** Revised **

PATRICIA SCOTT, CHAIR
JOHN GAGNEPAIN, VICE-CHAIR
CORINNE AWAD, 2ND VICE-CHAIR
MICHELLE PETERSON, COMMISSIONER
TAURUS JONES, COMMISSIONER

REGULAR MEETING AGENDA
PLANNING COMMISSION OF THE CITY OF SAN JACINTO
Tuesday, March 24, 2026
5:00 PM AGENDALINK WORKSHOP
6:00 PM OPEN SESSION

COMMUNITY CENTER
625 S. PICO AVENUE
SAN JACINTO, CA 92583
951-487-7330

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the office of the City Clerk at 951-487-7330 ext. 339. Notification 48 hours prior to a meeting will enable the City to make reasonable arrangements to ensure accessibility to that meeting [28 CFR 35.102.35.104 ADA Title II].

The Planning Commission meeting may be observed virtually by joining the link on the City's website at https://vimeo.com/user115670369 or in person at the San Jacinto Community Center.

Public Comments will only be accepted in person during the meeting or in writing to the Planning Division no later than 3:00 PM on the day of the meeting. Participants viewing the Livestream will not have a comment option.

Written public comments *may only be submitted via email* to comments@sanjacintoca.gov or by hard copy to the Planning Division at 595 S. San Jacinto Ave., San Jacinto, CA 92583, no later than 3:00 p.m. on the day of the meeting. Comments via text and social media (Facebook, Twitter, etc.) will not be accepted. Please identify the agenda item number and "PUBLIC COMMENT" in the subject line of the email or hard copy document. All written correspondence received by the 3:00 p.m. deadline will be distributed to the legislative body prior to the meeting and retained with the official meeting record. All email comments shall be subject to the same
rules as would otherwise govern in-person speaker comments at the Planning Commission meeting.

Reading of Public Comments: The Community Development Clerk will read all email comments, provided that the reading shall not exceed three (3) minutes, or such other time as the Commission may provide, consistent with the time limit for speakers at a Planning Commission meeting. The email comments submitted shall become part of the record of the Planning Commission meeting.

1. WORKSHOP

1.1 AGENDALINK

2. Organization

A. Call to Order

B. Roll Call

C. Pledge

3. Public Comments

4. Minutes

4.1 Minutes
Staff recommends that the Planning Commission approve the Minutes of the Regular Planning Commission Meeting of February 24, 2026.

5. Public Hearings

5.1 Chacon Farms (PROJ23-0029)
A proposal by Taylor and Clark Consulting on behalf of Richard Michael and Ramona Dairy, LLC, to establish a master-planned residential development consisting of 419 dwelling units as well as the construction of onsite roadways, a detention basin, parks, and on-site landscaping on 73.97-net acres.

6. Community Development Update

7. Commissioner Comments

8. Adjournment

Date Posted: March 19, 2026

March 24, 2026

TO:	Planning Commission
REQUESTED BY:	Kevin White, Planning Manager
APPROVED BY:	Robert A. Johnson, City Manager
SUBJECT:	AGENDALINK

RECOMMENDATION:

DISCUSSION:

FISCAL IMPACT:

March 24, 2026

TO:	Planning Commission
REQUESTED BY:	Lori Matley, Community Development Clerk
APPROVED BY:	Travis Randel, Deputy City Manager
SUBJECT:	Minutes

RECOMMENDATION:

Staff recommends that the Planning Commission approve the Minutes of the Regular Planning Commission Meeting of February 24, 2026.

Attachments

Planning_Commission_Regular_Meeting_Minutes_of_February_24_2026.pdf

MICHELLE PETERSON, CHAIR
PATRICIA SCOTT, VICE-CHAIR
JOHN GAGNEPAIN, 2ND VICE-CHAIR
CORINNE AWAD, COMMISSIONER
TAURUS JONES, COMMISSIONER

ACTION MINUTES
SAN JACINTO PLANNING COMMISSION – REGULAR MEETING
TUESDAY, FEBRUARY 24, 2026
6:00 PM
LIVE STREAM LINK: https://vimeo.com/user115670369

SAN JACINTO COMMUNITY CENTER
625 S. PICO AVENUE
SAN JACINTO, CA 92583
951-487-7330

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1. ORGANIZATION

1.1. Call to Order

Vice-Chair John Gagnepain called the Regular Meeting of the San Jacinto Planning Commission to order at 6:00 p.m.

1.2. Roll Call

Community Development Clerk Lori Matley conducted the roll call.

Present: Commissioner Corinne Awad, Commissioner John Gagnepain, Commissioner Taurus Jones, Commissioner Michelle Peterson

Absent: Commissioner Patricia Scott

1.3. Pledge of Allegiance

Commissioner Awad led the Pledge of Allegiance.

1.4. Presentation of Plaque to Outgoing Chair Michelle Peterson

Vice-Chair Gagnepain presented a plaque to Outgoing Chair Michelle Peterson.

2. PUBLIC COMMENTS

None

3. MINUTES

3.1. Planning Commission Regular Meeting Minutes of December 9, 2025

A motion was made by Commissioner Jones and seconded by Commissioner Awad to approve the Planning Commission Regular Meeting Minutes of December 9, 2025. **Motion carried** 4/0.

AYES:	Awad, Gagnepain, Jones, Peterson
NAYS:	None
ABSENT:	Scott
ABSTAIN:	None

4. PUBLIC HEARING

4.1. A proposal by Taylor and Clark Consulting on behalf of Richard Michael and Ramona Dairy, LLC, to establish a master-planned residential development consisting of 419 dwelling units as well as the construction of on-site roadways, a detention basin, parks, and on-site landscaping on 73.97-net acre. (PROJ23-0029).

Vice-Chair Gagnepain said the applicant requests that the Planning Commission continue the Project to the March 24, 2026, Planning Commission hearing date and asked for a motion to approve the continuance. A motion was made by Commissioner Awad and seconded by Commissioner Peterson. **Motion carried** 4/0.

AYES:	Awad, Gagnepain, Jones, Peterson
NAYS:	None
ABSENT:	Scott
ABSTAIN:	None

4.2. A proposal by Rancon to establish four restaurants with drive-thru service, a 20,000 square foot grocery store, a 10,450 square foot building for retail shops, and a maximum 192,000 square foot self-storage facility within the Sanderson Crossroads Shopping Center. (PROJ23-0021)

Planning Manager Kevin White presented the Staff Report.

Vice-Chair Gagnepain opened the Public Hearing at 6:28 pm.

Dan Long, representative for Rancon, was in attendance and agreed with the conditions of approval.

There were no public comments and Vice-Chair Gagnepain closed the Public Hearing at 6:34 pm.

Following discussion by the Planning Commission, a motion was made by Commissioner Awad and seconded by Commissioner Peterson to: **1. DETERMINE** that, in accordance with CEQA Guidelines Sections 15162 and 15164, that the proposed Addendum to the previously adopted Mitigated Negative Declaration **(CUP 18-01)** adequately addresses the Modified Project, and that no subsequent or supplemental environmental review is required because the Modified Project would not result in new or more significant environmental impacts than those previously analyzed, no substantial changes in circumstances have occurred that would create new or more significant environmental impacts, and no new information of substantial importance has been identified that would require revisions to the prior analysis or conclusions. **2. APPROVE** PROJ23-0021 to establish four restaurants with drive-thru service, a 20,000 square foot market, a 10,450 square foot building for retail shops, and a 174,506 square foot (maximum 192,000 square foot Gross Floor Area) self-storage facility within the Sanderson Crossroads Shopping Center that includes the following applications:

- Tentative Parcel Map (SUB24-0013) to create 7 parcels on 14.63 acres.
- Site Plan & Design review for the construction of the self-storage facility, market, retail shops, and restaurants. (USE25-0114)
- Conditional Use Permit (ARC23-0045) to establish a maximum 192,386 square foot self-storage Facility.
- Minor Use Permit (USE 24-0047) to establish a restaurant with drive-thru service (Pad 1)
- Minor Use Permit (USE 24-0048) to establish a restaurant with drive-thru service (Pad 2)
- Minor Use Permit (USE 24-0049) to establish a restaurant with drive-thru service (Pad 3)
- Minor Use Permit (USE 24-0050) to establish a restaurant with drive-thru service (Pad 4)

Motion carried 4/0.

AYES: Awad, Gagnepain, Jones, Peterson
NAYS: None
ABSENT: Scott
ABSTAIN: None

4.3. 2025 ANNUAL PROGRESS REPORT

Senior Planner Yaneli Hernandez presented the staff report.

Receive and File

5. COMMUNITY DEVELOPMENT UPDATE

5.1. Planning Manager Kevin White provided an update on the following:

- Development Activity
- Soboba Crossroads
- Rancho De Alamo
- Pre-zoning Appeal
- Parks Division
- AgendaLink

6. COMMISSIONER COMMENTS

Commissioners provided their comments.

7. ADJOURNMENT

With no further business to discuss, Commissioner Peterson adjourned the meeting at 6:54 p.m.

Respectfully submitted,

_____
Planning Commission Secretary

City of San Jacinto
Planning Commission

_____
Planning Commission Chair

March 24, 2026

TO:	Planning Commission
REQUESTED BY:	Yaneli Hernandez, Senior Planner
APPROVED BY:	{{approvedBy}}
SUBJECT:	Chacon Farms (PROJ23-0029)

RECOMMENDATION:

That the Planning Commission **Adopt** PC Resolution No. 26-01, thereby recommending that the City Council:

1. **DETERMINE** that the proposed Project will not have a significant effect on the environment with the incorporation of mitigation based on the findings set forth in the case record and **ADOPT** a Mitigated Negative Declaration (MND) and Mitigation Monitoring and Reporting Program, pursuant to the California Environmental Quality Act (CEQA); and
2. **APPROVE** the General Plan Amendment to change the land use designation from Very Low Density Residential (VLDR) to Low Density Residential (LDR);
3. **APPROVE** the Change of Zone from Rural Residential (RR) to Residential Low Density;
4. **APPROVE** the Chacon Farms Planned Development Permit; and
5. **APPROVE** Tentative Tract Map (TTM) 39076 to subdivide 73.97-net acres, into 419 single-family lots for the ultimate construction of 419 single-family detached residences, and to create lettered lots for onsite roadways, a detention basin, parks, and on-site landscape subject to the Recommended Conditions of Approval.

DISCUSSION:

The project is a proposal by Taylor and Clark Consulting on behalf of Richard Michael and Ramona Dairy, LLC, to establish a master-planned residential development consisting of 419 homes as well as the construction of onsite roadways, a detention basin, parks, and on-site landscaping on 73.97-net acres. To facilitate the development, the applicant submitted a General Plan Amendment (GPA), Change of Zone (CZ), Tentative Tract Map (TTM) and Planned Development Permit (PDP), for review and approval. Because the GPA, CZ, and PDP require City Council approval, the Planning Commission is being asked to provide a recommendation to the City Council.

The Project site is located west of Cawston Avenue, extending between Seventh Street and Esplanade Avenue. The project site is currently occupied by Chacon Farms and Bruno Ranches agricultural operations. Two single-family residential uses occupied by caretakers are also located on site. The project site is surrounded by residential uses to the north and east, residential and agricultural uses to the west, and a dairy farm to the south. The General Plan Land Use Designation is Very Low Density Residential and the current Zone is Rural Residential.

	Land Use	General Plan Designation	Current Zoning
Project Site	Agricultural	VLDR - Very Low Density Residential	RR - Rural Residential
North	Residential	LDR - Low Density Residential	RL - Residential, Low Density

South	Dairy Farm	City of Hemet	City of Hemet
East	Residential	VLDR - Very Low Density Residential	RR - Rural Residential
West	Residential / Vacant	Specific Plan	Specific Plan

ANALYSIS:

The intent of the Very Low Density Residential (VLDR) General Plan Land Use Designation and Rural Residential (RR) Zone is to provide for the development of single-family dwellings at a density of up to 2 dwelling units per gross acre of land. This designation is generally most suitable in rural areas, locations where scenic and natural resources should be protected, in areas that consist of small agricultural operations, or where natural hazards limit development potential (such as hillsides). With a maximum density of 2 units per acre the property would be allowed to develop 158 units. However, the developer desires to create a product with smaller lots and more units than would be allowed in the existing designations and therefore a General Plan Amendment and Zone Change are proposed

General Plan and Change of Zone

The project proposes to change the General Plan Land Use Designation to Low Density Residential (LDR) and the Zone to Residential, Low Density (RL). Like the VLDR and RR designations, the proposed land use and zone provide for the development of detached single-family dwellings, however the LDR and RL designations would allow the property to be developed at a higher density with a range between 2 and 7 dwelling units per gross acre and thus allow more units.

As noted in the table above, the area directly north of the project site is designated LDR and RL and have been developed with single family homes above 2 units to the acre. Furthermore, the area directly west of the site is governed by the Esplanade Specific Plan, which allows a maximum density of 4.5 units to the acre. Development within the Specific Plan is currently underway at with densities also above 2 units per acre. Given the development patterns that exists north and west of the project site, the proposed General Plan Amendment and Zone Change provide for a logical and orderly development pattern, with the extension of single-family residences at a higher density consistent with the LDR and RL designations.

Tentative Tract Map

The project proposes to subdivide 3 parcels into single family lots. Therefore, the project includes TTM 39076 to create 419 single-family lots with a density of 5.53 dwelling units per acre. The subdivision is proposed to be recorded in two phases which will include 235 lots in Phase 1 and 184 lots in Phase 2. The proposed lots range in size between 3,700 to 7,900 square feet. In addition, the subdivision includes lettered lots for the construction of onsite roadways, detention basins, parks, and on-site landscaping.

Access and Circulation

Two points of vehicular access will be provided to the development, which includes a single new 80-foot-wide (40' curb to curb) east-west oriented roadway from Cawston Avenue, which borders the development to the east, and a new 56-foot-wide (36' curb to curb) north-south oriented roadway that connects to Seventh Street which borders the project to the north. These two proposed entrance roadways lead to a network of 52-foot-wide (36' curb to curb) internal streets within the tract that ensure appropriate access to every facet of the development, including all homes, parks and basins. The new roads will be private streets that include curb, gutter, sidewalks and streetlights. Because the roads are proposed as private streets, they will be maintained by a Homeowners Association (HOA). Pedestrian access is also provided via proposed sidewalks on both sides of the new streets mentioned above as well as a new pedestrian entrance from Esplanade Avenue through a proposed paseo.

In addition to internal streets the developer will also be conditioned to improve Cawston Avenue and Seventh Street which are adjacent to the site. For Cawston Avenue and Seventh Street the developer will be required to dedicate 20 feet of right-of-way and widen the existing roadway with additional asphalt paving. In addition, the project will be conditioned to install curb, gutter, sidewalk, streetlights and 18 feet of parkway with landscaping.

Frontage improvements along Esplanade Avenue, which borders the project site to the south, will be constructed as part of the City's adopted Capital Improvement Program (CIP), which includes the widening of Esplanade Avenue from Warren Road to Sanderson Avenue. Accordingly, the Developer will not be required to construct the roadway frontage improvements along Esplanade.

This approach is consistent with the City's long-standing plan to deliver these improvements as a single coordinated CIP project and avoids the inefficiencies and potential conflicts associated with having multiple contractors operating within the same right-of-way at the same time.

While the roadway widening is primarily funded through the Transportation Uniform Mitigation Fee (TUMF) program, TUMF funding is limited to capacity-related improvements and does not include street lighting. As such, the Developer remains responsible for the installation of streetlights along the project frontage.

To ensure compatibility with the City's ongoing construction, the Developer shall coordinate with the City and its contractor to incorporate the necessary provisions into the CIP project to allow for the future installation of streetlights and related improvements without requiring disturbance of the newly constructed roadway. The Developer shall also coordinate with the City regarding frontage landscaping.

To ensure that intersections will operate at acceptable levels with the additional traffic created, traffic signals will be required at the intersection of Cawston Avenue and Esplanade Avenue, Cawston Avenue and Seventh Street, and Cawston Avenue and Cottonwood Avenue. However, the intersection at Cawston and Esplanade will be completed as part of the CIP project and therefore it is not a required condition of approval. Along with the installation of these traffic signals, additional signing and stripping improvements to accommodate vehicular travel lanes and pedestrian crossings will be required.

Planned Development Permit (PDP)

To support the ultimate development of the proposed subdivision, the applicant has submitted a Planned Development Permit (PDP). The purpose of the PDP is to promote the efficient use of land, ensure a high-quality residential environment, uphold strong environmental design standards, and provide enhanced amenities that contribute to the creation of a well-planned community. In addition to the proposed single-family homes, Chacon Farms also includes four active parks and amenities that will feature pickle ball courts, shade structures, picnic tables, BBQs, and multiple play structures. The project also includes a network of new street improvements as well as utilities, and drainage infrastructure to serve the development.

The PDP establishes the design and minimum development standards for the future buildout of Chacon Farms. The proposed residential units would include 4 to 5 bedrooms, 2 to 4 bathrooms, and optional loft spaces available within specific floor plans. The homes would range in size from approximately 1,758 to 3,025 square feet, providing a variety of housing options capable of meeting the needs of different household types and lifestyles. All homes would include two-car garages as well as driveways designed to accommodate an additional two vehicles, ensuring adequate on-site parking. To further reduce parking impacts within the neighborhood, the internal street system has been designed to allow on-street parking on one side, thereby providing convenient and accessible guest parking while maintaining clear travel lanes and emergency access.

The Preliminary Development Plan (PDP) provides comprehensive guidelines for architectural design, color schemes, and materials intended to establish a cohesive, rural-inspired character. For the purposes of this PDP, an agrarian architecture theme is achieved through simple building forms, varied one- and two-story massing, pitched rooflines, and the use of natural materials such as muted stucco and stone veneer, complemented by architectural details including siding, shutters, and covered entries typical of farmhouse-style development.

The guidelines address architectural styles, color palettes, exterior materials, and elevations treatments. The architectural styles include Spanish, Prairie, and Farmhouse for the future 419 dwelling units, accompanied by nine (9) color schemes. The incorporation of multiple styles and color options is intended to enhance visual interest while maintaining a unified aesthetic throughout the subdivision. In addition, the PDP proposes five (5) distinct floor plans, each offering five (5) elevation types. This range of design options ensures that homes will not appear repetitive and ensures identical or highly similar elevations being placed adjacent to or directly across from one another. The added variety and enhanced architectural features and variation of product types provided within the Chacon Farms development will ensure that the development is cohesive and unique while providing greater architectural interest throughout the development.

In addition to the 419 lots, the proposed PDP includes one basin/park located at the northwest corner of the community, a central park located at the center of the community, two smaller neighborhood parks located to the south, and paseos throughout the site totaling approximately 3.26-acres. All parks, roadways, and basins will be maintained by the HOA. The following is a complete list of amenities within the park areas:

A. Basin Park

- Shade Structure with Picnic Tables (six tables)
- Seating area with Picking Tables (five locations)
- Benches
- Turf / Open Space
- Pickleball Court
- Playground

B. Central Park

- Two Shade Structures with Picnic Tables (two tables each)
- Playground / Tot lot
- Turf / Open Space

C. West Neighborhood Park

- Shade Structures with Picnic Tables (two tables)
- Barbeque area
- Turf / Open Space

D. East Neighborhood Park

- Shade Structure with Picnic Tables (two tables)

- Barbeque area
- Turf / Open Space

Lastly, the Planned Development includes landscape design guidelines and wall standards that provide additional details that enhance the project. Those details include enhanced entrances with accent trees, outdoor play equipment, stone veneer pilasters at corners, split face block walls with decorative caps that will be enhanced with vines and landscaping with an expansive list of Street Trees and shrubs to provide additional variety and interest.

Development Schedule and Phasing Plan

Construction activities for the Project would occur over four construction phases lasting approximately 5 years, with final engineering completed in 2026 and final closing in 2031. Construction would occur as follows: (1) final engineering; (2) grading and site preparation; (3) home construction (4) final closing. Construction activities would be limited to the hours between 7:00 a.m. and 7:00 p.m. on weekdays and Saturdays, and between 9:00 a.m. and 6:00 p.m. on Sundays and holidays pursuant to the City's Municipal Code Chapter 8.40.090.

The proposed product types, enhanced architectural standards, and park provides for a better living environment with higher standards found in conventional developments.

Modified Designed Standards

To meet the project objectives that provide for this future development, the PDP proposes to modify several development standards of the Residential, Low Density (RL) zone. The table below identifies the RL Development Standards and the proposed Development Standards of the PDP. Items that are underlined are standards that would be modified.

Development Feature	RL Zone Development Code	Proposed	Proposed Modification
Density	2.1-7.0 DU/AC	5.53 DU/AC	No
Parcel Area (Net)	5,000 sq. ft.	3,717 sq. ft.	**Yes**
Parcel Width Interior	50 ft.	45 ft.	**Yes**
Parcel Width Corner	70 ft.	25 ft.	**Yes**
Parcel Depth	100 ft.	60 ft.	**Yes**
Setback Front	20 ft.	10 ft.	**Yes**
Front Garage	N/A	20 ft.	N/A
Setback (Interior)	5 ft.	4 ft.	**Yes**
Setback Street Side	10 ft.	5 ft.	**Yes**
Setback Rear	20 ft.	10 ft.	**Yes**
Rear with Slope	20 ft.	10 ft.	**Yes**
Lot Coverage - Structure	55%	60%	**Yes**
Primary Structure Height	35 ft.	35 ft.	No

The proposed Planned Development Permit (PDP) includes modifications to certain development standards of the Residential, Low Density (RL) zone to facilitate a cohesive and efficient site design. These modifications primarily include reductions in minimum lot size, lot dimensions, and setbacks, along with a modest increase in allowable lot coverage. The resulting project achieves a density of 5.53 dwelling units per acre, which remains within the permitted range of the Low Density Residential (LDR) designation (2.1 to 7.0 dwelling units per acre).

The proposed modifications are consistent with the intent of the General Plan and reflect development patterns in the surrounding area, including nearby neighborhoods to the north and west that have been developed at similar densities and with comparable lot configurations. As such, the project does not introduce an intensity or scale that would be incompatible with adjacent uses and represents a logical continuation of existing residential development in the vicinity.

In addition to consistency with surrounding development, the PDP incorporates objective design standards and site planning features that ensure a high-quality residential environment. The project includes a typical plotting plan demonstrating that functional single-family homes can be constructed on the proposed lots in compliance with applicable building and fire code requirements, confirming that the modified standards result in practical and buildable lot configurations.

The PDP further enhances the quality of the development through a range of site design features and amenities, including:

- A dual park and basin feature that provides both recreational space and functional stormwater infrastructure
- Play equipment and design elements that reflect the agricultural character of the surrounding area
- A coordinated landscape palette that complements the architectural styles and enhances neighborhood identity
- Decorative perimeter walls with stone veneer pilasters, enhanced with landscaping and vines
- A tubular steel fence with split-face block pilasters at the water quality basin
- An enhanced entry feature along Cawston Avenue with accent landscaping and 24-inch box trees
- A paseo connection to Esplanade Avenue providing pedestrian access to and from the community
- Architectural design standards that exceed minimum Development Code requirements, including five floor plans with multiple elevation types and varied materials such as siding, brick and stone veneer, clay tile elements, and enhanced window treatments

Collectively, these features demonstrate that the requested modifications are balanced by a comprehensive and thoughtfully designed project. The flexibility provided through the Planned Development Permit results in a development that is both consistent with applicable land use policies and superior in overall design quality, consistent with the purpose and intent of the PDP process.

ENVIRONMENTAL ASSESSMENT:

The project has been reviewed in accordance with the California Environmental Quality Act (“CEQA”) and the State CEQA guidelines. An Initial Study was prepared for the project to determine the potential environmental impacts of the project. The Initial Study concluded that with applied mitigation the Project would not result in a significant effect on the environment. The project includes mitigation measures related to Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Noise, and Tribal Cultural Resources. Therefore, staff determined that a Mitigated Negative Declaration (MND) was the appropriate CEQA document in support of the Project.

The Initial Study and Mitigated Negative Declaration (IS/MND) was circulated for a 30-day public comment period via the publication of a Notice of Intent on October 28, 2025. In addition to the publication, the IS/MND was submitted to the State Clearing House for posting (SCH No. 2025101241). Three comments were received.

Department of Toxic Substances (DTSC)

The first comment letter was issued by the Department of Toxic Substances Control (DTSC), outlining DTSC's recommendations regarding potential contaminants of concern (COCs). As part of the MND a Phase 1 Environmental Site Assessment (ESA) was prepared, which did not identify recognized environmental conditions (RECs) requiring immediate subsurface investigation. Additional soil sampling was also conducted, and no pesticides or heavy metals were detected in the shallow soil samples.

Department of Conservation

The second letter was issued by the Department of Conservation, providing advisory comments regarding the project's potential conversion of Important Farmland. This concern was evaluated in the Agriculture and Forestry Resources as part of the City General Plan Environmental Impact Report (EIR). The agricultural resource impacts associated with converting Important Farmland within the Planning Area, including the infeasibility of preservation-based mitigation, were fully evaluated and disclosed in the General Plan 2040 EIR. The proposed project does not introduce new agricultural impacts or increase the severity of those identified in the certified EIR. In addition, to evaluate site-specific agricultural viability, a California Agricultural Land Evaluation and Site Assessment (LESA) Model analysis was conducted. The LESA Model, developed by the California Department of Conservation (DOC), is an optional quantitative tool available to lead agencies under CEQA for determining the significance of farmland conversion. While the project converts existing agricultural land, these impacts were fully analyzed in the General Plan EIR and are not new or more severe than previously disclosed.

Talley Meadows Ranch

The third and final comment letter was submitted by Talley Meadows Ranch, outlining concerns about traffic safety and pedestrian hazards on Cawston Avenue along the project frontage. These concerns have been acknowledged; however, the comments do not identify deficiencies in the adequacy of the CEQA document. Issues related to the safety and functional design of the street frontage will be addressed through the Tentative Tract Map No. 39076 engineering review and approval process, which ensures that all frontage improvements and design details comply with the City's requirements and standards.

The mitigation measures required to reduce or mitigate the impacts of this Project on the environment are included in the Initial Study and will be made enforceable through the Mitigation Monitoring and Reporting Program ("MMRP") and the Conditions of Approval for the Project..

Notice of Public Hearing

The public hearing for this Project was originally noticed on or before January 17, 2026, for a January 27, 2026 hearing, including mailed notice to property owners within 300 feet of the project site. The January 27, 2026 hearing was subsequently adjourned, and all items were continued to February 24, 2026. On February 19, 2026, the applicant requested a continuance to the March 24, 2026 meeting to allow time to address outstanding items related to the conditions of approval.

Out of an abundance of caution, the Project was re-noticed on or before March 13, 2026 for the March 24, 2026 hearing, including mailed notice to property owners within 300 feet of the project site. As of the preparation of this report, no additional correspondence or comments have been received.

CONCLUSION

The proposed General Plan Amendment and Change of Zone establish a land use framework that is internally consistent with the General Plan and supports the orderly development of the project site. As outlined in the Findings of Fact, the project furthers multiple General Plan goals and policies related to housing, land use compatibility, circulation, and community design, while contributing to the City's Regional Housing Needs Allocation (RHNA) and providing a range of housing opportunities.

The proposed Tentative Tract Map and Planned Development Permit implement this framework through a cohesive subdivision design, appropriate infrastructure and circulation improvements, and a comprehensive set of architectural standards and site enhancements. The requested modifications to development standards are consistent with the intent of the Planned Development Permit process and are balanced by high-quality design features, integrated open space, and neighborhood amenities that ensure compatibility with surrounding uses and the creation of a well-planned residential community. As further supported by the Findings, the site is physically suitable for the proposed development, and adequate public services and infrastructure are available or will be provided to serve the project.

Additionally, to ensure consistency with development standards and enhance the overall project design, the applicant will be required to submit a revised plot plan prior to City Council clearly illustrating all required setbacks as measured from the property lines, including a minimum setback of no less than twenty (20) feet from the property line to the garage. The applicant will also identify any rear elevations that face the public right-of-way and demonstrate how those elevations will be architecturally enhanced to maintain visual quality and compatibility with the surrounding area.

The environmental analysis prepared for the project determined that, with incorporation of mitigation measures, all potential impacts can be reduced to a less-than-significant level. Adoption of the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program will ensure that these measures are implemented.

Based on the foregoing and the detailed Findings of Fact attached, staff recommends that the Planning Commission adopt a resolution recommending that the City Council: (1) adopt the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program pursuant to CEQA; and (2) approve the General Plan Amendment, Change of Zone, Planned Development Permit, and Tentative Tract Map No. 39076, subject to the Conditions of Approval.

As the General Plan Amendment, Change of Zone, and Planned Development Permit require City Council approval, the Planning Commission’s action on this item is a recommendation only. Final action on the Project will be taken by the City Council.

The Planning Commission’s recommendation is subject to appeal in accordance with Chapter 17.715 (Appeals) of the Development Code.

Attachments

PC_Resolution_26-01.pdf
Findings_-_Chacon_Farms.pdf
Conditions_of_Approval.pdf
Planned_Development_Permit.pdf
TTM_39076_12-11-25_v3.pdf
GPLU_Map.pdf
Zoning_Map.pdf
Location_Map.pdf
CLEAN_PROJ23-0029_Chacon_Farms_Draft_ISMND_10-20-2025.pdf
Appendix_A-1_Air_Quality_GHG_Energy.pdf
Appendix_A-2_Health_Risk_Assessment.pdf
Appendix_B-1_Habitat_Assessment-030524.pdf
Appendix_B-2_Tree_Survey_rev-042823.pdf
Appendix_C_-_Phase_I_Archaeo-Paleo_Inventory-101923.pdf
Appendix_D-1_-_Geotechnical_Report.pdf
Appendix_D-2_Updated_Geotechnical_Report.pdf
Appendix_E_-_Phase_1_ESA.pdf
Appendix_F-1_-_Preliminary_Hydrology_Study.pdf
Appendix_F-2_Preliminary_WQMP.pdf
Appendix_G_-_Noise_Study.pdf
Appendix_H_-_Traffic_Trip_Generation_Study.pdf
Appendix_I_-_Planned_Development_Permit_-_Chacon.pdf

STATE OF CALIFORNIA) **PC RESOLUTION NO. 26-01**
COUNTY OF RIVERSIDE)
CITY OF SAN JACINTO)

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SAN JACINTO RECOMMENDING THAT THE CITY COUNCIL ADOPT A MITIGATED NEGATIVE DECLARATION AND MITIGATION MONITORING AND REPORTING PROGRAM, AND APPROVE A GENERAL PLAN AMENDMENT, CHANGE OF ZONE, PLANNED DEVELOPMENT PERMIT, AND TENTATIVE TRACT MAP 39076 (PROJ23-0029)

WHEREAS, the applicant, Chacon Farms, submitted applications for a General Plan Amendment, Change of Zone, Planned Development Permit, and Tentative Tract Map 39076 to subdivide approximately 73.97 net acres into 419 single-family residential lots, along with lettered lots for internal roadways, a detention basin, parks, and landscape areas, located between 7th Street to the north, Esplanade Avenue to the south, and west of Cawston Avenue (Project); and

WHEREAS, the City, as Lead Agency, prepared an Initial Study in accordance with the California Environmental Quality Act (CEQA) and determined that, with the incorporation of mitigation measures, the Project will not have a significant effect on the environment, and a Mitigated Negative Declaration (MND) and Mitigation Monitoring and Reporting Program (MMRP) were prepared for the Project; and

WHEREAS, the Planning Commission has reviewed and considered the Initial Study, Mitigated Negative Declaration, and Mitigation Monitoring and Reporting Program, together with all comments received thereon, and finds that the MND reflects the independent judgment of the City; and

WHEREAS, on March 24, 2026, the Planning Commission conducted a duly noticed public hearing on the Project, at which time all interested persons were given the opportunity to be heard and the Project was fully considered; and

WHEREAS, the Planning Commission has considered the entire record of proceedings, including the staff report, technical studies, public testimony, and all other evidence presented.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF SAN JACINTO:

Section 1. Recitals. The foregoing recitals are true and correct and are incorporated herein by reference.

Section 2. Environmental Determination. Based upon the whole of the record before it, including the Initial Study and all supporting information, the Planning Commission finds that:

A. The Mitigated Negative Declaration has been prepared in compliance with the California Environmental Quality Act (CEQA);

B. The Mitigated Negative Declaration reflects the independent judgment of the City;

C. There is no substantial evidence, in light of the whole record, that the Project, as mitigated, will have a significant effect on the environment; and

D. The mitigation measures identified in the Mitigated Negative Declaration are hereby adopted and shall be implemented through the Mitigation Monitoring and Reporting Program.

Section 3. Findings. Based upon the entire record, including all written and oral evidence presented, and the findings set forth in the staff report and incorporated herein by reference, the Planning Commission finds that:

A. The Project is consistent with the General Plan and all applicable provisions of the Municipal Code;

B. The Tentative Tract Map is consistent with the Subdivision Map Act and the City's Development Code, and the site is physically suitable for the type and density of development proposed;

C. The Project satisfies all applicable findings required for approval of the General Plan Amendment, Change of Zone, Planned Development Permit, and Tentative Tract Map; and

D. The Project will not be detrimental to the public interest, health, safety, convenience, or welfare of the City.

Section 4. Recommendation of Approval. Based upon the foregoing, the Planning Commission hereby recommends that the City Council:

A. Adopt the Mitigated Negative Declaration for the Project and adopt and implement the Mitigation Monitoring and Reporting Program;

B. Approve a General Plan Amendment to change the land use designation from Very Low Density Residential (VLDR) to Low Density Residential (LDR);

C. Approve a Change of Zone from Rural Residential (RR) to Residential Low Density (RL);

D. Approve a Planned Development Permit to allow modifications to the Residential Low Density (RL) development standards, subject to the Conditions of Approval attached hereto as Exhibit A and incorporated herein by reference;

E. Approve Tentative Tract Map No. 39076 to subdivide approximately 73.97 net acres into 419 single-family residential lots and associated lettered lots for roadways, drainage, parks, and landscape areas, subject to the Conditions of Approval attached hereto as Exhibit A and incorporated herein by reference; and,

F. Direct staff to file a Notice of Determination in accordance with the California Environmental Quality Act.

Section 5. Record of proceedings. The documents and materials that constitute the record of proceedings upon which this Resolution is based are located at the City of San Jacinto, 595 South San Jacinto Avenue, San Jacinto, California 92583. The custodian of the record is the Community Development Department. This information is provided pursuant to Public Resources Code Section 21081.6.

Section 6. Recommendation to city council. As the Project includes a General Plan Amendment, Change of Zone, and Planned Development Permit, final action on the Project rests with the City Council. The Planning Commission's action on this item constitutes a recommendation to the City Council.

PASSED, APPROVED, AND ADOPTED at a regular meeting of the Planning Commission on the 24th day of March 2026 by the following vote:

AYES:
NAYS:
ABSENT:
ABSTAIN:

CITY OF SAN JACINTO:

_____
Planning Commission Chair

ATTEST:

_____
Planning Commission Secretary

FINDINGS OF FACTS
Chacon Farms Residential Development

GENERAL PLAN AMENDMENT FINDINGS:

1. **The amendment is internally consistent with all other provisions of the General Plan and any applicable specific plan;**

   The proposed General Plan Amendment from VLDR (Very Low Density Residential) to LDR (Low Density Residential) will further the intent of the General Plan by providing a variety of new housing opportunities that will complement surrounding uses of primarily residential developments. Specifically the General Plan Amendment will continue to allow the development of residences on the project site with a density range of 2.1 to 7 dwelling units to the acre in lieu of the current density range of 0-2 dwelling units to the acre with the VLDR designation. With proposed General Plan Amendment, the proposed project will conform with the goals and policies of the General Plan, including the applicable goals and policies of the Land Use Element and Housing Element, as detailed below:

   Land Use Goal 1: A community with a land use plan that accommodates a mix of uses to meet current and future needs.
   Specifically implementing policy 1.3 & 1.6

   - The Project supports Policy LU-1.3 by increasing the City's housing supply within an established growth area and contributing toward the City's Regional Housing Needs Allocation (RHNA). The Project includes 419 single-family residential units within the allowable density range of the Low Density Residential designation, helping to meet current and future housing needs.

   - The Project is consistent with Policy LU-1.6 through the incorporation of multiple neighborhood parks, open space areas, and an interconnected system of pedestrian paseos. These features provide accessible recreational opportunities and functional gathering spaces for future residents.

   Land Use Goal 2: A City that manages and directs growth so that the community and its neighborhoods are protected and enhanced.
   Specifically implementing policy 2.1 & 2.2

   - The Project supports Policies LU-2.1 and LU-2.2 by promoting an orderly and coordinated pattern of development that is compatible with surrounding residential uses. The Project site is adjacent to existing and

planned residential neighborhoods and proposes a density that is consistent with the Low Density Residential designation.

- The Project includes an interconnected circulation network designed to improve internal connectivity, provide efficient vehicular and pedestrian access, and enhance access to on-site open space and neighborhood amenities. The Project also provides connectivity to the Class I multi-use path along Esplanade Avenue, supporting multimodal access.

- The Project provides a balanced distribution of open space and recreational amenities throughout the site, ensuring that residents have convenient access to neighborhood parks and contributing to the overall quality and livability of the community.

The Project has been reviewed for consistency with applicable infrastructure and service requirements and will coordinate with appropriate service providers, including Eastern Municipal Water District, to ensure adequate utilities and public services are provided.

Based on the foregoing, the proposed General Plan Amendment is internally consistent with the goals, policies, and land use framework of the General Plan and will not create inconsistencies with other provisions of the Plan.

2. The proposed amendment will not be detrimental to the public interest, health, safety, convenience, or welfare of the City;

Public Interest

The proposed project is consistent with the General Plan and serves the public interest by providing a balanced mix of housing and amenities that meet community needs and enhance recreational and social opportunities. The project would contribute 419 residential units toward the Regional Housing Needs Allocation (RHNA), offering a variety of housing types to accommodate diverse ages, incomes, and household needs. The homes are designed with architectural styles that complement the area's rural character. Overall, the development promotes livability through walkability, community engagement, integrated open space, pedestrian safety, and support for an active lifestyle.

Health and Safety

The proposed project is consistent with the General Plan and promotes public health and safety by incorporating a planned layout that emphasizes pedestrian safety and encourages physical activity and well-being. Four community parks, connected by an integrated network of pathways, will provide residents with a range of social and recreational opportunities.

Convenience

The proposed project conforms with the provision of public convenience according to the General Plan. This development will create an additional 419 homes that are within a convenient distance to surrounding amenities and public infrastructure, including the following:

- *Transit*
  The Project Site is approximately 0.6 miles (a 12-minute walk), from the Riverside Transit Agency (RTA) Go Micro service zone. Go Micro is RTA's on-demand public transit service available within the Hemet-San Jacinto micro transit zone. Shared rides can be booked via the Go Micro app at user convenience, rather than relying on a predetermined bus schedule. Go Micro minibuses directly pick up and drop off passengers at desired locations, at desired times (provided both locations are within the micro transit zone and that the trip does not begin and end at route 44 bus stops).

- *Schools*
  The Project Site is located within the Hemet Unified School District and would likely be served by nearby schools, including Cawston Elementary School (1.3 miles), Rancho Viejo Middle School (0.9 miles), and Tahquitz High School (0.7 miles). The site may also be served by Megan Cope Elementary School (0.7 miles), which is within the San Jacinto Unified School District. In addition, Mt. San Jacinto College is approximately five miles from the Project Site and is directly accessible via RTA's on-demand transit service, Go Micro.

Welfare

The proposed project with the support of the General Plan Amendment and Zoning Map Amendment, will support and promote the general welfare of San Jacinto residents. The proposed project, specifically, will support and promote walkability, community engagement, integrated open space, pedestrian safety, and an active lifestyle. Integrated Community Parks connected by a network of paths will facilitate recreation and socialization.

3. **If an amendment to the Land Use Element, the affected site(s) is physically suitable in terms of design, location, shape, size, operating characteristics, and the provision of public and emergency vehicle (e.g., fire and medical) access and public services and utilities (e.g., fire protection, police protection, potable water, schools, solid waste collection and disposal, storm drainage, wastewater collection, treatment, and disposal, etc.), to ensure that the proposed or anticipated uses and/or development will not endanger, jeopardize, or otherwise constitute a hazard to the property or improvements in the vicinity in which the property is located; and**

Physical Suitability

The proposed project, with the support of the General Plan Amendment and Zoning Map Amendment, will not endanger, jeopardize, or otherwise constitute hazard to property in the vicinity in which the property is located and will be physically suitable in terms of design, location, shape, size, operating characteristics, and the provision of public emergency vehicle access and public services as follows:

- *Design*

  The Proposed Project is designed to be compatible with the surrounding San Jacinto community and consistent with adjacent residential uses. The development features an interconnected grid of streets that enhances walkability and provides convenient vehicle and pedestrian access to homes, community parks, and recreational amenities distributed throughout the site.

  Residential architecture will include farmhouse, Spanish, and prairie styles, using quality materials such as stucco, brick, and stone, along with a varied but cohesive color palette that complements the broader community and individual streetscapes. These design elements enhance the visual character of the Chacon Farms community.

  The project will not interfere with existing water or sewer easements, as confirmed by the site boundary survey, and will comply with applicable landscaping and setback requirements. The site's north–south orientation supports efficient solar design, with some east–west–oriented homes incorporated where feasible to allow for additional passive solar opportunities.

- *Location*

  The proposed development will complement and enhance surrounding land uses. Existing single-family residential neighborhoods are located to the north, northeast, and northwest across West 7th Street, as well as to the east across Cawston Avenue. To the west, the Esplanade Specific Plan includes approximately 130.7 acres of planned single-family residential development.

- *Shape and Size*

  The project site is generally rectangular in configuration and consists of three smaller rectangular parcels. The proposed project is designed to minimize sprawl and efficiently utilize the approximately 75.70 acres of site area. The site will accommodate 419 single-family homes with a minimum lot size of 3,717 square feet, along with designated open space for parks and a basin.

- *Operating Characteristics*
  The proposed projects operating characteristics will be consistent with those of surrounding single-family developments. The proposed project will operate as a place of housing, enhanced by various amenities within several community parks, to prospective residents.

- *Public Emergency Vehicle Access*
  The proposed project's inter-connected network of thoroughfares will contribute to emergency vehicle accessibility. The applicant will comply with any easement requirements for public emergency vehicle access. Further, the proposed public emergency vehicle access will be reviewed by City and County Departments including the City's engineering department and Riverside County Fire, to ensure efficiency and safety for future residents.

- *Public Service and Utilities*
  Adequate City infrastructure exists to support the Project. Additionally, the project has been reviewed by Police, Fire, Public Utilities and Engineering to ensure that the design accommodates public and emergency vehicles including solid waste haulers, City crews, and other service providers.

4. **The City may reduce, require, or permit the reduction of, the residential density for any parcel to, or allow development of any parcel at, a lower residential density, as defined in Government Code Section 65863, only if the following two additional findings are first made:**

   a. **The reduction is consistent with the adopted General Plan, including the Housing Element; and**

      The proposed Project does not involve a reduction in residential density. The proposed General Plan Amendment would change the land use designation from Very Low Density Residential (0 to 2 dwelling units per acre) to Low Density Residential (2.1 to 7 dwelling units per acre), thereby allowing for an increase in residential density on the Project site. Accordingly, this finding is not applicable. Notwithstanding, the Project is consistent with the General Plan and Housing Element.

   b. **The remaining sites identified in the Housing Element are adequate to accommodate the jurisdiction's share of the regional housing needs in compliance with Government Code Section 65584.**

      The proposed Project does not reduce residential density and

therefore does not trigger this finding. Notwithstanding, the Housing Element identifies adequate sites to accommodate the City's remaining Regional Housing Needs Allocation (RHNA), and the Project would increase the City's housing supply and contribute toward meeting its RHNA obligations.

CHANGE OF ZONE FINDINGS:

1. **Findings required for all Development Code and Zoning Map amendments.**

   a. **The proposed amendment is consistent with the General Plan and any applicable specific plan;**

      The proposed Change of Zone from Rural Residential (RR) to Residential Low Density (RL) is consistent with the General Plan with the adoption of the proposed General Plan Amendment. The RL zoning designation is the implementing zone for the Low Density Residential (LDR) General Plan land use designation and will ensure consistency between the General Plan and Zoning Map. The Project site is not located within a Specific Plan area; therefore, no Specific Plan applies.

   b. **The proposed amendment will not be detrimental to the public interest, health, safety, convenience, or welfare of the City.**

      The proposed Change of Zone will not be detrimental to the public interest, health, safety, convenience, or welfare of the City. The amendment will facilitate the development of a planned residential community that is consistent with the General Plan and Development Code. The Project incorporates an interconnected circulation system, neighborhood parks, and pedestrian amenities that promote walkability and community interaction.

      The Project has been reviewed by applicable City departments and service providers to ensure that adequate infrastructure and public services, including police, fire, utilities, and emergency access, are available to serve the site. As conditioned, the Project will not result in adverse impacts to the surrounding area and will support orderly and coordinated development.

2. **Additional findings for Zoning Map amendments**

   a. **The affected site(s) is physically suitable in terms of design, location, shape, size, operating characteristics, and the provision of public and emergency vehicle (e.g., fire and medical) access and public services and utilities (e.g., fire protection, police protection, potable water, schools, solid waste collection and disposal, storm drainage, wastewater collection, treatment, and disposal, etc.), to ensure that the requested zoning designation and the proposed or anticipated uses and/or development will not endanger, jeopardize, or otherwise constitute a hazard to the property or improvements in the vicinity in which the property is located.**

      The Project site is physically suitable for the proposed Residential Low

Density (RL) zoning designation in terms of design, location, shape, size, and operating characteristics. The site is of sufficient size and configuration to accommodate the proposed residential development, including internal circulation, open space, and required infrastructure.

The Project is located adjacent to existing and planned residential development and represents a logical extension of the surrounding land use pattern. The proposed street network is designed to provide adequate access for residents, service providers, and emergency response vehicles and will be subject to review and approval by the City's Engineering Department and Riverside County Fire Department.

Adequate public services and utilities are available, or will be provided, to serve the Project, including potable water, wastewater, storm drainage, solid waste services, and schools. The Project has been reviewed by relevant agencies and departments to ensure that the proposed zoning and anticipated development will not endanger or otherwise constitute a hazard to surrounding properties or improvements.

SUBDIVISION FINDINGS (TTM 39076):

1. **The proposed subdivision of land has been found to be consistent with the Development Code, General Plan, and the San Jacinto Municipal Code.**

   The proposed Tentative Tract Map (TTM 39076) is consistent with the San Jacinto Municipal Code and has been reviewed in accordance with the applicable provisions of Titles 16 and 17. The Project includes a Planned Development Permit to allow limited, controlled modifications to the development standards of the Residential Low Density (RL) zone, which are intended to facilitate a cohesive and well-designed residential community.

   Upon approval of the General Plan Amendment and Change of Zone, the Project will be consistent with the Low Density Residential (LDR) General Plan land use designation and the corresponding RL zoning designation. The proposed subdivision is consistent with the permitted density range and establishes a logical and orderly pattern of residential development.

   The Project implements applicable General Plan goals and policies, including:

   - Land Use Goal 2 and Policies LU-2.1 and LU-2.2, by promoting orderly and coordinated growth that is compatible with surrounding residential neighborhoods and supported by an interconnected circulation network and accessible open space; and

   - Land Use Goal 3 and Policies LU-3.1 and LU-3.2, by facilitating high-quality residential development that is compatible with adjacent land uses and incorporates design features that enhance neighborhood character and connectivity.

   Based on the foregoing, the proposed subdivision is consistent with the Development Code, General Plan, and Municipal Code.

2. **The tentative map does not propose to divide land which is subject to a contract entered into pursuant to the California Land Conservation Act of 1965, or the land is subject to a Land Conservation Act contract but the resulting parcels following division of the land will be of an adequate size to sustain their agricultural use**

   The project site is not subject to a contract pursuant to the California Land Conservation Act of 1965 as detailed in the analysis completed through the Mitigated Negative Declaration document. In addition, the projects title report did not have indication of a Williamson Act Contract.

3. **The site is physically suitable for the type and proposed density of development proposed by the tentative map.**

   The Project site is physically suitable for the proposed subdivision of 419 single-family residential lots. The proposed use is consistent with the Residential Low Density (RL) zoning designation and the Low Density Residential (LDR) General Plan land use designation, which permits residential development within the proposed density range.

   The site is of sufficient size and configuration to accommodate the proposed subdivision, including residential lots, internal circulation, and open space areas. The Project represents a logical expansion of existing and planned residential development in the surrounding area, including neighborhoods to the north, east, and west.

   The Project site has access to existing and planned infrastructure necessary to support the proposed development, including potable water, wastewater, natural gas, and electrical services, which are available within adjacent roadways. The site is also located in proximity to existing community amenities, including parks and schools, which support the residential character of the Project.

   Based on the foregoing, the site is physically suitable for the type and density of development proposed.

4. **The design of the subdivision and the proposed improvements, with conditions of approval, are either:**

   a. **Not likely to cause significant environmental damage or substantially and avoidably injure fish or wildlife or their habitat; or**

      An Initial Study was prepared for the Project in accordance with the California Environmental Quality Act (CEQA) to evaluate potential environmental impacts. The Initial Study determined that, with the incorporation of mitigation measures, the Project will not have a significant effect on the environment, including impacts to biological resources such as fish and wildlife and their habitat.

      All mitigation measures identified in the Initial Study have been incorporated into the Project and will be implemented through the Mitigation Monitoring and Reporting Program. Accordingly, the design of the subdivision and proposed improvements is not likely to cause significant environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

b. An environmental impact report under which a finding has been made pursuant to Public Resources Code Section 21081(a)(3) that specific economic, social, or other considerations make infeasible mitigation measures or project alternatives identified in the environmental impact report.

The project's impacts were not significant enough to require the preparation of an environmental impact report. A Mitigated Negative Declaration was prepared for the Project to assess any significant environmental impacts, and it was determined that a Mitigated Negative Declaration is the appropriate level of environmental document. Therefore, findings pursuant to Public Resources Code Section 21081(a)(3) are not necessary.

5. The design of the subdivision of land and the type of improvements are not likely to cause serious public health problems.

The implementation of the proposed conditions will ensure that the Project will not be detrimental to the public interest, health, safety, convenience, or welfare of the City or the future residents of the development. As previously mentioned, a Mitigated Negative Declaration was prepared for the proposed subdivision, which analyzed items that can cause public health problems such as Air Quality, Hazardous Materials, and Utilities. It was determined through the environmental document that with incorporation of mitigation measures, the impacts to public health problems would be less than significant

6. That design of the subdivision provides for future passive or natural heating or cooling opportunities in the subdivision to the extent feasible.

The design of the subdivision will provide for future passive cooling opportunities with the implementation of building setbacks, lot coverage requirements, landscaping requirements, including required street trees, and open space areas. This can also include configuration to permit orientation of a structure to take advantage of shade and prevailing breezes. Furthermore, natural heating opportunities can be provided with orientation of a structure in an east-west alignment for southern exposure.

The proposed project is a subdivision and Planned Development Permit, subsequent development will be analyzed and conditioned through a Site Plan and Design Review. As part of the Site Plan and Design Review process, the Planning Department will ensure that natural heating and cooling opportunities are explored to the extent feasible and condition the project accordingly.

7. **The design of the subdivision and the type of improvements will not conflict with easements acquired by the public at large for access through or use of property within the proposed subdivision, or the design of the alternate easements which are substantially equivalent to those previously acquired by the public will be provided.**

   Per the title report provided by the project applicant, the site consists of two easements for a right-of-way over a strip of land 30 feet wide located outside the property line on Cawston Avenue. The second easement is granted to Easter Municipal Water District for sewage transmission and collection facilities. This easement is located outside the property lines along Cawston Avenue. These two easements are shown in the Tentative Tract Map and will not conflict with the development of the proposed Project.

8. **The subdivision is consistent with the City's parkland dedication requirements (per the Quimby Act), as applicable, in accordance with Chapter 16.75 (Parkland Dedication and Fees).**

   The proposed subdivision is consistent with the City's parkland dedication requirements pursuant to Chapter 16.75 of the San Jacinto Municipal Code. The Project provides approximately 3.26 acres of usable parkland within designated park lots, which contributes toward satisfying the City's parkland dedication requirement.

   Any remaining parkland obligation will be satisfied through the payment of in-lieu fees, in accordance with Chapter 16.75, as required by the Conditions of Approval.

   Based on the foregoing, the Project complies with the City's parkland dedication requirements..

PLANNED DEVELOPMENT PERMIT FINDINGS:

1. **The Planned Development Permit will:**

    a. **Be allowed within the subject base zone;**

    The Project includes a Change of Zone to the Residential Low Density (RL) zone. The RL zone is intended to accommodate detached single-family residential development, along with accessory uses and other compatible uses, at a density range of 2.1 to 7.0 dwelling units per acre.

    The Planned Development Permit is an allowed entitlement within the RL zone and is intended to provide flexibility from standard development requirements in order to achieve superior site design and community planning. Accordingly, the Planned Development Permit is permitted within the proposed base zone..

    b. **Be consistent with the purpose, intent, goals, policies, actions, and land use designations of the General Plan and any applicable specific plan;**

    The Project site is proposed to be designated Low Density Residential (LDR) under the General Plan, which permits detached single-family residential development at a density of 2.1 to 7.0 dwelling units per acre. The Project proposes a density of 5.53 dwelling units per acre, which is within the allowable range and consistent with the intended use of the LDR designation. The Project site is not located within a Specific Plan area.

    The Project is consistent with the purpose and intent of the General Plan by facilitating a well-planned residential community that balances efficient land use with neighborhood compatibility and access to amenities. The Planned Development Permit allows for modifications to development standards that support a cohesive site design while maintaining consistency with the overall density and character envisioned by the General Plan.

    The Project implements applicable General Plan goals and policies, including:

    - Land Use Policy LU-1.6, by incorporating an integrated system of open space and recreational amenities, including multiple parks, paseos, and gathering areas that support community interaction and outdoor activity;

    - Land Use Policy LU-4.4, by promoting pedestrian-oriented design through internal walkways, paseo connections, and

access to the Class I multi-use trail along Esplanade Avenue; and

- Land Use Policy LU-5.4, by providing well-designed, multi-functional open spaces, including neighborhood parks and a basin park, that serve a variety of recreational and community needs.

Based on the foregoing, the Planned Development Permit is consistent with the purpose, intent, goals, policies, and land use designations of the General Plan.

c. **Be generally in compliance with all of the applicable provisions of this Development Code relating to both on-site and off-site improvements that are necessary to accommodate flexibility in site planning and property development and to carry out the purpose, intent, and requirements of this Chapter and the subject base zone, including prescribed development standards and applicable design guidelines, except for those provisions modified in compliance with this Chapter.**

The Project is compliant with the Provisions of the Development Code relating to on-site and off-site improvements. The Project's off-site improvements will include a Class 1 Multi-Use along Esplanade Avenue as required per the Trails Master Plan. Additionally, the Project will be conditioned to dedicate and provide improvement along Esplanade Avenue, Cawston Avenue, and Seventh Street. On-site improvements will include 3.26-acres of open space amenities and connections to the proposed Class I Multi-Use Trail. The proposed modified development standards for the Project will accommodate flexibility in site planning and property development, while still upholding the intentions and goals of the Development Code by creating a cohesive neighborhood community. Therefore, the Project is found to be compliant with all the applicable provisions of the development code relating to both on-site and off-site improvements.

d. Ensure compatibility of property uses within the zone and general neighborhood of the proposed development.

The Project will include single-family residential uses and complementary recreational and open space areas. The combination of uses is generally considered compatible and will create a cohesive residential neighborhood. The development of the Class I Multi-Use Trail will continue the intent of creating an integrated trails network throughout the City and will serve as an amenity for residents nearby and within the development. The Project site is bound by residential uses.

The surrounding land uses designations include: Specific Plan to the west, Low Density Residential to the north, Very Low Density Residential to the east, and City of Hemet to the south. Development surrounding the Project Site is planned to be of similar character, land use, and density. Therefore, the proposed Project is found to be compatible the zone and with the general neighborhood of the proposed development.

2. **The proposed project will produce a comprehensive development of superior quality and excellence of design (e.g., appropriate variety of structure placement and orientation opportunities, appropriate mix of structure sizes, high quality architectural design, significantly increased amounts of landscaping and improved open space, improved solutions to the design and placement of parking and loading facilities, incorporation of a program of highly enhanced amenities [e.g., additional public art], LEED or other "green" related standards, etc.) than might otherwise occur from more typical development applications;**

   The proposed Project includes 3.26-acres of common areas and recreational amenities. This includes play areas, turf / open space area, and picnic areas. The Project additionally proposes to construct a Class I Multi-Use Trail along Esplanade Avenue. This trail will include a meandering six (6) foot sidewalk, landscaped parkway located on both sides of the walkway, and proposed channel. This trail will connect to the internal pedestrian paths.

   The architectural styles proposed will reflect styles farm style inspired. The Project, with its architectural styles, supporting landscape palette, open spaces, and monumentation, offers a development with excellence of design. The architectural styles include Spanish, Prairie, and Farmhouse for the future 419 dwelling units, accompanied by nine (9) color schemes. The incorporation of multiple styles and color options is intended to enhance visual interest while maintaining a unified aesthetic throughout the subdivision. In addition, the PDP proposes five (5) distinct floor plans, each offering three (3) elevation types. The design of the residential lots and variation in architecture creates a diverse community and avoids a monotonous appearance.

3. **Proper standards and conditions have been imposed to ensure the protection of the public health, safety, and welfare;**

   The Project Site is currently and has historically been used for agricultural purposes. Due to this fact, the environmental analysis of the Project Site included a Phase I Environmental Safety Assessment (Phase I ESA) to analyze any hazards that could result from development of the site. The Phase I ESA found that due to the historical use of this property for agricultural purposes dating back from at least 1930's, it is possible agricultural chemicals

such as pesticides and fertilizers have likely been applied to crops grown on the Proposed Project Site. Through the adoption of the Mitigation and Monitoring Program within the Conditions of Approval for the Project, any hazards that could create a significant hazard to the public or the environment through the conversion of agricultural land to residential uses will be significantly reduced to create a safe, healthy environment. Additionally, plans for the proposed residential development will be required to be submitted and approved through Site Plan and Design Review process.

Additionally, the Zoning, Fire, and Building Codes will ensure that that the development of the project will meet applicable safety standards. Therefore, it is found that with the incorporation of the above mentioned Mitigation Measures, Conditions of Approval, and the requirements of the Zoning, Fire, and Building Codes will ensure the protection of the public health, safety and welfare.

4. **Proper on-site traffic circulation (e.g., pedestrian and vehicular) and control is designed into the development to ensure protection for fire suppression and police surveillance equal to or better than what would normally be created by compliance with the minimum setback and parcel width standards identified in Article 2 (Zones, Allowable Land Uses, and Zone Specific Standards);**

   The proposed Planned Development Permit incorporates a comprehensive internal circulation system designed to accommodate both vehicular and pedestrian traffic while ensuring adequate access for emergency response and public safety services. The Project has been reviewed for compliance with applicable City standards and the requirements of the City Engineer, Riverside County Fire Department, and Sheriff's Department.

   The internal street network is designed to provide efficient circulation and connectivity throughout the Project site. Roadway widths, including minimum 24-foot fire access lanes where applicable, and turning radii have been designed to accommodate emergency vehicles, service vehicles, and passenger traffic. The interconnected street system enhances accessibility for fire suppression and law enforcement response.

   Pedestrian circulation is supported through sidewalks, paseos, and connections to on-site parks and adjacent improvements, including the Class I multi-use trail along Esplanade Avenue. These features promote safe and convenient pedestrian movement throughout the community.

   Based on the foregoing, the Project provides proper on-site traffic circulation and control for both vehicular and pedestrian movement and ensures protection for fire suppression and police services equal to or better than that which would be achieved through strict compliance with standard

development requirements..

5. **The subject parcel is adequate in terms of size, shape, topography, and circumstances to accommodate the proposed development;**

   The proposed Project Site is generally flat and is shaped to accommodate a proper lot layout. Section 17.620.020 of the Development Code states that the minimum lot size for a Planned Development Permit is 2 acres. The proposed Project site greatly exceeds this requirement and is 73.06-net acres. The proposed Project will provide an efficient use of land that will meet the purpose and intent of the Low Density Residential (LDR) General Plan land use designation by modifying the development standards to accommodate a 2-7 dwelling unit per acre development as required by the 2024 General Plan. Therefore, the subject parcel is adequate in terms of size, shape, topography, and circumstances to accommodate the proposed development.

6. **Adequate public services and facilities exist, or will be provided, in compliance with the conditions of approval, to serve the proposed development and the approval of the proposed development will not result in a reduction of public services to properties in the vicinity to be a detriment to public health, safety, and general welfare;**

   Adequate public services and facilities exist, or will be provided, to serve the proposed development. The Project has been reviewed by applicable City departments and service providers, including Public Works, Public Utilities, Sheriff's Department, and Riverside County Fire Department, to ensure that the development can be adequately served.

   Utility services, including potable water, wastewater, electricity, natural gas, telecommunications, and solid waste services, are available within the vicinity of the Project site or will be extended to serve the development. Eastern Municipal Water District has indicated its willingness and ability to provide water and wastewater service to the Project.

   The Project will be conditioned to ensure that all required infrastructure improvements are constructed and that service connections and applicable fees are provided prior to occupancy. Emergency access and response capabilities have been incorporated into the Project design and will be subject to review and approval by the appropriate agencies.

   Based on the foregoing, adequate public services and facilities exist, or will be provided, to serve the Project, and the proposed development will not result in a reduction of service levels to surrounding properties.

7. **The proposed development, as conditioned, will not have a substantial adverse effect on surrounding property or their allowed use;**

   The proposed development will not have a substantial adverse effect on surrounding properties or their allowed uses. The Project is consistent with the General Plan and zoning designations of the surrounding area and represents a logical extension of existing and planned residential development.

   The Project has been designed to be compatible with adjacent uses through site planning, building placement, and the incorporation of landscaping, open space, and internal circulation. The transition from the Project site to surrounding properties is appropriate for the area, whether adjacent lands remain in agricultural use or develop in accordance with the General Plan.

   The Project is subject to Conditions of Approval and compliance with applicable Municipal Code requirements, including noise, lighting, and traffic standards, as well as the California Building Code and Fire Code. These requirements are intended to prevent nuisances and ensure that the development does not create adverse impacts on surrounding properties.

   Based on the foregoing, the proposed development, as conditioned, will not have a substantial adverse effect on surrounding property or their allowed use.

8. **If the development proposes to mix residential and commercial uses whether done in a vertical or horizontal manner, the residential use is designed in a manner that it is appropriately buffered from the commercial use and is provided sufficiently enhanced amenities to create a comfortable and healthy residential environment and to provide a positive quality of life for the residents. The enhanced amenities may include additional landscaping, additional private open space, private or separated entrances, etc;**

   The Project does not propose a mix of residential and commercial uses as the project does not include Commercial uses.

9. **The design, location, operating characteristics, and size of the proposed development will be compatible with the existing and future land uses in the vicinity, in terms of aesthetic values, character, scale, and view protection; and**

   This project will have the appropriate buffers such as exterior walls and perimeter landscaping to ensure that it will be compatible with any future land use whether it remains agricultural, develops with Residential, Commercial or a project that integrates both, in accordance with the General Plan.

10. **The applicant agrees in writing to comply with any and all of the conditions imposed by the review authority in the approval of the Planned Development Permit.**

    The Applicant has agreed with all of the conditions imposed by the review authority prior to the issuance of any permits or recordation of any documents.

General Notes, Requirements, and Conditions of Approval
General Plan Amendment, Change of Zone, Planned Development Permit, and Tentative Tract Map 39076

Approval Date: Tentative
Effective Date: Tentative
Expiration Date: Tentative

PROJECT LOCATION: West site of Cawston Avenue extending between Seventh Street and Esplanade Avenue
San Jacinto, CA APN: 432-260-009, 432-260-026, 432-260-027

APPLICANT: **Ramona Dairy, LLC**
Richard Micheal
2451 Ramona Expressway
San Jacinto, CA 92582

ACCEPTED AND AGREED TO BY: _____
Applicant (signature) Date

PROJECT DESCRIPTION

A General Plan Amendment from Very Low Density Residential to Low Density Residential; a Change of Zone from Rural Residential to Residential Low Density; approval of a Planned Development Permit and Tentative Tract Map 39076 to subdivide three parcels into 419 single-family residential lots on approximately 73.97 gross acres, including on-site roadways, parks, a detention basin, and landscaping.

General Requirements & Information

A. To the extent permitted by law the applicant/licensee shall by accepting these conditions agree to defend (with legal counsel of City's selection), indemnify, and hold harmless the City and its elected and appointed officials, agents, attorneys, employees and officers, from any action, claim or proceeding brought by any party other than the applicant/licensee against the City or its elected and appointed officials, agents, employees and officers to attack, set aside, void, or annul a discretionary land use approval of the City, which action is brought within the applicable statute of limitations. The required indemnification shall include damages awarded against the City, if any, costs of suit, attorneys' fees and other costs and expenses incurred in connection with the action. The City shall promptly notify the applicant/licensee of any such claim, action, or proceeding and cooperate fully in the defense.

B. The residential subdivision shall comply with all required development standards of the Development Code and the Planned Development Permit (PDP). When a conflict between the Development Code and the PDP exists, the PDP standards will supersede the Development Code

C. An SB 330 Preliminary Application was submitted for this development and became effective on March 31, 2025 (the "Vesting Date"), which is the date the applicant submitted a complete application pursuant to Government Code Section 65941.1. **The City will utilize the development standards and fees in effect on March 31, 2025**.

D. The residential subdivision shall comply with the Subdivision Map Act (Government Code Section 66410 et seq.) and Title 16 (Subdivisions) of the Municipal Code.

E. The effective date of Tentative Tract Map 39076 is ten (10) days following the approval date. The approval will lapse if a final map has not recorded within three (3) years from the date upon which the approval was granted. Unless a time extension is approved by the City's applicable review authority, applications for time extensions must be received prior to the expiration date. The filing of a final map for phase 1 of the Tentative Tract Map shall extend the life of the remaining portion of the Tentative Tract Map consistent with Government Code section 66452.6. The Tentative Tract Map may be recorded in phases in a manner consistent with the phasing map.

F. The developer/applicant or successor in interest shall pay any outstanding planning application or processing fees within ten (10) days of City's request therefore and prior to permits being exercised. Failure to do so will be grounds for Code Enforcement actions, revocation, or further legal action.

G. The Project shall fully and continually comply with all applicable conditions of approval, State, Federal, and local laws in effect at the time the permit is approved and exercised, and which may become effective and applicable thereafter. Failure to do so will be grounds for Code Enforcement actions, revocation, or further legal action.

H. This permit shall run with the land associated to the project/permit and continues to be valid upon change of ownership. All applicable conditions of approval shall continue to apply with a change in property ownership.

I. All plans submitted to the City shall be in substantial conformance with the plans in this approval as conditioned. This condition applies to site plans, grading plans, landscape plans, building plans, elevations, and all other illustrations, text, or plans submitted to the City in connection with the Project.

J. The approved entitlement cannot be legally conducted on the subject property until all applicable conditions of approval have been met to the satisfaction of the Planning Department.

K. The applicant shall be subject to all applicable development fees. Such fees may include, but not be limited to Development Impact Fees, Park Fees, School Fees, Transportation Uniform Mitigation Fees, and Multiple Species Habitat Conservation Plan Fees.

L. Signs shall be permitted in accordance with Chapter 17.335 – Sign Regulations of the Development Code in effect on the Vesting Date. Any signs, including exterior-mounted, monument, and window signs, shall be subject to separate review and assessment. A separate sign application, including fees and additional sets of plans, will be necessary prior to sign permit issuance.

M. The City shall have the right to inspect the site and facilities to ensure compliance with the conditions of approval and to recover its actual costs related to such inspections from the property owner or tenant.

N. Site Plan and Design Review (SPDR) for construction of the dwelling units shall ensure that all lumber scraps,

combustible materials, and other debris be picked up daily, or more often as required by the Building and Safety Division.

O. All existing and new utilities adjacent to and on the Project site shall be located underground as per City of San Jacinto Municipal Code Section 15.32.

P. In the event of a conflict between any conditions for this approval, the most restrictive regulations shall apply.

Q. The contractor shall comply with the following best practices during the construction phase of the development.

- The erection (including excavation), demolition, alteration or repair of any building shall occur between the **hours** of seven a.m. and seven p.m. on weekdays and Saturdays, and between 9:00 a.m. and 6:00 p.m. on Sundays and holidays, except when such work complies with the terms of a temporary use permit which may be issued by the community development director or his or her designee, upon a showing of sufficient need due to hot or inclement weather, or the use of an unusually long process material, or other circumstances of unusual and compelling nature.

- During the entire active construction period, equipment and trucks used for the project construction shall utilize the best available noise control techniques (e.g., improved mufflers, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible.

- During the entire active construction period, stationary noise sources shall be located as far from sensitive receptors as possible, and they shall be incorporated to the extent feasible.

- Select haul routes that avoid the greatest amount of sensitive use areas. Avoid soil hauling through residential areas.

- Signs shall be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes.

- Equipment shall be maintained and operated such that loads are secured from rattling or banging.

R. A copy of all pages of these Conditions shall be included in the construction drawing packages for grading plans and building permits, including landscaping permits.

S. During the entire active construction period and to the extent feasible, the use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. The construction manager shall use smart back-up alarms, which automatically adjust the alarm level based on the background noise level, or switch off back-up alarms and replace them with human spotters in compliance with all safety requirements and laws.

T. A grading permit shall be obtained from the City of San Jacinto prior to the commencement of any grading outside of the City-maintained Road right-of-way.

U. The Project is required to comply with San Jacinto Development Code Section 17.300.080 which requires all exterior lighting to be shielded or modified and located so as to eliminate spillover illumination or glare beyond the property line or upward into the sky.

Engineering Department General Requirements & Information

V. With respect to the Conditions of Approval for the above referenced project, the City of San Jacinto requires that the developer/property owner provides the following street improvements and/or road dedications in accordance with the City of San Jacinto Municipal Code. It is understood that the site plan correctly shows all existing and proposed easements, traveled ways, rights-of-way, and drainage courses with appropriate Q's and their omission may require the site plan to be resubmitted for further consideration. These ordinances and the following conditions are essential parts and requirement occurring in ONE is as binding as though occurring in all. They are intended to be complimentary and to describe the conditions for a complete design of the improvements. Unless otherwise noted, all offsite improvements as conditioned shall be installed prior to issuance of any occupancy permits. All questions regarding the true meaning of the conditions shall be referred to the City Engineer's office. In the event of a conflict between any conditions stated below, those imposed by Planning Department and others, and requirements identified in the approved Traffic impact Analysis, the most stringent in the opinion of the City shall prevail.

W. The project grading shall be in a manner to perpetuate existing natural patterns. Any deviation from this, concentration or increase in runoff must have approval of adjacent property owners and City Engineer. The developer/property owner shall accept the offsite runoff and convey to acceptable outlet.

X. Prior to commencement of any construction or installation of fencing in public right-of-way, an encroachment permit shall be obtained from the City Engineer's office.

Y. The developer/property owner shall secure City's and appropriate agencies' clearances and approvals of the improvement plans.

Timing	Responsible Department	Prior to Recordation of the Final Map (Phase 1)	Met?
Prior to Recordation of the Final Map Phase 1	Planning	1) The Final Map shall accurately depict the Typical Rear Yard sections within the PDP.	☐
Prior to Recordation of the Final Map Phase 1	Planning	2) The developer/applicant shall prepare CC&R's for City review and approval. The CC&R's shall include a provision for maintenance of the common spaces within the subdivision and shall include a provision allowing the increase of fees to ensure continued maintenance of all common and public areas in the event any assessment district is reduced or eliminated. A Homeowners Association (HOA) shall be established to enforce the CC&Rs, and to provide ongoing maintenance of the parking areas, park, basins and landscaped areas.	☐
Prior to Recordation of the Final Map Phase 1	Engineering	3) A final map shall be filed for review and approval and shall be recorded.	☐
Prior to Recordation of the Final Map Phase 1	Engineering	4) The developer/property owner shall have approved improvement plans, executed subdivision improvement agreement, and posted securities for the public improvements.	☐

Timing	Responsible Department	Prior to Recordation of the Final Map (Phase 1)	Met?
Prior to Recordation of the Final Map Phase 1	Engineering	5) A total of 52 feet (52') shall be dedicated for all interior streets within Phase 1 and will be privately maintained.	☐
Prior to Recordation of the Final Map Phase 1	Engineering	6) A total of 56 feet (56') shall be dedicated for Street "A", a privately maintained street.	☐
Prior to Recordation of the Final Map Phase 1	Engineering	7) A total of 80 feet (80') shall be dedicated for the Street "K" entry, a privately maintained street.	☐
Prior to Recordation of the Final Map Phase 1	Engineering	8) Seventh Street is classified as a Major per the City General Plan. A 30-foot wide halfwidth right-of-way is currently dedicated along the property's northerly frontage. The developer/property owner shall dedicate the required additional 20 feet (20') of right-of-way to provide for a 50-foot wide halfwidth right-of-way.	☐
Prior to Recordation of the Final Map Phase 1	Engineering	9) Cawston Avenue is classified as a Major per the City General Plan. A 30-foot wide halfwidth right-of-way is currently dedicated along the property's easterly frontage. The developer/property owner shall dedicate the required additional 20 feet (20') of right-of-way to provide for a 50-foot wide halfwidth right-of-way.	☐

Timing	Responsible Department	Prior to Recordation of the Final Map (Phase 1)	Met?
Prior to Recordation of the Final Map Phase 1	Engineering	10) Property line corner cutbacks shall be dedicated per County of Riverside Standard No. 805.	☐
Prior to Recordation of the Final Map Phase 1	Engineering	11) All easements and/or public street rights-of-way shall be offered for dedication to the public or other appropriate agencies in perpetuity and shall continue in force until the City or the appropriate agency accepts or abandons such offers.	☐
Prior to Recordation of the Final Map Phase 1	Engineering	12) The developer/property owner shall sign the consent and waiver form to join the City's Flood Control District as appropriate. The proposed streetlights and traffic signals shall be maintained by the City and cost paid by the developer/property owner through the said annexation.	☐
Prior to Recordation of the Final Map Phase 1	Engineering	13) The developer/property owner shall submit the following to the City Engineer for review and approval: • Street Improvement Plans • Street Light Plans prepared by a registered Electrical Engineer • Signing and Striping, Traffic Signal Plans as appropriate • Onsite Grading and Erosion Control Plans – Plans shall show the approved WDID No. • Geotechnical Report (for reference) • Sewer and Water Plans • Storm Drain Improvement Plans • Hydrology and Hydraulic Analysis • Final WQMP (for reference) including WDID No.	☐

Timing	Responsible Department	Prior to Recordation of the Final Map (Phase 1)	Met?
		• Traffic Signal Plan The design shall comply with Eastern Municipal Water District (EMWD), Fire Department, Riverside County Flood Control and Water Conservation District (RCFCD), Riverside County Transportation Department, Caltrans, City of San Jacinto and ADA most recent standards, criteria, and requirements and in effect at the time of construction and shall be coordinated with the approved plans of the adjacent developments.	
Prior to Recordation of the Final Map Phase 1	Engineering	14) The following statement shall be added to the Final Map: NOTICE OF DRAINAGE FEES – Notice is hereby given that this property is located in San Jacinto Valley Area Drainage Plan which was adopted by the City of San Jacinto pursuant to Ordinance 13-01 and Section 66001, et seq, of the Government Code and that said property is subject to fees for said drainage area. Notice is further given that, pursuant to Ordinance 13-01, payment of the drainage fees shall be paid to the City of San Jacinto prior to issuance of the building permit for a parcel, and that the property owner shall pay the fee required at the rate in effect at the time of issuance of the actual permit.	☐
Prior to Recordation of the Final Map Phase 1	Special Districts	15) Establish a funding mechanism for the maintenance of public improvements. • One such mechanism is annexation into the Public Facilities Maintenance Community Facilities District (CFD) is an option to fulfill the funding requirement for maintenance of public improvements. If a property owner opts to annex into a CFD, the annexation must be finalized in order to satisfy this condition.	☐

Timing	Responsible Department	Prior to Recordation of the Final Map (Phase 1)	Met?
Prior to Recordation of the Final Map Phase 1	Special Districts	16)Establish a funding mechanism for the public safety services. • One such mechanism is annexation into the Public Safety Community Facilities Districts (CFD) is an option to fulfill the funding requirement for public safety services. Funding of services under the City's CFDs will consist of an annual assessment based on the costs of such services, as determined by a City's Engineer's Estimate and established by tax zone.	☐

Timing	Responsible Department	Prior to Recordation of the Final Map (Phase 2)	Met?
Prior to Recordation of the Final Map Phase 2	Engineering	17)A final map for phase 2 shall be filed for review and approval and shall be recorded.	☐
Prior to Recordation of the Final Map Phase 2	Engineering	18)The developer/property owner shall have approved improvement plans, executed subdivision improvement agreement, and posted securities for the public improvements.	☐
Prior to Recordation of the Final Map Phase 2	Engineering	19)A total of 52 feet (52') shall be dedicated for all interior streets withing phase 2. Interior Streets will be privately maintained.	☐

Timing	Responsible Department	Prior to Recordation of the Final Map (Phase 2)	Met?
Prior to Recordation of the Final Map Phase 2	Engineering	20) Esplanade Avenue is classified as an Arterial per the City General Plan. A 56-foot wide halfwidth right-of-way is currently dedicated along the property's southerly frontage. The developer/property owner shall dedicate the required additional 17 feet (17') of right-of-way to provide for a 73-foot wide halfwidth right-of-way with Phase 2.	☐
Prior to Recordation of the Final Map Phase 2	Engineering	21) Property line corner cutbacks shall be dedicated per County of Riverside Standard No. 805.	☐
Prior to Recordation of the Final Map Phase 2	Engineering	22) All easements and/or street rights-of-way shall be offered for dedication to the public or other appropriate agencies in perpetuity and shall continue in force until the City or the appropriate agency accepts or abandons such offers.	☐
Prior to Recordation of the Final Map Phase 2	Engineering	23) The developer/property owner shall sign the consent and waiver form to join the City's Lighting and Landscape Districts and City's Flood Control District as appropriate. The proposed streetlights and traffic signals shall be maintained by the City and cost paid by the developer/property owner through the said annexation.	☐
Prior to Recordation of the Final Map Phase 2	Engineering	24) The developer/property owner shall submit the following to the City Engineer for review and approval: • Street Improvement Plans • Street Light Plans prepared by a registered Electrical Engineer • Signing and Striping, Traffic Signal Plans as appropriate • Onsite Grading and Erosion Control Plans – Plans shall show the	

Timing	Responsible Department	Prior to Recordation of the Final Map (Phase 2)	Met?
		approved WDID No. • Geotechnical Report (for reference) • Storm Drain Improvement Plans • Hydrology and Hydraulic Analysis • Final WQMP (for reference) including WDID No. • Traffic Signal Plan The design shall comply with Eastern Municipal Water District (EMWD), Fire Department, Riverside County Flood Control and Water Conservation District (RCFCD), Riverside County Transportation Department, Caltrans, City of San Jacinto and ADA most recent standards, criteria, and requirements and in effect at the time of construction and shall be coordinated with the approved plans of the adjacent developments.	
Prior to Recordation of the Final Map Phase 2	Engineering	25)The following statement shall be added to the Final Map: NOTICE OF DRAINAGE FEES – Notice is hereby given that this property is located in San Jacinto Valley Area Drainage Plan which was adopted by the City of San Jacinto pursuant to Ordinance 13-01 and Section 66001, et seq, of the Government Code and that said property is subject to fees for said drainage area. Notice is further given that, pursuant to Ordinance 13-01, payment of the drainage fees shall be paid to the City of San Jacinto prior to issuance of the building permit for a parcel, and that the property owner shall pay the fee required at the rate in effect at the time of issuance of the actual permit.	☐

Timing	Responsible Department	Prior to a Specific Date	Met?
30-days Prior to Grading	Planning	26) **Mitigation Measure BIO-1**: Burrowing Owl Pre-Construction Surveys. The Project Applicant shall retain a qualified Biologist to conduct a pre-construction survey for burrowing owl on the Proposed Project Site (and including adjacent areas within 500 feet to the extent possible) within 30 days prior to construction. Methods for the pre-construction surveys shall be conducted as a one-day focused survey following the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP 2006). Following the survey, the Biologist shall prepare a Memorandum/Letter Report describing the methods and results of the survey for submittal to the City. If burrowing owl are observed, the Report shall also make recommendations for avoidance and minimization measures depending on the timing of construction and the location of the active burrow with respect to planned activities. If burrowing owl are observed, the Project Applicant (or their designee) shall contact the City to discuss avoidance and minimization options. During the breeding season (i.e., March 1 to August 31), restrictions shall be placed on construction activities in the vicinity of any active burrow until the burrow is no longer active, as determined by a qualified Biologist. The protective buffer shall be 500 feet (or as otherwise approved by the City) around the active burrow. The protective buffer shall be flagged clearly in the field, mapped as an “Environmentally Sensitive Area,” and the maps provided to the Project Applicant, their designee (e.g., Construction Supervisor), and the City. During the wintering season, an active burrow may be closed following CDFW-approved procedures with permission from the City. If the wintering burrow would not be directly impacted, a protective buffer of 160 feet (or as otherwise approved by the City) shall be placed around the burrow. The protective buffer shall be flagged clearly in the field, mapped as an “Environmentally Sensitive Area,” and the maps	☐

Timing	Responsible Department	Prior to a Specific Date	Met?
		provided to the Project Applicant, their designee (e.g., Construction Supervisor), and the City. The Project Applicant shall not proceed with construction until the avoidance and minimization measures have been approved by the City and all appropriate protections are in place.	
Three days prior to Grading	Planning	27) **Mitigation Measure BIO-2**: Nesting Bird Survey. To the extent possible, vegetation removal will be conducted during the non-breeding season (September 12 to January 31) in order to minimize direct impacts on nesting birds and raptors. If construction activities would be initiated during the peak breeding season for nesting birds/raptors (February 1–June 30), a pre-construction survey will be conducted by a qualified Biologist within three days prior to the initiation of construction (including demolition of structures). The nesting bird/raptor survey area will include a buffer of 100 feet around the work area for nesting birds and a buffer of 500 feet around the work area for nesting raptors. This survey can be combined with the pre-construction burrowing owl survey described in MM BIO-1. If the Biologist does not find any active nests in or immediately adjacent to the impact area, construction activities can proceed. If the Biologist detects an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted, or breeding activities substantially disrupted by increased activity around the nest, the Biologist will determine an appropriate protective buffer around the nest depending on the sensitivity of the species and the nature of the construction activity. The protective buffer shall be between 25 to 100 feet for nesting birds and 300 to 500 feet for nesting raptors. No work will be allowed within the protective buffer until nesting activity has ended, as determined by a qualified Biologist. Any protective buffers will be flagged clearly in the field, mapped as “Environmentally Sensitive Areas,” and the	☐

Timing	Responsible Department	Prior to a Specific Date	Met?
		maps provided to the Project Applicant, their designee (e.g., Construction Supervisor), and the City. Construction can proceed within the protective buffer when the qualified Biologist has determined that the nest is no longer active (i.e., fledglings have left the nest, or the nest has failed).	

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
Prior to Issuance of Grading Permit	Planning	28) A grading permit shall be obtained from the City of San Jacinto prior to the commencement of any grading outside of the City-maintained road right-of-way.	☐
Prior to Issuance of Grading Permit	Planning	29) A copy of all pages of these Conditions shall be included in the construction drawing packages for grading plans.	☐
Prior to Issuance of Grading Permit	Planning	30) All imported soils/fill shall be tested to ensure Contaminants of Concern (COC's) meet the applicable screening levels as outlined in DTSC's Preliminary Endangerment Assessment Guidance Manual. The applicant/developer shall provide the following to the Planning Department for review: a. Report of testing performed. b. Documentation of the origins of the soil/fill material, if applicable, sampling be conducted to ensure that the imported soil/fill material are suitable for the intended land use. c. The soil sampling should include analysis based on the source of the soil/fill and knowledge of prior land use.	☐
Prior to Issuance of Grading Permit	Planning	31) **Mitigation Measure BIO-3.** Western Riverside County Regional Conservation Authority Multiple Species Habitat Conservation Plan (MSHCP) Fee. Prior to the issuance of a grading permit, the Project Applicant shall pay the MSHCP mitigation fee as directed by the City of San Jacinto based on the most current rates.	☐

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
Prior to Issuance of Grading Permit	Planning	32) **Mitigation Measure BIO-4.** MSHCP Construction Minimization Measures. The Project Applicant and their designee (i.e., Construction Contractors) shall follow required MSHCP Construction Minimization Measures (Section 7.5.3 of the MSHCP). Applicable construction minimization measures are listed below. Plans for water pollution and erosion control will be prepared for all Discretionary Projects involving the movement of earth in excess of 50 cubic yards. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, use of plant material for erosion control. Plans will be reviewed and approved by the City prior to construction. Timing of construction activities will consider seasonal requirements for breeding birds and migratory non-resident species. Habitat clearing will be avoided during species active breeding season defined as March 1 to June 30. Sediment and erosion control measures will be implemented until such time soils are determined to be successfully stabilized.	☐
Prior to Issuance of Grading Permit	Planning	33) **Mitigation Measure CUL-1.** Archaeological Monitor. The Project proponent shall retain a Project Archaeologist prior to the initiation of ground-disturbing activities to monitor ground-disturbing activities occurring within native sediment (in situ material). In the event that archaeological resources are discovered at the Proposed Project Site, the handling of the discovered resources shall occur, as described below. All artifacts discovered shall be inventoried and analyzed by the Project Archaeologist. If any artifacts of Native American	☐

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
		origin are discovered, all activities in the immediate vicinity of the find (within a 50-foot radius) shall stop, and the Project Archaeologist shall notify the property owner and tribes identified by the NAHC as being affiliated with the area. The Project Archaeologist and Tribal Representative will analyze the Native American artifacts for identification as everyday life and/or religious or sacred items, cultural affiliation, temporal placement, and function, as deemed possible. The significance of Native American resources shall be evaluated in accordance with the provisions of CEQA and shall consider the religious beliefs, customs, and practices of the affiliated tribes. All items found in association with Native American human remains shall be considered grave goods or sacred in origin and subject to special handling. Non-Native American artifacts shall be inventoried, assessed, and analyzed for cultural affiliation, personal affiliation (prior ownership), function, and temporal placement. After analysis and reporting, these artifacts shall be subjected to curation or returned to the property owner, as deemed appropriate. Once grading activities have ceased or the Project Archaeologist, in consultation with the lead agency and Tribal Representative, determines that monitoring is no longer necessary, monitoring activities can be discontinued. A report of findings, including an itemized inventory of recovered artifacts, shall be prepared upon completion of the steps outlined above. A copy of the report shall also be filed with the EIC.	

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
Prior to Issuance of Grading Permit	Planning	34) **Mitigation Measure CUL-2.** Discovery of Human Remains. All discovered human remains shall be treated with respect and dignity. California State law (California Health & Safety Code Section 7050.5) and federal law and regulations ([Archaeological Resources Protection Act 16 United States Code (USC) 470 & 43 Code of Federal Regulations (CFR) 7], [Native American Graves Protection & Repatriation Act 25 USC 3001 & 43 CFR 10] and [Public Lands, Interior 43 CFR 8365.1–7]) require a defined protocol if human remains are discovered in the State of California regardless of whether the remains are modern or archaeological in origin. If human remains, grave goods, ceremonial items, and/or sacred items are encountered, work will immediately halt within the immediate area and any nearby area reasonably suspected to overlie adjacent remains, and a 100-foot ESA boundary will be established to protect the find from impact, and the Soboba Band of Luiseno Indians and the City of San Jacinto Planning Division shall be immediately notified. In accordance with Section 7050.5 of the California Health and Safety Code and CEQA Guidelines Section 15064.5(e), if human remains are found, the Riverside County Coroner's office shall be notified by the permittee within 24 hours of the discovery. County Coroner's determination regarding the origin of the remains and any required notification is described in Section 7050.5 of the California Health and Safety Code and CEQA Guidelines Section 15064.5(e). No further excavation or disturbance of the potential human remains, or any area reasonably suspected to overlie additional remains, shall occur until a determination has been made, any notifications have been sent and received, and the Riverside County Coroner's Office has cleared the site.	☐

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
Prior to Issuance of Grading Permit	Planning	35) **Mitigation Measure GEO-1**. Paleontological Treatment Plan. In the event that potential paleontological resources are discovered during ground-disturbing activities, work will stop in that area and within 30 feet of the find until a qualified paleontologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures may include monitoring by a qualified paleontologist during construction-related ground- disturbing activities. The monitor will retain the option to reduce monitoring if it is determined that the sediments were previously disturbed. Monitoring may also be reduced if potentially fossiliferous units are not present or, if present, are determined to have a low potential to contain fossil resources. The monitor will be equipped to salvage fossils and samples of sediments as they are unearthed and will be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Recovered specimens will be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Specimens will be curated into a professional, accredited museum repository with permanent retrievable storage. A report of findings, with an appended itemized inventory of specimens, will be prepared and will signify completion of the mitigation.	☐
Prior to Issuance of Grading Permit	Planning	36) **Mitigation Measure TCR-1:** Prior to grading permit issuance, the developer shall enter into a Treatment and Disposition Agreement (TDA) with the Soboba Band of Luiseño Indians to address treatment and disposition of archaeological, or Tribal Cultural Resources and human remains associated with the Soboba Band of Luiseño Indians that may be uncovered or otherwise discovered during ground-disturbing activities related to the project, if monitoring deemed necessary by Soboba Band of Luiseño Indians. The TDA will establish provisions for tribal monitoring	☐

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
		and shall be submitted to the Planning Division once it has been executed.	
Prior to Issuance of Grading Permit	Planning	37) If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine the identity of and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD must complete the inspection within 48 hours of being granted access to the site. If human remains, grave goods, ceremonial items, and/or sacred items are encountered, work will immediately halt within the immediate area and any nearby area reasonably suspected to overlie adjacent remains, and a 100-foot ESA boundary will be established to protect the find from impact, and the Soboba Band of Luiseno Indians and the City of San Jacinto Planning Division shall be immediately notified. In accordance with Section 7050.5 of the California Health and Safety Code and State CEQA Guidelines Section 15064.5(e), if human remains are found, the Riverside County Coroner's office shall be notified by the permittee within 24 hours of the discovery. County Coroner's determination regarding the origin of the remains and any required notification is described in Section 7050.5 of the California Health and Safety Code and State CEQA Guidelines Section 15064.5(e). No further excavation or disturbance of the potential human remains, or any area reasonably suspected to overlie additional remains, shall occur until a determination has been made, any notifications have been sent and received, and the Riverside County Coroner's Office has cleared the site.	☐

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
Prior to Issuance of Grading Permit	Planning	38) The Migratory Bird Treaty Act (MBTA) prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service. The list of migratory bird species protected by the law is primarily based on bird families and species included in the four international conservation treaties that the U.S. entered into with Canada in 1916, Mexico in 1936, Japan in 1972, and Russia in 1976. The list of birds protected under the law can be found under Title 50 Part 10.13 of the Code of Federal Regulations. Additionally, California Fish and Game Code Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." California Fish and Game Code Section 3511 prohibits the taking of any bird listed as fully protected and Section 3515 states that is it unlawful to take any non-game migratory bird protected under the MBTA.	☐
Prior to Issuance of Grading Permit	Planning	39) A copy of all pages of these Conditions shall be included in the construction drawing packages for grading plans.	☐
Prior to Issuance of Grading Permit	Planning	40) The proposed site design BMPs selected for this project have been approved in concept. The project shall submit a Final Addendum WQMP including plans and details providing the elevations and slopes of the three bioretention basins and other details for the proposed structural BMPs. The Public Works Department shall review and approve the Final WQMP document, plans and details. The Public Works Department shall review and approve the Final WQMP document, plans and details.	☐

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
Prior to Issuance of Grading Permit	Planning	41) The development shall be subject to all provisions of City of San Jacinto Municipal Code Chapter 13.44, which establishes Urban Stormwater Runoff Management and discharge controls to improve Water Quality and comply with Federal/State Regulations and any subsequent amendments, revisions or ordinances pertaining thereto.	☐
Prior to Issuance of Grading Permit	Planning	42) A Final Water Quality Management Plan (WQMP) shall be submitted and approved, including a project description, and identifying Best Management Practices (BMPs) that will be used on-site to reduce pollutants into the storm drain system to the maximum extent practicable. The Water Quality Management Plan shall identify the structural and non-structural measures consistent with the City's adopted requirements.	☐
Prior to Issuance of Grading Permit	Planning	43) The developer/applicant or successor in interest shall prepare a Stormwater Pollution Prevention Plan (SWPPP) and obtain a Notice of Intent (NOI) to comply with obtaining coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit from the State Water Resources Control Board. Evidence that this has been obtained (i.e., a copy of the Waste Discharger's Identification Number) shall be submitted to the City for coverage under the National Pollutant Discharge Elimination System General Construction Permit. **The applicant/developer shall provide documentation to the City for review.**	☐
Prior to Issuance of Grading Permit	Planning	44) The contractor shall provide a letter that agreeing to follow the City's General Plan and Noise Ordinance. In addition, the letter shall indicate the contractor shall implement the following best practices during the construction phase of the development.	☐

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
		a. Limit construction to the daytime hours (7:00 AM to 7:00 PM) and prohibit construction on Sundays and holidays. b. At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction on days and hours, as well as telephone numbers of the City's and contractor's authorized representative that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report to the City. c. During the entire active construction period, equipment and trucks used for the project construction shall utilize the best available noise control techniques (e.g., improved mufflers, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible. d. During the entire active construction period, stationary noise sources shall be located as far from sensitive receptors as possible, and they shall be incorporated to the extent feasible. e. Select haul routes that avoid the greatest amount of sensitive use areas. Avoid soil hauling through residential areas. f. Signs shall be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes. g. During the entire active construction period and to the extent feasible, the use of noise-producing signals, including horns, whistles, alarms,	

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
		and bells, shall be for safety warning purposes only. The construction manager shall use smart back-up alarms, which, automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace them with human spotters in compliance with all safety requirements and laws. h. No radios or other sound equipment shall be used at this site unless required for emergency response by the contractor. i. The City shall require the developer to require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by applicant personnel during construction activities. j. Equipment not in use for five minutes shall be shut off. k. Equipment shall be maintained and operated such that loads are secured from rattling or banging. l. Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment. **The applicant / developer shall provide a letter from the contractor agreeing to implement this condition.**	
Prior to Issuance of Grading Permit	Building & Safety / Planning	45) The developer shall comply with the following requirements to the satisfaction of the Building & Safety Division: a. The site shall be watered on an on-going basis to control dust during construction and grading.	☐

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
		b. There shall be regular street sweeping and clean up of adjacent streets to minimize the amount of dust put into the air from motor vehicle travel. c. Mud and dirt shall be removed from construction equipment and vehicles prior to leaving the site to ensure they do not spread dirt into the street. An energy conservation plan showing compliance with Title 24 (Building Standards) of the California Administrative Code shall also be provided.	
Prior to Issuance of Grading Permit	Building & Safety / Planning	46) Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill material. If covering is not feasible, then measures such as the use of straw bales or sandbags shall be used to capture and hold eroded material on the project site for future cleanup.	☐
Prior to Issuance of Grading Permit	Building & Safety / Planning	47) All exposed, disturbed soil (trenches, stored backfill, etc.) shall be sprayed with water or soil binders twice a day, or more frequently if fugitive dust is observed migrating from the project site during future construction activities.	☐

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
Prior to Issuance of Grading Permit	Building & Safety / Planning	48) Prior to and during grading and construction, should an accidental release of a hazardous material occur, the following actions will be implemented: a. Construction activities in the immediate area will be immediately stopped; appropriate regulatory agencies will be notified; immediate actions will be implemented to limit the volume and area impacted by the contaminant; the contaminated material, primarily soil, shall be collected and removed to a location where it can be treated or disposed of in accordance with the regulations in place at the time of the event; b. Any transport of hazardous waste from the property shall be carried out by a registered hazardous waste transporter; and testing shall be conducted to verify that any residual concentrations of the accidentally released material are below the regulatory remediation goal at the time of the event. All of the above sampling or remediation activities related to the contamination will be conducted under the oversight of Riverside County Certified Unified Program Agency (CUPA) Site Mitigation Unit (SMU). All of the above actions shall be documented and made available to the appropriate regulatory agencies prior to closure (a determination of the regulatory agency that a site has been remediated to a threshold that poses no hazard to humans) of the contaminated area.	☐
Prior to Issuance of Grading Permit	Engineering	49) The developer/property owner shall have approved grading and improvement plans, executed grading agreement as directed by the City Engineer, and posted securities.	☐

Timing	Responsible Department	Prior to Issuance of Grading Permit	Met?
Prior to Issuance of Grading Permit	Engineering	50) The developer/property owner shall submit the following plans and reports to the City Engineer for review and approval: a. Onsite Grading and Erosion Control Plans – Plans shall show the approved WDID No. b. Geotechnical Report (for reference) c. Storm Drain Improvement Plans d. Hydrology and Hydraulic Analysis e. Final WQMP (for reference) including WDID No. f. Traffic Signal Plan The design shall comply with, RCFCD, , and City of San Jacinto, and ADA most recent standards, criteria, and requirement and in effect at the time of construction and shall be coordinated with the approved plans of the adjacent developments.	☐

Timing	Responsible Department	Prior to Issuance of Building Permit (Phase 1)	Met?
Prior to Issuance of Building Permits of Phase 1	Planning	51) The applicant shall demonstrate compliance with SCAQMD rules, Rule 201 – Permit to Construct and Rule 203 – Permit to Operate by obtaining the proper permits from SCAQMD. The applicant/developer shall provide documentation that these permits were obtained.	☐
Prior to Issuance of Building Permits of Phase 1	Planning	52) All plans submitted shall be in substantial conformance to the approved Planned Development Permit and Tentative Tract Map. This condition applies to site plans, grading plans, landscape plans, building plans, elevations, and all other illustrations, text, or plans submitted to the City in connection with the project.	☐
Prior to Issuance of Building Permits of Phase 1	Planning	53) Grading and public improvements shall be installed in accordance with city standards and specifications.	☐
Prior to Issuance of Building Permits of Phase 1	Planning	54) Building permit plans shall be substantially consistent with plans approved through this entitlement, as determined by City Planning.	☐
Prior to Issuance of Building Permits of	Planning	55) A Site Plan & Design Review plan shall be submitted and approved by the City. The design review shall be consistent with the Residential Development Design Regulations (Section 17.425.020) and other relevant	☐

Phase 1		sections of the Development Code. At a minimum it should consist of: a. A precise grading plan with the plotting of homes, setbacks from property lines, paved areas, slopes, etc.; b. Floor plans; c. Architectural elevations (in color) of all sides; d. Typical front yard landscaping; e. Entry monumentation, and parkway landscape treatments; f. Wall and Fence Plan that includes a decorative block wall around the perimeter of the project and interior fencing; and g. Common mailbox architectural treatment h. Elevations of houses facing Esplanade Avenue, Cawston Avenue, and 7th Street shall be enhanced.	
Prior to Issuance of Building Permits of Phase 1	Planning	56) **Mitigation Measure HAZ-1.** Asbestos Containing Materials Survey. Prior to the disturbance of any suspect Asbestos Containing Materials (ACMs) during construction or demolition activities at the Proposed Project Site, a comprehensive survey shall be required to sample materials on-site and confirm the presence or absence of ACMs. If such materials are identified and need to be disturbed, repaired, or removed, a licensed abatement contractor shall be consulted further.	☐
Prior to Issuance of Building Permits of Phase 1	Planning	57) **Mitigation Measure HAZ-2.** Methane Testing. Prior to the issuance of building permits, methane testing shall be conducted by a licensed engineer, geologist, or registered environmental assessor, and as necessary, shall include measures to reduce concentrations of methane to an acceptable level.	☐

Prior to Issuance of Building Permits of Phase 1	Planning	58) The developer/applicant or successor in interest shall record a "Water Quality Management Plan and Urban Runoff BMP Transfer Access and Maintenance Agreement," to provide public notice of the requirement to implement the approved Final project-specific WQMP and the maintenance requirements associated with the WQMP. The developer/applicant or successor in interest shall ensure the following, pursuant to Section XII. I. of the 2010 NPDES Permit: Field verification that structural Site Design, Source Control, and Treatment Control BMPs are designed, constructed and functional in accordance with the approved Final Water Quality Management Plan (WQMP). City WQMP Inspector will be notified for required inspections during construction.	☐
Prior to Issuance of Building Permits of Phase 1	Planning	59) Submit a detailed landscape and irrigation plan for review and approval. The landscape plans shall be prepared by a licensed landscape architect in conformance with Chapter 17.325 – Water Efficient Landscape and Irrigation and Section 17.325.060 – Landscape and Irrigation Submittal Package Requirements of the Development Code and the City Landscape Design Guidelines for review and approval by the City Landscape Architect. Plans should be submitted at least 30 days prior to the expected date of permit issuance. The Landscape and Irrigation Submittal Package shall include: a. A completed application packet provided by the City; b. The Water Efficient Landscape Worksheet, including the MAWA and ETWU; Note the ETo rate for San Jacinto is 56.8 per State guidelines. c. The soils management report; d. The landscape design plan;	☐

		e. The irrigation design plan; f. The grading plan.	
Prior to Issuance of Building Permits of Phase 1	Planning	60) Submit a Fence and Wall Plan for review that shows the following: a. The developer will work with any adjacent property owners to remove existing walls/fencing (double walls are not permitted). b. The developer will show on the plans how they will connect to the existing wall located to the west. Proposed wall should be similar in color, material, pilaster size, and caps.	☐
Prior to Issuance of Building Permits of Phase 1	Building & Safety	61) The contract with demolition and construction contractors shall include the requirement that all materials that can be recycled shall be salvaged and recycled. This includes, but is not limited to, wood, metals, concrete, road base, and asphalt. The developer shall submit a recycling plan to the City for review and approval prior to the start of demolition/construction activities to accomplish this objective.	☐
Prior to Issuance of Building Permits of Phase 1	Riverside County Fire Department	62) Residential Fire Sprinklers: Residential fire sprinklers are required in all one and two-family dwellings per the California Residential Code (CRC). Plans must be submitted to the Office of the Fire Marshal for review and be approved prior to installation. Reference	☐
Prior to Issuance of Building Permits of Phase 1	Riverside County Fire Department	63) Phased Construction Access and Water Supply: If construction is phased, an approved phasing plan shall be approved by the Fire Department. Each phase shall provide approved access and water supply for fire protection prior to any construction. Reference CFC as amended.	☐

Prior to Issuance of Building Permits of Phase 1	Riverside County Fire Department	64) Fire and Life Safety Requirements - Final fire and life safety conditions will be addressed when the Fire Department reviews any subsequent submittals. These conditions will be based on California Fire Code (CFC), California Building Code (CBC), and related codes/standards adopted and amended at the time of construction plan submittal.	☐
Prior to Issuance of Building Permits of Phase 1	Riverside County Fire Department	65) Fire Protection Water Supplies/Fire Flow - Minimum fire flow for the construction of all buildings is required per CFC Appendix B. Prior to building permit issuance for new construction, the applicant shall provide documentation to the Fire Department to show there exists a water system capable of delivering the required fire flow. Specific design features may increase or decrease the required fire flow. Reference CFC 507.3 as amended. **Will Serve Letters from the responsible water purveyor are required prior to a map recordation.**	☐
Prior to Issuance of Building Permits of Phase 1	Riverside County Fire Department	66) Fire Protection Water Supplies/Hydrants – The minimum number of fire hydrants required, as well as the location and spacing of fire hydrants, shall comply with the CFC Appendix C. Fire hydrants shall be located no more than 600 feet from all portions of the exterior of the building along an approved route from a fire apparatus access road. Where new water mains are extended along streets and hydrants are not needed for protection of structures, standard fire hydrants shall be provided as spacing not to exceed 1000 feet along streets for transportation hazards. The size and number of outlets required for the approved fire hydrants are 4” x 2 ½”. Final fire hydrant locations shall be determined during the fire water plan review. Reference CFC as amended.	☐

Prior to Issuance of Building Permits of Phase 1	Riverside County Fire Department	67) Tract Water Plans – If fire hydrants are required to be installed, applicant/developer shall furnish the water system fire hydrant plans to Fire Department for review and approval prior to building permit issuance. Plans shall be signed by a registered civil engineer, and shall confirm hydrant type, location, spacing, and minimum fire flow. Once plans are signed and approved by the local water authority, the originals shall be presented to the Fire Department for review and approval. Reference CFC as amended.	☐
Prior to Issuance of Building Permits of Phase 1	Riverside County Fire Department	68) Fire Department Access - Fire apparatus access roads shall be provided within 300 feet of all exterior portions of buildings, unless otherwise approved by the Fire Department. Fire apparatus access roads shall have an unobstructed width of no less than 24 feet. Dead-end fire apparatus access roads exceeding 150 feet shall provide an approved turn around. The minimum required turning radius of a fire apparatus access road is 38 feet outside radius and 14 feet inside radius. The construction of the fire apparatus access roads shall be all weather and capable of sustaining 75,000 lbs. Unless otherwise approved, the grade of a fire apparatus access road shall not exceed 16 percent and the cross slope shall not exceed 2.5 percent. The angles of approach and departure for fire apparatus access roads shall be a maximum of 6 percent grade change for 25 feet of approach/departure. Reference CFC as amended and Riverside County Fire Department Policies and Standards. Fire Lane marking: Identification and marking of fire lanes, including curb details and signage, shall comply with all Riverside County Fire Department Standards.	☐

Prior to Issuance of Building Permits of Phase 1	Riverside County Fire Department	69) Fire Department Access Turn Around - Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with a bulb turnaround at the terminus measuring a minimum of 38 feet outside radius and 14 feet inside radius. Parallel parking around the perimeter of the bulb is acceptable provided the bulb outside turning radius is increased by 8 feet. In-lieu of a bulb, a hammer-head type turnaround is acceptable where the top of the "T" dimension is 120 feet with the stem in the center. Additional turnaround designs may be acceptable as approved by the Fire Department. Reference CFC as amended and Riverside County Fire Department Policies and Standards.	☐
Prior to Issuance of Building Permits of Phase 1	Riverside County Fire Department	70) Secondary Access - Additional fire apparatus access roads based on the potential for impairment by vehicle congestion, condition of terrain, climatic conditions, anticipated magnitude of a potential incident, or other factors that could limit access shall be required by the Fire Department. Secondary access fire apparatus access roads shall provide independent egress/access for the area, as approved by the Fire Department. Secondary access fire apparatus access roads shall be as remote as practical from the primary fire apparatus access road to reduce the possibility that both routes will be obstructed by a single emergency. Additional fire apparatus access roads based on the potential for impairment by vehicle congestion, condition of terrain, climatic conditions, anticipated magnitude of a potential incident, or other factors that could limit access may be required by the Fire Department. Reference CFC as amended and Riverside County Fire Department Policies and Standards.	☐
Prior to Issuance of Building Permits of	Riverside County Fire Department	71) Traffic Calming Devices - Requests for installation of traffic calming designs/devices on fire apparatus access roads shall be submitted and approved by the Office of the Fire Marshal. Reference CFC as amended.	☐

Phase 1			
Prior to Issuance of Building Permits of Phase 1	Engineering	72) The developer/property owner shall submit to Building and Safety a compaction certification from the Soils Engineer in compliance with the approved geotechnical/soils report and the pad elevation certification from the Civil Engineer in compliance with the approved Precise Grading Plan.	

Timing	Responsible Department	Prior to Acceptance of Public Improvements (Phase 1 and 2)	Met?
Prior to Acceptance of Public Improvements	Special Districts	73) Developer will ensure that funds are available for maintenance, in the event that improvements are completed, and ready for City takeover, PRIOR to levy collection. a. The first installment of collected assessments is paid to the City in January of each year. In the event that takeover is requested before the first installment is paid to the City, the Developer will either: i. Pay an advancement of funds for the months included from takeover to collection (amount to be set by cost estimate at annexation) OR ii. Continue to maintain improvements until City has acquired enough funds to sustain maintenance or until first assessment installment is received, whichever is first.	☐
Prior to Acceptance of Public Improvements	Special Districts	74) Upon acceptance and City take-over, developer will ensure that a minimum of one-year warranty is in place for landscape, irrigation, and basin integrity, inclusive pumps and mechanical equipment used for the maintenance of the improvements taken over.	☐
Prior to Acceptance of Public Improvements	Special Districts	75) Parks and associated facilities shall be inspected by a Certified Access Specialist through the Division of the State Architect ensuring compliance with applicable state and federal construction-related accessibility standards. A copy of the disability access inspection certificate and the CASp inspection report shall be provided to the City. Any accessibility barriers documented will need to be remedied prior to acceptance of the park by the City	☐

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase1)	Met?
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Planning	76) The developer/applicant or successor in interest shall submit the following items for the landscape and irrigation development and maintenance: The signed Landscape Certificate of Completion pursuant to Section 17.325.070– Certificate of Completion of the Development Code; The irrigation scheduling pursuant to Section 17.325.080 – Irrigation Scheduling of the Development Code; The Landscape and Irrigation Maintenance Schedule pursuant to Section 17.325.090 – Landscape and Irrigation Maintenance Schedule of the Development Code; and The Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis pursuant to Section 17.325.100 — Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis of the Development Code. Pursuant to Section 17.325.150 – Maintenance of the Development Code, all installed landscaping and irrigation systems shall be continually maintained. Maintenance shall consist of regular watering, mowing, pruning, fertilizing, clearing of debris and weeds, monitoring for pests and disease, the removal and timely replacement of dead plants, and the repair and timely replacement of irrigation systems, and integrated architectural features.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Planning	77) The subdivider shall pay a fee for neighborhood and community park and recreation purposes according to the standards and formula contained in Title 16 – Subdivision Code, as applicable to each phase contemplated by the a final map.	☐

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase1)	Met?
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Planning	78) The developer shall pay all required Development Impact Fees (DIF) for parkland acquisition, parkland development, and park facilities in effect on the Vesting Date prior to the issuance of a certificate of occupancy or final inspection.at the time of permit issuance for each home. Upon the City's acceptance of the completed parks, the developer will receive a refund of the applicable fees pursuant to Title 16 of the Municipal Code. The amount of the refund shall not exceed the actual cost of the parkland acquisition, parkland development, and park facilities, nor shall it exceed the amount of the fees initially paid. No cross-category credit or refund shall be provided. The developer must provide documentation to the City demonstrating that the refunds do not exceed the actual costs incurred.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Building & Safety	79) The City has adopted Traffic Signal Mitigation Fees and the Transportation Uniform Mitigation Fee (TUMF) program. This Project shall be subject to payment of these fees prior certificate of occupancy unless exempted by the ordinance establishing the TUMF program. The fees shall be subject to the provisions of the enabling ordinance and based upon the fee schedule in effect upon the issuance of a certificate of occupancy or final inspection.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Building & Safety	80) Specific addresses for each building shall be provided to make such number plainly visible from the public street, avenue, court, or alley upon which property fronts, and shall be contrasting color and background.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	81) The following items need to be approved: a. Approved WDID No. b. Geotechnical Report (for reference) c. Storm Drain Improvement Plans	☐

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase1)	Met?
		d. Hydrology and Hydraulic Analysis e. Final WQMP (for reference) including WDID No. The design shall comply with, RCFCD and City of San Jacinto most recent standards, criteria, and requirement and in effect at the time of construction and shall be coordinated with the approved plans of the adjacent developments.	
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	82) Construct all interior streets within Phase 1. Interior Streets shall be private with a full width of 52 feet to provide for 36 feet asphalt paving (using TI of 5.5 and PG 64-10), curb and gutter at 18 feet on both sides of centerline, an 8-foot parkway consisting of landscaping, a 6-sidewalk, and streetlights subject to photometric analysis per City of San Jacinto, County of Riverside and Caltrans standards. A 24-foot wide access shall be provided for Fire access at all times. Street parking shall be restricted to one side of the street.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	83) Construct Street "A" from 7th Street to the southern edge of Street L. Street A shall be private with a full width of 56 feet improved to provide for 36 feet asphalt paving (using TI of 5.5 and PG 64-10) , curb and gutter at 18 feet on both sides of centerline, a 10-foot parkway consisting of landscaping, a 6-sidewalk, and streetlights subject to photometric analysis per City of San Jacinto, County of Riverside and Caltrans standards. A 24-foot wide access shall be provided for Fire at all times. Street parking shall be restricted to one side of the street.	☐

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase1)	Met?
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	84) Construct Street "K" from Cawston Avenue to the western edge of Street "A". Street K shall be private with a full width of 80 feet improved to provide for 40 feet asphalt paving (using TI of 5.5 and PG 64-10) , curb and gutter at 20 feet on both sides of centerline, a 20-foot parkway consisting of landscaping, a 6-sidewalk, and streetlights subject to photometric analysis per City of San Jacinto, County of Riverside and Caltrans standards.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	85) Seventh Street shall be improved to provide for a 50-foot wide halfwidth right-of-way, asphalt paving (using a TI of 9.0 and PG 70-10), 8-inch curb and gutter 32 feet south of centerline, a Class II: Buffered Bike Lane per the City of San Jacinto Trails Master Plan, and an 18-foot wide parkway consisting of landscaping, a 6-foot sidewalk, and streetlights subject to photometric analysis per City of San Jacinto, County of Riverside, and Caltrans standards. If the existing pavement is in good condition the developer/property owner may use grind and overlay technique as determined by the City Engineer.	☐

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase1)	Met?
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	86) Cawston Avenue shall be improved to provide for a 50-foot wide halfwidth right-of-way, asphalt paving (using a TI of 9.0 and PG 70-10), 8-inch curb and gutter 32 feet west of centerline, a Class II: Buffered Bike Lane per the City of San Jacinto Trails Master Plan, and an 18-foot wide parkway consisting of landscaping, a 6-foot sidewalk, and streetlights subject to photometric analysis per City of San Jacinto, County of Riverside, and Caltrans standards. If the existing pavement is in good condition the developer/property owner may use grind and overlay technique as determined by the City Engineer.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	87) This Property is located in the San Jacinto Valley Area Drainage Plan which was adopted by the City of San Jacinto pursuant to Ordinance 13-01 and Section 66001, et seq, of the Government Code and that said property is subject to fees for said drainage area. Notice is further given that, pursuant to Ordinance 13-01, payment of the drainage fees applicable to each phase shall be paid to the City of San Jacinto prior to certificate of occupancy of the 1st building permit for the phase, and that the property owner shall pay the fee required at the rate in effect at the upon the issuance of a certificate of occupancy or final inspection	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	88) All residential driveways shall be constructed per County of Riverside Standard No. 207.	☐

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase1)	Met?
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	89) All sidewalks shall comply with Riverside County Standard 401.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	90) Curb ramps shall include truncated domes per Riverside County Standard 403.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	91) The detention basin on Lot "A" is proposed to be maintained by the City. The basin shall be constructed per City of San Jacinto and Riverside County Flood Control and Water Conservation District (RCFCD) standards and design guidelines. To dewater the basin, a sump pump and force main is required. The developer purposes to pump nuisance flows to a bubble-up structure in the Seventh Street right-of-way just west of Anza Trail. From there, the storm water would flow through the gutter to a catch basin at Serrano Street where it would be collected and discharged into a detention basin constructed with the Esplanade Specific Plan. The entire system, including the Esplanade Specific Plan basin, must be accepted by the City for maintenance prior to the issuance of the 1st occupancy permit for this development.	☐

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase1)	Met?
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	92) The developer shall provide water and sewer services to each lot in accordance with the requirements of the appropriate utility purveyor. This development is within the City of San Jacinto sewer service area, and the EMWD water service area. Water and sewer improvements shall be designed and installed per EMWD Standards.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	93) Existing power poles with cables 66kV and under along the alley shall be removed and cables undergrounded. Poles with cables over 66kV shall be relocated as necessary, but other utilities on the pole must be undergrounded. Provide an undergrounding of utilities study by a utility consultant/electrical engineer analyzing and determining the extent of conformance.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	94) The developer/property owner shall provide for utility trench surface repair as directed by the City Engineer if applicable.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Special Districts	95) Development must comply with Storm Water Basin & Pump Specifications and Standards. Privately maintained storm water and water quality systems will be required to submit an Irrevocable Offer of Dedication for the basin lot.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Special Districts	96) Development must comply with Landscape and Irrigation Design Guidelines.	☐

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase1)	Met?
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Special Districts	97) Landscape improvements shall include irrigation meters and backflow devices with tampering preventive cage, exclusive for right- of-way landscaping. Right-of-way landscaping must be divided from private property by form or mow-curb or other approved materials.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Special Districts	98) Landscape areas in the right-of-way shall include an independent irrigation control system, with separate electric meter, exclusive for right-of-way landscaping. Cal-Sense version approved by the Public Utilities Superintendent is required for City maintained irrigation areas. (Must be operational and certified by Cal-Sense).	☐

Timing	Responsible Department	Prior to Issuance of Building Permits (Phase 2)	Met?
Prior to Issuance of Building Permits of Phase 2	Planning	99)All Phase 1 Conditions of Approval Prior to Occupancy Conditions are required to be completed.	☐
Prior to Issuance of Building Permits of Phase 2	Planning	100) All required infrastructure including, streets, basins and landscape setbacks, shall be complete to the satisfaction of the Planning Division and the City Engineer.	☐
Prior to Issuance of Building Permits of Phase 2	Planning	101) The applicant shall submit a revised plot plan that clearly illustrates all required setbacks measured from the property lines. a. The minimum setback from the property line to the garage shall be no less than twenty (20) feet. b. The applicant shall identify rear elevations that face the public right-of-way and show how they will be architecturally enhanced.	☐
Prior to Issuance of Building Permits of Phase 2	Planning	102) A Site Plan & Design Review plan shall be submitted and approved by the City. The design review shall be consistent with the Residential Development Design Regulations (Section 17.425.020) and other relevant sections of the Development Code. At a minimum it should consist of: a. A precise grading plan with the plotting of homes, setbacks from property lines, paved areas, slopes, etc.; b. Floor plans;	☐

Timing	Responsible Department	Prior to Issuance of Building Permits (Phase 2)	Met?
		c. Architectural elevations (in color) of all sides; d. Typical front yard landscaping; e. Entry monumentation, and parkway landscape treatments; f. Wall and Fence Plan that includes a decorative block wall around the perimeter of the project and interior fencing; and g. Common mailbox architectural treatment h. Elevations of houses facing Esplanade Avenue, Cawston Avenue, and 7th Street shall be enhanced.	

Timing	Responsible Department	Prior to Issuance of Building Permits (Phase 2)	Met?
Prior to Issuance of Building Permits of Phase 2	Planning	103) Submit a detailed landscape and irrigation plan for review and approval. The landscape plans shall be prepared by a licensed landscape architect in conformance with Chapter 17.325 – Water Efficient Landscape and Irrigation and Section 17.325.060 – Landscape and Irrigation Submittal Package Requirements of the Development Code and the City Landscape Design Guidelines for review and approval by the City Landscape Architect. Plans should be submitted at least 30 days prior to the expected date of permit issuance. The Landscape and Irrigation Submittal Package shall include: a. A completed application packet provided by the City; b. The Water Efficient Landscape Worksheet, including the MAWA and ETWU; Note the ETo rate for San Jacinto is 56.8 per State guidelines. c. The soils management report; d. The landscape design plan; e. The irrigation design plan; f. The grading plan.	☐
Prior to Issuance of Building Permits of Phase 2	Planning	104) Submit a Fence and Wall Plan for review that shows the following: a. The developer will work with any adjacent property owners to remove existing walls/fencing (double walls are not permitted). b. The developer will show on the plans how they will connect to the existing wall located to the west. Proposed wall should be similar in color, material, pilaster size, and caps.	☐

Timing	Responsible Department	Prior to Issuance of Building Permits (Phase 2)	Met?
Prior to Issuance of Building Permits of Phase 2	Planning	105) Submit a Fence and Wall Plan for review that shows the following: a. The developer will work with any adjacent property owners to remove existing walls/fencing (double walls are not permitted). b. The developer will show on the plans how they will connect to the existing wall located to the west. Proposed wall should be similar in color, material, pilaster size, and caps.	☐

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase 2)	Met?
Prior to the Issuance of a Certificate of Occupancy of Phase 2	Planning	106) The developer/applicant or successor in interest shall submit the following items for the landscape and irrigation development and maintenance: • The signed Landscape Certificate of Completion pursuant to Section 17.325.070– Certificate of Completion of the Development Code; • The irrigation scheduling pursuant to Section 17.325.080 – Irrigation Scheduling of the Development Code; • The Landscape and Irrigation Maintenance Schedule pursuant to Section 17.325.090 – Landscape and Irrigation Maintenance Schedule of the Development Code; and • The Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis pursuant to Section 17.325.100 — Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis of the Development Code. Pursuant to Section 17.325.150 – Maintenance of the Development Code, all installed landscaping and irrigation systems shall be continually maintained. Maintenance shall consist of regular watering, mowing, pruning, fertilizing, clearing of debris and weeds, monitoring for pests and disease, the removal and timely replacement of dead plants, and the repair and timely replacement of irrigation systems, and integrated architectural features.	☐

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase 2)	Met?
Prior to the Issuance of a Certificate of Occupancy of Phase 2	Planning	107) The developer shall pay all required Development Impact Fees (DIF) for parkland acquisition, parkland development, and park facilities in effect on the Vesting Date prior to the issuance of a certificate of occupancy or final inspection.at the time of permit issuance for each home. Upon the City's acceptance of the completed parks, the developer will receive a refund of the applicable fees pursuant to Title 16 of the Municipal Code. The amount of the refund shall not exceed the actual cost of the parkland acquisition, parkland development, and park facilities, nor shall it exceed the amount of the fees initially paid. No cross-category credit or refund shall be provided. The developer must provide documentation to the City demonstrating that the refunds do not exceed the actual costs incurred.	
Prior to the Issuance of a Certificate of Occupancy of Phase 2	Building & Safety	108) The City has adopted Traffic Signal Mitigation Fees and the Transportation Uniform Mitigation Fee (TUMF) program. This Project shall be subject to payment of these fees prior certificate of occupancy unless exempted by the ordinance establishing the TUMF program. The fees shall be subject to the provisions of the enabling ordinance and based upon the fee schedule in effect upon the issuance of a certificate of occupancy or final inspection.	
Prior to the Issuance of a Certificate of Occupancy of Phase 2	Building & Safety	109) Specific addresses for each building shall be provided to make such number plainly visible from the public street, avenue, court, or alley upon which property fronts, and shall be contrasting color and background.	

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase 2)	Met?
Prior to the Issuance of a Certificate of Occupancy of Phase 2	Engineering	110) Construct all interior streets within Phase 2. Interior Streets shall be private with a full width of 52 feet to provide for 36 feet asphalt paving (using TI of 5.5 and PG 64-10), curb and gutter at 18 feet on both sides of centerline, an 8-foot parkway consisting of landscaping, a 6-sidewalk, and streetlights subject to photometric analysis per City of San Jacinto, County of Riverside and Caltrans standards. A 24-foot wide access shall be provided for Fire access at all times. Street parking shall be restricted to one side of the street.	
Prior to the Issuance of a Certificate of Occupancy of Phase 2	Engineering	111) Esplanade shall be improved to provide for a 73-foot wide halfwidth right-of-way, asphalt paving (using a TI of 9.5 and PG 70-10), 8-inch curb and gutter 38 feet north of centerline, a Class I: Multi-Use Path per the City of San Jacinto Trails Master Plan, and an 35-foot wide parkway consisting of landscaping, and streetlights subject to photometric analysis per City of San Jacinto, County of Riverside, and Caltrans standards. 112) As part of the CIP program, the City is planning to widen Esplanade Avenue from Warren Road to Sanderson Avenue in 2026 and will include traffic signals at the intersections of Cawston Avenue and Sanderson Avenue, with two more lanes and a sidewalk. Streetlights will not be constructed as part of these improvements. The developer shall coordinate with the City on the installation of improvements. 113) If the existing pavement is in good condition the developer/property owner may use grind and overlay technique as determined by the City Engineer.	☐
Prior to the	Engineering	114) The developer shall provide water and sewer services to each lot in	☐

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase 2)	Met?
Issuance of a Certificate of Occupancy of Phase 2		accordance with the requirements of the appropriate utility purveyor. This development is within the City of San Jacinto sewer service area, and the EMWD water service area. Water and sewer improvements shall be designed and installed per EMWD Standards.	
Prior to the Issuance of a Certificate of Occupancy of Phase 2	Engineering	115) Existing power poles with cables 66kV and under along the alley shall be removed and cables undergrounded. Poles with cables over 66kV shall be relocated as necessary, but other utilities on the pole must be undergrounded. Provide an undergrounding of utilities study by a utility consultant/electrical engineer analyzing and determining the extent of conformance.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 2	Engineering	116) The developer/property owner shall provide for utility trench surface repair as directed by the City Engineer if applicable.	☐
Prior to the Issuance of a Certificate of Occupancy of Phase 1	Engineering	117) A traffic signal shall be installed at the intersection of Cawston Avenue and Cottonwood Avenue. The intersection shall be improved to accommodate the required vehicular travel lanes and pedestrian crossings as recommended by the project's traffic engineer and as directed by the City Engineer.	☐

Timing	Responsible Department	Prior to the Issuance of a Certificate of Occupancy (Phase 2)	Met?
Prior to the Issuance of a Certificate of Occupancy of Phase 2	Engineering	118) The following items need to be approved: a. approved WDID No. b. Geotechnical Report (for reference) c. Storm Drain Improvement Plans d. Hydrology and Hydraulic Analysis e. Final WQMP (for reference) including WDID No. The design shall comply with, RCFCD and City of San Jacinto most recent standards, criteria, and requirement and in effect at the time of construction and shall be coordinated with the approved plans of the adjacent developments.	☐

Timing	Responsible Department	Operational	Met?
Operational	Planning	119) The Project is required to comply with San Jacinto Development Code Section 17.300.080 which requires all exterior lighting to be shielded or modified and located so as to eliminate spillover illumination or glare beyond the property line or upward into the sky.	☐
Operational	Planning	120) All landscaped areas shall be maintained in a thriving condition free of weeds, trash, and debris.	☐

Timing	Responsible Department	Operational	Met?
Ongoing	Planning	121) The erection (including excavation), demolition, alteration or repair of any building shall occur between the hours of seven a.m. and seven p.m. on weekdays and Saturdays, and between nine a.m. and six p.m. on Sundays and holidays, except when such work complies with the terms of a temporary use permit which may be issued by the community development director or his or her designee, upon a showing of sufficient need due to hot or inclement weather, or the use of an unusually long process material, or other circumstances of unusual and compelling nature. All construction equipment shall be muffled and/or surrounded by noise attenuating barriers.	☐
Ongoing	Planning	122) **Mitigation Measure BIO-4.** MSHCP Construction Minimization Measures. The Project Applicant and their designee (i.e., Construction Contractors) shall follow required MSHCP Construction Minimization Measures (Section 7.5.3 of the MSHCP). Applicable construction minimization measures are listed below. Plans for water pollution and erosion control will be prepared for all Discretionary Projects involving the movement of earth in excess of 50 cubic yards. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, use of plant material for erosion control. Plans will be reviewed and approved by the City prior to construction. Timing of construction activities will consider seasonal requirements for breeding birds and migratory non-resident species. Habitat clearing will be avoided during species active breeding season defined as March 1	☐

Timing	Responsible Department	Operational	Met?
		to June 30. Sediment and erosion control measures will be implemented until such time soils are determined to be successfully stabilized.	

Planned Development Permit

Chacon Farms

Tentative Tract Map No. 39076

Prepared for:

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November 21, 2025

OVERVIEW

1. **Project Title:** Chacon Farms, TTM 39076
2. **Project Location:** The Project site is in the City of San Jacinto, County of Riverside, California. The site is located off Cawston Ave and between W. 7th St. and W. Esplanade Ave.
3. **Project Sponsor's Name and Address**: Ramona Dairy, LLC, 2451 Ramona Expressway, San Jacinto, CA 92582
4. **Current Zoning & General Plan Designation**: RR (Rural Residential) & VLDR (Very Low Density Residential)
5. **Proposed Zoning & General Plan Designation:** Residential, Low Density (RL), pursuant to the Zoning Map (San Jacinto 2012). Low Density Residential (LDR) (2.0 to 7.0 Dwelling Units per Acre), pursuant to the General Plan Land Use Policy Map (San Jacinto 2022).
6. **Proposed Project:** Ramona Dairy, LLC ("Applicant") proposes to develop approximately 75.70 acres of vacant land with up to 419 detached single-family homes and associated infrastructure and amenities to serve the residential community ("Project"). The development would include the construction of homes, four expansive active parks and amenities that will feature, pickle ball, shade structures, picnic tables, BBQs, and multiple play structures. Four water quality/stormwater detention basins, internal streets and sidewalks, bike lanes, landscaping, signage, and utility improvements to serve the site. Offsite improvements include street and sidewalk connections along the frontage of W. 7th St., Cawston Ave., and W. Esplanade Ave.

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PLANNED DEVELOPMENT PERMIT PROCEDURAL GUIDELINES

1. All development within the PDP shall comply with the requirements and standards set forth in this document. In some cases, this PDP provides direct references to the City of San Jacinto Development Code, and where this PDP is silent, the City of San Jacinto Development Code will provide additional guidance. Where a conflict exists between standards contained herein and those found in the City of San Jacinto Development Code, the standards in this document shall apply.

2. The Director shall require the posting of cash, a savings and loan certificate, or a performance bond issued by a corporate surety company, in an amount to be determined by the City Engineer, in compliance with Section 17.660.070 (Performance Guarantees), to cover the costs of the public improvements adjacent to the proposed development before the issuance of the Building Permit for the first phase of construction.

3. The Development Schedule is anticipated as follows:
    a. Final Engineering: Complete March 2026
    b. Grading Start: April 2026
    c. Home Construction Start: January 2027
    d. Final Closing: May 2031

4. All modifications to PDP must follow City of San Jacinto Develop Code, Section 17.620.070 – Planned Development Permit Amendment.

5. All development timing/scheduling shall be in tandem with Tentative Tract Map 39076 and shall not supersede Planning Commission Approvals.

    a. The development schedule for a Planned Development Permit shall indicate the approximate time period, after the Planned Development Permit becomes effective, when construction of the project can be expected to begin, the anticipated rate of development, and the anticipated completion date. If approved by the Commission, shall become a part of the Planned Development Permit and shall be adhered to by the owner of the property and the owner's successor(s)-in-interest.

    b. "NOTE: The Director shall require the posting of cash, a savings and loan certificate, or a performance bond issued by a corporate surety company, in an amount to be determined by the City Engineer, in compliance with Section 17.660.070 (Performance Guarantees), to cover the costs of the public improvements adjacent to the proposed development before the issuance of the Building Permit for the first phase of construction."

c. The developer shall construct all amenities shown and landscape all open spaces within each phase as it is completed, and before occupancy of any structure located within each phase of the development."

6. Landscaping Open Space Timing:
    a. Lot A & Lot B shall be completed with Phase 1, please see Exhibit D Phasing Plan.
    b. Lot D shall be completed with Phase 3, please see Exhibit D Phasing Plan.
    c. Lot C shall be completed with Phase 4, please see Exhibit D Phasing Plan.

7. Landscape Guideline:
    a. a. "The landscape guidelines and proposed landscape plans provided herein are additional guiding principles to ensure compatibility within the development, with surrounding areas and Citywide guidelines. However, all landscaping must abide by the City of San Jacinto's Water Efficient Landscape and Irrigation Standards found in Chapter 17.325 at minimum, and wherever these guidelines are silent, the Citywide Landscape Guidelines will provide additional guidance. Proposed plant species cannot be listed on the California Invasive Plant Council (CAL-IPC) Invasive Species Inventory or the Multiple Species Habitat Conservation Plan (MSHCP) Invasive Plant List."

PROJECT ATTRIBUTES & JUSTIFICATION FOR DENSITY INCENTIVE AND PLANNED DEVELOPMENT PERMIT

The Project has been a collaborative effort with City staff to design a high-quality residential community with modified standards and density incentives to help address the regions need for attainable homes and the critical housing shortage in California. The project conforms to the City's General Plan and Zoning Designation, but requires slight modifications to Development Code Standards.

<u>As part of the coordination local issues and constraints were improved:</u>

- **Issue:** Pedestrian connectivity.
  Improvement: Installation of sidewalks connecting 7th St and Esplanade Ave.

- **Issue:** Increased park and open space above typical Development Code Standards
  Improvement: Provide spaces for event programing, including multiple parks, pickle ball, shade structures, BBQs, picnic tables, and open space.

<u>Findings:</u>

- **Finding:** Be consistent with the purpose, intent, goals, policies, actions, and land use designations of the General Plan and any applicable specific plan.
  - **Justification:** The proposed Master Planned Residential Community provides a total of 419 residential units with a variety of single-family options to accommodate buyers of diverse incomes. It provides a variety of housing styles, layouts, and other characteristics that may be suited to the growing population of San Jacinto. The Proposed Project's contribution to housing needs of the local workforce will cut commute times and improve air quality. Chacon Farms' addition of 419 residential units to San Jacinto's housing supply, will increase the City's housing capacity and will contribute to the accommodation of the City's unmet RHNA. Lots sizes will range from 4,500 square feet to 8,622 square feet.

- **Finding:** Ensure compatibility of property uses within the zone and general neighborhood of the proposed development.
- **Finding:** The design, location, operating characteristics, and size of the proposed development will be compatible with the existing and future land uses in the vicinity, in terms of aesthetic values, character, scale, and view protection; and
  - **Justification:** The Proposed Project Site is surrounded by existing residential and agricultural uses. Directly to the north, northeast, and northwest across West 7th Street and to the east across Cawston Avenue North, are existing Single-Family Residential uses. To the west, is the Esplanade Specific Plan which will include 56.7 acres of mixed-use development and 130.7 acres of single-family residential development to provide 686 single-family homes. Directly south, and across West Esplanade Avenue are agricultural uses which are located within the Jurisdiction

of the City of Hemet. The Proposed Project will enhance the rural character, and active-lifestyle culture of the City of San Jacinto and bordering City of Hemet. Chacon Farms seeks to maintain its rural, agricultural legacy. A "farm feel" will be maintained through the use of farmhouse, craftsman and prairie architectural styles throughout the community. Architectural details will serve to reinforce the broader community design theme and work together within their broader context, thereby creating compatibility with neighboring properties and developments. Additionally, street and park names and other development details will be chosen in consistency with the Site's farm community heritage.

- **Finding:** The proposed project will produce a comprehensive development of superior quality and excellence of design (e.g., appropriate variety of structure placement and orientation opportunities, appropriate mix of structure sizes, high quality architectural design, significantly increased amounts of landscaping and improved open space, improved solutions to the design and placement of parking and loading facilities, incorporation of a program of highly enhanced amenities [e.g., additional public art], LEED or other "green" related standards, etc.) than might otherwise occur from more typical development applications;
    - **Justification:** Chacon Farms will create a unique sense of place through maintaining a "farm feel" that reinforces its agricultural legacy. Architecture of homes and other structures within residential areas and Community Parks will be consistent with the community's proposed agricultural theme. Architecture will be built in farmhouse, craftsman, and prairie styles, using quality materials such as stucco, brick, and stone, that convey a sense of permanence. A diverse set of colors will be incorporated, without deviating from the context of the broader community style or the context of each individual street. These design choices will enhance the visual attraction of the Chacon Farms community. Additionally, Community Parks featuring amenities that provide opportunity for recreation and interaction between residents will contribute to the active and social lifestyle that the proposed Community aims to promote.

- **Finding:** Proper standards and conditions have been imposed to ensure the protection of the public health, safety, and welfare;
    - **Justification:** The proposed Master Planned Residential Community substantially conforms with the General Plan and public health and public safety, as it will provide a planned layout that incorporates pedestrian safety and encourages physical activity and wellbeing. Four Community Parks, connected by a network of paths will provide numerous social and recreational opportunities for each resident.

- **Finding:** Proper on-site traffic circulation (e.g., pedestrian and vehicular) and control is designed into the development to ensure protection for fire suppression and police surveillance equal to or better than what would normally be created by compliance with the minimum setback and parcel width standards identified in Article 2 (Zones, Allowable

Land Uses, and Zone Specific Standards);

- **Justification:** The Proposed Project's inter-connected network of thoroughfares contributes to a balanced and efficient pattern, as it will disperse traffic and provide easy access to a variety of open spaces and centers of activity within the neighborhood. Residents will have access to the Class I Multi-Use Path along Esplanade Avenue. These thoroughfares will also contribute to public services by increasing emergency response accessibility.

- **Finding:** The subject parcel is adequate in terms of size, shape, topography, and circumstances to accommodate the proposed development;
  - **Justification:** The Project Site consists of three parcels with approximately 75.70 acres of total lot area and is located west of Cawston Avenue North, northeast of Warren Road, north of West Esplanade Avenue, and south of West Seventh Street. The site is surrounded by a mixture of residential and agricultural uses. Regional access to the vicinity is provided by State Route (SR) 74, approximately 3.9 miles south of the Project Site and SR 79, approximately 5.5 miles northeast of the site.

- **Finding:** Adequate public services and facilities exist, or will be provided, in compliance with the conditions of approval, to serve the proposed development and the approval of the proposed development will not result in a reduction of public services to properties in the vicinity to be a detriment to public health, safety, and general welfare;
  - **Justification:** The Project Site is approximately 0.6 miles (a 12-minute walk), from the Riverside Transit Agency (RTA) Go Micro service zone. Go Micro is RTA's on-demand public transit service available within the Hemet-San Jacinto micro transit zone. Shared rides can be booked via the Go Micro app at user convenience, rather than relying on a predetermined bus schedule. Go Micro minibuses directly pick up and drop off passengers at desired locations, at desired times (provided both locations are within the micro transit zone and that the trip does not begin and end at route 44 bus stops). The Project Site is surrounded by W. 7th Street to the north, Cawston Avenue N. to the east, and W. Esplanade Avenue to the South. All surrounding streets will meet the City's standards based on the classifications shown in the Circulation Master Plan. Further, the Site is designed with an interconnected network of thoroughfares which helps to disperse traffic.

- **Finding:** The proposed development, as conditioned, will not have a substantial adverse effect on surrounding property or their allowed use;
  - **Justification:** The site location and design are consistent with the nearby residential uses. The project site is surrounded by existing single-family residential directly to the north, northeast, and northwest across West Seventh Street. The Chacon Farms development will add 419 Single Family Homes within the 75.70 acre site. The location of the site provides pedestrian proximity to community features and amenities such as Catalpa Park (0.3 miles), Tahquitz High School (0.7 miles), Megan Cope Elementary School (0.7 miles), Rancho Viejo Middle School (0.9 miles) and Cawston Elementary School (1.3 miles).

Proposed Community Benefits and Attributes:

- Enhanced Open Space and Architecture Guidelines.
- Located nearby Tahquitz High School
- Strong compatibility with existing surrounding uses
- Meets or exceeds current solar energy and T-24 requirements
- 146,361.60 square feet of new parks for residents.
- New street improvements along Esplanade Avenue, Cawston Avenue, and 7th Street.
- New perimeter landscaping and street trees along Esplanade Avenue, Cawston Avenue, and 7th Street.
- New perimeter sidewalk and trails along Esplanade Avenue, Cawston Avenue, and 7th Street.

The Project has been a collaborative effort with City staff to design a high-quality residential community with modified standards and density incentives to help address the regions need for attainable homes and the critical housing shortage in California.

SITE PLANNING AND DESIGN

Quality residential subdivisions function as neighborhoods, encourage social interaction, promote healthful activities, and incorporate best practices in sustainable development planning. This section provides development standards for the planning and design of homes within the project to accomplish these goals and provide for a visually appealing, pedestrian friendly neighborhood environment.

1. Development Standards

Residential development within the Chacon Farms community shall comply with the development standards listed below:

Table 1

Lot Requirements	
Lot Area (minimum):	3,717 square feet
Lot Width (minimum):	45 feet
Lot Width Corner (minimum):	25 feet
Lot Depth (minimum):	60 feet
Lot Coverage – Structure (maximum):	60%
Lot Coverage – Impervious (maximum):	70%

Setbacks	
Front (minimum):	10 feet
Front Garage (minimum):	20 feet
Side Yard (minimum):	4 feet
Side Yard Corner (minimum):	5 feet
Rear (minimum):	10 feet
Rear with Slope (minimum):	10 feet

Buildings	
Height of Buildings (maximum):	35 feet
Size of Buildings (maximum):	4,500 square feet
Number of Stories (maximum):	Two Stories
Allowed Percentage of Units at Two Stories:	100%
FAR (maximum):	2:1

2. Plotting Guidelines

The Chacon Farms community provides for a range of home sizes, home styles and floor plans. Exhibit C Tentative Tract Map shows the overall design of the Chacon Farms community with

the building envelopes plotted. The Chacon Farms community is comprised of a single neighborhood with a minimum lot size of 3,717 sf. See Exhibit E for Plotting Exhibit. Plotting will be finalized during the City's Design Review approval process, which includes plotting of each lot to ensure setback requirements are achieved.

Single family homes within Chacon Farms shall creatively use "architecture forward" designs, landscaping, and other innovative neighborhood design techniques to create a visually interesting street scene and identifiable neighborhood character. To encourage a diverse and visually interesting street scene, the neighborhood within the Chacon Farms community shall comply with the following guidelines:

1. A minimum of three (3) architectural elevations and three (3) floor plans are required for the community.
2. The same elevation style shall not be plotted next to itself or directly across the street.
3. All setbacks shall meet the minimum requirement listed in Table 1.

ARCHITECTURAL DESIGN GUIDELINES

These Architectural Design Guidelines convey the Chacon Farms community's architectural design theme. It is not the intent of these Guidelines to mandate that all the identified design components and elements described herein be incorporated into the actual building designs. Rather, these Guidelines serve as a "palette" of character-defining exterior elements that should be used in home design. It is expected that builders and their architects will prepare architectural building plans that substantially conform to these guidelines, while also applying creativity and innovation in response to housing design trends, homebuyer expectations, and other market conditions.

1. Design Principles

While these Architectural Design Guidelines do not expressly limit architectural styles, the styles employed in Chacon Farms should be complementary and compatible with the styles described in this document. The defining features of the selected architectural styles must be consistently implemented across the community to visually identify and differentiate each style. These Guidelines allow for both traditional/historical styles and contemporary interpretations of these styles, provided that the style's defining features can be visually identified, consistently applied, and differentiated from the character defining features of other styles implemented in the community.

The selection of architectural styles should be compatible with the massing of their floor plans; as such, a certain style should not be forced onto every floor plan if it is not compatible. By emphasizing the use of distinct and identifiable styles, these guidelines discourage monotony. Street scenes shall incorporate multiple architectural styles and should be divers as to form, massing, features, windows, front doors, materials, and colors.

2. Form and Massing

Building mass and scale are two primary design components that affect how a building is perceived. The created use of design articulation of the building's visible facades, variation of rooflines, balance of roof forms, and changes in vertical and horizontal plans reduces the perceived mass of a building.

3. Roofs

The roofline is a dominant visual element of a home. A roof's composition should allow for a clean interface with the building and the building façade. A roof's form and composition should reflect the appropriate roof pitch, characteristics, and materials that are consistent with and true to the selected architectural style and shall also not be overbearing nor give the appearance of being disjointed.

I. Rooflines of adjacent homes shall vary to create a variety of silhouettes and ridge heights.
II. Roof pitches and colors shall vary from one house to the next, when appropriate for the architectural styles.
III. Roof materials and colors selected for an architectural style must reflect the elements that are typically used in that style.
IV. Roofing Materials shall be non-combustible.
V. Solar panels should be integrated into the roof design as an unobstructive element.

4. Garage Location and Design

To achieve attractive street scenes throughout the Chacon Farms community, particular attention must be given to the design and placement of garages.

I. Garage door style, color and design shall reflect the architectural character of the home and shall vary between adjacent homes, when appropriate. Acceptable garage door styles include, but are not limited to raised panel, recessed panel, flush panel in both roll-up and carriage swing door designs.
II. Window shall be incorporated into the garage door design. Garage door window styles shall correspond to the window forms of the house.
III. Architectural features, such as varied rooflines (including height and pitch) and second story setbacks, can be incorporated into the garage design to reduce building mass and scale and create a visually interesting street scene, when appropriate for the selected architectural style.
IV. Landscaping can be introduced to soften the visual impact of the garage door and accent the garage facade.

5. Windows and Doors

Window and door details are architectural components that carry a strong visual impact through their placement and design.

I. Front door details shall be consistent with the architectural style.
II. Feature window shapes shall be consistent with the architectural style.
III. Accent shutters are not required; however, when used, shutter size shall be proportional to the window and shall reflect the architectural style.
IV. Window trim details used on the front elevation shall be applied to the sides and rear of the house for continuity.
V. Windows and/or doors with silver or gold frames or reflective glass are prohibited.

6. Building Materials and Colors

A complementary mixture of colors, textures, and building materials is encouraged throughout the Chacon Farms community. Building material and color selection are integral components in

the definition of a specific architectural style and provide a varied streetscape design. Material breaks, transitions and termination should produce complementary and clear definition of separation while maintaining a prescribed color and material palette. A variety of exterior accent materials should be used as an integral feature in home construction to convey the selected architectural styles.

I. Color schemes shall be simple, tasteful, and consistent with architectural styles.
II. A scheme of color values on all exterior elements shall be distinct from one house to the next, with deeper tones encouraged to promote variations. This avoids a monotonous appearance of multiple buildings of the same colors and tones.

7. Enhanced Elevations

Rear elevations facing the public right of way should be architecturally enhanced with balconies, verandas, patio covers, window boxes or similar features.

8. Site Lighting

Lighting standards throughout Chacon Farms shall be similar in style, color and materials, embracing a natural and minimal lighting approach.

All outdoor lighting shall incorporate, to the extent feasible and permissible under City standards, measures to aid in reducing light pollution. Such measure include: wattage reduction, directing lighting downward, shielding lights (or using “cut-off lights” that only illuminate the side or underside of a fixture, rather than shining skyward) and lowering the height of light poles to reduce the illumination radius.

All outdoor lighting fixtures shall be focused, directed, and arranged to minimize glare and illumination of public streets and adjoining property.

Mechanical Equipment

Mechanical equipment such as air conditioners, heaters, evaporative coolers, and other such devices shall not be mounted on any roof and must be located behind privacy walls or landscaping.

Exhibit A – Architecture

CHACON FARMS

SAN JACINTO, CALIFORNIA

10/29/2025

RAMONA DAIRY, LLC.

Kevin L. Crook
Architect
Inc
#24076
PLANNING + ARCHITECTURE

CHACON FARMS

SAN JACINTO, CALIFORNIA

A-1 Typical Plotting
A-2 Street Scene
A-3 Plan 1 (1758) - Front Elevations
A-4 Plan 1A (1758) - Floor Plan
A-5 Plan 1A (1758) - Spanish Elevation
A-6 Plan 1B (1758) - Prairie Elevations
A-7 Plan 1C (1758)- Farmhouse Elevation
A-8 Plan 1 (1758) - Roof Plans

A-9 Plan 2 (2410) - Front Elevations
A-10 Plan 2A (2410) - Floor Plan
A-11 Plan 2A (2410) - Spanish Elevation
A-12 Plan 2B (2410) - Prairie Elevations
A-13 Plan 2C (2410)- Farmhouse Elevation
A-14 Plan 2 (2410) - Roof Plans

A-15 Plan 3 (2608) - Front Elevations
A-16 Plan 3A (2608) - Floor Plan
A-17 Plan 3A (2608) - Spanish Elevation
A-18 Plan 3B (2608) - Prairie Elevations
A-19 Plan 3C (2608)- Farmhouse Elevation
A-20 Plan 3 (2608) - Roof Plans

A-21 Plan 4 (2831) - Front Elevations
A-22 Plan 4A (2831) - Floor Plan
A-23 Plan 4A (2831) - Spanish Elevation
A-24 Plan 4B (2831) - Prairie Elevations
A-25 Plan 4C (2831)- Farmhouse Elevation
A-26 Plan 4 (2831) - Roof Plans

A-27 Plan 5 (3025) - Front Elevations
A-28 Plan 5A (3025) - Floor Plan
A-29 Plan 5A (3025) - Spanish Elevation
A-30 Plan 5B (3025) - Prairie Elevations
A-31 Plan 5C (3025)- Farmhouse Elevation
A-32 Plan 5 (3025) - Roof Plans

A-33 Written Color Schemes
A-34 Color Boards - “A“ Spanish
A-35 Color Boards - “B“ Prairie
A-36 Color Boards - “C“ Farmhouse

RAMONA DAIRY, LLC.

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Kevin L. Crook **Architect** Inc #24076
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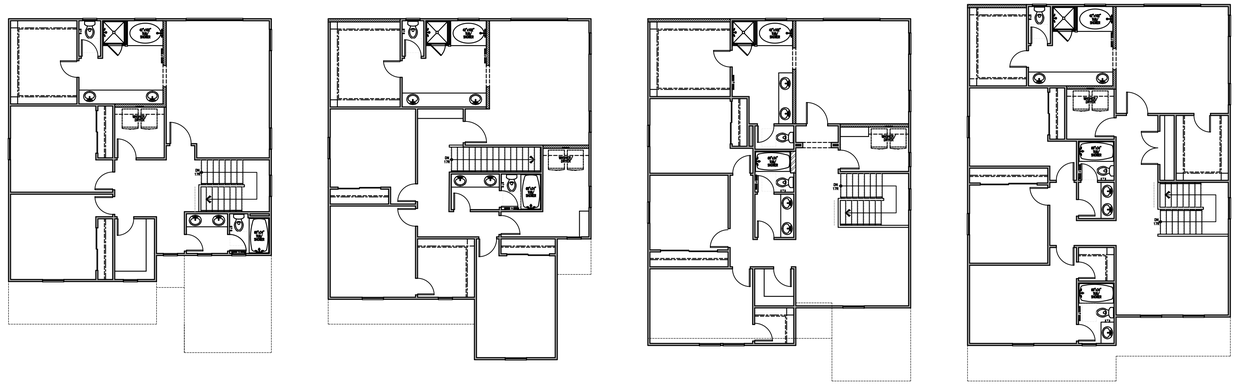

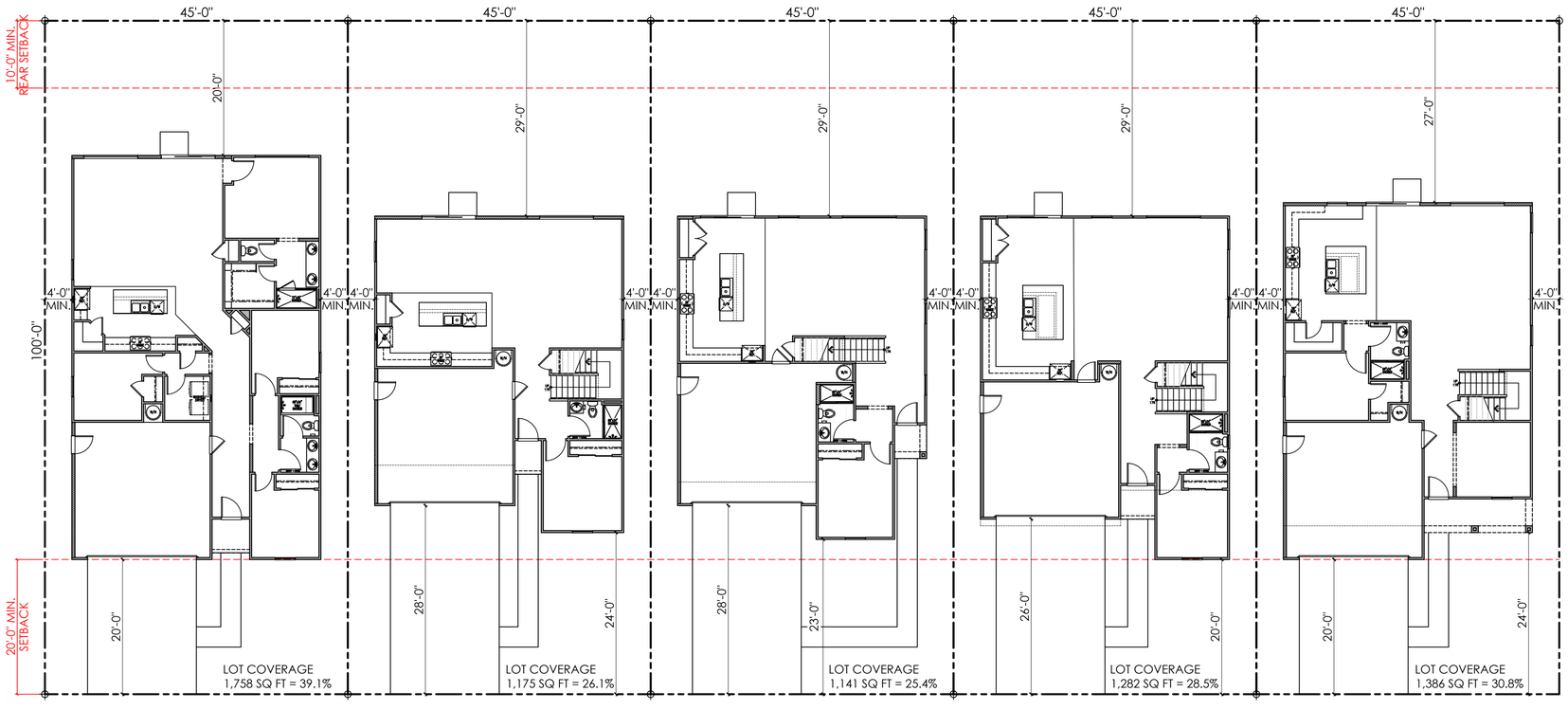

PLAN 1A (1,758) PLAN 2A (2,410) PLAN 3A (2,608) PLAN 4A (2,831) PLAN 5A (3,025)

TYPICAL PLOTTING

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CHACON FARMS
SAN JACINTO, CALIFORNIA

07/21/2025
A-1

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ELEV. STYLE
PLAN 5B (3,025)

ELEV. STYLE
PLAN 3C (2,608)

ELEV. STYLE
PLAN 4A (2,831)

ELEV. STYLE
PLAN 1C (1,758)

ELEV. STYLE
PLAN 2B (2,410)

STREET SCENE

0 2 4 8 12

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CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-2

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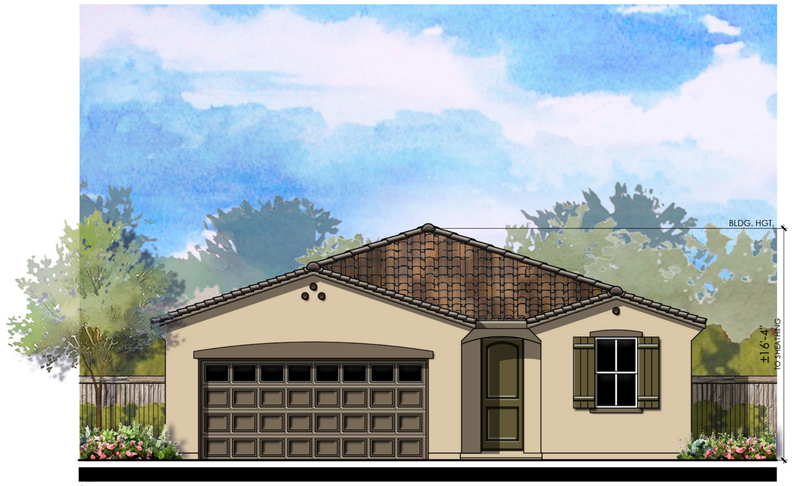

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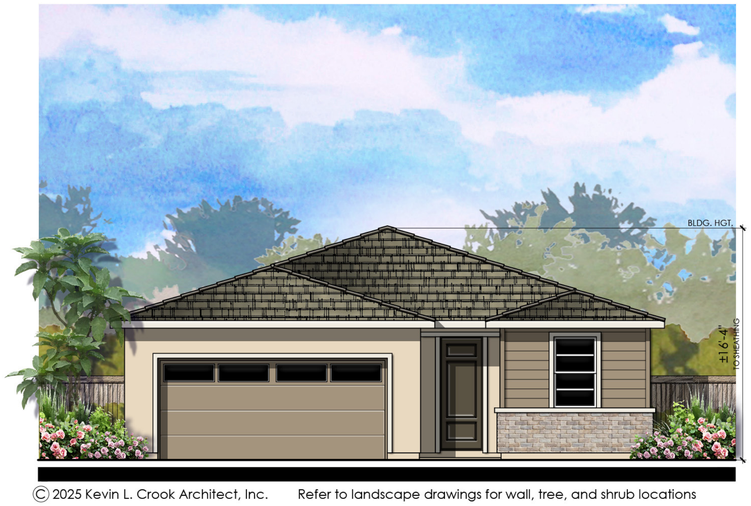
A - SPANISH STYLE



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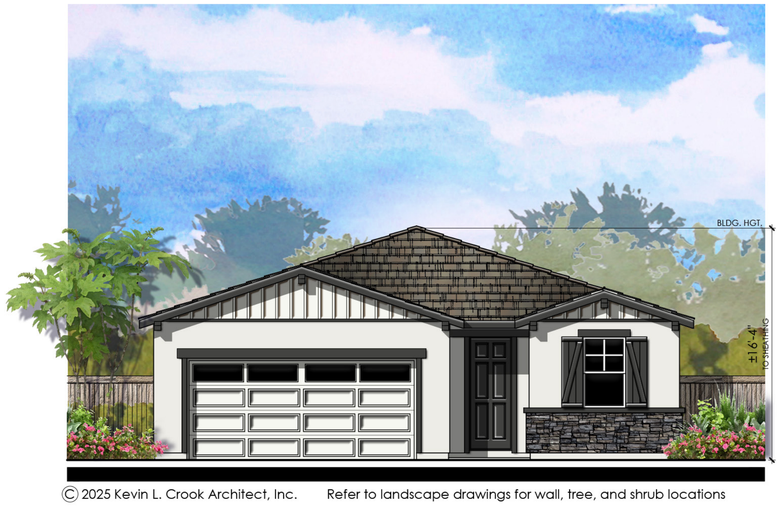
B - PRAIRIE STYLE



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C - FARMHOUSE STYLE

PLAN 1 (1,758)

FRONT ELEVATIONS

0 2 4 8 12

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CHACON FARMS

SAN JACINTO, CALIFORNIA

10/29/2025

A-3

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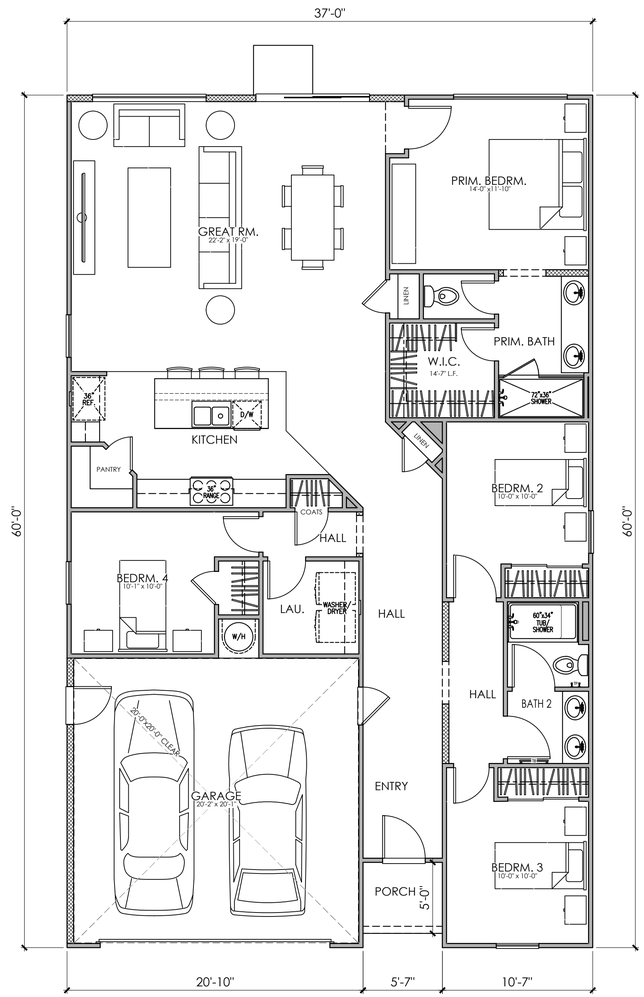

PLAN 1
AREA TABULATION

CONDITIONED SPACE	
FIRST FLOOR AREA	1,758 SQ. FT.
TOTAL DWELLING	1,758 SQ. FT.
UNCONDITIONED SPACE	
GARAGE	428 SQ. FT.
PORCH	28 SQ. FT.

PLAN 1
4 BEDROOM, 2 BATH
FLOOR PLAN

0 2 4 8 12

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CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-4

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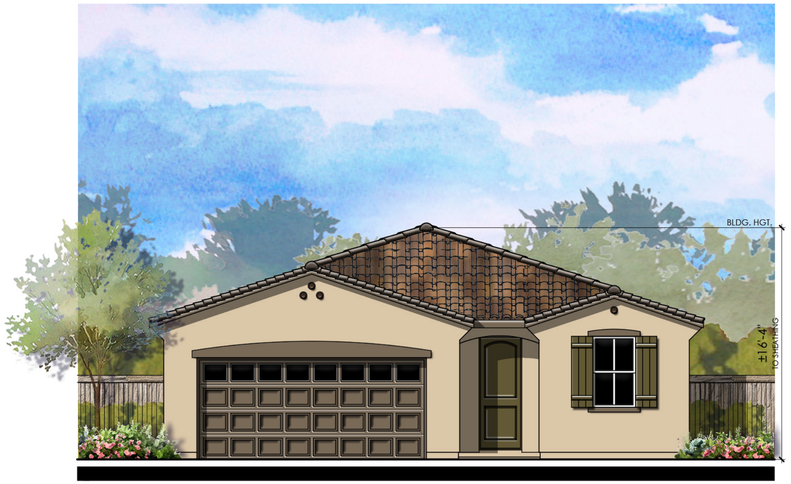

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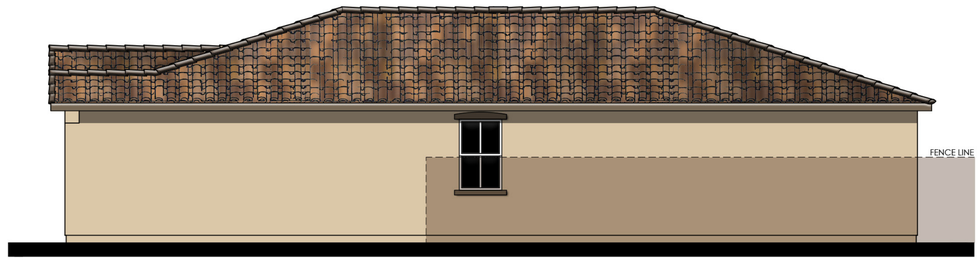
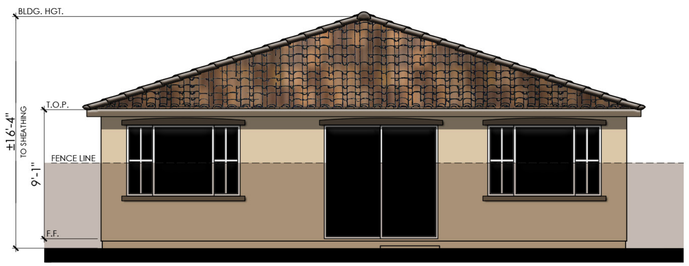
FRONT



RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "LOW S" TILE 4:12 HIP AND GABLE
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
GABLE END:	SIMULATED CLAY PIPES
WALL:	STUCCO
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM



REAR



LEFT

COLOR SCHEME 1

PLAN 1A
"A"SPANISH ELEVATIONS

0 2 4 8 12

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CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-5

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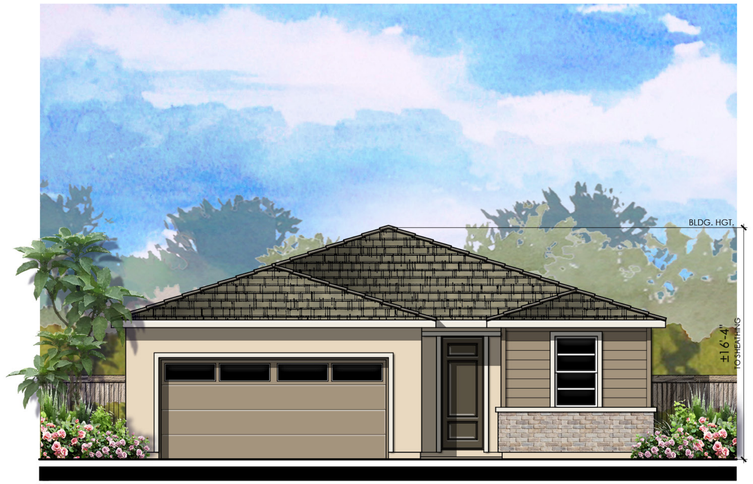

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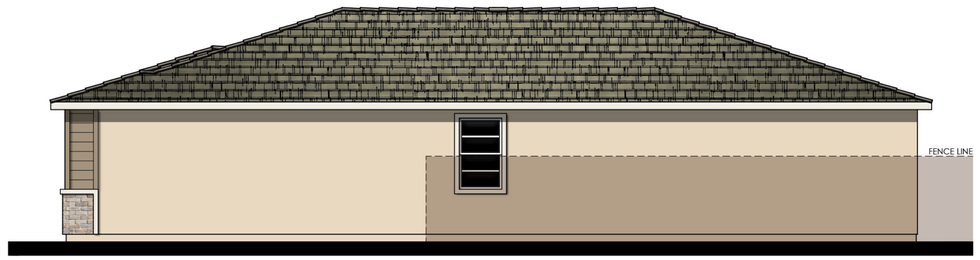
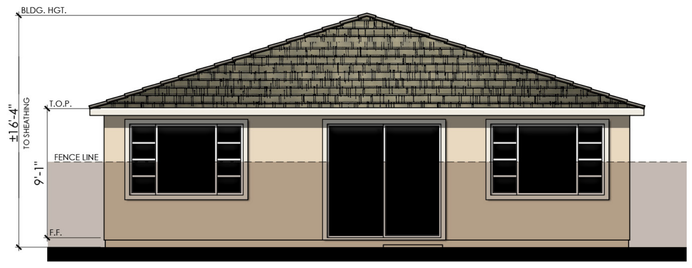
FRONT



RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS WITH INSET
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "FLAT SLATE" TILE 4:12 HIP
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
WALL:	STUCCO/LAP SIDING
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM
WAINSCOT:	BRICK VENEER



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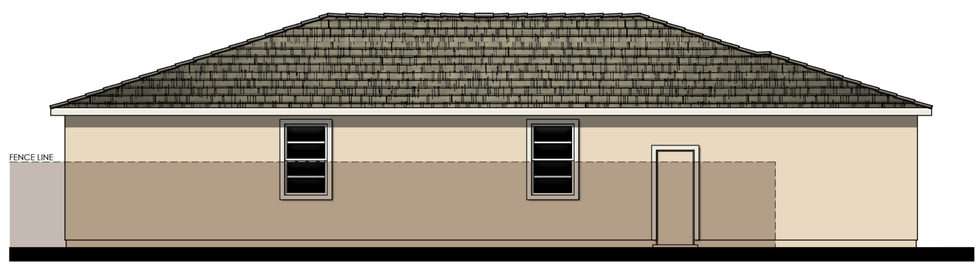

LEFT

COLOR SCHEME 4

PLAN 1B
"B" PRAIRIE ELEVATIONS

0 2 4 8 12

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CHACON FARMS
SAN JACINTO, CALIFORNIA

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A-6

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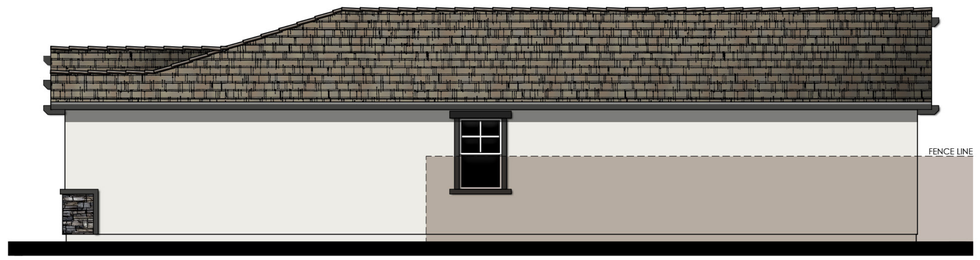
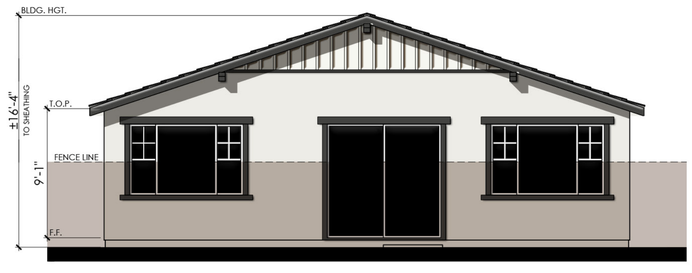
FRONT



RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "FLAT SHAKE" TILE 4:12 HIP AND GABLE
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
GABLE END:	BOARD AND BATTEN SIDING/ DECORATIVE CORBEL/STUCCO
WALL:	STUCCO
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM
WAINSCOT:	STONE VENEER



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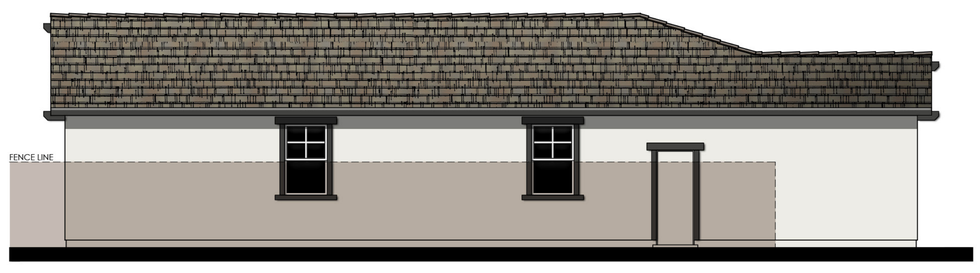

LEFT

COLOR SCHEME 7

PLAN 1C

"C" FARMHOUSE ELEVATIONS

0 2 4 8 12

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CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-7

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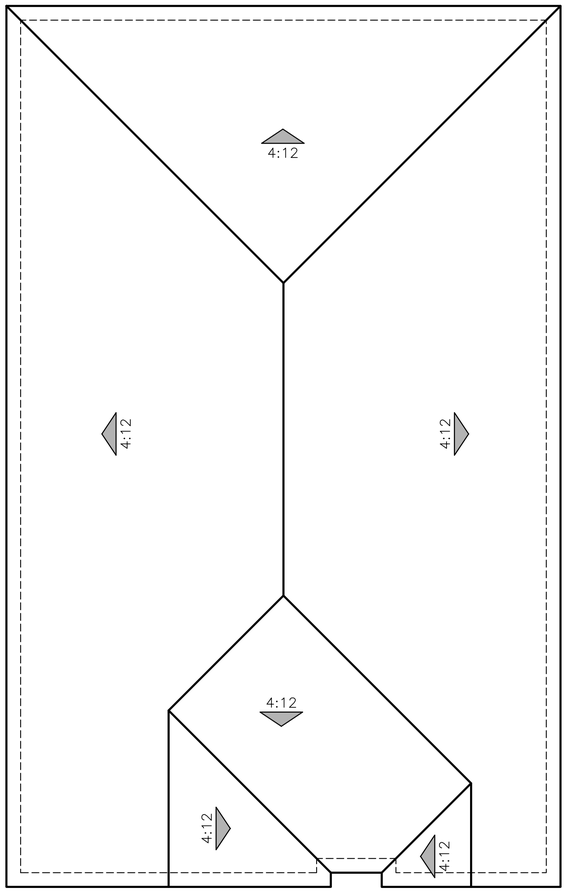
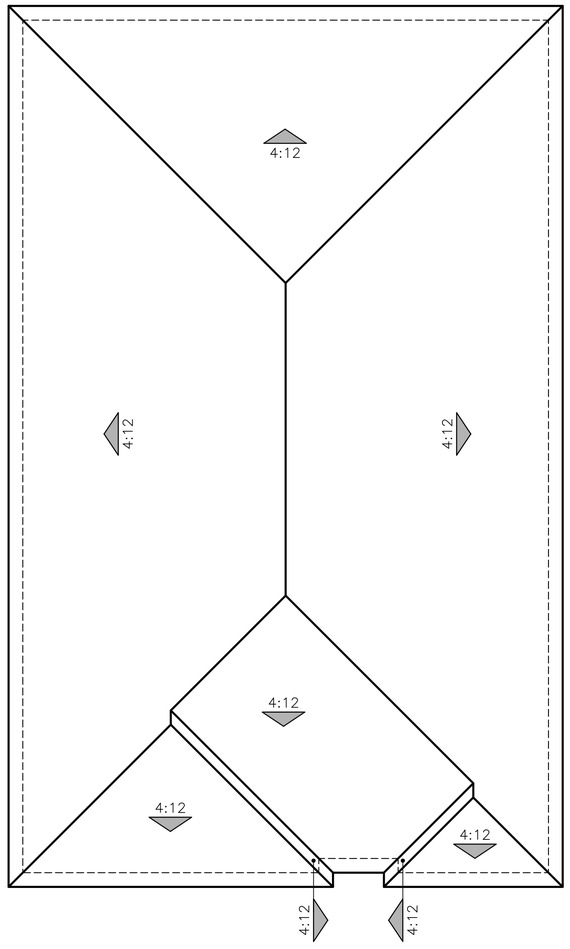
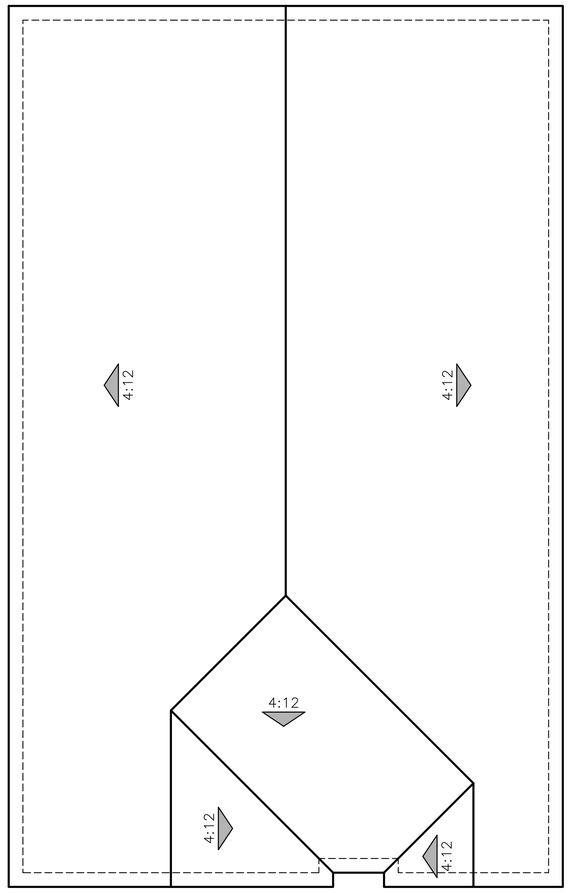


A - SPANISH



B - PRAIRIE



C - FARMHOUSE

PLAN 1
ROOF PLANS

0 2 4 8 12

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CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-8

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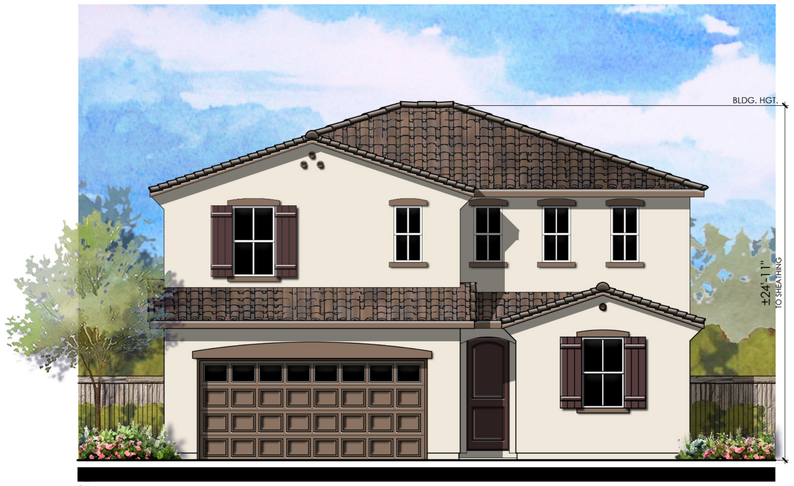

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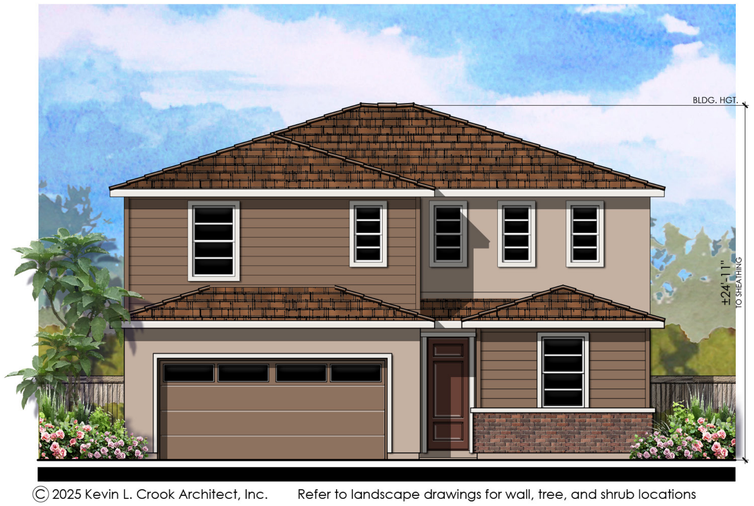
A - SPANISH STYLE



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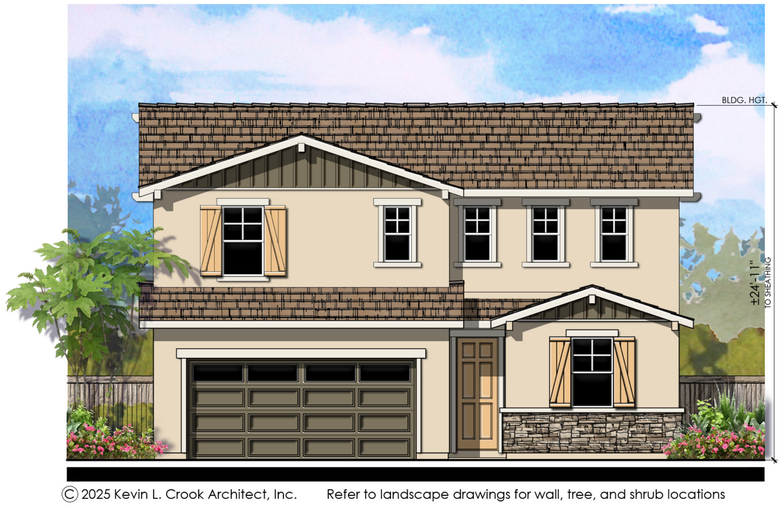
B - PRAIRIE STYLE



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C - FARMHOUSE STYLE

PLAN 2 (2,410)

FRONT ELEVATIONS

0 2 4 8 12

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CHACON FARMS

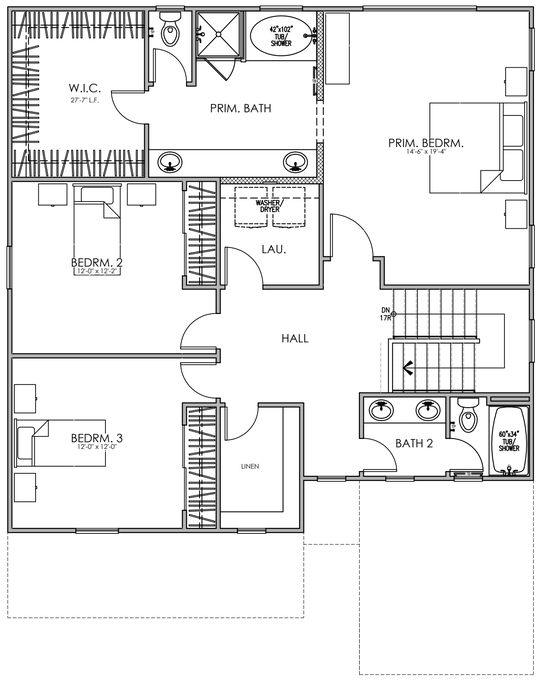
SAN JACINTO, CALIFORNIA

10/29/2025

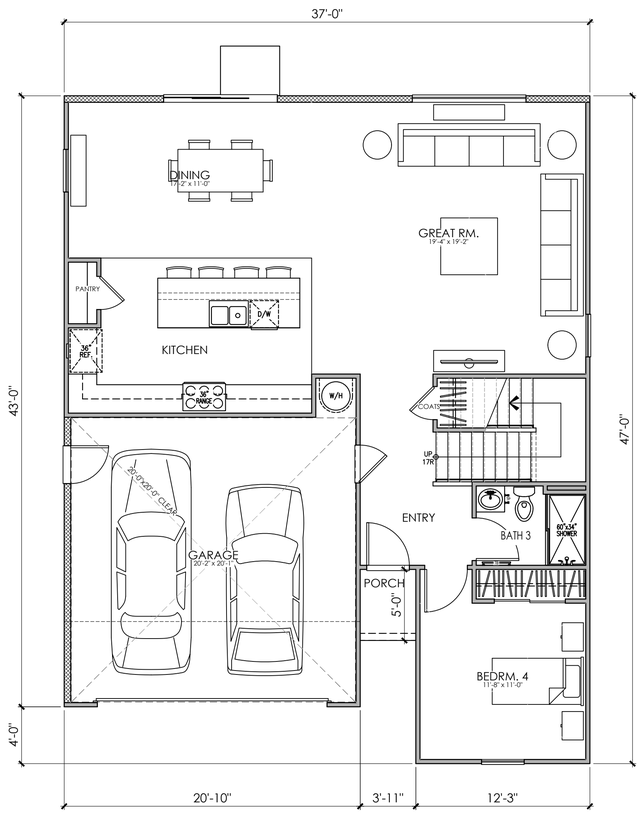
A-9

Kevin L. Crook Architect Inc #24076

PLANNING + ARCHITECTURE



SECOND FLOOR



FIRST FLOOR

PLAN 2
AREA TABULATION

CONDITIONED SPACE

FIRST FLOOR AREA	1,173 SQ. FT.
SECOND FLOOR AREA	1,237 SQ. FT.
TOTAL DWELLING	2,410 SQ. FT.

UNCONDITIONED SPACE

GARAGE	428 SQ. FT.
PORCH	20 SQ. FT.

PLAN 2
4 BEDROOM, 3 BATH
FLOOR PLAN

0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-10

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FRONT



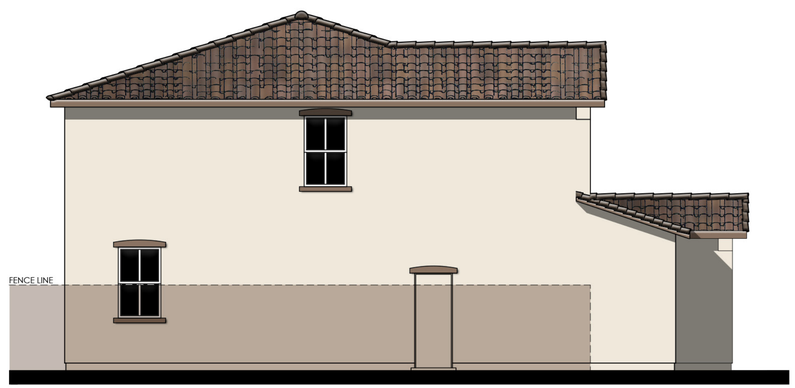
RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "LOW S" TILE 4:12 HIP AND GABLE
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
GABLE END:	SIMULATED CLAY PIPES
WALL:	STUCCO
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM



REAR



LEFT

COLOR SCHEME 2

PLAN 2A
"A"SPANISH ELEVATIONS

0 2 4 8 12

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CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-11

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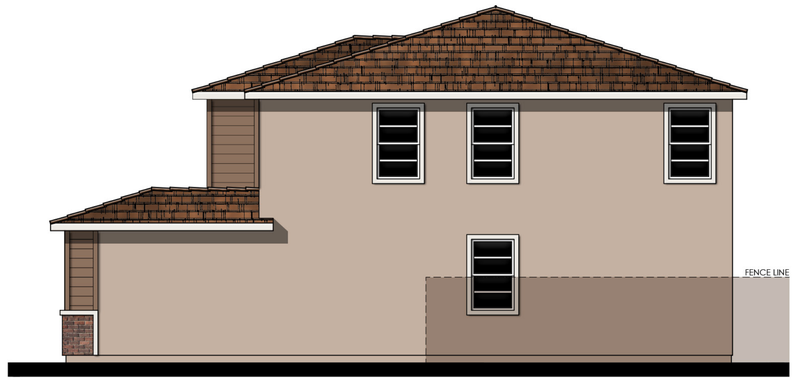
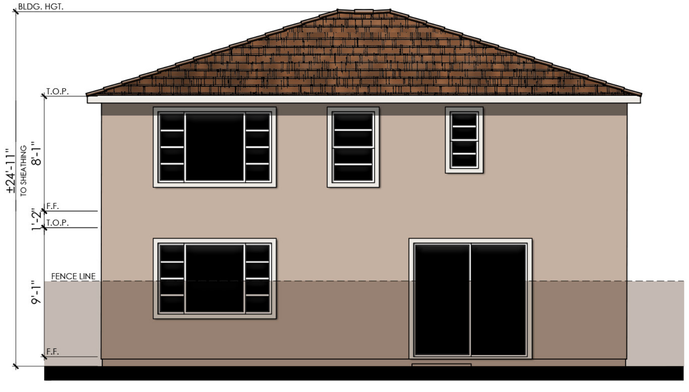
FRONT



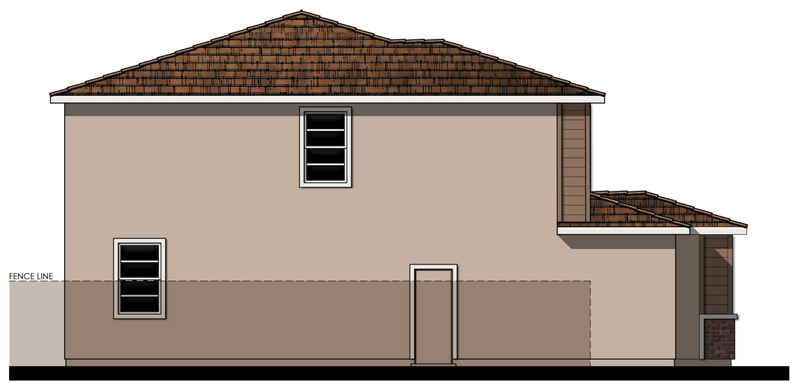
RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS WITH INSET
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "FLAT SLATE" TILE 4:12 HIP
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
WALL:	STUCCO/LAP SIDING
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM
WAINSCOT:	BRICK VENEER



REAR



LEFT

COLOR SCHEME 5

PLAN 2B
"B" PRAIRIE ELEVATIONS

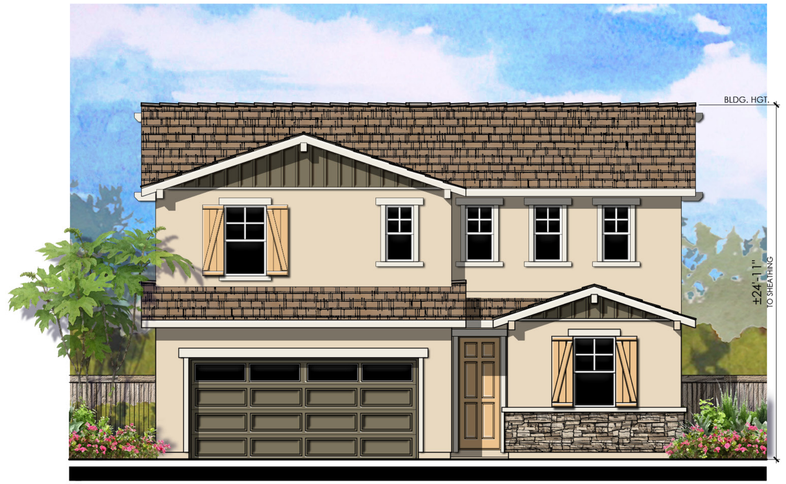
0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-12

Kevin L. Crook Architect Inc #24076
PLANNING + ARCHITECTURE



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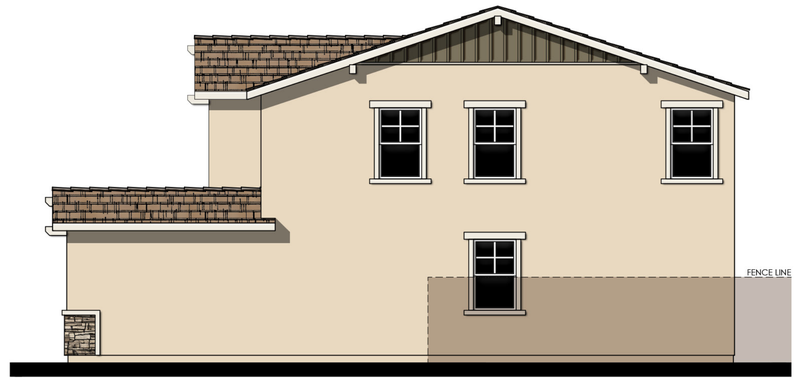
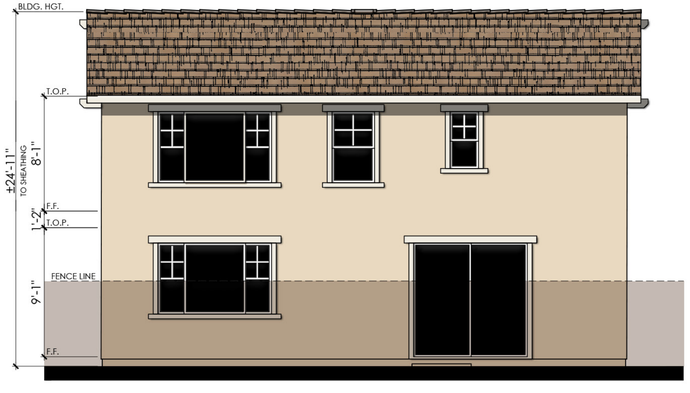
FRONT



RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "FLAT SHAKE" TILE 4:12 HIP AND GABLE
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
GABLE END:	BOARD AND BATTEN SIDING/ DECORATIVE CORBEL/STUCCO
WALL:	STUCCO
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM
WAINSCOT:	STONE VENEER



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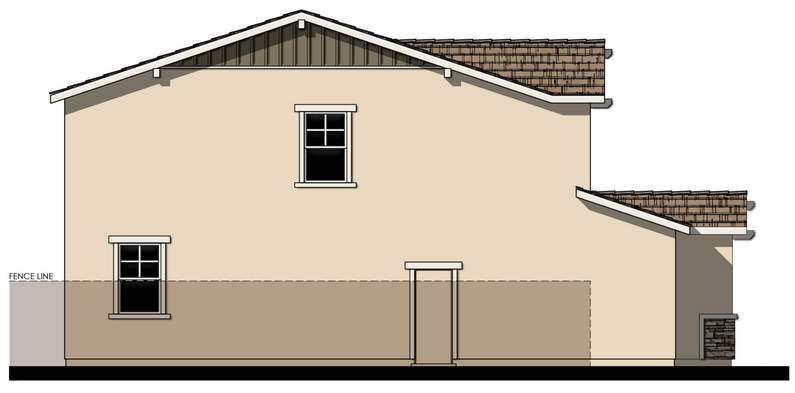


LEFT

COLOR SCHEME 8

PLAN 2C

"C" FARMHOUSE ELEVATIONS

0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS

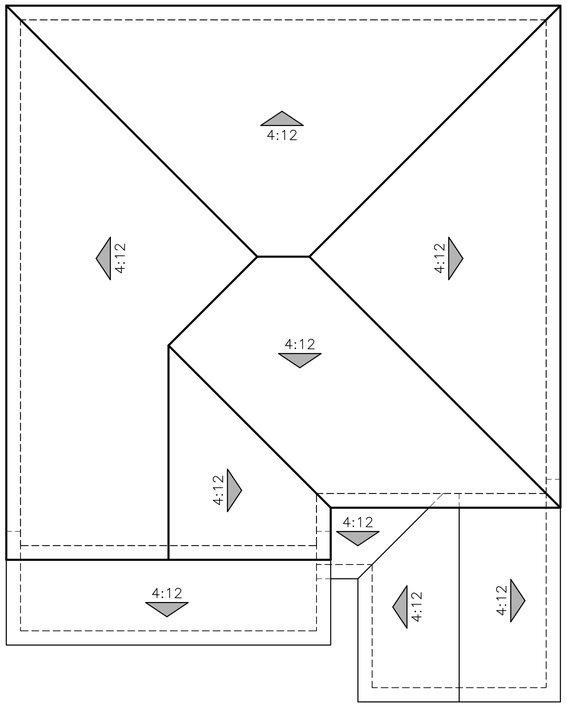
SAN JACINTO, CALIFORNIA

10/29/2025

A-13

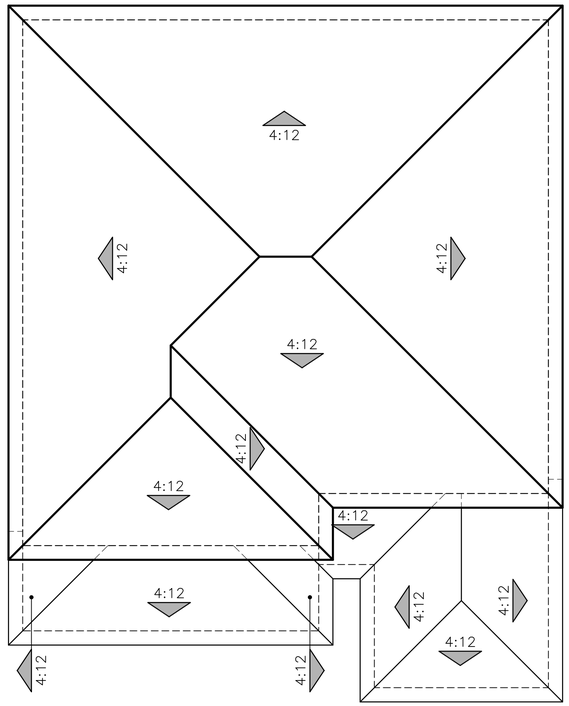
Kevin L. Crook Architect Inc #24076

PLANNING + ARCHITECTURE

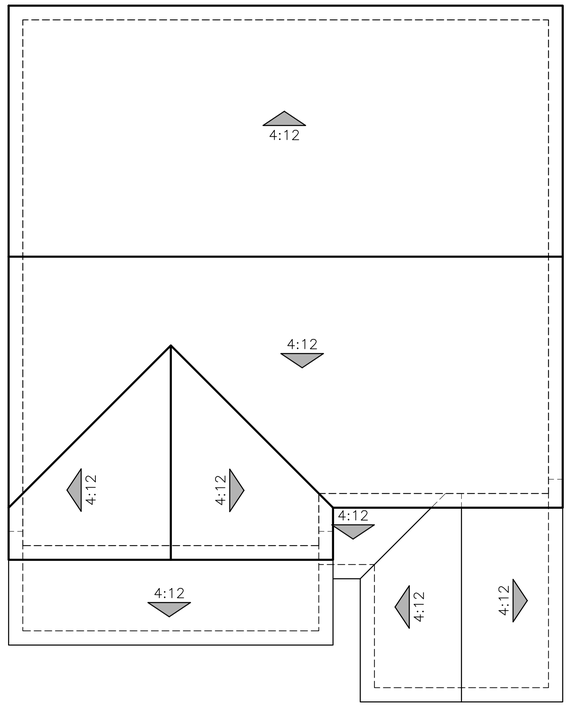


PLAN 1
2,410 sf

A - SPANISH



B - PRAIRIE



C - FARMHOUSE

PLAN 2
ROOF PLANS

0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-14

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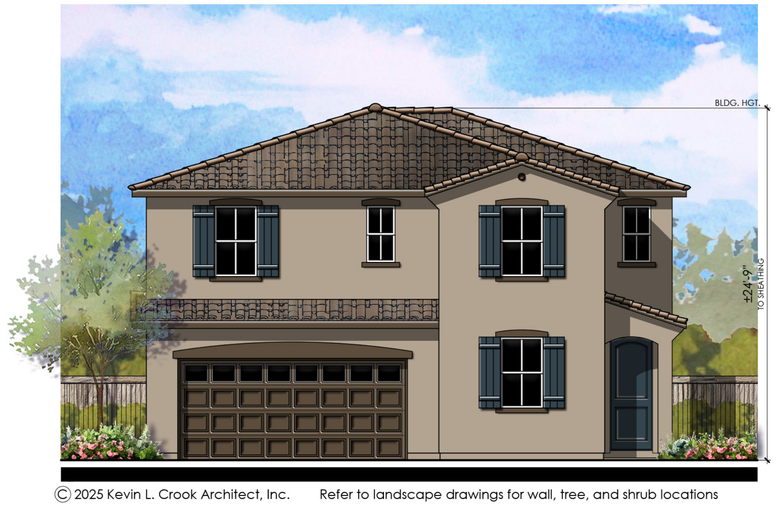
PLANNING + ARCHITECTURE



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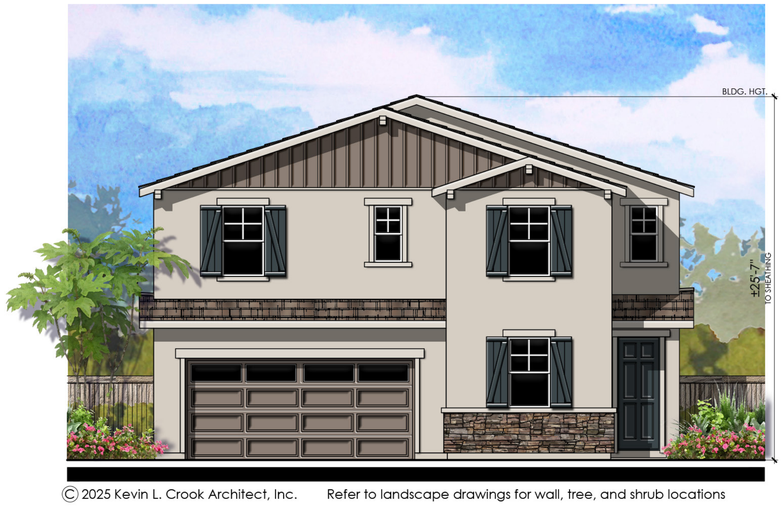
A - SPANISH STYLE



© 2025 Kevin L. Crook Architect, Inc. Refer to landscape drawings for wall, tree, and shrub locations

B - PRAIRIE STYLE



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C - FARMHOUSE STYLE

PLAN 3 (2,608)

FRONT ELEVATIONS

0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS

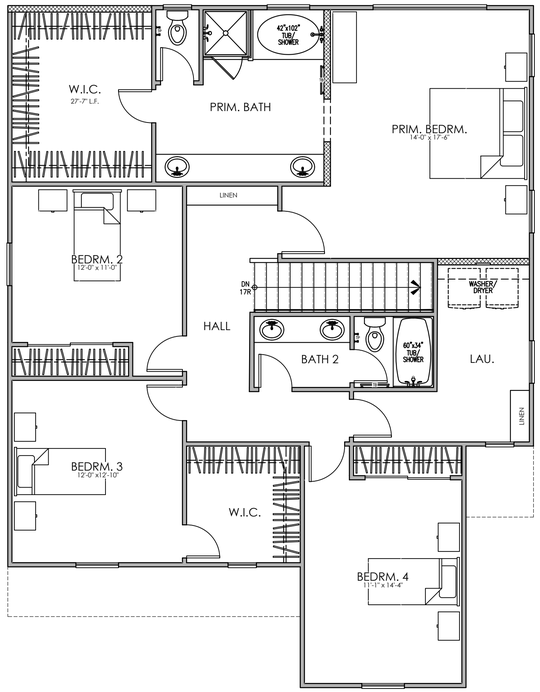
SAN JACINTO, CALIFORNIA

10/29/2025

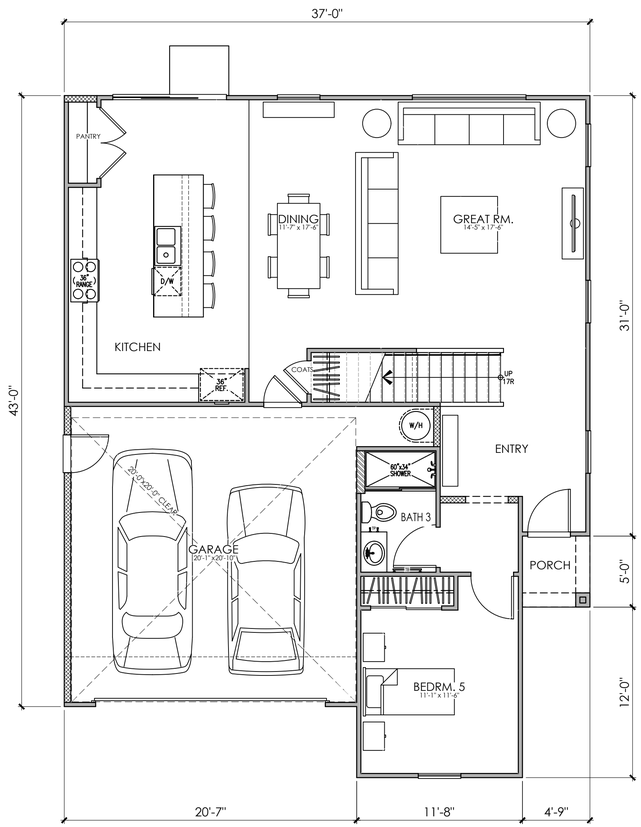
A-15

Kevin L. Crook Architect Inc #24076

PLANNING + ARCHITECTURE



SECOND FLOOR



FIRST FLOOR

PLAN 3
AREA TABULATION

CONDITIONED SPACE	
FIRST FLOOR AREA	1,141 SQ. FT.
SECOND FLOOR AREA	1,467 SQ. FT.
TOTAL DWELLING	2,608 SQ. FT.
UNCONDITIONED SPACE	
GARAGE	451 SQ. FT.
PORCH	24 SQ. FT.

PLAN 3
5 BEDROOM, 3 BATH
FLOOR PLAN

0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-16

Kevin L. Crook
Architect
Inc
#24076
PLANNING + ARCHITECTURE



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FRONT



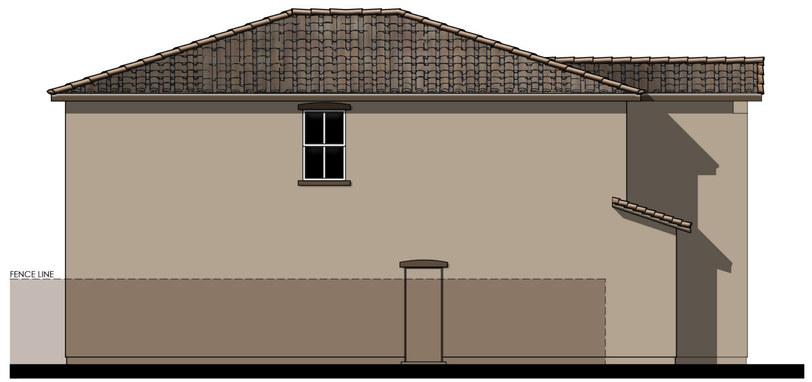
RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "LOW S" TILE 4:12 HIP AND GABLE
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
GABLE END:	SIMULATED CLAY PIPES
WALL:	STUCCO
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM



REAR



LEFT

COLOR SCHEME 3

PLAN 3A
"A"SPANISH ELEVATIONS

0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-17

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PLANNING + ARCHITECTURE



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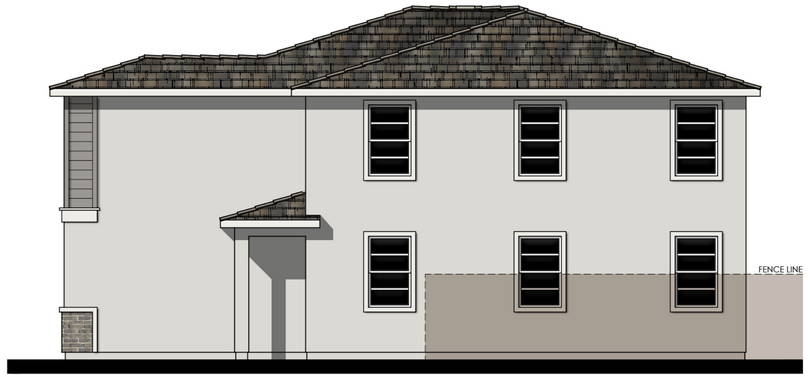
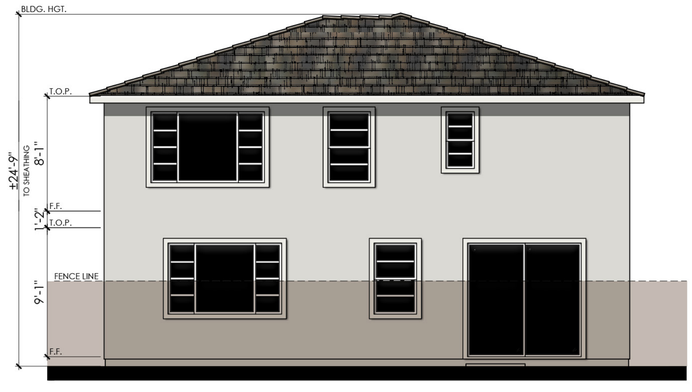
FRONT



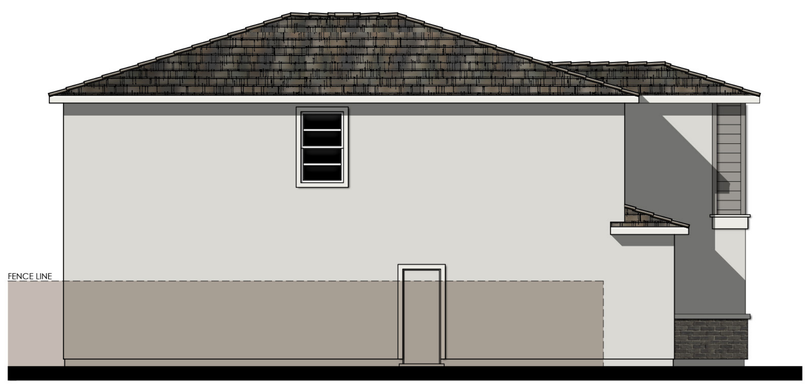
RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS WITH INSET
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "FLAT SLATE" TILE 4:12 HIP
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
WALL:	STUCCO/LAP SIDING
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM
WAINSCOT:	BRICK VENEER



REAR



LEFT

COLOR SCHEME 6

PLAN 3B

"B" PRAIRIE ELEVATIONS

0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS

SAN JACINTO, CALIFORNIA

10/29/2025

A-18

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PLANNING + ARCHITECTURE



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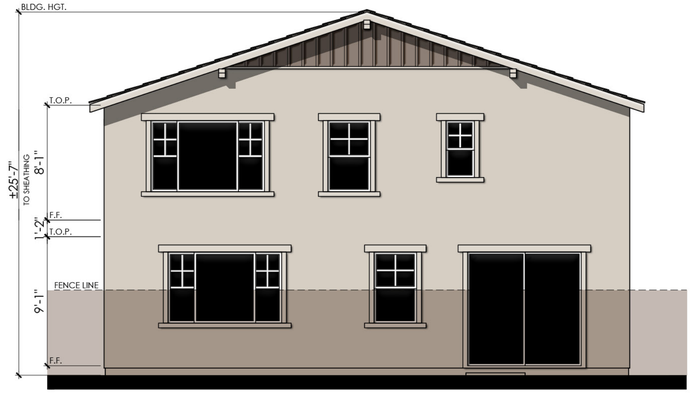
FRONT



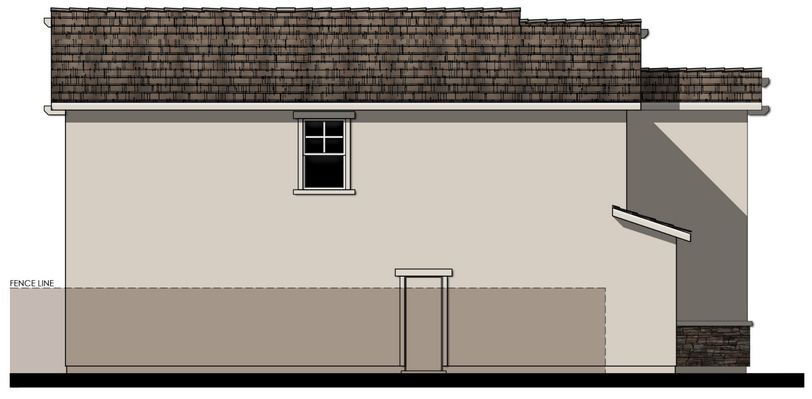
RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "FLAT SHAKE" TILE 4:12 HIP AND GABLE
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
GABLE END:	BOARD AND BATTEN SIDING/ DECORATIVE CORBEL/STUCCO
WALL:	STUCCO
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM
WAINSCOT:	STONE VENEER



REAR



LEFT

COLOR SCHEME 9

PLAN 3C

"C" FARMHOUSE ELEVATIONS

0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS

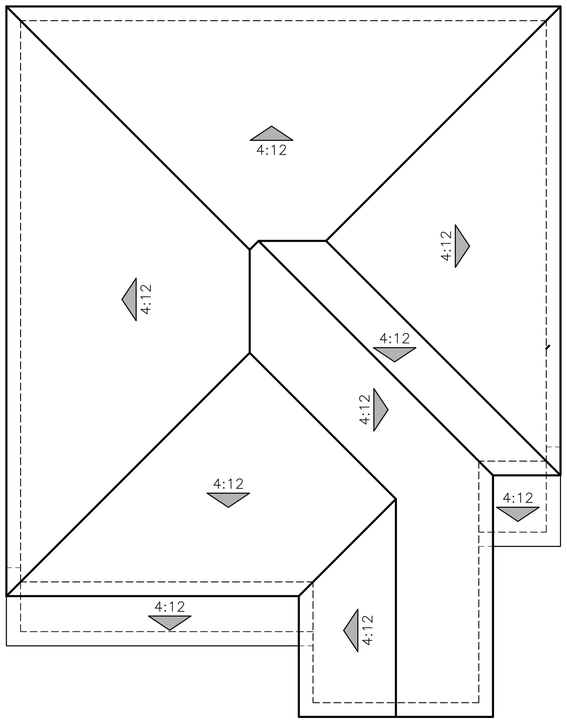
SAN JACINTO, CALIFORNIA

10/29/2025

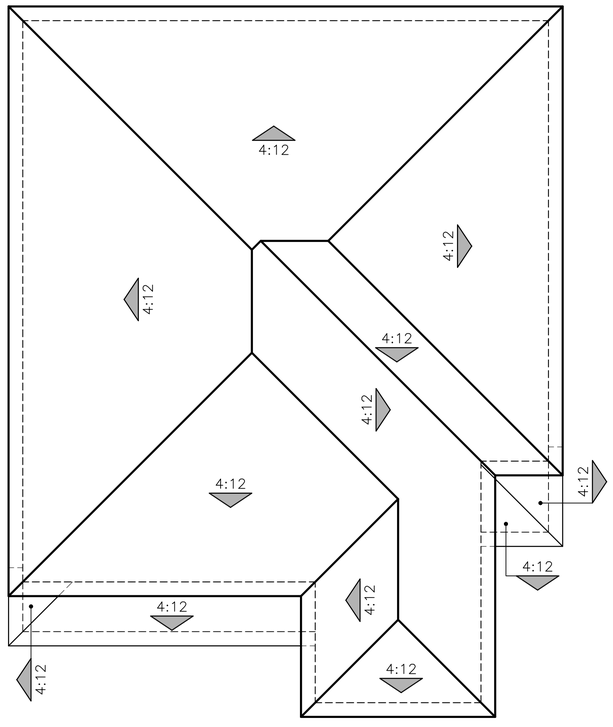
A-19

Kevin L. Crook Architect Inc #24076

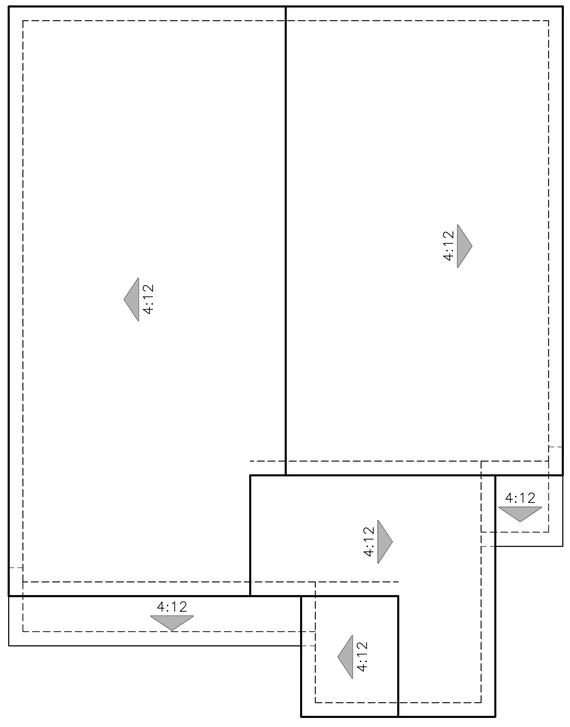
PLANNING + ARCHITECTURE



A - SPANISH



B - PRAIRIE



C - FARMHOUSE

PLAN 3
ROOF PLANS

0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-20

Kevin L. Crook
Architect
Inc
#24076
PLANNING + ARCHITECTURE



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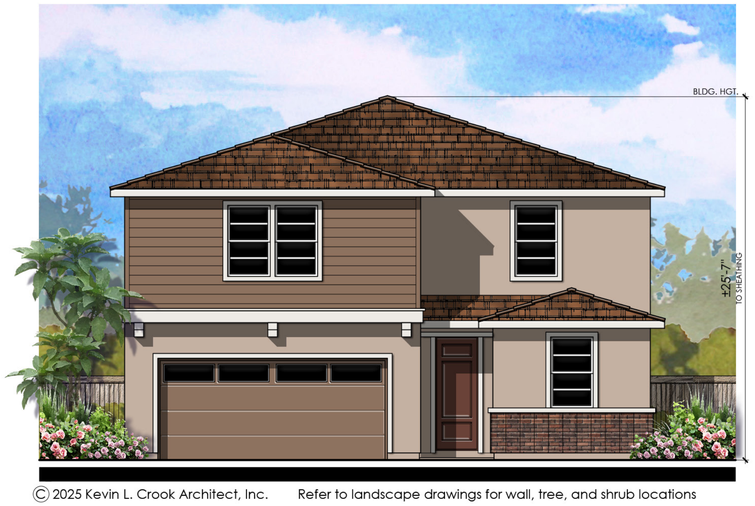
A - SPANISH STYLE



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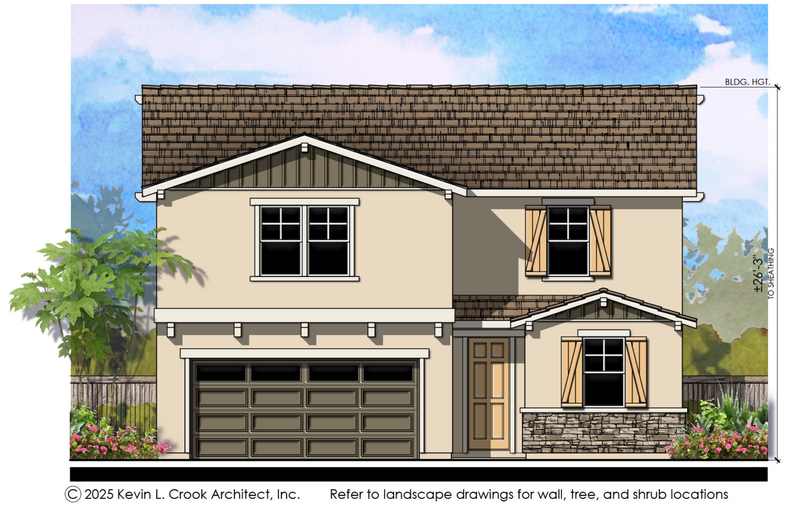
B - PRAIRIE STYLE



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C - FARMHOUSE STYLE

PLAN 4 (2,831)

FRONT ELEVATIONS

0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS

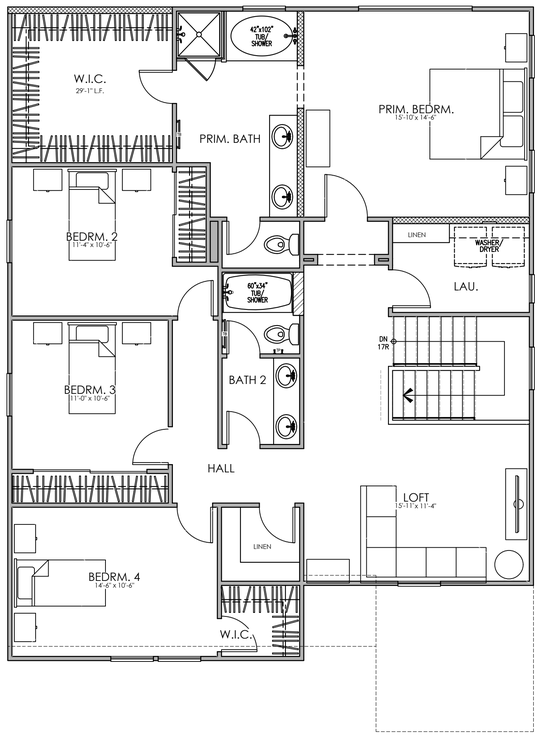
SAN JACINTO, CALIFORNIA

10/29/2025

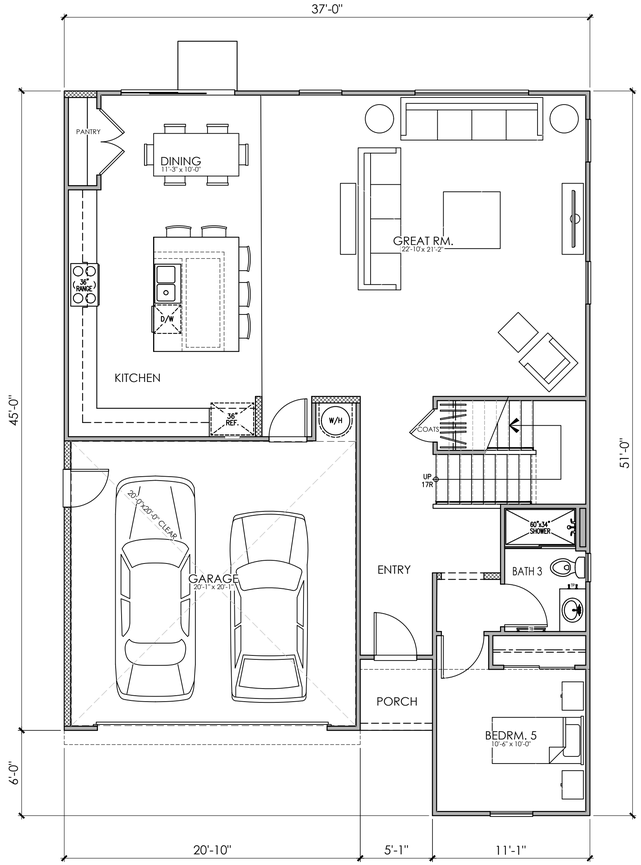
A-21

Kevin L. Crook Architect Inc #24076

PLANNING + ARCHITECTURE



SECOND FLOOR



FIRST FLOOR

PLAN 4
AREA TABULATION

CONDITIONED SPACE	
FIRST FLOOR AREA	1,279 SQ. FT.
SECOND FLOOR AREA	1,544 SQ. FT.
TOTAL DWELLING	2,823 SQ. FT.
UNCONDITIONED SPACE	
GARAGE	427 SQ. FT.
PORCH	25 SQ. FT.

PLAN 4
5 BEDROOM, 3 BATH, LOFT
FLOOR PLAN

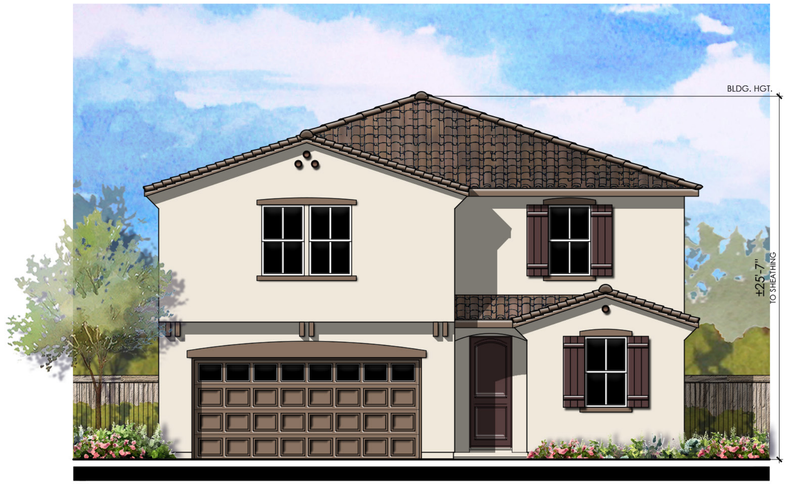
0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-22

Kevin L. Crook Architect Inc #24076
PLANNING + ARCHITECTURE



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FRONT



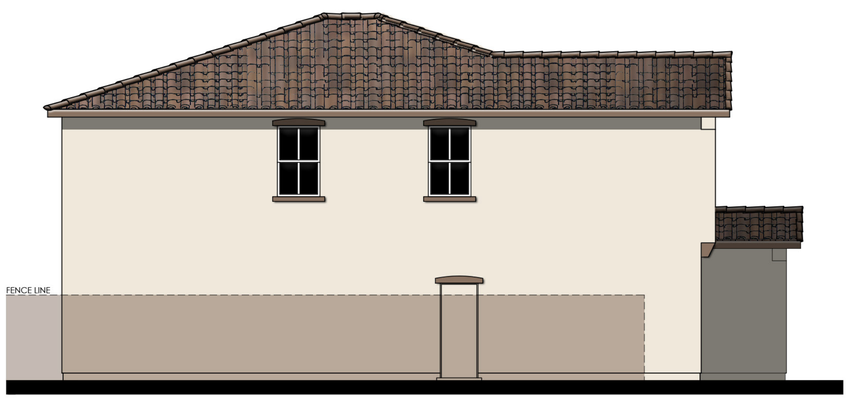
RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "LOW S" TILE 4:12 HIP AND GABLE
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
GABLE END:	SIMULATED CLAY PIPES
WALL:	STUCCO
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM



REAR



LEFT

COLOR SCHEME 2

PLAN 4A
"A"SPANISH ELEVATIONS

0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-23

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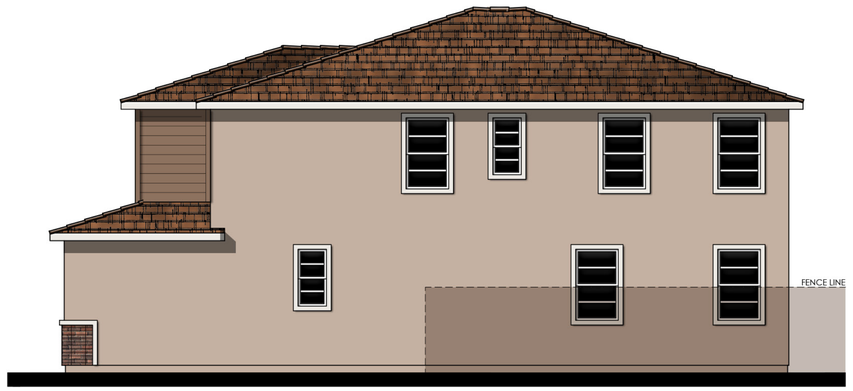
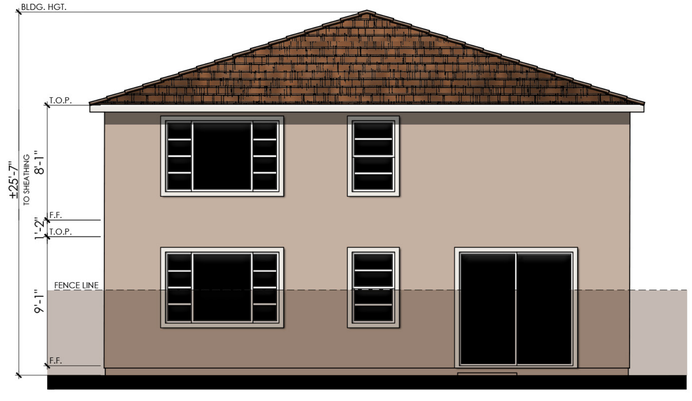
FRONT



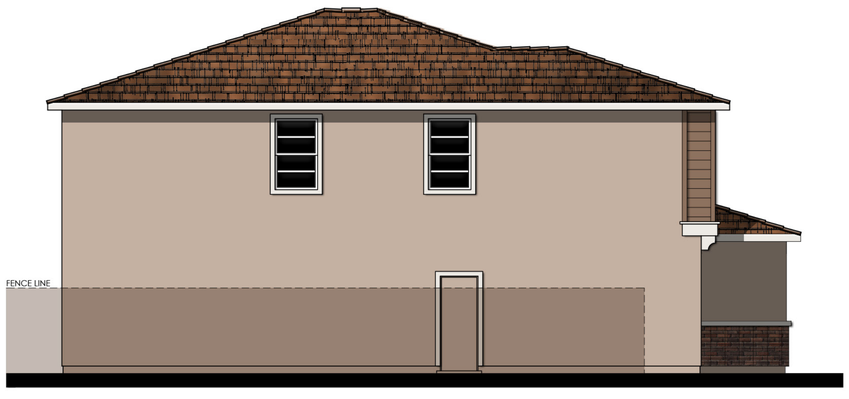
RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS WITH INSET
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "FLAT SLATE" TILE 4:12 HIP
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
WALL:	STUCCO/LAP SIDING
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM
WAINSCOT:	BRICK VENEER



REAR



LEFT

COLOR SCHEME 5

PLAN 4B
"B" PRAIRIE ELEVATIONS

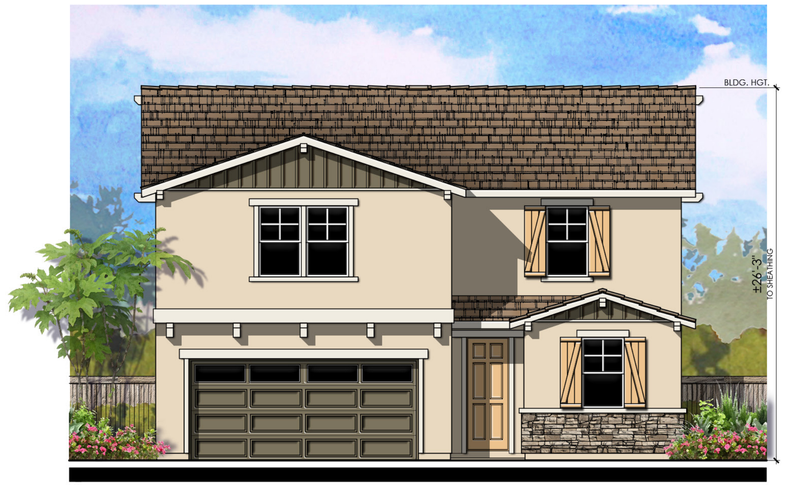
0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-24

Kevin L. Crook Architect Inc #24076
PLANNING + ARCHITECTURE



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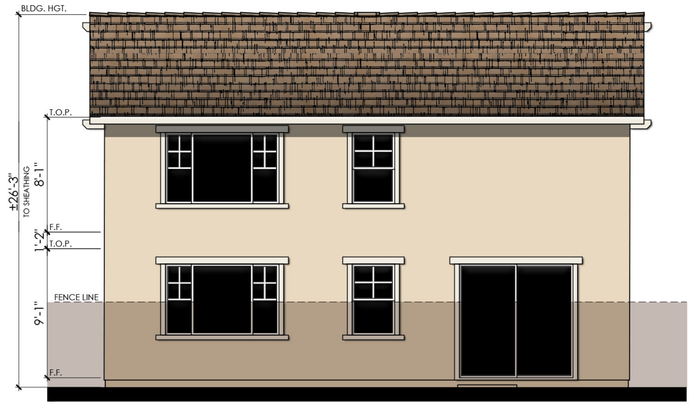
FRONT



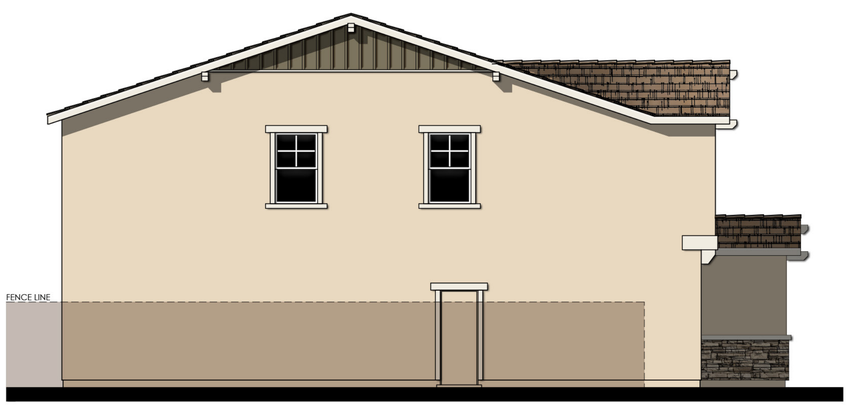
RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "FLAT SHAKE" TILE 4:12 HIP AND GABLE
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
GABLE END:	BOARD AND BATTEN SIDING/ DECORATIVE CORBEL/STUCCO
WALL:	STUCCO
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM
WAINSCOT:	STONE VENEER



REAR



LEFT

COLOR SCHEME 8

PLAN 4C

"C" FARMHOUSE ELEVATIONS

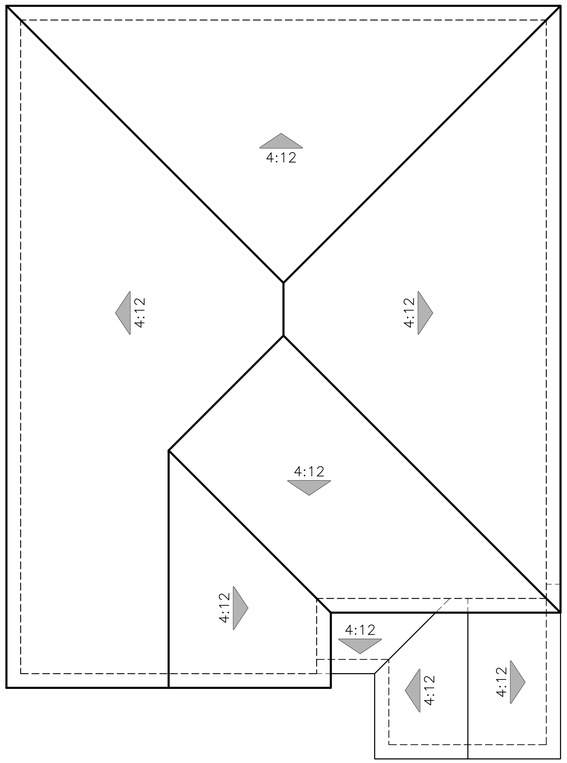
0 2 4 8 12

RAMONA DAIRY, LLC.

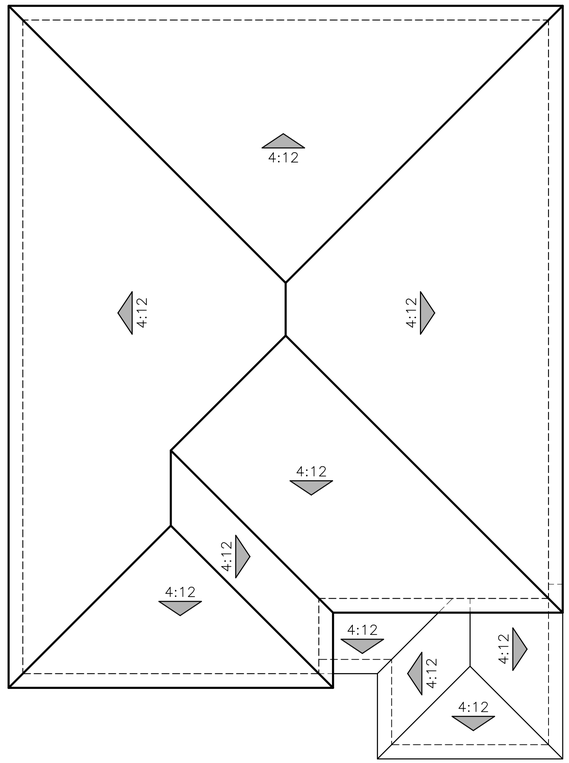
CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-25

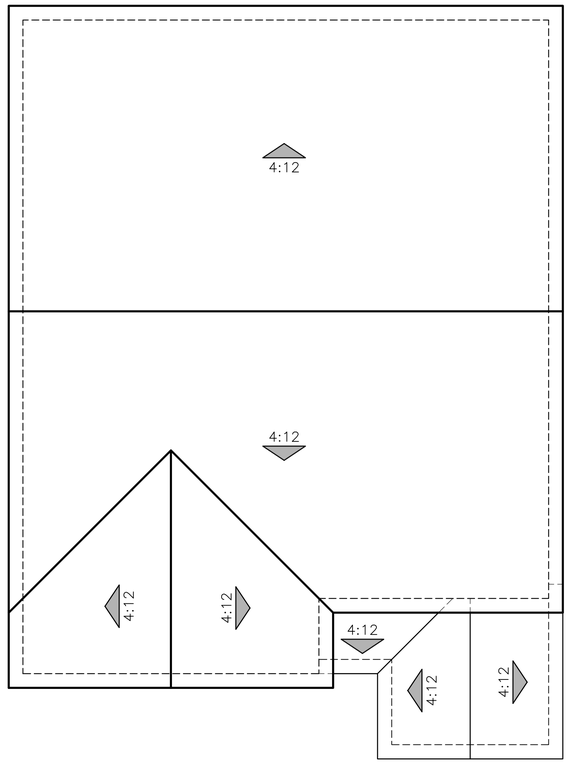
Kevin L. Crook Architect Inc #24076
PLANNING + ARCHITECTURE



A - SPANISH



B - PRAIRIE



C - FARMHOUSE

PLAN 4
ROOF PLANS

0 2 4 8 12

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CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-26

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A - SPANISH STYLE



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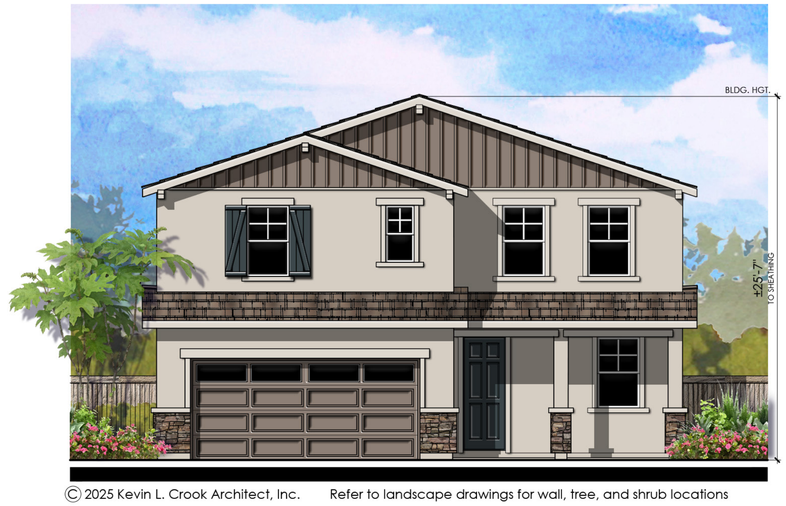
B - PRAIRIE STYLE



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C - FARMHOUSE STYLE

PLAN 5 (3,025)

FRONT ELEVATIONS

0 2 4 8 12

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CHACON FARMS

SAN JACINTO, CALIFORNIA

10/29/2025

A-27

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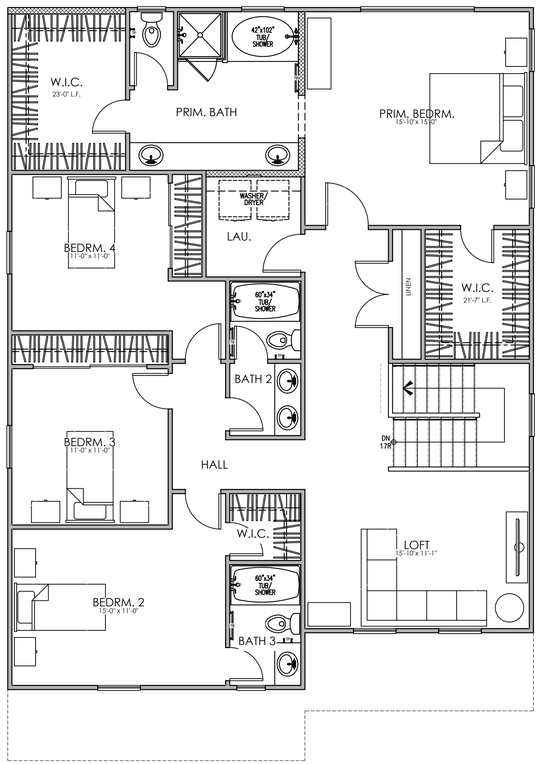
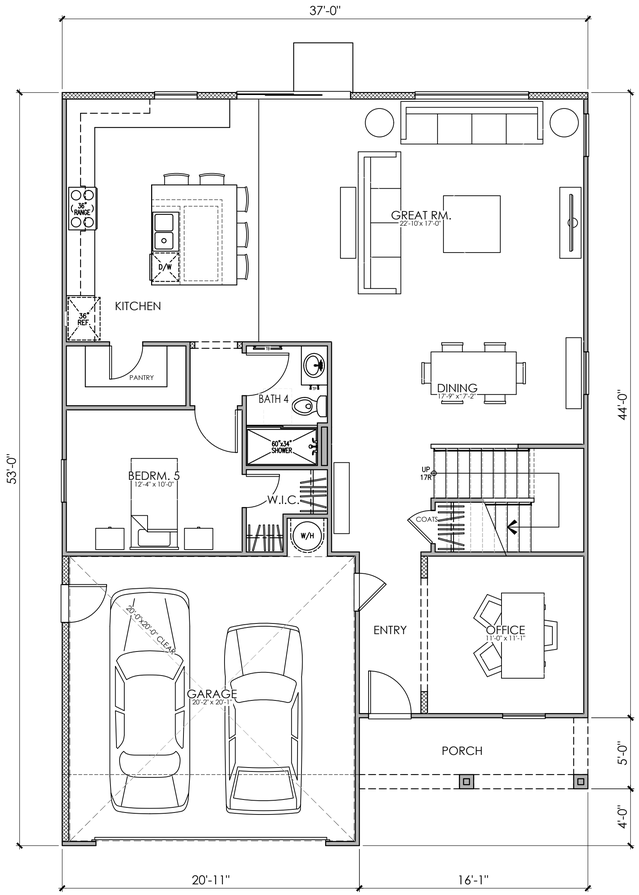
PLANNING + ARCHITECTURE



SECOND FLOOR



FIRST FLOOR

PLAN 5
AREA TABULATION

CONDITIONED SPACE	
FIRST FLOOR AREA	1,386 SQ. FT.
SECOND FLOOR AREA	1,639 SQ. FT.
TOTAL DWELLING	3,025 SQ. FT.
UNCONDITIONED SPACE	
GARAGE	430 SQ. FT.
PORCH	88 SQ. FT.

PLAN 5
5 BEDROOM, 4 BATH, LOFT
FLOOR PLAN

0 2 4 8 12

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SAN JACINTO, CALIFORNIA

10/29/2025
A-28

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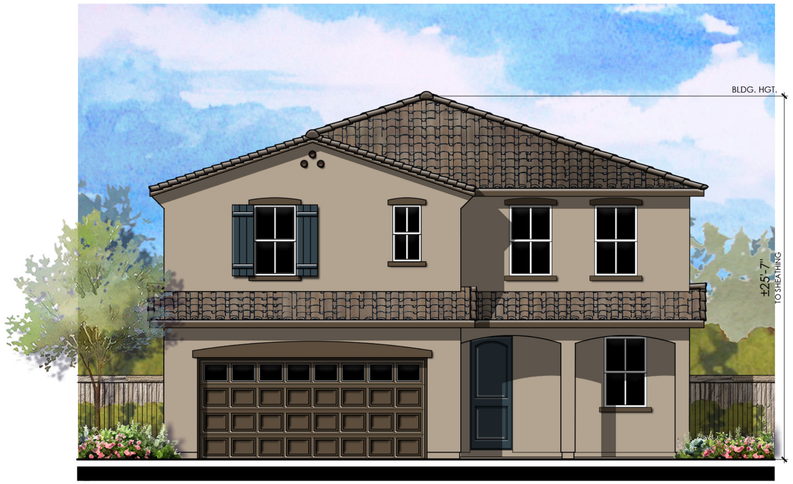

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FRONT



RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "LOW S" TILE 4:12 HIP AND GABLE
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
GABLE END:	SIMULATED CLAY PIPES
WALL:	STUCCO
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM



REAR



LEFT

COLOR SCHEME 3

PLAN 5A

"A"SPANISH ELEVATIONS

0 2 4 8 12

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CHACON FARMS

SAN JACINTO, CALIFORNIA

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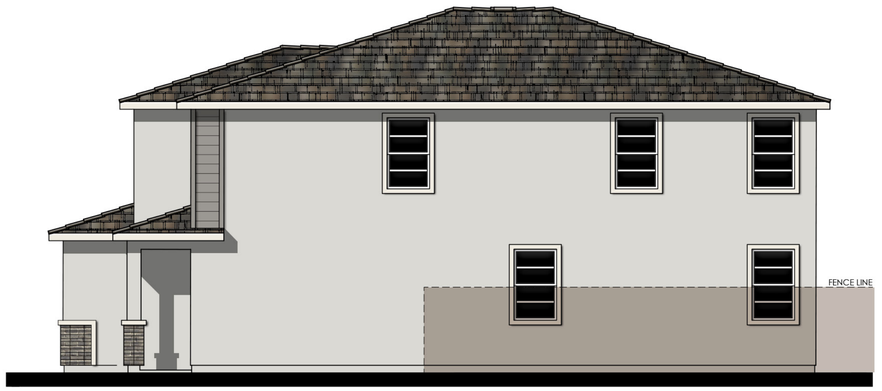
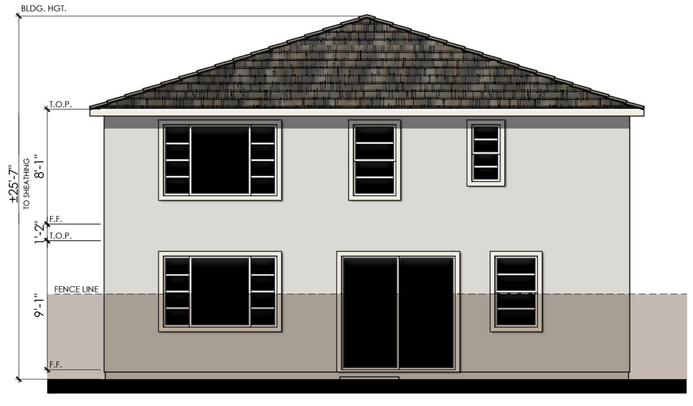
FRONT



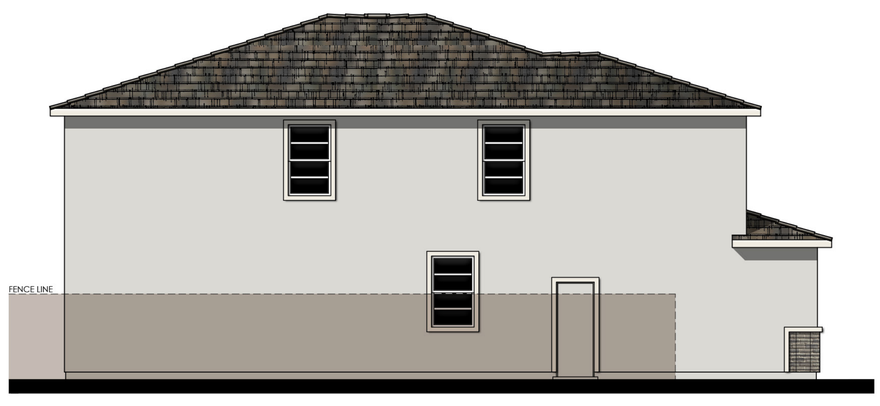
RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS WITH INSET
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "FLAT SLATE" TILE 4:12 HIP
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
WALL:	STUCCO/LAP SIDING
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM
WAINSCOT:	BRICK VENEER



REAR



LEFT

COLOR SCHEME 6

PLAN 5B

"B" PRAIRIE ELEVATIONS

0 2 4 8 12

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CHACON FARMS

SAN JACINTO, CALIFORNIA

10/29/2025

A-30

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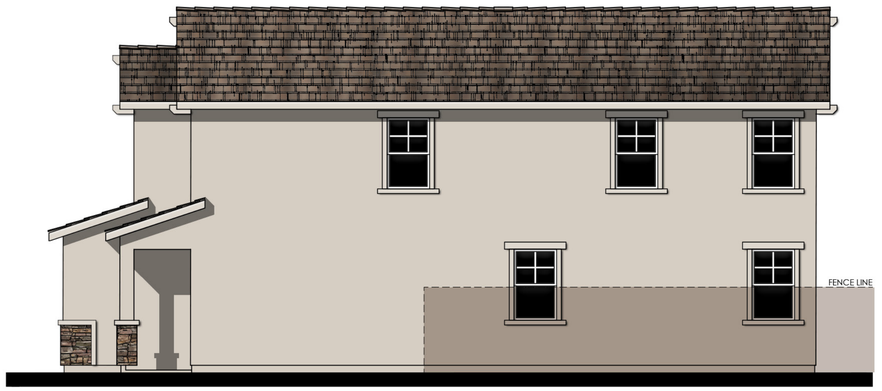
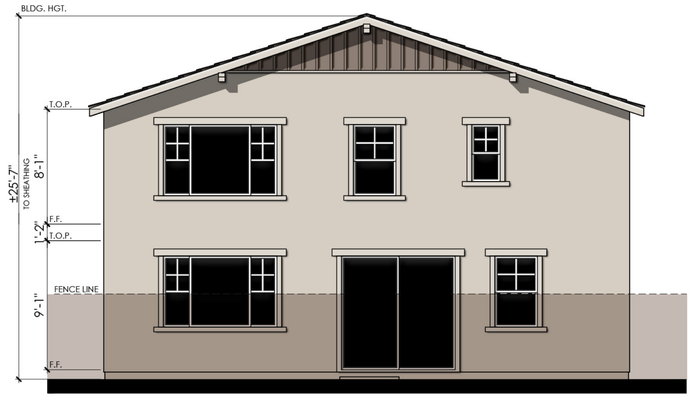
FRONT



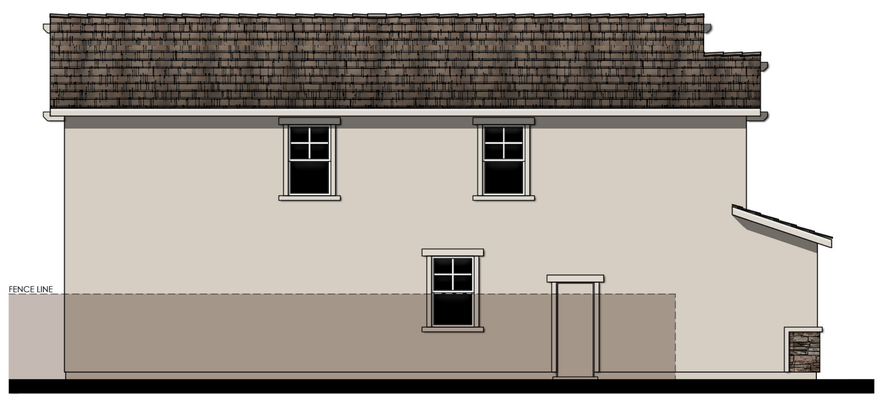
RIGHT

MATERIALS LEGEND
(WHERE OCCURS)

FRONT DOOR:	FIBERGLASS
GARAGE DOOR:	METAL SECTIONAL
ROOF:	CONCRETE "FLAT SHAKE" TILE 4:12 HIP AND GABLE
FASCIA:	2x6 WOOD
BARGE:	2x6 WOOD
GABLE END:	BOARD AND BATTEN SIDING/ DECORATIVE CORBEL/STUCCO
WALL:	STUCCO
WINDOWS:	VINYL W/ GRIDS
SHUTTERS:	SIMULATED WOOD
TRIM:	STUCCO OVER RIGID FOAM
WAINSCOT:	STONE VENEER



REAR



LEFT

COLOR SCHEME 9

PLAN 5C

"C" FARMHOUSE ELEVATIONS

0 2 4 8 12

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CHACON FARMS

SAN JACINTO, CALIFORNIA

10/29/2025

A-31

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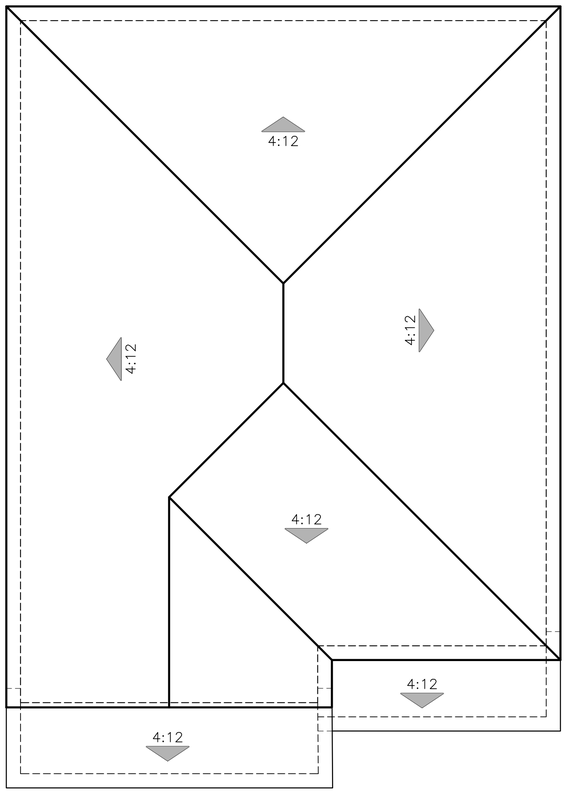
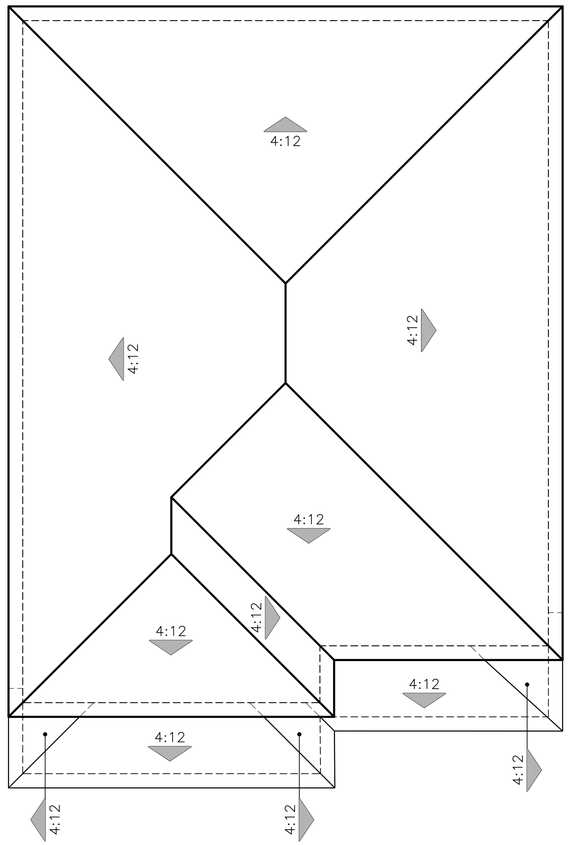
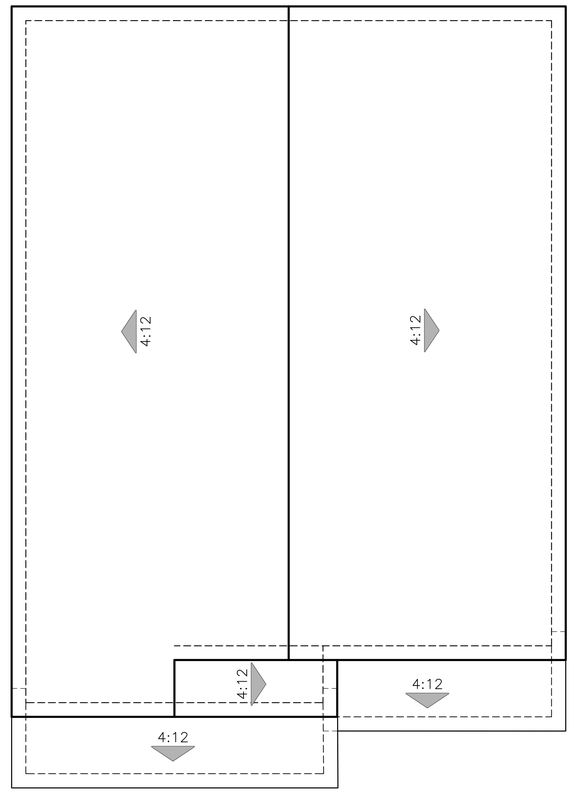
PLANNING + ARCHITECTURE



A - SPANISH



B - PRAIRIE



C - FARMHOUSE

PLAN 5
ROOF PLANS

0 2 4 8 12

RAMONA DAIRY, LLC.

CHACON FARMS
SAN JACINTO, CALIFORNIA

10/29/2025
A-32

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CHACON FARMS

SAN JACINTO, CA

JOB # 24076
CREATED 3/4/2025

"A" ELEVATIONS SPANISH	SCHEME 1	SCHEME 2	SCHEME 3
STUCCO	1628	1580	1587
STUCCO PAINT MATCH**	SW6120 BELIEVABLE BUFF	SW7012 CREAMY	SW7507 STONE LION
FASCIA / TRIM / GARAGE DOOR	SW6152 SUPERIOR BRONZE	SW7525 TREE BRANCH	SW7034 STATUS BRONZE
FRONT DOOR / SHUTTERS	SW7735 PALM LEAF	SW7580 CARNELIAN	SW7605 GALE FORCE
GABLE END DETAIL	SW6061 TANBARK	SW6061 TANBARK	SW6061 TANBARK
ROOF: LOW PROFILE "S" VILLA	1VICS0431 APPLE BARK	1VICS3182 GARNET BLEND	1VICS3181 SMOKEY TOPAZ BLD
GUTTERS:	PEBBLESTONE CLAY	WOOD BEIGE	WOOD BEIGE

STUCCO:	OMEGA
PAINT:	SHERWIN WILLIAMS
ROOF:	NEWPOINT
VENEER:	ELDORADO
GUTTERS:	RGS
GROUT:	ORCO OR EQ.

"B" ELEVATIONS PRAIRIE	SCHEME 4	SCHEME 5	SCHEME 6
STUCCO	1557	1631	1539
STUCCO PAINT MATCH **	SW7573 EAGLET BEIGE	SW6086 SAND DUNE	SW7646 FIRST STAR
FASCIA / TRIM	SW7551 GREEK VILLA	SW7004 SNOWBOUND	SW7005 PURE WHITE
LAP SIDING / CORNER BOARDS / GARAGE DOOR	SW9117 URBAN JUNGLE	SW6088 NUTHATCH	SW7673 PEWTER CAST
FRONT DOOR	SW7745 MUDDLED BASIL	SW2837 AURORA BROWN	SW7069 IRON ORE
BRICK: STACK BOND	TUNDRA LATIGO	TUNDRA HARTFORD	TUNDRA ASHLAND
GROUT:	MAC MISTY COVE	MAC MISTY COVE	MAC MISTY COVE
ROOF: FLAT SLATE	1FQCY4070 SEA PEARL BLEND	1FACS6464 CA MISSION BLEND	1FACS0330 APPALACHIAN BLEND
GUTTERS:	LINEN	SATIN	SATIN

"C" ELEVATIONS FARMHOUSE	SCHEME 7	SCHEME 8	SCHEME 9
STUCCO	1572	1557	1528
STUCCO PAINT MATCH **	SW7005 PURE WHITE	SW7573 EAGLET BEIGE	SW7632 MODERN GRAY
FASCIA / TRIM	SW7069 IRON ORE	SW7551 GREEK VILLA	SW7628 WINDFRESH WHITE
GABLE SIDING / GARAGE DOOR	SW7757 HIGH REFLECTIVE WHITE	SW7740 MESSENGER BAG	SW6074 SPALDING GRAY
FRONT DOOR / SHUTTERS	SW7069 IRON ORE	SW6373 HARVESTER	SW7625 MOUNT ETNA
STONE: DRYSTACK INSTALLATION	CLIFFSTONE BANFF SPRINGS	CLIFFSTONE BOARDWALK	CLIFFSTONE MANZANITA
ROOF: FLAT SHAKE	1FBCJ4072 SAHARA QTZ BLD	1FBCF0198 DUNES TAN	1FBCJ3181 SMOKEY TOPAZ BLD
GUTTERS:	SATIN	PEBBLESTONE	SATIN

ALL FLASHING, GUTTERS, DOWNSPOUTS ETC. TO BE PAINTED TO **MATCH** ADJACENT SURFACE. ALL PAINT BREAKS TO BE CUT AT INSIDE CORNERS.

** FOR PHOTOSHOP & RENDERING PURPOSES ONLY, DO NOT USE IN THE FIELD

TODAS LAS TAPAJUNTAS, CAñALERAS, CAñALONES, ETC.SERAN PINTADOS PARA **IGUALAR** A LA SUPERFICIE DE JUNTO

TODAS LAS RESTAURAS DE PINTURA SE CORTARAN EN LAS ESQUINAS INTERIORES

**SOLO PARA FINES DE PHOTOSHOP Y REPRESENTACIONES, NO USAR EN EL CAMPO

RAMONA DAIRY, LLC

Kevin L. Crook **Architect** Inc
PLANNING + ARCHITECTURE

WRITTEN COLOR SCHEMES

SPANISH
SCHEME #1



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SAN JACINTO, CA

#24076
MAR. 4, 2025

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SPANISH
SCHEME #2



RAMONA DAIRY, LLC

CHACON FARMS
SAN JACINTO, CA

#24076
MAR. 4, 2025

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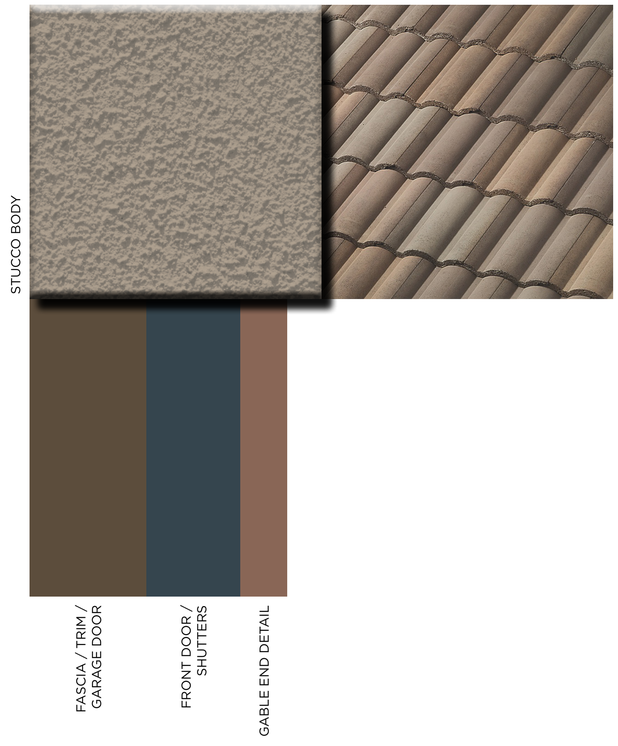
SPANISH
SCHEME #3



RAMONA DAIRY, LLC

CHACON FARMS
SAN JACINTO, CA

#24076
MAR. 4, 2025

Kevin L. Crook Architect Inc
PLANNING + ARCHITECTURE

COLOR BOARDS - “A“ SPANISH

PRAIRIE
SCHEME #4



RAMONA DAIRY, LLC

CHACON FARMS
SAN JACINTO, CA

#24076
MAR. 4, 2025

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PRAIRIE
SCHEME #5



RAMONA DAIRY, LLC

CHACON FARMS
SAN JACINTO, CA

#24076
MAR. 4, 2025

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PRAIRIE
SCHEME #6



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CHACON FARMS
SAN JACINTO, CA

#24076
MAR. 4, 2025

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COLOR BOARDS - “B“ PRAIRIE

FARMHOUSE
SCHEME #7



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CHACON FARMS
SAN JACINTO, CA

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MAR. 4, 2025

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FARMHOUSE
SCHEME #8



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CHACON FARMS
SAN JACINTO, CA

#24076
MAR. 4, 2025

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FARMHOUSE
SCHEME #9



RAMONA DAIRY, LLC

CHACON FARMS
SAN JACINTO, CA

#24076
MAR. 4, 2025

Kevin L. Crook Architect Inc
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COLOR BOARDS - "C" FARMHOUSE

LANDSCAPE DESIGN GUIDELINES

These Landscape Design Guidelines articulate the various landscape design components of Chacon Farms thematic identity. The community's landscape theme draws from the rural, agricultural heritage of the San Jacinto area.

As demonstrated by Exhibit B, Conceptual Landscape Plan, the landscape concept is intended to create a sense of community identity that links together Chacon Farms' residential land uses. Furthermore, the recommended plant palette is designed to reinforce and emphasize the community's landscape theme at major focal points.

Although a great deal of specific design information is provided in these Landscape Design Guidelines, these Guidelines are not intended to establish a set of rigid landscaping requirements for the Chacon Farms community. Instead, these Guidelines provide landscape principals and standards to ensure that plant materials, streetscapes community wall and fences are compatible with the community's design theme. These Guidelines are intended to be a living document and, as such, are subject to modification over time to allow for creative and innovative responses to unanticipated conditions, such as changes in housing design trends or community desires.

A. Plant Palette

The plant palette for Chacon Farms complements and enhances the community's setting, while also reducing irrigation needs and conserving water resources. The plant palette includes colorful plant materials along with trees appropriate for the property's climatic conditions. The plant palette also emphasizes other design elements in the community, such as the recommend architectural styles, monumentation sign, walls and fences, etc. Many of the plant materials are water efficient species native to Southern California or naturalized to the arid Southern California climate.

The plant palette provides a list of the plant materials approved for use in the Chacon Farms' community. The plans listed in the plant palette provide a base palette for the community's landscape design. Other similar plant materials may be substituted provided the selected plant materials are water-efficient and complement the Chacon Farms community theme. Plant selection for specific areas of the community shall have similar watering requirements so that the irrigation systems can be designed to minimize water us and plant materials can thrive under optimal conditions.

B. Walls & Fences

The conceptual Wall and Fence Plan for the Chacon Farms community is illustrated on Exhibit B. As shown, a variety of walls and fences are provided throughout the community to minimize roadway noise, increase privacy within each residential lot, and increase safety along the existing streets. Community walls and fences are designed as an integral component and

extension for the building designed and surrounding landscape. Gates should be complementary in style and color to its fence or wall.

Decorative Block Wall. Decorative block walls are located between roadways and residential lots to maximize privacy and provide noise attenuation. The decorative block wall shall be up to six feet (6') tall (from the resident's yard finish grade elevation). Corner returns shall be decorative block wall.

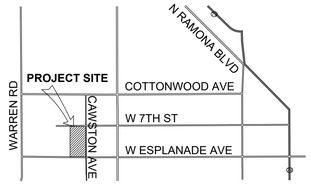
Privacy fences are provided in the rear and side yards of residential lots that do not have masonry walls. These privacy fences are vinyl. A minimum and maximum of six feet (6') tall.

B. Amenities

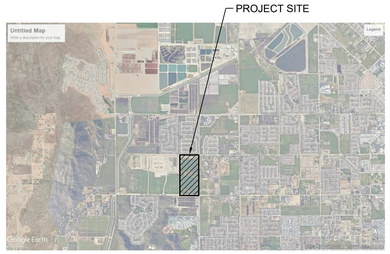
The community includes multiple new ways for residents to connect with the surrounding community include new sidewalks/trails along the perimeter streets and new pedestrian routes between Seventh Street, Cawston Avenue, and Esplanade.

The four HOA maintained parks include amenities such as pickleball court, shade structures, picnic tables, playgrounds, open space, walkways, benches, and BBQs.

Exhibit B – Landscape Architecture



LOCATION MAP
NOT TO SCALE



SITE CONTEXT MAP
NOT TO SCALE

Sheet List Table	
Sheet Number	Sheet Title
1	OVERALL SITE PLAN
2	OVERALL SITE PLAN
3	OVERALL SITE PLAN
4	BASIN PARK ENLARGEMENT
5	CENTRAL PARK ENLARGEMENT
6	EAST WEST NEIGHBORHOOD PARKS ENLARGEMENT
7	STREETSCAPE ENLARGEMENT
8	CONCEPTUAL PLANT PALETTE
9	AMENITIES
10	WALL AND FENCE PLAN
11	WALL AND FENCE PLAN
12	WALL AND FENCE PLAN
13	MAINTENANCE EXHIBIT

REFER TO SHEET 4 FOR BASIN PARK ENLARGEMENT

REFER TO SHEET 7 FOR 7TH STREETSCAPE ENLARGEMENT

PROPOSED PERIMETER BLOCK WALL



MATCHLINE - SEE SHEET 2

EXISTING PERIMETER BLOCK WALL

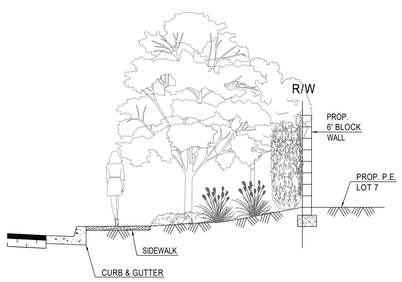
PROPOSED PERIMETER BLOCK WALL

IRRIGATION CONCEPT NOTE:

THE IRRIGATION DESIGN WILL INCORPORATE THE LATEST IN SMART IRRIGATION TECHNOLOGIES. ALL NEW LANDSCAPE AREAS WILL INCLUDE HIGH EFFICIENCY, LOW WATER USE IRRIGATION EQUIPMENT AND METHODS. A SMART IRRIGATION CONTROLLER WITH A RAIN SHUT OFF DEVICE WILL ALSO BE INCORPORATED. BARK MULCH WILL BE USED TO RETAIN MOISTURE AND REDUCE EVAPORATION AND AN IRRIGATION SCHEDULE WILL BE PROVIDED TO PROGRAM THE CONTROLLER. TWO IRRIGATION SCHEDULES SHALL BE PREPARED, ONE FOR PLANT ESTABLISHMENT AND ONE FOR MAINTENANCE. ALL NEW IRRIGATION SYSTEMS WILL COMPLY WITH ALL CURRENT LANDSCAPE GUIDELINES.

LANDSCAPE CONCEPT NOTE:

THIS LANDSCAPE WILL CONSIST OF CALIFORNIA-FRIENDLY, LOW AND MEDIUM WATER USE PLANT MATERIAL. ALL PLANTS HAVE BEEN CHOSEN FROM THE LOW OR MEDIUM WATER USE CATEGORY ACCORDING TO WUCOLS. PLANTS HAVE BEEN CHOSEN TO CREATE A UNIFORM THEME ACROSS THE SITE CONSISTING OF MEDITERRANEAN AND CALIFORNIA FRIENDLY PLANT MATERIAL. MAINTENANCE AND LONGEVITY OF PLANT MATERIAL HAS BEEN TAKEN INTO CONSIDERATION. ROOT PANELS AND BARRIERS WILL BE UTILIZED ON ALL TREES NECESSARY, CONSISTENT WITH ALL STANDARDS AND SPECIFICATIONS. A 3" LAYER OF BARK MULCH WILL BE USED IN ALL LANDSCAPE AREAS. ALL LANDSCAPE AREAS WILL CONFORM TO ALL CURRENT LANDSCAPE GUIDELINES.



SECTION 7TH STREET TYP

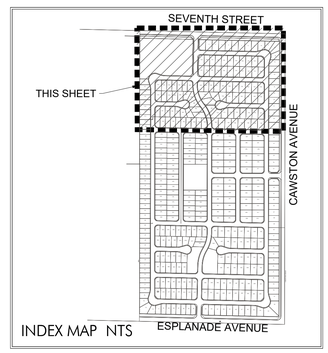
NTS

DRAINAGE BASIN HYDROSEED SCHEDULE - WUCOLS - LOW				
SYMBOL	SCIENTIFIC NAME	COMMON NAME	PURITY/ GERMINATION	BULK (LBS/ACRE)
	AGROTIS EXARATA	BENT GRASS	98/80	4.0
	BACCHARIS PILULARIS	COYOTE BRUSH	2/40	2.0
	BROMUS CARINATUS	CALIFORNIA BROME GRASS	95/80	1.5
	HELIOTROPIUM CURASSAVICUM	SALT HELIOTROPE	20/60	2.0
	HEMIZONIA FASCICLATA	FASCICLED TARWEED	10/25	1.0
	LASTHENIA CALIFORNICA	COASTAL GOLDFIELDS	90/85	0.25
	LEYMUS CONDENSATUS	GIANT WILD RYE	80/80	8.0
	LOTUS SCOPARIUS	DEERWEED	90/60	6.0
	LUPINUS BICOLOR	DOVE LUPINE	98/80	0.25
	MIMULUS GATTATUS	SEEP MONKEY FLOWER	10/60	1.0
	PLANTAGO OVATA	PLANTAIN	98/75	10.0
	TRIFOLIUM TRIDENTATUM	TOMCAT CLOVER	90/80	2.0
	VULPIA MICROSTACHYS	SMALL FESCUE	90/80	6-8

BIORETENTION BASIN PLANT SCHEDULE - WUCOLS - LOW				
SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	WUCOLS
TREES				
	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	15 GALLON	M
	CHILOPSIS LINEARIS	DESERT WILLOW	15 GALLON	L
	SHRUBS			
	SCIENTIFIC NAME	COMMON NAME	SIZE/SPACING	DENSITY/ ACRE
	JUNCUS BUFONIUS	TOAD RUSH	PLUGS/1' O.C.	10,890
	JUNCUS MEXICANUS	MEXICAN RUSH	PLUGS/1' O.C.	10,890
	SCHOENOPLECTUS AMERICANUS	WINGED THREE-SQUARE	PLUGS/1' O.C.	10,890

PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
ACCENT TREES			
	JACARANDA MIMOSIFOLIA JACARANDA	24" BOX	M
	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' MUSKOGEE CRAPE MYRTLE	36" BOX	M
PARK TREES			
	JACARANDA MIMOSIFOLIA JACARANDA	24" BOX	M
	PISTACIA CHINENSIS 'KEITH DAVEY' KEITH DAVEY CHINESE PISTACHE	24" BOX	M
	RHUS LANCEA AFRICAN SUMAC	36" BOX	L
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	48" BOX	M
STREETSCAPE - MAIN			
	CHILOPSIS LINEARIS 'BURGUNDY' DESERT WILLOW	15 GAL	L
	JACARANDA MIMOSIFOLIA JACARANDA	24" BOX	M
	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	PISTACIA CHINENSIS CHINESE PISTACHE	24" BOX	M
	PLATANUS ACERFOLIA 'BLOODGOOD' BLOODGOOD LONDON PLANE TREE	24" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	24" BOX	M
	ULMUS PARVIFOLIA 'TRUE GREEN' CHINESE ELM	24" BOX	L
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	24" BOX	L
ACCENT SHRUBS			
	AGAVE DESMETIANA SMOOTH AGAVE	5 GAL	L
	ALOE BLUE ELF BLUE ELF	1 GAL	L
	DIANELLA REVOLUTA 'DTN03' BABY BLISS™ FLAX LILY	1 GAL	L
BACKGROUND SHRUBS			
	LAURUS NOBILIS 'MONRIK' LITTLE RAGU® SWEET BAY	5 GAL	L
	LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD' GREEN CLOUD TEXAS SAGE	5 GAL	L
	OLEA EUROPAEA 'MONTRA' LITTLE OLLIE® OLIVE	5 GAL	L
	WESTRINGIA X 'WYNYABBIE GEM' WYNYABBIE GEM COAST ROSEMARY	5 GAL	L
MIDGROUND SHRUBS			
	CALLISTEMON VIMINALIS 'LITTLE JOHN' LITTLE JOHN WEEPING BOTTLEBRUSH	5 GAL	L
	BOUTELOUS GRACILIS 'BLOND AMBITION' BLONDE AMBITION GLUE GRAMA	1 GAL	L
	HESPERALOE PARVIFLORA RED YUCCA	1 GAL	L
	LOMANDRA LONGIFOLIA 'BREEZE' BREEZE™ MAT RUSH	5 GAL	L
	MUHLENBERGIA CAPILLARIS PINK MUHLY GRASS	1 GAL	L
	ROSMARINUS OFFICINALIS 'TUSCAN BLUE' TUSCAN BLUE ROSEMARY	5 GAL	L
	SALVIA GREGGII AUTUMN SAGE	5 GAL	L
	SALVIA LEUCOPHYLLA PURPLE SAGE	5 GAL	L
	WESTRINGIA FRUTICOSA 'MORNING LIGHT' MORNING LIGHT COAST ROSEMARY	5 GAL	L
VINES			
	FICUS PUMILA / CREEPING FIG	5 GAL	M
GROUNDCOVERS			
	BACCHARIS PILULARIS 'TWIN PEAKS' TWIN PEAKS COYOTE BRUSH	1 GAL	L
	MYOPORUM PARVIFOLIUM 'FINE LEAF FORM' FINE LEAF TRAILING MYOPORUM	1 GAL	L
	ROSMARINUS OFFICINALIS 'PROSTRATUS' DWARF ROSEMARY	1 GAL	L
	SENECIO MANDRALISCAE BLUE FINGERS	1 GAL	L
	WESTRINGIA FRUTICOSA 'NFL25' MUNDI™ COAST ROSEMARY	1 GAL	L



NORTH 0' 60' 120' 180'

CHACON FARMS - TRACT 39076 - OVERALL SITE PLAN

CONCEPTUAL LANDSCAPE PLAN

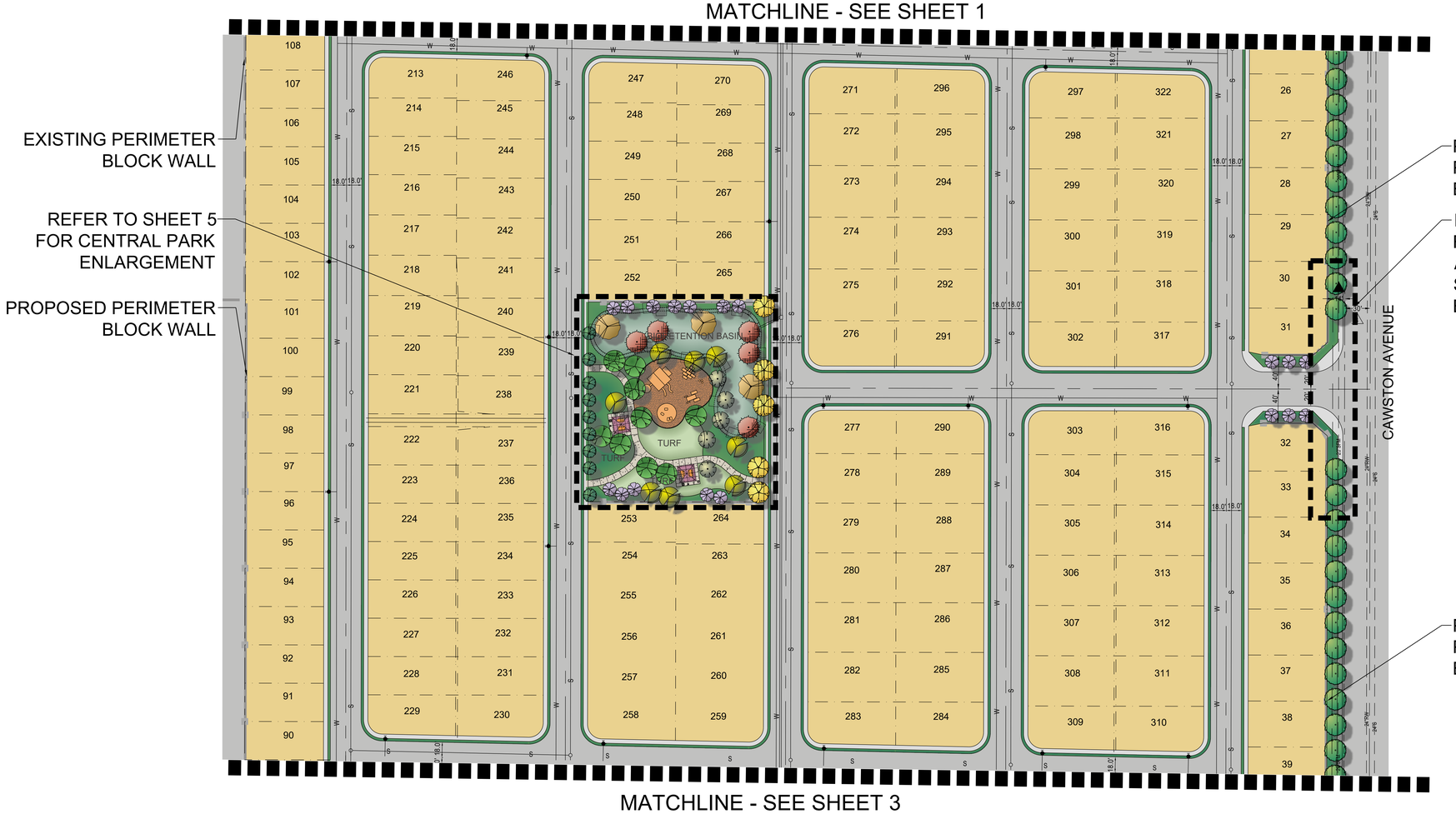
SHEET 1

PREPARED FOR RAMONA DAIRY

2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582

July 24, 2025

bmla
LANDSCAPE ARCHITECTURE
310 NORTH JOY STREET | CORONA, CA 92879
T: 951.737.1124 | F: 951.737.6551



PLANT SCHEDULE			
SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
ACCENT TREES			
	JACARANDA MIMOSIFOLIA JACARANDA	24" BOX	M
	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' MUSKOGEE CRAPE MYRTLE	36" BOX	M
PARK TREES			
	JACARANDA MIMOSIFOLIA JACARANDA	24" BOX	M
	PISTACIA CHINENSIS 'KEITH DAVEY' KEITH DAVEY CHINESE PISTACHE	24" BOX	M
	RHUS LANCEA AFRICAN SUMAC	36" BOX	L
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	48" BOX	M
STREETSCAPE - MAIN			
	CHILOPSIS LINEARIS 'BURGUNDY' DESERT WILLOW	15 GAL	L
	JACARANDA MIMOSIFOLIA JACARANDA	24" BOX	M
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	PLATANUS ACERFOLIA 'BLOODGOOD' BLOODGOOD LONDON PLANE TREE	24" BOX	M
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	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	24" BOX	L
ACCENT SHRUBS			
	AGAVE DESMETIANA SMOOTH AGAVE	5 GAL	L
	ALOE BLUE ELF BLUE ELF	1 GAL	L
	DIANELLA REVOLUTA 'DTN03' BABY BLISS™ FLAX LILY	1 GAL	L
BACKGROUND SHRUBS			
	LAURUS NOBILIS 'MONRIK' LITTLE RAGU® SWEET BAY	5 GAL	L
	LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD' GREEN CLOUD TEXAS SAGE	5 GAL	L
	OLEA EUROPAEA 'MONTRA' LITTLE OLLIE® OLIVE	5 GAL	L
	WESTRINGIA X 'WYNYABBIE GEM' WYNYABBIE GEM COAST ROSEMARY	5 GAL	L
MIDGROUND SHRUBS			
	CALLISTEMON VIMINALIS 'LITTLE JOHN' LITTLE JOHN WEEPING BOTTLEBRUSH	5 GAL	L
	BOUTELOUS GRACILIS 'BLOND AMBITION' BLONDE AMBITION GLUE GRAMA	1 GAL	L
	HESPERALOE PARVIFLORA RED YUCCA	1 GAL	L
	LOMANDRA LONGIFOLIA 'BREEZE' BREEZE™ MAT RUSH	5 GAL	L
	MUHLENBERGIA CAPILLARIS PINK MUHLY GRASS	1 GAL	L
	ROSMARINUS OFFICINALIS 'TUSCAN BLUE' TUSCAN BLUE ROSEMARY	5 GAL	L
	SALVIA GREGGII AUTUMN SAGE	5 GAL	L
	SALVIA LEUCOPHYLLA PURPLE SAGE	5 GAL	L
	WESTRINGIA FRUTICOSA 'MORNING LIGHT' MORNING LIGHT COAST ROSEMARY	5 GAL	L
VINES			
	FICUS PUMILA / CREEPING FIG	5 GAL	M
GROUNDCOVERS			
	BACCHARIS PILULARIS 'TWIN PEAKS' TWIN PEAKS COYOTE BRUSH	1 GAL	L
	MYOPORUM PARVIFOLIUM 'FINE LEAF FORM' FINE LEAF TRAILING MYOPORUM	1 GAL	L
	ROSMARINUS OFFICINALIS 'PROSTRATUS' DWARF ROSEMARY	1 GAL	L
	SENECIO MANDRALISCAE BLUE FINGERS	1 GAL	L
	WESTRINGIA FRUTICOSA 'NFL25' MUNDI™ COAST ROSEMARY	1 GAL	L

BIORETENTION BASIN PLANT SCHEDULE - WUCOLS - LOW				
SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	WUCOLS
TREES				
	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	15 GALLON	M
	CHILOPSIS LINEARIS	DESERT WILLOW	15 GALLON	L
	SHRUBS			
	SCIENTIFIC NAME	COMMON NAME	SIZE/SPACING	DENSITY/ ACRE
	JUNCUS BUFONIUS	TOAD RUSH	PLUGS/1' O.C.	10,890
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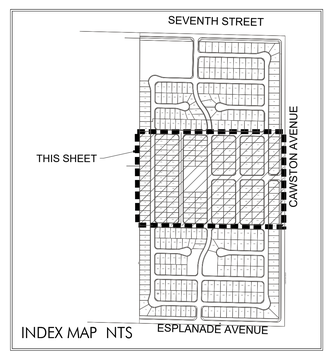
	SCHOENOPLECTUS AMERICANUS	WINGED THREE-SQUARE	PLUGS/1' O.C.	10,890



CHACON FARMS - TRACT 39076 - OVERALL SITE PLAN

NORTH 0' 60' 120' 180'

CONCEPTUAL LANDSCAPE PLAN

SHEET 2

bmla
LANDSCAPE ARCHITECTURE
310 NORTH JOY STREET | CORONA, CA 92879
T: 951.737.1124 | F: 951.737.6551

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
July 24, 2025



PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
ACCENT TREES			
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	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' MUSKOGEE CRAPE MYRTLE	36" BOX	M
PARK TREES			
	JACARANDA MIMOSIFOLIA JACARANDA	24" BOX	M
	PISTACIA CHINENSIS 'KEITH DAVEY' KEITH DAVEY CHINESE PISTACHE	24" BOX	M
	RHUS LANCEA AFRICAN SUMAC	36" BOX	L
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	48" BOX	M
STREETSCAPE - MAIN			
	CHILOPSIS LINEARIS 'BURGUNDY' DESERT WILLOW	15 GAL	L
	JACARANDA MIMOSIFOLIA JACARANDA	24" BOX	M
	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' MUSKOGEE CRAPE MYRTLE	36" BOX	M
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ACCENT SHRUBS			
	AGAVE DESMETIANA SMOOTH AGAVE	5 GAL	L
	ALOE BLUE ELF BLUE ELF	1 GAL	L
	DIANELLA REVOLUTA 'DTN03' BABY BLISS™ FLAX LILY	1 GAL	L
BACKGROUND SHRUBS			
	LAURUS NOBILIS 'MONRIK' LITTLE RAGU® SWEET BAY	5 GAL	L
	LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD' GREEN CLOUD TEXAS SAGE	5 GAL	L
	OLEA EUROPAEA 'MONTRA' LITTLE OLLIE® OLIVE	5 GAL	L
	WESTRINGIA X 'WYNYABBIE GEM' WYNYABBIE GEM COAST ROSEMARY	5 GAL	L
MIDGROUND SHRUBS			
	CALLISTEMON VIMINALIS 'LITTLE JOHN' LITTLE JOHN WEEPING BOTTLEBRUSH	5 GAL	L
	BOUTELOUS GRACILIS 'BLOND AMBITION' BLONDE AMBITION GLUE GRAMA	1 GAL	L
	HESPERALOE PARVIFLORA RED YUCCA	1 GAL	L
	LOMANDRA LONGIFOLIA 'BREEZE' BREEZE™ MAT RUSH	5 GAL	L
	MUHLENBERGIA CAPILLARIS PINK MUHLY GRASS	1 GAL	L
	ROSMARINUS OFFICINALIS 'TUSCAN BLUE' TUSCAN BLUE ROSEMARY	5 GAL	L
	SALVIA GREGGII AUTUMN SAGE	5 GAL	L
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	BACCHARIS PILULARIS 'TWIN PEAKS' TWIN PEAKS COYOTE BRUSH	1 GAL	L
	MYOPORUM PARVIFOLIUM 'FINE LEAF FORM' FINE LEAF TRAILING MYOPORUM	1 GAL	L
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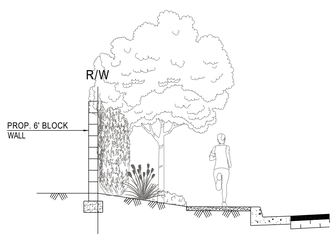
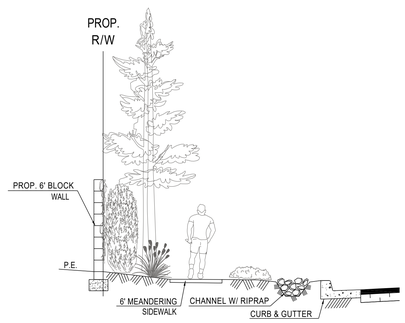
	SENECIO MANDRALISCAE BLUE FINGERS	1 GAL	L
	WESTRINGIA FRUTICOSA 'NFL25' MUNDI™ COAST ROSEMARY	1 GAL	L



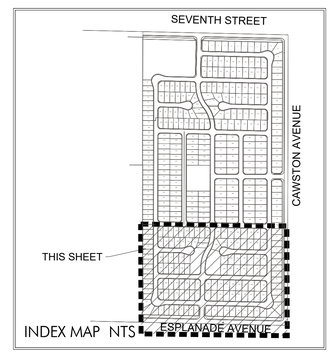
SECTION CAWSTON AVE TYP

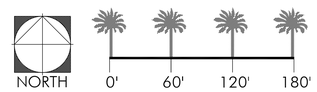


SECTION ESPLANADE AVE TYP

NTS

BIORETENTION BASIN PLANT SCHEDULE - WUCOLS - LOW				
SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	WUCOLS
TREES				
	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	15 GALLON	M
	CHILOPSIS LINEARIS	DESERT WILLOW	15 GALLON	L
	SHRUBS			
	SCIENTIFIC NAME	COMMON NAME	SIZE/SPACING	DENSITY/ ACRE
	JUNCUS BUFONIUS	TOAD RUSH	PLUGS/1' O.C.	10,890
	JUNCUS MEXICANUS	MEXICAN RUSH	PLUGS/1' O.C.	10,890
	SCHOENOPLECTUS AMERICANUS	WINGED THREE-SQUARE	PLUGS/1' O.C.	10,890





CHACON FARMS - TRACT 39076 - OVERALL SITE PLAN

CONCEPTUAL LANDSCAPE PLAN

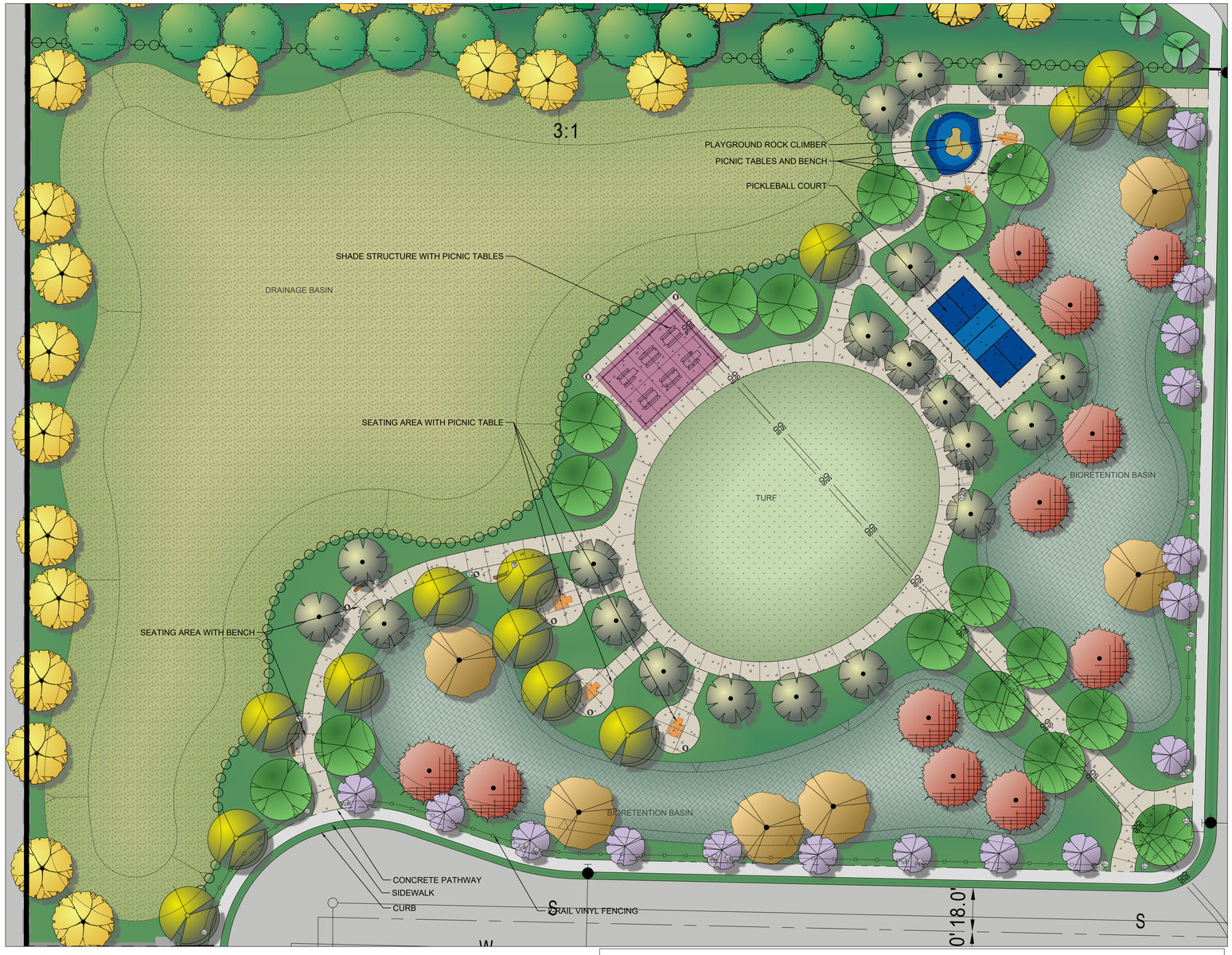
SHEET 3

PREPARED FOR RAMONA DAIRY

2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582

July 24, 2025

bmla
LANDSCAPE ARCHITECTURE
310 NORTH JOY STREET | CORONA, CA 92879
T: 951.737.1124 | F: 951.737.6551



PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
ACCENT TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' MUSKOGEE CRAPE MYRTLE	36" BOX	M
PARK TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	PISTACIA CHINENSIS 'KEITH DAVEY' KEITH DAVEY CHINESE PISTACHE	24" BOX	M
	RHUS LANCEA AFRICAN SUMAC	36" BOX	L
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	48" BOX	M
STREETSCAPE - MAIN			
	ULMUS PARVIFOLIA 'TRUE GREEN' CHINESE ELM	24" BOX	L
	PISTACIA CHINENSIS CHINESE PISTACHE	24" BOX	M
	KOELREUTERIA BIPINNATA CHINESE FLAME TREE	24" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	24" BOX	M
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	24" BOX	L

PARK TREES SHALL BE MIXED SIZES:
25% - 48" BOX
30% - 36" BOX
45% - 24" BOX

SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
ACCENT SHRUBS			
	AGAVE DESMETIANA SMOOTH AGAVE	5 GAL	L
	ALOE BLUE ELF BLUE ELF	1 GAL	L
	DIANELLA REVOLUTA 'DTN03' BABY BLISS™ FLAX LILY	1 GAL	L
BACKGROUND SHRUBS			
	LAURUS NOBILIS 'MONRIK' LITTLE RAGU® SWEET BAY	5 GAL	L
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MIDGROUND SHRUBS			
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	SENECIO MANDRALISCAE BLUE FINGERS	1 GAL	L
	WESTRINGIA FRUTICOSA 'NFL25' MUNDI™ COAST ROSEMARY	1 GAL	L

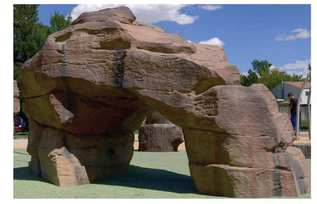
KOMPAN

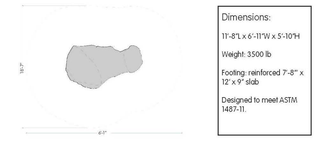
Sandstone Arch

Playground Rock Climbers

Ages 5-12

Inspired by the wind scoured formations of Utah, this climbing boulder can be explored from all sides, featuring routes for beginner to intermediate climbers.





SANDSTONE ARCH ROCK CLIMBER CONCEPT IMAGERY
MANUFACTURER: KOMPAN

BASIN PARK ENLARGEMENT



PICKLEBALL COURT



6' BENCH WITH STEEL SLAT SEAT
MANUFACTURER: VICTOR STANLEY
MODEL: NRB-28
COLOR: BLACK



SHADE STRUCTURE
GABLE ROOF RECTANGLE MULTI-RIB ROOF
MANUFACTURER: POLIGON
MODEL: REK 30 x 44 -73967
ROOF COLOR: COLONIAL RED
FRAME COLOR: ALMOND

DRAINAGE BASIN HYDROSEED SCHEDULE - WUCOLS - LOW				
SYMBOL	SCIENTIFIC NAME	COMMON NAME	PURITY/ GERMINATION	BULK (LBS/ACRE)
	AGROTIS EXARATA	BENT GRASS	98/80	4.0
	BACCHARIS PILULARIS	COYOTE BRUSH	2/40	2.0
	BROMUS CARINATUS	CALIFORNIA BROME GRASS	95/80	1.5
	HELIOTROPIUM CURASSAVICUM	SALT HELIOTROPE	20/60	2.0
	HEMIZONIA FASCICLATA	FASCICLED TARWEED	10/25	1.0
	LASTHENIA CALIFORNICA	COASTAL GOLDFIELDS	90/85	0.25
	LEYMUS CONDENSATUS	GIANT WILD RYE	80/80	8.0
	LOTUS SCOPARIUS	DEERWEED	90/60	6.0
	LUPINUS BICOLOR	DOVE LUPINE	98/80	0.25
	MIMULUS GATTATUS	SEEP MONKEY FLOWER	10/60	1.0
	PLANTAGO OVATA	PLANTAIN	98/75	10.0
	TRIFOLIUM TRIDENTATUM	TOMCAT CLOVER	90/80	2.0
	VULPIA MICROSTACHYS	SMALL FESCUE	90/80	6-8

BIORETENTION BASIN PLANT SCHEDULE - WUCOLS - LOW				
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SHRUBS				
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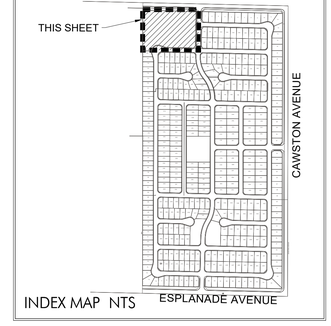

NORTH 0' 20' 40' 60'

CHACON FARMS - TRACT 39076 - ENLARGEMENT

CONCEPTUAL LANDSCAPE PLAN

SHEET 4

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
July 24, 2025

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LANDSCAPE ARCHITECTURE
310 NORTH JOY STREET | CORONA, CA 92879
T: 951.737.1124 | F: 951.737.6551



SHADE STRUCTURE
SQUARE
MANUFA
MODEL:
ROOF C(
FRAME (



8' ADA RECTANGULAR PERFORATED STEEL TABLE
MANUFACTURER: ANOVA
MODEL: D1007
COLOR: TABLE TOP - PINE, SEAT - PINE , FRAME - BLACK

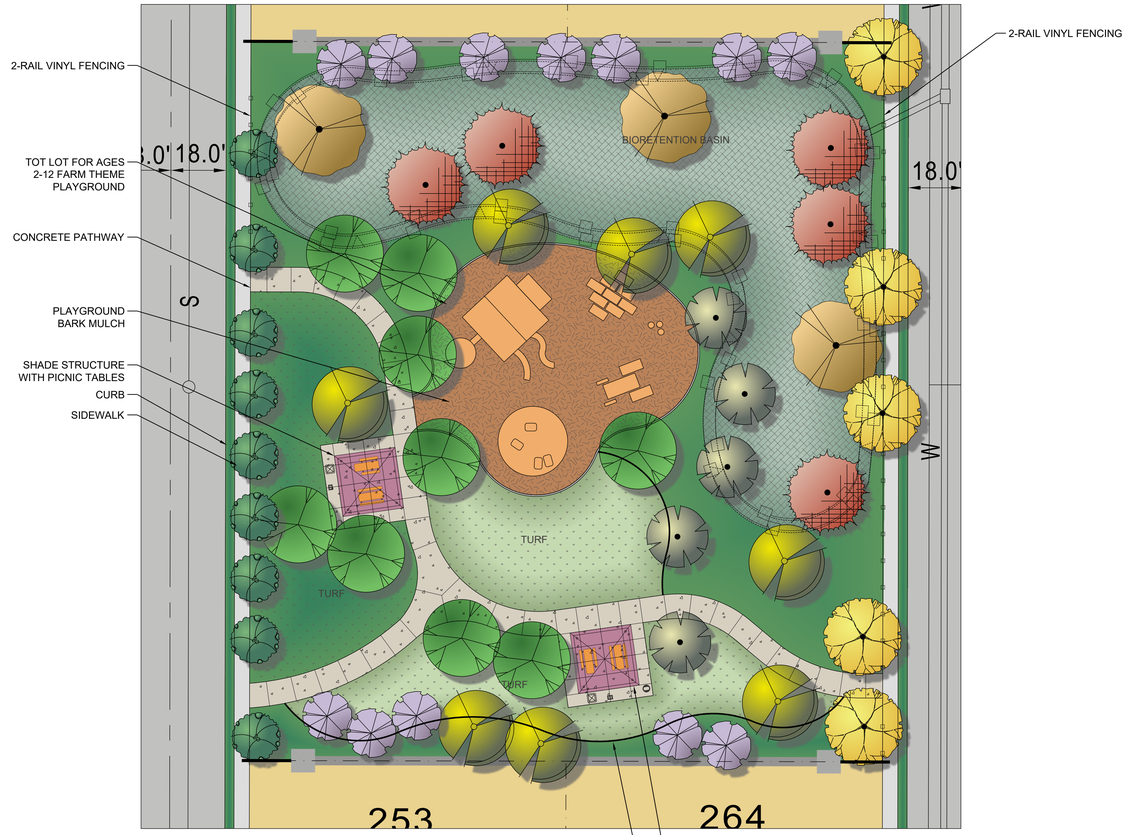


8' RECTANGULAR PERFORATED STEEL TABLE
MANUFACTURER: ANOVA
MODEL: D2014
COLOR: TABLE TOP - PINE, SEAT - PINE , FRAME - BLACK



PLAYGROUND CONCEPT IMAGERY
MANUFACTURER: Landscape Structures





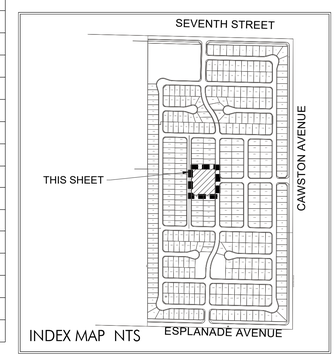
CENTRAL PARK ENLARGMENT

BIORETENTION BASIN PLANT SCHEDULE - WUCOLS - LOW				
SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	WUCOLS
TREES				
	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	15 GALLON	M
	CHILOPSIS LINEARIS	DESERT WILLOW	15 GALLON	L
SHRUBS				
	SCIENTIFIC NAME	COMMON NAME	SIZE/SPACING	DENSITY/ ACRE
	JUNCUS BUFONIUS	TOAD RUSH	PLUGS/1' O.C.	10,890
	JUNCUS MEXICANUS	MEXICAN RUSH	PLUGS/1' O.C.	10,890
	SCHOENOPLECTUS AMERICANUS	WINGED THREE-SQUARE	PLUGS/1' O.C.	10,890

PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
ACCENT TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' MUSKOGEE CRAPE MYRTLE	36" BOX	M
PARK TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	PISTACIA CHINENSIS 'KEITH DAVEY' KEITH DAVEY CHINESE PISTACHE	24" BOX	M
	RHUS LANCEA AFRICAN SUMAC	36" BOX	L
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	48" BOX	M
STREETSCAPE - MAIN			
	ULMUS PARVIFOLIA 'TRUE GREEN' CHINESE ELM	24" BOX	L
	PISTACIA CHINENSIS CHINESE PISTACHE	24" BOX	M
	KOELREUTERIA BIPINNATA CHINESE FLAME TREE	24" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	24" BOX	M
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	24" BOX	L
ACCENT SHRUBS			
	AGAVE DESMETIANA SMOOTH AGAVE	5 GAL	L
	ALOE BLUE ELF BLUE ELF	1 GAL	L
	DIANELLA REVOLUTA 'DTN03' BABY BLISS™ FLAX LILY	1 GAL	L
BACKGROUND SHRUBS			
	LAURUS NOBILIS 'MONRIK' LITTLE RAGU® SWEET BAY	5 GAL	L
	LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD' GREEN CLOUD TEXAS SAGE	5 GAL	L
	OLEA EUROPAEA 'MONTRA' LITTLE OLLIE® OLIVE	5 GAL	L
	WESTRINGIA X 'WYNYABBIE GEM' WYNYABBIE GEM COAST ROSEMARY	5 GAL	L
MIDGROUND SHRUBS			
	CALLISTEMON VIMINALIS 'LITTLE JOHN' LITTLE JOHN WEEPING BOTTLEBRUSH	5 GAL	L
	BOUTELOUS GRACILIS 'BLOND AMBITION' BLONDE AMBITION GLUE GRAMA	1 GAL	L
	HESPERALOE PARVIFLORA RED YUCCA	1 GAL	L
	LOMANDRA LONGIFOLIA 'BREEZE' BREEZE™ MAT RUSH	5 GAL	L
	MUHLENBERGIA CAPILLARIS PINK MUHLY GRASS	1 GAL	L
	ROSMARINUS OFFICINALIS 'TUSCAN BLUE' TUSCAN BLUE ROSEMARY	5 GAL	L
	SALVIA GREGGII AUTUMN SAGE	5 GAL	L
	SALVIA LEUCOPHYLLA PURPLE SAGE	5 GAL	L
	WESTRINGIA FRUTICOSA 'MORNING LIGHT' MORNING LIGHT COAST ROSEMARY	5 GAL	L
VINES			
	FICUS PUMILA / CREEPING FIG	5 GAL	M
GROUNDCOVERS			
	BACCHARIS PILULARIS 'TWIN PEAKS' TWIN PEAKS COYOTE BRUSH	1 GAL	L
	MYOPORUM PARVIFOLIUM 'FINE LEAF FORM' FINE LEAF TRAILING MYOPORUM	1 GAL	L
	ROSMARINUS OFFICINALIS 'PROSTRATUS' DWARF ROSEMARY	1 GAL	L
	SENECIO MANDRALISCAE BLUE FINGERS	1 GAL	L
	WESTRINGIA FRUTICOSA 'NFL25' MUNDI™ COAST ROSEMARY	1 GAL	L

PARK TREES SHALL BE MIXED SIZES:
25% - 48" BOX
30% - 36" BOX
45% - 24" BOX



NORTH 0' 20' 40' 60'

CHACON FARMS - TRACT 39076 - ENLARGEMENT

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CONCEPTUAL LANDSCAPE PLAN

SHEET 5

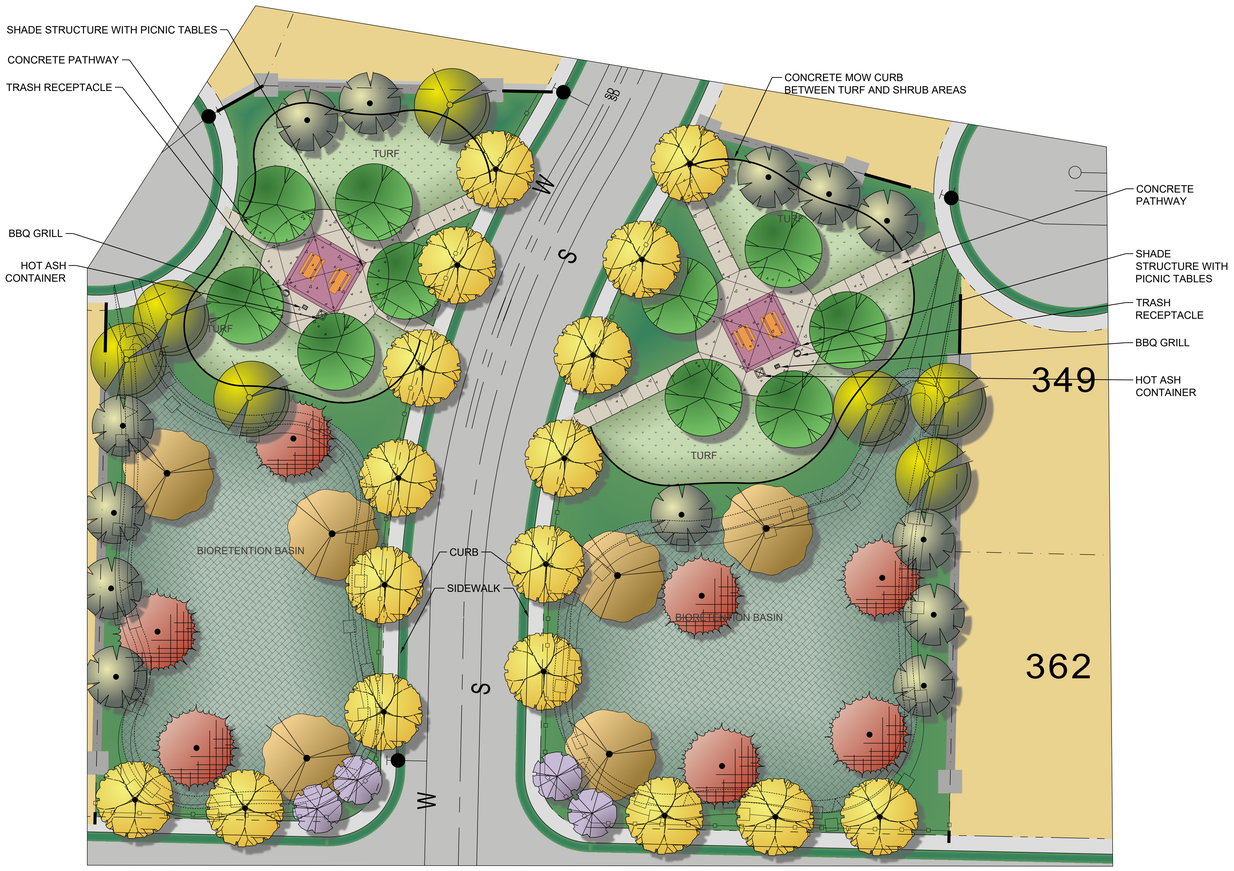
PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
July 24, 2025



SURFACE MOUNTED GRILL
MANUFACTURER: PILOT ROCK MFG
MODEL: N-20-B3



TRASH RECEPTACLE W/OPEN HOOD TOP
MANUFACTURER: VICTOR STANLEY
MODEL: S-4524
COLOR: BLACK



NEIGHBORHOOD PARKS WEST/EAST ENLARGMENT



HOT ASH RECEPTACLE
MANUFACTURER: OUTDOOR CREATIONS
MODEL: 300CR



SHADE STRUCTURE
SQUARE MULTI-RIB ROOF
MANUFACTURER: POLIGON
MODEL: SQR-20
ROOF COLOR: COLONIAL RED
FRAME COLOR: ALMOND

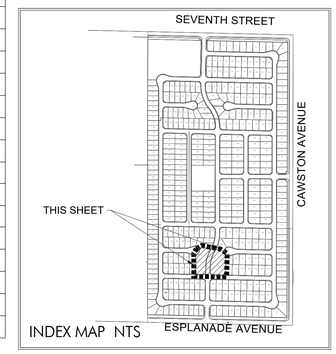
BIORETENTION BASIN PLANT SCHEDULE - WUCOLS - LOW

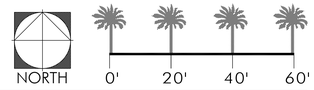
SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	WUCOLS
TREES				
	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	15 GALLON	M
	CHILOPSIS LINEARIS	DESERT WILLOW	15 GALLON	L
SHRUBS				
	SCIENTIFIC NAME	COMMON NAME	SIZE/SPACING	DENSITY/ ACRE
	JUNCUS BUFONIUS	TOAD RUSH	PLUGS/1' O.C.	10,890
	JUNCUS MEXICANUS	MEXICAN RUSH	PLUGS/1' O.C.	10,890
	SCHOENOPLECTUS AMERICANUS	WINGED THREE-SQUARE	PLUGS/1' O.C.	10,890

PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
ACCENT TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' MUSKOGEE CRAPE MYRTLE	36" BOX	M
PARK TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	PISTACIA CHINENSIS 'KEITH DAVEY' KEITH DAVEY CHINESE PISTACHE	24" BOX	M
	RHUS LANCEA AFRICAN SUMAC	36" BOX	L
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	48" BOX	M
STREETSCAPE - MAIN			
	ULMUS PARVIFOLIA 'TRUE GREEN' CHINESE ELM	24" BOX	L
	PISTACIA CHINENSIS CHINESE PISTACHE	24" BOX	M
	KOELREUTERIA BIPINNATA CHINESE FLAME TREE	24" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	24" BOX	M
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	24" BOX	L
ACCENT SHRUBS			
	AGAVE DESMETIANA SMOOTH AGAVE	5 GAL	L
	ALOE BLUE ELF BLUE ELF	1 GAL	L
	DIANELLA REVOLUTA 'DTN03' BABY BLISS™ FLAX LILY	1 GAL	L
BACKGROUND SHRUBS			
	LAURUS NOBILIS 'MONRIK' LITTLE RAGU® SWEET BAY	5 GAL	L
	LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD' GREEN CLOUD TEXAS SAGE	5 GAL	L
	OLEA EUROPAEA 'MONTRA' LITTLE OLLIE® OLIVE	5 GAL	L
	WESTRINGIA X 'WYNYABBIE GEM' WYNYABBIE GEM COAST ROSEMARY	5 GAL	L
MIDGROUND SHRUBS			
	CALLISTEMON VIMINALIS 'LITTLE JOHN' LITTLE JOHN WEEPING BOTTLEBRUSH	5 GAL	L
	BOUTELOUS GRACILIS 'BLOND AMBITION' BLONDE AMBITION GLUE GRAMA	1 GAL	L
	HESPERALOE PARVIFLORA RED YUCCA	1 GAL	L
	LOMANDRA LONGIFOLIA 'BREEZE' BREEZE™ MAT RUSH	5 GAL	L
	MUHLENBERGIA CAPILLARIS PINK MUHLY GRASS	1 GAL	L
	ROSMARINUS OFFICINALIS 'TUSCAN BLUE' TUSCAN BLUE ROSEMARY	5 GAL	L
	SALVIA GREGGII AUTUMN SAGE	5 GAL	L
	SALVIA LEUCOPHYLLA PURPLE SAGE	5 GAL	L
	WESTRINGIA FRUTICOSA 'MORNING LIGHT' MORNING LIGHT COAST ROSEMARY	5 GAL	L
VINES			
	FICUS PUMILA / CREEPING FIG	5 GAL	M
GROUNDCOVERS			
	BACCHARIS PILULARIS 'TWIN PEAKS' TWIN PEAKS COYOTE BRUSH	1 GAL	L
	MYOPORUM PARVIFOLIUM 'FINE LEAF FORM' FINE LEAF TRAILING MYOPORUM	1 GAL	L
	ROSMARINUS OFFICINALIS 'PROSTRATUS' DWARF ROSEMARY	1 GAL	L
	SENECIO MANDRALISCAE BLUE FINGERS	1 GAL	L
	WESTRINGIA FRUTICOSA 'NFL25' MUNDI™ COAST ROSEMARY	1 GAL	L

PARK TREES SHALL BE MIXED SIZES:
25% - 48" BOX
30% - 36" BOX
45% - 24" BOX





CHACON FARMS - TRACT 39076 - ENLARGEMENT

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LANDSCAPE ARCHITECTURE
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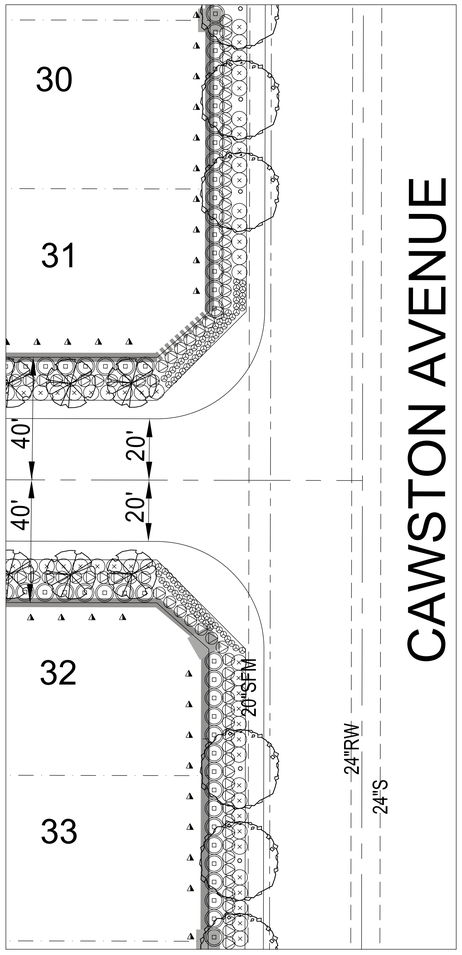
CONCEPTUAL LANDSCAPE PLAN SHEET 6

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
July 24, 2025

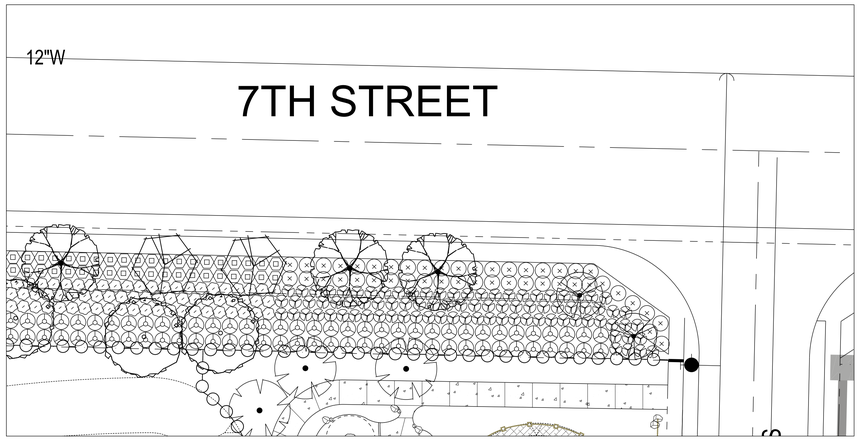
PLANT_SCHEDULE_ESPLANADE			
SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	PISTACIA CHINENSIS CHINESE PISTACHE	24" BOX	M
	CHILOPSIS LINEARIS 'BURGUNDY' DESERT WILLOW	15 GAL	L
	ULMUS PARVIFOLIA 'TRUE GREEN' CHINESE ELM	24" BOX	L
ACCENT			
	DIANELLA REVOLUTA 'DTN03' BABY BLISS™ FLAX LILY	1 GAL	L
BACKGROUND			
	TECOMA STANS YELLOW BELLS	5 GAL	L
GROUND COVERS			
	BACCHARIS X 'CENTENNIAL' CENTENNIAL COYOTE BUSH	1 GAL	L
	RHAMNUS CALIFORNICA 'MOUND SAN BRUNO' MOUND SAN BRUNO COFFEEBERRY	1 GAL	L
MIDGROUND SHRUBS			
	CALLISTEMON VIMINALIS 'LITTLE JOHN' LITTLE JOHN WEEPING BOTTLEBRUSH	5 GAL	L
	MUHLENBERGIA CAPILLARIS 'WHITE CLOUD' WHITE CLOUD MUHLY GRASS	1 GAL	L
VINES			
	FICUS PUMILA CREEPING FIG	5 GAL	M

PLANT_SCHEDULE_7TH_STREET			
SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	PISTACIA CHINENSIS CHINESE PISTACHE	24" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	36" BOX	M
	PLATANUS ACERFOLIA 'BLOODGOOD' BLOODGOOD LONDON PLANE TREE	24" BOX	M
BACKGROUND			
	XYLOSMA CONGESTUM 'COMPACTA' COMPACT XYLOSMA	5 GAL	M
GROUND COVERS			
	BACCHARIS PILULARIS 'TWIN PEAKS' TWIN PEAKS COYOTE BRUSH	1 GAL	L
	JUNIPERUS HORIZONTALIS 'WILTONII' BLUE RUG JUNIPER	1 GAL	M
MIDGROUND SHRUBS			
	MUHLENBERGIA CAPILLARIS PINK MUHLY GRASS	1 GAL	L
	SALVIA LEUCOPHYLLA PURPLE SAGE	5 GAL	L

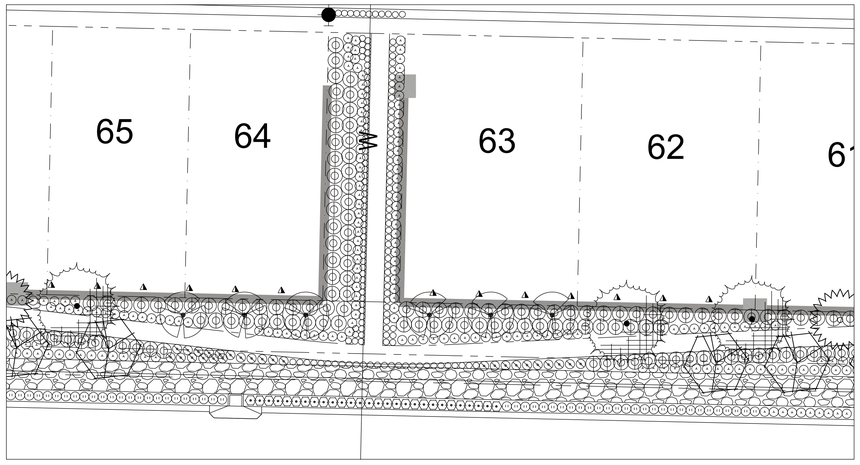
PLANT_SCHEDULE_CAWSTON			
SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
TREES			
	JACARANDA MIMOSIFOLIA JACARANDA	24" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	36" BOX	M
ACCENT			
	ALOE BLUE ELF BLUE ELF	1 GAL	L
BACKGROUND			
	LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD' GREEN CLOUD TEXAS SAGE	5 GAL	L
GROUND COVERS			
	BACCHARIS PILULARIS 'TWIN PEAKS' TWIN PEAKS COYOTE BRUSH	1 GAL	L
MIDGROUND SHRUBS			
	HESPERALOE PARVIFLORA RED YUCCA	1 GAL	L
VINES			
	FICUS PUMILA CREEPING FIG	5 GAL	M



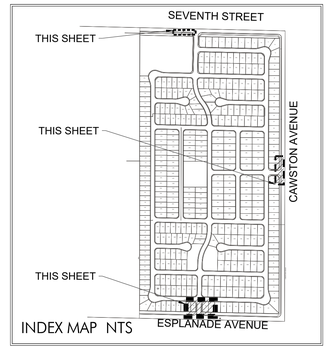
CAWSTON AVE STREETSCAPE ENLARGMENT



7 TH STREET STREETSCAPE ENLARGMENT

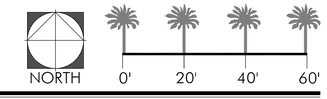


ESPLANADE STREETSCAPE ENLARGMENT



CHACON FARMS - TRACT 39076 - ENLARGEMENT

NOTE:
1. VINES PLACEMENT IS DIAGRAMMATIC. FINAL PLACEMENT IS TO BE ON THE STREET SIDE OF WALL.



bmla
LANDSCAPE ARCHITECTURE
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CONCEPTUAL LANDSCAPE PLAN

SHEET 7

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
July 24, 2025

TREES



LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE'



PODOCARPUS GRACILIOR



PISTACHIA CHINENSIS 'KEITH DAVEY'



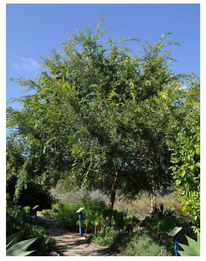
RHUS LANCEA



ULMUS PARVIFOLIA 'TRUE GREEN'



PLATANUS ACERIFOLIA 'BLOOD GOOD'



ULMUS PARVIFOLIA 'DRAKE'



JACARANDA MIMOSIFOLIA



CHILOPSIS LINEARIS 'BURGUNDY'



PISTACIA CHINENSIS

SHRUBS



AGAVE DESMETIANA



ALOE 'BLUE ELF'



DIANELLA REVOLUTA 'BABY BLISS'



LAURUS NOBILIS 'MONRIK'



LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD'



OLEA EUROPAEA 'MONTRA'



WESTRINGIA X 'WYNABBIE GEM'



CALLISTEMON VIMINALIS 'LITTLE JOHN'



TECOMA STANS



HESPERALOE PARVIFLORA



LOMANDRA LONGIFOLIA 'BREEZE'



MUHLENBERGIA CAPILARIS



ROSMARINUS OFFICINALIS 'TUSCAN BLUE'



SALVIA GREGGI



SALVIA LEUCOPHYLLA



WESTRINGIA FRUTICOSA 'MORNING LIGHT'



MUHLENBERGIA CAPILLARIS 'WHITE CLOUD'



XYLOSMA CONGESTUM 'COMPACTA'

GROUNDCOVER



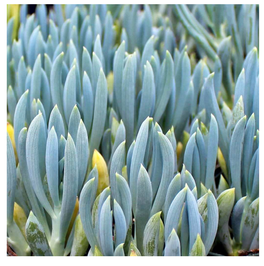
BACCHARIS PILULARIS 'TWIN PEAKS'



MYOPORUM PARVIFOLIUM 'FINE LEAF FORM'



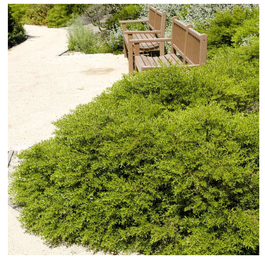
ROSMARINUS OFFICINALIS 'PROSTRATUS'



SENECIO MANDRALISCAE



WESTRINGIA 'MUNDI'



BACCHARIS X 'CENTENNIAL'

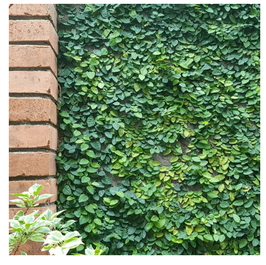


RHAMNUS CALIFORNICA 'MOUND SAN BRUNO'



JUNIPERUS HORIZONTALIS 'WILTONII'

VINE



FICUS PUMILA

CHACON FARMS - TRACT 39076 - CONCEPTUAL PLANT PALETTE

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CONCEPTUAL LANDSCAPE PLAN SHEET 8

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
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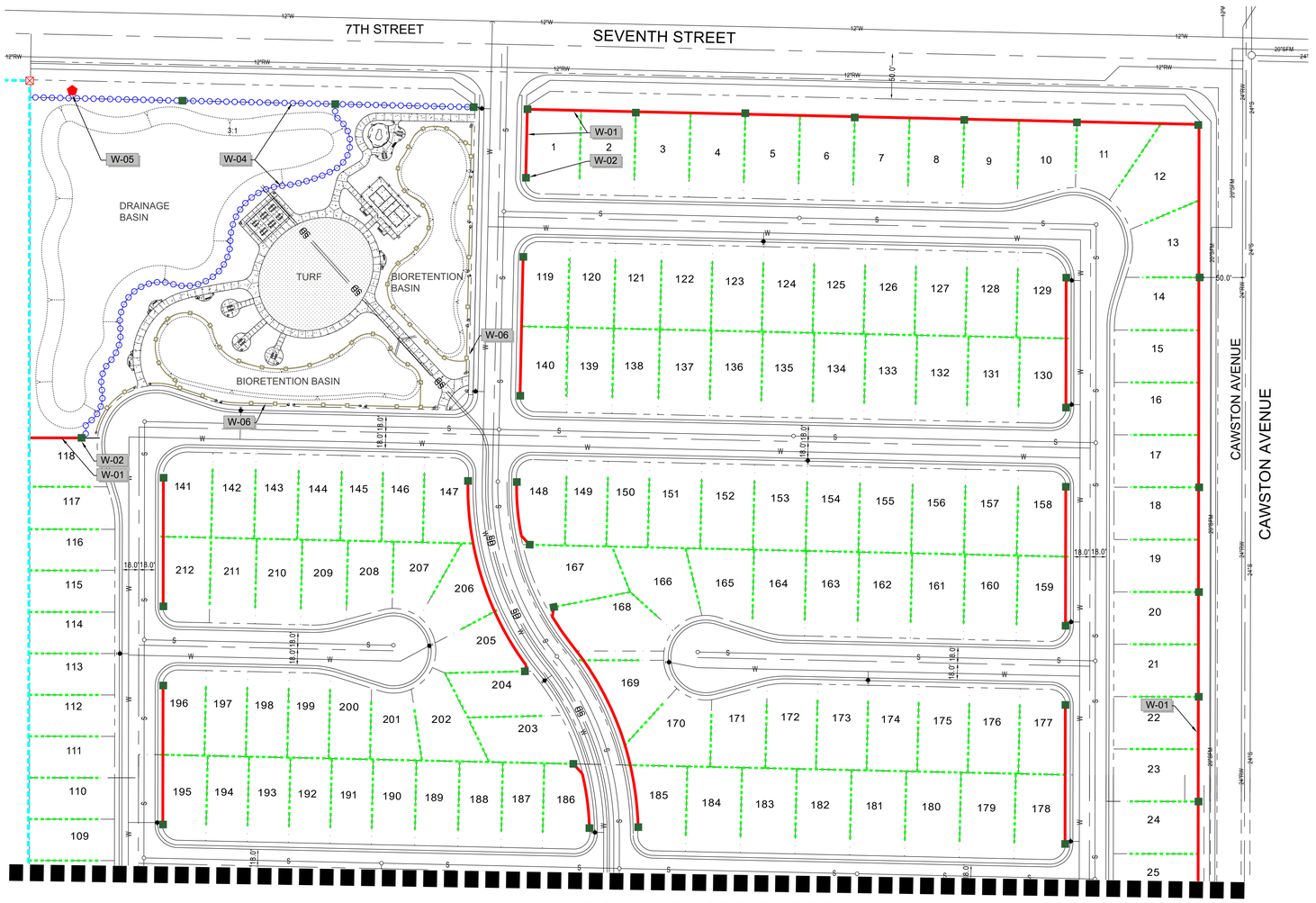


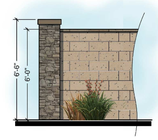
MATCHLINE - SEE SHEET 10

WALL AND FENCE LEGEND	
CODE/SYMBOL	DESCRIPTION
W-01	6'-0" TALL SPLIT-FACE ON BOTH SIDES BLOCK WALL W/ 2" THICK DECORATIVE CAP
W-02	6'-6" TALL SPLIT-FACE BLOCK PILASTER W/ 4" THICK DECORATIVE CAP, PILASTER TO RECEIVE STONE VENEER AT CORNER LOCATIONS
W-03A	6-0" TALL INTERIOR VINYL FENCE, COLOR TAN
W-04	6'-0" TALL TUBULAR STEEL FENCE
W-05	6'-0" TALL TUBULAR STEEL MAINTENANCE GATE
W-06	2'-4" TALL SPLIT RAIL VINYL FENCE
W-07	6'-0" TALL PROJECT ENTRY MONUMENT WALL
	EXISTING PERIMETER WALL
	EXISTING PILASTER

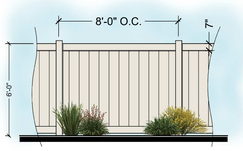
WALL AND FENCE ELEVATIONS



WALL: W-01
PILASTER: W-02
6'-0" TALL SPLIT-FACE ON BOTH SIDE BLOCK WALL W/ 2" DECORATIVE CAP
6'-6" SPLITFACE PILASTER WITH 4" DECORATIVE CAP



PILASTER: W-02
6'-6" STONE VENEER PILASTER WITH 4" DECORATIVE CAP AT CORNER CONDITIONS



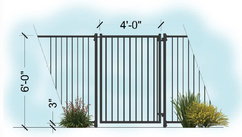
FENCE: W-03
6'-0" TALL INTERIOR VINYL FENCE, COLOR WHITE



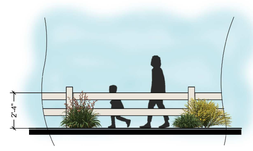
GATE: W-03B
3-0" WIDE VINYL GATE, COLOR WHITE



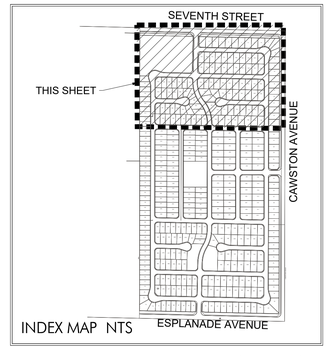
FENCE: W-04
6'-0" TALL TUBULAR STEEL FENCE



FENCE: W-05
6'-0" TALL TUBULAR STEEL FENCE GATE



FENCE: W-06
2'-4" TALL SPLIT RAIL VINYL FENCE



CHACON FARMS - TRACT 39076 - WALL AND FENCE PLAN

NORTH 0' 60' 120' 180'

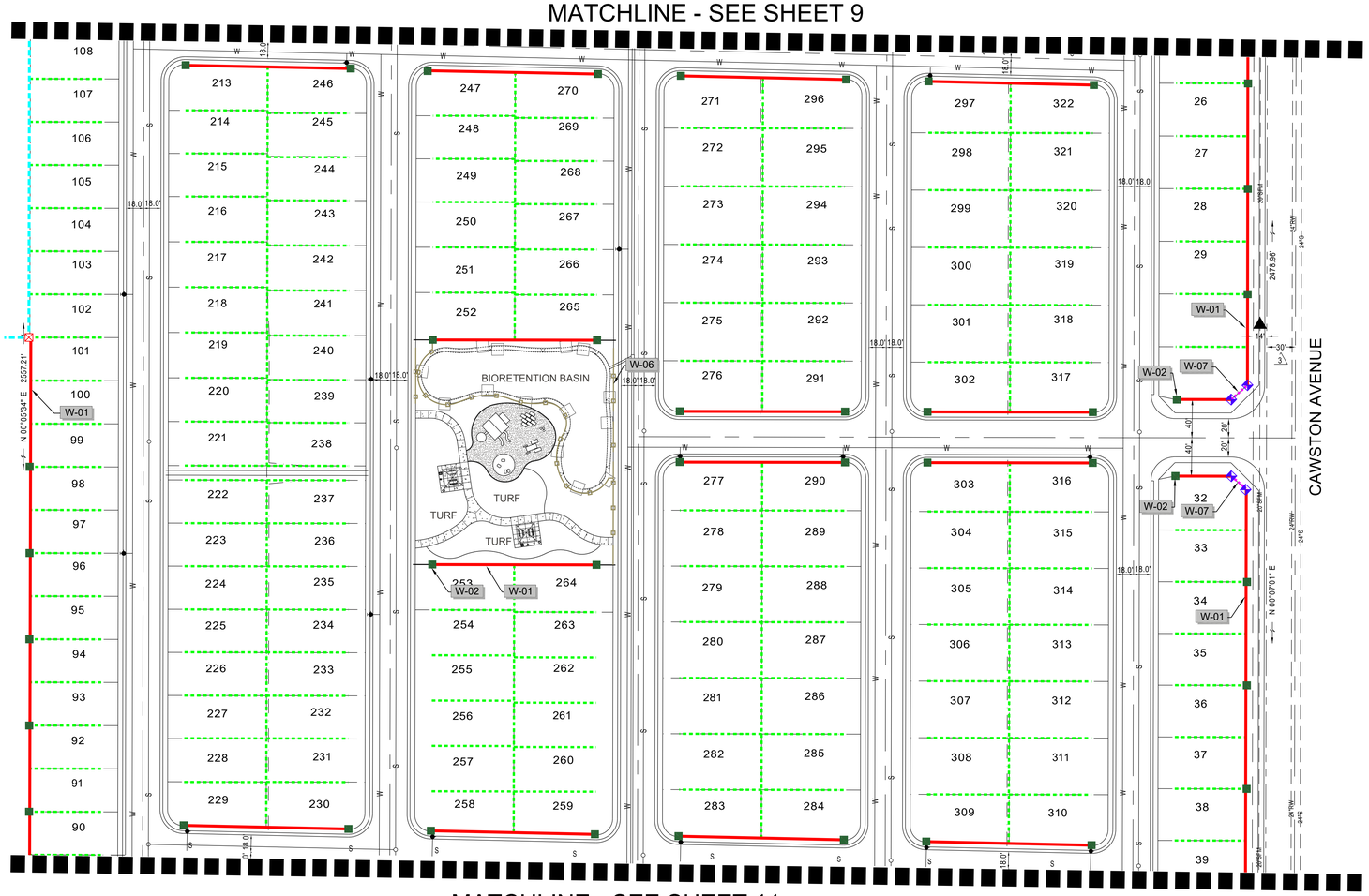
bmla
LANDSCAPE ARCHITECTURE
310 NORTH JOY STREET | CORONA, CA 92879
T: 951.737.1124 | F: 951.737.6551

CONCEPTUAL LANDSCAPE PLAN

SHEET 9

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
July 24, 2025

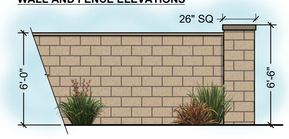
MATCHLINE - SEE SHEET 9



MATCHLINE - SEE SHEET 11

WALL AND FENCE LEGEND	
CODE/SYMBOL	DESCRIPTION
W-01	6'-0" TALL SPLIT-FACE ON BOTH SIDES BLOCK WALL W/ 2" THICK DECORATIVE CAP
W-02	6'-6" TALL SPLIT-FACE BLOCK PILASTER W/ 4" THICK DECORATIVE CAP, PILASTER TO RECEIVE STONE VENEER AT CORNER LOCATIONS
W-03A	6-0" TALL INTERIOR VINYL FENCE, COLOR TAN
W-04	6'-0" TALL TUBULAR STEEL FENCE
W-05	6'-0" TALL TUBULAR STEEL MAINTENANCE GATE
W-06	2'-4" TALL SPLIT RAIL VINYL FENCE
W-07	6'-0" TALL PROJECT ENTRY MONUMENT WALL
	EXISTING PERIMETER WALL
	EXISTING PILASTER

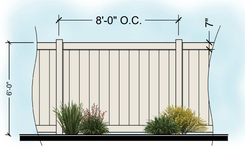
WALL AND FENCE ELEVATIONS



WALL: W-01
PILASTER: W-02
6'-0" TALL SPLIT-FACE ON BOTH SIDE BLOCK WALL W/ 2" DECORATIVE CAP
6'-6" SPLITFACE PILASTER WITH 4" DECORATIVE CAP



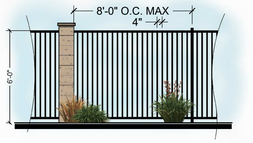
PILASTER: W-02
6'-6" STONE VENEER PILASTER WITH 4" DECORATIVE CAP AT CORNER CONDITIONS



FENCE: W-03
6'-0" TALL INTERIOR VINYL FENCE, COLOR WHITE



GATE: W-03B
3-0" WIDE VINYL GATE, COLOR WHITE



FENCE: W-04
6'-0" TALL TUBULAR STEEL FENCE



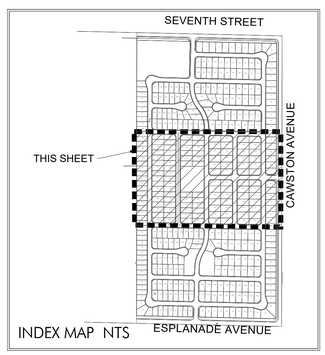
FENCE: W-05
6'-0" TALL TUBULAR STEEL FENCE GATE

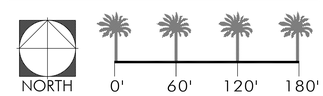


FENCE: W-06
2'-4" TALL SPLIT RAIL VINYL FENCE



WALL: W-07
6'-0" TALL ENTRY MONUMENT WALL
TEXT IS 18" HIGH BY 16' WIDE, 24 SF TOTAL.





CHACON FARMS - TRACT 39076 - WALL AND FENCE PLAN

CONCEPTUAL LANDSCAPE PLAN

SHEET 10

bmla
LANDSCAPE ARCHITECTURE
310 NORTH JOY STREET | CORONA, CA 92879
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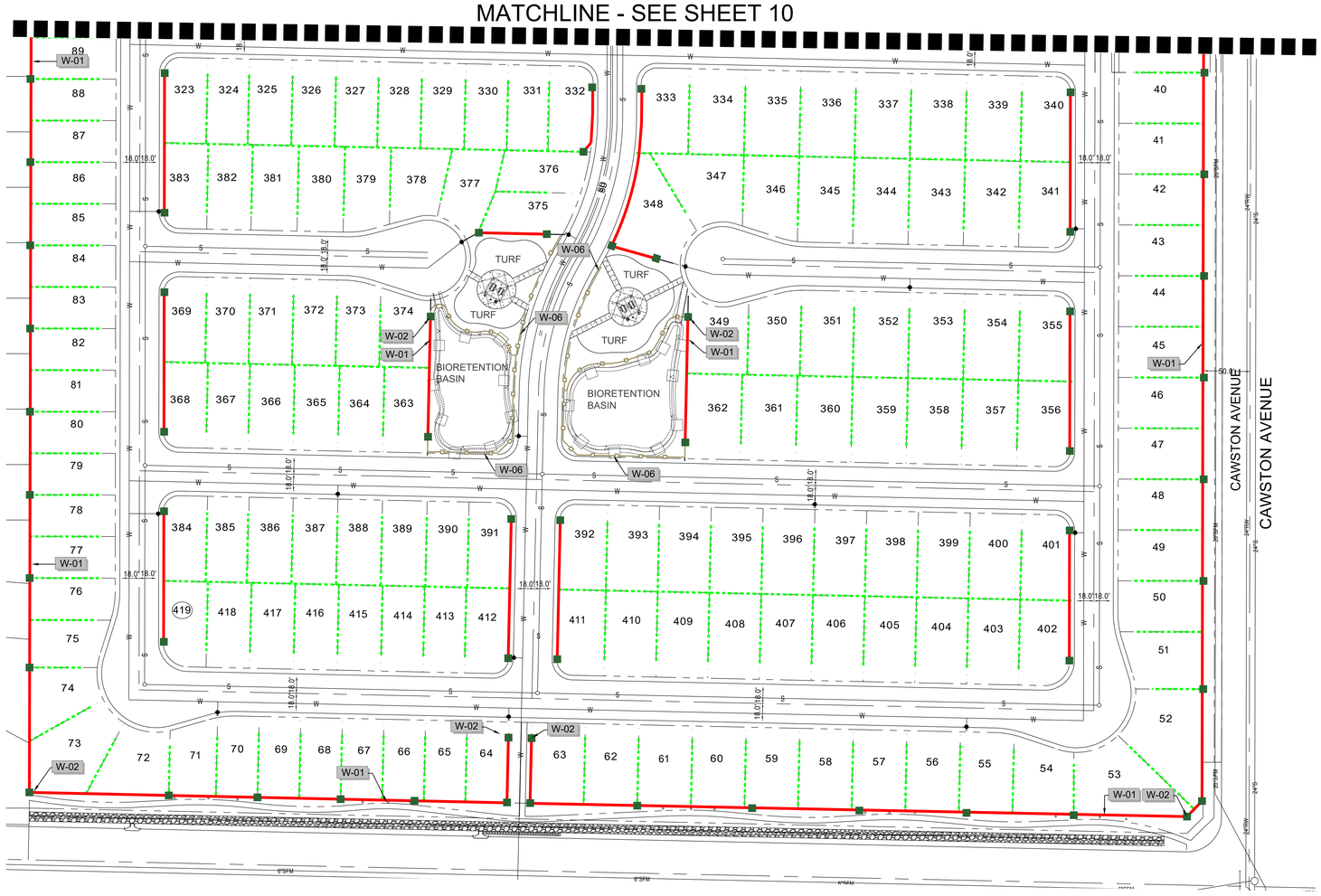
PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
July 24, 2025



WALL AND FENCE LEGEND	
CODE/SYMBOL	DESCRIPTION
W-01	6'-0" TALL SPLIT-FACE ON BOTH SIDES BLOCK WALL W/ 2" THICK DECORATIVE CAP
W-02	6'-6" TALL SPLIT-FACE BLOCK PILASTER W/ 4" THICK DECORATIVE CAP, PILASTER TO RECEIVE STONE VENEER AT CORNER LOCATIONS
W-03A	6-0" TALL INTERIOR VINYL FENCE, COLOR TAN
W-04	6'-0" TALL TUBULAR STEEL FENCE
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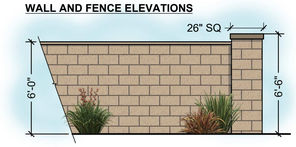
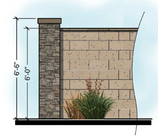
W-06	2'-4" TALL SPLIT RAIL VINYL FENCE
W-07	6'-0" TALL PROJECT ENTRY MONUMENT WALL
	EXISTING PERIMETER WALL
	EXISTING PILASTER

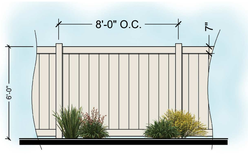
WALL AND FENCE ELEVATIONS



WALL: W-01
PILASTER: W-02
6'-0" TALL SPLIT-FACE ON BOTH SIDE BLOCK WALL W/ 2" DECORATIVE CAP
6'-6" SPLITFACE PILASTER WITH 4" DECORATIVE CAP



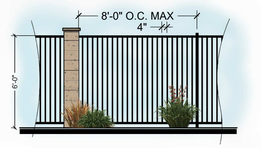
PILASTER: W-02
6'-6" STONE VENEER PILASTER WITH 4" DECORATIVE CAP AT CORNER CONDITIONS



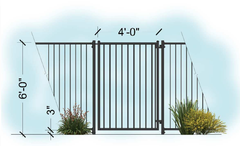
FENCE: W-03
6'-0" TALL INTERIOR VINYL FENCE, COLOR WHITE



GATE: W-03B
3'-0" WIDE VINYL GATE, COLOR WHITE



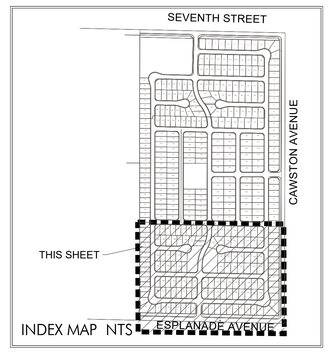
FENCE: W-04
6'-0" TALL TUBULAR STEEL FENCE

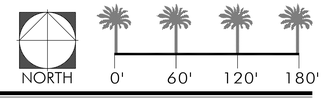


FENCE: W-05
6'-0" TALL TUBULAR STEEL FENCE GATE



FENCE: W-06
2'-4" TALL SPLIT RAIL VINYL FENCE





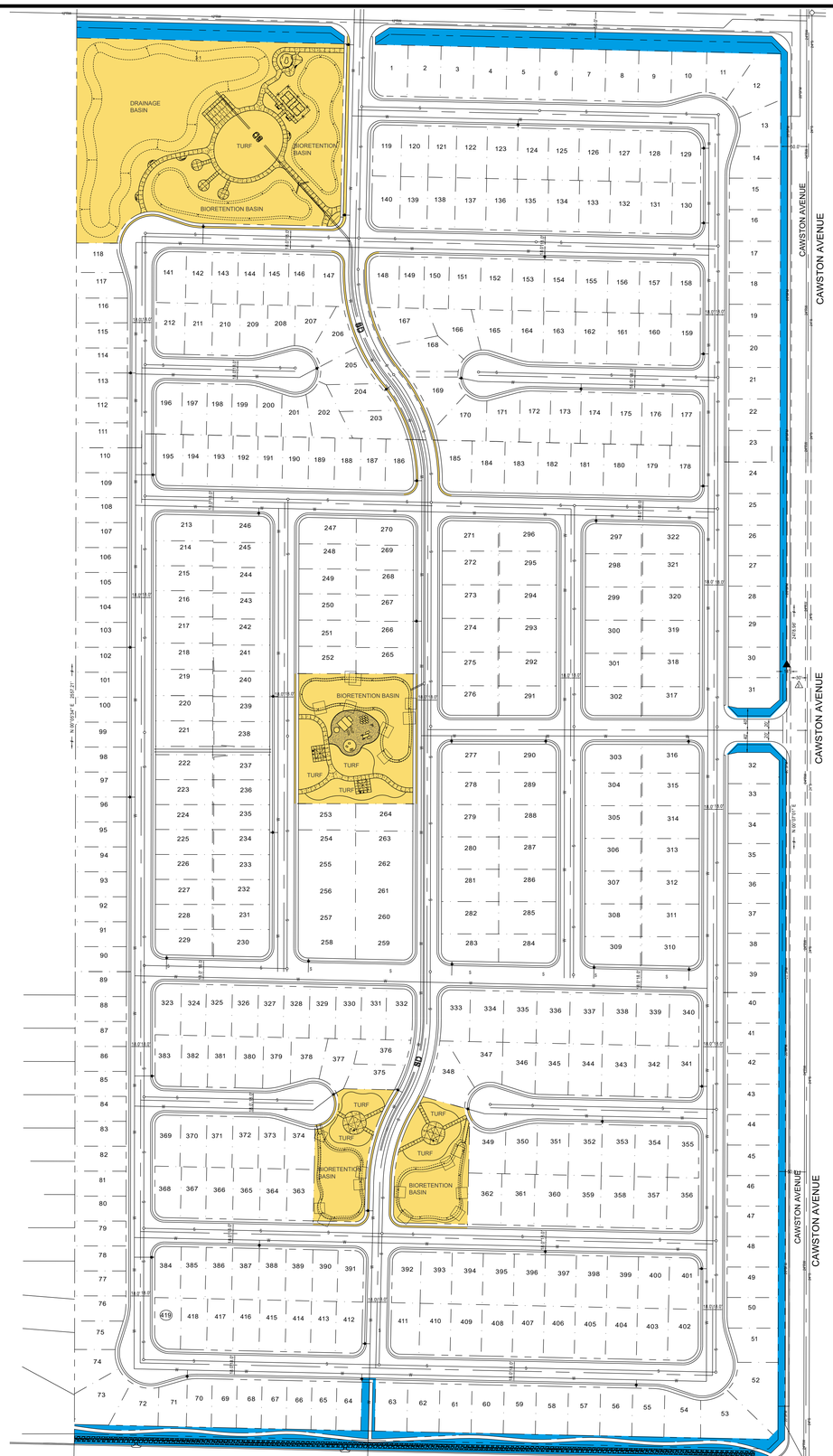
CHACON FARMS - TRACT 39076 - WALL AND FENCE PLAN

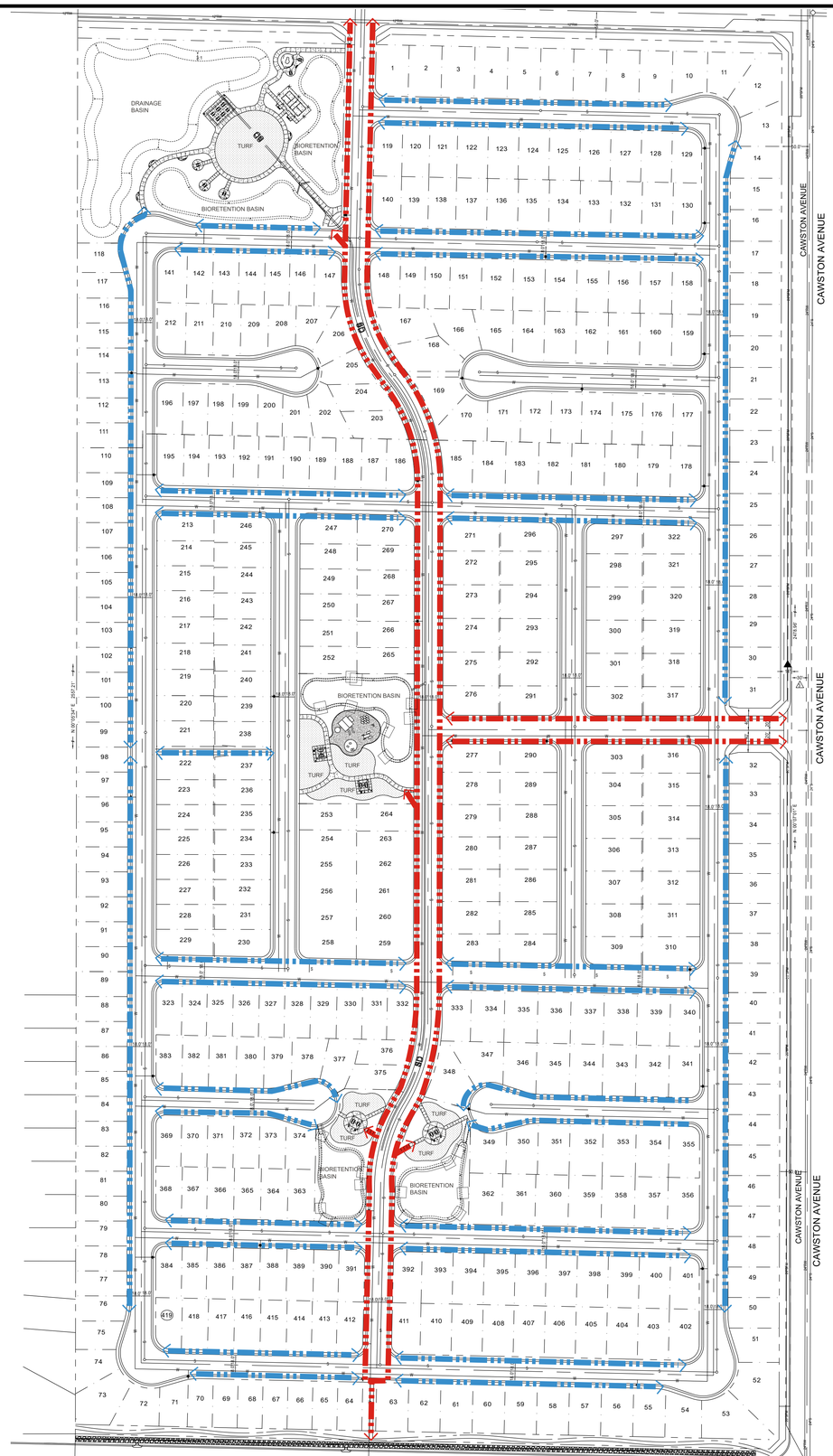
CONCEPTUAL LANDSCAPE PLAN

SHEET 11

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
July 24, 2025

bmla
LANDSCAPE ARCHITECTURE
310 NORTH JOY STREET | CORONA, CA 92879
T: 951.737.1124 | F: 951.737.6551





CHACON FARMS - TRACT 38787 - MAINTENANCE EXHIBIT & CIRCULATION

CONCEPTUAL LANDSCAPE PLAN

SHEET 12

NORTH 0' 100' 200' 300'

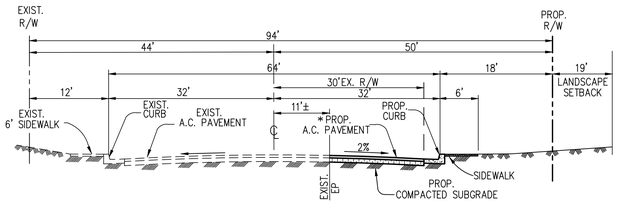
bmla
LANDSCAPE ARCHITECTURE
310 NORTH JOY STREET | CORONA, CA 92879
T: 951.737.1124 | F: 951.737.6551

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
July 24, 2025

Exhibit C - Tentative Tract Map

IN THE CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076

PORTION SECTION 31, TOWNSHIP 4 SOUTH, RANGE 1 WEST, S.B.M.

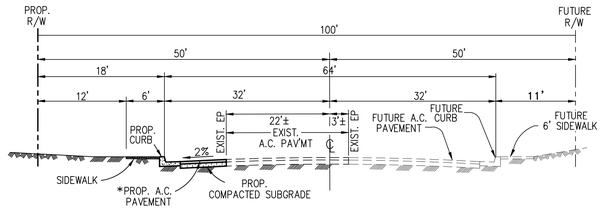


TYPICAL STREET SECTION
SEVENTH STREET - MAJOR
PUBLIC STREET

NOT TO SCALE

T.I. = 9.0

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.

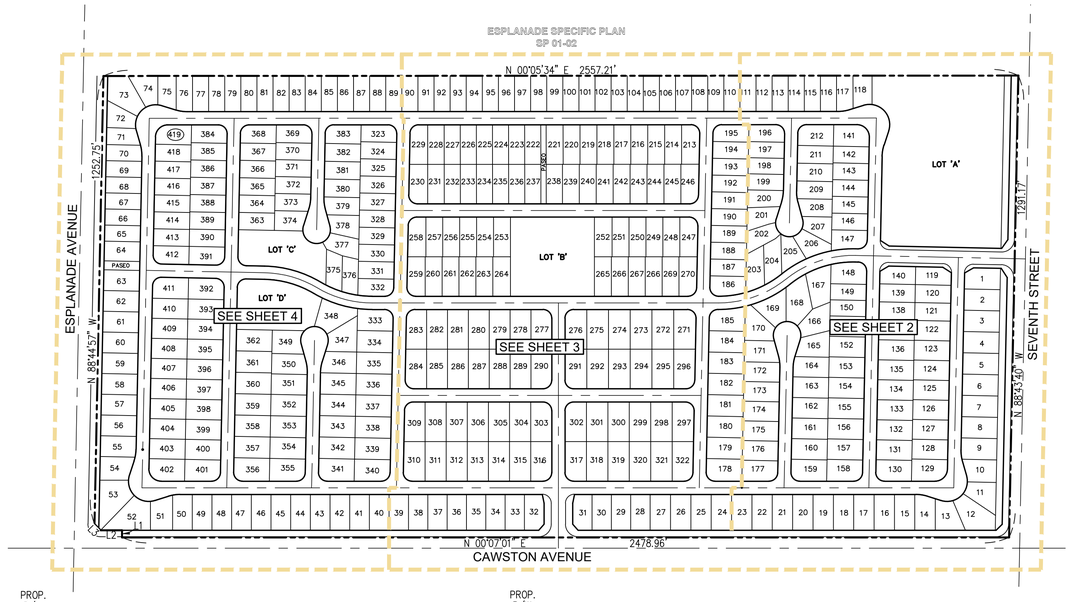


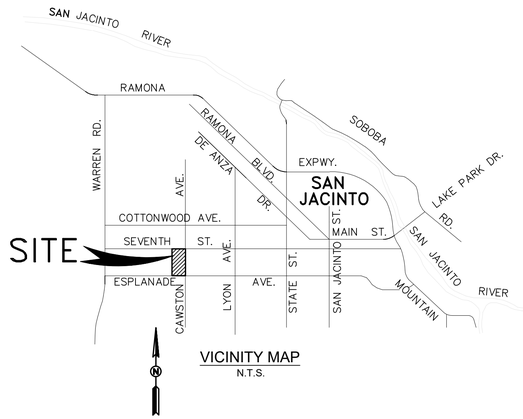
TYPICAL STREET SECTION
CAWSTON AVENUE - MAJOR
PUBLIC STREET

NOT TO SCALE

T.I. = 9.0

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.





VICINITY MAP
N.T.S.

OWNER

TEUNIS J. DE JONG, TRUSTEE OF THE TEUNIS J. JONG TRUST.
2451 RAMONA EXPRESSWAY
SAN JACINTO, CA. 92582
907-229-2072

APPLICANT

RICHARD MICHAEL
RAMONA DAIRY
2451 RAMONA EXPRESSWAY
SAN JACINTO, CA 92582
907-229-2072
richard@homealaska.net

ASSESSOR'S PARCEL NO(S).

432-260-009, 026 AND 027

ADJACENT LAND USE

WEST – ESPLANADE SP/ESPLANADE SP
NORTH – LDR/RL
EAST – VLDR/RR
SOUTH – CITY OF HEMET/CITY OF HEMET

ZONING

RL
RL/PI
RL
RM

EXISTING LAND USE

VLDR – VERY LOW DENSITY RESIDENTIAL

PROPOSED LAND USE

LDR – LOW DENSITY RESIDENTIAL

EXISTING ZONING

RR – RURAL RESIDENTIAL

PROPOSED ZONING

RL – RESIDENTIAL LOW DENSITY

UTILITIES

SEWER	CITY OF SAN JACINTO
WATER	EASTERN MUNICIPAL WATER DISTRICT
GAS	SOUTHERN CALIFORNIA GAS COMPANY
ELECTRIC	SOUTHERN CALIFORNIA EDISON COMPANY
TELEPHONE	FRONTIER
CABLE	FRONTIER

NUMBER OF LOTS

419 SINGLE FAMILY RESIDENTIAL
4 OPEN SPACE LOTS

DENSITY

5.53 DU/AC GROSS

ACREAGE

75.70 GROSS ACRES WITHIN BOLD BOUNDARY
73.06 ACRES NET

OPEN SPACE AREA (NO BASINS)

LOT 'A': 1.88 AC
LOT 'B': 0.76 AC
LOT 'C': 0.27 AC
LOT 'D': 0.35 AC

SCHOOL DISTRICT

SAN JACINTO UNIFIED

SOURCE OF TOPOGRAPHY

AN AERIAL SURVEY BY PSOMAS DATED 10/22

FLOOD PLAIN

ZONE X PER COMMUNITY PANEL NO. 06065C1470G, DATED 8/28/2008.

EARTHWORK CALCULATIONS

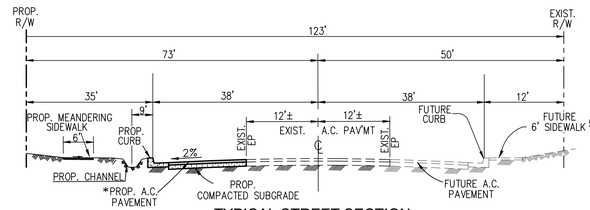
CUT VOLUME: 42,809 C.Y.
FILL VOLUME: 169,944 C.Y.

SHEET INDEX

SHEET 1 . . . . . TITLE SHEET
SHEET 2 . . . . . TENTATIVE TRACT MAP
SHEET 3 . . . . . TENTATIVE TRACT MAP
SHEET 4 . . . . . TENTATIVE TRACT MAP
SHEET 5 . . . . . LOT AREA SUMMARY TABLE

PHASING NOTE

THIS TENTATIVE MAP IS BEING FILED IN ACCORDANCE WITH SUBDIVISION MAP ACT SECTION 66456.1 ALLOWING FOR THE FILING OF MULTIPLE FINAL MAPS. FOUR (4) PHASED FINAL MAPS ARE ANTICIPATED TO BE FILED BASED ON THIS TENTATIVE TRACT MAP.

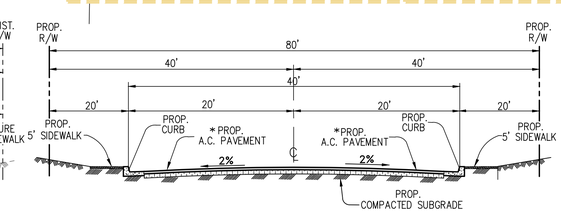


TYPICAL STREET SECTION
ESPLANADE AVENUE - ARTERIAL
PUBLIC STREET

NOT TO SCALE

T.I. = 9.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.

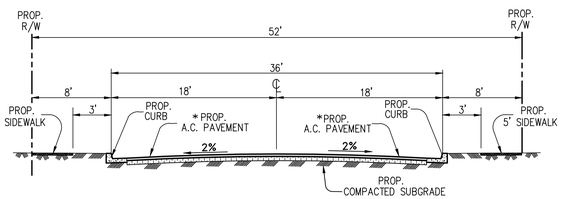


TYPICAL STREET SECTION
ENTRANCE ROADS - STREET 'K'/MODIFIED LOCAL
PRIVATE STREETS

NOT TO SCALE

T.I. = 5.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.
PARKING RESTRICTED TO ONE SIDE ONLY

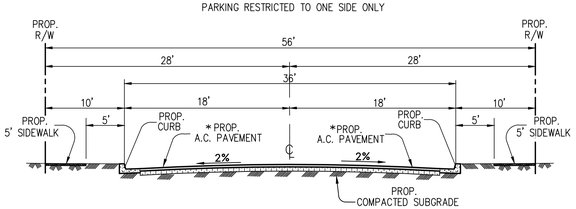


TYPICAL STREET SECTION
ROADS - MODIFIED LOCAL
PRIVATE STREETS

NOT TO SCALE

T.I. = 5.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.
PARKING RESTRICTED TO ONE SIDE ONLY



TYPICAL STREET SECTION
ENTRANCE ROADS - STREET 'A'/MODIFIED LOCAL
PRIVATE STREETS

NOT TO SCALE

T.I. = 5.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.
PARKING RESTRICTED TO ONE SIDE ONLY

EASEMENT NOTES

1. A RIGHT OF WAY FOR ONE DITCH, FLUME OR OTHER AQUEDUCT, ACROSS THE LAND OF ANY OTHER OWNER LYING BETWEEN THE LANDS OF SAID OWNER AND THE SAN JACINTO VIEJO, BY DECREE OF PARTITION OF SAID RANCHO RECORDED IN BOOK 43, PAGE 161 OF DEEDS, RECORDS OF SAN DIEGO COUNTY, CALIFORNIA. ROUTE NOT DEFINED OF RECORD.

2. THE RIGHT TO DEVELOP, TAKE, EXPORT AND APPROPRIATE TO ITS OWN USE IN ANY MANNER AND BY AN AGENCY, ALL WATER THAT MAY BE DISCOVERED IN OR THAT MAY BE DEPOSITED IN OR UNDERLIE THE PROPERTY HEREIN DESCRIBED, AND ALL RIPARIAN AND OTHER WATER RIGHTS THAT MAY BE AND APPURTENANT TO OR BELONG TO THE SAID LAND; PROVIDED, HOWEVER, THAT NO WORKS FOR THE DEVELOPMENT OF SAID WATER SHALL BE LOCATED ON THE LANDS HEREIN DESCRIBED; AND PROVIDED, HOWEVER, FURTHER, THAT THE OWNERS SHALL HAVE THE RIGHT TO DEVELOP WATER FOR DOMESTIC USE ON SAID LAND, CONVEYED BY DEED FROM THE SAN JACINTO LAND COMPANY TO CITIZENS WATER COMPANY OF SAN JACINTO, RECORDED DECEMBER 4, 1911 IN BOOK 341, PAGE 195 OF DEEDS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA AND IS BLANKET IN NATURE.

3. A RIGHT OF WAY OVER A STRIP OF LAND 30 FEET WIDE ON EACH SIDE OF THE SECTION AND QUARTER SECTION LINES FOR ROAD OR FOR DITCHES OR PIPES FOR CONDUCTING AND DISTRIBUTING WATER, AS DESCRIBED IN BOOK 341, PAGE 195 DEEDS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA AND IS SHOWN HEREON.

4. AN EASEMENT GRANTED TO EASTERN MUNICIPAL WATER DISTRICT, A PUBLIC AGENCY TO CONSTRUCT, ENLARGE, RECONSTRUCT, REMOVE AND REPLACE, OPERATE, INSPECT, MAINTAIN, REPAIR, IMPROVE AND RELOCATE, SEWAGE TRANSMISSION AND COLLECTION FACILITIES, INCLUDING, BUT NOT LIMITED TO, GRAVITY PIPELINES, PRESSURE PIPELINES, MANHOLES, CONNECTIONS, AND APPURTENANT EQUIPMENT FOR THE COLLECTION AND TRANSMISSION OF SEWAGE, TOGETHER WITH REASONABLE RIGHT OF ACCESS TO AND FROM SAID EASEMENT FOR THE PURPOSE OF EXERCISING THE RIGHTS GRANTED IN SAID EASEMENT, RECORDED SEPTEMBER 14, 2010 AS INSTRUMENT NO. 2010-0439200 OF OFFICIAL RECORDS, AND IS SHOWN HEREON.

LINE DATA

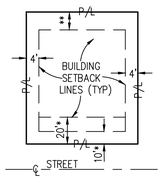
LINE	BEARING	DISTANCE
L1	N 89°52'59" W	20.00'
L2	N 00°07'01" E	60.00'
L3	N 45°40'13" E	24.28'

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF SAN JACINTO, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE EAST ½ OF FARM LOT 161 OF THE LANDS OF SAN JACINTO LAND ASSOCIATION, AS SHOWN BY MAP ON FILE IN BOOK 8, PAGE 357 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

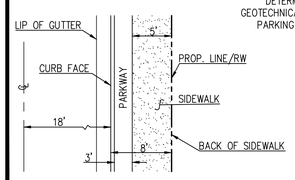
EXCEPTING THEREFROM THAT PORTION OF LAND CONVEYED TO THE CITY OF SAN JACINTO, A CALIFORNIA MUNICIPAL CORPORATION, IN GRANT DEED RECORDED OCTOBER 2, 2019 AS INSTRUMENT NO. 2019-394879 OFFICIAL RECORDS.



TYPICAL BUILDING SETBACKS

NTS

20'* FROM P/L TO GARAGE,
10'* FROM P/L TO HOUSE FEATURE.
CORNER LOT: STREET SIDE SETBACK
5' FROM P/L.
** REAR SETBACK: 10' MIN.
** REAR SETBACK WITH SLOPE: 10' MIN.



PRIVATE STREET LEGEND
NTS

DIG ALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE
				CITY ENGINEER	

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL: REGISTERED PROFESSIONAL ENGINEER — BLAINE A. WOMER — No. 46354 — CIVIL — STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER

PREPARED BY: DATE
R.C.E. NO.

BLAINE A. WOMER CIVIL ENGINEERING
• PLANNING • SURVEYING • CIVIL ENGINEERING • PUBLIC WORKS
Hemet, CA. 92544, 41555 E Florida Ave., Suite G, Phone (951)658-1727 Fax (951)658-9347
Park City, UT 84098, 5133 Cove Canyon Dr. #302
Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

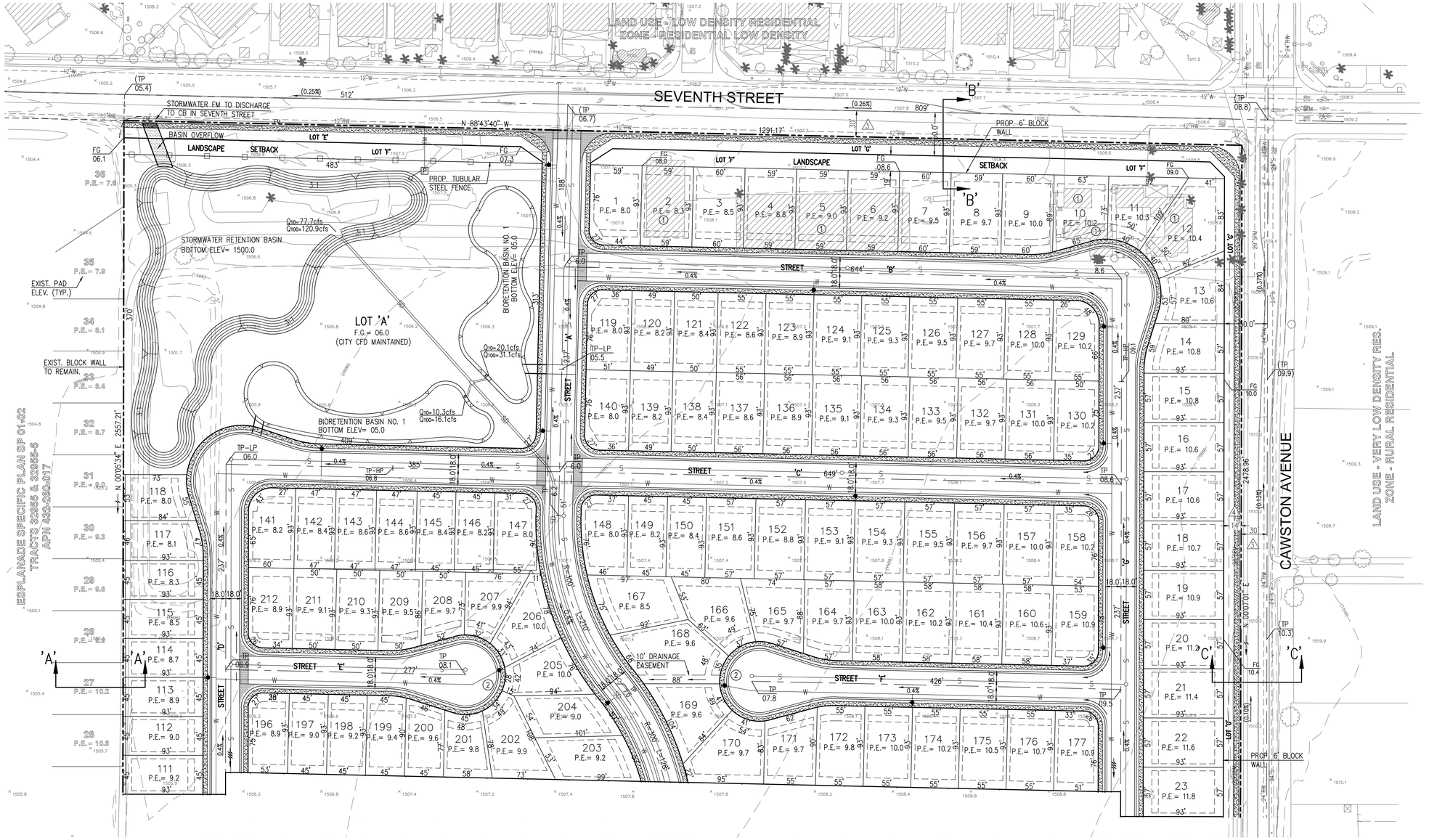
CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076
FOR RAMONA DAIRY
W.O.

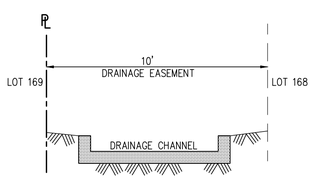
SHEET NO. 1 OF 5 SHEETS
FILE NO.

NORTH

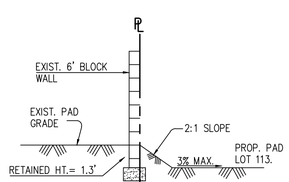
0 60 120 180

1"=60'

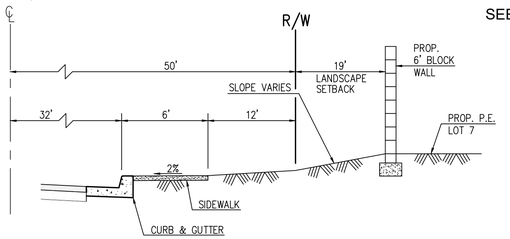




DRAINAGE EASEMENT SECTION
NTS



SECTION 'A' – 'A'
NTS



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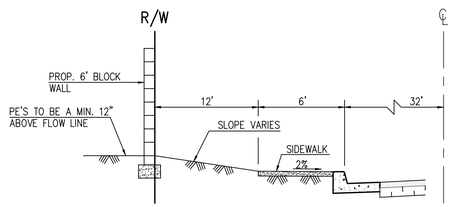
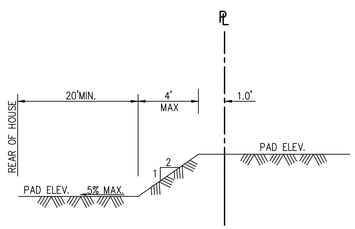


SECTION 'C' – 'C'
NTS



TYPICAL REAR YARD SECTION
NTS

KEY NOTES

1. EXISTING STRUCTURES TO BE REMOVED.
2. PARKING TO BE RESTRICTED IN CUL-DE-SAC.

NOTE: ALL CURB RETURNS HAVE A 25' RADIUS.

SEE SHEET 1 FOR EASEMENT AND LINE DATA INFORMATION.

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DATE	BY	MARK	REVISIONS	APPR.	DATE
				CITY	

ENGINEER
DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER

PREPARED BY: DATE
R.C.E. NO.

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Park City, UT 84098, 5133 Cove Canyon Dr. #302
Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO

TENTATIVE TRACT MAP NO. 39076

FOR RAMONA DAIRY
W.O.

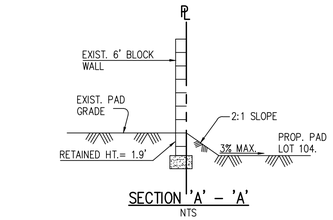
SHEET NO. 2 OF 5 SHEETS
FILE NO.

SEE SHEET NO. 2

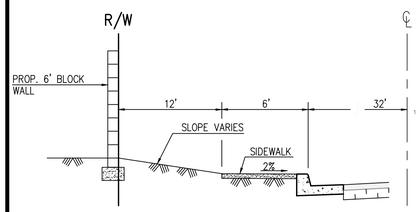
NORTH

0 60 120 180

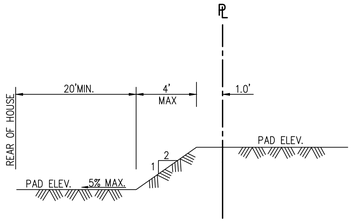
1"=60'



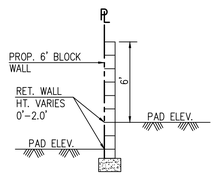
SECTION 'A' – 'A'
NTS



SECTION 'C' – 'C'
NTS



TYPICAL REAR YARD SECTION
NTS



SECTION 'E' – 'E'
NTS

ESPLANADE SPECIFIC PLAN SP 01-02
TRACT 32325-1
APN 432-280-014

EXIST. BLOCK WALL

PROP. 6' BLOCK WALL ON RETAINING WALL.

BIORETENTION BASIN NO. 2
BOTTOM ELEV= 07.0
Q10=6.9cfs Q100=10.8cfs
Q10=4.5cfs Q100=7.0cfs

LOT 'B'
F.G.= 08.0
(CITY CFD MAINTAINED)
Q10=9.7cfs Q100=15.1cfs

STREET 'H' STREET 'I' STREET 'J' STREET 'K' STREET 'L'

PASEO

CAWSTON AVENUE

LAND USE: VERY LOW DENSITY RESIDENTIAL
ZONE: RURAL RESIDENTIAL

SEE SHEET NO. 4

SEE SHEET 1 FOR EASEMENT AND LINE DATA INFORMATION.

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DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				CITY	

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A. WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
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TENTATIVE TRACT MAP NO. 39076
FOR RAMONA DAIRY
W.O.

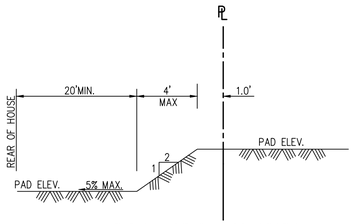
SHEET NO. 3 OF 5 SHEETS
FILE NO.

NORTH

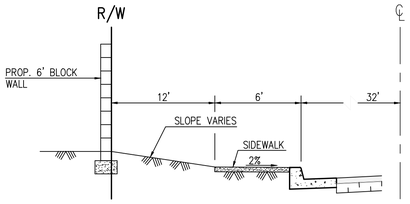
0 60 120 180

1"=60'

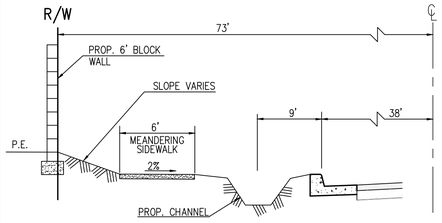
SEE SHEET NO. 3



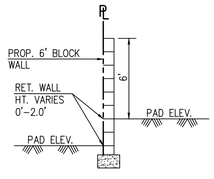
TYPICAL REAR YARD SECTION
NTS



SECTION 'C' – 'C'
NTS



SECTION 'D' – 'D'
NTS



SECTION 'E' – 'E'
NTS



KEY NOTES

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SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO

TENTATIVE TRACT MAP NO. 39076

FOR RAMONA DAIRY
W.O.

SHEET NO. 4 OF 5 SHEETS
FILE NO.

LOT AREA TABLE	
LOT #	AREA SQFT.
1	5,412
2	5,504
3	5,504
4	5,504
5	5,504
6	5,504
7	5,504
8	5,504
9	5,476
10	5,033
11	5,217
12	7,362
13	5,113
14	5,058
15	5,258
16	5,263
17	5,263
18	5,263
19	5,263
20	5,263
21	5,263
22	5,263
23	5,263
24	5,263
25	5,276
26	5,088
27	5,088
28	5,088
29	5,088
30	5,088
31	4,927
32	5,055
33	4,995
34	4,995
35	4,995
36	4,995
37	4,995
38	4,995
39	4,903
40	5,088
41	5,088
42	5,088
43	5,088
44	5,088
45	5,088
46	5,088
47	5,088
48	5,088
49	5,088
50	5,085

LOT AREA TABLE	
LOT #	AREA SQFT.
51	5,019
52	7,950
53	7,486
54	4,971
55	5,058
56	5,075
57	5,075
58	5,075
59	5,075
60	5,075
61	5,075
62	5,075
63	5,075
64	3,938
65	3,938
66	3,938
67	3,938
68	3,938
69	3,938
70	3,923
71	3,977
72	5,032
73	6,682
74	4,398
75	4,099
76	4,156
77	4,163
78	4,163
79	4,163
80	4,163
81	4,163
82	4,163
83	4,163
84	4,163
85	4,163
86	4,163
87	4,163
88	4,163
89	4,163
90	4,163
91	4,163
92	4,163
93	4,163
94	4,163
95	4,163
96	4,163
97	4,163
98	4,163
99	4,163
100	4,163

LOT AREA TABLE	
LOT #	AREA SQFT.
101	4,163
102	4,163
103	4,163
104	4,163
105	4,163
106	4163
107	4,163
108	4,163
109	4,163
110	4,163
111	4,163
112	4,163
113	4,163
114	4,163
115	4,185
116	4,140
117	4,147
118	4,091
119	4,643
120	4,545
121	4,637
122	5,120
123	5,119
124	5,119
125	5,119
126	5,119
127	5,119
128	5,120
129	4,811
130	4,696
131	5,173
132	5,173
133	5,173
134	5,173
135	5,173
136	5,173
137	5,173
138	4,638
139	4,545
140	4,643
141	4,780
142	4,328
143	4,327
144	4,329
145	4,143
146	4,163
147	4,544
148	4,780
149	4,163
150	4,163

LOT AREA TABLE	
LOT #	AREA SQFT.
151	5,273
152	5,304
153	5,304
154	5,304
155	5,304
156	5,304
157	5,304
158	4,824
159	4,847
160	5,324
161	5,324
162	5,324
163	5,324
164	5,143
165	4,977
166	5,542
167	5,875
168	7,099
169	5,019
170	5,741
171	4,883
172	5,073
173	5,088
174	5,088
175	5,088
176	5,088
177	4,608
178	5,029
179	5,506
180	5,506
181	5,506
182	5,506
183	5,506
184	5,506
185	5,037
186	4,361
187	4,163
188	4,343
189	4,343
190	4,343
191	4,163
192	4,163
193	4,163
194	4,163
195	4,401
196	4,241
197	4,163
198	4,163
199	4,146
200	3,773

LOT AREA TABLE	
LOT #	AREA SQFT.
201	3,717
202	5,168
203	5,129
204	4,824
205	4,378
206	4,639
207	4,055
208	3,901
209	4,502
210	4,589
211	4,587
212	4,709
213	4,802
214	4,638
215	4,638
216	4,876
217	4,876
218	4,875
219	4,875
220	4,700
221	4,739
222	4,636
223	4,635
224	4,636
225	4,637
226	4,637
227	4,638
228	4,635
229	4,752
230	4,956
231	4,633
232	4,633
233	4,634
234	4,586
235	4,635
236	4,636
237	4,636
238	4,636
239	4,636
240	4,739
241	4,842
242	4,842
243	4,842
244	4,739
245	4,636
246	4,884
247	4,802
248	4,645
249	4,645
250	4,883

LOT AREA TABLE	
LOT #	AREA SQFT.
251	4,883
252	5,092
253	4,883
254	4,979
255	4,645
256	4,645
257	4,645
258	4,946
259	4,843
260	4,645
261	4,645
262	4,843
263	4,883
264	5,089
265	4,883
266	4,883
267	4,883
268	4,645
269	4,645
270	4,802
271	5,538
272	6,269
273	6,268
274	6,269
275	6,269
276	5,432
277	5,181
278	6,019
279	6,019
280	6,019
281	6,019
282	6,019
283	5,080
284	5,285
285	6,019
286	6,019
287	6,019
288	6,019
289	6,019
290	5,181
291	5,432
292	6,269
293	6,269
294	6,269
295	6,269
296	5,329
297	5,449
298	6,179
299	6,179
300	6,179

LOT AREA TABLE	
LOT #	AREA SQFT.
301	6,179
302	5,343
303	5,257
304	6,094
305	6,094
306	6,094
307	6,094
308	6,094
309	5,155
310	5,360
311	6,094
312	6,094
313	6,094
314	6,094
315	6,094
316	5,257
317	5,343
318	6,179
319	6,179
320	6,179
321	6,179
322	5,240
323	4,241
324	4,163
325	4,348
326	4,348
327	4,266
328	4,327
329	4,379
330	4,255
331	4,163
332	4,303
333	4,758
334	5,592
335	5,534
336	5,534
337	5,534
338	5,534
339	5,534
340	4,900
341	5,063
342	5,534
343	5,534
344	5,534
345	5,533
346	5,089
347	5,874
348	6,068
349	5,028
350	4,944

LOT AREA TABLE	
LOT #	AREA SQFT.
351	5,294
352	5,527
353	5,527
354	5,527
355	5,057
356	5,221
357	5,527
358	5,527
359	5,527
360	5,527
361	5,527
362	5,568
363	4,489
364	4,489
365	4,489
366	4,489
367	4,212
368	4,291
369	4,181
370	4,348
371	4,348
372	4,348
373	4,877
374	4,220
375	4,170
376	4,183
377	4,651
378	4,473
379	4,450
380	4,615
381	4,615
382	4,430
383	4,319
384	4,275
385	4,163
386	4,409
387	4,471
388	4,471
389	4,471
390	4,195
391	4,240
392	4,706
393	5,184
394	5,184
395	5,184
396	5,184
397	5,184
398	5,184
399	5,184
400	5,187

LOT AREA TABLE	
LOT #	AREA SQFT.
401	4,827
402	4,892
403	5,187
404	5,184
405	5,184
406	5,184
407	5,184
408	5,184
409	5,184
410	5,184
411	4,706
412	4,333
413	4,163
414	4,214
415	4,373
416	4,373
417	4,373
418	4,372
419	4,235
LOT 'A'	168,611
LOT 'B'	48,417
LOT 'C'	22,214
LOT 'D'	26,755

LOT SIZE SUMMARY:

MINIMUM LOT SIZE: 3,717 S.F.
AVERAGE LOT SIZE: 4925 S.F.
MINIMUM LOT WIDTH: 25 FT.
MINIMUM LOT WIDTH CORNER: 47 FT.
MINIMUM LOT DEPTH: 93 FT.
MAXIMUM FRONT YARD IMPERVIOUS COVER: 35%,
OR AS OTHERWISE ALLOWED PER CODE SEC.17.215.035 A.

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UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE

ENGINEER | CITY
DESIGNED BY: | DRAWN BY: | CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
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SCALE 1" = 60'
DATE
BENCHMARK:

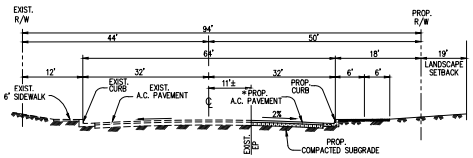
CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076
LOT AREAS

FOR | W.O.

SHEET NO. 5 OF 5 SHEETS
FILE NO.

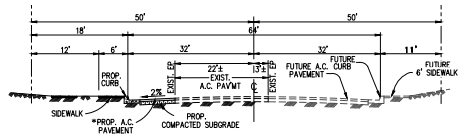
Exhibit D – Phasing

Phasing Map

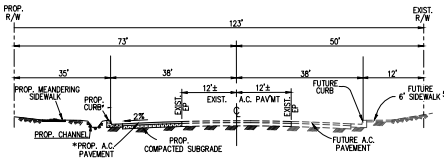


TYPICAL STREET SECTION
SEVENTH STREET - MAJOR
NOT TO SCALE
T.I. = 9.0
*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.

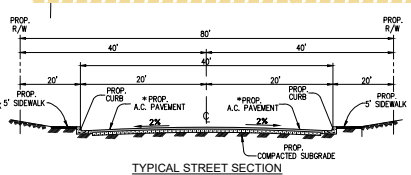
Esplanade Ave. and Cawston Ave. south of K Street to be constructed with Phase 2.



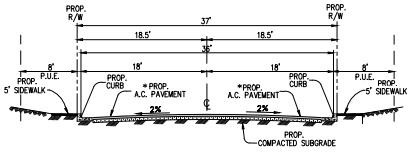
TYPICAL STREET SECTION
CAWSTON AVENUE - MAJOR
NOT TO SCALE
T.I. = 9.0
*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.



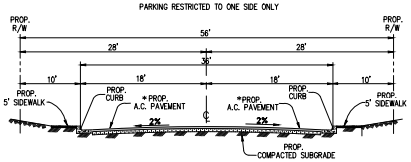
TYPICAL STREET SECTION
ESPLANADE AVENUE - ARTERIAL
NOT TO SCALE
T.I. = 9.5
*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.



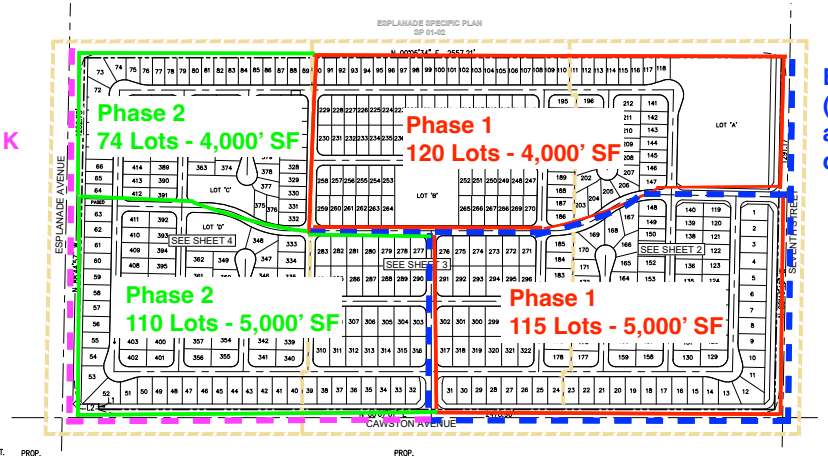
TYPICAL STREET SECTION
ENTRANCE ROADS - STREET 'K'/MODIFIED LOCAL PRIVATE STREETS
NOT TO SCALE
T.I. = 5.5
*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.
PARKING RESTRICTED TO ONE SIDE ONLY

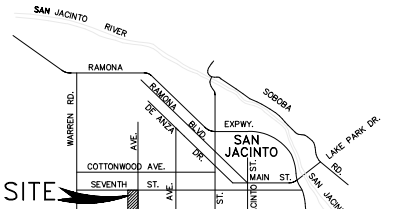


TYPICAL STREET SECTION
ROADS - MODIFIED LOCAL PRIVATE STREETS
NOT TO SCALE
T.I. = 5.5
*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.
PARKING RESTRICTED TO ONE SIDE ONLY



TYPICAL STREET SECTION
ENTRANCE ROADS - STREET 'A'/MODIFIED LOCAL PRIVATE STREETS
NOT TO SCALE
T.I. = 5.5
*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.
PARKING RESTRICTED TO ONE SIDE ONLY





Backbone internal streets including Street A (until Street L) and Street K, Seventh Street, and Cawston Ave. north of K Street to be constructed with Phase 1.

EASEMENT NOTES

1. A RIGHT OF WAY FOR ONE DITCH, FLUME OR OTHER AQUEDUCT, ACROSS THE LAND OF ANY OTHER OWNER LYING BETWEEN THE LANDS OF SAID OWNER AND THE SAN JACINTO WE,O, BY DECREE OF PARTITION OF SAID RANCHO RECORDED IN BOOK 43, PAGE 161 OF DEEDS, RECORDS OF SAN DIEGO COUNTY, CALIFORNIA. ROUTE NOT DEFINED OF RECORD.
2. THE RIGHT TO DEVELOP, TAKE, EXPORT AND APPROPRIATE TO ITS OWN USE IN ANY MANNER AND BY AN AGENCY, ALL WATER THAT MAY BE DISCOVERED IN OR THAT MAY BE DEPOSITED IN OR UNDERLIE THE PROPERTY HEREIN DESCRIBED, AND ALL RIPARIAN AND OTHER WATER RIGHTS THAT MAY BE AND APPURTENANT TO OR BELONG TO THE SAID LAND; PROVIDED, HOWEVER, THAT NO WORKS FOR THE DEVELOPMENT OF SAID WATER SHALL BE LOCATED ON THE LANDS HEREIN DESCRIBED; AND PROVIDED, HOWEVER, FURTHER, THAT THE OWNERS SHALL HAVE THE RIGHT TO DEVELOP WATER FOR DOMESTIC USE ON SAID LAND, CONVEYED BY DEED FROM THE SAN JACINTO LAND COMPANY TO CITIZENS WATER COMPANY OF SAN JACINTO, RECORDED DECEMBER 4, 1911 IN BOOK 341, PAGE 195 OF DEEDS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA AND IS BLANKET IN NATURE.

⚠ A RIGHT OF WAY OVER A STRIP OF LAND 30 FEET WIDE ON EACH SIDE OF THE SECTION AND QUARTER SECTION LINES FOR ROAD OR FOR DITCHES OR PIPES FOR CONDUCTING AND DISTRIBUTING WATER, AS DESCRIBED IN BOOK 341, PAGE 195 DEEDS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA AND IS SHOWN HEREON.

⚠ AN EASEMENT GRANTED TO EASTERN MUNICIPAL WATER DISTRICT, A PUBLIC AGENCY TO CONSTRUCT, ENLARGE, RECONSTRUCT, REMOVE AND REPLACE, OPERATE, INSPECT, MAINTAIN, REPAIR, IMPROVE AND RELOCATE, SEWAGE TRANSMISSION AND COLLECTION FACILITIES, INCLUDING, BUT NOT LIMITED TO, GRAVITY PIPELINES, PRESSURE PIPELINES, MANHOLES, CONNECTIONS, AND APPURTENANT EQUIPMENT FOR THE COLLECTION AND TRANSMISSION OF SEWAGE, TOGETHER WITH REASONABLE RIGHT OF ACCESS TO AND FROM SAID EASEMENT FOR THE PURPOSE OF EXERCISING THE RIGHTS GRANTED IN SAID EASEMENT, RECORDED SEPTEMBER 14, 2010 AS INSTRUMENT NO. 2010-0439200 OF OFFICIAL RECORDS, AND IS SHOWN HEREON.

LINE DATA

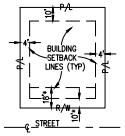
LINE	BEARING	DISTANCE
L1	N 89°52'59" W	20.00'
L2	N 00°07'01" E	60.00'
L3	N 45°40'13" E	24.28'

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF SAN JACINTO, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE EAST ½ OF FARM LOT 161 OF THE LANDS OF SAN JACINTO LAND ASSOCIATION, AS SHOWN BY MAP ON FILE IN BOOK 8, PAGE 357 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

EXCEPTING THEREFROM THAT PORTION OF LAND CONVEYED TO THE CITY OF SAN JACINTO, A CALIFORNIA MUNICIPAL CORPORATION, IN GRANT DEED RECORDED OCTOBER 2, 2019 AS INSTRUMENT NO. 2019-394879 OFFICIAL RECORDS.



TYPICAL BUILDING SETBACKS
NTS
16'* FROM R/W TO GARAGE.
10'* FROM R/W TO HOUSE FEATURE.
CORNER LOT: STREET SIDE SETBACK 10' FROM R/W.

OWNER
TEUNIS J. DE JONG, TRUSTEE OF THE TEUNIS J. JONG TRUST.
2451 RAMONA EXPRESSWAY
SAN JACINTO, CA. 92582
907-229-2072

APPLICANT
RICHARD MICHAEL
RAMONA DAIRY
2451 RAMONA EXPRESSWAY
SAN JACINTO, CA 92582
907-229-2072
richard@amedaska.net

ASSESSOR'S PARCEL NO(S).
432-260-009, 026 AND 027

ADJACENT LAND USE
WEST – ESPLANADE SP/ESPLANADE SP
NORTH – LDR/RL
EAST – VLDR/RR
SOUTH – CITY OF HEMET/CITY OF HEMET

ZONING
RL
RL/PI
RL
RM

EXISTING LAND USE
VLDR – VERY LOW DENSITY RESIDENTIAL

PROPOSED LAND USE
LDR – LOW DENSITY RESIDENTIAL

EXISTING ZONING
RR – RURAL RESIDENTIAL

PROPOSED ZONING
RL – RESIDENTIAL LOW DENSITY

UTILITIES

SEWER	CITY OF SAN JACINTO
WATER	EASTERN MUNICIPAL WATER DISTRICT
GAS	SOUTHERN CALIFORNIA GAS COMPANY
ELECTRIC	SOUTHERN CALIFORNIA EDISON COMPANY
TELEPHONE	FRONTIER
CABLE	FRONTIER

NUMBER OF LOTS
419 SINGLE FAMILY RESIDENTIAL
4 OPEN SPACE LOTS

DENSITY
5.53 DU/AC GROSS

ACREAGE
75.70 GROSS ACRES WITHIN BOLD BOUNDARY

OPEN SPACE AREA
LOT 'A': 3.73 AC
LOT 'B': 1.19 AC
LOT 'C': 0.58 AC
LOT 'D': 0.67 AC

SCHOOL DISTRICT
SAN JACINTO UNIFIED

SOURCE OF TOPOGRAPHY
AN AERIAL SURVEY BY PSOMAS DATED 10/22

FLOOD PLAIN
ZONE X PER COMMUNITY PANEL NO. 06065C1470G, DATED 8/28/2008.

EARTHWORK CALCULATIONS
CUT VOLUME: 42,809 C.Y.
FILL VOLUME: 169,944 C.Y.

SHEET INDEX

SHEET 1 . . . . . TITLE SHEET
SHEET 2 . . . . . TENTATIVE TRACT MAP
SHEET 3 . . . . . TENTATIVE TRACT MAP
SHEET 4 . . . . . TENTATIVE TRACT MAP
SHEET 5 . . . . . LOT AREA SUMMARY TABLE

PHASING NOTE
THIS TENTATIVE MAP IS BEING FILED IN ACCORDANCE WITH SUBDIVISION MAP ACT SECTION 66456.1 ALLOWING FOR THE FILING OF MULTIPLE FINAL MAPS. FOUR (4) PHASED FINAL MAPS ARE ANTICIPATED TO BE FILED BASED ON THIS TENTATIVE TRACT MAP.

DIG ALERT
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1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				CITY	
DESIGNED BY:			DRAWN BY:	CHECKED BY:	

SEAL
REGISTERED PROFESSIONAL ENGINEER BLAINE A. WOMER No. 46354 CIVIL STATE OF CALIFORNIA

APPROVED BY: _____ DATE _____
CONTRACT CITY ENGINEER

PREPARED BY: _____ DATE _____
R.C.E. NO. _____

BLAINE A. WOMER
CIVIL ENGINEERING
PLANNING
SURVEYING
LAND ENGINEERING
PUBLIC WORKS

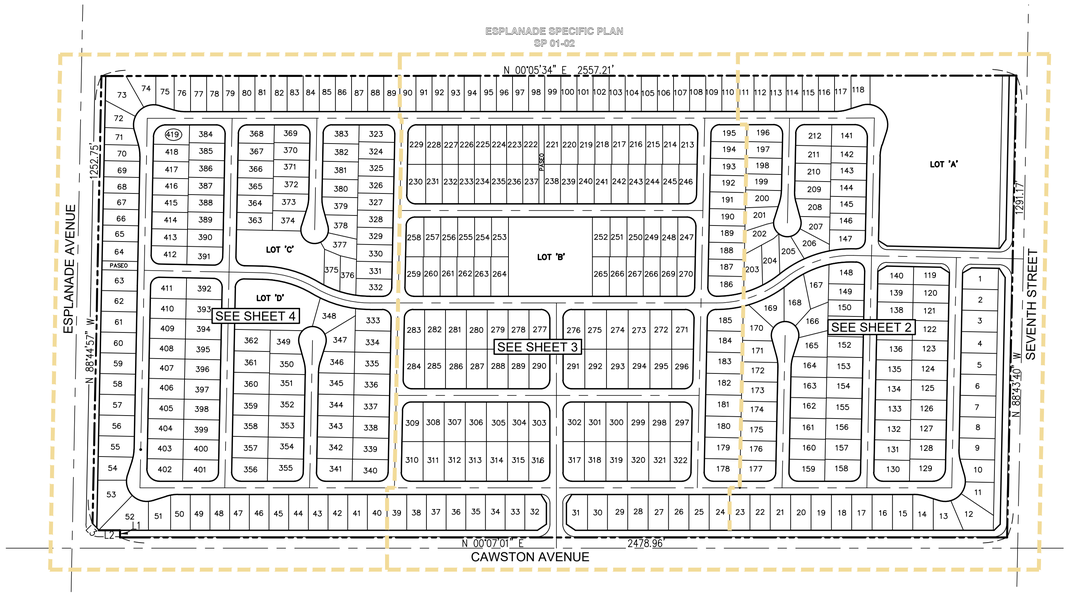
SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

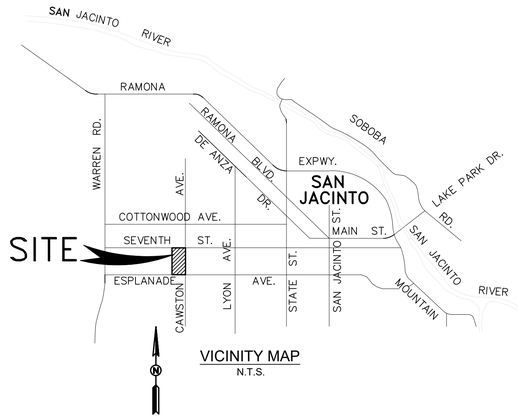
CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076
FOR RAMONA DAIRY
W.O.

SHEET NO. 1 OF 5 SHEETS
FILE NO.

Exhibit E – Plotting

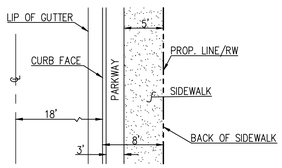
IN THE CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076
PLOT PLAN



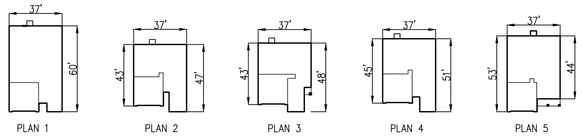


VICINITY MAP
N.T.S.

TYPICAL BUILDING SETBACKS
NTS
20'* FROM P/L TO GARAGE,
10'* FROM P/L TO HOUSE FEATURE.
CORNER LOT: STREET SIDE SETBACK
5' FROM P/L.
** REAR SETBACK: 10' MIN.
** REAR SETBACK WITH SLOPE: 10' MIN.



PRIVATE STREET LEGEND
NTS



HOUSE PLAN DIMENSIONS

EASEMENT NOTES

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LINE DATA

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L2	N 00°07'01" E	60.00'
L3	N 45°40'13" E	24.28'

OWNER
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2451 RAMONA EXPRESSWAY
SAN JACINTO, CA. 92582
907-229-2072

APPLICANT
RICHARD MICHAEL
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SAN JACINTO, CA 92582
907-229-2072
richard@homealaska.net

ASSESSOR'S PARCEL NO(S).
432-260-009, 026 AND 027

ADJACENT LAND USE
WEST – ESPLANADE SP/ESPLANADE SP
NORTH – LDR/RL
EAST – VLDR/RR
SOUTH – CITY OF HEMET/CITY OF HEMET

ZONING
RL
RL/PI
RL
RM

EXISTING LAND USE
VLDR – VERY LOW DENSITY RESIDENTIAL

PROPOSED LAND USE
LDR – LOW DENSITY RESIDENTIAL

EXISTING ZONING
RR – RURAL RESIDENTIAL

PROPOSED ZONING
RL – RESIDENTIAL LOW DENSITY

UTILITIES

SEWER	CITY OF SAN JACINTO
WATER	EASTERN MUNICIPAL WATER DISTRICT
GAS	SOUTHERN CALIFORNIA GAS COMPANY
ELECTRIC	SOUTHERN CALIFORNIA EDISON COMPANY
TELEPHONE	FRONTIER
CABLE	FRONTIER

NUMBER OF LOTS
419 SINGLE FAMILY RESIDENTIAL
4 OPEN SPACE LOTS

ACREAGE
75.70 GROSS ACRES WITHIN BOLD BOUNDARY
73.97 ACRES NET

OPEN SPACE AREA (NO BASINS)
LOT 'A': 1.88 AC
LOT 'B': 0.76 AC
LOT 'C': 0.27 AC
LOT 'D': 0.35 AC

SCHOOL DISTRICT
SAN JACINTO UNIFIED

SOURCE OF TOPOGRAPHY
AN AERIAL SURVEY BY PSOMAS DATED 10/22

FLOOD PLAIN
ZONE X PER COMMUNITY PANEL NO. 06065C1470G, DATED 8/28/2008.

EARTHWORK CALCULATIONS
CUT VOLUME: 42,809.82 C.Y.
FILL VOLUME: 169,944.42 C.Y.

SHEET INDEX

SHEET 1 . . . . . TITLE SHEET
SHEET 2 . . . . . PLOT PLAN
SHEET 3 . . . . . PLOT PLAN
SHEET 4 . . . . . PLOT PLAN

DIG ALERT
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UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE

ENGINEER
DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A. WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER
PREPARED BY: DATE
R.C.E. NO.

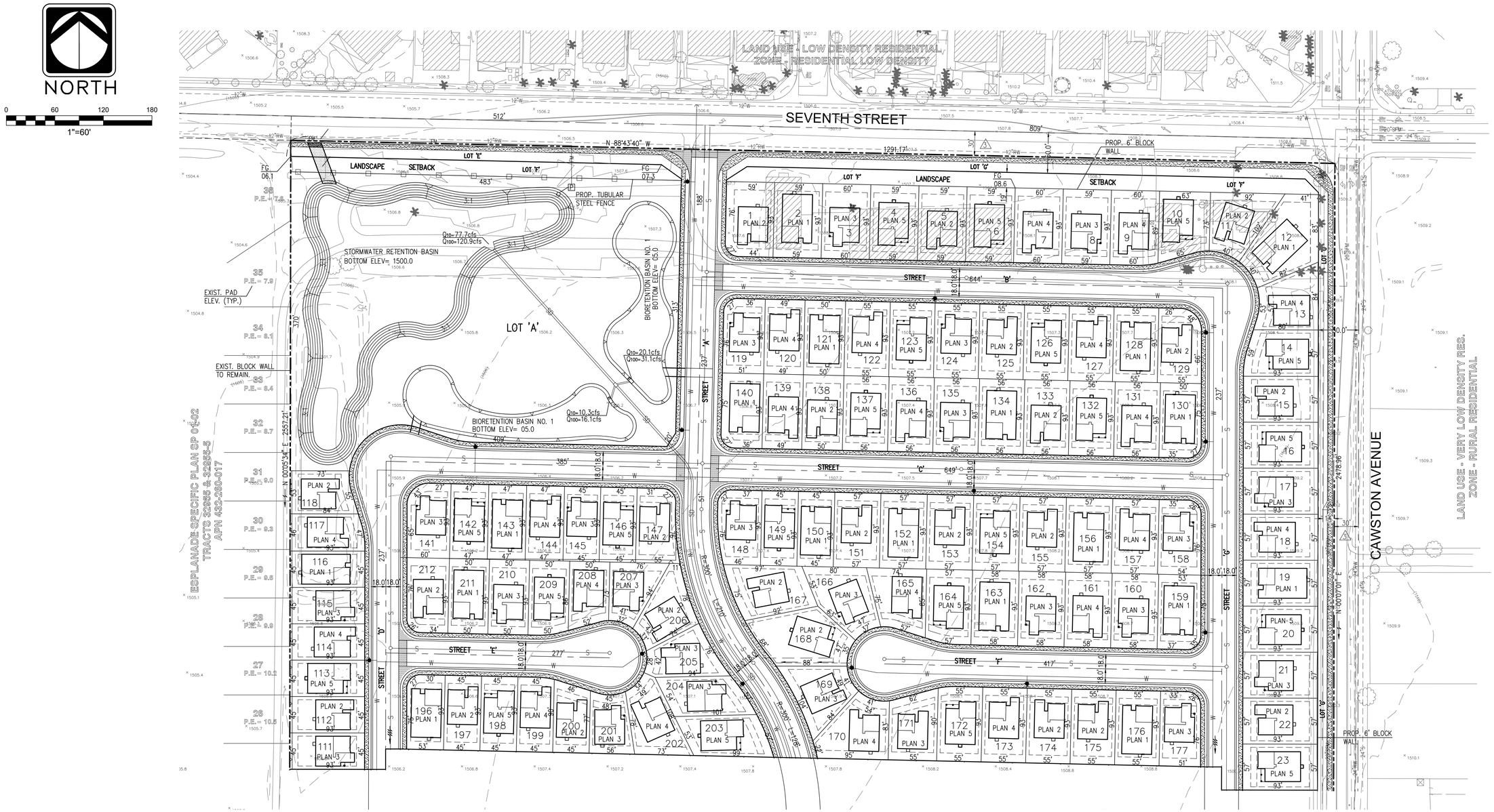
BLAINE A. WOMER
CIVIL ENGINEERING
• PLANNING
• SURVEYING
• CIVIL ENGINEERING
• PUBLIC WORKS
Hemet, CA. 92544, 41555 E Florida Ave., Suite G, Phone (951)658-7727 Fax (951)658-9347
Park City, UT 84098, 5133 Cove Canyon Dr. #302
Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076
PLOT PLAN

FOR RAMONA DAIRY
W.O.

SHEET NO. 1
OF 4 SHEETS
FILE NO.



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ENGINEER			REVISIONS	CITY	

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SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO
TENTATIVE TRACT
MAP NO. 39076
PLOT PLAN
FOR RAMONA DAIRY
W.O.

SHEET NO. 2 OF 4 SHEETS
FILE NO.

NORTH

0 60 120 180

1"=60'

SEE SHEET NO. 2



SEE SHEET NO. 4

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AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				CITY	

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A. WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER

PREPARED BY: DATE
R.C.E. NO.

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• CIVIL ENGINEERING
• PUBLIC WORKS
Hemet, CA. 92544, 41550 E Florida Ave., Suite G, Phone (951)658-1727 Fax (951)658-9347
Park City, UT 84098, 5133 Cove Canyon Dr. #302
Boise, ID. 83706, 4305 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076
PLOT PLAN
FOR RAMONA DAIRY
W.O.

SHEET NO. 3 OF 4 SHEETS
FILE NO.

NORTH

0 60 120 180

1"=60'

SEE SHEET NO. 3



DIG ALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE

ENGINEER
DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER

PREPARED BY: DATE
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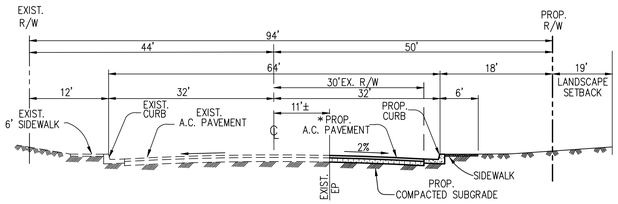
SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076
PLOT PLAN
FOR RAMONA DAIRY
W.O.

SHEET NO. 4 OF 4 SHEETS
FILE NO.

IN THE CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076

PORTION SECTION 31, TOWNSHIP 4 SOUTH, RANGE 1 WEST, S.B.M.

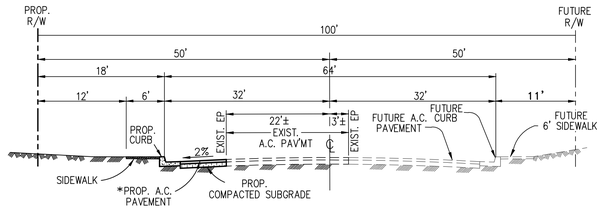


TYPICAL STREET SECTION
SEVENTH STREET - MAJOR
PUBLIC STREET

NOT TO SCALE

T.I. = 9.0

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.

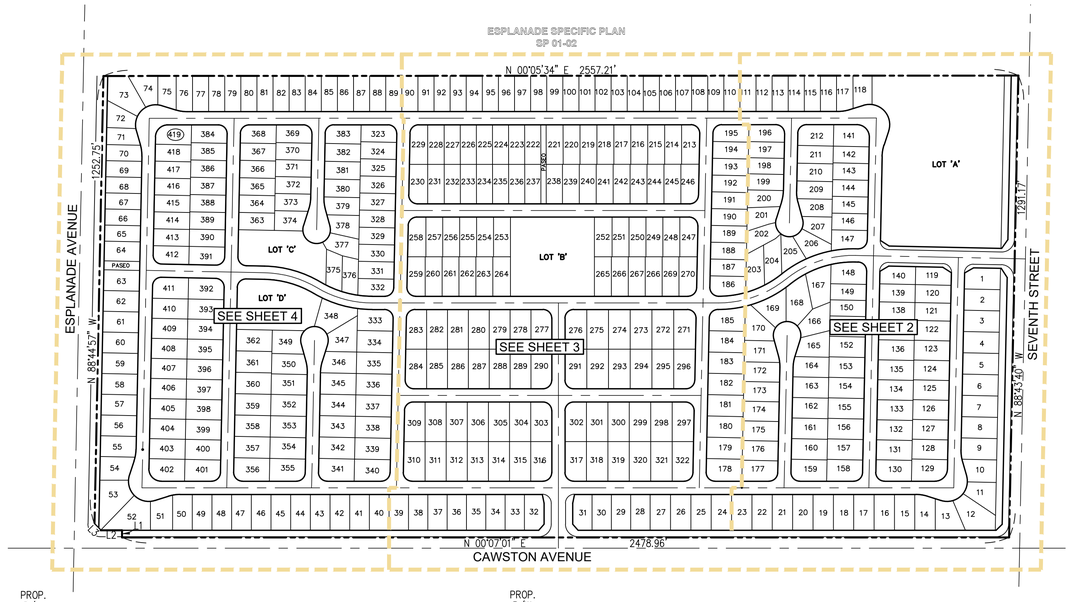


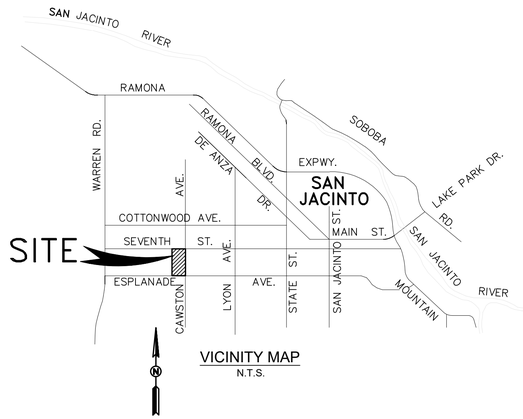
TYPICAL STREET SECTION
CAWSTON AVENUE - MAJOR
PUBLIC STREET

NOT TO SCALE

T.I. = 9.0

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.





VICINITY MAP
N.T.S.

OWNER

TEUNIS J. DE JONG, TRUSTEE OF THE TEUNIS J. JONG TRUST.
2451 RAMONA EXPRESSWAY
SAN JACINTO, CA. 92582
907-229-2072

APPLICANT

RICHARD MICHAEL
RAMONA DAIRY
2451 RAMONA EXPRESSWAY
SAN JACINTO, CA 92582
907-229-2072
richard@homealaska.net

ASSESSOR'S PARCEL NO(S).

432-260-009, 026 AND 027

ADJACENT LAND USE

WEST – ESPLANADE SP/ESPLANADE SP
NORTH – LDR/RL
EAST – VLDR/RR
SOUTH – CITY OF HEMET/CITY OF HEMET

ZONING

RL
RL/PI
RL
RM

EXISTING LAND USE

VLDR – VERY LOW DENSITY RESIDENTIAL

PROPOSED LAND USE

LDR – LOW DENSITY RESIDENTIAL

EXISTING ZONING

RR – RURAL RESIDENTIAL

PROPOSED ZONING

RL – RESIDENTIAL LOW DENSITY

UTILITIES

SEWER	CITY OF SAN JACINTO
WATER	EASTERN MUNICIPAL WATER DISTRICT
GAS	SOUTHERN CALIFORNIA GAS COMPANY
ELECTRIC	SOUTHERN CALIFORNIA EDISON COMPANY
TELEPHONE	FRONTIER
CABLE	FRONTIER

NUMBER OF LOTS

419 SINGLE FAMILY RESIDENTIAL
4 OPEN SPACE LOTS

DENSITY

5.53 DU/AC GROSS

ACREAGE

75.70 GROSS ACRES WITHIN BOLD BOUNDARY
73.06 ACRES NET

OPEN SPACE AREA (NO BASINS)

LOT 'A': 1.88 AC
LOT 'B': 0.76 AC
LOT 'C': 0.27 AC
LOT 'D': 0.35 AC

SCHOOL DISTRICT

SAN JACINTO UNIFIED

SOURCE OF TOPOGRAPHY

AN AERIAL SURVEY BY PSOMAS DATED 10/22

FLOOD PLAIN

ZONE X PER COMMUNITY PANEL NO. 06065C1470G, DATED 8/28/2008.

EARTHWORK CALCULATIONS

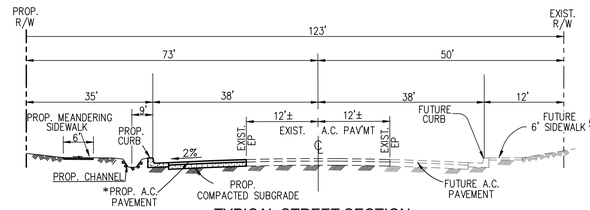
CUT VOLUME: 42,809 C.Y.
FILL VOLUME: 169,944 C.Y.

SHEET INDEX

SHEET 1 . . . . . TITLE SHEET
SHEET 2 . . . . . TENTATIVE TRACT MAP
SHEET 3 . . . . . TENTATIVE TRACT MAP
SHEET 4 . . . . . TENTATIVE TRACT MAP
SHEET 5 . . . . . LOT AREA SUMMARY TABLE

PHASING NOTE

THIS TENTATIVE MAP IS BEING FILED IN ACCORDANCE WITH SUBDIVISION MAP ACT SECTION 66456.1 ALLOWING FOR THE FILING OF MULTIPLE FINAL MAPS. FOUR (4) PHASED FINAL MAPS ARE ANTICIPATED TO BE FILED BASED ON THIS TENTATIVE TRACT MAP.

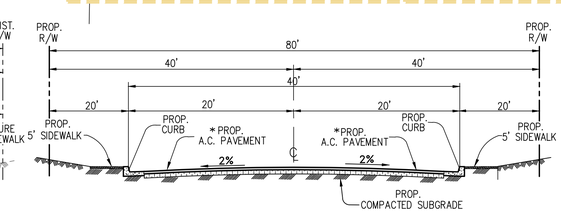


TYPICAL STREET SECTION
ESPLANADE AVENUE - ARTERIAL
PUBLIC STREET

NOT TO SCALE

T.I. = 9.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.

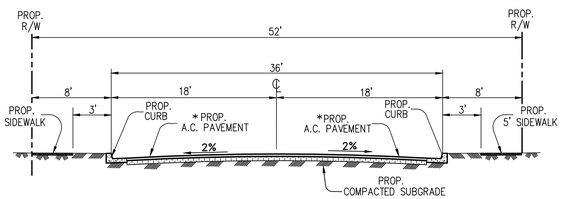


TYPICAL STREET SECTION
ENTRANCE ROADS - STREET 'K'/MODIFIED LOCAL
PRIVATE STREETS

NOT TO SCALE

T.I. = 5.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.
PARKING RESTRICTED TO ONE SIDE ONLY

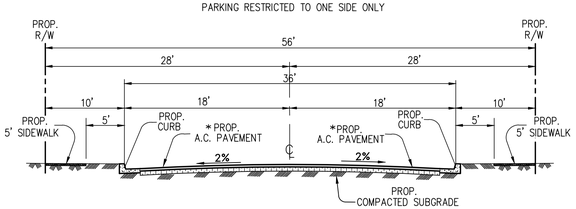


TYPICAL STREET SECTION
ROADS - MODIFIED LOCAL
PRIVATE STREETS

NOT TO SCALE

T.I. = 5.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.
PARKING RESTRICTED TO ONE SIDE ONLY



TYPICAL STREET SECTION
ENTRANCE ROADS - STREET 'A'/MODIFIED LOCAL
PRIVATE STREETS

NOT TO SCALE

T.I. = 5.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.
PARKING RESTRICTED TO ONE SIDE ONLY

EASEMENT NOTES

1. A RIGHT OF WAY FOR ONE DITCH, FLUME OR OTHER AQUEDUCT, ACROSS THE LAND OF ANY OTHER OWNER LYING BETWEEN THE LANDS OF SAID OWNER AND THE SAN JACINTO VIEJO, BY DECREE OF PARTITION OF SAID RANCHO RECORDED IN BOOK 43, PAGE 161 OF DEEDS, RECORDS OF SAN DIEGO COUNTY, CALIFORNIA. ROUTE NOT DEFINED OF RECORD.

2. THE RIGHT TO DEVELOP, TAKE, EXPORT AND APPROPRIATE TO ITS OWN USE IN ANY MANNER AND BY AN AGENCY, ALL WATER THAT MAY BE DISCOVERED IN OR THAT MAY BE DEPOSITED IN OR UNDERLIE THE PROPERTY HEREIN DESCRIBED, AND ALL RIPARIAN AND OTHER WATER RIGHTS THAT MAY BE AND APPURTENANT TO OR BELONG TO THE SAID LAND; PROVIDED, HOWEVER, THAT NO WORKS FOR THE DEVELOPMENT OF SAID WATER SHALL BE LOCATED ON THE LANDS HEREIN DESCRIBED; AND PROVIDED, HOWEVER, FURTHER, THAT THE OWNERS SHALL HAVE THE RIGHT TO DEVELOP WATER FOR DOMESTIC USE ON SAID LAND, CONVEYED BY DEED FROM THE SAN JACINTO LAND COMPANY TO CITIZENS WATER COMPANY OF SAN JACINTO, RECORDED DECEMBER 4, 1911 IN BOOK 341, PAGE 195 OF DEEDS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA AND IS BLANKET IN NATURE.

3. A RIGHT OF WAY OVER A STRIP OF LAND 30 FEET WIDE ON EACH SIDE OF THE SECTION AND QUARTER SECTION LINES FOR ROAD OR FOR DITCHES OR PIPES FOR CONDUCTING AND DISTRIBUTING WATER, AS DESCRIBED IN BOOK 341, PAGE 195 DEEDS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA AND IS SHOWN HEREON.

4. AN EASEMENT GRANTED TO EASTERN MUNICIPAL WATER DISTRICT, A PUBLIC AGENCY TO CONSTRUCT, ENLARGE, RECONSTRUCT, REMOVE AND REPLACE, OPERATE, INSPECT, MAINTAIN, REPAIR, IMPROVE AND RELOCATE, SEWAGE TRANSMISSION AND COLLECTION FACILITIES, INCLUDING, BUT NOT LIMITED TO, GRAVITY PIPELINES, PRESSURE PIPELINES, MANHOLES, CONNECTIONS, AND APPURTENANT EQUIPMENT FOR THE COLLECTION AND TRANSMISSION OF SEWAGE, TOGETHER WITH REASONABLE RIGHT OF ACCESS TO AND FROM SAID EASEMENT FOR THE PURPOSE OF EXERCISING THE RIGHTS GRANTED IN SAID EASEMENT, RECORDED SEPTEMBER 14, 2010 AS INSTRUMENT NO. 2010-0439200 OF OFFICIAL RECORDS, AND IS SHOWN HEREON.

LINE DATA

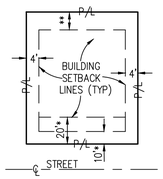
LINE	BEARING	DISTANCE
L1	N 89°52'59" W	20.00'
L2	N 00°07'01" E	60.00'
L3	N 45°40'13" E	24.28'

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF SAN JACINTO, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE EAST ½ OF FARM LOT 161 OF THE LANDS OF SAN JACINTO LAND ASSOCIATION, AS SHOWN BY MAP ON FILE IN BOOK 8, PAGE 357 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

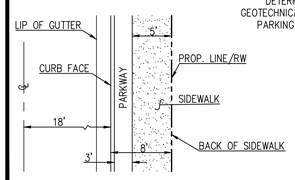
EXCEPTING THEREFROM THAT PORTION OF LAND CONVEYED TO THE CITY OF SAN JACINTO, A CALIFORNIA MUNICIPAL CORPORATION, IN GRANT DEED RECORDED OCTOBER 2, 2019 AS INSTRUMENT NO. 2019-394879 OFFICIAL RECORDS.



TYPICAL BUILDING SETBACKS

NTS

20'* FROM P/L TO GARAGE,
10'* FROM P/L TO HOUSE FEATURE.
CORNER LOT: STREET SIDE SETBACK
5' FROM P/L.
** REAR SETBACK: 10' MIN.
** REAR SETBACK WITH SLOPE: 10' MIN.



PRIVATE STREET LEGEND
NTS

DIG ALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE
				CITY ENGINEER	

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL: REGISTERED PROFESSIONAL ENGINEER — BLAINE A. WOMER — No. 46354 — CIVIL — STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER

PREPARED BY: DATE
R.C.E. NO.

BLAINE A. WOMER CIVIL ENGINEERING
• PLANNING • SURVEYING • CIVIL ENGINEERING • PUBLIC WORKS
Hemet, CA. 92544, 41555 E Florida Ave., Suite G, Phone (951)658-1727 Fax (951)658-9347
Park City, UT 84098, 5133 Cove Canyon Dr. #302
Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

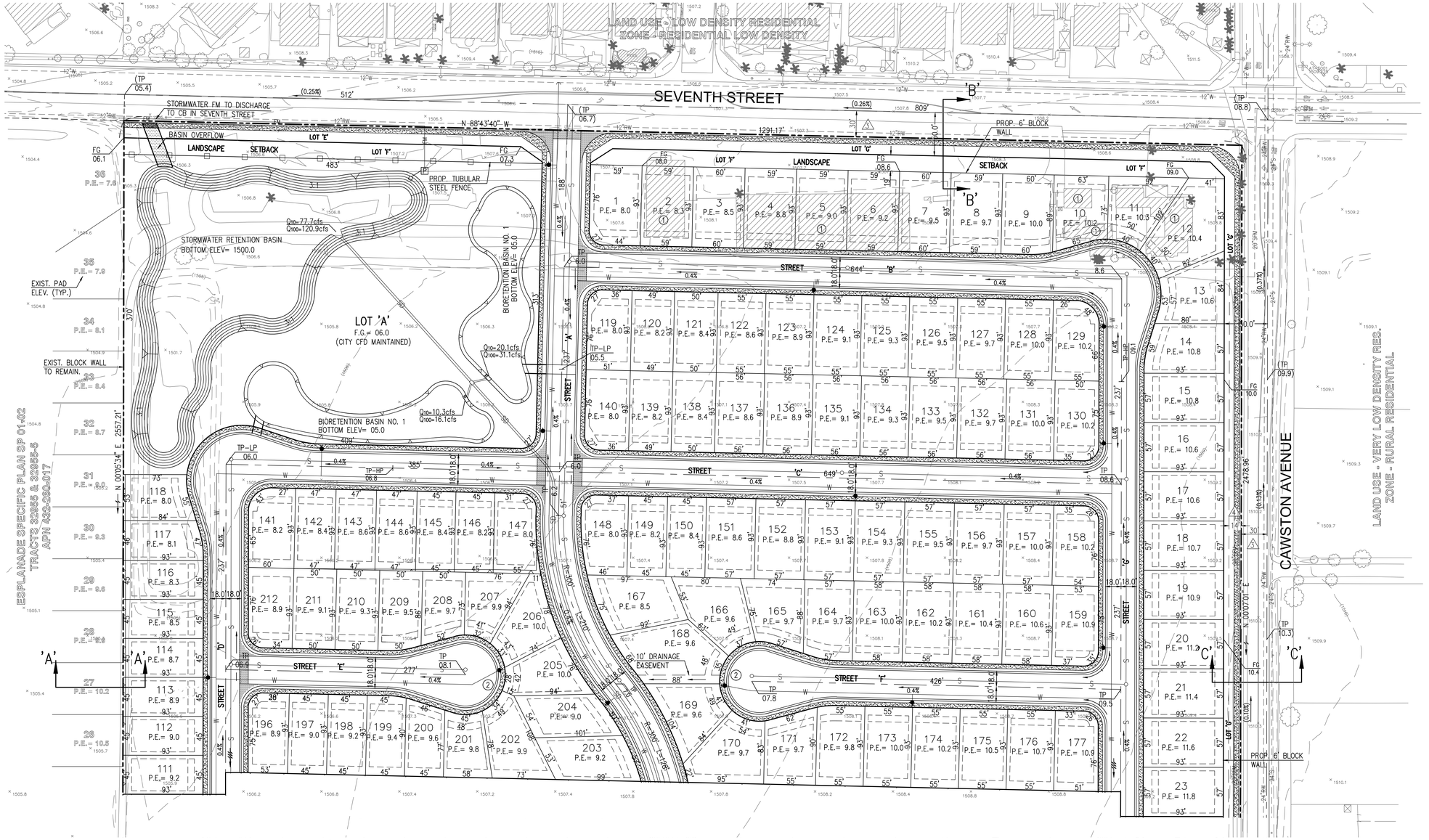
CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076
FOR RAMONA DAIRY
W.O.

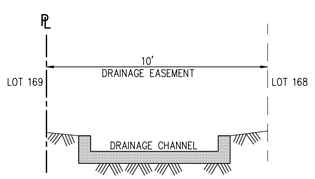
SHEET NO. 1 OF 5 SHEETS
FILE NO.

NORTH

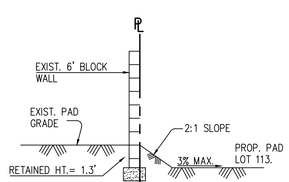
0 60 120 180

1"=60'

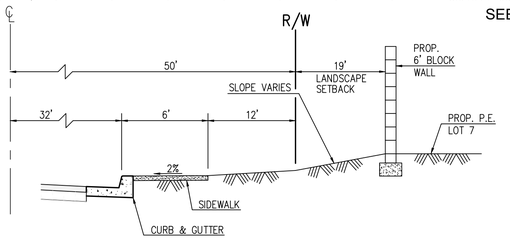




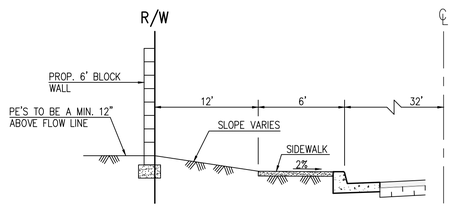
DRAINAGE EASEMENT SECTION
NTS



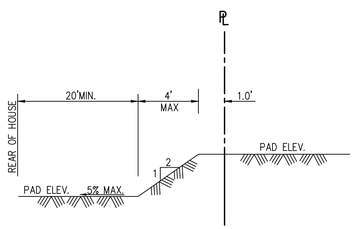
SECTION 'A' – 'A'
NTS



SECTION 'B' – 'B'
NTS



SECTION 'C' – 'C'
NTS



TYPICAL REAR YARD SECTION
NTS

KEY NOTES

1. EXISTING STRUCTURES TO BE REMOVED.
2. PARKING TO BE RESTRICTED IN CUL-DE-SAC.

NOTE: ALL CURB RETURNS HAVE A 25' RADIUS.

SEE SHEET 1 FOR EASEMENT AND LINE DATA INFORMATION.

DIG ALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE
				CITY	

ENGINEER
DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
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Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO

TENTATIVE TRACT MAP NO. 39076

FOR RAMONA DAIRY
W.O.

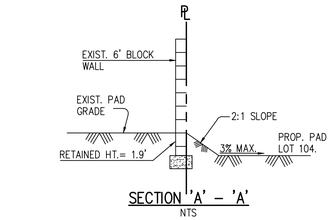
SHEET NO. 2 OF 5 SHEETS
FILE NO.

SEE SHEET NO. 2

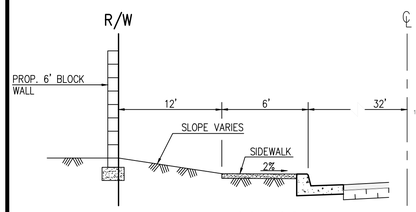
NORTH

0 60 120 180

1"=60'



SECTION 'A' – 'A'
NTS



SECTION 'C' – 'C'
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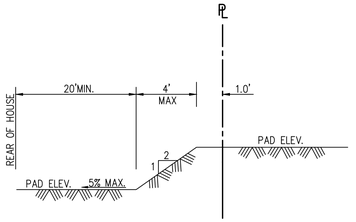
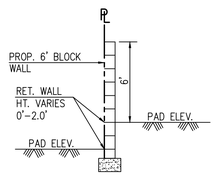


TYPICAL REAR YARD SECTION
NTS



SECTION 'E' – 'E'
NTS

ESPLANADE SPECIFIC PLAN SP 01-02
TRACT 32325-1
APN 432-280-014

EXIST. BLOCK WALL

PROP. 6' BLOCK WALL ON RETAINING WALL.

BIORETENTION BASIN NO. 2
BOTTOM ELEV= 07.0
Q10=6.9cfs Q100=10.8cfs
Q10=4.5cfs Q100=7.0cfs

LOT 'B'
F.G.= 08.0
(CITY CFD MAINTAINED)
Q10=9.7cfs Q100=15.1cfs

STREET 'H' STREET 'I' STREET 'J' STREET 'K' STREET 'L'

PASEO

CAWSTON AVENUE

LAND USE: VERY LOW DENSITY RESIDENTIAL
ZONE: RURAL RESIDENTIAL

SEE SHEET NO. 4

SEE SHEET 1 FOR EASEMENT AND LINE DATA INFORMATION.

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DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				CITY	

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A. WOMER
No. 46354
CIVIL
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FOR RAMONA DAIRY
W.O.

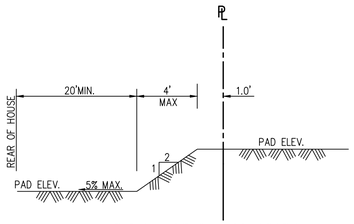
SHEET NO. 3 OF 5 SHEETS
FILE NO.

NORTH

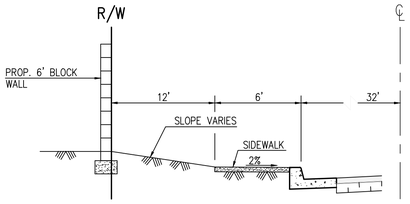
0 60 120 180

1"=60'

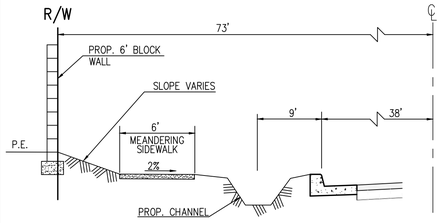
SEE SHEET NO. 3



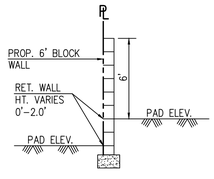
TYPICAL REAR YARD SECTION
NTS



SECTION 'C' – 'C'
NTS



SECTION 'D' – 'D'
NTS



SECTION 'E' – 'E'
NTS



KEY NOTES

1. EXISTING STRUCTURES TO BE REMOVED.
2. PARKING TO BE RESTRICTED IN CUL-DE-SAC.

NOTE: ALL CURB RETURNS HAVE A 25' RADIUS.

SEE SHEET 1 FOR EASEMENT AND LINE DATA INFORMATION.

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SCALE 1" = 60'
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BENCHMARK:

CITY OF SAN JACINTO

TENTATIVE TRACT MAP NO. 39076

FOR RAMONA DAIRY
W.O.

SHEET NO. 4 OF 5 SHEETS
FILE NO.

LOT AREA TABLE	
LOT #	AREA SQFT.
1	5,412
2	5,504
3	5,504
4	5,504
5	5,504
6	5,504
7	5,504
8	5,504
9	5,476
10	5,033
11	5,217
12	7,362
13	5,113
14	5,058
15	5,258
16	5,263
17	5,263
18	5,263
19	5,263
20	5,263
21	5,263
22	5,263
23	5,263
24	5,263
25	5,276
26	5,088
27	5,088
28	5,088
29	5,088
30	5,088
31	4,927
32	5,055
33	4,995
34	4,995
35	4,995
36	4,995
37	4,995
38	4,995
39	4,903
40	5,088
41	5,088
42	5,088
43	5,088
44	5,088
45	5,088
46	5,088
47	5,088
48	5,088
49	5,088
50	5,085

LOT AREA TABLE	
LOT #	AREA SQFT.
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53	7,486
54	4,971
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64	3,938
65	3,938
66	3,938
67	3,938
68	3,938
69	3,938
70	3,923
71	3,977
72	5,032
73	6,682
74	4,398
75	4,099
76	4,156
77	4,163
78	4,163
79	4,163
80	4,163
81	4,163
82	4,163
83	4,163
84	4,163
85	4,163
86	4,163
87	4,163
88	4,163
89	4,163
90	4,163
91	4,163
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100	4,163

LOT AREA TABLE	
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112	4,163
113	4,163
114	4,163
115	4,185
116	4,140
117	4,147
118	4,091
119	4,643
120	4,545
121	4,637
122	5,120
123	5,119
124	5,119
125	5,119
126	5,119
127	5,119
128	5,120
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130	4,696
131	5,173
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133	5,173
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136	5,173
137	5,173
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164	5,143
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166	5,542
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169	5,019
170	5,741
171	4,883
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173	5,088
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177	4,608
178	5,029
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183	5,506
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185	5,037
186	4,361
187	4,163
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216	4,876
217	4,876
218	4,875
219	4,875
220	4,700
221	4,739
222	4,636
223	4,635
224	4,636
225	4,637
226	4,637
227	4,638
228	4,635
229	4,752
230	4,956
231	4,633
232	4,633
233	4,634
234	4,586
235	4,635
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262	4,843
263	4,883
264	5,089
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267	4,883
268	4,645
269	4,645
270	4,802
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273	6,268
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332	4,303
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397	5,184
398	5,184
399	5,184
400	5,187

LOT AREA TABLE	
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402	4,892
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411	4,706
412	4,333
413	4,163
414	4,214
415	4,373
416	4,373
417	4,373
418	4,372
419	4,235
LOT 'A'	168,611
LOT 'B'	48,417
LOT 'C'	22,214
LOT 'D'	26,755

LOT SIZE SUMMARY:

MINIMUM LOT SIZE: 3,717 S.F.
AVERAGE LOT SIZE: 4925 S.F.
MINIMUM LOT WIDTH: 25 FT.
MINIMUM LOT WIDTH CORNER: 47 FT.
MINIMUM LOT DEPTH: 93 FT.
MAXIMUM FRONT YARD IMPERVIOUS COVER: 35%,
OR AS OTHERWISE ALLOWED PER CODE SEC.17.215.035 A.

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DATE	BY	MARK	REVISIONS	APPR.	DATE

ENGINEER | CITY
DESIGNED BY: | DRAWN BY: | CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER

PREPARED BY: DATE
R.C.E. NO.

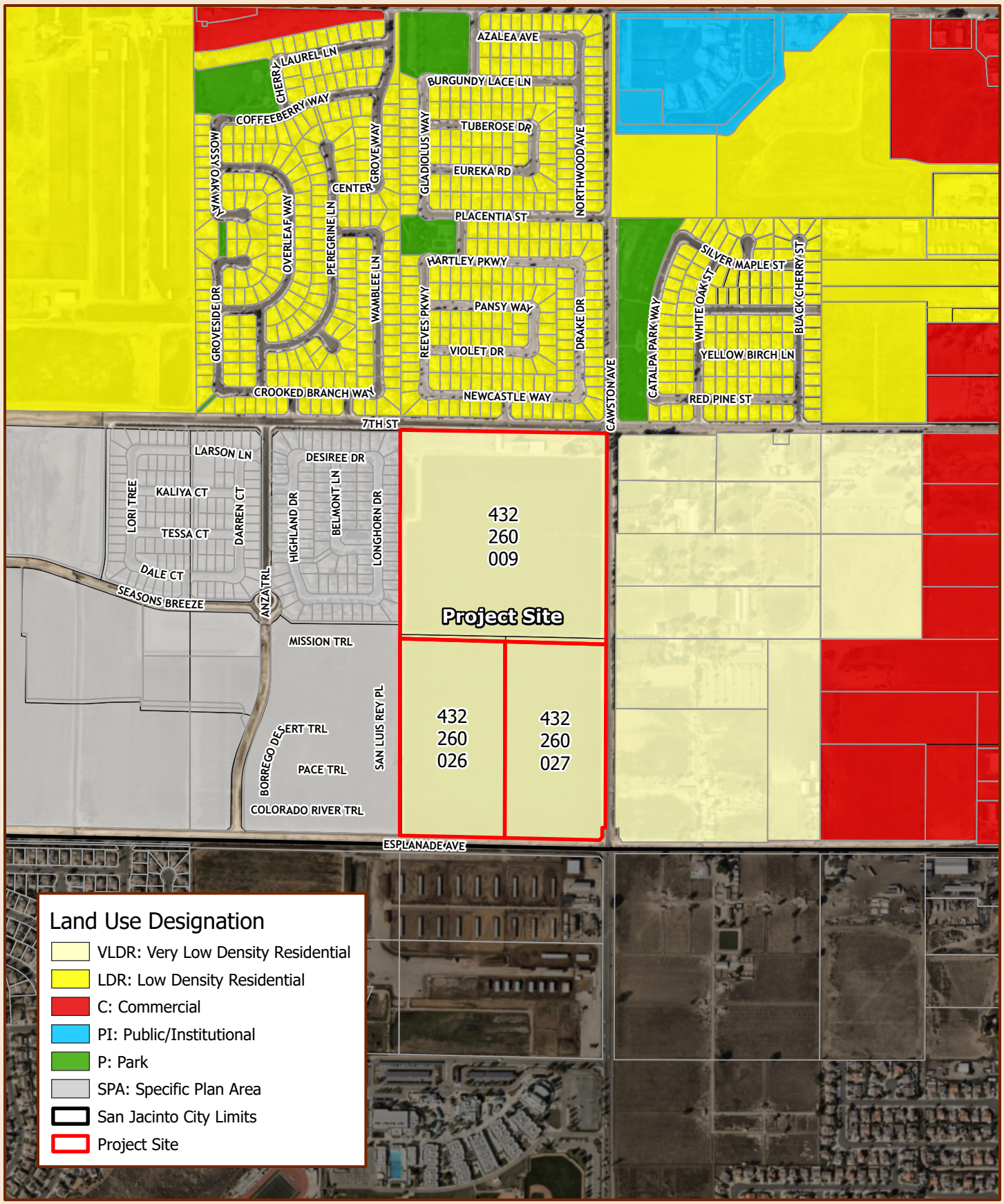
BLAINE A. WOMER CIVIL ENGINEERING
• PLANNING • SURVEYING • CIVIL ENGINEERING • PUBLIC WORKS
Hemet, CA. 92544, 41555 E Florida Ave., Suite G, Phone (951)658-1727 Fax (951)658-9347
Park City, UT 84098, 5133 Cove Canyon Dr. #302
Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE
BENCHMARK:

CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076
LOT AREAS

FOR | W.O.

SHEET NO. 5 OF 5 SHEETS
FILE NO.



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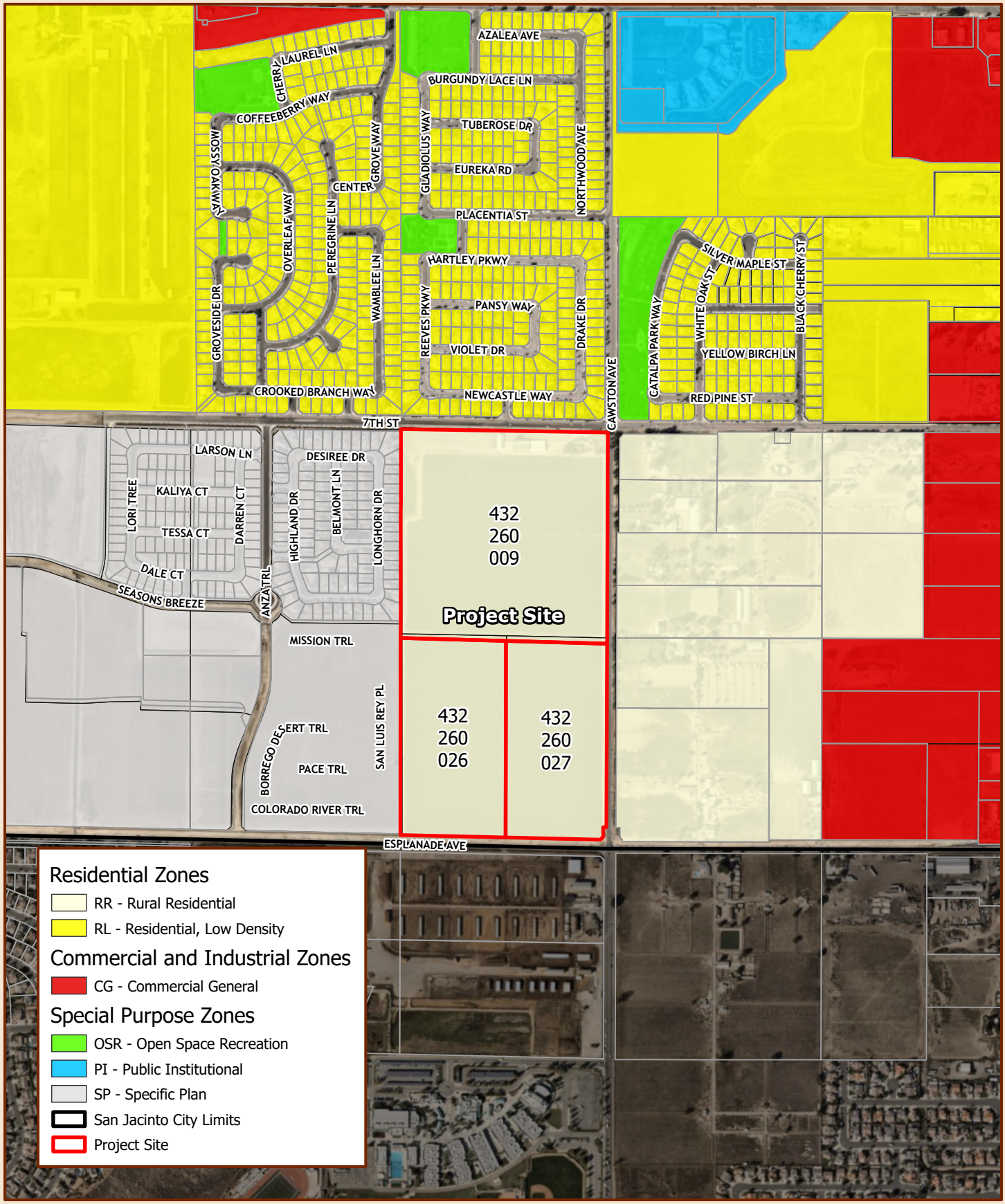
432-260-009/026/027
General Plan Land Use Map



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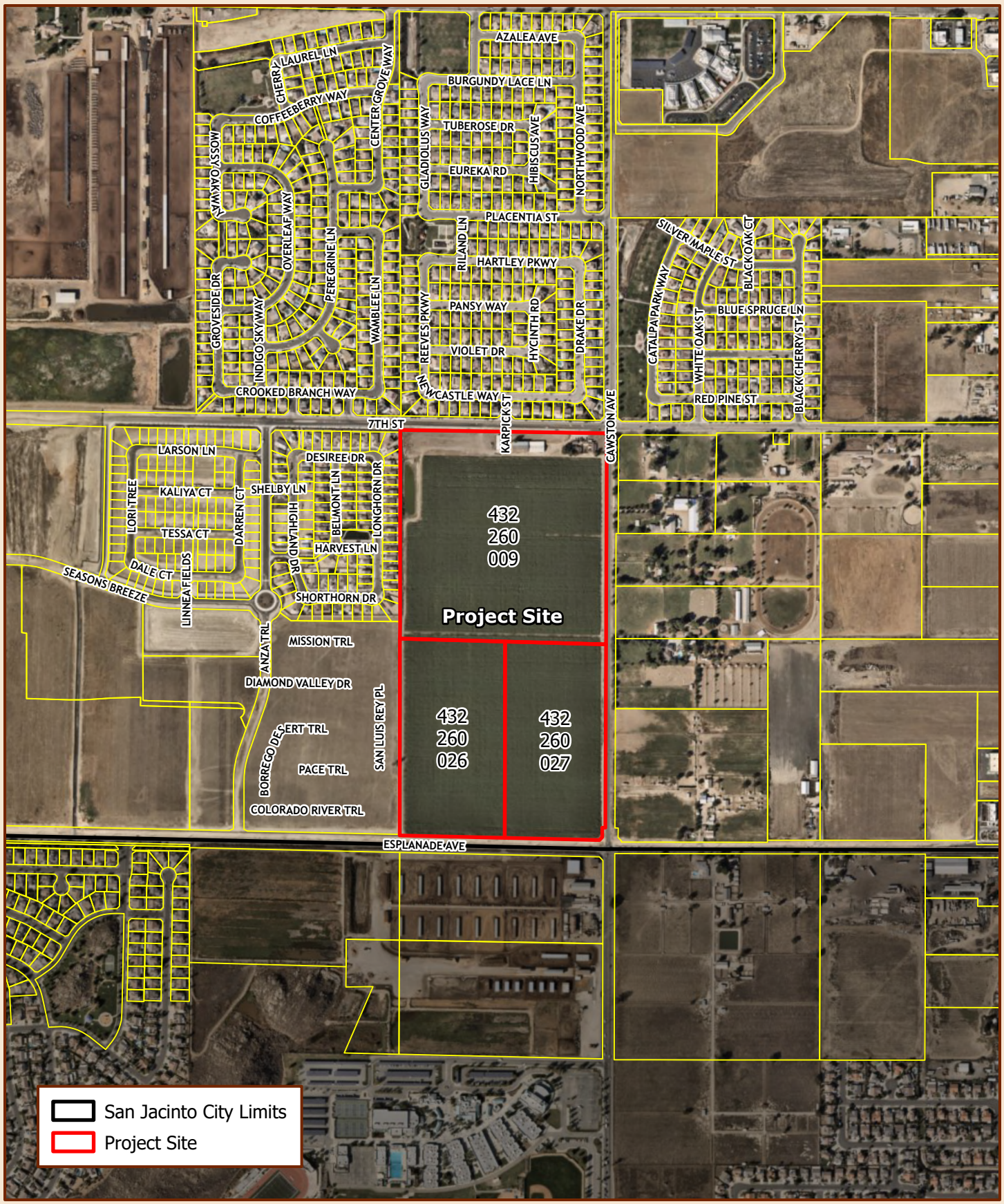
432-260-009/026/027
Zoning Map



N

432-260-009/026/027
Location Map

Chacon Farms Project
Tentative Tract Map No. 39076
DRAFT INITIAL STUDY / MITIGATED NEGATIVE DECLARATION
Case No. PROJ23-0029

Prepared For:
City of San Jacinto
Planning and Building Division
595 South San Jacinto Avenue
San Jacinto, California 92583

Prepared By :

11801 Pierce Street, Ste. 200
Riverside, CA 92505

October 20, 2025

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Appendix F-2 *Project Specific Water Quality Management Plan,* Blaine Womer Civil Engineering, October 27, 2024, Revised July 14, 2025.
Appendix G *Chacon Farms, Noise Impact Study,* MD Acoustics, October 3, 2024
Appendix H *Chacon Farms Trip Generation Analysis, City of San Jacinto*, TJW Engineering, September 17, 2024, with *Chacon Farms Draft Transportation Impact Study,* Psomas, March 2024.
Appendix I *Planned Development Permit, Chacon Farms, Tentative Tract Map No. 39076, Taylor & Clark Consulting, LLC*, November 4, 2024

List of Acronymns

Acronym	Definition
AB 32	Assembly Bill 32
AB 52	Assembly Bill 52
ADA	Americans with Disabilities Act
AFY	Acre Feet Per Year
AQMP	Air Quality Management Plan
APE	Area of Potential Effect
APN	Assessor Parcel Number
APZ	Accident Potential Zone
BMPs	Best Management Practices
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
City	City of San Jacinto
CNPS	California Native Plant Society
CNEL	Community Noise Equivalent Level
CO	Carbon Monoxide
CRHR	California Register of Historic Places
dBA	A-Weighted Decibels
DIF	Development Impact Fees
DPM	Diesel Particulate Matter
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAR	Floor Area Ratio

FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping Management Program
GHG	Greenhouse Gas
GSP	Groundwater Sustainability Plan
gpd/acre	Gallons per Day per Acre
HAER	Historic American Engineering Record
HCP	Habitat Conservation Plan
ITE	Institute of Transportation Engineers
LID	Low Impact Design
LOS	Level of Service
LST	Localized Significance Threshold
MDAQMD	Mojave Desert Air Quality Management District
mgd	Millions of Gallons per Day
MLD	Most Likely Descendent
MMRP	Mitigation Monitoring and Reporting Program
MRZ	Mineral Resources Zone
MS4	Municipal Separate Storm Water Sewer System
MTCO2e	Metric Tons Carbon Dioxide Equivalent
NAHC	Native American Heritage Commission
NCCP	Natural Communities Conservation Plan
ND	Negative Declaration
NO2	Nitrogen Dioxide
NOx	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
PCE	Passenger Car-Equivalent
PM-2.5	Particulate Matter Less Than 2.5 Microns in Diameter
PM-10	Particulate Matter Less Than 10 Microns in Diameter
PRIMMP	Paleontological Resource Impact Mitigation Monitoring Program
RWQCB	Regional Water Quality Control Board
SGMA	Sustainability Groundwater Management Act
SF	Square Feet
SCAG	Southern California Association of Governments
SRA	State Responsibility Area
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TIA	Traffic Impact Analysis
TUMF	Transportation Uniform Mitigation Fee

1. Purpose and Scope

Richard Michael (Applicant) is proposing the Chacon Farms Project (Tentative Tract Map 39076) to subdivide 75.7 gross acres into 419 single family residential lots, four open space lots, and new roadways (Proposed Project). The Proposed Project Site is currently comprised of agricultural lands and is bounded by W. Seventh Street on the north, W. Esplanade Avenue on the south, Cawston Avenue North on the east, and a planned development on the west. The Proposed Project Site is identified as Assessor Parcel Numbers (APNs) 432-260-009, -026, and -027.

The Proposed Project is subject to approval of the following entitlements:

- Per San Jacinto Development Code ("SJDC") Section 17.720.020, a General Plan Amendment to revise the land use designation from VLDR (Very Low Density Residential) to LDR (Low Density Residential) for the Proposed Project Site located at 710 Cawston Avenue North (APNs 432-260-009, 432-260-026, and 432-260-027);
- Per SJDC Section 17.720.020, a Zoning Map Amendment (Zone Change) from the RR Zone (Rural Residential) to the LDR Zone (Residential – Low Density) for the Proposed Project Site;
- Per SJDC Section 17.620, a Planned Development Permit (PDP);
- Per SJDC Section 17.630.040 approval of Site Plan and Design Review;
- Per San Jacinto Municipal Code ("SJMC") Section 16.25 a Tentative Tract Map (TTM 39076) for the subdivision of the Proposed Project Site into 419 residential lots (for the development of 419 single family homes) and 4 lettered lots.

The Proposed Project is a project under the California Environmental Quality Act (Public Resources Code Section 21000 et seq.: "CEQA"). The primary purpose of CEQA is to inform the public and decision makers as to the potential impacts of a project and to allow an opportunity for public input to ensure informed decision-making. CEQA requires all state and local government agencies to consider the environmental effects of projects over which they have discretionary authority. CEQA also requires each public agency to mitigate or avoid any significant environmental impacts resulting from the implementation of projects subject to CEQA.

Pursuant to Section 15367 of the CEQA Guidelines, the City of San Jacinto (City) is the lead agency for the Proposed Project. The lead agency is the public agency that has the principal responsibility for conducting or approving a project. The City, as the lead agency for the Proposed Project, is responsible for preparing environmental documentation in accordance with CEQA to determine if approval of the discretionary actions requested and subsequent development of the Proposed Project would have a significant impact on the environment.

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000-21178.1), this Initial Study has been prepared to analyze the Proposed Project to determine any potential significant impacts upon the environment that would result from construction and implementation of the Proposed Project. In accordance with California Code of Regulations, Section 15063, this Initial Study is a preliminary analysis prepared by the Lead Agency in consultation with other jurisdictional agencies, to determine whether a Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report is required for the Proposed Project. The purpose of this Initial Study is to inform the decision-makers, affected agencies, and the public of potential environmental impacts associated with the implementation of the Proposed Project.

A Lead Agency may prepare a Mitigated Negative Declaration for a project that is subject to CEQA when an Initial Study has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the Applicant before the proposed Negative Declaration and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment (Public Resources Code Section 21064.5).

This Initial Study has been prepared for the Proposed Project, in conformance with Section 15070(b) of the CEQA Guidelines. This Initial Study analyzes potentially significant impacts associated with the Proposed Project and incorporates mitigation measures into the Proposed Project as necessary to eliminate the potentially significant effects of the Proposed Project or to reduce the effects to a level of less than significant.

1.1 Content and Format of the Initial Study

The Initial Study is organized as follows:

- **Section 1 – Purpose and Scope.** This section introduces the scope of the Proposed Project and the City's role in the project, as well as a brief summary of findings.
- **Section 2 – Project Summary and Environmental Determination.** This section summarizes the Proposed Project and actions to be undertaken by the City. This section also provides the determination of the environmental document to be approved by the City.
- **Section 3 – Project Description.** This section details the Proposed Project components and general environmental setting.
- **Section 4 – Environmental Impacts**. This section contains the Environmental Checklist Form, as suggested in Section 15063(d)(3) of the CEQA Guidelines, as amended, and includes a series of questions about the project for each of the listed environmental topics. The Form evaluates whether or not there would be significant environmental effects associated with the development of the project and provides mitigation measures, when required, to reduce impacts to a less than significant level. The form requires an analysis in 20 subject categories as well as Mandatory Findings of Significance.
- **Section 5 – List of Preparers.** This section identifies the names and affiliations of the individuals who contributed to the preparation of the environmental evaluation.
- **Section 6 – References.** This section identifies the references used in the preparation of this Initial Study.

1.2 Initial Study Summary of Findings

Based on the analysis in Section 4, there were no environmental factors that could potentially affect ("Potentially Significant") the environment. Mitigation measures were identified to reduce some impacts to Less Than Significant. Therefore, the determination, based on the Initial Study, is that a **Mitigated Negative Declaration** would be prepared.

1.3 Documents Incorporated by Reference

The following reports and/or studies are applicable to analysis of the development of the Project Site and are hereby incorporated by reference:

- *Envision San Jacinto, General Plan 2040* (City, November 15, 2022). (Available at https://www.sanjacintoca.gov/city_departments/community-development/general-plan
- *Public Review Draft, Environmental Impact Report for the San Jacinto General Plan Update (SCH: 2020120312),* July 2022, prepared by De Novo Planning Group (City, 2022a) Available at: https://sanjacinto.generalplan.org/documents-amp-maps
- *Administrative Draft Initial Study and Mitigated Negative Declaration, Chacon Farms Project, PROJ23-0029*, prepared by Psomas, April 2024. This document assessed the potential environmental impacts of a previous design for the Project, known as Vesting Tentative Tract Map 38787 that identified 210 single family residences and 430 townhomes on 75 gross acres/50.13 net acres, requiring a General Plan Amendment from Very Low Density to Medium Density and a Zone Change from Rural Residential to Residential-Medium Density. The Administrative Draft Initial Study was prepared for City of San Jacinto as a draft analysis and is on file with the City of San Jacinto Planning Division. Since the preparation of the Administrative Draft Initial Study in April 2024, the Project design was modified to the current Project, known as Tentative Tract Map 39076 that identifies 419 single family residences and four open space lots on approximately 75 gross acres, requiring a General Plan Amendment from Very Low Density Residential to Low Density Residential and a Zone Change from Rural Residential to Residential-Low Density. Most of the environmental analysis prepared for the original Project design is unchanged for the analysis of the current Project design; however, the modified Project required a re-evaluation of studies in the categories of hydrology, noise, and transportation. Because the air quality, energy, and greenhouse gas emissions were assessed on a more intensive project design and found to be less than significant, these studies were not revised; therefore, the data from the more intensive project design was utilized for the analysis of the current Proposed Project.
- *P22-079 – Revision to Esplanade Specific Plan and TTM32955:* A proposal to revise approved Tentative Tract Map 32955, phases 32955-2, -3,-4 within Planning Areas 1, 3, 5, 7 and 8 of the Esplanade Specific Plan for 852 single-family residential lots and one,+/-36.1-acre mixed use lot with capacity for 194 multi-family units. The project includes an amendment to approved SP 01-02 (the Esplanade Specific Plan) and revisions to several improvements to match and support revisions to the associated tract map. Environmental: Initial Study. These documents are available for review at the City of San Jacinto Planning and Building Division, 595 South San Jacinto Avenue, San Jacinto, CA 92583.

1.4 Contact Person

City of San Jacinto
Planning and Building Division
Attn: Yaneli Hernandez, Senior Planner
595 South San Jacinto Avenue, San Jacinto, CA 92583
Phone: (951) 487-7330
Email: yhernandez@sanjacintoca.gov

2. Summary and Environmental Determination

2.1 Project Summary

1. Project Title: Chacon Farms Project: Tentative Tract Map No. 39076
PROJ23-0029

2. Lead Agency Name: City of San Jacinto
Address: Planning and Building Division
595 South San Jacinto Avenue
San Jacinto, CA 92583

3. Contact Person: Yaneli Hernandez, Senior Planner
Planning and Building Division
595 South San Jacinto Avenue, San Jacinto, CA 92583
Email: yhernandez@sanjacintoca.gov

4. Project Location: 710 Cawston Avenue North
Between Seventh Street, W. Esplanade Avenue and
Cawston Avenue
Gross Acres: 75.7
Site Address: None assigned.
Topographic Quad (USGS 7.5"): *Lakeview*
Topographic Quad Coordinates: T4 South, R1 West, Section 31, 32
Latitude: 33°46'36.66"N, Longitude: - 117° 1'3.84"W
APN: 432-260-009, -026, and -027

5. Project Sponsor's Name: Ramona Dairy, LLC, Attn: Richard Michael
Address 2451 Ramona Expressway, San Jacinto, CA 92582

6. General Plan Designation:
Existing: Very Low Density Residential (VLDR)
Proposed: Low Density Residential (LDR)

7. Zoning Designation:
Existing: Rural Residential (RR)
Proposed: Residential, Low Density (RL)

8. Description of Project:

Richard Michael (Applicant) is proposing the Chacon Farms Project (Tentative Tract Map 39076) to subdivide 75.7 gross acres into 419 single family residential lots, four open space lots, and new roadways within agricultural lands bounded by W. Seventh Street on the north, W. Esplanade Avenue on the south, Cawston Avenue North on the east, and a planned development on the west. The Proposed Project Site is identified as Assessor Parcel Numbers (APNs) 432-260-009, -026, and -027. The purpose of the Project is to obtain entitlements that would enable the subdivision of the property, which would ultimately provide additional housing options to serve the growing population of the City of San Jacinto. The Project requires a General Plan Amendment and Zone Change to increase allowed housing density.

9. Surrounding Land Uses:

Surrounding land uses are identified in **Table 1 – Surrounding Land Use**. The Project Site is currently occupied by Chacon Farms and Bruno Ranches agricultural operations. Two single-family residential uses occupied by caretakers are also located on the Proposed Project Site.

Table 1: Surrounding Land Use

Location	Land Use	Zoning
Project Site	Chacon Farms and Bruno Ranches agricultural operations	RR (Rural Residential)
North	West Seventh Street followed by a single-family residential development and Catalpa Park	RL (Residential, Low Density);
South	West Esplanade Avenue followed by GH Dairy Farm (1455 Cawston Avenue North) and Ridgely Farms (3901 West Esplanade Avenue), located in the City of Hemet city limits (which begins on the south of West Esplanade Avenue)	City of Hemet, A2 (Heavy Agriculture)
East	Cawston Avenue North followed by single-family residences and horse farms/ranches	RR (Rural Residential)
West	Vacant lands/under construction for planned development	Esplanade Specific Plan SP 01-02 (mixed use single family residential and commercial subdivision under construction)

Sources: Google Earth Imagery; City of San Jacinto Zoning Map; City of Hemet Zoning Map

10. Other Public Agencies Whose Approval is Required:

The following discretional approvals are required for the Project:

State Agencies:

- Santa Ana Regional Water Quality Control Board: approval of a National Pollutant Discharge Elimination System (NPDES) permit to ensure that construction site drainage velocities are equal to or less than the pre-construction conditions and downstream water quality is not worsened.

11. California Native American Consultation

On February 22, 2024, the City of San Jacinto notified via email the following tribal entities of the Project and requested a timeframe in which to request consultation in accordance with AB52 and SB18. The following summarizes the results of the AB52 consultation.

- Soboba Band of Luiseño Indians. Result: Mitigation measures requested to manage unanticipated tribal resources. Consultation concluded.
- Rincon Band of Luiseño Indians. Result: No potential tribal resources. Consultation concluded.
- Yuhaaviatam of San Manuel Nation. Result: the Project site was outside of Serrano ancestral territory. Consultation concluded.
- Agua Caliente Band of Cahuilla Indians (ACBCI). Result: Letter dated February 26, 2024 requested formal consultation and more information identified in the Cultural Resources Report. Letter received April 21, 2025 stating the Project site is outside of the boundaries of the ACBCI Reservation, but within the tribe's traditional use area. ACBCI deferred to Soboba for this Site. Consultation concluded.

Mitigation measures to ensure resources to tribal cultural resources are minimized have been incorporated, as appropriate, into the Initial Study.

2.2 Environmental Analysis and Determination

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000-21178.1), this Initial Study has been prepared to analyze the Proposed Project to determine any potential significant impacts upon the environment that would result from construction and implementation of the Project. This Initial Study is based on an Environmental Checklist Form (Form), as suggested in Section 15063(d)(3) of the CEQA Guidelines, as amended, and includes a series of questions about the project for each of the listed environmental topics. The Form evaluates whether or not there would be significant environmental effects associated with the development of the project and provides mitigation measures, when required, to reduce impacts to a less than significant level.

In accordance with California Code of Regulations, Section 15063, this Initial Study is a preliminary analysis prepared by the Lead Agency in consultation with other jurisdictional agencies, to determine whether a Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report is required for the Proposed Project. The purpose of this Initial Study is to inform the decision-makers, affected agencies, and the public of potential environmental impacts associated with the implementation of the Proposed Project.

2.2.1 Organization of Environmental Analysis

Section 4 provides a discussion of the potential environmental impacts of the Project. The evaluation of environmental impacts follows the questions provided in the Form provided in the CEQA Guidelines.

2.2.2 Evaluation of Environmental Impacts

A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to the project (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

All answers must take account of the whole action involved, including off site as well as on site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

Once the Lead Agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation incorporated, or less than significant.

"Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

"Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." Mitigation measures are identified and explain how they reduce the effect to a less than significant level (mitigation measures may be cross-referenced).

Earlier analyses may be used where, pursuant to the Program EIR or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. (CEQA Guidelines Section 15063[c][3][D]. In this case, a brief discussion should identify the following:

a) Earlier analyses used where they are available for review.

b) Which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and whether such effects were addressed by mitigation measures based on the earlier analysis.

c) The mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project for effects that are "Less than Significant with Mitigation Measures Incorporated.

References and citations have been incorporated into the checklist references to identify information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document, where appropriate, include a reference to the page or pages where the statement is substantiated.

Source listings and other sources used, or individuals contacted are cited in the discussion.

The explanation of each issue should identify:

a) The significance criteria or threshold, if any, used to evaluate each question

b) The mitigation measure identified, if any, to reduce the impact to less than significant.

2.2.3 Environmental Factors Potentially Affected

Based on the analysis in Section 4, the Proposed Project could potentially affect ("Potentially Significant") the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor and identifies where mitigation measures would be necessary to reduce all impacts to less than significant levels.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology and Soils	☐ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials
☐ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☒ Noise	☐ Population and Housing	☐ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☐ Utilities and Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

2.2.4 Determination

On the basis of this initial evaluation, the following finding is made:

	The Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	Although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
	The Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	The Proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	Although the Proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the Proposed Project, nothing further is required.

Signature _____ Date _____

Name _____ Title _____

3. Project Description

3.1 Project Setting

3.1.1 Site Location

The Proposed Project Site is located at 710 Cawston Avenue North in the City of San Jacinto, County of Riverside, between Seventh Street to the north and Esplanade Avenue to the south. The Proposed Project Site is also bordered by the City of Hemet to the south. The San Jacinto Mountains are located to the east and the Lakeview Mountains are located to the west of the Proposed Project Site. Refer to **Figure 1: *Reginal Vicinity*** and **Figure 2: *Site Location - Aerial View***. The Project includes three lots associated with Assessor's Parcel Numbers (APNs) 432-260-009, -026, and -027 and is comprised of 75.7 gross acres.

Local vehicular access to the Proposed Project Site is provided by existing driveways located on Seventh Street to the north and Cawston Avenue to the east, which are both classified as major roadways. Regional access is provided by State Route (SR) 74, approximately 3.9 miles south of the Proposed Project Site and SR-79, approximately 5.5 miles northeast of the site.

The Proposed Project Site is within the *Lakeview U.S. Geological Survey* (USGS) 7.5-minute topographical map in Sections 31, 32, Township 4 South, Range 1 West at an elevation of approximately 1,511 feet above mean sea level **(Figure 3: *Site Location - USGS).*** The topography of the site is relatively planar with a very gentle fall toward the east.

3.1.2 Existing Site Conditions

The Proposed Project Site is occupied by Chacon Farms and Bruno Ranches agricultural operations. Two single-family residential uses occupied by caretakers are also located on the Proposed Project Site. Onsite operations consist of the cultivation of alfalfa and routine facility maintenance. In addition to the residences and alfalfa crops, the Proposed Project Site is also improved with a capped irrigation well, cattle corrals, irrigation infrastructure, two septic systems, asphalt pavement beneath the storage barns, a grain storage vessel, concrete driveway, and unpaved roads that surround and bisect the Proposed Project Site. Additionally, a detention basin is located on the northwest portion of the Proposed Project Site.

3.1.3 Existing Utilities

Water

Water is provided to the Proposed Project Site by the Eastern Municipal Water District (EMWD), which provides potable water, recycled water, and wastewater services to an area of approximately 555 square miles in western Riverside County. Local supplies include recycled water, potable groundwater, and desalinated groundwater, and imported supplies from the Metropolitan Water District of Southern California (Metropolitan), which comprises about half of the water used in EMWD's service area, is provided by EMWD.

There are multiple domestic water mains in each of the streets surrounding the Proposed Project Site. Water mains range in size from 2 to 30 inches in Cawston Avenue North and West Esplanade Avenue. A 12-inch main runs the improved length of West Seventh Street. Fire hydrants are located along Cawston Avenue North and West Seventh Street. There is a 24-inch recycled water main running north to south in Cawston Avenue North.

Wastewater

The City Public Utilities Department owns and operates the sewage collection system. Sewage is treated by the San Jacinto Valley Regional Water Reclamation Facility, located at 770 N Sanderson Avenue, San Jacinto,

approximately 1 mile north of the Proposed Project Site. There is a 24-inch gravity sanitary sewer running north in Cawston Avenue North and then east on West Seventh Street. There is also a 20-inch EMWD sewage force main running along Proposed Project Site's eastern property line within a 14-foot easement.

Stormwater

The development of the Project site will result in an increased area of impervious surfaces, including roofs, asphalt, concrete, sidewalks, and driveways. The property's natural drainage pattern directs flow toward the northwest, and this orientation has been incorporated into the project's grading design. Each lot will drain through vegetated swales to the adjacent streets. Stormwater from the streets will be conveyed to onsite bioretention basins for preliminary treatment. Should the volume of stormwater exceed basin capacity, excess runoff will be managed by an onsite storm drain system, which will divert additional flow to a retention basin located at the northwest corner of the property.

The stormwater retention basin described above has been designed to address the incremental increase in runoff volume resulting from development for the 100-year, 24-hour storm event. Any runoff exceeding the mitigation volume will be conveyed to Seventh Street via a curb outlet structure. Subsequently, the stormwater will travel approximately 1,786 feet west through a force main line to an existing catch basin. The construction of the force main line will occur within the area designated for street improvements along Seventh Street, as established by Tract No. 32955 and addressed in the CEQA documentation approved for that project.

Power

San Jacinto Power provides electricity to the City and surrounding areas, including the Proposed Project Site. Existing overhead electric lines run along the east side of Cawston Avenue North with several guy poles on the Proposed Project Site buttressing service lines running east. Overhead transmission and distribution lines run east to west on the southern side of West Esplanade Avenue. Existing residences on the Proposed Project Site are served by an overhead line from Cawston Avenue North and a service pole near the residences. All other power is underground in West Seventh Street.

Telecommunications

Telecommunications providers within the site vicinity include Frontier, Verizon, and AT&T for telephone services and Charter and Crown-Castle for cable services. There are existing facilities in Cawston Avenue North adjacent to the site.

3.1.4 Planning Context

The Proposed Project Site has a General Plan land use designation of VLDR (Very Low Density Residential). The Proposed Project Site is currently zoned Rural Residential, which according to the San Jacinto Development Code Section 17.215.010, is applied to areas appropriate for detached single-family dwelling units with appropriate accessory structures and uses in a semirural setting. The Rural Residential zone may also allow mobile and modular homes, public facilities, and other uses that are compatible with rural single-family neighborhoods. Horses and other farm animals are also allowed in this zone in compliance with Section 17.430.050 (Animal Keeping). This zone allows a maximum density of 2.0 dwelling units per gross acre of land. The Rural Residential zone is consistent with the VLDR land use designation of the General Plan**.**

3.2 Project Characteristics

3.2.1 Site Plan

The Project involves subdividing 75.7 gross acres into 419 single family residential lots, four open space lots (Tentative Tract Map 39076), as shown on **Figure 4: *Site Plan Schematic*, *TTM 30926.*** The lots generally range

in size from 4,500 square feet (SF) to 6,500 SF as shown in **Appendix I: Planned Development Permit**. The community would be connected by an internal roadway network gaining access via Cawston Avenue, Seventh Street and Esplanade Avenue. Proposed on-site pedestrian trails and paths would provide access to the range of residential types within the community, as well as open spaces, parks, and a neighborhood park with a clubhouse and associated amenities, as described further below. Four lettered lots totaling 6.6 acres would be set aside for dual use as both landscaped stormwater control basins and picnic/greenspace areas connected with trails. The total Project area would equate to 75.7 acres.

3.2.2 Off-Site Improvements:

The Project involves improvements within the public right-of-way (ROW), such as street dedications and improvements, sidewalks and landscaping along West Seventh Street and Cawston Avenue, and sidewalks and landscaping along West Esplanade Avenue.

3.2.3 Access/Circulation

The internal vehicular circulation network would include the main road running north/south through the center of the site with ingress/egress on Seventh Street on the north and W Esplanade Avenue on the south. A local entry road is planned for Cawston Avenue that would connect to the main north/south roadway. The internal street system would primarily comprise local access roads, as shown on **Appendix I**.

3.2.4 Open Space and Parks

The Project would incorporate a variety of open space areas, including a private and public multi-use path linking key areas and providing pedestrian access throughout the Proposed Project Site. Four lots (Lot A, B, C, and D) totaling 6.61 acres are provided throughout the development that provide a combination of detention basins, biofiltration and park space.

3.2.5 Landscaping

The Project would include various landscape treatments as shown in **Appendix I** which delineates major landscape treatments and identifies planting types. **Figure 5: *Concept Landscaping Plan*** provides a compilation of the landscaping plan presented in **Appendix I**. Proposed landscaped types would include trees and shrubs as shown in the Preliminary Plant Palette, included as part of the Planned Development Permit in **Appendix I**. The Landscape Plan would comply with the San Jacinto Landscape Design Guidelines (San Jacinto 2005), which includes an approved plant list. The Landscape Design Guidelines aim to retain the community's rural agricultural roots, and water wise planting (i.e. drought tolerant, native, or low-water plants) is utilized whenever possible. The Project would remove 22 existing on-site trees with diameters of 9.5 inches or greater, five of which are street trees located within the Proposed Project Site's boundary, including one Tree of Heaven (*Ailanthus altissima*) , one Lemon Tree (*Citrus limon*), two Mondell Pines (*Pinus eldarica*), one Peach Tree (*Prunus persica*), four Peruvian Pepper Tree (*Schinus molle*), four California Fan Palms (*Washingtonia filifera*) and nine Mexican Fan Palms (*Washingtonia robusta*). Removal of the trees within the public street right-of-way would require authorization from the City Council, in accordance with San Jacinto Municipal Code (SJMC) Section 12.20.050 All other tree removals during Project construction would require replacement from the Applicant and approval by the City Parks and Recreation Commission.

3.2.6 Architectural Design and Elevations

The Architectural Design Guidelines in **Appendix I** conveys the Chacon Farms community's architectural design theme. It is not the intent of the Guidelines to mandate that all the identified design components and elements described be incorporated into the actual building designs. Rather, the Guidelines serve as a "palette" of character-defining exterior elements that should be used in home design. It is expected that builders and their architects would prepare architectural building plans that substantially conform to the

guidelines, while also applying creativity and innovation in response to housing design trends, homebuyer expectations, and other market conditions.

3.2.7 Sustainability Features

The Project would be constructed in compliance with the latest 2022 Title 24, Part 6 Energy Code and Title 24, Part 11 California Green Building Code requirements, which mandates the inclusion of various design features meant to reduce energy consumption and promote sustainable development. These features include but are not limited to the following:

- Solar photovoltaic systems equipped on all 419 dwelling units;
- Energy storage system ready for each residential unit;
- Electric vehicle (EV) capable and EV ready parking spaces to facilitate future installation and use of EV chargers;
- Low-flow fixtures (showerheads, toilets, kitchen/bathroom faucets);
- Low water use vegetation;
- Electric heat pumps;
- Energy efficient lighting such as light emitting diode (LED) lights;
- Lighting controls such as dimmers and motion/occupancy sensors; and
- High performance windows and doors (to limit air leakage, promote thermal efficiency, and reduce the transmission of solar heat).

3.2.8 Utilities

Water

Water would continue to be provided to the Proposed Project Site by EMWD via proposed looped network lateral connections to the existing water mains in Cawston Avenue North, West Esplanade Avenue, and West Seventh Street. The Project has been preliminarily sized to meet the minimum design water pressure of 50 pounds per square inch (psi) at each proposed service point of connection and a 20-psi residual pressure for fire flows.

During final design, the Fire Marshal would confirm that fire flow from the existing and new fire hydrants meet the demand for the Proposed Project. New fire hydrants would be installed throughout the Project and at the street intersections along the Project frontages of West Seventh Street, Cawston Avenue North, and West Esplanade Avenue, per EMWD standards.

Wastewater

The Project wastewater flows would be collected via a proposed sewer system and would be conveyed to EMWD's San Jacinto Valley Regional Water Reclamation Facility, located 1 mile north of the Project Site. The Project's proposed sewer collection system has been preliminarily sized to convey the sewer flow through a proposed 8-inch sewer main line via gravity from the southern to the northeast corner of the Proposed Project Site. A proposed lift station would move wastewater from the proposed 8-inch main line to a proposed 10-inch sewer main line to be constructed within Seventh Street. The proposed 10-inch sewer main line would then connect to an existing 24-inch gravity sanitary sewer running north in Cawston Avenue North and then east on West Seventh Street. The Project has been designed to be a self-contained system that does not anticipate any future sewer input from other sources.

Stormwater Controls

The Proposed Project Site will be developed with associated improvements, including improved streets and graded slopes. The runoff from the developed condition would be collected into an on-site storm drain

system, which includes two upstream bioretention water quality basins, and flows to a larger stormwater basin located in the northwest corner of the Proposed Project Site. The larger stormwater basin also includes a bioretention water quality basin as well. A submerged pump would be installed at the north side of the basin to send the treated stormwater into Cawston Avenue where water would be conveyed west and off-site and continue down Seventh Street via roadside swale or gutter flow and into the existing City stormwater system, as under existing conditions.

Construction of the Proposed Project would also require the contractor to prepare a Stormwater Pollution Prevention Plan (SWPPP) as the Project Site is more than 1 acre.

3.2.9 Construction Timing

Construction activities are anticipated to begin in January 2026 and end in January 2029, with phased openings occurring as completed as early as Spring 2029. Construction activity would occur for 8 hours per day, and 5 days per week (Monday through Friday), in accordance with the City's permitted hours of construction (SJMC Section 8.40.090 *Construction activity noise regulations*). Construction stages such as demolition, site preparation, grading/excavation, building construction, paving, and architectural coating would occur as the subdivision requires as identified on Table 2: Project Construction Phasing Summary.

Construction of the proposed Project would require common construction equipment types. No pile driving would be required.

Table 2: Project Construction Phasing Summary

Construction Phase	Timing
Demolition	November 2025 – December 2025
Interior grading and road improvements	January 2026 – January 2029
Grading for basins, housing pads	January 2026 to April 2026
Off-site improvements	April 2026 – August 2026
Housing pad improvements, housing construction	September 2026 – May 2029

*Note: Some phases may overlap, as determined necessary for construction sequencing.

3.2.10 Grading Quantities

Grading activities would include an estimated 27,000 cubic yards (cy) of cut, 193,600 cy of fill, and 166,600 cy of import.

3.2.11 Best Management Practices During Construction

The following best management practices are incorporated into the Project construction specifications to identity how the Project would conform to Federal, State, and Local regulations:

- Construction Water Quality Control. Construction projects that disturb 1 acre of land or more are required to obtain coverage under the NPDES General Permit for Construction Activities (General Construction Permit), which requires the applicant to file a notice of intent (NOI) to discharge stormwater and to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP includes an overview of the Best Management Practices (BMPs) that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. The Project is more than 1 acre, therefore, the contractor is required to provide an SWPPP. The SWPPP will also address post-construction measures for water quality protection.

3.3 Project Characteristics - Operations

The Proposed Project would be fully operational in 2029 and would include 419 residential units for approximately 1,453 future residents within the Chacon Farms community, as discussed further in Section 4.14, Population and Housing. The proposed community aims to provide open space areas connected by a network of trails and paths between residences to provide social and recreational opportunities for future residents. A homeowners association would be formed to manage the subdivision facilities.

3.4 Project Approvals

The following approvals and permits are required from the City of San Jacinto as part of Case No. PROJ23-0029 to implement the Proposed Project:

- Per San Jacinto Development Code ("SJDC") Section 17.720.020, a General Plan Amendment to revise the land use designation from VLDR (Very Low Density Residential) to LDR (Low Density Residential) for the Proposed Project Site located at 710 Cawston Avenue North (APNs 432-260-009, 432-260-026, and 432-260-027);
- Per SJDC Section 17.720.020, a Zoning Map Amendment (Zone Change) from the RR Zone (Rural Residential) to the LDR Zone (Residential – Low Density) for the Proposed Project Site;
- Per SJDC Section 17.620, a Planned Development Permit (PDP);
- Per SJDC Section 17.630.040 approval of Site Plan and Design Review;
- Per San Jacinto Municipal Code ("SJMC") Section 16.25 a Tentative Tract Map (TTM 39076) for the subdivision of the Proposed Project Site into 419 residential lots (for the development of 419 single family homes) and 4 lettered lots.
- Per SJDC Section 17.600.090 Environmental Review and approval of the IS/MND;
- Per SJMC Section 12.20.050, removal of applicable trees within City right-of-way.

Other non-discretionary actions anticipated to be taken by the City at the staff level as part of the Proposed Project include:

- Review and approval of all off-site infrastructure plans, including street and utility improvements pursuant to the conditions of approval;
- Review all on-site plans, including grading and on-site utilities; and
- Per SJDC Section 17.600.100 approval of a Water Quality Management Plan ("WQMP").

Figure 1 – Regional Vicinity

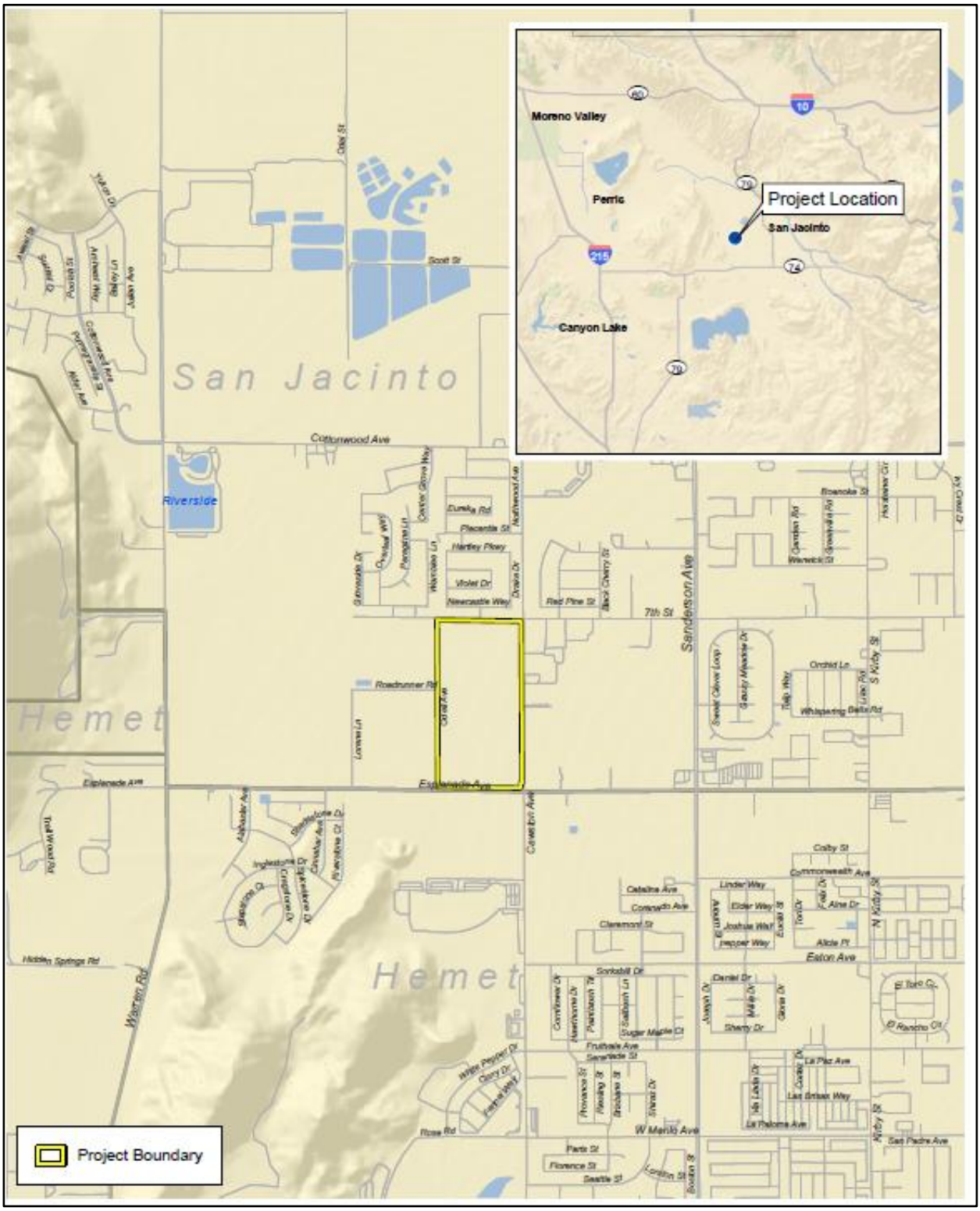

Figure 2 – Site Location, Aerial View



Not to scale
Source: *Google Earth Pro*

Figure 3 – Site Location, USGS

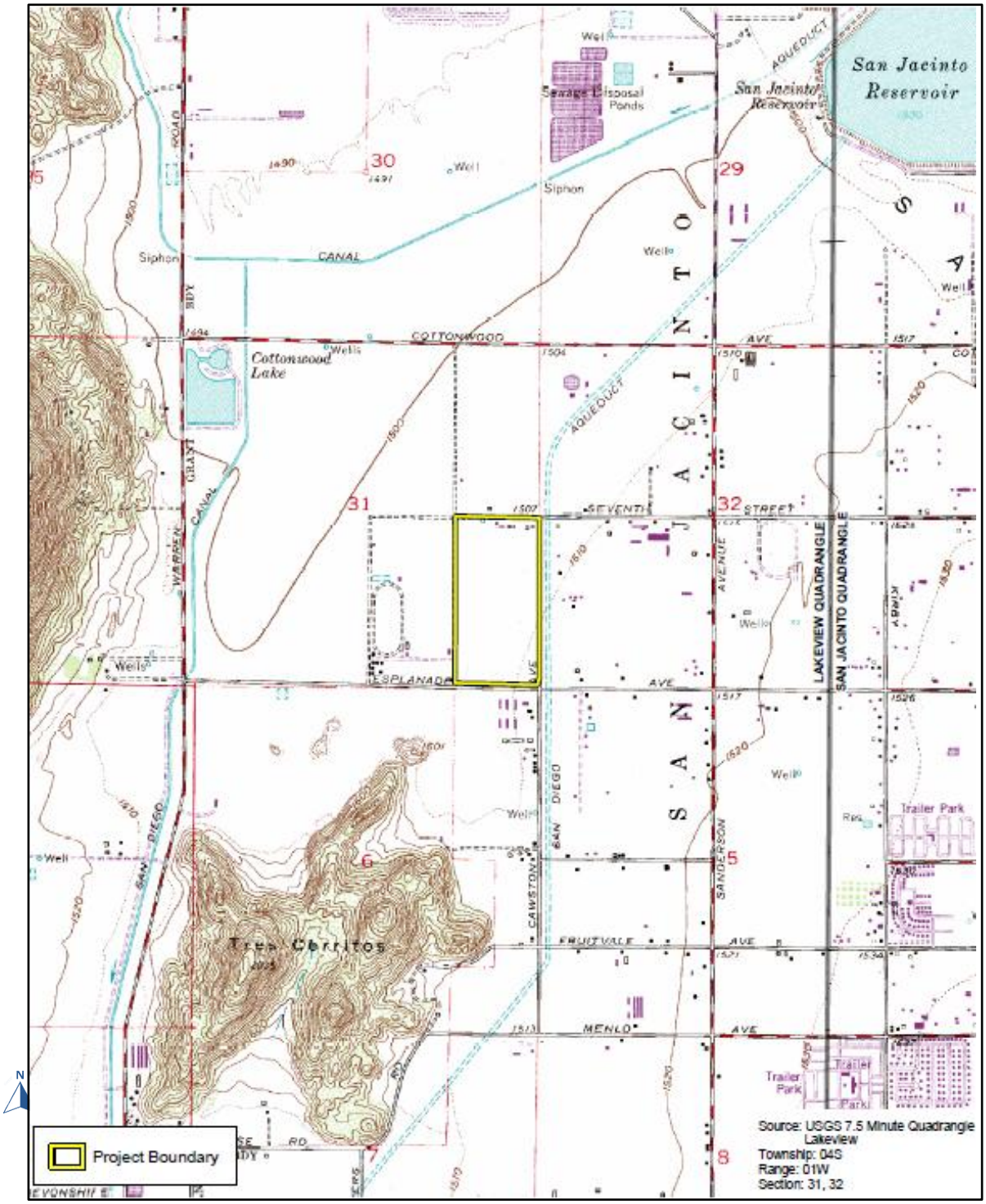

Figure 4 – Site Plan Schematic, TTM 39076

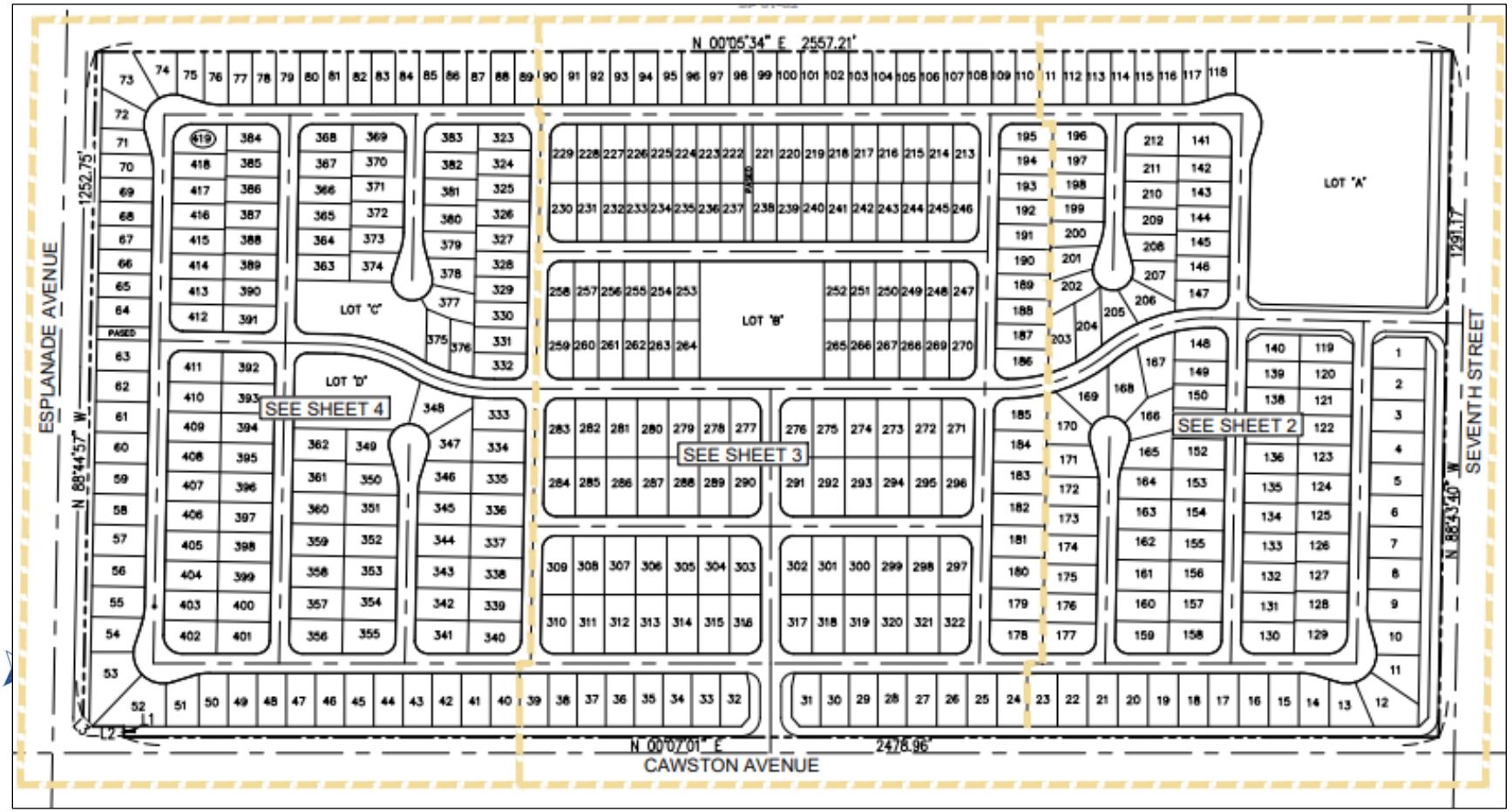

Figure 5 – Concept Landscaping Plan



4. Environmental Impacts

4.1 Aesthetics

4.1.1 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Discussion

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. As stated in the San Jacinto General Plan Draft Environmental Impact Report, scenic vistas visible in the City include the Lakeview Mountains to the west, the San Jacinto Mountain foothills to the northeast, and the San Timoteo badlands to the northwest (San Jacinto 2022c). The Proposed Project Site is situated in a relatively low and flat area in the southwestern portion of the City.

Public vantage points of these scenic vistas are from Cawston Avenue and 7th Avenue. Cawson Avenue is on the east side of Project, site so views of the San Jacinto Mountains looking to the east will remain visible after development of the Project. However, views of the Lakeview Mountains looking to the west will be partially blocked by the Project post-development. The San Timoteo Badlands are not visible from Cawston Avenue or 7th Street because they are approximately 12 miles away, and views are already blocked by intervening topography and development.

From 7th Street, views of the Lakeview Mountains and San Jacinto Mountains would not be blocked by the Project because these views are visible to pedestrians and motorists traveling east and west along 7th Street, and the new structures will be located on the south side of the roadway.

Additionally, the proposed structures are limited to 40% lot coverage, a maximum height of 40 feet, and three stories tall, and would have setbacks between structures consistent with the design requirements of the SJMC. For these reasons, views of the Lakeview Mountains and Jacinto Mountains would still be visible from the internal public streets. The Project would also not significantly alter any

views from public parks or open space areas. Therefore, the Project would not result in a substantial adverse effect on a scenic vista, and impacts would be less than significant. No mitigation is required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. Based on the California Department of Transportation (Caltrans) California State Scenic Highway System Map, there are no Officially Designated State scenic highways within the Project vicinity (Caltrans 2023). The closest Eligible highway is a portion of SR-74 from Interstate 5 at San Juan Capistrano to SR-111, located approximately 5 miles south of the Proposed Project Site at the nearest point[1]. Therefore, the Project Site does not exist within or near a State scenic highway. Due to distance, topographic changes, and intervening development, the Proposed Project Site is not visible from this segment of SR-74.

Additionally, none of the streets surrounding the Project Site are identified in the San Jacinto General Plan as being a local scenic roadway. The Project Site is fully disturbed with agricultural, limited residential uses, and a significant number of invasive tree species, and does not contain areas with native vegetation. The residential uses on the Project Site were found to not be historically significant (refer to Section 4.5.2 in this document).

Therefore, the proposed Project would not have an adverse effect on scenic resources (including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway) or a locally designated rural street or scenic corridor. There would be no impact, and no mitigation is required.

c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant Impact. The Project vicinity is characterized by a mix of both non-urbanized and urbanized areas. Surrounding land uses include a mix of undeveloped, rural residential, low-density residential, and heavy agriculture uses. The Project has been designed to be consistent with the surrounding area and development. Single family homes within Chacon Farms shall creatively use "architecture forward" designs, landscaping, and other innovative neighborhood design techniques to create a visually interesting street scene and identifiable neighborhood character. As the Project has been designed to match the existing visual character within the Project vicinity context, the Project would not substantially degrade the existing visual character or quality of the site and its surroundings. Therefore, impacts would be less than significant, and no mitigation is required.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant Impact. As stated above, the area surrounding the Project is developed with agricultural and limited residential uses that provide various levels of existing nighttime lighting. Operation of the Proposed Project would introduce new sources of residential and street lighting into the Proposed Project Site. However, the proposed lighting would be similar to the type and level of existing lighting provided in the Project vicinity and be designed to direct light downward within the Proposed Project Site to minimize spillover illumination and glare consistent with the City's Development Code Section 17.300.080 – Outdoor Light and Glare (San Jacinto 2022d). In addition, the exteriors of the proposed residential structures would be constructed of low-glare materials. No

1 (Caltrans "List of eligible and officially designated State Scenic Highways (XLS), https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways, accessed February 9, 2025)

prefabricated metal buildings would be allowed, and metal would only be utilized minimally in accent features. Therefore, potential light and glare impacts would be less than significant, and no mitigation is required.

4.1.2 Mitigation Measures

No mitigation measures associated with impacts to Aesthetics apply to the Proposed Project.

4.1.3 Conclusion

There are less than significant potential impacts of the Proposed Project associated with Aesthetics, and no mitigation would be required.

4.2 Agriculture and Forestry Resources

4.2.1 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			X	
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?			X	
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?			X	

Discussion

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

Less Than Significant Impact. Based on review of the California Important Farmland Finder Map, prepared by the California Department of Conservation, Farmland Mapping and Monitoring Program (FMMP), the Proposed Project Site is located on Prime Farmland and Farmland of Statewide Importance (FMMP 2023).

As stated in the General Plan Draft EIR, although there are existing agricultural activities within the City, the San Jacinto General Plan Land Use Map does not designate lands specifically for agricultural use. Areas identified as Prime Farmland or Farmland of Statewide Importance are mostly designated for a mix of residential and non-residential development. According to the General Plan, future development consistent with the General Plan along with changes in the economy are expected to

result in the conversion of many of these Prime Farmland or Farmland of Statewide Importance areas to urban uses. Because there are no exclusive agricultural land use designations included as part of the General Plan, the General Plan identifies that future development, such as the proposed Project, could convert existing agricultural resources and Prime Farmland, Unique Farmland, and Farmland of Statewide Importance to non-agricultural uses (City, 2022). Although the Project would convert areas of Prime Farmland and Farmland of Statewide Importance to non-agricultural uses, the City General Plan anticipated future development converting these uses. Therefore, impacts related to conversion of farmland would be less than significant, and no mitigation is required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Less Than Significant Impact. As stated above, the Proposed Project Site is located on Prime Farmland and Farmland of Statewide Importance. As stated in the City of San Jacinto General Plan Draft EIR, land use designations for these parcels allow for non-agricultural uses including mixed-use and residential. Additionally, lands within the surrounding area are identified for urban development. Because there are no exclusive agricultural land use designations included as part of the General Plan, the General Plan identified that future development, such as the Proposed Project, and changes in the economy could result in conversion of preserved agricultural properties to urban uses (City, 2022). There is no Williamson Act contract for the Proposed Project Parcels, according to the Applicant's due diligence surveys and title reports performed prior to purchase. Therefore, the Proposed Project would not conflict with existing agricultural use as the City anticipated development to convert agricultural land.

The Project would request a Zoning Map Amendment (Zone Change) per the SJDC Section 17.720.020 from RR Zone (Rural Residential) to the LDR Zone (Residential – Low Density) for the Proposed Project Site. The Project would not conflict with existing zoning for agricultural use. Therefore, impacts would be less than significant, and no mitigation is required.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. As stated in the General Plan Draft EIR, there are no forest lands within the City, nor are there suitable environmental conditions for forest land to be developed. Therefore, there are no forest lands on the Proposed Project Site and implementation of the Project would not result in the loss of forest land or convert forest land to non-forest use; no mitigation is required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As stated in the General Plan Draft EIR, there are no forest lands within the City, nor are there suitable environmental conditions for forest land to be developed. Therefore, there are no forest lands on the Proposed Project Site and implementation of the Proposed Project would not result in the loss of forest land or convert forest land to non-forest use; no mitigation is required.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or the conversion of forest land to non-forest use?

Less Than Significant Impact. As discussed previously, the Proposed Project site is located on Prime Farmland and Farmland of Statewide Importance. The construction and operation of the Project would be confined to the Project footprint and would not cause offsite conversion of farmland or forest land to non-agriculture uses or non-forest uses. And while the Proposed Project Site is occupied by agricultural operations ,the Proposed Project is consistent with the City's current land use and zoning for the Project Site. Additionally, General Plan Draft EIR addressed future development, such as the Proposed Project, would result in the conversion of preserved agricultural properties to urban uses

(San Jacinto 2022c). As the General Plan anticipated such change from Farmland to non-agricultural uses, impacts would be less than significant, and no mitigation is required.

4.2.2 Mitigation Measures

No mitigation measures associated with impacts to Agriculture and Forestry Resources apply to the Proposed Project.

4.2.3 Conclusion

There are less than significant potential impacts of the Proposed Project associated with Agriculture and Forestry Services, and no mitigation would be required.

4.3 Air Quality

Information and analysis in this section is derived from the documents incorporated by reference as identified in Section 1.3 of this document and the Air Quality and Greenhouse Report prepared included as **Appendix A-1 – *Chacon Farms, Air Quality, Greenhouse Gas, and Energy Impact Study,* MD Acoustics, April 28, 2025**. A Health Risk Assessment (HRA) was prepared to assess the potential health risks associated with construction of the Project within proximity to other nearby residential uses, and is included as **Appendix A-2 – *Health Risk Assessment for the Chacon Farms Project, City of San Jacinto*, MD Acoustics, April 28, 2025**.

4.3.1 Regulatory Setting

Federal Standards

The U.S. Environmental Protection Agency (EPA) is responsible for global, international, and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Air Quality Standards, also known as federal standards. There are six common air pollutants, called criteria pollutants, which were identified from the provisions of the Clean Air Act of 1970, including ozone, nitrogen dioxide, lead, particulate matter (PM10 and PM2.5), carbon monoxide, sulfur dioxide.

The federal standards were set to protect public health, including that of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect public health.

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by the Air Resources Board (ARB), which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan incorporates individual federal attainment plans for regional air districts—air district prepares their federal attainment plan, which sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms.

Federal and state ambient air quality standards are summarized in **Table 3: *Ambient Air Quality Standards***.

Table 3: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentrations[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1-Hour	0.09 ppm	Ultraviolet Photometry	- -	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm		0.070 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM10)[8]	24-Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µ/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		- -		

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentrations[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Fine Particulate Matter (PM2.5)[8]	24-Hour	- -	- -	35 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 µg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 µg/m^3)	- -	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 µg/m^3)		9 ppm (10 µg/m^3)	- -	
	8-Hour (Lake Tahoe)	6 ppm (7 µg/m^3)		- -	- -	
Nitrogen Dioxide (NO_2)[9]	1-Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	- -	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (357 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[10]	1-Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	- -	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	- -		- -	0.5 ppm (1300 mg/m^3)	
	24-Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[10]	- -	
	Annual Arithmetic Mean	- -		0.130 ppm (for certain areas)[10]	- -	
Lead[11,12]	30 Day Average	1.5 µg/m^3	Atomic Absorption	- -		
	Calendar Qrtr	- -		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	- -		0.15 µg/m^3		
Visibility Reducing Particles[13]	8-Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24-Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride[11]	24-Hour	0.01 ppm (26 µg/m3)	Gas Chromatography			

Notes:

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.
8. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
9. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
10. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1- hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
11. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
12. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
13. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Several pollutants listed are not addressed in this analysis. Analysis of lead is not included because the Project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The Project is not expected to generate or be exposed to vinyl chloride

because proposed Project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the Project vicinity. The proposed Project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity.

South Coast Air Quality Management District

The Proposed Project Site is located within the Southern California Air Basin (SoCAB) and is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the basin. SCAQMD, in coordination with the Southern California Association of Governments, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the basin. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the federal and/or California ambient air quality standards. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

Every three (3) years the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon.

On March 23, 2017, the California Air Resources Board (CARB) approved the 2016 AQMP. The 2016 AQMP is a regional blueprint for achieving the federal air quality standards and healthful air. The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the Plan is not approved or if the National Ambient Air Quality Standards (NAAQS) are not met on time. As with every AQMP, a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures is updated with the latest data and methods. The most significant air quality challenge in the Basin is to reduce nitrogen oxide (NOx) emissions sufficiently to meet the upcoming ozone standard deadlines. The primary goal of this AQMP is to meet clean air standards and protect public health, including ensuring benefits to environmental justice and disadvantaged communities. Now that the plan has been approved by CARB, it has been forwarded to the EPA for its review. If approved by EPA, the plan becomes federally enforceable.

SCAQMD adopted the 2022 AQMP on December 2, 2022, to address the attainment of the 2015 8-hour ozone standard (70 parts per billion [ppb]) for South Coast Air Basin and Coachella Valley. To meet this standard, the AQMP determined NOx emissions must be reduced by 67 percent more than is required by adopted rules and regulations by 2037. The control strategy for the 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available zero-emission (ZE) and low NOx technologies and (2) developing new ZE and ultra-low NOx technologies for use in cases where the technology is not currently available. SCAQMD will prioritize distribution of incentive funding in environmental justice areas and seek opportunities to focus benefits on the most disadvantaged communities. Cost-effectiveness and affordability will be further considered during the rulemaking or incentive program development process.

The AQMP for the basin establishes a program of rules and regulations administered by SCAQMD to obtain attainment of the state and federal standards. Some of the rules and regulations that apply to this Project include, but are not limited to, the following:

- SCAQMD Rule 402 - prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or

safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

- SCAQMD Rule 403 - governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.
- SCAQMD Rule 1113 - governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of project must comply with Rule 1113.
- Idling Diesel Vehicle Trucks - Idling for more than 5 minutes in any one location is prohibited within California borders.
- Rule 2702 - establishes a voluntary air quality investment program from which SCAQMD can collect funds from parties that desire certified greenhouse gas (GHG) emission reductions, pool those funds, and use them to purchase or fund GHG emission reduction projects within two years, unless extended by the Governing Board.

Local Climate and Meteorology

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal areas and around the Los Angeles area is transported inland until it reaches the mountains where the combination of mountains and inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The annual average temperature varies little throughout much of the basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas where the Proposed Project Site is located. The majority of the annual rainfall in the basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thunderstorms in the coastal regions and slightly heavier showers in the eastern portion of the basin along the coastal side of the mountains. Year-to-year patterns in rainfall are unpredictable because of fluctuations in the weather.

Temperature inversions limit the vertical depth through which pollution can be mixed. Among the most common temperature inversions in the basin are radiation inversions, which form on clear winter nights when cold air off mountains sink to the valley floor while the air aloft over the valley remains warm. These inversions, in conjunction with calm winds, trap pollutants near the source. Other types of temperature inversions that affect the basin include marine, subsidence, and high-pressure inversions.

Local Air Quality

The SCAQMD is divided into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The Proposed Project Site is located in the City of San Jacinto in the Hemet/San Jacinto Valley Source Receptor Area (SRA 28). The nearest air monitoring station to the Proposed Project Site is the Banning Airport Station. The Banning Airport Station is located approximately 13 miles northeast of the Proposed Project Site, at 200 South Hathaway Street, Banning. However, this location does not provide all ambient weather data. Therefore, additional data was pulled from the SCAQMD historical data for the Hemet/San Jacinto Area for both sulfur dioxide and carbon monoxide to provide the existing levels. **Table 4: *Local Area Air Quality Levels from the Banning Monitoring Stations*** presents the monitored pollutant levels within the vicinity. However, it should be noted that due to the air monitoring station distance from the Proposed Project Site, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy, local air quality conditions at the Proposed Project Site. The monitoring data presented shows that ozone and particulate matter (PM10) are the air pollutants of primary concern in the Project area, which are detailed further in Table 4.

Table 4: Local Air Quality Levels from the Banning Monitoring Stations

Pollutant (Standard)[2]	Year		
	2020	2021	2022
Ozone:			
Maximum 1-Hour Concentration (ppm)	0.150	0.139	0.116
Days > CAAQS (0.09 ppm)	29	41	30
Maximum 8-Hour Concentration (ppm)	0.115	0.116	0.100
Days > NAAQS (0.07 ppm)	68	80	56
Days > CAAQS (0.070 ppm)	71	82	59
Carbon Monoxide:			
Maximum 1-Hour Concentration (ppm)	*	*	*
Days > NAAQS (20 ppm)	*	*	*
Maximum 8-Hour Concentration (ppm)	*	*	*
Days > NAAQS (9 ppm)	*	*	*
Nitrogen Dioxide:			
Maximum 1-Hour Concentration (ppm)	0.051	0.057	0.052
Days > NAAQS (0.25 ppm)	0	0	0
Sulfur Dioxide:			
Maximum 1-Hour Concentration (ppm)	*	*	*
Days > CAAQS (0.25 ppm)	*	*	*
Inhalable Particulates (PM10):			
Maximum 24-Hour Concentration (ug/m3)	69.3	48.6	52.4
Days > NAAQS (150 ug/m3)	0	0	0
Days > CAAQS (50 ug/m3)	1	0	0
Annual Average (ug/m3)	21.2	21.2	22.5
Annual > NAAQS (50 ug/m3)	No	No	No
Annual > CAAQS (20 ug/m3)	**Yes**	**Yes**	**Yes**
Ultra-Fine Particulates (PM2.5):			
Maximum 24-Hour Concentration (ug/m3)	46.7	40.9	37.9
Days > NAAQS (35 ug/m3)	-	-	-
Annual Average (ug/m3)	10.5	11.7	9.4
Annual > NAAQS (15 ug/m3)	No	No	No
Annual > CAAQS (12 ug/m3)	No	No	No

Pollutant (Standard)[2]	Year		
	2020	2021	2022

1. Source: obtained from https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year and/or https://www.arb.ca.gov/adam/topfour/topfour1.php
2 CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million
3 No data available.

Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or 'form' of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM2.5 standard is met if the three-year average of the annual average PM2.5 concentration is less than or equal to the standard. **Table 5: *South Coast Air Basin Attainment Status***, lists the attainment status for the criteria pollutants in the basin.

Table 5: South Coast Air Basin Attainment Status

Pollutant	Averaging Time	National Standards[1]	Attainment Date[2]	California Standards[3]
1979 1-Hour Ozone[4]	1-Hour (0.12 ppm)	Nonattainment (Extreme)	11/15/2010 (Not attained[4])	Extreme Nonattainment
1997 8-Hour Ozone[5]	8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024	Nonattainment
2008 8-Hour Ozone	8-Hour (0.075 ppm)	Nonattainment (Extreme)	12/31/2032	
2015 8-Hour Ozone	8-Hour (0.070 ppm)	Designations Pending	~2037	
CO	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (Attained)	Maintenance
NO_2 [6]	1-Hour (100 ppb) Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (Attained)	Attainment
SO_2[7]	1-Hour (75 ppb)	Designations Pending	Pending	Attainment
	24-Hour (0.14 ppm) Annual (0.03 ppm)	Unclassifiable/ Attainment	3/19/1979 (Attained)	
PM10	24-Hour (150 µg/m^3)	Nonattainment (Serious)[8]	12/31/2006 (Redesignation request submitted)[8]	Nonattainment
PM2.5	24-Hour (35 µg/m^3)	Nonattainment	12/31/2006 (Redesignation request submitted)[8]	Unclassified
Lead	3-Months Rolling (0.15 µg/m^3)	Nonattainment (Partial)[9]	12/31/2015	Nonattainment (Partial)[9]

Notes:

Pollutant	Averaging Time	National Standards[1]	Attainment Date[2]	California Standards[3]

1 Obtained from Draft 2012 AQMP, SCAQMD, 2012. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassified/Attainment or Unclassifiable.

2 A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration.

3 Obtained from http://www.arb.ca.gov/desig/adm/adm.htm.

4 1-hour O3 standard (0.13 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard based on 2008-2010 data has some continuing obligations under the former standard.

5 1997 8-hour O3 standard (0.08 ppm) was reduced (0.075 ppm), effective May 27, 2008; the 1997 O3 standard and most related implementation rules remain in place until the 1997 standard is revoked by U.S. EPA.

6 New NO2 1-hour standard, effective August 2, 2010; attainment designations June, 2013; annual NO2 standard retained.

7 The 1971 annual and 24-hour SO2 standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO2 1-hour standard. Area designations expected in 2012, with SSAB designated Unclassifiable/Attainment.

8 Annual PM10 standard was revoked, effective December 18, 2006; redesignation request to Attainment of the 24-hour PM10 standard is pending with U.S. EPA

9 Partial Nonattainment designation - Los Angeles County portion of Basin only.

Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution than others due to their exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, a sensitive receptor for air quality would be a location where a sensitive individual could remain for 24 hours or longer, such as residencies, hospitals, and schools (etc.). The closest existing sensitive receptors (to the site area) for purposes of air quality are existing single-family residences located approximately 100 feet to the north.

Significance Criteria

Appendix G of the CEQA Guidelines states that the significance criteria established by the applicable air quality management district may be relied upon to make significance determinations. The SCAQMD has established significance thresholds to assess the regional and localized impacts of Project-related air pollutant emissions, as shown below.

Regional Thresholds for Construction Emissions

The following CEQA significance thresholds for construction emissions are established for the Basin by the SCAQMD:

- 75 pounds per day (lbs/day) of VOC
- 100 lbs/day of NOx
- 550 lbs/day of CO
- 150 lbs/day of PM10
- 55 lbs/day of PM2.5
- 150 lbs/day of SO_2

Local Microscale Concentration Standards

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the Project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of

one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 parts per million (ppm) or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm

Localized Significance Thresholds

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the Project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the Project-related air emissions in the Project vicinity. The SCAQMD has also provided Final Localized Significant Threshold Methodology (LST Methodology), June 2003, which details the methodology to analyze local air emission impacts. The LST Methodology found that the primary emissions of concern are NO_2, CO, PM10, and PM2.5.

The emission thresholds were calculated based on the Hemet/San Jacinto Valley Source Receptor Area and a disturbance of 4 acres per day at a distance of 25 meters (82 feet), for construction and 5 acres a day for screening of localized operational emissions

4.3.2 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact. The SCAQMD CEQA Handbook states that "new or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not

required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The current regional plan applicable to the Project is the SCAQMD's 2022 AQMP, discussed in further detail above.

The SCAQMD CEQA Handbook identifies two key indicators of consistency:

1. Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

2. Whether the project will exceed the assumptions in the AQMP in 2016 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated below.

Criterion 1 - Increase in the Frequency or Severity of Violations – Based on the air quality modeling analysis discussed further below and in **Appendix A-1**, short-term construction impacts would not result in significant impacts based on the SCAQMD regional and local thresholds of significance. Additionally, as discussed further below and in **Appendix A-1**, long-term operations impacts would not result in significant impacts based on the SCAQMD regional thresholds of significance. Therefore, the Proposed Project is not projected to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

Criterion 2 - Exceed Assumptions in the AQMP – Consistency with the AQMP assumptions is determined by performing an analysis of the proposed Project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed Project are based on the same forecasts as the AQMP. The 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), prepared by SCAG and adopted on April 4, 2024, includes chapters on: the challenges in a changing region, creating a plan for our future, and the road to greater mobility and sustainable growth. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For the Proposed Project, the City of San Jacinto Land Use Plans define the assumptions that are represented in the AQMP.

The City of San Jacinto General Plan identifies the land use designation of the site as Very Low Density Residential. The Proposed Project is a residential development. The Proposed Project includes the application for a General Plan Amendment to revise the land use designation from VLDR (Very Low Density Residential) to LDR (Low Density Residential) and a Zoning Map Amendment (Zone Change) from the RR Zone (Rural Residential) to the LDR Zone (Residential – Low Density). Therefore, as the Proposed Project seeks to maintain the residential land uses, instead of changing them to commercial or industrial, the Proposed Project would not result in an inconsistency with the land use designation in the City's General Plan and is not anticipated to exceed the AQMP assumptions for the Proposed Project Site. As such, the Project is found to be consistent with the AQMP for the second criterion.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. A project may have a significant impact where project-related emissions would exceed federal, State, or regional standards or thresholds, or where project-related emissions would substantially contribute to an existing or projected air quality violation. The SCAQMD has

developed construction and operations thresholds, as described above, to determine whether projects would potentially result in contributing toward a violation of ambient air quality standards.

Construction Emissions – Regional

Typical emission rates from construction activities were obtained from the California Emissions Estimator Model (CalEEMod) Version 2022.1.1.22 CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2017 (EMission Factor) computer program to calculate the emission rates specific for the southwestern portion of Riverside County for construction-related employee vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy truck operations. EMFAC2017 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Using CalEEMod, the peak daily air pollutant emissions were calculated and presented below. These emissions represent the highest level of emissions for each of the construction phases in terms of air pollutant emissions.

Table 6: Regional Significance – Construction Emissions (pounds/day) identified the emissions for proposed Project (**Appendix A-1**). In addition, SCAQMD Rule 402 and 403 were incorporated into the model, and are not considered mitigation measures as the Project is, by default, required to incorporate these rules during construction

Table 6: Regional Significance – Construction Emissions (pounds/day)

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Demolition						
On-Site[2]	2.40	22.20	19.90	0.03	1.52	0.93
Off-Site[3]	0.08	0.91	1.36	0.01	0.41	0.12
Total	2.48	23.11	21.26	0.04	1.93	1.05
Site Preparation						
On-Site[2]	3.31	31.60	30.20	0.05	9.04	5.20
Off-Site[3]	0.07	0.08	1.02	0.00	0.23	0.05
Total	3.38	31.68	31.22	0.05	9.27	5.25
Grading						
On-Site[2]	3.20	29.70	28.30	0.06	4.87	2.57
Off-Site[3]	0.41	23.10	6.63	0.13	6.25	1.90
Total	3.61	52.80	34.93	0.19	11.12	4.47
Building Construction						
On-Site[2]	1.13	10.40	13.00	0.02	0.43	0.40
Off-Site[3]	0.71	2.31	12.08	0.01	2.37	0.59
Total	1.84	12.71	25.08	0.03	2.80	0.99
Paving						
On-Site[2]	0.74	6.94	9.95	0.01	0.30	0.27
Off-Site[3]	0.07	0.54	1.15	0.00	0.34	0.09
Total	0.81	7.48	11.10	0.01	0.64	0.36
Architectural Coating						
On-Site[2]	56.91	1.13	0.00	0.00	0.02	0.02
Off-Site[3]	0.11	0.12	1.51	0.00	0.39	0.09
Total	57.02	1.25	1.51	0.00	0.41	0.11
Total of overlapping phases[4]	59.67	21.44	37.69	0.04	3.85	1.46
SCAQMD Thresholds	75	100	550	150	150	55

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Exceeds Thresholds	No	No	No	No	No	No

Notes:
1 Source: CalEEMod Version 2022.1.1.22
2 On-site emissions from equipment operated on-site that is not operated on public roads.
3 Off-site emissions from equipment operated on public roads.
4 Construction, architectural coatings and paving phases may overlap.

As shown in Table 6, the construction emissions for the Proposed Project would not exceed the SCAQMD's daily emission thresholds at the regional level, and therefore would be considered less than significant.

Construction Emissions – Localized Significance Thresholds

In addition to the mass daily emissions thresholds established by the SCAQMD, short-term local impacts to nearby sensitive receptors from on-site emissions of NO2, CO, PM10, and PM2.5 are examined based on SCAQMD LST methodology.

The SCAQMD has published a "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds." CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the localized significance threshold lookup tables, the CEQA document should contain in its project design features or its mitigation measures the following parameters:

1. The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
2. The maximum number of acres disturbed on the peak day.
3. Any emission control devices added onto off-road equipment.
4. Specific dust suppression techniques used on the day of construction activity with maximum emissions.

The construction equipment showing the equipment associated with the maximum area of disturbance was assumed to be 4 acres per day for the previously proposed project (**Table 7: Construction Equipment Assumptions**), and no changes in equipment are anticipated for the currently proposed Project.

Table 7: Construction Equipment Assumptions

Activity	Equipment	Number	Acres/8 hr-day	Total Acres
Site Preparation	Rubber Tired Dozers	3	0.5	1.5
	Tractors/Loaders/Backhoes	4	0.5	2.0
Total Per Phase				3.5
Grading	Graders	1	0.5	0.5
	Rubber Tired Dozers	1	0.5	0.5
	Scrapers	2	1.0	2.0
	Tractors/Loaders/Backhoes	2	0.5	1.0
Total Per Phase				4.0

Notes: Source: MD Acoustics 2024.

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significance Threshold Look-up Tables and the methodology described in the Localized Significance Threshold Methodology, prepared by SCAQMD, revised July 2008. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM10, and PM2.5 from the Proposed Project could result in a significant impact to the local air quality. The emission thresholds were based on the Hemet/San Jacinto Valley source receptor area and a disturbance of 4 acres per day at a distance of 25 meters (82 feet). The closest receptors are located 30 meters to the north of the site. The 4-acre threshold is interpolated from the 2- and 5-acre thresholds.

As shown in **Table 8: Localized Significance – Construction**, none of the analyzed criteria pollutants for the Proposed Project would exceed the local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact would occur from construction of the Proposed Project. No mitigation is required.

Table 8: Localized Significance – Construction

Phase	On-Site Pollutant Emissions (pounds/day)[1]			
	NOx	**CO**	**PM10**	**PM2.5**
Demolition	22.20	19.90	1.52	0.93
Site Preparation	31.60	30.20	9.04	5.20
Grading	29.70	28.30	4.87	2.57
Building Construction	10.40	13.00	0.43	0.40
Paving	6.94	9.95	0.30	0.27
Architectural Coating	1.13	0.00	0.02	0.02
Total of overlapping phases	18.47	22.95	0.75	0.69
SCAQMD Threshold for 25 meters (82 feet) or less[2]	325.3	1,676.7	11.0	6.7
Exceeds Threshold?	No	No	No	No

Notes:

1 Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for 4 acres in Hemet/San Jacinto Valley Source Receptor Area (SRA 28). Project will disturb a maximum of 4.0 acres per day (see Table 7).

2 The nearest sensitive receptor is located 30 meters north; therefore, the 25-meter threshold has been used.

Long-Term Operational Emissions

Operational or long-term emissions occur would over the life of the Project. Mobile, area, and energy sources generate operational emissions. Area source emissions arise from consumer product usage, heaters that consume natural gas, gasoline-powered landscape equipment, and architectural coatings (painting). Mobile source emissions from motor vehicles are the largest single long-term source of air pollutants from the operation of the Project. The operational emissions were estimated using the latest version of CalEEMod, as shown in **Appendix A-1**.

Mobile Sources: Mobile sources include emissions from the additional vehicle miles generated from the proposed Project. The vehicle trips associated with the proposed Project are based upon the trip generation rates given in the ITE trip generation manual. The traffic analysis shows a trip generation rate of approximately 3,952 trips per day (**Appendix H**).

The program then applies the emission factors for each trip which is provided by the EMFAC2017 model to determine the vehicular traffic pollutant emissions. The CalEEMod default trip lengths were used in this analysis, as shown in **Appendix A-1**.

Area Sources: Area sources include emissions from consumer products, landscape equipment and architectural coatings. Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers, as well as air compressors, generators, and pumps. As specifics were not known about the landscaping equipment fleet, CalEEMod defaults were used to estimate emissions from landscaping equipment, as shown in **Appendix A-1**.

Per SCAQMD Rule 1113 as amended on June 3, 2011, the architectural coatings that would be applied after January 1, 2014 will be limited to an average of 50 grams per liter or less and the CalEEMod model default was utilized as the new model takes this rule into account.

Energy Usage: CalEEMod defaults were utilized to determine the approximate energy usage, as shown in **Appendix A-1**. The Project will be 100 percent electric. Solar photovoltaic panels have been included in the analysis per Title 24 requirements (Part 6 – Section 110.10).

The potential air quality impacts of created by the Proposed Project's long-term operations were calculated, and the highest emissions from either summer or winter are summarized in **Table 9: Regional Significance – Unmitigated Operational Emissions**.

Table 9: Regional Significance – Unmitigated Operational Emissions

Activity	Pollutant Emissions (pounds/day)[1]					
	VOC	NOx	CO	SO2	PM10	PM2.5
Area Sources[2]	21.00	0.23	23.80	0.00	0.01	0.01
Energy Usage[3]	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources[4]	14.40	13.10	116.00	0.30	27.60	7.17
Total Emissions	35.40	13.33	139.80	0.30	27.61	7.18
SCAQMD Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Notes:
1 Source: CalEEMod Version 2022.1.1.22
2 Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
3 Energy usage consists of emissions from on-site natural gas usage.
4 Mobile sources consist of emissions from vehicles and road dust.

As shown on Table 9, the Proposed Project does not exceed the SCAQMD daily emission threshold. Therefore, regional operational emissions would be less than significant. No mitigation is required.

Operational Localized Significance Thresholds

Table 10: Localized Significance – Unmitigated Operational Emissions, shows the calculated emissions for the proposed operational activities compared with appropriate LSTs. The LST analysis only includes on-site sources; however, the CalEEMod software outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table 10 include all on-site Project-related stationary sources and 10 percent of the Project-related new mobile sources. This percentage is an estimate of the amount of Project- related new vehicle traffic that will occur on-site.

Table 10: Localized Significance – Unmitigated Operational Emissions

On-Site Emission Source	On-Site Pollutant Emissions (pounds/day)[1]			
	NOx	CO	PM10	PM2.5
Area Sources[2]	0.23	23.80	0.01	0.01
Energy Usage[3]	0.00	0.00	0.00	0.00
On-Site Vehicle Emissions[4]	0.44	3.87	0.92	0.24
Total Emissions	0.67	27.67	0.93	0.25
SCAQMD Threshold for 25 meters (82 feet) or less[2]	371	1,965	4	2
Exceeds Threshold?	No	No	No	No

Notes:
1 Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for 5 acres in Hemet/San Jacinto Valley Source Receptor Area (SRA 28). Project will be approximately 76.3 acres.
2 Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
3 Energy usage consists of emissions from generation of electricity and on-site natural gas usage.
4 On-site vehicular emissions based on 1/10 of the gross vehicular emissions and road dust.
5 The nearest sensitive receptor is located 30 meters north; therefore, the 25-meter threshold has been used.

Table 10 indicates that the local operational emissions would not exceed the LST thresholds at the nearest sensitive receptors, located adjacent to the Project, the currently Proposed Project would not result in significant Localized Operational emissions. No mitigation is required.

Cumulative Regional Air Quality Impacts

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the Project's air quality must be generic by nature.

The Project area is out of attainment for both ozone and PM10 particulate matter. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the South Coast Air Basin. The greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. The Project would not exceed any of the thresholds of significance and therefore is considered less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. A significant impact may occur when a project would generate pollutant concentrations to a degree that would significantly affect sensitive receptors, which include populations that are more susceptible to the effects of air pollution than the population at large. Exposure of sensitive receptors is addressed for the following situations: CO hotspots; criteria pollutants and toxic air contaminants (TACs, specifically diesel particulate matter [DPM]) from on-site construction; exposure to off-site TAC emissions; and asbestos and lead-based paint during demolition. Operational, long-term TACs may be generated by some industrial land uses; commercial land uses

(e.g., gas stations and dry cleaners); and diesel trucks on freeways. Residential land uses do not generate substantial quantities of TACs and are therefore not addressed in this section of this document.

Carbon Monoxide Hotspot Emissions

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards which were presented above.

To determine if the proposed Project could cause emission levels in excess of the CO standards discussed above, a sensitivity analysis is typically conducted to determine the potential for CO "hot spots" at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, "hot spots" potentially can occur at high traffic volume intersections with a Level of Service E or worse.

Micro-scale air quality emissions have traditionally been analyzed in environmental documents where the air basin was a non-attainment area for CO. However, the SCAQMD has demonstrated in the CO attainment redesignation request to EPA that there are no "hot spots" anywhere in the air basin, even at intersections with much higher volumes, much worse congestion, and much higher background CO levels than anywhere in Riverside County. If the worst-case intersections in the air basin have no "hot spot" potential, any local impacts will be below thresholds.

The traffic analysis (**Appendix H**) showed that the Project would generate 3,952 trips per day. The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection which has a daily traffic volume of approximately 100,000 vehicles per day would not violate the CO standard. The volume of traffic at Project buildout would be well below 100,000 vehicles and below the necessary volume to even get close to causing a violation of the CO standard. Therefore, no CO "hot spot" modeling was performed, and no significant long-term air quality impact is anticipated to local air quality with the on-going use of the Proposed Project.

Exposure to On-Site Construction Toxic Air Contaminant Emissions

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the Proposed Project. The Office of Environmental Health Hazard Assessment (OEHHA) has issued the Air Toxic Hot Spots Program Risk Assessment Guidelines and Guidance Manual for the Preparation of Health Risk Assessments, February 2015 to provide a description of the algorithms, recommended exposure variates, cancer and noncancer health values, and the air modeling protocols needed to perform a HRA under the Air Toxics Hot Spots Information and Assessment Act of 1987. Hazard identification includes identifying all substances that are evaluated for cancer risk and/or non-cancer acute, 8-hour, and chronic health impacts. In addition, identifying any multi-pathway substances that present a cancer risk or chronic non- cancer hazard via non-inhalation routes of exposure.

An HRA was prepared for the Proposed Project (**Appendix A-2**). According to the HRA, construction activities would result in short-term Project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment used for site preparation (e.g., demolition, excavation, and grading); paving; building construction; and other miscellaneous activities. CARB identified DPM as a TAC in 1998. The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of

exposure to the substance. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer time period. According to the OEHHA, HRAs—which determine the exposure of sensitive receptors to TAC emissions—should be based on a 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the Project (**Appendix A-2**).

The Project would result in the development of residential uses which do not involve substantial levels of TACs due to the nature of the development. However, construction activities will result in emissions of DPM which is carcinogenic. The HRA report in **Appendix A-2** estimated the cancer risk to construction for 10 receptor locations near the Project Site (Table 3, **Appendix A-2**). The report identifies that the cancer risks from construction activities are estimated to range from a low of 0.21 per million at West Esplanade Ave to a high of 0.86 per million along West Seventh Street. All estimates are below the SCAQMD's significance threshold of 10 in a million. As such, Project-related construction emissions of TACs would not expose sensitive receptors to substantial emissions of TACs (**Appendix A-2**). The impact would be less than significant, and no mitigation is required.

Exposure to Off-Site Construction Toxic Air Contaminant Emissions

As stated in the HRA, the CARB Air Quality and Land Use Handbook: A Community Health Perspective provides guidance concerning land use compatibility with TAC sources (CARB 2005). While not a law or adopted policy, the handbook offers advisory recommendations for siting sensitive receptors near uses associated with TACs (such as freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, and industrial facilities) to help keep children and other sensitive populations out of harm's way. (**Appendix A-2**).

Projects of concern for mobile sources of TACs are typically those located within 500 feet of the following types of facilities that emit significant quantities of DPM: urban roads with more than 100,000 vehicles per day; freeways or roads with a high heavy truck concentration; and/or near rail yards, ports, and/or distribution centers. The Proposed Project Site is more than 500 feet from any freeway or major urban road. With respect to proximity to emissions from railroad sources, CARB recommends avoiding siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard (CARB 2005); the Proposed Project Site is not located within 1,000 feet of this type of facility. CARB recommends not placing sensitive receptors within the same building as a dry cleaner and avoiding siting residences within 300 feet of a large gas station or within 500 feet of dry-cleaning operations with 2 machines using perchloroethylene. There are no gas stations within 300 feet or dry cleaners within 500 feet of the Proposed Project Site. As such, the health risks associated with locating sensitive receptors proximate to a dry cleaner would be less than significant since there are no dry cleaners located within 500 feet of the site. It is important to note the CARB recommendation was published in 2005; however, subsequent to CARB's recommendation in 2007, the CARB established a phase-out of perchloroethylene usage at dry cleaners by 2023.

The HRA for the Project has also provided the relative health risk of the Project area as well as other locations in the general area and the air basin. The overall cancer risk at the Proposed Project Site of 254 per million health risk is generally lower than other areas identified within the HRA and substantially less than the basin-wide average of 455 in a million health risk. As such, no off-site sensitive uses would be exposed to significant levels TACs. Impacts would be less than significant, and no mitigation is required (**Appendix A-2**).

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. The SCAQMD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine whether the Project would result in excessive nuisance odors, as defined under the California Code of Regulations and Section 41700 of the California Health and Safety Code, and thus would constitute a public nuisance related to air quality.

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement. The objectionable odors that may be produced during the construction process are short-term in nature and the odor emissions are expected to cease upon the drying or hardening of the odor producing materials. Diesel exhaust and VOCs would be emitted during construction of the Project, which are objectionable to some; however, emissions would disperse rapidly from the Proposed Project Site and therefore should not reach an objectionable level at the nearest sensitive receptors. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the Proposed Project.

Potential sources that may emit odors during the on-going operations of the proposed Project would include odor emissions from trash storage areas and vehicle emissions. Due to the distance of the nearest receptors from the Proposed Project Site and through compliance with SCAQMD's Rule 402, no significant impact related to odors would occur during the on-going operations of the proposed Project and no mitigation is required.

4.3.3 Mitigation Measures

No mitigation measures associated with impacts to Air Quality apply to the Proposed Project.

4.3.4 Conclusion

There are less than significant potential impacts of the Proposed Project associated with Air Quality, and no mitigation would be required.

4.4 Biological Resources

Information and analysis in this section is derived from the documents incorporated by reference as identified in Section 1.3 of this document and biological surveys completed to determine potential impacts to biological services associated with the development of the Proposed Project, included as **Appendix B-1** – ***Habitat Assessment for Chacon Farms Property,* Psomas, March 5, 2024***,* and **Appendix B-2 –** ***Tree Inventory Report for the Chacon Farms Property, City of San Jacinto, California,* Psomas, April 28, 2023.**

4.4.1 Regulatory Setting

Given the local environment, regulations governing biological resources for this Project include the following:

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711) provides protection for nesting birds that are both residents and migrants whether they are considered sensitive by resource agencies. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered a take under federal law. The USFWS, in coordination with the California Department of Fish and Wildlife (CDFW) administers the MBTA. CDFW's authoritative nexus to MBTA is provided in California Fish and Game Code (FGC) Sections 3503.5 which protects all birds of prey and their nests and FGC Section 3800 which protects all non-game birds that occur naturally in the State.

Endangered Species Act - Federal

The purpose of the United States Endangered Species Act that was established in 1973 provides protections for fish, wildlife, and plants that are listed as threatened or endangered; provides for adding species to and removing them from the list of threatened and endangered species, and for preparing and implementing plans for their recovery; provides for interagency cooperation to avoid take of listed species and for issuing permits for otherwise prohibited activities; provides for cooperation with States, including authorization of financial assistance; and implements the provisions of the Convention on International Trade in Endangered Species of Wild Flora and Fauna. The US Fish and Wildlife administers the federal Endangered Species Act.

California Endangered Species Act

The California Endangered Species Act (CESA) is a California environmental law that conserves and protects plant and animal species at risk of extinction. Originally enacted in 1970, CESA was repealed and replaced by an updated version in 1984 and amended in 1997. Plant and animal species may be designated threatened or endangered under CESA after a formal listing process by the California Fish and Game Commission. Approximately 250 species are currently listed under CESA. A CESA-listed species, or any part or product of the plant or animal, may not be imported into the state, exported out of the state, "taken" (i.e., killed), possessed, purchased, or sold without proper authorization. Implementation of CESA has reduced and avoided impacts to California's most imperiled plants and animals, has protected hundreds of thousands of acres of vital habitat, and has led to a greater scientific understanding of California's incredible biodiversity.

The California Department of Fish and Wildlife (CDFW) works with agencies, organizations, and other interested persons to study, protect, and preserve CESA-listed species and their habitats. CDFW also conducts scientific reviews of species petitioned for listing under CESA, administers regulatory permitting programs to authorize take of listed species, maintains an extensive database of listed species occurrences, and conducts periodic reviews of listed species to determine if the conditions that led to original listing are still present.

4.4.2 Environmental Setting

The Proposed Project Site consists of agricultural areas with developed and disturbed areas around the edges. Existing vegetation observed on the Proposed Project Site include field croplands and valley and foothill grassland; disturbed and developed landcovers are also present, as shown in **Appendix B-1** (refer to *Exhibit 4, Vegetation Types and Other Areas*).

Additionally, there is a detention basin located in the northwest corner of the Proposed Project Site. The detention basin undergoes routine maintenance and appears to have been plowed multiple times in the past based on historical aerials. The main source of water for this basin is irrigation from the adjacent agricultural fields; no natural inlet or outlet was observed in the field. It does not connect to a natural drainage, and no riparian vegetation is present.

4.4.3 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?		X		

Discussion

a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact With Mitigation Incorporated.

No candidate, sensitive, or special status species are expected to occur on the Proposed Project Site due to lack of suitable habitat and/or because they were absent during focused surveys. The Proposed Project Site is not located within any designated critical habitat for federally or State-listed Threatened or Endangered species.

According to the Western Riverside County Regional Conservation Authority Multiple Species Habitat Conservation Plan (MSHCP) Information Mapping Application (2023), the Proposed Project Site was required to be assessed for Narrow Endemic plant species, burrowing owl (*Athene cunicularia*), Riparian/Riverine habitat (i.e., riparian bird species), and vernal pool branchiopods (i.e., fairy shrimp).

Narrow Endemic Plants

Per Section 6.1.3 of the MSHCP, habitat was assessed for the following Narrow Endemic plant species: Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), many-stemmed dudleya (*Dudleya multicaulis*), spreading navarretia (*Navarretia fossalis*), Californica Orcutt grass (*Orcuttia californica*), and Wright's trichocoronis (*Trichocoronis wrightii*). Of these Narrow Endemic plant species, San Diego ambrosia, spreading navarretia, California Orcutt grass, and Wright's trichocoronis had limited potential to occur based on the presence of marginally suitable habitat (i.e., the on-site basin and/or margins of the agricultural field). Munz's onion and many- stemmed dudleya would not be expected to occur based on lack of suitable habitat. Additionally, the Proposed Project Site was determined to have potential for Salt Spring checkerbloom (*Sidalcea neomexicana*), which is a California Rare Plant Rank [CRPR] 2B.2[2] species and is not covered by the MSHCP. Focused surveys were conducted for Narrow Endemic and other special status plant species; no Narrow Endemic or special status plant species were observed. Therefore, there would be no impact on these species, and no mitigation would be required.

Burrowing Owl

On October 10, 2024, the California Fish and Game Commission (CFGC) accepted the petition to designate the western burrowing owl as a candidate species for protection under the California Endangered Species Act (CESA). The species will have full CESA protections until the California Department of Fish and Wildlife (CDFW) decides whether listing is warranted, which will likely occur in late 2025 or early 2026. The MSHCP identifies the burrowing owl as a covered species and requires surveys to determine habitat and presence prior to approving projects. The City of San Jacinto is signatory to the MSHCP.

Per Section 6.3.2 of the MSHCP, the Proposed Project Site was assessed for the presence of burrowing owl habitat. The habitat assessment determined that suitable habitat for the burrowing owl was present on the Proposed Project Site and adjacent areas (e.g., field croplands and disturbed areas); therefore, focused surveys were required. Potentially suitable burrows were observed; however, no burrowing owls, or other evidence of owl presence (e.g., cast pellets, white-wash, feathers, or prey

2 CRPR 2B.2: Plants rare, threatened, or endangered in California but common elsewhere; 20–80 percent of occurrences threatened.

remains) were observed during the focused surveys. Therefore, there would be no impact on this species, and no compensatory mitigation would be required.

Because site conditions change over time and burrowing owls move seasonally, a burrowing owl could be on the Proposed Project Site in the future. All projects located within the Additional Survey Area for burrowing owl are required to conduct a pre-construction survey for burrowing owl within 30 days prior to construction to ensure the Project would not impact any active burrows. Therefore, the Project would implement **Mitigation Measure BIO-1**, which would require a pre-construction survey for burrowing owls.

Riparian Bird Species

Per Section 6.1.2 of the MSHCP, the Proposed Project Site must be assessed for the presence of Riparian/Riverine habitat; no Riparian/Riverine habitat was present on the Proposed Project Site. Therefore, there would be no impact on riparian bird species covered by this section of the MSHCP, and no mitigation would be required.

Vernal Pool Branchiopods (Fairy Shrimp)

Per Section 6.1.2 of the MSHCP, the Proposed Project Site must be assessed for the presence of vernal pools and associated vernal pool branchiopods. The detention basin at the northwest corner of the Proposed Project Site was observed to support ponding; the source of the water appears to be irrigation from the adjacent agricultural fields. Historic aerials were examined on Google Earth between 1996 to 2021 to examine the extent of ponding over time. The artificial basin appears to have been intermittently ponded beginning in 2009. During dry periods, the area appears to have been plowed and blends in with the surrounding agricultural field. As stated in the MSHCP, stock ponds, ephemeral pools, and other features that are artificially created are not considered vernal pools meeting the requirements of Section 6.1.2 (refer to Fair Shrimp Report in **Appendix B-1**). However, they may still provide habitat for vernal pool invertebrate species that are protected by the MSHCP.

One wet season focused survey and one dry season focused survey were conducted for Riverside fairy shrimp (*Streptocephalus woottoni*) and vernal pool fairy shrimp (*Branchinecta lynchi*) in 2022–2023; neither of these species was observed during the wet season fairy shrimp surveys. Dry season sampling was conducted in August 2023; *Branchinecta* cysts were observed but the lab results were inconclusive. Of the cysts observed, only one cyst hatched; it was identified as versatile fairy shrimp (*Branchinecta lindali*), a common species of fairy shrimp. The *Brancinecta* cysts collected during dry season sampling were then sent to Washington State University for a genetic analysis; results of the genetic analysis confirmed the genetic material was from versatile fairy shrimp (i.e., the common species). No Riverside fairy shrimp or vernal pool fairy shrimp were observed during focused surveys; therefore, there would be no impact on these species.

Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) was proposed as a Candidate to be State listed as Endangered in 2019; this species is not a Covered Species in the MSHCP. Crotch bumble bee is a ground nester and often makes its nest in abandoned mammal burrows; it can be found in most native habitat types, although it prefers grassland and scrub habitats. The Proposed Project Site has been utilized as an agricultural area that lacks vegetation, and the Proposed Project Site has been regularly tilled (detrimental to ground-nesting bees) and may have been exposed to pesticides. While the edges of the agricultural fields may be considered marginally suitable, this species is not expected to occur because the surrounding land uses are agricultural or residential; there are no adjacent areas of grassland or scrub habitats.

Mountain Lion

The mountain lion (*Puma concolor*) is currently a Candidate to be State listed as Threatened as an Evolutionary Significant Unit (ESU). Regardless of the outcome of the proposed listing, this species is already a MSHCP Covered Species. The mountain lion occurs throughout most of California except for the Mojave and Colorado Deserts and the croplands of the Central Valley. Mountain lions occur in a variety of habitats, especially brushy habitats and riparian areas with interspersed irregular terrain, rocky outcrops, and tree/brush edges. Mountain lions use caves, natural cavities, and thickets for cover. A major threat to this species is fragmentation of habitat by spread of human developments and associated roads. Mountain lion is not expected to occur on the Proposed Project Site due to lack of suitable habitat. Additionally, the Proposed Project Site is also not within an area designated as a MSHCP linkage for wildlife movement.

Stephens' Kangaroo Rat

In response to the listing of Stephens' kangaroo rat (*Dipodomys stephensi*), the Riverside County Habitat Conservation Agency developed a Stephens' Kangaroo Rat Habitat Conservation Plan (SKR HCP). The City of San Jacinto is not a participant in the SKR HCP; however, the MSHCP provides take authorization for projects outside the SKR HCP but within the MSHCP boundaries. Stephens' kangaroo rat is not expected to occur on the Proposed Project Site due to lack of suitable habitat.

b) Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. There is no riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service present on the Project Site (**Appendix B-1**). There would be no impact, and no mitigation is required.

c) Have a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. There are no jurisdictional features on the Proposed Project Site. The detention basin present in the northwest corner of the Proposed Project Site was artificially created in uplands that were previously used for croplands. This area is irrigated, as evidenced by rills in the banks adjacent to the active agricultural field. This type of waterbody is excluded from being classified as a Waters of the U.S. under the jurisdiction of U.S. Army Corps of Engineers (USACE) because it is isolated. Artificial wetlands less than one acre in size are not considered Waters of the State under the authority of the Regional Water Quality Control Board (RWQCB). Based on historic aerial imagery and topographic maps, this area does not appear to have been part of a historic drainage; therefore, it would not be under the regulatory authority of the CDFW. As such, no drainages or other waters that would be under the jurisdiction of the USACE, RWQCB, or CDFW occur on the Proposed Project Site.

As mentioned above, the detention basin at the northwest corner of the Proposed Project Site was observed to support ponding; the source of the water appears to be irrigation from the adjacent agricultural fields. Historic aerials were examined on Google Earth between 1996 to 2021 to examine the extent of ponding over time. The detention basin appears to have been intermittently ponded beginning in 2009. During dry periods, the area appears to have been plowed and blends in with the surrounding agricultural field. As stated in the MSHCP, stock ponds, ephemeral pools, and other features that are artificially created are not considered vernal pools meeting the requirements of

Section 6.1.2 (**Appendix B-1**). Therefore, no impact would occur related to wetlands, and no mitigation would be required.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact With Mitigation Incorporated. The Proposed Project Site is surrounded by existing development, with suburban development to the north and east, a dairy farm to the south, and construction an additional residential development to the west. Additionally, the Proposed Project Site is not located within a "Core" or "Linkage" area designated by the MSHCP. Wildlife could move locally through the Proposed Project Site and adjacent residential, agricultural, and dairy land. The Proposed Project Site is expected to be used for local movement by urban-tolerant species such as coyote (*Canis latrans*), which could also use the Proposed Project Site after Project implementation. Therefore, there would be no impact on wildlife movement.

Birds have potential to nest throughout the Proposed Project Site in vegetation, on bare ground, and on structures. The MBTA protects the taking of migratory birds and their nests and eggs. Bird species protected under the provisions of the MBTA are identified by the List of Migratory Birds (Code of Federal Regulations, Title 50, Section 10.13). Section 3503 of the California Fish and Game Code makes it unlawful to take, possess, or destroy any bird's nest or any bird's eggs. Section 3513 of the California Fish and Game Code prohibits the take and possession of any migratory nongame bird, as designated in the MBTA. Any impact on an active bird nest would be considered a violation of the MBTA. Section 7.5.3 of the MSHCP requires implementation of Construction Minimization Measures, which include conducting vegetation clearing outside the peak nesting season (i.e., March 1 to June 30) to the extent practicable in order to avoid impacts on nesting birds. Implementation of **Mitigation Measure BIO-2** would require a pre-construction nesting bird/raptor survey and protection for any nests observed.

Existing trees located in the northeastern corner of the Proposed Project Site and adjacent to the Proposed Project Site also have potential to be used for nesting by raptors. Trees within the Proposed Project Site include Peruvian pepper tree (*Schinus mole*), Mexican fan palm (*Washingtonia robusta*), and California fan palm (*Washingtonia filifera*) (refer to **Appendix B-2**). If construction occurs during the raptor nesting season (i.e., February 1 to June 30), the loss of an active nest of any raptor species, including common raptor species, would be considered a violation of Sections 3503, 3503.5, and 3513 of the California Fish and Game Code. As discussed above, Section 7.5.3 of the MSHCP requires implementation of Construction Minimization Measures, which include conducting vegetation clearing outside the peak nesting season to the extent practicable in order to avoid impacts on nesting birds (including raptors); however, raptors nest slightly earlier than other nesting birds (i.e., February 1 to June 30). Implementation of **Mitigation Measure BIO-2** would require a pre-construction nesting bird/raptor survey and protection for any nests observed. Therefore, impacts related to migratory corridors or native nursery sites would be less than significant with mitigation measures incorporated.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant. The City of San Jacinto Municipal Code prohibits removal of trees from public streets or parkways, and authorization must be obtained from the City Council (Section 12.20). There is no restriction on the removal of trees located on private property; however, tentative tract maps must show the location of all trees having a diameter of 9.5 inches or greater. A total of 22 trees occur on the Proposed Project Site, as shown in the Tree Inventory Report (**Appendix B-2**) including one tree of heaven (*Ailanthus altissima*), one lemon tree (*Citrus limon*), two Mondell pine (*Pinus eldarica*), one peach tree (*Prunus persica*), four Peruvian pepper trees, four California fan palms, and nine Mexican

fan palms. Removal of these trees does not conflict with the tree ordinance; they have been incorporated into Project plans. Therefore, there would be no impact, and no mitigation would be required.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less Than Significant Impact With Mitigation Incorporated. The Proposed Project Site is located in the MSHCP area, specifically, within the San Jacinto Valley Area Plan. The City of San Jacinto is a signatory to the MSHCP; therefore, the Project would be subject to the provisions of the MSHCP. The Proposed Project Site is not located within an MSHCP Criteria Cell; the nearest Criteria Cell is approximately 0.25 miles southwest of the Proposed Project Site. Therefore, the Project would not conflict with assembly of the MSHCP Reserve.

Habitat assessments and focused surveys were conducted in accordance with MSHCP requirements. Focused surveys were negative for all the species that required additional surveys. As required by the MSHCP, a pre-construction survey for burrowing owl will be conducted (Mitigation Measure BIO-1). Also as required by the MSHCP, a per-acre mitigation fee will be required by the City of San Jacinto based on unit density (i.e., 5.5 dwelling units per acre), **Mitigation Measure BIO-3**. Lastly, the Project must be constructed following the standard MSHCP Construction Minimization Measures (MSHCP Section 7.5.3), **Mitigation Measure BIO-4**. With implementation of Mitigation Measures BIO-1, BIO-3, and BIO-4, the Project would not conflict with the MSHCP.

The City of San Jacinto is not a participant in the SKR HCP; however, the MSHCP provides take authorization for projects outside the SKR HCP but within the MSHCP boundaries. The Project does not occur within a SKR HCP Reserve area; therefore, the Project does not conflict with the SKR HCP. As such, impacts would be less than significant with mitigation incorporated.

4.4.4 Mitigation Measures

BIO-1 The Project Applicant shall retain a qualified Biologist to conduct a pre-construction survey for burrowing owl on the Proposed Project Site (and including adjacent areas within 500 feet to the extent possible) within 30 days prior to construction. Methods for the pre-construction surveys shall be conducted as a one-day focused survey following the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP 2006). Following the survey, the Biologist shall prepare a Memorandum/Letter Report describing the methods and results of the survey for submittal to the City. If burrowing owl are observed, the Report shall also make recommendations for avoidance and minimization measures depending on the timing of construction and the location of the active burrow with respect to planned activities.

If burrowing owl are observed, the Project Applicant (or their designee) shall contact the City to discuss avoidance and minimization options. During the breeding season (i.e., March 1 to August 31), restrictions shall be placed on construction activities in the vicinity of any active burrow until the burrow is no longer active, as determined by a qualified Biologist. The protective buffer shall be 500 feet (or as otherwise approved by the City) around the active burrow. The protective buffer shall be flagged clearly in the field, mapped as an "Environmentally Sensitive Area," and the maps provided to the Project Applicant, their designee (e.g., Construction Supervisor), and the City. During the wintering season, an active burrow may be closed following CDFW-approved procedures with permission from the City. If the wintering burrow would not be directly impacted, a protective buffer of 160 feet (or as otherwise approved by the City) shall be placed around the burrow. The

protective buffer shall be flagged clearly in the field, mapped as an "Environmentally Sensitive Area," and the maps provided to the Project Applicant, their designee (e.g., Construction Supervisor), and the City. The Project Applicant shall not proceed with construction until the avoidance and minimization measures have been approved by the City and all appropriate protections are in place.

BIO-2 To the extent possible, vegetation removal will be conducted during the non-breeding season (September 12 to January 31)[3] in order to minimize direct impacts on nesting birds and raptors. If construction activities would be initiated during the peak breeding season for nesting birds/raptors (February 1–June 30), a pre-construction survey will be conducted by a qualified Biologist within three days prior to the initiation of construction (including demolition of structures). The nesting bird/raptor survey area will include a buffer of 100 feet around the work area for nesting birds and a buffer of 500 feet around the work area for nesting raptors. This survey can be combined with the pre-construction burrowing owl survey described in MM BIO-1. If the Biologist does not find any active nests in or immediately adjacent to the impact area, construction activities can proceed.

If the Biologist detects an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted, or breeding activities substantially disrupted by increased activity around the nest, the Biologist will determine an appropriate protective buffer around the nest depending on the sensitivity of the species and the nature of the construction activity. The protective buffer shall be between 25 to 100 feet for nesting birds and 300 to 500 feet for nesting raptors. No work will be allowed within the protective buffer until nesting activity has ended, as determined by a qualified Biologist. Any protective buffers will be flagged clearly in the field, mapped as "Environmentally Sensitive Areas," and the maps provided to the Project Applicant, their designee (e.g., Construction Supervisor), and the City. Construction can proceed within the protective buffer when the qualified Biologist has determined that the nest is no longer active (i.e., fledglings have left the nest, or the nest has failed).

BIO-3 Prior to the issuance of a grading permit, the Project Applicant shall pay the MSHCP mitigation fee as directed by the City of San Jacinto based on the most current rates.

BIO-4 The Project Applicant and their designee (i.e., Construction Contractors) shall follow required MSHCP Construction Minimization Measures (Section 7.5.3 of the MSHCP). Applicable construction minimization measures are listed below.

- Plans for water pollution and erosion control will be prepared for all Discretionary Projects involving the movement of earth in excess of 50 cubic yards. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, use of plant material for erosion control. Plans will be reviewed and approved by the City prior to construction.
- Timing of construction activities will consider seasonal requirements for breeding birds and migratory non-resident species. Habitat clearing will be avoided during species active breeding season defined as March 1 to June 30.
- Sediment and erosion control measures will be implemented until such time soils are determined to be successfully stabilized.

3 These dates are outside the collective dates for the raptor nesting season (February 1 to June 30, peak nesting bird season (March 1 to June 3), and burrowing owl breeding season (March 1 to August 31).

- Silt fencing or other sediment trapping materials will be installed at the downstream end of construction activities to minimize the transport of sediments off-site.
- The limits of disturbance, including the upstream, downstream, and lateral extents, will be clearly defined and marked in the field. Monitoring personnel will review the limits of disturbance prior to initiation of construction activities.
- Exotic species removed during construction will be properly handled to prevent sprouting or regrowth.
- Training of construction personnel will be provided.
- Ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of best management practices.
- When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, water tankers) shall be available on the site during all phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventative methods shall be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities.
- Active construction areas shall be watered regularly to control dust and minimize impacts to adjacent vegetation.
- All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances shall occur only in designated areas within the proposed grading limits of the Proposed Project Site. These designated areas shall be clearly marked and located in such a manner as to contain run-off.
- Waste, dirt, rubble, or trash shall not be deposited in the Conservation Area or on native habitat.

4.4.5 Conclusion

Implementation of **Mitigation Measures BIO-1, BIO-2, BIO-3,** and **BIO-4** would reduce potential impacts of the Proposed Project associated with Biological Resources to less than significant.

4.5 Cultural Resources

Information and analysis in this section is derived from the documents incorporated by reference as identified in Section 1.3 of this document and the Phase I Archaeological and Paleontological Resources Inventory, prepared by Psomas, dated October 2023, and included as **Appendix C**, which includes an Eastern Information Center (EIC) cultural resources literature and records search, a Native American Heritage Commission (NAHC) Sacred Lands Files (SLF) database search, Western Science Center (WSC) Paleontological Record Search, and pedestrian field survey. A Historic Built Environment Assessment, prepared by South Environmental, is included in **Appendix C**.

4.5.1 Environmental Setting

The study in **Appendix C** included a records search through the EIC, intensive-level pedestrian field survey and paleontological resources overview. The EIC record search identified 14 prior cultural resources studies within 0.8 km (one-half mile) of the Proposed Project Site were completed between 1990 and 2014 and are identified on **Table 11: *Prior Cultural Studies Within ½-mile of the Project Site***. Two of the cultural resource studies (RI-06821 and RI-08160) traversed the Proposed Project Site. The 14 studies consisted of archaeological field studies and literature reviews (**Appendix C**).

Table 11: Prior Cultural Studies Within ½-mile of the Project Site

Report No.	Year	Author(s)	Type of Study	Title of Study	Proximity to Proposed Project Site
RI-02885	1990	Arkush, Brooke	Cultural Resources Study	An Archaeological Assessment of Five Potential Sites for the Perris Water Treatment Plant, Located Near Lakeview in Western Riverside County, California	Outside
RI-04404	2000	Jones and Stokes Associates	Cultural Resources Study	Final Cultural Resources Inventory Report for the Williams Communications, Inc., Fiber Optic Cable System Installation Project, Riverside to San Diego, California Vol I–IV.	Outside
RI-04981	2003	McKenna et al.	Cultural Resources Study	A Phase I Cultural Resources Survey of the Esplanade Specific Plan Project Area Near Hemet, Riverside County, California	Outside
RI-05103	2002	Applied Earthworks	Cultural Resources Study	Cultural Resources Survey of Tentative Tract 30560, Hemet, California	Outside
RI-05555	2003	Applied Earthworks	Cultural Resources Study	Cultural Resources Survey of Tentative Tract 31184, Hemet, California	Outside
RI-06821	2006	Dudgeon-Commendador, Amy and Beth Padon	Cultural Resources Study	Phase I Cultural Resource Assessment for the Proposed Cawston Avenue Development Project, San Jacinto, Riverside County, California	Within
RI-06824	2007	Austerman, Virginia	Cultural Resources Study	Cultural Resources Assessment, Sanderson Avenue Development Project, San Jacinto, Riverside, California	Outside
RI-06846	2006	Padon, Beth and Sheila McElroy	Cultural Resources Study	Letter Report: Phase I Architectural Assessment for 40-Acre Parcel, San Jacinto, California	Outside

Report No.	Year	Author(s)	Type of Study	Title of Study	Proximity to Proposed Project Site
RI-06944	2006	Demcak, Carol R.	Cultural Resources Study	Report of Phase I Archaeological Assessment of West Esplanade Project (APN 431-190-010 & APN 431-190-011), City of San Jacinto, Riverside County, California	Outside
RI-07558	2008	Joan, George	Cultural Resources Study	Phase I Cultural Resources Survey KZ Holdings Project, San Jacinto, California	Outside
RI-07883	2008	Smallwood, Josh and Laura Hensley Shaker	Cultural Resources Study	Historical & Archaeological Resources Survey Report: Cottonwood Avenue Mixed-Use Project, City of San Jacinto, Riverside County, California	Outside
RI-08160	2008	Hogan, Michael and Bai Tong	Cultural Resources Study	Historical & Archaeological Resources Survey Report San Jacinto Master Drainage Plan in and near the City of San Jacinto Riverside County, California	Within
RI-08495	2010	Joan George, Vanessa Mirro, and Elizabeth Dennison	Cultural Resources Study	Supplemental Cultural Resources Survey Report: Cultural Resources in Southern San Jacinto Valley: Realign State Route 79 between Domenigoni Parkway and Gilman Springs Road in the Cities of Hemet and San Jacinto and the County of Riverside, Riverside County, California	Outside
RI-09689	2014	Delu, Antonina M., John J. Eddy, and Gabrielle Duff	Cultural Resources Study	First Supplemental Historic Property Survey Report Realign State Route 79 Between Domenigoni Parkway and Gilman Sprinfs Road in the Cities of Hemet and San Jacinto and the County of Riverside, Riverside County, California	Outside

Source: Appendix C

Previously Recorded Cultural Resources

The EIC records searches also identified five previously recorded cultural resources within 0.8 km (1/2-mile) of the Proposed Project Site and are identified on **Table 12: Previously Recorded Cultural Resources Within ½ Mile of the Project Site** (**Appendix C**). The previously recorded resources include historic buildings and structures. No precontact cultural resources (before the arrival of Europeans) were identified by the EIC. None of the five historic buildings and structures are located within the Proposed Project Site.

Table 12: Previously Recorded Cultural Resources Within ½ Mile of the Project Site

Primary No.	Trinomial No.	Resource Description	Year Recorded/Recorder(s)	Proximity to Proposed Project Site
P-33-006287	–	Historic: building, structure	1982 (Warner, Jim); 2007 (Tibbet, Casey)	Outside
P-33-007301	–	Historic: building	1982 (Swift, Laura), 2006 (McElroy, Sheila)	Outside
P-33-014791	–	Historic: building, structure	2003 (Livingstone, D.)	Outside
P-33-015267	–	Historic: building	2006 (McElroy, Sheila)	Outside
P-33-017928	–	Historic: structure	2010 (Dice, Michael)	Outside

Source: Appendix C

Native American Heritage Commission Sacred Lands File Search

On September 19, 2022, Psomas requested that the NAHC conduct a search of its SLF database to determine if cultural resources important to Native Americans have been recorded in the Proposed Project Site or in the immediate vicinity. The results of the NAHC SLF search were received on November 22, 2022, and were negative; however, it should be noted that the records maintained by the NAHC, and the CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. Furthermore, a tribe may be the only source of information regarding the existence of a tribal cultural resource. The review included a list of tribes affiliated with the Proposed Project Site. If these tribal governments have requested to be listed on the City's Assembly Bill (AB) 52 contact list the tribal governments will be contacted by the City and offered an opportunity to consult on the Project to comply with the requirements of AB 52. The SLF search results summary letter from the NAHC is provided in the Phase I Archaeological and Paleontological Resources Inventory (**Appendix C**).

Field Survey

Psomas cultural resource specialist Heather Garnett, RPA, surveyed the Proposed Project Site on February 9, 2023. The cultural resources field survey did not identify archaeological resources; however, it should be noted ground visibility was obscured by dense vegetation and recent flooding from rain. Additionally, the structures located on at the northern end of the Proposed Project Site date to 1940s. A separate historic built environment assessment of the structures and report has been prepared by South Environmental, included in the Phase I Archaeological and Paleontological Resources Inventory (**Appendix C**).

4.5.2 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Less Than Significant Impact. Public Resources Code Section 15064.5(a) defines historical resources, which includes: A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code Section 5024.1, Title 14 CCR, Section 14 CCR, Section 4850 et seq.). The EIC record search results identified five cultural resources located within a half-mile of the Proposed Project Site. These resources consist of five historic-era buildings and associated structures that establish historic-era land use within the generalized area. None of the five cultural resources are within the Proposed Project Site; therefore, the proposed Project will not impact these cultural resources. One built environment resource over 45 years old was identified within the Proposed Project Site: a residential farm located at 710 Cawston Avenue North comprising several buildings and structures. The Proposed Project Site was recorded and evaluated for historical significance on the appropriate set of DPR Forms in consideration of CRHR and City designation criteria and integrity requirements. The Proposed Project Site was found not eligible under all State and local designation criteria due to a lack of significant historical associations, a lack of architectural merit, and compromised integrity. No historical resources were identified within the Proposed Project Site as a result of this analysis. Therefore, with respect to a historical resource pursuant to Section 15064.5, the proposed Project would not impact a historical resource under CEQA. No mitigation is required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less Than Significant Impact With Mitigation Incorporated. A significant impact would occur if grading or excavation activities associated with the Project were to disturb archaeological resources that presently exist within the Proposed Project Site. The EIC record search results identified five cultural resources located within one-half-mile of the Proposed Project Site. These resources consist of five historic-era buildings and associated structures that establish historic-era land use within the generalized area. None of the five cultural resources are archaeological resources. However, there is the possibility that undiscovered intact archaeological resources may be present below the surface in native (alluvial) sediments. These potential effects would be mitigated to a less than significant level with the implementation of **Mitigation Measure CUL-1**, which recommends archaeological monitoring when excavations are required in native sediment.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact With Mitigation Incorporated. A significant adverse effect could occur if grading or excavation activities associated with the Project were to disturb previously interred human remains. The Proposed Project Site is located within a developed area that has been subject to earth-moving activities in the past, and no known burial sites are located on or adjacent to the Proposed Project Site. In the unlikely event of an unanticipated discovery of human remains in the Proposed Project Site during construction, the California Health and Safety Code and the California Public Resources Code require that any activity in the area of a potential find be halted and the Orange County Coroner be notified, as described in **Mitigation Measure CUL-2**. Implementation of CUL-2 would ensure impacts related to this threshold are less than significant, and no mitigation is required

4.5.3 Mitigation Measures

CUL-1 The Project proponent shall retain a Project Archaeologist prior to the initiation of ground-disturbing activities to monitor ground-disturbing activities occurring within native sediment (in situ material).

In the event that archaeological resources are discovered at the Proposed Project Site, the handling of the discovered resources shall occur, as described below. All artifacts discovered shall be inventoried and analyzed by the Project Archaeologist. If any artifacts of Native American origin are discovered, all activities in the immediate vicinity of the find (within a 50-foot radius) shall stop, and the Project Archaeologist shall notify the property owner and tribes identified by the NAHC as being affiliated with the area. The Project Archaeologist and Tribal Representative will analyze the Native American artifacts for identification as everyday life and/or religious or sacred items, cultural affiliation, temporal placement, and function, as deemed possible. The significance of Native American resources shall be evaluated in accordance with the provisions of CEQA and shall consider the religious beliefs, customs, and practices of the affiliated tribes. All items found in association with Native American human remains shall be considered grave goods or sacred in origin and subject to special handling.

Non-Native American artifacts shall be inventoried, assessed, and analyzed for cultural affiliation, personal affiliation (prior ownership), function, and temporal placement. After analysis and reporting, these artifacts shall be subjected to curation or returned to the property owner, as deemed appropriate.

Once grading activities have ceased or the Project Archaeologist, in consultation with the lead agency and Tribal Representative, determines that monitoring is no longer necessary, monitoring activities can be discontinued. A report of findings, including an itemized inventory of recovered artifacts, shall be prepared upon completion of the steps outlined above. A copy of the report shall also be filed with the EIC.

CUL-2 All discovered human remains shall be treated with respect and dignity. California State law (California Health & Safety Code Section 7050.5) and federal law and regulations ([*Archaeological Resources Protection Act 16 United States Code* (USC) 470 & 43 Code of Federal Regulations (CFR) 7], [*Native American Graves Protection & Repatriation Act* 25 USC 3001 & 43 CFR 10] and [Public Lands, Interior 43 CFR 8365.1–7]) require a defined protocol if human remains are discovered in the State of California regardless of whether the remains are modern or archaeological in origin.

If human remains, grave goods, ceremonial items, and/or sacred items are encountered, work will immediately halt within the immediate area and any nearby area reasonably suspected to overlie adjacent remains, and a 100-foot ESA boundary will be established to protect the find from impact, and the Soboba Band of Luiseno Indians and the City of San Jacinto Planning Division shall be immediately notified.

In accordance with Section 7050.5 of the California Health and Safety Code and CEQA Guidelines Section 15064.5(e), if human remains are found, the Riverside County Coroner's office shall be notified by the permittee within 24 hours of the discovery. County Coroner's determination regarding the origin of the remains and any required notification is described in Section 7050.5 of the California Health and Safety Code and CEQA Guidelines Section 15064.5(e). No further excavation or disturbance of the potential human remains, or any area reasonably suspected to overlie additional remains, shall occur until a determination

has been made, any notifications have been sent and received, and the Riverside County Coroner's Office has cleared the site.

4.5.4 Conclusion

Implementation of Mitigation Measure **CUL-1** and **CUL-2,** would reduce potential impacts of the Proposed Project associated with Cultural Resources to less than significant.

4.6 Energy

Information and analysis in this section is derived from the documents incorporated by reference as identified in Section 1.3 of this document and from the Air Quality, Greenhouse Gas, and Energy Impact Study prepared by MD Acoustics and dated April 28, 2025, and included as **Appendix A-1**.

Information from the CalEEMod 2022.1.1.22 Daily and Annual Outputs contained in **Appendix A-1** was utilized for this analysis, and the CalEEMod outputs detail Project related construction equipment, transportation energy demands, and facility energy demands.

4.6.1 Regulatory Setting

The discussion below provides a summary of key standards relative to this Project. A more detailed list of standards is provided in **Appendix A-1.**

Building Energy Efficiency Standards

California Code of Regulations (CCR) Title 24, Part 6. CCR Title 24, Part 6, which is California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. 2013 and 2016 standards have been approved and became effective July 1, 2014 and January 1, 2016, respectively.

California Code of Regulations (CCR) Title 24, Part 11, commonly referred to as the CALGreen Code, states that all buildings for which an application for a building permit is submitted on or after January 1, 2023 must follow the 2022 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

The CALGreen Code includes mandatory measures for non-residential development related to site development; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. Specifically, the code requires the following measures that are applicable to energy use:

- New buildings with tenant spaces that have 10 or more tenant-occupants to provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.
- New buildings that require 10 or more parking spaces to provide a specific number of spaces to facilitate the future installation of electric vehicle supply equipment. The raceways are required to be installed at the time of construction.

Senate Bill 100

Senate Bill 100 (SB 100) was signed into law September 2018 and increased the goal of the California RPS Program to achieve at least 50 percent renewable resources by 2026, 60 percent renewable resources by 2030, and 100 percent renewable resources by 2045. SB 100 also includes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

4.6.2 Environmental Setting

California is one of the lowest per capita energy users in the United States, ranked 48th in the nation, due to its energy efficiency programs and mild climate (United States Energy Information Administration [EIA] 2018). California consumed 292,039 gigawatt-hours (GWh) of electricity and 2,110,829 million cubic feet of natural gas in 2017 (California Energy Commission [CEC] 2019; EIA 2018). In addition, Californians consume approximately 18.9 billion gallons of motor vehicle fuels per year (Federal Highway Administration 2019). The single largest end-use sector for energy consumption in California is transportation (39.8 percent), followed by industry (23.7 percent), commercial (18.9 percent), and residential (17.7 percent) (EIA 2018).

Most of California's electricity is generated in-state with approximately 30 percent imported from the Northwest (Alberta, British Columbia, Idaho, Montana, Oregon, South Dakota, Washington, and Wyoming) and Southwest (Arizona, Baja California, Colorado, Mexico, Nevada, New Mexico, Texas, and Utah) in 2017. In addition, approximately 30 percent of California's electricity supply comes from renewable energy sources such as wind, solar photovoltaic, geothermal, and biomass (CEC 2018). Adopted on September 10, 2018, SB 100 accelerates the State's Renewables Portfolio Standards Program by requiring electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

To reduce statewide vehicle emissions, California requires that all motorists use California Reformulated Gasoline, which is sourced almost exclusively from refineries located in California. Gasoline is the most used transportation fuel in California with 15.5 billion gallons sold in 2017 and is used by light-duty cars, pickup trucks, and sport utility vehicles (California Department of Tax and Fee Administration 2018). Diesel is the second most used fuel in California with 4.2 billion gallons sold in 2015 and is used primarily by heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles (CEC 2016). Both gasoline and diesel are primarily petroleum-based, and their consumption releases greenhouse gas (GHG) emissions, including CO_2 and NO_X. The transportation sector is the single largest source of GHG emissions in California, accounting for 41 percent of all inventoried emissions in 2016 (California Air Resources Board [CARB] 2018).

4.6.3 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
ENERGY: Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact.

Construction Energy Demand

Construction Equipment Electricity Usage. Electrical service will be provided by SCE. Based on the 2017 National Construction Estimator, the typical power cost per 1,000 square feet of building construction per month is estimated to be $2.32. The energy analysis provided in **Appendix A-1** was prepared assuming project plans to develop the site with approximately 817,050 square feet of new residential space over the course of approximately 39 months. Based on **Table 13, *Project Construction Power Cost and Electricity Usage***, the total power cost of the on-site electricity usage during the construction of the Proposed Project is estimated to be approximately $73,926.68 and the total electricity usage from Project construction related activities is estimated to be approximately 1,344,122 kilowatt-hours (kWh).

Table 13: Project Construction Power Cost and Electricity Usage

Power Cost (per 1,000 square feet of building per month of construction)	Total Building Size (1,000 Square Foot)*	Construction Duration (months)	Total Project Construction Power Cost	Cost per kWh	Total Project Construction Electricity Usage (kWh)
$2.32	817.050	39	$73,926.68	$0.06	1,344,122

* Assumes the project will be under the GS-1 General Service rate under SCE.
Source: Appendix A-1

Construction Equipment Fuel Estimates. Using the CalEEMod data input, the Project's construction phase would consume electricity and fossil fuels as a single energy demand, that is, once construction is completed their use would cease. CARB's 2017 Emissions Factors Tables show that on average aggregate fuel consumption (gasoline and diesel fuel) would be approximately 18.5 horsepower hours per gallon (hp-hr/gal). As presented in **Table 14, *Construction Equipment Fuel Consumption Estimates*** below, the Proposed Project construction activities would consume an estimated 108,685 gallons of diesel fuel.

Table 14: Construction Equipment Fuel Consumption Estimates

Phase	Number of Days	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	HP hrs/ day	Total Fuel Consumption (gal diesel fuel)[1]
Demolition	30	Concrete/Industrial Saws	1	8	33	0.73	193	313
	30	Excavators	3	8	36	0.38	328	532
	30	Rubber Tired Dozers	2	8	367	0.4	2,349	3,809
Site Preparation	40	Rubber Tired Dozers	3	8	367	0.4	3,523	7,618
	40	Tractors/Loaders/Backhoes	4	8	84	0.37	995	2,150
Grading	110	Excavators	2	8	36	0.38	219	1,301
	110	Graders	1	8	148	0.41	485	2,886
	110	Rubber Tired Dozers	1	8	367	0.4	1,174	6,983
	110	Scrapers	2	8	423	0.48	3,249	19,316
	110	Tractors/Loaders/Backhoes	2	8	84	0.37	497	2,957
Building Construction	500	Cranes	1	7	367	0.29	745	20,135
	500	Forklifts	3	8	82	0.2	394	10,638
	500	Generator Sets	1	8	14	0.74	83	2,240
	500	Tractors/Loaders/Backhoes	3	7	84	0.37	653	17,640

Phase	Number of Days	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	HP hrs/ day	Total Fuel Consumption (gal diesel fuel)[1]
	500	Welders	1	8	46	0.45	166	4,476
Paving	75	Pavers	2	8	81	0.42	544	2,207
	75	Paving Equipment	2	8	89	0.36	513	2,078
	75	Rollers	2	8	36	0.38	219	887
Architectural Coating	90	Air Compressors	1	6	37	0.48	107	518
Construction Fuel Demand (gallons of diesel fuel)								108,685

Notes:

[1] Using Carl Moyer Guidelines Table D-21 Fuel consumption rate factors (bhp-hr/gal) for engines less than 750 hp.

Construction Worker Fuel Estimates. It is assumed that all construction worker trips are from light duty autos (LDA) along area roadways. With respect to estimated vehicle miles travelled (VMT), the construction worker trips would generate an estimated 3,772,243 VMT. Vehicle fuel efficiencies for construction workers were estimated in the air quality and greenhouse gas analysis using information generated using CARB's EMFAC model (see **Appendix A-1** for details). **Table 15: *Construction Worker Fuel Consumption Estimates***, shows that an estimated 121,882 gallons of fuel would be consumed for construction worker trips.

Table 15: Construction Worker Fuel Consumption Estimates

Phase	Number of Days	Worker Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Demolition	30	15.0	18.5	8,325	30.95	269
Site Preparation	40	17.5	18.5	12,950	30.95	418
Grading	110	20.0	18.5	40,700	30.95	1,315
Building Construction	500	385.0	18.5	3,561,250	30.95	115,065
Paving	75	15.0	18.5	20,813	30.95	672
Architectural Coating	90	77.0	18.5	128,205	30.95	4,142
Total Construction Worker Fuel Consumption						121,882

Notes:

1 Assumptions for the worker trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.22 defaults.

Construction Vendor/Hauling Fuel Estimates. **Table 16: *Construction Vendor Fuel Consumption Estimates (MHD Trucks)*** and **Table 17: *Construction Hauling Fuel Consumption Estimates (HHD Trucks)*** show the estimated fuel consumption for vendor and hauling during building construction and architectural coating. With respect to estimated VMT, the vendor and hauling trips would generate an estimated 1,000,455 VMT. For the architectural coatings it is assumed that the contractors would be responsible for bringing coatings and equipment with them in their light duty vehicles. Table 16 and Table 17 show that an estimated 134,056 gallons of fuel would be consumed for vendor and hauling trips.

Table 16: Construction Vendor Fuel Consumption Estimates (MHD Trucks)

Phase	Number of Days	Worker Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Demolition	30	0	10.2	0	9.22	0
Site Preparation	40	0	10.2	0	9.22	0
Grading	110	0	10.2	0	9.22	0
Building Construction	500	68.4	10.2	348,840	9.22	37,835
Paving	75	15.0	10.2	11,475	9.22	1,245
Architectural Coating	90	0	10.2	0	9.22	0
Total Vendor Fuel Consumption						39,080

Notes:
1 Assumptions for the vendor trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.22 defaults.

Table 17: Construction Hauling Fuel Consumption Estimates (HHD Trucks)

Phase	Number of Days	Worker Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Demolition	30	10.9	20	6,540	6.74	970
Site Preparation	40	0.0	20	0	6.74	0
Grading	110	288.0	20	633,600	6.74	94,006
Building Construction	500	0	20	0	6.74	0
Paving	75	0	20	0	6.74	0
Architectural Coating	90	0	20	0	6.74	0
Total Construction Hauling Fuel Consumption						94,976

Notes:
1 Assumptions for hauling trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.22 defaults.

Construction Energy Efficiency/Conservation Measures. Construction equipment used over the approximately 39 month construction phase would conform to CARB regulations and California emissions standards and is evidence of related fuel efficiencies. In addition, the CARB Airborne Toxic Control Measure limits idling times of construction vehicles to no more than five minutes, thereby minimizing unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Furthermore, the Project has been designed in compliance with California's Energy Efficiency Standards and 2022 California Green Building Standards Code, Title 24, Part 11 (CALGreen).

Construction of the proposed residential development would require the typical use of energy resources. There are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities or equipment that would not conform to current emissions standards (and related fuel efficiencies). Therefore, the proposed construction activities would not result in inefficient, wasteful, or unnecessary fuel consumption and no mitigation is required.

Operational Energy Demand

Transportation Fuel Consumption. The largest source of operational energy use would be vehicle operation of customers. The site is located in an urbanized area just in close proximity to transit stops.

Using the CalEEMod output, it is assumed that an average trip length would be 9.944 miles. To show a worst-case analysis, as the Proposed Project is a residential project, it was assumed that vehicles would operate 365 days per year. **Table 18: *Estimated Vehicle Operations Fuel Consumption***, shows the worst-case estimated annual fuel consumption for all classes of vehicles from autos to heavy-heavy trucks. Table 18 shows that an estimated 571,336 gallons of fuel would be consumed per year for the operation of the proposed Project.

Table 18: Estimated Vehicle Operations Fuel Consumption

Vehicle Type	Vehicle Mix	Number of Vehicles	Average Trip (miles)[2]	Daily VMT	Average Fuel Economy (mpg)	Total Gallons per Day	Total Annual Fuel Consumption (gallons)
Light Auto	Automobile	2,194	9.944	21,813	31.82	685.52	250,215
Light Truck	Automobile	229	9.944	2,280	27.16	83.96	30,645
Light Truck	Automobile	706	9.944	7,024	25.6	274.37	100,145
Medium Truck	Automobile	564	9.944	5,613	20.81	269.74	98,454
Light Heavy Truck	2-Axle Truck	106	9.944	1,051	13.81	76.08	27,769
Light Heavy Truck 10,000 lbs +	2-Axle Truck	29	9.944	292	14.18	20.57	7,507
Medium Heavy Truck	3-Axle Truck	47	9.944	464	9.58	48.46	17,688
Heavy Heavy Truck	4-Axle Truck	77	9.944	761	7.14	106.61	38,913
Total		3,952	--	39,298	--	1565.30	--
Total Annual Fuel Consumption							571,336

Notes:
1 The project is to generate 3,952 total net new trips after reduction of existing uses. Default CalEEMod vehicle fleet mix utilized.
2 Based on the size of the site and relative location, trips were assumed to be local rather than regional.

Trip generation generated by the proposed Project are consistent with other similar residential uses of similar scale and configuration as reflected in the traffic data. That is, the Proposed Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips, nor associated excess and wasteful vehicle energy consumption. Therefore, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

Facility Energy Demands (Electricity)

The annual electricity demands were provided per the CalEEMod output and are provided in **Table 19: *Project Unmitigated Annual Operational Energy Demand Summary***. The Project will be 100 percent electric and will not require natural gas.

Table 19: Project Unmitigated Annual Operational Energy Demand Summary

Electricity Demand	kWh/year
Single Family Housing	8,280,326
Total	8,280,326

Notes:
1 Taken from the CalEEMod 2022.1.1.22 annual output.

As shown in Table 19, the estimated electricity demand for the Proposed Project is approximately 8,280,326 kWh per year. In 2022, the residential sector of the County of Riverside consumed approximately 9,061 million kWh of electricity. Therefore, the increase in electricity demand from the proposed Project is insignificant compared to the County's 2022 demand. However, electricity for the

homes in the Project will also be provided by onsite solar which will not affect the County's demand. Therefore, the increase in electricity demand from the proposed Project is insignificant compared to the County's 2022 demand, and impacts would be less than significant. No mitigation is required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. This analysis considers whether the Project would conflict with applicable federal transportation regulations, the State's Energy Plan, and the State's Renewable Energy Portfolio Standards.

Regarding federal transportation regulations, the Proposed Project Site is located in an already developed area. Access to/from the Proposed Project Site is from existing roads. These roads are already in place so the Project would not interfere with, nor otherwise obstruct intermodal transportation plans or Projects that may be proposed pursuant to the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) because SCAG is not planning for intermodal facilities in the Project area.

Regarding the State's Energy Plan and compliance with Title 24 CCR energy efficiency standards, the applicant is required to comply with the California Green Building Standard Code requirements for energy efficient buildings and appliances as well as utility energy efficiency programs implemented by the SCE and Southern California Gas Company.

Regarding the State's Renewable Energy Portfolio Standards, the Project would be required to meet or exceed the energy standards established in the CALGreen Code. CALGreen Standards require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. Therefore, the Project would not conflict with or obstruct a State or the General Plan policies for energy efficiency, and less than significant impacts would occur. No mitigation is required.

4.6.4 Mitigation Measures

No mitigation measures associated with impacts to Energy apply to the Proposed Project.

4.6.5 Conclusion

There would be less than significant of the Proposed Project associated with Energy resources, and no mitigation would be required.

4.7 Geology and Soils

4.7.1 Environmental Setting

Information and analysis in this section is derived from the documents incorporated by reference as identified in Section 1.3 of this document and from an updated, Project-specific Preliminary Geotechnical Investigation (Geotechnical Evaluation) prepared by Geocon West Inc., dated November 4, 2022, and included as **Appendix D-1**. An updated geotechnical evaluation was prepared in January 2024 and it is provided in **Appendix D-2**.

4.7.2 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
GEOLOGY AND SOILS: Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
• Strong seismic ground shaking?			X	
• Seismic-related ground failure, including liquefaction?			X	
• Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Discussion

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- *Rupture of a known earthquake fault, as delineated on the most recent Alquist Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

  Less Than Significant Impact. According to the Geotechnical Evaluation, the Proposed Project Site is not located within a currently established State of California Alquist-Priolo Earthquake Fault Zone or Riverside County Fault Hazard Zone for surface fault rupture hazards (**Appendix D-1**). No active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, impacts would be less than significant, and no mitigation is required.

- *Strong seismic ground shaking?*

  Less Than Significant Impact. The Proposed Project Site is located in a seismically active area, as is the majority of southern California, and there is potential for strong ground motion in the Project areas during the Project's lifetime. The closest active fault to the site is the Casa Loma branch of the San Jacinto fault located approximately ¾ mile northeast of the site. This fault, among others within the area, would have the potential to produce an earthquake estimated up to 6.9 on the Richter Scale (**Appendix D**). In the event an earthquake of this magnitude occurs, the Proposed Project Site could experience periodic shaking, possibly of considerable intensity. The Project's proposed structures would be required to meet the City's construction development standards and the seismic design parameters of the California Uniform Building Code to withstand potential seismic shaking impacts caused by an earthquake within an acceptable level of risk. In addition, the specific recommendations of the Geotechnical Evaluation prepared for the Project would be fully incorporated in the design and construction of the Project. Compliance with the California Uniform Building Code Seismic Safety Standards and Geotechnical Investigation recommendations would minimize risks related to seismic shaking impacts and reduce the potential for adverse effects to less than significant, and no mitigation is required.

- *Seismic related ground failure, including liquefaction?*

  Less Than Significant Impact. Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations. The County of Riverside indicates that the site is located within a zone of moderate liquefaction potential. However, based on historic well records, static groundwater is more than 100 feet below ground surface in the vicinity of the site and the Geotechnical Investigation concluded the potential for liquefaction to occur beneath the site is considered very low (**Appendix D**). In addition, the specific recommendations of the Geotechnical Evaluation prepared for the Project would be fully incorporated in the design and construction of the Project. Therefore, impacts related to liquefaction would be less than significant levels, and no mitigation is required.

- *Landslides?*

  No Impact. Landslides may be induced by strong vibratory motion produced by earthquakes. The Proposed Project Site would not be subject to landslides. According to the California Department of Conservation Earthquake Zones of Required Investigation mapper (CDC 2024), the Proposed Project Site is not identified as being within an area susceptible to landslides. The Proposed Project Site is relatively flat, with elevations ranging from 1,505 feet above mean sea level (AMSL) on the northwestern portion of the site to approximately 1,515 feet AMSL on the southwestern corner of the site. In addition, the specific recommendations of the Geotechnical Evaluation prepared for the Project, including slope stability features, would be fully incorporated in the design and construction of the Project. Due to the relatively low topography, and since the Project does not propose to create slopes or features that would increase the potential for landslides, no adverse impacts are anticipated, and no mitigation is required.

Based on the above, the Project will have a less than significant impact regarding exposure people or structures to potential substantial adverse effects of earthquakes, ground shaking, liquefaction and landsides, and no mitigation is required.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The largest source of erosion and topsoil loss is uncontrolled drainage during construction. As discussed in more detail in Section XI, Hydrology and Water Quality, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into "waters of the U.S." Construction activities shall be conducted in compliance with the statewide NPDES General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2022-0057-DWQ, NPDES No. CAS000002), adopted by the State Water Resources Control Board on September 8, 2022. In compliance with the NPDES permit, erosion potential during construction of the proposed Project would be managed with Best Management Practices (BMPs) implemented on the Proposed Project Site as part of a Storm Water Pollution Prevention Plan (SWPPP) during construction activities in accordance with NPDES requirements. Implementation of the BMPs would reduce construction-related erosion impacts to less than significant levels. Additionally, the specific recommendations of the Geotechnical Evaluation prepared for the Project, including grading and earthwork related recommendations, would be fully incorporated in the design and construction of the Project. Therefore, impacts related to soil erosion would be less than significant, and no mitigation is required.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. As discussed above, the potential for liquefaction at the Proposed Project Site is considered low and the Proposed Project Site is not located in a potential landslide zone. The proposed Project would not introduce any new topographical features or elements that would change the existing geologic setting of the Project area, and the majority of the area is relatively flat. As such, on-site geologic and soils issues such as on-site soil stability including landslides, lateral spreading, liquefaction, and collapse are not significant due to the nature of the Project. The report in **Appendix D-2** also identified that the potential for subsidence was low because: the site is not located in an Area of Land Subsidence in California according to the United States Geological Survey (USGS); the San Jacinto Valley is not included in an area currently undergoing a USGS subsidence study; Riverside County does include the site in an area of active subsidence; the California Geological Survey does not address subsidence risk on its website; and a search of the City of the San Jacinto website GIS system did not yield results when the term "subsidence" was searched. Additionally, the specific

recommendations of the Geotechnical Investigation prepared for the Project (**Appendix D-1** and **Appendix D-2**) would be fully incorporated in the design and construction of the Project. Therefore, implementation of the proposed Project would not result in impacts associated with unstable geologic conditions. Impacts related to geologic unit stability that could result in lateral spreading, subsidence, liquefaction, or collapse would be less than significant. No mitigation is required.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact. Expansive soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content the onsite fill consists of sandy silt within the soils encountered near the ground surface. Expansive soils are a contributing factor to building foundation settlement. According to the Geotechnical Evaluation, the upper five feet of existing site soils encountered during the investigation were considered to have a "very low" expansive potential and are classified as "non-expansive" (**Appendix D-1**). Additionally, the specific recommendations of the Geotechnical Evaluation prepared for the Project would be fully incorporated in the design and construction of the Project. Therefore, Project impacts related to expansive soils would be less than significant, and no mitigation is required.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The Project does not propose to install septic tanks or alternative wastewater disposal systems. No impacts would occur, and no mitigation is required.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact With Mitigation Incorporated. Psomas requested a literature and records search from the WSC on November 21, 2022 (refer to the *Phase I Archaeological and Paleontological Resources Inventory* in **Appendix C**). The WSC houses records regarding paleontological resources recorded in Riverside County. The records search included a 1.6-km (1-mile) search radius around the Proposed Project Site and consisted of a detailed examination of the USGS' 7.5-minute Lakeview Quadrangle. The purpose of the literature search was to identify paleontological resources and/or unique geological units previously recorded within and around the Proposed Project Site. The WSC paleontological literature review and record searches did not identify paleontological resources within the Proposed Project Site or the 1-mile search buffer/radius. Furthermore, the WSC noted that the geologic units underlying the Proposed Project Site are mapped entirely as active valley deposits dating to the Holocene which is estimated to be between 5,000 years old and present. While Holocene alluvial units are of high preservation value, material found is unlikely to be fossil material due to the relatively modern associated dates of the deposits. However, the WSC also noted that if development requires any substantial depth of disturbance, the likelihood of reaching older Holocene or Late Pleistocene alluvial sediments would increase. The paleontological search results summary letter from WSC is presented in **Appendix C**.

Psomas surveyed the Proposed Project Site on February 9, 2023. The results of the field survey were negative for paleontological resources. However, the negative results only include an examination of the surface. Therefore, there is a possibility that intact paleontological resources may be present below the surface. A significant impact could occur if grading or excavation activities associated with the Project were to disturb paleontological resources that presently exist within the Project site. These potential effects may be mitigated to a less than significant level with the implementation of **Mitigation Measure GEO-1**, which requires retention of a qualified Paleontologist to be available "on-call"

throughout the duration of grading activities, would reduce potential impacts to less than significant levels.

4.7.3 Mitigation Measures

GEO-1 In the event that potential paleontological resources are discovered during ground-disturbing activities, work will stop in that area and within 30 feet of the find until a qualified paleontologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures may include monitoring by a qualified paleontologist during construction-related ground- disturbing activities. The monitor will retain the option to reduce monitoring if it is determined that the sediments were previously disturbed. Monitoring may also be reduced if potentially fossiliferous units are not present or, if present, are determined to have a low potential to contain fossil resources. The monitor will be equipped to salvage fossils and samples of sediments as they are unearthed and will be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Recovered specimens will be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Specimens will be curated into a professional, accredited museum repository with permanent retrievable storage. A report of findings, with an appended itemized inventory of specimens, will be prepared and will signify completion of the mitigation.

4.7.4 Conclusion

Implementation of **Mitigation Measure GEO-1** would reduce potential impacts of the Proposed Project associated with Geology and Soils to less than significant.

4.8 Greenhouse Gas Emissions

Information and analysis in this section is derived from the documents incorporated by reference as identified in Section 1.3 of this document and the Greenhouse Gas Analysis prepared for the Project as part of the Air Quality, Greenhouse Gas, and Energy Impact Study (**Appendix A-1**), and all information in this section is derived from **Appendix A-1**.

4.8.1 Environmental Setting

Constituent gases of the Earth's atmosphere, called atmospheric GHGs, play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO_2 and N_2O are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO_2, where CO_2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean**. Table 20: *GHG Descriptions***, provides a description of each of the greenhouse gases and their global warming potential.

Table 20: GHG Descriptions

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (N_2O), also known as laughing gas is a colorless gas. It has a lifetime of 114 years. Its global warming potential is 298.	Microbial processes in soil and water, fuel combustion, and industrial processes. In addition to agricultural sources, some industrial processes (nylon production, nitric acid production) also emit N_2O.
Methane	Methane (CH_4) is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 25.	A natural source of CH4 is from the decay of organic matter. Methane is extracted from geological deposits (natural gas fields). Other sources are from the decay of organic material in landfills, fermentation of manure, and cattle farming.
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.

Greenhouse Gas	Description and Physical Properties	Sources
Chlorofluorocarbons	CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). They are gases formed synthetically by replacing all hydrogen atoms in methane or methane with chlorine and/or fluorine atoms. Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone, therefore their production was stopped as required by the Montreal Protocol.
Hydrofluorocarbons	Hydrofluorocarbons (HFCs) are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.
Perfluorocarbons	Perfluorocarbons (PFCs) have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above the Earth's surface. They have a lifetime 10,000 to 50,000 years. They have a global warming potential range of 6,200 to 9,500.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Source: MD Acoustics 2024.

4.8.2 Regulatory Background

Federal

Greenhouse Gas Endangerment**.** On December 2, 2009, the EPA announced that GHGs threaten the public health and welfare of the American people. The EPA also states that GHG emissions from on-road vehicles contribute to that threat. The decision was based on Massachusetts v. EPA (Supreme Court Case 05-1120) which argued that GHGs are air pollutants covered by the Clean Air Act and that the EPA has authority to regulate those emissions.

Clean Vehicles**.** Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years

2012-2016). The second phase of the national program would involve proposing new fuel economy and greenhouse gas standards for model years 2017-2025 by September 1, 2011.

On October 25, 2010, the EPA and the U.S. Department of Transportation proposed the first national standards to reduce greenhouse gas emissions and improve fuel efficiency of heavy- duty trucks and buses. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles and 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the agencies are proposing engine and vehicle standards starting in the 2014 model year which would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions by 2018 model year.

Mandatory Reporting of Greenhouse Gases**.** On January 1, 2010, the EPA started requiring large emitters of heat-trapping emissions to begin collecting GHG data under a new reporting system. Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse gas emissions are required to submit annual reports to the EPA.

Climate Adaption Plan. The EPA Plan identifies priority actions the Agency will take to incorporate considerations of climate change into its programs, policies, rules and operations to ensure they are effective under future climatic conditions.

State

California Code of Regulations (CCR) Title 24, Part 6. CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. 2013 and 2016 standards have been approved and became effective July 1, 2014 and January 1, 2016, respectively.

California Code of Regulations (CCR) Title 24, Part 11. All buildings for which an application for a building permit is submitted on or after January 1, 2023 must follow the 2022 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

California Green Building Standards**.** On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Housing and Community Development (HCD) updated CALGreen through the 2015 Triennial Code Adoption Cycle, during the 2016 to 2017 fiscal year. During the 2022-2023 fiscal year, the HCD updated CALGreen through the 2023 Triennial Code Adoption Cycle.

The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings. CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24,

Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.

The CEC estimates that over 30 years the 2022 Energy Code will provide $1.5 billion in consumer benefits and reduce 10 million metric tons of GHG. Changes compared to the 2019 Energy Code include increases to on-site renewable energy generation from solar, increases to electric load flexibility to support grid reliability, reduction of emissions from newly constructed buildings, reduction of air pollution for improved public health, and increased adoption of environmentally beneficial efficient electric technologies.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided, they provide a minimum 50- percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy.

Executive Order S-3-05**.** California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following targets:

- By 2010, California shall reduce greenhouse gas emissions to 2000 levels;
- By 2020, California shall reduce greenhouse gas emissions to 1990 levels.
- By 2050, California shall reduce greenhouse gas emissions to 80 percent below 1990 levels.

The executive order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

Executive Order S-01-07**.** Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009, CARB approved the proposed regulation to implement the low carbon fuel standard. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 million metric tons (MMT) per year by 2020. The low carbon fuel standard is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded," with more reductions required in the last five years, than the first five years. This schedule

allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug- in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

SB 97. Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Resource Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance are provided and no specific mitigation measures are identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

AB 32**.** The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. ARB is the state agency charged with monitoring and regulating sources of greenhouse gases. AB 32 states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB Board approved the 1990 greenhouse gas emissions level of 427 million metric tons of carbon dioxide equivalent ($MTCO_2e$) on December 6, 2007 (CARB 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 million $MTCO_2e$. Emissions in 2020 in a "business as usual" scenario are estimated to be 596 million $MTCO_2e$.

Under AB 32, the ARB published its Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California. Discrete early action measures are currently underway or are enforceable by January 1, 2010. The ARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of these early action measures, nine are considered discrete early action measures, as they are regulatory and enforceable by January 1, 2010. The ARB estimates that the 44 recommendations are expected to result in reductions of at least 42 million $MTCO_2e$ by 2020, representing approximately 25 percent of the 2020 target.

The ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 (CARB 2008). The Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 greenhouse gas target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, Including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long- term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. "Capped" strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. "Uncapped" strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional greenhouse gas emission reductions.

The 2022 Scoping Plan was adopted by CARB in November 2022 and expands upon earlier plans with a target of reducing GHG emissions to 85 percent below 1990 levels by 2045.

Senate Bill 100**.** Senate Bill 100 (SB 100) requires 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 was adopted September 2018.

The interim thresholds from prior Senate Bills and Executive Orders would also remain in effect. These include Senate Bill 1078 (SB 1078), which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) which changed the target date to 2010. Executive Order S-14-08, which was signed on November 2008 and expanded the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed the CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

SB 375**.** Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a Sustainable Communities Strategy (SCS) or Alternate Planning Strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's Sustainable Communities Strategy or Alternate Planning Strategy for consistency with its assigned targets.

The Proposed Project is located within the Southern California Association of Governments (SCAG), which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 13 percent below 2005 per capita GHG emissions levels by 2035. On April 4, 2024, SCAG adopted the 2024-2050 RTP/SCS, which meets the CARB emission reduction requirements.

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, new provisions of CEQA would incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as "transit priority projects."

Assembly Bill 939 and Senate Bill 1374**.** Assembly Bill 939 (AB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

Executive Order S-13-08**.** Executive Order S-13-08 indicates that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resource Agency 2009) was adopted, which is the "… first statewide, multi-sector, region-specific, and information-based climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15**.** Executive Order B-30-15, establishing a new interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030, was signed by Governor Brown in April 2015.

Executive Order B-29-15**.** Executive Order B-29-15, mandates a statewide 25 percent reduction in potable water usage and was signed into law on April 1, 2015.

Executive Order B-37-16. Executive Order B-37-16, continuing the State's adopted water reduction, was signed into law on May 9, 2016. The water reduction builds off the mandatory 25 percent reduction called for in EO B-29-15.

Regional

The Project is within the South Coast Air Basin, which is under the jurisdiction of the SCAQMD. SCAQMD Regulation XXVII currently includes three rules:

- The purpose of Rule 2700 is to define terms and post global warming potentials.
- The purpose of Rule 2701, SoCal Climate Solutions Exchange, is to establish a voluntary program to encourage, quantify, and certify voluntary, high quality certified greenhouse gas emission reductions in the SCAQMD.
- Rule 2702, Greenhouse Gas Reduction Program, was adopted on February 6, 2009. The purpose of this rule is to create a Greenhouse Gas Reduction Program for greenhouse gas emission reductions in the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

SCAQMD Threshold Development

The SCAQMD has established recommended significance thresholds for greenhouse gases for local lead agency consideration ("SCAQMD draft local agency threshold"). SCAQMD has published a five-tiered draft GHG threshold which includes a 10,000 metric ton of CO_2e per year for stationary/industrial sources and 3,000 metric tons of CO_2e per year significance threshold for residential/commercial projects. Tier 3 is anticipated to be the primary tier by which the SCAQMD will determine significance for projects. The Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90-precent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to CEQA analysis. The 90-percent capture rate GHG significance screening level in Tier 3 for stationary sources was derived using the SCAQMD's annual Emissions Reporting Program.

The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.

- Tier 2 consists of determining whether or not the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose but must be consistent. A project's construction emissions are averaged over 30 years and are added to a project's operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant:
    - All land use types: 3,000 $MTCO_2e$ per year
    - Based on land use types: residential is 3,500 $MTCO_2e$ per year; commercial is 1,400 $MTCO_2e$ per year; mixed use is 3,000 $MTCO_2e$ per year; and industrial is 10,000 $MTCO_2e$ per year
- Tier 4 has the following options:
    - Option 1: Reduce emissions from business as usual by a certain percentage; this percentage is currently undefined
    - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
    - Option 3: Year 2020 target for service populations (SP), which includes residents and employees: 4.8 $MTCO_2e$/SP/year for projects and 6.6 $MTCO_2e$/SP/year for plans;
    - Option 3, 2035 target: 3.0 $MTCO_2e$/SP/year for projects and 4.1 $MTCO_2e$/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

WRCOG Subregional Climate Action Plan

The City of San Jacinto is part of the Western Riverside Council of Government (WRCOG). The WRCOG adopted the WRCOG Subregional Climate Action Plan (CAP) in September 2014. Twelve cities in the subregion joined efforts to develop the Subregional CAP, which set forth a subregional emissions reduction target, emissions reduction measures, and action steps to assist each community to demonstrate consistency with California's Global Warming Solutions Act of 2006 (AB 32). The CAP consists of an emissions reduction target of 15 percent below 2010 levels by 2020, and 49 percent below 2010 levels by 2035. As indicated in the CAP the emission reduction target of 15 percent from 2010 levels equates to a GHG emissions reduction of nearly 2,330,647 metric tons below business-as-usual (BAU) conditions by 2020. In order to reach these goals, the CAP provides feasible strategies, while affording its communities other economic and environmental benefits.

Therefore, to determine whether the Project's GHG emissions are significant, this analysis uses the WRCOG CAP.

The Project will be subject to the latest requirements of the California Green Building and Title 24 Energy Efficiency Standards (currently 2022) which would reduce project-related greenhouse gas emissions.

Significance Criteria

To determine if a project would have a significant impact on greenhouse gases, the type, level, and impact of emissions generated by the project must be evaluated. The following greenhouse gas significance thresholds are contained in Appendix G of the CEQA Guidelines, and a significant impact would occur if the project would:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

However, despite this, currently neither the CEQA statutes, the OPR guidelines, nor the draft proposed changes to the CEQA Guidelines prescribe thresholds of significance or a particular methodology for performing an impact analysis; as with most environmental topics, significance criteria are left to the judgment and discretion of the Lead Agency. The SCAQMD has adopted draft interim thresholds. The Project was compared to the Tier 4 per service population threshold, interpolated for opening year 2027 at 3.96 $MTCO_2e$ per year per service population. The Project was also compared to the goals of the WRCOG CAP for this analysis.

4.8.3 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction GHG Impact

Less Than Significant Impact. The greenhouse gas emissions from Project construction equipment and worker vehicles are shown in **Table 21: *Construction Greenhouse Gas Emissions***. The emissions are from all phases of construction. The total construction emissions amortized over a period of 30 years are estimated at 97.95 metric tons of CO_2e per year. Annual CalEEMod output calculations are provided in **Appendix A-1**.

Table 21: Construction Greenhouse Gas Emissions

Activity	Emissions ($MTCO_2e$)[1]		
	Onsite	Offsite	Total
Demolition	46.80	13.52	60.32
Site Preparation	96.40	4.23	100.63
Grading	330.00	1,050.30	1,380.30
Building Construction	545.00	765.30	1,310.30
Paving	51.60	22.32	73.92
Coating	3.39	9.74	13.13
Total	1,073.19	1,865.41	2,938.60
Averaged over 30 years[2]	35.77	62.18	97.95

Notes:

1. $MTCO_2e$=metric tons of carbon dioxide equivalents (includes carbon dioxide, methane and nitrous oxide).
2. The emissions are averaged over 30 years because the average is added to the operational emissions, pursuant to SCAQMD.

* CalEEMod output (Appendix A)

Operational GHG Impact

Operational emissions occur over the life of the Proposed Project. The operational emissions for the Project are 5,354 metric tons of CO2e per year or 3.957 metric tons of CO2e per service population as shown in **Table 22: *Opening Year Unmitigated Project-Related Greenhouse Gas Emissions***. The Project would be below the 2027 interpolated SCAQMD threshold of 3.96 metric tons of CO2e per service population, and therefore the Project would have a less than significant impact.

Table 22: Opening Year Unmitigated Project-Related Greenhouse Gas Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year)[1]						
	Bio-CO2	**Non Bio-CO_2**	**CO_2**	**CH_4**	**N_2O**	**R**	**CO_2e**
Area Sources[2]	0.00	7.21	7.21	0.00	0.00	0.00	7.23
Energy Usage[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources[4]	0.00	4,873.00	4,873.00	0.21	0.23	6.35	4,954.00
Solid Waste[5]	34.20	0.00	34.20	3.42	0.00	0.00	120.00
Water[6]	5.41	150.00	155.41	0.56	0.01	0.00	174.00
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.97	0.97
Construction[7]	0.00	95.24	95.24	0.00	0.01	0.07	97.95
Total Emissions	39.61	5,124.01	5,163.62	4.19	0.25	7.39	5,354.15
Service Population							1,353
Total Emissions per Service Population (MTCO2e/yr/SP)							3.957
2027 Interpolated SCAQMD Threshold (MTCO2e/yr/SP)							3.960
Exceeds Threshold?							No

Notes:
1 Source: CalEEMod Version 2022.1.1.22
2 Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
3 Energy usage consist of GHG emissions from electricity and natural gas usage.
4 Mobile sources consist of GHG emissions from vehicles.
5 Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
6 Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
7 Construction GHG emissions based on a 30-year amortization rate.

b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. The proposed Project would have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. The City of San Jacinto is participating the WRCOG Subregional Climate Action Plan. The WRCOG Subregional CAP establishes a community-wide emissions reduction target of 15 percent below 2010, following guidance from CARB and the Governor's Office of Planning and Research. CARB and the California Attorney General have determined this approach to be consistent with the state-wide AB 32 goal of reducing emissions to 1990 levels.

As shown in **Table 23: *Applicable WRCPG Subregional CAP Local Reduction Measure Project Comparison***, below, the Project is consistent with applicable local reduction measures identified in the WRCOG Subregional CAP and would result in a less than significant impact.

Table 23: Applicable WRCPG Subregional CAP Local Reduction Measure Project Comparison

WRCOG Local Reduction Measure	Measure Description	Project Compliance with Measure
E-1: Energy Action Plan	Improve municipal and community wide energy efficiency and reduce energy consumption through the adoption of local Energy Action Plans (EAP).	Not directly applicable to the Proposed Project; however, the Proposed Project will be compliant with the current Title 24 standards, including solar PV installations.
E-3: Shade Trees	Strategically plant trees to reduce the urban heat island effect.	The Proposed Project is to include trees per City requirements for new developments.
T-2: Bicycle Parking	Provide additional options for bicycle parking.	The Proposed Project will follow City requirements for bicycle parking.
T-8: Density	Improve jobs-housing balance and reduce vehicle miles traveled by increasing household and employment densities.	The Proposed Project is residential and located within 0.5 miles of a multiple schools and commercial uses.
T-10: Design/Site Planning	Design neighborhoods and sites to reduce VMT.	The Proposed Project is residential and located within 0.5 miles of a multiple schools and commercial uses.
T-14: Voluntary Transportation Demand Management	Reduce demand for roadway travel through incentives for alternative modes of transportation and disincentives for driving	The Proposed Project is residential and located within 0.5 mile of a multiple schools and commercial uses.
SW-1: Yard Waste Collection	Provide green waste collection bins community-wide.	The Proposed Project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.
SW-2: Food Scrap and Paper Division	Divert food and paper waste from landfills by implementing collection system.	The Proposed Project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.

Source: Appendix A-1

CARB Scoping Plan Consistency

The ARB Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (CARB 2008). The measures in the Scoping Plan have been in place since 2012.

This Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

In May 2014, CARB released its First Update to the Climate Change Scoping Plan (CARB 2014). This Update identifies the next steps for California's leadership on climate change. While California

continues on its path to meet the near-term 2020 greenhouse gas limit, it must also set a clear path toward long-term, deep GHG emission reductions. This report highlights California's success to date in reducing its GHG emissions and lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.

In November 2017, CARB release the 2017 Scoping Plan. This Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals, and includes a description of a suite of specific actions to meet the State's 2030 GHG limit. In addition, Chapter 4 provides a broader description of the many actions and proposals being explored across the sectors, including the natural resources sector, to achieve the State's mid and long-term climate goals.

Guided by legislative direction, the actions identified in the 2017 Scoping Plan reduce overall GHG emissions in California and deliver policy signals that will continue to drive investment and certainty in a low carbon economy. The 2017 Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and Trade Program, which constrains and reduces emissions at covered sources.

As the latest, 2022 Scoping Plan builds upon previous versions, project consistency with applicable strategies of both the 2008 and 2017 Plan are assessed in Table 24. As shown in **Table 24: *Project Consistency with CARB Scoping Plan Policies and Measures***, the Project is consistent with the applicable strategies and would result in a less than significant impact.

Therefore, the Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Furthermore, the Project will also comply with applicable Green Building Standards and City of San Jacinto's policies regarding sustainability (as dictated by the City's General Plan). With incorporation of regulatory compliance and credit for reductions due to CAPCOA location-based efficiency measures, impacts are considered to be less than significant, further analysis is not warranted.

Table 24: Project Consistency with CARB Scoping Plan Policies and Measures

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	**Consistent.** These are CARB enforced standards; vehicles that access the Project that are required to comply with the standards would comply with the strategy.
Energy Efficiency – Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	**Consistent.** The Project would be compliant with the current Title 24 standards.

Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard.	**Consistent.** These are CARB enforced standards; vehicles that access the Project that are **required** to comply with the standards would comply with the strategy.
Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures.	**Consistent.** These are CARB enforced standards; vehicles that access the Project that are required to comply with the standards would comply with the strategy.
Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures.	**Consistent.** These are CARB enforced standards; vehicles that access the Project that are required to comply with the standards would comply with the strategy.
Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Consistent.** The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that are mandatory in the 2022 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The Project would be subject to these mandatory standards.
High Global Warming Potential Gases – Adopt measures to reduce high global warming potential gases.	**Consistent.** CARB identified five measures that reduce HFC emissions from vehicular and commercial refrigeration systems; vehicles that access the Project that are required to comply with the measures will comply with the strategy.
Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	**Consistent.** The state is currently developing a regulation to reduce methane emissions from municipal solid waste landfills. The Proposed Project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.
Water – Continue efficiency programs and use cleaner energy sources to move and treat water.	**Consistent.** The Project would comply with all applicable City ordinances and CAL Green requirements.
2017 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	**Project Compliance with Recommended Action**
Implement Mobile Source Strategy: Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Car regulations.	**Consistent.** These are CARB enforced standards; vehicles that access the Project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025 and at least 4.2 million zero emission and plug-in hybrid light- duty electric vehicles by 2030.	**Consistent.** These are CARB enforced standards; vehicles that access the Project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero- emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard.	**Consistent.** These are CARB enforced standards; vehicles that access the Project that are required to comply with the standards will comply with the strategy.

Implement Mobile Source Strategy: Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3-7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.	**Consistent.** These are CARB enforced standards; vehicles that access the Project that are required to comply with the standards will comply with the strategy.
Implement SB 350 by 2030: Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.	**Consistent.** The Project will be compliant with the current Title 24 standards.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	**Consistent.** The Project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.

Source: Appendix A-1

The Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment and would be consistent with the GHG reduction policies adopted in the WRCOG CAP and consequently would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The impact would be less than significant, and no mitigation is required.

4.8.4 Mitigation Measures

No mitigation measures associated with impacts to Greenhouse Gas apply to the Proposed Project.

4.8.5 Conclusion

Potential impacts of the Proposed Project associated with Greenhouse Gas Emissions would be less than significant, and no mitigation would be required.

4.9 Hazards and Hazardous Materials

Information and analysis in this section is derived from the documents incorporated by reference as identified in Section 1.3 of this document and from the Project-specific Phase I Environmental Site Assessment (Phase I ESA) prepared by Partner Engineering and Science Inc., dated September 30, 2024 and included as **Appendix E**.

4.9.1 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard or excessive noise to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?				X

Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact. Demolition and construction activities for the proposed Project would involve the use of chemical substances such as solvents, paints, fuel for equipment, and other potentially hazardous materials. Hazards to the environment or the public would typically occur with the transport, use, storage, or disposal of hazardous materials. Demolition and construction activities would be relatively short-term and the transport, use, and disposal of hazardous materials as part of

these activities would utilize small quantities and be temporary. The contractor would be required to comply with existing regulations for the transport, use, storage, and disposal of hazardous materials to prevent public safety hazards. These regulations include the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, California Hazardous Waste Control Act, and California Accidental Release Prevention Program, among others.

Long-term Project operation is not expected to involve the routine transport, use, or disposal of hazardous materials in quantities or conditions that would pose a hazard to public health and safety or the environment. No industrial uses or facilities are proposed that might be associated with such routine use, transport, or disposal of such materials. Proposed residential operations would involve the use of cleaning products and occasional use of pesticides and herbicides for landscape maintenance. These materials are common for general maintenance and would not be stored in large quantities that pose a significant health hazard to the public or environment. Therefore, potential impacts would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant With Mitigation Incorporated. As discussed in the Phase I ESA, review of historic sources indicates the site has been used for agricultural purposes since the early 1930s. The Proposed Project Site was initially developed with an ostrich farm and residence which operated as such until the 1940s. The Proposed Project Site was occupied by a cattle ranch between the 1940s until 1976 when Chacon Farms purchased the Proposed Project Site. Operations at Chacon Farms included cattle farming; cultivation of onions, hay, banana squash, carrots, and potatoes; and onion processing and packaging. Formal operation of Chacon Farms concluded in circa 1995 and the agricultural portion of the Proposed Project Site has been leased to various tenant farmers since then and up to the present. Bruno Ranches is the current tenant farmer leasing the agricultural portion of the Proposed Project Site, which cultivates a "Roundup ready" strain of alfalfa not requiring application of pesticides **Appendix E**).

The objective of a Phase I ESA is to identify the presence of Recognized Environmental Conditions (RECs), defined by the American Society for Testing and Materials as: The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property 1) due to any release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions which pose a material threat of future release to the environment. As stated above, agricultural chemicals such as pesticides and fertilizers have likely been applied to crops grown on the Proposed Project Site. However, the Phase I ESA does not consider the legal application of agricultural chemicals as an REC, since agricultural chemicals in use today are typically regulated by State or local agencies and experience with surface soil sampling and analysis from properties with similar agricultural histories has typically revealed non-detectable or very low concentrations of environmentally persistent agricultural chemicals. In addition, the Phase I ESA notes that no specific areas of concern (e.g. product mishandling, releases, spills, incidents, etc.) related to agricultural chemical storage and use at the Proposed Project Site were identified. Based on the continued use of the Proposed Project Site for agricultural purposes and the absence of specific areas of concern associated with agricultural chemical storage and use, the current and historical agricultural use of the Proposed Project Site is not expected to represent a significant environmental concern (**Appendix E**).

During site reconnaissance, hydraulic oil, propane, and gasoline tanks were found on-site. However, the materials were found to be properly labeled and stored with no signs of leaks, stains, or spills. Based on the nature of use and overall small quantities and lack of violations on-file with the local health department, these materials are not expected to represent a significant environmental concern. Three 250-gallon diesel aboveground storage tanks (ASTs) were also observed stored atop a truck bed

parked east of the barns. The ASTs were not in use and do not appear to have been used in the last decade or more. No evidence of leakage, surface staining, or petroleum hydrocarbon odors was identified in the area of the ASTs. Based on the absence of evidence of a release, the presence of the ASTs on the Proposed Project Site is not expected to represent a significant environmental concern at this time.

Due to the age of the residential building on-site, which was constructed in 1946, there is potential for Asbestos-Containing Materials (ACMs) and Lead Based Paint to be present. Interior and exterior painted surfaces were observed in good condition and therefore not expected to represent a hazard. As such, the Project would implement **Mitigation Measure HAZ-1**, which would require a comprehensive survey prior to the disturbance of any suspect ACMs to determine if the subject materials are regulated. If such materials are identified and need to be disturbed, repaired, or removed, a licensed abatement contractor should be consulted further.

Additionally, due to the historical presence of cattle farming on-site, the Project would be required to conduct methane testing prior to the issuance of building permits to reduce concentration of methane to an acceptable level if found on-site. Therefore, with implementation of **Mitigation Measure HAZ-2**, the Project would result in less than significant impacts related to methane.

Overall, the Phase I ESA did not identify evidence of RECs, Controlled Recognized Environmental Conditions (CRECs) or Historical Recognized Environmental Conditions (HRECs) at the Proposed Project Site. With implementation of Mitigation Measure HAZ-1 and Mitigation Measure HAZ-2, Project impacts related to creation of a significant hazard to the public involving release of hazards into the environment would be less than significant.

c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Less Than Significant Impact. The nearest school to the Proposed Project Site is Tahquitz High School, located approximately 0.27 mile south of the most southern Project boundary. As stated above, hazardous materials used during temporary construction activities and residential occupation would be common in type and of low-concentration properties. Therefore, the potential impacts associated with the transport and use of hazardous materials during construction and operations would be less than significant, and no mitigation is required.

D) *Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

No Impact. Government Code Section §65962.5(a)(1) requires that Department of Toxic Substance Control (DTSC) "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: (1) all hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code ("HSC")." The hazardous waste facilities identified in HSC Section 25187.5 are those where DTSC has taken or contracted for corrective action because a facility owner/operator has failed to comply with a date for taking corrective action in an order issued under HSC Section 25187, or because DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment. This is known as the "Cortese List." This is a very small and specific subgroup of facilities and they are not separately posted on the DTSC or Cal/EPA's website. The following databases that meet the "Cortese List" requirements were reviewed for this Project.

Envirostore Database. There are no sites listed in the Envirostore Database within 1,000 feet of the Proposed Project Site.

Geotracker Database. Geotracker is the SWRCB's database that manages potential hazardous sites to groundwater. There are no sites listed in the Geotracker Database within 1,000 feet of the Proposed Project Site.

There are no sites within or near the Proposed Project Site identified on the Hazardous Waste and Substances List (also called the Cortese List) compiled by the California Environmental Protection Agency pursuant to Section 65962.5 of the California Government Code. There would be no impact related to identification on the Cortese List such that a significant hazard to the public or the environment would occur during construction or operation of the Project. No impacts related to known hazardous materials sites would occur, and no mitigation is required.

e) For a project located within an airport land use plan or, where such a plan had not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The Proposed Project Site is not located within an adopted Airport Land Use Plan or in the vicinity of a private airstrip, heliport, or helistop. The nearest airport is the Hemet-Ryan Airport, located approximately 2.5 miles south of the Proposed Project Site. The Project would be located outside the airport influence area and would not expose additional people to safety hazards related to airport operations. Implementation of the proposed Project would not impact the airport facilities or their operation; no mitigation would be required.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. According to the City General Plan Public Safety Element, the City supports a high level of multi-jurisdictional cooperation and communication for emergency planning and response management. Major arterials serve as the primary routes for evacuation; however, evacuation routes will depend upon the emergency event and area affected. Law enforcement would identify the appropriate routes and assist residents leaving the City in the event an evacuation of all or part of the City is required (San Jacinto 2022a). In addition, the City prepared an analysis, referred to as a White Paper, consistent with Senate Bill 99 to identify residential developments in hazard areas that do not have at least two emergency evacuation routes. According to the White Paper, the Arterials within the Project area include Cawston Avenue, Esplanade Avenue, and Seventh Street. The Proposed Project Site is located within an area identified as one exit point directly onto a single arterial[4].

During construction activities, the Project may temporarily alter traffic patterns along Cawston Avenue, Esplanade Avenue, and Seventh Street during construction. However, the Project would not completely close the aforementioned streets at any point. The Project would comply with all conditions set forth in the required Project-specific Traffic Control Plan (TCP), which would be reviewed and approved by the City prior to initiation of construction activities. Therefore, with implementation of the required TCP, the temporary closure of a few lanes along Cawston Avenue, Esplanade Avenue, and Seventh Street would not result in a significant interference of emergency access during construction. It is important to note that the Project would be subject to review by the Building Division and Riverside County Fire Department to ensure compliance with building and fire codes. The Project would not work within the public right-of-way without undergoing proper review through the Engineering department, which would require an Encroachment Permit. Therefore, the Project would have less than significant impacts regarding interference with emergency response or evacuation plans during construction, and no mitigation is required.

4 2022c (July). Public Review Draft Environmental Impact Report for the San Jacinto General Plan Update. San Jacinto, CA: City of. https://drive.google.com/file/d/12Vj9c-gjvsqypdwprdq_9OCvIt8OCksM/view?pli=1.

In the long-term, the Project would continue to provide access from Cawston Avenue, Seventh Street, and West Esplanade Avenue The proposed internal street system is primarily comprised of the main north/south road running through the center of the site, local roads, and alleys, as shown in **Appendix I**, Sheets 2 through 4. No unusual circumstances are present or proposed for permanent occupation of the Proposed Project Site that are anticipated to conflict with the City's Public Safety Element. In the event evacuation is required, law enforcement would identify and direct traffic to designated emergency evacuation routes. Residents of the Project would be expected to comply with the City's emergency response plans. Therefore, the Project would have less than significant impacts regarding interference with emergency response or evacuation plans during construction and operation, and no mitigation is required.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The Proposed Project Site is not located within a Fire Hazard Severity Zone (FHSZ) in a State Responsibility Area (SRA) (CAL FIRE 2023) or within a Very High Fire Hazard Severity Zone (VHFHSZ) in a Local Responsibility Area (LRA)[5]. The Proposed Project Site is also located within a relatively flat area of the City, surrounded by a mix of residential and rural residential development. The Project would also be required to adhere to construction provisions as provided in the SJMC, the CBC and California Fire Code. Implementation of the Project would not expose people or structures directly or indirectly to a significant risk of loss or death associated wildland fires. Therefore, risk of exposure is considered negligible, and no impacts are anticipated. No mitigation is required.

4.9.2 Mitigation Measures

HAZ-1 Prior to the disturbance of any suspect Asbestos Containing Materials (ACMs) during construction or demolition activities at the Proposed Project Site, a comprehensive survey shall be required to sample materials on-site and confirm the presence or absence of ACMs. If such materials are identified and need to be disturbed, repaired, or removed, a licensed abatement contractor shall be consulted further.

HAZ-2 Prior to the issuance of building permits, methane testing shall be conducted by a licensed engineer, geologist, or registered environmental assessor, and as necessary, shall include measures to reduce concentrations of methane to an acceptable level.

4.9.3 Conclusion

Implementation of **Mitigation Measures HAZ-1** and **HAZ-2**, would reduce potential impacts of the Proposed Project associated with Hazards and Hazardous Materials to less than significant.

5 Fire Hazard Severity Zones Viewer. Sacramento, CA: CAL FIRE. https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008, accessed November 10, 2024.

4.10 Hydrology and Water Quality

Information and analysis in this section is derived from the documents incorporated by reference as identified in Section 1.3 of this document and from the Project-specific Preliminary Hydrology Study (**Appendix F-1 - *Preliminary Hydrology Study for Tentative Tract 39076, Blaine A Womer Civil Engineering*, October 27, 2024, (Revised July 14, 2025)** as well as the Project-specific Water Quality Management Plan (WQMP) (**Appendix F-2** - ***Project Specific Water Quality Management Plan, Blaine Womer Civil Engineering*** **October 30, 2024).**

4.10.1 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:				
• result in substantial erosion or siltation onsite or offsite;			X	
• substantially increase the rate or amount of surface water runoff in a manner which would result in flooding on or offsite;			X	
• create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
•impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Discussion

a) Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact.

Construction

During construction, the Project has the potential to result in short-term construction impacts to surface water quality from demolition, grading, and construction-related activities. Stormwater runoff from the construction site could contain loose soils, organic matter, and sediments. Spills or leaks from heavy equipment and machinery, such as fuel, oil, and grease, and heavy metals, could also enter the runoff. Building construction would involve the use of hazardous materials (e.g., paints, solvents, cleansers) that, if not properly handled, may enter the stormwater runoff. The Clean Water Act establishes a framework for regulating potential water quality impacts from construction activities, as well as new development and major redevelopment, through the NPDES program. Construction activities that disturb one acre or more of land are required to obtain an NPDES permit or coverage under the NPDES Construction General Permit, which requires the development and implementation of an SWPPP. The SWPPP would identify BMPs to minimize degraded surface water runoff impacts, such as provision of sandbags/silt fencing for sediment control, vehicle and equipment washing for non-storm water discharge control, and site watering for dust/erosion control. The Project would be required to comply with the NPDES short-term regulatory requirements, including preparation of a SWPPP and implementation of BMPs, which would reduce potential short-term construction related impacts to water quality to less than significant. No mitigation would be required.

Operations

Stormwater pollutants generated by Project operation would include sediment; trash and debris; oil and grease; bacterial indicators; nutrients; and pesticides, which may originate from landscaped areas, drive aisles, parking areas, and outdoor residential activities. In accordance with the NPDES program, a Project-specific Preliminary WQMP (included as **Appendix F-2**) has been prepared for the Project in compliance with the City of San Jacinto Ordinance 13.44.

The proposed impervious area, post-development, will be 1,719,665 SF. The impervious areas consist of roofs, asphalt, concrete, concrete sidewalks, and driveways. The natural drainage pattern for the property is northwest. Project grading has been primarily designed to honor the natural drainage pattern. Individual lots will drain via vegetated swales to the transferring streets. Street drainage is directed to three onsite bioretention basins for treatment.

The Proposed Project Site will be developed with associated improvements, including improved streets and graded slopes. The runoff from the developed condition would be collected into an on-site storm drain system, which includes three bioretention water quality basins and flows to a larger stormwater retention basin located in the northwest corner of the Proposed Project Site. The larger stormwater basin also includes a bioretention water quality basin as well. A submerged pump would be installed at the north side of the basin to send the treated stormwater into Cawston Avenue where water would be conveyed west and off-site and continue down Seventh Street via roadside swale or gutter flow and into the existing City stormwater system, as under existing conditions.

The Project-specific Preliminary WQMP is subject to City review and approval prior to construction and operation of the Project; therefore, with the implementation of the biotreatment BMPs, the Project would not result in significant soil, surface water, or groundwater contamination. Impacts would be less than significant, and no mitigation is required.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. The Proposed Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede

sustainable groundwater management of the basin. The Proposed Project would not utilize any wells for domestic water, nor does the Project propose to drill any wells to supply water to the Project. All of the Project's stormwater would infiltrate into the groundwater basin, which would serve to enhance the basin's supply.

The Eastern Municipal Water District (EMWD), the Project's water supplier, receives its supply from recycled water, potable groundwater, and desalinated groundwater. EMWD has groundwater wells in two groundwater management areas and works with other stakeholders to protect the quality and integrity of the groundwater basins. EMWD receives imported water from the Metropolitan Water District of Southern California (Metropolitan). About half of the water used in EMWD's service area is imported by Metropolitan. Through the implementation of local supply projects and increased water use efficiency, EMWD has been able to maintain a balance of local and imported water even as new connections have been added.[6]

The EMWD's 2020 Urban Water Management Plan (UWMP) identifies sufficient water resources to meet demand in its service area. The total retail water supply for EMWD in 2020 for retail customers, was 124,314 acre- feet per year (AFY) inclusive of both potable and recycled water, while the demand for both potable and recycled water was 115,916 AFY. According to EMWD, single-family uses accounted for 61.6% of the overall potable water demand in 2020, equal to 52,162 AFY. EMWD served a population of 603,950 persons in 2015, given that the average household size in the City of San Jacinto is 3.45 persons (according to the EMWD UWMP which utilized SCAG 2020 Local Profile for the City of San Jacinto), the Proposed Project is anticipated to house a population of approximately 1,445 persons. According to EMWD's UWMP, EMWD's actual 2020 per capita use is 125 gallons per capita per day (GPCD). Based on the above, the population generated by the Proposed Project would demand 180,625 gallons per day (GPD)(419 x 125 = 180,625 GPD per person) equal to approximately 202 AFY of water from EMWD. Based on the projected water demand for single-family residential units within EMWD's retail service area in 2025 at 8,500 AFY, and in 2045 at 10,600 AFY, it is anticipated that the 202 AFY demand by the Proposed Project can be accommodated into the future, particularly given that the overall available total gross water use is anticipated to be 145,930 AFY in 2025, and 187,100 AFY in 2045. The anticipated available water supply within EMWD's retail service area is anticipated to be greater than the demand for water in the future, which indicates that EMWD has available capacity to serve the Proposed Project without significant adverse impacts on area groundwater basins.

Additionally, compliance with Title 24, residences are expected to use less water than existing properties due to the mandated use of high efficiency plumbing fixtures under the CalGreen building standards.

Sustainable Groundwater Plan Compliance

The objective of the Sustainable Groundwater Management Act (SGMA) is sustainable groundwater management in a manner that prevents significant and unreasonable impacts to groundwater basins in California. Under SGMA, each high and medium priority basin, as identified by the California Department of Water Resources (DWR), is required to have a Groundwater Sustainability Agency (GSA) that will be responsible for groundwater management and development of a Groundwater Sustainability Plan (GSP). The EMWD Board of Directors is the GSA for the West San Jacinto Groundwater Basin and is responsible for development and implementation of a GSP.

The San Jacinto Groundwater Basin (Basin) is the source of groundwater production for EMWD and several other water purveyors. EMWD has been actively managing the Basin as part of a voluntary Assembly Bill 3030 effort passed in 1992. EMWD adopted the West San Jacinto Groundwater Basin

[6] Eastern Municipal Water District, 2020 Urban Water Management Plan, July 1, 2023.

Management Plan in 1995. Subsequently, EMWD's Board of Directors became the exclusive GSA for the western portion of the San Jacinto Groundwater Basin (West San Jacinto GSA) on April 24, 2017.

The San Jacinto Groundwater Basin is deemed a high priority basin, but not critically overdrafted, by DWR, and the GSA was required to develop by 2022 and implement by 2042 a Groundwater Sustainability Plan (GSP).

The GSP was approved by DWR in 2023. The GSP documents basin conditions and ongoing basin management practices to maintain sustainability.

Therefore, the Proposed Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. As such, the impacts are less than significant, and no mitigation is required.

b) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:

- *result in substantial erosion or siltation onsite or offsite;*

  Less Than Significant Impact. As indicated above, the Project would be required to comply with all BMPs as outlined in the WQMP, which was prepared in compliance with the NPDES program. Compliance with the WQMP would provide erosion control, sediment control, tracking, waste management, and construction site maintenance BMPs to reduce the potential for soil and wind erosion during construction activities. With compliance with the required WQMP and BMPs, construction-related erosion would be less than significant, and no mitigation is required.

  Additionally, the Project has been designed to maintain a similar drainage pattern on-site during Project operation and the increase in development would likewise increase the amount of impervious surface area and subsequently reduce the areas that would be subject to erosion or siltation. Pervious surface areas would be landscaped. As such, the Project would not result in substantial erosion or siltation during construction or operations. Impacts related to erosion would be less than significant, and no mitigation is required.

- *substantially increase the rate or amount of surface water runoff in a manner which would result in flooding on or offsite;*

- *create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*

  Less Than Significant Impact.

The development of the Project site will result in an increased area of impervious surfaces, including roofs, asphalt, concrete, sidewalks, and driveways. The property's natural drainage pattern directs flow toward the northwest, and this orientation has been incorporated into the project's grading design. Each lot will drain through vegetated swales to the adjacent streets. Stormwater from the streets will be conveyed to onsite bioretention basins for preliminary treatment. Should the volume of stormwater exceed basin capacity, excess runoff will be managed by an onsite storm drain system, which will divert additional flow to a retention basin located at the northwest corner of the property.

The stormwater retention basin described above has been designed to address the incremental increase in runoff volume resulting from development for the 100-year, 24-hour storm event. Any runoff exceeding the mitigation volume will be conveyed to Seventh Street via a curb outlet structure. Subsequently, the stormwater will travel approximately 1,786 feet west through a force main line to

an existing catch basin. The construction of the force main line will occur within the area designated for street improvements along Seventh Street, as established by Tract No. 32955 and addressed in the CEQA documentation approved for that project.

As such, the Project would not exceed the capacity of planned stormwater drainage and impacts would be less than significant. No mitigation is required.

- *impede or redirect flood flows?*

  Less Than Significant Impact. The Federal Emergency Management Agency (FEMA) has prepared flood insurance rate maps for use in administering the National Flood Insurance Program. According to the FEMA flood map, the Proposed Project Site is located in the Zone X, area of minimal flood hazard, located outside the 100-year and 500-year flood plains (Partner 2020). As stated above, stormwater runoff would be conveyed to the proposed storm drain system and flow towards the northwestern corner of the Proposed Project Site, similar to existing conditions. A stormwater detention basin would also be constructed to retain stormwater flows, which would reduce the potential for flooding to occur as a result of the Project. Additionally, the Project would implement all recommendations contained in the WQMP, including temporary and permanent erosion control BMPs. Thus, the Project would not impede or redirect flood flows. Project impacts would be less than significant, and no mitigation is required.

D) Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. A tsunami is a series of long period waves generated in the ocean by a sudden displacement of large volumes of water. Causes of tsunamis include underwater earthquakes, volcanic eruptions, or offshore slope failures. The primary cause for locally generated tsunamis offshore southern California is tectonic deformation from large seismic events. The Proposed Project Site is located approximately 40 miles from the nearest coastline, and at an elevation of more than 1,500 feet AMSL, the Project would have no impact associated with tsunamis. A seiche is a run-up of water within a lake or embayment triggered by fault- or landslide-induced ground displacement. The Proposed Project Site is not located adjacent to a body of water; therefore, the Project would have no impact associated with seiche. In addition, the Proposed Project Site is not located within an area mapped as a designated flood hazard zone as discussed previously and would not create a risk of pollutants due to inundation. Therefore, no impacts related to flood hazard, tsunami, and seiche are anticipated, and no mitigation is required.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The Project Site is underlain by the San Jacinto Groundwater Basin (SJGB) within the Hemet-San Jacinto Watermaster Management Area, which consists of a Groundwater Sustainability Plan (GSP) developed by the EMWD in compliance with the Sustainable Groundwater Management Act. The purpose of the GSP is to define the groundwater conditions that will be used to ensure ongoing, long-term, sustainable management of the groundwater resources within the Plan Area. The groundwater resources of the SJGB support domestic, agricultural, municipal, industrial, and environmental uses. Long-term sustainable management includes maintaining sufficient groundwater in storage, protecting municipal and domestic supplies of fresh groundwater, avoiding subsidence related to groundwater production, and ensuring groundwater production does not result in significant and unreasonable loss of groundwater dependent ecosystems[7]. The proposed Project is consistent with

7 Groundwater Sustainability Plan, for the San Jacinto Groundwater Basin. Perris, CA: EMWD. https://sgma.water.ca.gov/portal/gsp/preview/71, accessed 11/10/24.

the City of San Jacinto General Plan with approval of the proposed General Plan Amendment, and the water demands for the Project are accounted for in the City Urban Water Management Plan (UWMP) which includes available groundwater supplies. As the Project would not involve direct or indirect withdrawals of groundwater, it would not deplete groundwater supplies or interfere substantially with groundwater recharge and would be consistent with the GSP. Therefore, the proposed Project would not conflict with the SJGB GSP.

In addition, the Project would not conflict or obstruct the County's NPDES program or the City's UWMP. The proposed Project would include an internal stormwater drainage system and detention basin and would not significantly alter drainage patterns on-site. The Project would additionally comply with the WQMP, which includes BMPs that are a part of the proposed Project design and work to ensure the reduction of pollutants from construction and operation activities entering surface waters. Therefore, potential impacts associated with the conflict or obstruction of implementing a water quality control plan or sustainable groundwater management plan would be less than significant, and no mitigation would be required.

4.10.2 Mitigation Measures

No mitigation measures associated with impacts to Hydrology and Water Quality apply to the Proposed Project.

4.10.3 Conclusion

Potential impacts of the Proposed Project associated with Hydrology and Water Quality would be less than significant, and no mitigation would be required.

4.11 Land Use and Planning

Information and analysis in this section is derived from the documents incorporated by reference as identified in Section 1.3 of this document.

4.11.1 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?			X	
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

Discussion

a) Would the project physically divide an established community?

Less Than Significant Impact. One of the primary factors in considering division of an established community is whether the Project would create any physical barriers that change the connectivity between areas of an existing community. The Project vicinity is characterized by a mix of both non-urbanized and urbanized areas. Surrounding land uses include a mix of undeveloped, rural residential, low-density residential, and heavy agriculture uses. The Proposed Project Site is bound by West Seventh Street followed by a single-family residential development and Catalpa Park to the north; West Esplanade Avenue followed by GH Dairy and Ridgely Farms to the south; Cawston Avenue North followed by single-family residences and horse farms/ranches to the east; and mixed-use residential/commercial land to be built out related to the Esplanade Specific Plan to the west.

The Project would replace two existing residential units, which are associated with the existing on-site farm, and existing agricultural operations with the development of a 419-unit residential community. The community would be connected via an internal roadway network gaining access via Cawston Avenue, Seventh Street, and West Esplanade Avenue. Because the Proposed Project Site does not currently provide connectivity between adjacent uses, and on-site land uses would be demolished as part of the Project, development of the Proposed Project Site as a residential community would not divide an established community. Therefore, the Project would not divide an established community. Impacts would be less than significant, and no mitigation is required.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The Project proposes to develop a residential community within the City of San Jacinto. Local plans and programs relevant to the Project and the consistency of the proposed Project with these plans and programs are discussed below.

San Jacinto General Plan

The City General Plan "Envision San Jacinto" provides the vision for how the City will evolve and reflect the community's objectives, including reflecting the current goals and vision expressed by City residents, businesses, decision-makers, and other stakeholders; protecting and enhancing San Jacinto's

unique history and character; promoting San Jacinto as a safe, vibrant, and family friendly community; proactively planning for and accommodate local and regional growth in a responsible manner; encouraging the revitalization of San Jacinto's Main Street and other community activity centers; allowing for a range of housing options; attracting and retaining businesses and industries that provide jobs for local residents; creating a more balanced jobs-housing ratio within the community; continuing to maintain and improve multimodal transportation opportunities; maintaining strong fiscal sustainability and continuing to provide efficient and adequate public services; addressing new requirements of State law; and addressing emerging transportation, housing, and employment trends[8]

The General Plan consists of seven elements, including Land Use, Economic Development, Mobility, Public Safety, Resource Management, Environmental Justice, and Housing Elements. An evaluation of the Project's consistency with applicable goals, policies, and actions of the Land Use Element is provided in following **Table 25: *General Plan Policy Consistency Analysis***.

Table 25: General Plan Policy Consistency Analysis

General Plan Goal	Consistency Analysis
Land Use Element	
Goal LU-2: Managed Growth. A City that manages and directs growth so that the community and its neighborhoods are protected and enhanced.	
Policy LU 2.1: Plan for New Development. Ensure that new development corresponds to the provision of infrastructure, public services and community facilities, and that new development funds and constructs its fair share of improvement in accordance with City requirements.	**Consistent**. The Project would include installation of on-site utilities and infrastructure to serve the needs of the Project and connect to existing utilities and infrastructure in the immediate vicinity. Additionally, the Project would contribute its fair share for two required traffic signals within the area, including approximately 17 percent of the Seventh Street/Lyon Avenue traffic signal cost and 11 percent of the Esplanade Avenue/Kirby Street traffic signal cost in accordance with City requirements.
Policy LU 2.2: Infill Development. Encourage new development to occur in infill locations in a balanced and efficient pattern that reduces sprawl, preserves open space, and creates convenient connections to other land uses and activity centers.	**Consistent**. The Project would replace agricultural uses and two associated residences with a planned community comprised of 419 residences and open space areas including four parks, and a landscaped detention basin. The Proposed Project Site is surrounded by other residential development, farms, and land associated with the Esplanade Specific Plan to be built-out. As such, the Project would not encourage sprawl and would be located adjacent to other land uses.
Goal LU-3: Land Use Compatibility. A community that promotes high-quality development and compatibility with surrounding land uses and major transportation corridors.	
Policy LU 3.1: Surrounding Uses. Consider as part of the development review process the compatibility of new development with surrounding uses and the ability of new development to enhance the character of the surrounding area.	**Consistent**. The Project would develop residential uses in an area already occupied with residential uses and is designed to prevent conflict with adjacent land uses through implementation of setbacks and building configurations in accordance with City requirements. Therefore, the Project would be compatible with surrounding uses and complements the existing development in the area.
Policy LU 3.2: Residential Uses. Require that new residential development be designed to protect residents from potential conflicts with adjacent land	

8 Envision San Jacinto – General Plan 2040. San Jacinto, CA: City of. https://sanjacinto.generalplan.org/

General Plan Goal	Consistency Analysis
uses, and other features including rail corridors, and high-volume roadways.	
Policy LU 3.4: Environmental Compatibility. Limit development in areas subject to severe natural hazards, such as landslides, ground subsidence, liquefaction, and flooding.	**Consistent.** The Proposed Project Site is not located in a landslide, liquefaction, or flood zone, and would therefore limit new development in areas subject to natural hazards.
Policy LU 3.6: Agricultural Compatibility. Ensure that new urban uses that are proposed adjacent to lands designated for agricultural uses include adequate buffers to reduce potential land use conflicts and nuisance impacts to sensitive receptors.	**Consistent.** The Proposed Project Site is designed to be consistent with surrounding agricultural uses and would implement setbacks and building configurations in accordance with City requirements.
Policy LU 3.8: Public Utilities. Ensure land uses and development are compatible with existing and proposed utility facilities including the San Jacinto Wastewater Treatment Facility.	**Consistent**. The Project would be served by existing utilities, including the EMWD for water and wastewater services, the City for storm drain, San Jacinto Power for electricity, SoCalGas for gas, and Frontier/Verizon/AT&T for telecommunications, each of which already provide service in the immediate area. Specifically, related to the San Jacinto Valley Regional Water Reclamation Facility, wastewater capacity would be available to serve the Proposed Project Site, as discussed further in Section 4.19. Utilities and Service Systems.
Goal LU-5: Community Character and Design. A visually attractive community that helps create a unique sense of place.	
Policy LU 5.1: Design Features. Consider as part of the development review process the compatibility of new development with surrounding uses and the ability of new development to enhance the character of the surrounding area.	**Consistent.** The PDP in Appendix I identifies that color and textures would incorporate a diversity of color that fits within the context of the broader community style as well as each individual street. All proposed buildings would have a maximum height of 40 feet and maximum of three stories consistent with the SJMC requirements.
Policy LU 5.2: Standards and Guidelines. Develop and enforce development standards and objective design guidelines that provide clear direction for achieving quality community design in new development and redevelopment projects.	
Policy LU 5.4: Gathering Places. Encourage the provision of both formal and informal public gathering spaces through pedestrian-oriented street design; sidewalk furniture and pedestrian-oriented development; well-designed, multi-use public spaces of different sizes including pocket parks, plazas, monuments, and community events.	**Consistent.** The Project involves the development of a residential community, which would be connected via an internal roadway network. Numerous pedestrian trails and paths would provide access to the range of residential types within the community, as well as four lots to be developed as park space with barbecues and covered picnic shelters, barbecues, and a pickleball court to be located in the northwestern area of the site, all of which would encourage gathering spaces and pedestrian oriented facilities.
Policy LU 5.5: Landscaping. Use landscaping for screening, solar control, parking lot shade, and other beautification purposes throughout the City.	**Consistent.** The Project would provide landscaping onsite, including parks, open space areas, and parkways. Common open space areas would equate to 6.6 acres. Additional open space areas include private backyards for each of the homes. Proposed landscaped types would include various trees and shrubs throughout the entire Proposed Project Site, as

General Plan Goal	Consistency Analysis
	shown in the Preliminary Plant Palette, included as part of the Planned Development Permit in Appendix I.
Policy LU 5.6: Streetscapes. Promote drought tolerant landscaping, tree planting, and tree preservation along City streets as a means of improving aesthetics, making neighborhoods more pedestrian friendly, and providing environmental and economic benefits.	**Consistent.** The Project would provide landscaping onsite, consisting of various trees and shrubs for aesthetic and shade purposes. The Landscape Plan would comply with the San Jacinto Landscape Design Guidelines, which includes an approved plant list. The Landscape Design Guidelines aim to retain the community's rural agricultural roots, and water wise planting (i.e. drought tolerant, native, or low-water plants) is utilized whenever possible. In addition, the Project involves improvements within the public ROW, such as street dedications and improvements, sidewalks and landscaping along West Seventh Street and Cawston Avenue and sidewalks and landscaping along West Esplanade Avenue, which would make the community more pedestrian friendly.
Economic Development Element	
There are no goals or policies in the Economic Development Element that are related to Project implementation.	
Mobility Element	
Goal M-1: Fiscal Diversity and Sustainability. A safe circulation system that meets the needs of existing and future land uses and users of all travel modes.	
Policy M-1.1: Balanced Circulation System. Provide for a balanced circulation system that promotes the safe and efficient movement of people and goods throughout the City.	**Consistent.** The Project would develop a pedestrian oriented residential community through inclusion of multiple open spaces connected by a network of sidewalks paths to enable pedestrian circulation throughout the planned community. The Project would also include pedestrian oriented amenities and provide an interconnected network of thoroughfares which would disperse traffic and ensure safe and efficient movement of people and goods.
Policy M-1.2: Access and Mobility. Strive to maintain sufficient access and mobility for all modes of travel and users of the roadway network.	
Policy M-1.5: Transportation Improvements for All Users. Encourage roadway, sidewalk, and median improvements that enhance the visual character of the roadway system and promote pedestrian and bicycle safety.	**Consistent.** As stated above, the Project includes residential uses and open space areas connected by a network of sidewalks to enable pedestrian circulation throughout the planned community. Roadways and sidewalks would be landscaped to provide a visually appealing environment, as shown in Appendix I. Additionally, the Project would incorporate bicycle parking for each unit within a separate secured garage space and additional parking racks at each guest parking area to promote bicycle and pedestrian use within the area.
Goal M-2: Regional Circulation System. A circulation system that is integrated with the larger regional transportation system to support the economic well-being of the community.	
Policy M-2.1: Regional Agency Coordination. Coordinate with regional transportation agencies, including the California Department of Transportation (Caltrans), the Riverside County Transportation Commission (RCTC), and the Riverside Transit Agency (RTA) to implement roadway improvements that	**Consistent.** The Project involves development of an internal circulation system accessible from Seventh Street, Cawston Avenue, and Esplanade Avenue. No improvements to the circulation system beyond the Project boundaries are proposed or required to ensure a safe and efficient flow of traffic in the area. Additionally, the Project would contribute

General Plan Goal	Consistency Analysis
encourage the safe and efficient flow of traffic within and beyond the City— for example, State Route 79 (SR-79) and Mid County Parkway.	its fair share for two required traffic signals within the area, including approximately 17 percent of the Seventh Street/Lyon Avenue traffic signal cost and 11 percent of the Esplanade Avenue/Kirby Street traffic signal cost in accordance with City requirements.
Goal M-3: Complete Streets. A multi-modal transportation network that provides sufficient vehicular, pedestrian, bike, and transit facilities.	
Policy M-3.4: New Development. Encourage Specific Plans and Planned Developments to include well developed and funded multimodal transportation facilities.	**Consistent.** The Project, which is a planned development, would provide a pedestrian oriented neighborhood and interconnected network of thoroughfares to ensure efficient and safe transportation facilities. The Project would also support bicycle travel through provision of bicycle parking for each unit within a separate secured garage space and additional bicycle parking racks provided at each guest parking area. Refer to Appendix I for further details on the Project layout and circulation system. In addition, the Project would pay fair share fees for required traffic signals within the area.
Goal M-4: Active Transportation. An extensive and regionally linked network of trails, bicycle lanes, and sidewalk paths that encourage active transportation as viable for transportation and recreation.	
Policy M-4.1: Trails Master Plan. Implement applicable goals, policies, and projects from the Trails Master Plan to provide trails and multimodal facilities that support active transportation within and beyond the City.	**Consistent.** As stated above, the Project would provide a pedestrian oriented neighborhood through inclusion of multiple open spaces connected by a network of sidewalks to enable pedestrian circulation throughout the planned community and emphasize active transportation. The Proposed Project Site is also within walking distance of multiple schools in the City, including Catalpa Park, Tahquitz High School, Rancho Viejo Middle School, and Megan Cope Elementary School. The Project would incorporate bicycle parking for each unit within a separate secured garage space and additional parking racks would be provided at each guest parking area, to promote bicycle use within the area.
Policy M-4.2: Active Transportation Network. Provide and maintain an extensive active transportation and trail network that supports bicycles, pedestrians, and equestrians and is linked to regional facilities and facilities of adjacent jurisdictions.	
Policy M-4.3: Trail Development. Encourage the use of open space and utility easements for bicycle, pedestrian, and equestrian trails, where feasible.	
Policy M-4.4: Trail Connectivity. Encourage Specific Plans and Planned Developments to include well developed and designed trails that connect neighborhoods to parks, schools, jobs, and adjacent existing or planned local and/or regional trails.	
Policy M-4.5: Support Facilities. Encourage new developments to provide bicycle parking, lockers, and other support facilities for bicyclists.	
Goal M-5: Parking. Parking supply that adequately and efficiently meets demand.	
Policy M-5.1: Appropriate Parking Supply. Use the development review process to plan for new developments to provide appropriate vehicle parking supply to meet demand.	**Consistent.** The Project would provide parking spaces as required by the San Jacinto Development Code (SJDC) Section 17.330.050. Guest parking is located in various locations around the site in addition to incorporated alley-load products to increase and allow for on-street parking. All residential units include a two-car garage and the majority have driveways, as well.

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Goal M-6: Transportation Management. Transportation management strategies that comply with the County Congestion Management Plan and regional and statewide greenhouse gas emissions targets.	
Policy M-6.1: Vehicle Miles Traveled. Maintain vehicle miles traveled (VMT) thresholds and Transportation Demand Management (TDM) mitigation requirements for the purpose of environmental review under the California Environmental Quality Act (CEQA).	**Consistent.** As stated in the Transportation Impact Study (TIS), included as Appendix L and discussed in Section XVII. Transportation, per the WRCOG VMT screening tool, the Project is located within a low VMT generating traffic analysis zone (TAZ). In addition, the Project is consistent with other uses in the TAZ as the northern half of the TAZ is a developed single-family residential neighborhood. Therefore, as the Project meets the screening criteria, the proposed Project would result in a less than significant impact for VMT. Therefore, no further VMT analysis is required (Appendix H).
Policy M-6.4: New Development. Work with developers to reduce greenhouse gas emissions and minimize congestion related to new development through improvements to the circulation system and on-site improvements that encourage non-vehicular modes of travel.	**Consistent.** The Project would include bicycle parking per City code requirements. In addition, the Project Applicant would be required to pay development impact fees to offset local impacts resulting from the Project's implementation. The payment of these impact fees may be used by the City to continue expansion of bicycle facilities.
Public Safety Element	
Goal PS-1: Seismic and Geologic Hazards. A community that is adequately prepared for natural hazards related to landslides, geologic instability, and seismic activity.	
Policy PS-1.2 Earthquake Protection. Enforce State seismic design guidelines and all relevant building codes to reduce the risk of damage associated with seismic activity.	**Consistent**. The Project is not located in a seismic hazard, landslide, liquefaction or flood zone, as described further in Section 4.7I. Geology and Soils. The specific recommendations of the Geotechnical Evaluation prepared for the Project would be fully incorporated in the design and construction of the Project. In addition, the Project's proposed structures would be required to meet the City's construction development standards and the seismic design parameters of the California Uniform Building Code to withstand potential seismic shaking impacts caused by an earthquake within an acceptable level of risk.
Policy PS-1.5 Development. Require assessment and mitigation of hazards related to liquefaction, landslides, and flooding for new development projects or City improvement projects that are identified by the City as susceptible to these hazards.	
Policy PS-1.6 Impact Reduction. Reduce the risk of impacts from geologic and seismic hazards by applying proper and up to date land use planning, development engineering, building construction, and retrofitting requirements.	
Goal PS-2: Fire Safety. A City that is safe and adequately prepared for urban and wildfire emergencies.	
Policy PS-2.1: Building Fire Codes. Require that all buildings and facilities within San Jacinto comply with local, state, and federal regulatory standards such as the California Building and Fire Codes as well as other applicable fire safety standards.	**Consistent**. The Project would be required to comply with all fire protection measures in accordance with the Riverside County Ordinances, 2022 CFC and any additional recognized fire protection standards, as discussed further in Section 4.15. Public Services.
Policy PS-2.2: Fire Protection Services. Reduce the risk of fire to the community by coordinating emergency preparedness with the Riverside County Fire Department (RCFD).	**Consistent**. The Developer would coordinate with the RCFD during the plan check process to ensure the development would comply with all fire standard and Fire Department standards, as discussed further in Section 4.15. Public Services.

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Goal PS-3: Flood Hazards. A community that is protected from flood hazards.	
Policy PS-3.1: Regulatory Compliance. Coordinate with local, state, and federal agencies to ensure that the City's regulations related to flood control are in compliance with federal, state, and local standards.	**Consistent**. The Project is not located within a flood hazard zone, as discussed further in Section 4.10. Hydrology and Water Quality. Additionally, the Project would implement all recommendations contained in the WQMP, including temporary and permanent erosion control BMPs to ensure prevent impacts from flood flows. The Project would comply with all applicable standards as outlined in the SJMC related to flood hazards.
Policy PS-3.5: Municipal Code. Implement the standards and requirements defined in the Municipal Code to reduce flood hazards and address flood-prone areas within San Jacinto.	
Policy PS-3.7: Stormwater Runoff. Encourage new developments that add impervious surfaces to integrate low impact development best management practices to reduce stormwater runoff.	**Consistent.** As described further in Section 4.10. Hydrology and Water Quality, the Project would increase the amount of impervious area from existing conditions and the Project would implement all BMPs as outlined in the WQMP, which was prepared in compliance with the NPDES program. Compliance with the WQMP would provide erosion control, sediment control, tracking, waste management, and construction site maintenance BMPs to reduce the potential for soil and wind erosion during construction activities. The Project would incorporate a detention basin to reduce stormwater runoff.
Goal PS-4: Hazardous Waste and Materials. A community that is protected from the potential for hazardous waste and materials contamination.	
Policy PS-4.6: Proposed Facilities. Require appropriate environmental analysis to be conducted for any proposed hazardous waste materials treatment or transfer, in accordance with environmental review requirement.	**Consistent**. As described further in Section 4.9. Hazards and Hazardous Materials, the Phase I ESA was conducted and did not identify any evidence of RECs, CRECs and HRECs at the Proposed Project Site. The Project would implement MM HAZ-1, which would require a comprehensive survey prior to the disturbance of any suspect ACMs to determine if the subject materials are regulated. If such materials are identified and need to be disturbed, repaired, or removed, a licensed abatement contractor should be consulted further.
Goal PS-5: Emergency Operations. A community that is highly prepared and equipped to handle emergency situations, in order to minimize loss of life, injury, property damage, and disruption of vital services.	
Policy PS-5.10: Crime Prevention Through Environmental Design. Ensure projects include design features that promote public safety and reduce criminal activity.	**Consistent.** As described further in Section 4.15. Public Services, the Project would provide safety measures such as fences around the site perimeter and security lighting throughout the Proposed Project Site to promote public safety though environmental design.
Goal PS-6: Noise. A comfortable community environment that is free from excessive noise pollution.	
Policy PS-6.1: Noise Exposure. Consider the noise compatibility of existing and future development when making land use planning decisions. Require development and infrastructure projects to be consistent with the land use compatibility standards contained in Tables PS-1, PS-2, PS-3 and PS-4 to ensure acceptable noise exposure levels for existing and future development.	**Consistent.** The Project would be consistent with the land use compatibility standards outlined in Tables PS-1, PS-2, PS-3, and PS-4. The Proposed Project Site is located within the Normally to Conditionally Acceptable range for new residential construction. In terms of consistency with Tables PS-2, PS-3, and PS-4, the Project would be constructed in compliance with Title 24, which mandates the inclusion of various project design features such as building insulation and high-performance windows and doors, which would

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Policy PS-6.2: Noise Mitigation. Require new development to mitigate excessive noise to the standards indicated in Tables PS-1, PS-2, PS-3 and PS-4 to the extent feasible through best practices, including building location and orientation, building design features, placement of noise generating equipment away from sensitive receptors, shielding of noise-generating equipment, placement of noise- tolerant features between noise sources and sensitive receptors, and use of noise-minimizing materials.	further reduce exterior-to-interior noise levels. In addition, the Project would also include a six-foot high masonry wall installed along the perimeter of the Proposed Project Site, further reducing roadway noise levels as well as noise emanating from adjacent land uses. Furthermore, noise generated by HVAC equipment would be minimized due to compliance with Section 8.40.140 of the Municipal Code.
Policy PS-6.7: Construction Noise. Require construction activities to reduce noise impacts on adjacent uses to the criteria identified in Tables PS-3 and PS-4, or, if the criteria cannot be met, to the maximum extent feasible complying with Chapter 8.40 of the San Jacinto Municipal Code (Noise Control) and use best practices. Construction activities outside of the permitted construction hours identified in the San Jacinto Municipal Code may be approved on a case-by-case basis by the Community Development Director.	**Consistent.** Project construction would comply with the construction noise requirements contained in Section 8.40.090 of the Municipal Code. In addition, Project construction is estimated to average 65 A-weighted decibel scale (dBA) or less as measured at the property lines of the nearby residential land uses.
Goal PS-7: Climate Change and Resiliency Planning. A resilient, sustainable, and equitable community where risks to life, property, the economy, and the environment resulting from climate change, including extreme weather events, are minimized.	
Policy PS-7.12: Extreme Heat Vulnerabilities. Require that new developments, major remodels, and redevelopments address urban heat island issues and reduce urban heat island effects for the proposed project site and adjacent properties.	**Consistent.** The Project includes development of a residential community, with a variety of proposed surface areas that would reduce potential effects of a heat island. Specifically, the Project includes provision of park and open space areas as well as landscaping along all internal roadways as shown on Figure 5. Additionally, there would be additional open space areas associated with the various residential unit types that would reduce the heat island effects.
Resource Management Element	
Goal RM-1: Natural Resources. A community that conserves and protects its natural resources.	
Policy RM-1.1: Balanced Open Space System. Support a balanced and integrated open space system that reflects a variety of considerations, including resource conservation, recreation, aesthetics, and community identity.	**Consistent.** The Project includes a variety of parks distributed throughout the planned neighborhood. The four lettered lots would be developed as combination bioretention basins and parks with shaded picnic areas and barbecues, along with a pickleball court to be located in the northwestern corner of the development. Common open spaces areas would equate to 6.6 acres on-site. The community layout and architectural design was designed to pay homage to the surrounding and existing farmland, and Project development would maintain the rural and agricultural history by maintaining a “farm feel” through the use of farmhouse, craftsman, and prairie architectural styles throughout the planned community. Landscaped plants and trees were selected to accentuate

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	the buildings. Refer to Appendix I for further details on the Project layout.
Goal RM-2: Water Resources. A community that protects and conserves limited water resources.	
Policy RM-2.4: Natural Conditions. Encourage development that avoids impacts to watershed areas, wetlands, natural drainage channels, riparian areas, and creeks, retaining these resources in their natural condition if feasible.	**Consistent**. As discussed in Section 4.4. Biological Resources, there are no jurisdictional features on the Proposed Project Site. The artificial basin present in the northwest corner of the Proposed Project Site was artificially created in uplands that were previously used for croplands. This type of waterbody is excluded from being classified as a Waters of the U.S. under the jurisdiction of USACE because it is isolated. Artificial wetlands less than one acre in size are not considered Waters of the State under the authority of the RWQCB. Based on historic aerial imagery and topographic maps, this area does not appear to have been part of a historic drainage; therefore, it would not be under the regulatory authority of the CDFW. As such, no drainages or other waters that would be under the jurisdiction of the USACE, RWQCB, or CDFW occur on the Proposed Project Site.
Goal RM-3: Heritage Resources. A community that celebrates and preserves its rich culture and historic assets.	
Policy RM 3.1: Preservation. Protect areas containing significant historic, archaeological, and paleontological resources, as defined by the California Public Resources Code.	**Consistent**. As discussed in Section 4.5 Cultural Resources, the Project record search identified five cultural resources located within a half-mile of the Proposed Project Site, none of which are on the Proposed Project Site. No historic resources were identified, and although none of these five resources are considered archaeological resources, the possibility that undiscovered intact archaeological resources may be present below the surface in native (alluvial) sediments. These potential effects would be mitigated to a less than significant level with the implementation of MM CUL-1, which recommends archaeological monitoring when excavations are required in native sediment. As discussed in Section 4.7. Geology and Soils, there is a possibility that intact paleontological resources may be present below the surface and would be mitigated to a less than significant level with the implementation of MM GEO-1, which requires retention of a qualified Paleontologist to be available "on-call" throughout the duration of grading activities, would reduce potential impacts to less than significant levels.
Policy RM-3.4: Tribal Consultation. Consult with Native American tribes whose tribal cultural resources may be impacted by proposed development, as necessary, and in accordance with state, local, and tribal intergovernmental consultation requirements, in an effort to mitigate or avoid significant effects to resource(s).	**Consistent.** As discussed in Section 4.18. Tribal Cultural Resources, pursuant to AB 52 and SB18, the Lead Agency, which is the City in this instance, has consulted with Native American Tribes and mitigation measures are included to reduce potential impacts to unanticipated tribal resources.

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Goal RM-4: Air Quality and Greenhouse Gas Emissions. Improved air quality in San Jacinto and the region through reductions in air pollutants and greenhouse gas (GHG) emissions.	
Policy RM 4.3: GHG Emissions. Align the City's local GHG reduction targets with the statewide GHG reduction targets of Assembly Bill 32 and align the City's GHG reduction goal with the statewide GHG reduction goal of Executive Order S-03- 05.	Consistent. The Project would be constructed in compliance with the requirements contained in Title 24, Part 6 and Title 24, Part 11 of the California Building Standards Code. The Project would provide various design features aimed at reducing GHG emissions, including, but not limited to, solar PV, on-site battery energy storage, high-performance windows and doors, EV ready parking spaces, energy efficient lighting, and low- flow fixtures.
Policy RM-4.5 Walkability. Encourage pedestrian-scale development and pedestrian-friendly design features to reduce vehicle emissions. (See Mobility Element).	Consistent. The Project would include off-site roadway and pedestrian improvements. In addition, the payment of Development Impact Fees could further assist the City in expanding pedestrian facilities throughout the City.
Policy RM 4.8: Mitigation. Require the implementation of relevant mitigation measures for all future development upon identification of potential air quality impacts.	Consistent. The Project would be constructed in compliance with the requirements contained in Title 24, Part 6 and Title 24, Part 11 of the California Building Standards Code.
Policy RM 4.9: Local Reduction Targets. The City of San Jacinto establishes the following per capita GHG reduction targets, in order to meet the requirements established by the state under AB 32 and SB 32, consistent with the CARB's 2017 Scoping Plan: 1.83 MTCO2e per service population (SP) by 2030; and 0.62 MTCO2e per service population (SP) by 2050	Consistent. The Project would include the planting of trees, shrubs, and plants.
Goal RM-6: Public Safety Resources. A community that safeguards persons and property through the provision of high-quality public safety services and crime prevention measures.	
Policy RM-6.3: Site Design. Recognize the role of design features in new development to reduce potential for crime and implement best practices into existing plans and new development strategies.	**Consistent.** As described further in Section 4.15. Public Services, the Project would provide safety measures such as fences around the site perimeter and security lighting throughout the Proposed Project Site to promote public safety though environmental design.
Goal RM-7: Parks and Recreational Resources. An integrated system of parks, recreational, and open space facilities that meet the community's needs and preferences	
Policy RM-7.4: Parkland Dedication. Require future private development to incorporate parkland, open space, or green space to expand recreational opportunities in the community in accordance with standards set by the San Jacinto Municipal Code.	Consistent. The Project would provide parks as a part of the development for common spaces. The parks contain a multitude of recreational amenities such as picnic tables, barbecues and greenspace.
Goal RM-8: Educational Resources. A community that supports the continued lifelong learning of all its residents with high quality educational facilities and opportunities.	
Policy RM-8.2: School Facilities. Work with developers and the school district to ensure the payment of fees, construction, and expansion of school facilities to address expected increases in school-age population.	Consistent. The Project would be required to pay all applicable school developer fees, that would be used for future facility improvements necessary to ensure adequate levels of service.
Goal RM-9: Infrastructure Planning. A community that provides adequate, reliable infrastructure and facilities to support existing and future development.	
Policy RM 9.3: Fair Share. Ensure that all new development provides for and funds its fair share of	**Consistent.** The Project would be required to provide for and fund its fair share of the costs of public infrastructure

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the costs for the expansion of public infrastructure and services, recreational amenities, and facilities.	and services, recreational amenities, and facilities. The Project proposes payment of development impact fees to cover the increased demand for public services and would provide 6.6 acres of recreational amenities for public and private use as detailed in Section 3, Project Description and shown in Appendix I.
Goal RM-10: Solid Waste Management and Recycling. A cost-effective, integrated waste management system that meets or exceeds recycling and waste diversion mandates and community expectations.	
Policy RM-10.2: Solid Waste Collection. Provide adequate waste disposal, recycling, and refuse services for present and future residents and businesses, including programs that improve public access to solid waste collection and recycling facilities.	**Consistent.** Solid waste disposal in the City of San Jacinto is presently handled by CR&R, a private company which is in partnership with the City to provide solid waste services for residential and commercial uses, including the Proposed Project Site. During construction and operation of the Project, the Project would comply with all applicable federal, State, and local management and reduction statutes related to solid waste during construction and operations. Chapter 8.32 of the SJMC establishes mandatory solid waste and recycling collection to comply with the requirements of AB 939 (which requires cities and counties throughout the State to divert 50 percent of all solid waste from landfills through source reduction, recycling, and composting) and AB 34 (which increased the statewide goal for waste diversion to 75 percent by 2020). The City has also established disposal and mandatory recycling requirements for residential premises to comply with State law diversion requirement, which the Project would be required to comply with.
Environmental Justice Element	
Goal EJ-1: Pollution Exposure and Air Quality. Land use and development patterns that reduce pollution exposure and enhance air quality, especially in environmental justice communities.	
Policy EJ-1.1: Emission Sources. Encourage existing sources of emissions to use feasible measures to minimize air quality impacts in Environmental Justice Communities and avoid new sources of significant emissions in these communities as feasible.	**Consistent.** Pursuant to the General Plan Draft EIR, Figure EJ-1 Disadvantaged Communities, the Proposed Project Site is not within an Environmental Justice (EJ) community but is adjacent to multiple EJ communities, located immediately west and north. As discussed further in Section 4.3, Air Quality, the proposed Project's construction emissions would be below SCAQMD thresholds and proposes single-family residential uses, which are not typically associated with substantial sources of air pollutant emissions.
Goal EJ-5: Physical Activity. Land use and development patterns that encourage physical activity and improve multimodal access and connectivity to employment, shopping, services, schools, parks, and other destinations	
Policy EJ-5.2: Accessibility. Endeavour to provide parks that are easily accessible to the surrounding neighborhood and beyond, and are as barrier-free as possible, particularly for those with limited mobility.	**Consistent.** The Project proposes the construction of parks as a part of the development, totaling 6.6 acres.

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Policy EJ 5.3: Physical Activity. Promote physical activity programs and education including, but not limited to, programs offered by the Landscape, Lighting and Park Districts and encourage residents to regularly participate in physical activity and active lifestyles.	
Goal EJ-7: Improvements and Programs. Improvements and programs address the needs of environmental justice communities.	
Policy EJ 7.3: Coordination. Coordinate with relevant utility providers to provide adequate and appropriate levels of service and promote the maintenance of water, sewer, stormwater, and electrical facilities serving Environmental Justice Communities.	**Consistent.** The Project would coordinate with all relevant utility providers including the EMWD, the City Public Utilities Department, SoCalGas and San Jacinto Power, as described further in Section 4.19. Utilities and Service Systems.

4.11.2 Mitigation Measures

No mitigation measures associated with impacts to Land Use and Planning apply to the Proposed Project.

4.11.3 Conclusion

Potential impacts of the Proposed Project associated with Land Use and Planning would be less than significant, and no mitigation would be required.

4.12 Mineral Resources

Information and analysis in this section is derived from the documents incorporated by reference as identified in Section 1.3 of this document.

4.12.1 Regulatory Setting

In 1975, the California legislature enacted the Surface Mining and Reclamation Act (SMARA). This act provides for the reclamation of mined lands and directs the State Geologist to classify (identify and map) the non-fuel mineral resources of the state to show where economically significant mineral deposits occur and where they are likely to occur based upon the best available scientific data.

4.12.2 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Discussion

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The City General Plan Draft EIR, Figure 5.12-1 Mineral Resource Zones identifies that the Proposed Project Site is located in an area that is designated Mineral Resource Zone 3 (MRZ-3), which is an area containing known or inferred mineral occurrences of undetermined mineral resource significance. In addition, the City does not contain any known or identified mineral resources or regional or Statewide importance[9]. The Proposed Project Site is currently utilized for agriculture, and there are no mining activities or mineral extraction uses near the Proposed Project Site. Thus, the Project would not result in the loss of availability of locally important mineral resources. No impacts would occur, and no mitigation is required.

4.12.3 Mitigation Measures

No mitigation measures associated with impacts to Mineral Resources apply to the Proposed Project.

4.12.4 Conclusion

There are no potential impacts of the Proposed Project associated with Mineral Resources, and no mitigation would be required.

9 Public Review Draft Environmental Impact Report for the San Jacinto General Plan Update. San Jacinto, CA: City of. https://sanjacinto.generalplan.org/documents-amp-maps

4.13 Noise

Information and analysis in this section is derived from the documents incorporated by reference as identified in Section 1.3 of this document and the noise analysis included as **Appendix G – *Chacon Farms, Noise Impact Study*, MD Acoustics, October 3, 2024**.

4.13.1 Environmental Setting

Noise Descriptors: Sound

"Sound" is a vibratory disturbance created by a moving or vibrating source and is capable of being detected. "Noise" is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance; interference with speech communication; sleep disturbance; and, in the extreme, hearing impairment (**Appendix G**).

Sound pressure levels are described in units called the decibel (dB). Decibels are measured on a logarithmic scale. A doubling of the energy of a noise source (such as doubling of traffic volume) would increase the noise level by 3 dB. The human ear is not equally sensitive to all frequencies within the sound spectrum. To accommodate this phenomenon, the A-scale was devised; the A-weighted decibel scale (dBA) approximates the frequency response of the average healthy ear when listening to most ordinary everyday sounds and is used in this analysis.

Human perception of noise has no simple correlation with acoustical energy. Due to subjective thresholds of tolerance, the annoyance of a given noise source is perceived very differently from person to person. The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at 3 feet is approximately 60 dBA, while loud jet engine noises at 1,000 feet equate to 100 dBA, which can cause serious discomfort. **Table 26: *Noise Levels for Common Events***, shows the relationship of various noise levels in dBA to commonly experienced noise events.

Table 26: Noise Levels for Common Events

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
–	110	Rock Band
Jet fly-over at 300 m (1,000 ft)	100	
Gas lawn mower at 1 m (3 ft)	90	
Diesel truck at 15 m (50 ft) at 80 km/hr (50 mph)	80	Food blender at 1 m (3 ft); garbage disposal at 1 m (3 ft)
Noisy urban area, daytime gas lawn mower at 30 m (100 ft)	70	Vacuum cleaner at 3 m (10 ft)
Commercial area, heavy traffic at 90 m (300 ft)	60	Normal speech at 1 m (3 ft)
Quiet urban daytime	50	Large business office, dishwasher in next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural nighttime	20	Bedroom at night, concert hall (background)
	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

dBA: A-weighted decibels; m: meter; ft: feet; km/hr: kilometers per hour; mph: miles per hour
Source: Caltrans 2013.

Two noise sources do not "sound twice as loud" as one source. As stated above, a doubling of noise sources results in a noise level increase of 3 dBA. Generally, noise is perceptible at an increase of 3 dBA as illustrated below:

Changes in Intensity Level (dBA)	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud

Source: https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm

From the source to the receiver, noise changes both in the level and frequency spectrum. The most obvious change is the decrease in noise level as the distance from the source increases. Sound from a small, localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. For point sources, such as HVAC units or construction equipment, the sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance (i.e., if the noise level is 70 dBA at 25 feet, it is 64 dBA at 50 feet). Vehicle movement on a road makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. The sound level attenuates or drops off at a rate of 3 dBA per doubling of distance for line sources.

A large object in the path between a noise source and a receiver can significantly attenuate noise levels at that receiver location. The amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain or landform features as well as man-made features (e.g., buildings and walls) can significantly alter noise exposure levels. For a noise barrier to work, it must be high enough and long enough to block the view from the receiver to a road or to the noise source. Effective noise barriers can reduce outdoor noise levels at the receptor by up to 15 dBA.

Several rating scales (or noise "metrics") exist to analyze effects of noise on a community. These scales are identified as follows:

- Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
- Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of 10 decibels to sound levels in the night before 7:00 AM and after 10:00 PM. The evening sound levels are assigned a 5-dBA penalty, and the nighttime sound levels are assigned a 10-dBA penalty prior to averaging with daytime hourly sound levels.
- Equivalent Sound Level (Leq): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time-varying noise level. The energy average noise level during the sample period. This includes including Lmax and Lmin, which are respectively the highest and lowest A-weighted sound levels that occur during a noise event.

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities such as railroads or vibration-intensive stationary sources but can also be associated with construction equipment

such as jackhammers, pile drivers, and hydraulic hammers. Vibration displacement is the distance that a point on a surface moves away from its original static position. The instantaneous speed that a point on a surface moves is described as the velocity, and the rate of change of the speed is described as the acceleration. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During construction of a project, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure. Analysis of this type of vibration is best measured in velocity and acceleration.

The three main wave types of concern in the propagation of groundborne vibrations are surface or Rayleigh waves, compression or P-waves, and shear or S-waves.

- Surface or Rayleigh waves travel along the ground surface. They carry most of their energy along an expanding cylindrical wave front, similar to the ripples produced by throwing a rock into a lake. The particle motion is more or less perpendicular to the direction of propagation (known as retrograde elliptical).
- Compression or P-waves are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal, in a push-pull motion. P-waves are analogous to airborne sound waves.
- Shear or S-waves are also body waves, carrying their energy along an expanding spherical wave front. Unlike P-waves, the particle motion is transverse, or perpendicular to the direction of propagation.

The peak particle velocity (ppv) or the root mean square (rms) velocity is usually used to describe vibration amplitudes. The ppv is defined as the maximum instantaneous peak of the vibration signal and the rms is defined as the square root of the average of the squared amplitude of the signal. The ppv is more appropriate for evaluating potential building damage and also used for evaluating human response.

The units for ppv velocity are normally inches per second (in/sec). Often, vibration is presented and discussed in dB units in order to compress the range of numbers required to describe the vibration. In this study, all ppv velocity levels are in in/sec and all vibration levels are in dB relative to one microinch per second. The threshold of perception is approximately 0.3 ppv. Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration. Even the more persistent Rayleigh waves decrease relatively quickly as they move away from the source of the vibration. Manmade vibration problems are, therefore, usually confined to short distances (500 feet or less) from the source.

Construction generally includes a wide range of activities that can generate groundborne vibration. In general, blasting and demolition of structures generate the highest vibrations. Heavy trucks can also generate groundborne vibrations, which vary depending on vehicle type, weight, and pavement conditions. Potholes, pavement joints, discontinuities, differential settlement of pavement, and other anomalies all increase the vibration levels from vehicles passing over a road surface. Construction vibration is normally of greater concern than vibration of normal traffic on streets and freeways with smooth pavement conditions. Trains generate substantial quantities of vibration due to their engines, steel wheels, and heavy loads.

4.13.2 Regulatory Setting

Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Publicize noise emission standards for interstate commerce
- Assist state and local abatement efforts
- Promote noise education and research

The federal government advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that "noise sensitive" uses are either prohibited from being constructed adjacent to a highway or, or alternatively that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

State Regulations

Title 24 of the California Code of Regulations, also known as the California Building Standards Code, establishes building standards applicable to all occupancies throughout the State. Section 1207.11.2 requires that residential structures other than detached single-family dwellings be designed to prevent the intrusion of exterior noise so that the interior noise attributable to exterior sources shall not exceed 45 dBA CNEL in any habitable room. Section 1207.12 states, "if interior allowable noise levels are met by requiring that windows be unopenable or closed, the design for the structure must also specify a ventilation or air-conditioning system to provide a habitable interior requirement. The ventilation system must not compromise the dwelling unit or guest room noise reduction".

City of San Jacinto

General Plan

The City of San Jacinto is affected by several different sources of noise, including automobile traffic, agricultural and commercial activity, and periodic nuisances such as construction, loud parties, and other events. The goal of San Jacinto's Public Safety Element is to reduce the risk of death, injury, property damage, economic loss, and harm due to natural and manmade hazards. The Public Safety Element contains guidelines for noise compatible land use for long-term operations as shown in Table 26. Further goals and policies pertaining to noise applicable to the Project are analyzed in *Section XI. Land Use and Planning*.

Municipal Code

The City Municipal Code (Title 8 – Health and Safety, Chapter 8.40, Noise Control) is the City's Noise Ordinance. As stated in the Municipal Code:

"It is hereby found and declared that:

- The making and creation of excessive, unnecessary or unusually loud noises within the limits of the city of San Jacinto is a condition that has existed for some time; however, the extent and volume of such noises is increasing; and

  B. The making, creation or maintenance of such excessive, unnecessary, unnatural or unusually loud noises that are prolonged, unusual and unnatural in their time, place and

use affect and are a detriment to public health, comfort, convenience, safety, welfare and prosperity of the residents of the city of San Jacinto; and

C. The necessity in the public interest for the provisions and prohibitions hereinafter contained and enacted is declared as a matter of legislative determination and public policy, and it is further declared that the provisions and prohibitions hereinafter contained and enacted are in pursuance of and for the purpose of securing and promoting the public health, comfort, convenience, safety, welfare and prosperity and the peace and quiet of the residents of the city of San Jacinto."

The following sections of the Noise Control Ordinance are applicable to the proposed Project:

8.40.040 Mobile noise source standards.

A. The following noise standards for maximum allowable noise exposure from mobile sources shall apply to all development and infrastructure projects, unless otherwise specifically indicated:

Land Use	Noise Standards[1]	
	Exterior	Interior
Residential—single-family, multifamily, duplex, and mobile home	65 dBA	45 dBA
Residential—transient lodging, hotels, motels, nursing homes, hospitals, assisted care facilities	65 dBA	45 dBA
Private offices, churches, libraries, theaters, concert halls, meeting halls, schools	65 dBA	45 dBA
General commercial, office, retail, reception, restaurant	65 dBA	45 dBA
Light Industrial[2]	–	–
Parks and playgrounds[3]	65 dBA	50 dBA
Golf courses, outdoor spectator sports	70 dBA	–

dBA: A-weighted decibels

1. In community noise equivalent level (CNEL).
2. Noise standards do not apply to light industrial areas.
3. Outdoor environment limited to playground areas, picnic areas, and other areas of frequent human use.

8.40.050 Stationary noise source standards, exterior and interior.

A. The following noise standards for maximum allowable noise level due to stationary noise sources shall apply to all development and infrastructure projects, unless otherwise specifically indicated:

Type of Land Use	Allowed Equivalent Noise Level, dBA L_{eq}	
	7:00 AM to 10:00 PM	7:00 AM to 10:00 PM
All single-family residential properties	65	45
All multifamily residential properties and mobile home parks	65	50
All commercial property	65	60
The residential portion of mixed-use properties	70	70
All manufacturing or industrial properties and all other uses	70	70

dBA L_{eq}: or equivalent sound level in A-weighted decibels, measures the cumulative noise exposure over a specific time interval (FTA 2018).

1. If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.

2. Measurements for compliance are made on the affected property pursuant to Section 8.40.160.
3. It is unlawful for any person at any location within the incorporated area of the city to create noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:
    a. The noise standard for the applicable zone for any fifteen (15) minute period;
    b. A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).
4. In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
5. The residential portion of mixed-use properties standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use if the noise originates from that commercial property or use.
6. If the measurement location is on a boundary between two different types of land uses, the lower noise level standard applicable to types of land uses shall apply.

B. The following allowable interior noise standards due to stationary noise sources shall apply to all development and infrastructure projects, unless otherwise specifically indicated:

Type of Land Use	Allowed Equivalent Noise Level, dBA Leq	
	7:00 AM to 10:00 PM	7:00 AM to 10:00 PM
All single-family residential properties	45	40
All multifamily residential properties and mobile home parks	45	40
All commercial property	45	40
Residential portion of mixed-use	45	40

dBA Leq: or equivalent sound level in A-weighted decibels, measures the cumulative noise exposure over a specific time interval (FTA 2018).

1. If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.
2. Measurements for compliance are made on the affected property pursuant to Section 8.40.160.
3. It is unlawful for any person at any location within the incorporated area of the city to create noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:
    a. The noise standard for the applicable zone for any fifteen (15) minute period;
    b. A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).
4. In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
5. The residential portion of mixed-use standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use if the noise originates from that commercial property or use.

6. If the measurement location is on a boundary between two different types of land uses, the lower noise level standard applicable to the types of land uses shall apply. (Ord. 22-13 Section 3 (Exh. A); Ord. 07-17 Section 2 (part)).

8.40.060 Sensitive uses development projects.

A. New residential developments, mixed-use developments with a residential component, and other noise-sensitive development (including, but not limited to, schools, day cares, hospitals) shall be designed to minimize noise exposure to sensitive uses through the incorporation of site planning and architectural techniques.

8.40.070 Exemptions.

The following activities shall be exempted from the provisions of this chapter of the Municipal Code:

A. Any activity conducted on public property, or on private property with the consent of the owner, by any public entity or its officers, employees, representatives, agents, subcontractors, permittees, licensees, or lessees that the public entity has authorized, shall be exempt from the provisions of this chapter. This includes, without limitation, sporting and recreational activities that are sponsored, co-sponsored, permitted or allowed by the city of San Jacinto or any school district within the city's jurisdictional boundaries. This also includes, without limitation, occasional outdoor gatherings, public dances, shows or sporting and entertainment events, provided such events are conducted pursuant to an approval, authorization, contract, lease, permit or sublease by the appropriate public entity, including the planning commission or city council;

B. Occasional outdoor gatherings, public dances, show, sporting, and entertainment events, provided said events are conducted pursuant to a permit or license issued by the appropriate jurisdiction relative to the staging of said events;

C. Public safety personnel in the course of executing their official duties, including, but not limited to, sworn peace officers, emergency personnel and public utility personnel. This exemption includes, without limitation, sound emanating from all equipment used by such personnel, whether stationary or mobile;

D. Noise sources associated with construction, repair, remodeling, demolition or grading of any real property. Such activities shall instead be subject to the provisions of Section 8.40.090;

. . .

G. Any activity to the extent regulation thereof has been preempted by state or federal law;

H. Any noise sources associated with people and/or music associated with a party at a residential property. Such noise shall be subject to the provisions of Section 8.40.080;

. . .

J. Any noise sources associated with barking dogs or other intermittent noises made by animals on any property within the city of San Jacinto. Such noise shall be subject to the provisions of Section 6.24.030;

K. Property maintenance, including, but not limited to, the operation of lawnmowers, leaf blowers, etc., provided such maintenance occurs between the hours of seven a.m. and seven p.m.;

8.40.080 Loud and disturbing noise.

A. It is unlawful for any person or property owner within the city to make, cause or allow to be made any loud, excessive, impulsive or intrusive noise, disturbance or commotion that disturbs the peace or quiet of any area or that causes discomfort or annoyance to any reasonable person of normal sensitivities in the area. The types of loud, disturbing, excessive, impulsive or intrusive noise may include, but shall not be limited to, yelling, shouting, hooting, whistling, singing,

playing a musical instrument, or emitting or transmitting any loud music or noise from any mechanical or electrical sound-making or sound-amplifying device.

8.40.090 Construction activity noise regulations.

A. The erection (including excavation), demolition, alteration or repair of any building shall occur between the hours of seven a.m. and seven p.m. on weekdays and Saturdays, and between nine a.m. and six p.m. on Sundays and holidays, except when such work complies with the terms of a temporary use permit which may be issued by the community development director or his or her designee, upon a showing of sufficient need due to hot or inclement weather, or the use of an unusually long process material, or other circumstances of unusual and compelling nature.

B. No landowner, construction company owner, contractor, subcontractor, or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment, or machine in violation of the provisions of this section.

8.40.120 Sound-amplifying equipment.

Loudspeakers, sound amplifiers, public address systems or similar devices used to amplify sounds shall be subject to the provisions of Section 8.40.130. Such sound- amplifying equipment shall not be construed to include electronic devices, including, but not limited to, radios, tape players, tape recorders, compact disc players, MP3 players, electric keyboards, music synthesizers, record players or televisions, which are designed and operated for personal use, or used entirely within a building and are not designed or used to convey the human voice, music or any other sound to an audience outside such building, or which are used in vehicles and heard only by occupants of the vehicle in which installed. (Ord. 22-13 Section 3 (Exh. A); Ord. 07-17 Section 2 (part)).

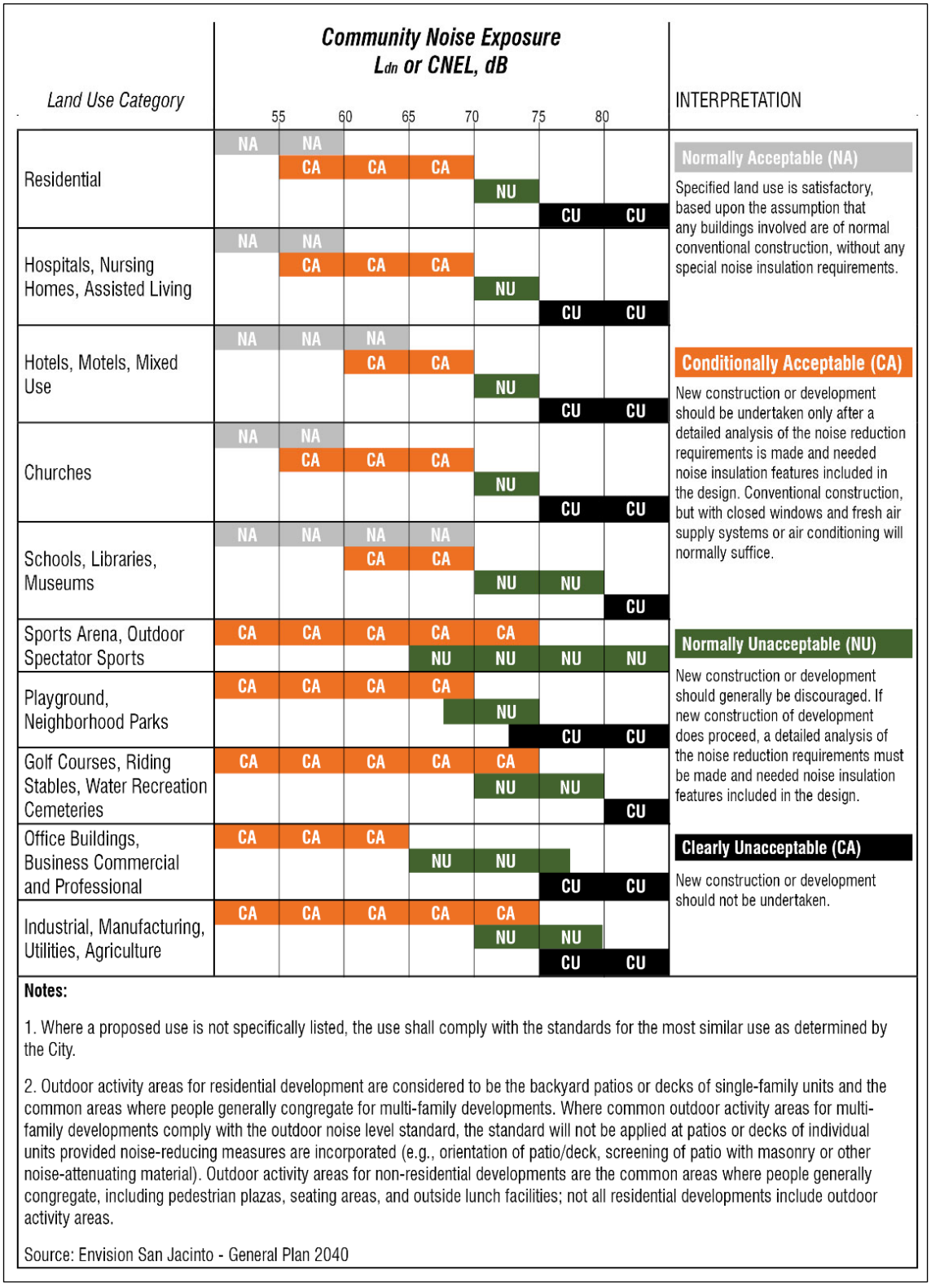
8.40.140 Heating, venting, pool/spa and air conditioning—Special provisions.

Permits for heating, venting and air conditioning (HVAC) and pool/spa equipment in or adjacent to residential areas shall be issued only after the installation contractor signs an acknowledgment that the installation will meet the noise limits established in Section 8.40.050. Applications for residential mechanical permits for air conditioners may use the methodology specified in Standard 275 “Standard Application of Sound Rated Outdoor Unitary Equipment” of the Air Conditioning and Refrigeration Institute (ARI), 1984, as amended. Applicants of mechanical permits for commercial HVAC equipment shall be required to submit a detailed acoustical study that demonstrates compliance with the noise limits established in Section 8.40.050. (Ord. 22-13 Section 3 (Exh. A); Ord. 07-17 Section 2 (part)).

8.40.170 Prima facie violation.

Any noise exceeding the noise level standard as specified in Sections 8.40.040 and 8.40.050 shall be deemed to be prima facie evidence of a violation of the provisions of this chapter. (Ord. 22-13 Section 3 (Exh. A); Ord. 07-17 Section 2 (part)).

Table 27: City of San Jacinto Guidelines for Noise Compatible Land Use Compatibility for Community Noise Exposure (dBA, CNEL)



Notes:

1. Where a proposed use is not specifically listed, the use shall comply with the standards for the most similar use as determined by the City.

2. Outdoor activity areas for residential development are considered to be the backyard patios or decks of single-family units and the common areas where people generally congregate for multi-family developments. Where common outdoor activity areas for multi-family developments comply with the outdoor noise level standard, the standard will not be applied at patios or decks of individual units provided noise-reducing measures are incorporated (e.g., orientation of patio/deck, screening of patio with masonry or other noise-attenuating material). Outdoor activity areas for non-residential developments are the common areas where people generally congregate, including pedestrian plazas, seating areas, and outside lunch facilities; not all residential developments include outdoor activity areas.

Source: Envision San Jacinto - General Plan 2040

Sensitive Receptors

The State of California defines noise-sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions (**Appendix G**). The land use categories requiring the lowest noise thresholds are schools, libraries, churches, hospitals, and residences. Schools, libraries, churches, hospitals, and residences proximate to the Proposed Project Site are referred to as the Project's "noise sensitive receptors" due to sensitivity of these uses to noise exposure. Please refer to Table 27: *City of San Jacinto Guidelines for Land Use Compatibility for Community Noise Exposure (dBA, CNEL)* based on each of these land use categories. Although each land use category has a different measure of acceptable noise exposure, most of the categories listed above must remain under 60-65 dBA per State and City guidelines.

The nearest noise sensitive uses to the Proposed Project Site would be the planned unit development located adjacent to the western property boundary of the Project Site and Catalpa Park, located at the northeast corner of the West 7th Street and Cawston Avenue North intersection. Based on Table 27, City of San Jacinto Guidelines for Land Use Compatibility for Community Noise Exposure (dBA, CNEL), the City does not consider park uses to be as noise sensitive as residential uses.

4.13.3 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
NOISE: Would the project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project site in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

Discussion

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact.

Two short-term 15-minute noise measurements were conducted at the Proposed Project Site to document the existing noise environment. The measurements include the 15-minute Leq, Lmin, Lmax, and other statistical data. Noise measurement field sheets are provided in **Table 28: *Long-Term Noise Measurement Data*** below and in **Appendix G** as follows:

Table 28: Long-Term Noise Measurement Data

Location	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)	L(90)
NM1 – Northwest corner of property along Seventh Street	46.9	68.0	36.9	53.6	48.7	44.9	41.7	38.6
NM2 – Southeast corner of property along W Esplanade	64.4	83.8	41.4	72.6	65.1	59.9	56.5	50.4

Construction

The development of the proposed Project would entail construction activities which include noise generated from the demolition of the existing on-site structures, grading/excavation, and the erection of the housing units. The construction of the Project is anticipated to occur over an approximately 3-year period. Local residents would be subject to elevated noise levels due to the operation of Project-related construction equipment. Construction activities are carried out in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise levels surrounding the construction site as work progresses. Construction noise levels reported in the U.S. Environmental Protection Agency's Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances were used to estimate future construction noise levels for the Project (**Appendix G**). Typically, the estimated construction noise levels are governed primarily by equipment that produces the highest noise levels. Construction noise levels for each generalized construction phase (ground-clearing/demolition, excavation, foundation construction, building construction, paving, and site cleanup) are based on a typical construction equipment mix for a mixed-use project and do not include use of atypical, very loud, and vibration-intensive equipment (e.g., pile drivers).

Construction of the Project would be required to comply with Section 8.40.090 – Construction activity noise regulations of the Municipal Code, which establishes restrictions related to construction activities. These restrictions include limiting the hours of construction to the hours of 7 AM and 7 PM on weekdays and Saturdays, and between 9 AM and 6 PM on Sundays and holidays. In addition, a temporary use permit may be issued in order to allow construction to deviate from the restrictions outlined above upon demonstrating a sufficient need. With the incorporation of these restrictions on construction noise generation and the noise attenuation provided by distance from the construction area to noise sensitive uses, the Project would result in less than significant construction noise impacts.

The degree to which noise-sensitive receptors are affected by construction activities depends heavily on their proximity. Construction noise is considered a short-term impact and would be considered significant if construction activities do not follow the above recommendations. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Proposed Project vicinity. The construction noise impact is considered less than significant; however, construction noise level projections are provided.

The nearest sensitive land uses to the Proposed Project Site are the residential uses to the north. These uses are as close as 100 feet from construction activities.

Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. A likely worst-case construction noise scenario assumes equipment operating as close as 100 feet and an average of 430 feet from the nearest sensitive receptor. **Table 29: *Construction Noise Levels at Noise-Sensitive Uses*** identifies potential noise levels assuming equipment operating as close to 100 feet from the residential uses to the west of the Project Site (**Appendix G**).

Table 29: Construction Noise Levels at Noise-Sensitive Uses

Phase	dBA Lmax	dBA Leq
Prep	76	50
Grading	77	50
Build	76	48
Paving	75	44
Arch Coating	70	36

The Lmax levels represent maximum levels when construction occurs adjacent to the residential receptors. Leq levels represent the average construction noise level during each phase. The noise due to construction at the nearest residential receptor will be 36 to 50 dBA Leq and 70 to 77 dBA Lmax. The noise due to construction will not exceed the construction noise limit of 65 dBA Leq provided in the City's Municipal code. Thus, the construction noise impact is less than significant.

Operations

Operational noise sources associated with the proposed Project would include, but are not limited to, landscape maintenance equipment; vehicles travelling on the local internal roadways; use of the common open space and recreational amenities; equipment noise from HVAC equipment; trash collection; and noise emanating from private open space.

Landscaping activities would generally occur within the Project's common and private open space. Noise generated by landscaping equipment would not impact the aforementioned planned unit development due to several factors: attenuation due to the distance between the common and private open space areas and the planned unit development located to the north; the inclusion of concrete masonry unit walls along the Proposed Project Site's property lines which would obstruct the line-of-sight between the Proposed Project Site and the aforementioned receptors; and adherence to the requirements outlined in the City of San Jacinto Municipal Code, specifically Section 8.40.070 – Exemptions, K., which exempts property maintenance, including, but not limited to, the operation of lawnmowers, leaf blowers, etc., provided such maintenance occurs between the hours of seven AM and seven PM. As such, noise impacts from the use and maintenance of the Project would be less than significant, and no mitigation is required.

Noise generated by parking activities consists of engine starts, door slams, and vehicle travel along the internal roadways. Parking-related noise is not considered to be substantial due to noise occurring in attached garages or within parking areas that are located within the interior of the proposed development. In addition, there is not a substantial quantity of vehicle trips, and they would not occur simultaneously and are composed of relatively quiet passenger vehicles. Noise associated with vehicles travelling along the internal roadways would not result in a substantial increase in noise levels at nearby residential uses due to the distance between the internal roadways and the nearest residential uses, intervening buildings, as well as relatively quiet passenger vehicles.

Noise generated within the common and private open space would include people talking, children playing, and amplified music. Noise generated within these areas would be similar to noise occurring within the planned unit development located to the north as well as to Catalpa Park located to the northeast of the Proposed Project Site. In addition, future residents would be required to adhere to Section 8.40.120 – Sound-amplifying equipment as well as other noise limits in the City of San Jacinto Municipal Code.

Noise generated by HVAC equipment is regulated by Section 8.40.140 – Heating, venting, pool/spa, and air conditioning – Special provision. The applicant would be required to obtain a permit in order to

install HVAC units. Approval of permits for HVAC units in the City is granted upon acknowledgement that the installation will meet the noise limits established in Section 8.40.050. Noise generated by trash collection would be consistent with noise generated by trash collection at adjacent residential uses. As a result, there would be a less than significant noise impact, and no mitigation is required.

Roadway Noise - General

Project-related off-site noise sources (i.e., roadway traffic noise) have the potential to increase noise levels on local roadways proximate to the Proposed Project Site. The City of San Jacinto determines whether traffic related noise impacts would occur based on the following criteria used to determine the significance of those impacts:

- Where existing traffic noise levels are within or below the "normally acceptable" noise criteria at the affected land use (see Table PS-1 of the San Jacinto General Plan), a readily perceptible 5 dBA CNEL or greater increase in roadway noise will be considered significant;
- Where existing traffic noise levels falls within the "conditionally acceptable" noise criteria at the sensitive land use, a +3 dBA CNEL or greater increase in roadway noise levels will be considered significant; and
- Where existing traffic noise levels exceed the "conditionally acceptable" noise criteria at the sensitive land use, a + 1.5 dBA CNEL or greater increase in roadway noise levels will be considered significant.

Operation of the proposed Project would result in a total of 3,952 Average Daily Trips distributed along local roadways. Traffic noise increases are due to changes in background traffic growth as well as Project related vehicle trips at the buildout year.

The noise analysis in **Appendix G** modeled a worst-case project generated traffic noise level utilizing the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108. Traffic noise levels were calculated at the nearest sensitive receptor to each analyzed roadway. The modeling takes into account existing walls and barriers that reduce noise. The potential off-site noise impacts caused by an increase of traffic from operation of the Proposed Project on the nearby roadways were calculated for the following scenarios:

- Existing Year (without Project): This scenario refers to existing year traffic noise conditions.
- Existing Year (Plus Project): This scenario refers to existing year + Project traffic noise conditions

The Noise Study in **Appendix G** compares the without and with Proposed Project scenarios and shows the change in traffic noise levels as a result of the Proposed Project. The noise level at the existing residences to the east of the Proposed Project Site (off Cawston Avenue) is "normally acceptable" per the General Plan noise compatibility matrix, while the noise level at the existing residences to the north of the Proposed Project Site (off Seventh Street) is "conditionally acceptable". These residences have a wall between their yard and Seventh Street. Per Policy PS-6.3, it takes a change of 5 dBA or more to be significant for "normally acceptable" uses and a change of 3 dBA or more to be significant for "conditionally acceptable" uses. Although there is an increase in traffic noise levels, the impact is considered to have no impact as the change in noise levels will be less than the applicable threshold criteria per the General Plan.

Table 30*: Off-Site Change in Existing Noise Levels as a Result of the Project*, is provided below and identifies the roadway noise that would be generated with the Project.

Table 30: Off-Site Change in Existing Noise Levels as a Result of the Project

Roadway[1]	Segment	CNEL at Nearest Sensitive Receptor, dBA[2]				
		Existing Without Project	Existing With Project	Change in Noise Level	Noise Level Increase Threshold (dBA)	Potential Significant Impact
Cawston Avenue	East of Project Site	52.2	55.8	3.6	5.0	No
7th Street	North of Project Site	67.8	69.3	1.5	3.0	No

Notes:
1 Exterior noise levels calculated at 5 feet above ground level.
2 Noise levels calculated at the nearest sensitive receptors.

Roadway Noise – Exterior Noise Standard Comparison

Traffic noise from the local roadway network was evaluated and compared to the City's Exterior Noise Standard. Per the City's Exterior Noise Standard (Table N-2 from the City's General Plan, Noise Element), the single-family residential noise limit is 65 dBA CNEL. As shown in **Table 31: On-Site Existing Plus Project Exterior Noise Levels**, existing plus Proposed Project traffic 65 dBA CNEL noise projections from the loudest street (Seventh Street) will reach up to 133 feet from the centerline of the road. Residential yard properties are located approximately 50 feet away from the centerline of Seventh Street and have a projected noise level of 71 dBA CNEL. Existing residences along Seventh Street have a wall between Seventh Street and their yards. Therefore, for the new residences **Mitigation Measure NOI-1** to require a wall of at least 6 feet high be constructed along the borders of the Proposed Project Site must be implemented to reduce noise levels of the new residential to 65 dBA CNEL and under.

Table 31: On-Site Existing Plus Project Exterior Noise Levels

Roadway	Segment	CNEL at 50 Ft (dBA), No Wall	CNEL at 50 Ft (dBA), With Wall	Distance to Contour, No Wall (Ft)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Cawston Avenue	East of Project Site	67.5	61.1	34	73	158	340
Seventh Street	North of Project Site	71.4	64.9	62	133	288	619
Esplanade Avenue	South of Project Site	69.9	63.4	49	106	228	473

Noise Impacts to Off-Site Receptors Due to Stationary Sources

The nearest sensitive receptors that may be affected by project operational noise include adjacent residential uses to the north.

On-site operational noise includes transformers and HVAC units. HVAC equipment will be ground mounted in the backyards of each unit behind fences/walls. Equipment will be at least 100 feet away from the nearest residential uses to the north. The maximum sound power level from a single unit is 73 dBA. At 100 feet away, the sound pressure level a single unit is estimated to be 32 dBA. Assuming all units are running simultaneously in each unit's backyard, the sound level is 43 dBA Leq at the nearest residential receptors. The noise due to the HVAC units operating simultaneously will thus meet the City's nighttime noise level limit of 45 dBA for residential properties.

Transformers to support the Proposed Project would be no louder than 65 dBA at 6 feet, according to American National Standards Institute (ANSI) standards . Operational noise complies with the

stationary noise standards set in section 8.40.050 of the City's Municipal Code. The impact is, therefore, less than significant.

b) Would the project result in the generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. The proposed Project would not generate or expose persons or structures to excessive groundborne vibration from the construction. The City of San Jacinto has established the following standards for vibration induced building damage: for sensitive historic structures, a vibration limit of 0.08 in/sec peak particle velocity will be used to minimize the potential for cosmetic damage to the building, while a vibration limit of 0.30 in/sec ppv will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.

Table 32: *Guideline Vibration Damage Potential Threshold Criteria*, identifies the thresholds from the Caltrans Transportation and Construction Induced Vibration Guidance Manual which provides general thresholds and guidelines as to the vibration damage potential from vibratory impacts.

Table 32: Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Table 19, Transportation and Construction Vibration Guidance Manual, Caltrans, Sept. 2013.
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Pile driving and blasting are generally the sources of the most severe vibration during construction. Neither pile driving nor blasting would be used during Project construction. Conventional construction equipment would be used for grading activities. **Table 33: *Vibration Levels for Construction Equipment***, summarizes typical vibration levels measured during construction activities for various vibration-inducing pieces of equipment.

Table 33: Vibration Levels for Construction Equipment

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

1 Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

All proposed structures are at least 100 feet from any existing structures. The nearest receptors to the Proposed Project Site are the planned unit development located 90 feet to the north of the Proposed Project Site's northern property line and the dairy farm located 78 feet to the south of the Proposed Project Site's southern property line.

At a distance of 100 feet, a vibratory roller would yield a worst-case 0.046 PPV (in/sec), which may be perceptible but below any risk of damage (0.5 in/sec PPV is the threshold of old residential structures). The impact is less than significant, and no mitigation is required.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Proposed Project Site is located approximately 2.5 miles north of the Hemet Ryan Airport, 11 miles east of the Perris Valley Airport, and approximately 14 miles southeast of the March Air Reserve Base. The Proposed Project Site is also located well outside the existing and projected 65-dBA CNEL noise contour of either of these airports. The Proposed Project Site is not located within the vicinity of a private airstrip. Aircraft overflights do not significantly contribute to the noise environment at the Proposed Project Site, and the Project would not expose future residents to excessive noise levels. There would be no impact.

4.13.4 Mitigation Measures

NOI-1 A 6-foot-high masonry wall, constructed to City standards, must be installed along the Project boundaries, between the planned residential units and West Seventh Street, Cawston Avenue and W Esplanade Avenue to ensure residential exterior noise standards would be met for the new residential units planned along those streets.

4.13.5 Conclusion

Implementation of **Mitigation Measures NOI-1** would reduce potential impacts of the Proposed Project associated with Noise to less than significant.

4.14 Population and Housing

4.14.1 Environmental Setting

4.14.2 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?			X	

Discussion

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. The Proposed Project would construct 419 single family units. Based on the City of San Jacinto average household size of 3.45 persons per household (according to the EMWD UWMP which utilized SCAG 2020 Local Profile for the City of San Jacinto), the Project would generate approximately 1,445 new residents. Based on the 2024 RTP/SCS, the City of San Jacinto included 53,400 people in 2019 and anticipated growth to 69,090 people by 2050.[10] The proposed Project would represent 9.2 percent of the growth between 2019 to 2050, which would be within the anticipated growth for the City as projected by SCAG, and would not constitute a significant increase.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Less Than Significant. The Proposed Project Site currently consists of two occupied residential units that are associated with the existing on-site farm. As such, construction of the Project would displace the residences currently located on-site. However, based on the average persons-per-household rate of 3.45 the existing residences would have a maximum of 7 persons. Displacement of approximately 7 persons would not necessitate the construction of replacement housing elsewhere. Further, the occupants are expected to relocate to another location associated with the owner's operations. Additionally, based on the vacancy rate for San Jacinto of 5.0 percent (US Census), there would be

10 Southern California Association of Governments (SCAG). April 4), Connect SoCal: Demographics and Growth Forecast Technical Report. Los Angeles, CA: SCAG. https://scag.ca.gov/sites/default/files/2024-05/23-2987-tr-demographics-growth-forecast-final-040424.pdf, as accessed 11/11/24. Per the SCAG Connect SoCal 2024, Demographics and Growth Forecast and Technical Report, a rough estimate of the future jurisdiction-level population based on Connect SoCal's household forecast can be derived using a county-level Population to Housing ratio from the appropriate County's forecast and applying it to a jurisdiction's future household growth. Riverside County's 2050 Population (2,992,000 people) to 2050 Housing (1,062,000 households) ratio would be 2.82. When applied to the City's 2050 Housing numbers (24,500 households), the City's approximate 2050 population growth would be 69,090 people.

sufficient replacement residences available for rent or purchase in the immediate area that are equivalent to the displacement properties. Therefore, the Project would not result in significant impacts related to displacement of housing and associated residents, and no replacement housing is required. No mitigation is required.

4.14.3 Mitigation Measures

No mitigation measures associated with impacts to Population and Housing apply to the Proposed Project.

4.14.4 Conclusion

Potential impacts of the Proposed Project associated with Population and Housing would be less than significant, and no mitigation would be required.

4.15 Public Services

4.15.1 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			X	
Police protection?			X	
Schools?			X	
Recreation/Parks?			X	
Other public facilities?			X	

Discussion

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services?

Fire Protection

Less Than Significant Impact. The Riverside County Fire Department (RCFD) would provide fire protection service for the Proposed Project Site. The closest fire station to the Proposed Project Site is Fire Station 78 located at 2450 Cottonwood Avenue, approximately 0.78 miles from the Proposed Project Site (RCFD 2023). As discussed in Section XIV. Population and Housing, the Project would increase the local population by approximately 1,453 residents, which would likely increase the demand for fire protection services, including administrative tasks associated with approval and construction of the Project (e.g., building plan check) and response to fire service calls once the Project is occupied. However, this increase in demand for fire protection services is not expected to independently require the construction of new or alteration of existing fire protection facilities to maintain an adequate level of fire protection service to the Project area. In addition, the Project would be required to comply with all fire protection measures in accordance with the Riverside County Ordinances, 2022 California Fire Code (CFC) and any additional recognized fire protection standards, which would also minimize demand for fire protection services. The Project plans would be subject to review and approval by the RCFD, which would ensure that adequate emergency access, fire hydrant availability, and sufficient capacity for fire flows would be provided in compliance with all applicable codes and standards.

Police Protection

Less Than Significant Impact. The Riverside County Sheriff's Department (RCSD) would provide police protection service for the Proposed Project Site. The San Jacinto Station is located at 160 West 6th Street, which is approximately 3.5 miles east of the site. As discussed in Section XIV. Population and Housing, the Project would increase the local population by approximately 1,453 residents, which would likely increase the demand for police protection services. However, this increase in demand for

police protection services is not expected to independently require the construction of new or alteration of existing police protection facilities to maintain an adequate level of police protection service to the Project area. Additionally, Project plans would be reviewed and approved by the City and RCSD to ensure adequate safety and crime prevention measures are provided. The Project would provide safety design features such as fences around the site perimeter and security lighting throughout the Proposed Project Site. The Developer would be responsible for the payment of development impact fees and would generate taxes to fund existing and future Sheriff's Department facilities. Additionally, the Project would be required to comply with the Sheriff's Department Code standards. Therefore, no physical impacts associated with the provision of police protection services to the proposed Project would occur. A less than significant impact would occur, and no mitigation is required.

Schools

Less Than Significant Impact. The Hemet Unified School District (HUSD) would provide school services for the Proposed Project Site. The Proposed Project Site is located within the boundary areas for Cawston Elementary School located at 4000 West Menlo Avenue (grades T–5), Rancho Viejo Middle School located at 985 North Cawston Avenue (grades 6–8), and Tahquitz High School located at 4425 Titan Trail (grades 6–12). The number of students that would result from the proposed Project's 419 single family units is shown in **Table 32: *Proposed Student Generation*** and is based on HUSD's student generation rates that were provided as part of the document preparation identified in Section 1.3 of this document.

Table 34: Proposed Student Generation

School Level	School Name/Location	Student Generation Rate	Total Students Generated
Elementary	Cawston Elementary School 4000 West Menlo Avenue	0.2111	88
Middle School	Rancho Viejo Middle School 985 North Cawston Avenue	0.1079	45
High School	Tahquitz High School 4425 Titan Trail	0.1625	68
Total Students			**201**

The HUSD includes a student population of approximately 22,091 pre-Kindergarten through twelfth grade students for the 2021/2022 school year. The school facilities have an available capacity of 22,588 students total, with middle schools currently in a capacity deficit and a remaining capacity of 497 students for 2021/2022. As the Project would generate 201 students and the HUSD has available capacity, the Project would have a less than significant impact. However, the Project would be required to pay all applicable school developer fees, that would be used for future facility improvements necessary to ensure adequate levels of service. Developer school fees are considered full and complete school facilities mitigation pursuant to SB 50. Therefore, no physical impacts associated with the construction of new or physical improvements to existing school would be required. A less than significant impact would occur, and no mitigation is required.

Recreational/Parks

Less Than Significant Impact. The City of San Jacinto has over 170 acres of public parks and common areas which comprise 36 parks. Parks located within one mile of the Proposed Project Site include Terrazzo Park, Catalpa Park, Tamarisk Park, Parkside Village, and Ward Park, with a multitude of public

amenities such as grassy areas, sports areas, and children's play structures. In addition to City parks and recreational amenities, the Project would include development of four lettered lots totaling 6.6 acres that would serve as both stormwater bioretention basins and park space with shade structures, barbecue space, walkways that connect to the sidewalks, and picnic areas. A pickleball court is planned in the northwest portion of the Project.

In addition, the Project would be required to comply with the Quimby Act, which allows local governments to exact funding for parks from developers of residential subdivisions, through the dedication of parkland or in-lieu fees, or both. The City implements the Quimby Act, which requires parkland dedication of 3 acres per 1,000 residents or an in-lieu fee payment as a required condition of approval for a residential subdivision. As the Proposed Project is projected to increase the population by approximately 1,453 people, the Project is required to provide a minimum of 4.4 acres of parkland in accordance with the Quimby Act.

Additionally, SJMC Section 16.75.060 *Formula for dedication of land* identifies the City's formula by which parkland is to be dedicated. The amount of land to be provided is determined pursuant to the formula using 0.0156 acres per dwelling unit. As the Proposed Project is projected to build 419 single family units, the Proposed Project would be required to provide 6.6 acres of parkland.

The Proposed Project includes development of four lettered lots totaling approximately 6.6 acres that would serve as both stormwater bioretention basins and park space for the residents, which meets the requirements of both the Quimby Act and the City's Municipal Code. The Project would also be subject to Developer Impact Fees fund existing facilities or provide new facilities within the City. Therefore, no new construction or physical improvements to City park facilities would be required. Therefore, no physical impacts associated with the provision of new or improved park facilities would occur. A less than significant impact would occur, and no mitigation is required.

Other Public Facilities

Less Than Significant Impact. Other public facilities within the Project vicinity includes libraries. The Riverside County Library System provides library services to the City through the San Jacinto Library located at 595 South San Jacinto Avenue. The Riverside County Library System provides a wide range of electronic and digitized resources that do not require physical library space. As discussed in Section XIV. Population and Housing, the Project would increase the local population by approximately 1,453 residents, which would likely increase the demand for library services within the area. However, the Project would be required to pay applicable development impact fees, including library fees, that are anticipated to offset the Project's potential increased demand for other public facilities include libraries. As such, the Project would not require the construction of new or alteration of existing library facilities, and no physical impacts would result. There would be a less than significant impact, and no mitigation is required.

4.15.2 Mitigation Measures

No mitigation measures associated with impacts to Public Services apply to the Proposed Project.

4.15.3 Conclusion

Potential impacts of the Proposed Project associated with Public Services would be less than significant, and no mitigation would be required.

4.16 Recreation

4.16.1 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
RECREATION: Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Discussion

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less Than Significant Impact. As stated above, the City of San Jacinto would provide park facilities for the Proposed Project Site and has over 170 acres of public parks and common areas which comprise 36 parks. According to the City's General Plan, parks located within 1 mile of the Proposed Project Site include Terrazzo Park, Catalpa Park, Tamarisk Park, Parkside Village, and Ward Park, as shown in **Table 35: *Parks Located Within One Mile of the Project Site***.

Table 35: Parks Located Within One Mile of the Project Site

Park Name	Amenities	Distance from Proposed Project Site
Terrazzo Park	Grassy area, shade pavilion, picnic tables, public grills, two play structures	0.3 mile
Catalpa Park	Grassy area	0.3 mile
Tamarisk Park	Grassy areas, shady pavilion, curbside parking, drinking fountains, ADA accessible, two play structures, public grills, picnic benches, and half-court basketball pads	0.8 mile
Ward Park	ADA compliant, grassy areas, Sandy ground play structure, shade pavilion, picnic benches, two half-court basketball pads	0.8 mile
Parkside Village	ADA accessible, street parking, gazebo, playground/play structure, picnic benches, basketball court	0.9 mile

As shown in **Table 35**, there are several existing park sites that provide recreation opportunities within one mile of the Proposed Project Site. There are additional parks located within approximately two miles of the Proposed Project Site, including Stoney Mountain Park, the Cove

Park, Pomegranate Park, and Colonial Golf and Country Club. Based on this relatively diverse array of available recreational facilities within the City, the Project is not expected to introduce a new resident population that would substantially overwhelm and/or deteriorate park facilities. In addition, the Project would include development of four lots that would serve as both stormwater bioretention basins and park space with covered picnic areas, barbecues, walkways that connect to the sidewalks, and a pickleball court in the northwestern area of the Project Site. These public spaces are in addition to the private spaces such as front yards and backyards that each of the home sites would be developed with. These onsite park facilities would reduce the Project's demand for existing park facilities in the City and would further encourage new residents to utilize onsite facilities as opposed to public facilities outside the planned community.

In addition, the Project would be required to comply with the Quimby Act, which allows local governments to exact funding for parks from developers of residential subdivisions, through the dedication of parkland or in-lieu fees, or both. The City implements the Quimby Act, which requires parkland dedication of three (3) acres per 1,000 residents or an in-lieu fee payment as a required condition of approval for a residential subdivision. As discussed in Section 4.15.1 "Public Facilities – Recreation/Parks," parks for the anticipated 1,453 residents of the Proposed Project are planned in the four lettered lots that would serve as both stormwater bioretention basins and park space; the lots total 6.6 acres, which meets the requirements of both the Quimby Act and the City's Municipal Code. Therefore, the increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated is less than significant.

The Project would also be subject to Developer Impact Fees to fund existing facilities or provide new facilities within the City. The Project would not significantly increase the use of existing recreation facilities or require the construction or expansion of recreational facilities, and impact would be less than significant. No mitigation is required.

4.16.2 Mitigation Measures

No mitigation measures associated with impacts to Recreation apply to the Proposed Project.

4.16.3 Conclusion

Potential impacts of the Proposed Project associated with Recreation would be less than significant, and no mitigation would be required.

4.17 Transportation

4.17.1 Traffic Impacts Terminology

This analysis is based on technical studies that were prepared for the currently proposed Project, including a revised trip generation and a vehicle miles traveled analysis that was prepared for the previously proposed Project (**Appendix H - *Chacon Farms Trip Generation Analysis, City of San Jacinto*, TJW Engineering, September 17, 2024, with *Chacon Farms Draft Transportation Impact Study*, Psomas, March 2024**).

The revised Trip Generation Analysis prepared September 17, 2024 (**Appendix H**) identified that the trip generation analysis for the currently proposed Project would generate a total of 294 AM peak hour trips, 394 PM peak hour trips, and 3,952 daily trips. It should be noted that a Draft Transportation Impact Study for the Proposed Project was conducted in March 2024 (**Appendix H**). The March 2024 study evaluated the previous higher intensity project and determined that, that the Proposed Project would generate a total of 364 AM peak hour trips, 454 PM peak hour trips, and 5,223 daily trips. As the currently proposed Project now generates fewer trips, the findings and conclusion of the March 2024 study would remain and be considered conservative.

4.17.2 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
TRANSPORTATION: Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

Discussion

a) Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?

Less Than Significant Impact.

The Project is primarily guided by the following transportation-related programs and plans, including the Riverside County General Plan Circulation Element (County of Riverside 2020); WRCOG Active Transportation Plan (WRCOG 2018); City of San Jacinto General Plan Mobility Element (City of San Jacinto 2022a); and the City of San Jacinto Trails Master Plan (City of San Jacinto 2018). These programs and plans discuss existing transit, roadways, bicycle, and pedestrian facilities within the County and City, analyzed further below.

Transit

There are no transit services located within the immediate vicinity of the Project (Psomas 2024b). The closest bus stop to the Proposed Project Site is located 2.5 miles east of the Proposed Project Site at the intersection of Esplanade Avenue/State Street. This bus stop serves Riverside Transit Agency (RTA) Line 44. Transit service is reviewed and updated by RTA periodically to address ridership, budget, and community demand needs. The Project's conformity with the above-mentioned plans is described below:

Riverside County General Plan Circulation Element

The Riverside County General Plan Circulation Element outlines the necessary multi-modal transportation system components and provides tools to assist with development and implementation of the transportation system. The Circulation Element is structured to effectively implement the goals and policies identified by the General Plan. The Circulation Element also reflects citizens' and decision makers' desires to provide transportation mobility and quality access to existing and future residential, recreation, and employment uses as defined in the Land Use Element.

The intent of the General Plan Circulation Element is to establish a comprehensive multi-modal transportation system that is safe, achievable, efficient, environmentally, and financially sound, accessible, and coordinated with the Land Use Element. It is important to design and implement a multi-modal transportation system that will serve projected future travel demand, minimize congestion, achieve the shortest feasible travel times and distances, and address future growth and development in Riverside County (County of Riverside 2020).

The Project is consistent with the goals of the Riverside County General Plan Circulation Element since the Project would provide multi-modal improvements such as bicycle infrastructure and sidewalks which would facilitate greater access to the bus stop located at the intersection of Esplanade Avenue/State Street.

WRCOG Active Transportation Plan (ATP)

The WRCOG, with the assistance of Fehr and Peers, published its Active Transportation Plan (ATP) in 2018 with the purpose of enhancing non-motorized infrastructure throughout the region. The goal of the WRCOG is to develop a robust network for people who choose or need to walk and/or bike. The ATP serves as a resource for WRCOG member jurisdictions and stakeholders to help identify important active transportation facilities they would like to see in their community and provides guidance on how each individual project can be achieved.

The Project is consistent with the following Active Transportation Efforts.

RTA First/Last Mile – The RTA First Mile-Last Mile Mobility Study (RTA Study) was released in 2017 to identify ways to improve access to and from bus stops throughout the region. Public transportation rarely stops at the passenger's origin or destination, and transit users have to rely on other modes to get to their desired locations. These trips, whether it is walking, biking, or ridesharing, are referred to as "first and last mile" journeys.

The goal of the RTA study is to identify challenges and offer solutions to passengers who have to travel to and from their bus stops. By improving these "first mile-last mile" trips, RTA hopes to increase both transit ridership and the livability of the region. The study takes note of the barriers that currently exist and provides solutions in removing the barriers. These could include unsafe pedestrian crossings, lack of walkways, and ADA accessibility issues. Some of

the solutions that can be implemented include, new bicycle infrastructure, improved lighting, shade, and seating, and improved wayfinding to transit stations. The active transportation facilities identified in the proposed ATP network should help to overcome some of the barriers that currently exist in the region. The Western Riverside County ATP and RTA First Mile-Last Mile report are important tools for encouraging investment in improving active transportation infrastructure.

The Project is consistent with WRCOG efforts to expand first/last mile connections since the Project would provide new sidewalks along Seventh Street, Cawston Avenue, and Esplanade Avenue. In addition, the City of San Jacinto identified the segments of Seventh Street and Cawston Avenue adjacent to the Proposed Project Site as roadways suited for Class II (buffered) Bicycle Lanes. The Project Applicant would be responsible for paying all development impact fees prior to the issuance of building permits for the purpose of ameliorating the impacts caused by new development on the City's infrastructure. Fees are used to finance the acquisition, construction, and improvement of public facilities needed as a result of this new development. The payment of development impact fees may assist the City in providing the bicycle facilities that are proposed for Seventh Street and Cawston Avenue.

City of San Jacinto General Plan Mobility Element

The Mobility Element of the City of San Jacinto General Plan provides the framework for decisions concerning the city's multimodal transportation system, which includes roadway, transit, bicycle, and pedestrian modes of travel. The Mobility Element provides for coordination with the Riverside County Transportation Commission, which serves as the coordinating agency for transportation funding for Riverside County. The Project is consistent with the following policies:

M-2.4 Public Transit. Promote public transportation programs that effectively serve the City's residents and workers by connecting users to local and regional destinations, including jobs, recreation, retail, and other activity centers.

M-3.3 Multimodal Connectivity. Link commercial development, employment centers, public facilities, and community parks and open spaces to transit and active transportation facilities and trails, wherever feasible.

M-3.4 New Development. Encourage Specific Plans and Planned Developments to include well-developed and funded multimodal transportation facilities.

M-6.4 New Development. Work with developers to reduce greenhouse gas emissions and minimize congestion related to new development through improvements to the circulation system and on-site improvements that encourage non-vehicular modes of travel.

The Project would include bicycle parking and new sidewalks which would provide greater access to various bus lines serving the City. In addition, development impact fees paid by the Applicant could be utilized by the City to provide the bicycle lane improvements proposed in the City's Mobility Element.

City of San Jacinto Trails Master Plan (TMP)

The City of San Jacinto Trails Master Plan (TMP) was released in November of 2018 with the intent on summarizing the City's existing trail and multi-modal conditions in order to develop project recommendations that make multi-modal transportation safe and enjoyable options. The TMP was created with input from the community, stakeholders, and City staff as a tool to

facilitate future grant efforts and public/private partnerships. As a result, the TMP can help to improve the quality of life for all who live, work, and play in San Jacinto. The TMP establishes a system of corridors by incorporating walking, biking, and multi-use paths (trails) within San Jacinto's streets and open space. Additionally, the plan provides recommendations on how to successfully implement and maintain the proposed corridor improvements. The TMP takes into consideration the City's General Plan and numerous past and on-going planning projects. By incorporating community feedback into the plan, the TMP also recommends facilities in places where people need them the most (City of San Jacinto, General Plan).

With regard to bus services, the TMP identified the following recommendation for Seventh Street: install enhanced crosswalks and bus shelters at the intersection of Seventh Street/State Street.

As mentioned previously, the Project Applicant would be required to pay development impact fees prior to the issuance of a building permit. These development impact fees may be utilized by the City to provide bus shelters at deficient bus stops.

Roadways

Within a local context, the Proposed Project Site is bound to the north by Seventh Street, to the south by Esplanade Avenue, and to the east by Cawston Avenue. The Project would provide roadway dedications for Seventh Street, Esplanade Avenue, and Cawston Avenue to help facilitate future roadway widening efforts. The inclusion of roadway dedications would assist the City in their attempt to ensure the aforementioned roadways are consistent with their designated roadway classifications (both Seventh Street and Cawston Avenues are classified as Major Roadways in the City's General Plan Mobility Element, while Esplanade Avenue is classified as an Arterial). Currently, none of the aforementioned roadways are consistent with their roadway classifications. All three street segments abutting the Proposed Project Site feature one lane of travel in each direction and are narrower than the typical right-of-way width permitted in the General Plan Mobility Element. As such, the Project would not conflict with any programs, plans, or ordinances addressing roadway facilities serving the Proposed Project Site.

Bicycle and Pedestrian Facilities

As indicated previously, the City's General Plan Mobility Element identifies Seventh Street and Cawston Avenue for potential bicycle lane improvements (the installation of Class II bicycle lanes along both roadways). In addition, the WRCOG ATP and County of Riverside General Plan Circulation Element contain numerous policies and strategies related to expanding bicycle and pedestrian facilities in which the Project would comply with. Lastly, the City's TMP contains recommendations requesting general bicycle and pedestrian network improvements. These improvements would help provide access to multi-use paths and trails as well as to bus stops located throughout the City.

There are no sidewalks located along the Project frontage. However, there are existing sidewalks along Cawston Avenue north of Seventh Street and south of Esplanade Avenue. In addition, there is an existing sidewalk along the north side of Seventh Street across from the Proposed Project Site. The Project would not conflict with the City's Mobility Element, the WRCOG ATP, the County Circulation Element, or the City TMP, as the Project would provide bicycle storage facilities and improve pedestrian facilities along Seventh Street, Cawston Avenue, and West Esplanade Avenue. As such, the Project would not conflict with any programs, plans, or ordinances addressing bicycle and pedestrian facilities serving the Proposed Project Site.

Therefore, there would be a less than significant impact, and no mitigation measures are required.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact. The Governor's Office of Planning and Research published its Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory). Based on OPR's Technical Advisory, projects located within low VMT generating traffic analysis zone (TAZ) may be presumed to have a less than significant VMT impact. This presumption may not be appropriate if the Project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips. To qualify as a low VMT generating TAZ under the Technical Advisory recommendations, residential land uses in the TAZ would have to generate VMT per resident that is 15 percent or more below baseline conditions compared to the citywide or regionwide average. Office land uses would have to generate VMT per worker that is 15 percent or more below baseline conditions compared to the regionwide average. To assist lead agencies in western Riverside County with SB 743 implementation, the WRCOG with support from SCAG, developed implementation guidance and a VMT impact screening tool. The WRCOG screening tool can be set up to use the Technical Advisory or any lead agency preferred threshold. The default setting in the tool defines low VMT generating TAZs as those that generate total VMT per service population less than the base year (2012) model jurisdictional average.

As stated in the Transportation Impact Study (TIS), included as **Appendix H**, per the WRCOG VMT screening tool, the Project is located within a low VMT generating TAZ. In addition, the Project is consistent with other uses in the TAZ as the northern half of the TAZ is a developed single-family residential neighborhood. Therefore, as the Project meets the screening criteria, the proposed Project is presumed to result in a less than significant impact for VMT. Therefore, no further VMT analysis is required (**Appendix H**). As such, there would be a less than significant impact, and no mitigation measures are required.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?

Less Than Significant Impact. Based on the Site Access Analysis provided in the TIS (**Appendix H**), the Project would have three access points: one on Seventh Street to the north, one on Cawston Avenue to the east, and one on Esplanade Avenue to the south. Two of the driveways are expected to operate with one-way stop controls, while the driveway proposed at Karpick Street would be controlled by a two-way stop. The access points would not be gated. As stated in the TIS, there are no major existing concerns with sight visibility, which would also be verified and maintained throughout the design and construction process.

Additionally, the Project volumes at the north and east driveways would not reach 50 peak hour right turns, so no right turn lanes would be needed, with the assumption that left turn lanes would be provided at all three driveways. In addition, although the peak hour right turn volume (westbound) at the south driveway would exceed 50 vehicles, it was not assumed that a right turn lane would be provided because Esplanade Avenue will be widened to a four-lane roadway as part of the City's Capital Improvement Plan.

The Traffic Signal Warrant Analysis provided in the TIS was provided to determine the potential need for installation of a traffic signal at an otherwise unsignalized intersection. As concluded by the TIS, there are two, all-way stop controlled intersections (the intersections of Seventh Street/Lyon Avenue and Esplanade Avenue/ Kirby Street) that are expected to fail in the opening year with or without the Project. Both the Seventh Street/Lyon Avenue and Esplanade Avenue/Kirby Street intersections are expected to meet the peak hour signal warrant, and traffic signals are recommended to be installed at both located to improve operations to an acceptable level. As shown in **Table 34: *Fair Share Percentage Calculations for Required Traffic Signals***, the Project would be responsible for 17 percent of the

Seventh Street/Lyon Avenue traffic signal cost and 11 percent of the Esplanade Avenue/Kirby Street traffic signal cost.

Table 36: Fair Share Percentage Calculations for Required Traffic Signals

Intersection	Peak Hour	Project Volumes	Future Development Volumes	Project Fair Share
Seventh Street/Lyon Avenue	AM	55	276	17 percent
	PM	68	330	17 percent
Esplanade Avenue/Kirby Street	AM	55	430	11 percent
	PM	68	566	11 percent

Source: Appendix H

Sidewalks would be provided throughout the site and would connect to the existing external roadways. Additionally, the Project would not interfere with the existing or planned bicycle network.

Overall, the Project would incorporate all recommendations outlined in the TIS, including verification and maintenance of sight visibility during the design and construction process and the payment of fair share fees to ameliorate the deficient off-site intersections described in Table 34. The Project Applicant would be required to pay requisite fees consistent with the City's requirements. With incorporation of all recommendations provided by the TIS, the Project would not substantially increase hazards due to a geometric design feature or incompatible use. Therefore, impacts would be less than significant, and no mitigation is required.

d) Would the project result in inadequate emergency access?

Less Than Significant Impact. Construction activities for the Project, including staging and worker parking, would occur on site. The Project may temporarily alter traffic patterns along Cawston Avenue, Esplanade Avenue, and Seventh Street during construction. However, the Project would not completely close the aforementioned streets at any point. The Project would comply with all conditions set forth in the required Project-specific TCP, which would be reviewed and approved by the City prior to initiation of construction activities. Therefore, with implementation of the required TCP, the temporary closure of a few lanes along Cawston Avenue, Esplanade Avenue, and Seventh Street would not result in a significant interference of emergency access during construction. It is important to note that the Project would be subject to review by the Building Division and RCFD to ensure compliance with building and fire codes. The Project would not work within the public right-of-way without undergoing proper review through the Engineering department, which would require an Encroachment Permit. Therefore, the Project would have less than significant impacts regarding interference with emergency response or evacuation plans during construction, and no mitigation is required.

In the long-term, the Project would provide primary vehicular ingress and egress points to and from the Proposed Project Site via three driveways. These driveways could be utilized for emergency response to the site and for emergency evacuation of the site. Operationally, the Project would not affect emergency response or emergency evacuation of adjacent land uses. The Project would incorporate all recommendations provided by the TIS, including the maintenance of the sight triangles (line-of-sight) at the three access points, discussed further above. Therefore, the Project would have less than significant impacts regarding interference with emergency response or evacuation plans during operation, and no mitigation is required.

Therefore, impacts are less than significant, and no mitigation is required.

4.17.3 Mitigation Measures

No mitigation measures associated with impacts to Transportation apply to the Proposed Project.

4.17.4 Conclusion

Potential impacts of the Proposed Project associated with Transportation would be less than significant, and no mitigation would be required.

4.18 Tribal Cultural Resources

City of San Jacinto AB 52 Tribal Consultation

On February 22, 2024, the City of San Jacinto notified via email the following tribal entities of the Project and requested a timeframe in which to request consultation in accordance with AB52 and SB18. The following summarizes the results of the AB52 consultation.

- Soboba Band of Luiseño Indians (SBLI). Result: Mitigation measures requested to manage unanticipated tribal resources. Consultation concluded.
- Rincon Band of Luiseño Indians. Result: No potential tribal resources. Consultation concluded.
- Yuhaaviatam of San Manuel Nation. Result: the Project site was outside of Serrano ancestral territory. Consultation concluded.
- Agua Caliente Band of Cahuilla Indians (ACBCI). Result: Letter dated February 26, 2024 requested formal consultation and more information identified in the Cultural Resources Report. Letter received April 21, 2025 stating the Project site is outside of the boundaries of the ACBCI Reservation, but within the tribe's traditional use area. ACBCI deferred to Soboba for this Site. Consultation concluded.

4.18.1 Environmental Setting

The subject property is currently occupied by Chacon Farms and Bruno Ranches for residential and agricultural use. The study area is within the ancestral territory or traditional use territory occupied by Luiseño Indians, Serrano Indians. And Cahuilla Indians. Ancestral territory describes land inhabited by a group for generations, indicating a longstanding historical association. Traditional territory refers to the geographic area that an Indigenous nation or group historically used or occupied for activities such as hunting, fishing, gathering, and spiritual practices.

4.18.2 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
TRIBAL CULTURAL RESOURCESNOISE: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or		X		
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

Discussion

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Less Than Significant Impact With Mitigation Incorporated. According to PRC Chapter 2.5, Section 21074, tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and items with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources as defined in Section 5020.1.

There were no resources that were identified as eligible for listing to the California Register of Historic Places within or near the Project site according to the cultural resources assessment (**Appendix C**). Therefore, there would be no impact to known tribal cultural resources. However, the Soboba Band of Luiseño Indians informed the City during the tribal consultation process that the Proposed Project area exists within their ancestral territory and, therefore, is of interest to the SBLI. The SBLI requested that **Mitigation Measure TCR-1**, located at the end of this section, as well as CUL-2, located in Section 4.5.3 of this document, be made a part of the project/permit/plan conditions to protect for unidentified resources.

b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less Than Significant Impact With Mitigation Incorporated. The Project has no resources that have been identified as significant within or near the Project site. Ground-disturbing activities, however, do have the potential to uncover unanticipated tribal cultural resources.

There are no resources that have been identified as eligible for listing to the California Register of Historic Places within or near the Project site. As discussed above, the Mitigation Measure TCR-1 would be implemented to avoid potential impacts to tribal cultural resources that may be unearthed by Project construction activities.

4.18.3 Mitigation Measures

TCR-1 Prior to grading permit issuance, the developer shall enter into a Treatment and Disposition Agreement (TDA) with the Soboba Band of Luiseño Indians to address treatment and disposition of archaeological, or Tribal Cultural Resources and human remains associated with the Soboba Band of Luiseño Indians that may be uncovered or otherwise discovered during ground-disturbing activities related to the project, if monitoring deemed necessary by Soboba Band of Luiseño Indians. The TDA will establish provisions for tribal monitoring and shall be submitted to the Planning Division once it has been executed.

4.18.4 Conclusion

Implementation of **Mitigation Measure TCR-1** and **Mitigation Measure CUL-2** would reduce potential impacts of the Proposed Project associated with Tribal Cultural Resources to less than significant.

4.19 Utilities and Service Systems

4.19.1 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Discussion

a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact. The Proposed Project Site would be serviced by the existing electric lines, gas lines, wastewater and water lines within the vicinity of the Proposed Project Site.

Water Facilities

Water service would be provided to the Proposed Project Site by EMWD via proposed looped network lateral connections to the existing water mains in Cawston Avenue North, West Esplanade Avenue, and West Seventh Street. The Project has been preliminarily sized to meet the minimum design water pressure of 50-psi at each proposed service point of connection and a 20-psi residual pressure for fire flows. As such, the Project would not require the relocation or new or expanded public water facilities to be built. Water mains for the Project would be connected to the existing City water mains. Therefore, there would be a less than significant impact, and no mitigation is required.

Wastewater Treatment Facilities

Wastewater generated from the Proposed Project Site is collected by the City's local wastewater collection system, which consists of approximately 178 miles of main sewer lines and access to the collection system is provided with 2,772 manhole locations. All City sewage is transferred to the EMWD sewer treatment plant – San Jacinto Valley Regional Water Reclamation Facility.

Under the developed condition, the Project wastewater flows would be collected via a proposed sewer system and would be conveyed to EMWD's sewer treatment plant. The Project's proposed sewer collection system has been preliminarily sized to convey the sewer flow through a proposed 8-inch sewer main line via gravity from the southern to the northeast corner of the Proposed Project Site. A proposed lift station would move wastewater from the proposed 8-inch main line to a proposed 10-inch sewer main line to be constructed within Seventh Street. The proposed 10-inch sewer main line would then connect to an existing 24-inch gravity sanitary sewer running north in Cawston Avenue North and then east on West Seventh Street. The Project has been designed to be a self- contained system that does not anticipate any future sewer input from other sources. As such, the Project would not require the relocation or new or expanded public wastewater facilities to be built. Sewer lines for the Project would be connected to existing City sewer lines. Therefore, there would be a less than significant impact, and no mitigation is required.

Stormwater Drainage Facilities

The City owns and maintains roadway and neighborhood storm drain collection systems. There is no formal drainage infrastructure in the immediate vicinity of the Project Site except roadside ditches and curb and gutter on fully improved roads.

The Proposed Project Site would be developed with associated improvements including streets and graded slopes. The runoff from the developed condition would be collected into an on-site storm drain system and flow to the northwest corner of the Proposed Project Site, mimicking the pre-developed drainage pattern. In the proposed post-developed condition, the existing detention basin would be regraded and expanded to serve as a stormwater detention basin. In addition, a submerged pump would be installed at the north side of the basin to send the treated stormwater into Cawston Avenue where water would be conveyed west and off-site and continue down Seventh Street via roadside swale or gutter flow and into the existing City stormwater system, as under existing conditions. As such, the Project would not require the relocation or new or expanded public storm drain facilities to be built. Therefore, there would be a less than significant impact, and no mitigation is required.

Dry Utilities

Electricity, natural gas, and telecommunications services are provided to the Proposed Project Site by San Jacinto Power, SoCalGas Company, and Frontier/Verizon/AT&T, respectively.

The Proposed Project's projected electricity usage is shown in this document, Section 4.6, *Energy*. Electricity would be provided to the Proposed Project Site to supply 100 percent of the Project's anticipated power demand via an existing off-site distribution network and continued underground on-site. The Project would not include connection to any natural gas service. Additionally, the Project would connect to existing telecommunications lines in the Project vicinity including telephone, cable television, and internet services. Payment of standard utility connection fees and ongoing user fees would be required to ensure these utility services would be able to accommodate the proposed development. As such, the Project would not require the relocation or new or expanded public dry utility facilities to be built. Therefore, there would be a less than significant impact, and no mitigation is required.

b) *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

Less than Significant Impact. As stated in the EMWD 2020 UWMP, the EMWD has the ability to meet current and projected water demands through 2045 during normal, historic single-dry and historic multiple-dry year periods using imported water from the Metropolitan with existing supply resources. Planned local supplies will complement imported supplies and improve reliability for EMWD and the region, and although the EMWD will continue to rely on imported water from Metropolitan as the main source of supply for its retail and wholesale customers, the EMWD would also utilize local supplies and water conservation to manage supply and demand. A Water Supply Assessment will be prepared to document the availability of adequate supplies in combination with other anticipated development in the service area.

Please refer to the discussion under Hydrology, Section 4.10 of this document. As discussed in Section 4.10, the Proposed Project is anticipated to utilize approximately 202 AFY of water from EMWD. Based on the projected water demand for single-family residential units within EMWD's retail service area in 2025 at 8,500 AFY, and in 2045 at 10,600 AFY, it is anticipated that the 202 AFY demand by the Proposed Project can be accommodated into the future, particularly given that the overall available total gross water use is anticipated to be 145,930 AFY in 2025, and 187,100 AFY in 2045. The available water supply within EMWD's retail service area is anticipated to be greater than the demand for water in the future, which indicates that EMWD has available capacity to serve the Proposed Project. As such, given that EMWD's 2020 Urban Water Management Plan indicates that the water district anticipates sufficient water supply will be available to serve the Proposed Project's daily/annual demand, the Proposed Project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. Therefore, the Proposed Project is anticipated to have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. Impacts are less than significant, and no mitigation is required.

c) *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Less than Significant Impact. Municipal wastewater is delivered to the one of EMWD's five regional water reclamation facilities which treat 46 million gallons of wastewater per day (MGD). EMWD is responsible for the collection, transmission, treatment, and disposal of wastewater within its service area, which includes portions of the City of San Jacinto, California. EMWD's San Jacinto Valley Regional Water Reclamation Facility (SJVRWRF) treats approximately 7 MGD of wastewater and has capacity of 14 MGD, and an ultimate capacity of 27 million gallons per day[11]. Based on a sewer generation rate of 43 gallons per day per capita,[12] the Proposed Project is estimated to generate approximately 62,135 gallons per day (GPD) of wastewater (1,445 x 43 gpcd = 62,135 GPD) and represents less than 0.6 percent of the 7 MGD available wastewater treatment capacity at the SJVRWRF. Furthermore, given that there are commercial and industrial uses served by EMWD for wastewater collection, the consideration of wastewater generated on gallons per capita per day basis tends to overestimate demand for residential uses. Regardless, given the available capacity at the SJVRWRF, it is anticipated that the District has available capacity to accommodate the anticipated wastewater generated from the new residences developed on the site. As such, it is anticipated that there will be available capacity

11 EMWD Website: https://content.emwd.org/sites/default/files/migrate-documents/sjvrwrffactsheet.pdf, accessed 2/16/25.

12 City, 2022a, pg. 5.19-36.

to accommodate the demand generated by the proposed project. Impacts under this issue are less than significant.

As such, the wastewater capacity would be able to serve the Proposed Project Site, and impacts would be less than significant.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant Impact. Solid waste disposal in the City of San Jacinto is presently handled by CR&R, a private company which is in partnership with the City to provide solid waste services for residential and commercial uses. CR&R includes trash, recycling and organic services, in addition to construction and demolition services.

Based on the projected population discussed in Section 4.14, Population and Housing, the Proposed Project would generate approximately 1,453 new residents. The City's 2022 General Plan identified that the City's average disposal rate is approximately 3.8 pounds per day per person.[13] As such, the Proposed Project has the potential to result in approximately 5,521 ponds per day of solid waste, or approximately 2.7 pounds per day, or approximately 985 tons per year of solid waste during operations.

The Lamb Canyon Sanitary Landfill and El Sobrante Landfill receive approximately 95 percent of the solid waste within the City. Lamb Canyon Landfill has a remaining capacity of 8.7 millions tons as of 2020, is permitted a maximum throughput of 5,000 TPD, and has enough projected capacity to serve residents and businesses until approximately 2029 with the potential for expansion. El Sobrante Landfill has a remaining capacity of approximately 8.7 million tons as of 2019, is permitted a maximum throughput of 16,054 TPD, and has enough projected capacity to serve residents and businesses until approximately 2051. Conservatively assuming the Lamb Canyon Sanitary Landfill reaches full capacity during the Project's future residential operations, the El Sobrante Landfill would have adequate capacity to accommodate the City's projected solid waste generation, as the Project would represent less than one percent of the landfill's daily capacity. Further, several other landfills serving the City, including Azusa Land Reclamation Co. Landfill, Badlands Sanitary Landfill, McKittrick Waste Treatment Site, San Timoteo Sanitary Landfill, and Sycamore Landfill would accept future solid waste generated by the Project.

Construction activities would also generate solid waste; however, the generation of solid waste during construction would be short-term and would not result in a significant impact to local solid waste management infrastructure. With regards to operation, as discussed above, landfills available to solid waste haulers serving the Proposed Project Site, during both construction and operations, have adequate capacity to serve the Project within the existing capacity of local infrastructure. Impacts would be less than significant, and no mitigation is required.

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact. During construction and operation of the Project, the Project would comply with all applicable federal, State, and local management and reduction statutes related to solid waste during construction and operations. Chapter 8.32 of the SJMC establishes mandatory solid waste and recycling collection to comply with the requirements of AB 939 (which requires cities and counties throughout the State to divert 50 percent of all solid waste from landfills through source reduction, recycling, and composting) and AB 34 (which increased the statewide goal for waste diversion to 75 percent by 2020). The City has also established disposal and mandatory recycling requirements for

13 City, 2022a, page 5.19-49

residential premises to comply with State law diversion requirement, which the Project would be required to comply with. As such, the Project would comply with all regulations related to solid waste, and impacts would be less than significant. No mitigation is required.

4.19.2 Mitigation Measures:

No mitigation measures associated with impacts to Utilities and Service Systems apply to the Proposed Project.

4.19.3 Conclusion

Potential impacts of the Proposed Project associated with Utilities and Service Systems would be less than significant, and no mitigation would be required.

4.20 Wildfire

4.20.1 Impact Analysis

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
WILDFIRE: Would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The Proposed Project Site is not located within a FHSZ in an SRA (CAL FIRE 2023) or within a Very High Fire Hazard Safety Zone (VHFHSZ) in a Local Response Area (CAL FIRE 2009). The Proposed Project Site is located within a relatively flat and area of the City, surrounded by a mix of residential and rural residential development. According to the City General Plan Public Safety Element, the City supports a high level of multi-jurisdictional cooperation and communication for emergency planning and response management. Major arterials serve as the primary routes for evacuation; however, evacuation routes will depend upon the emergency event and area affected. Law enforcement would identify the appropriate routes and assist residents leaving the City in the event an evacuation of all or part of the City is required (San Jacinto 2022a). In addition, the City prepared an analysis, referred to as a White Paper, consistent with SB 99 to identify residential developments in hazard areas that do not have at least two emergency evacuation routes. According to the White Paper, the Arterials within the Project area include Cawston Avenue, Esplanade Avenue, and Seventh Street. The Proposed Project Site is located within an area identified as one exit point directly onto a single arterial. Because the Project is not located in or near State responsibility areas or lands classified as VHFHSZ, implementation of the Project would not substantially impair an adopted emergency response plan or evacuation plan. Therefore, no impact would occur, and no mitigation is required.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. As stated above, the Proposed Project Site is not located within a FHSZ in an SRA or within a VHFHSZ in an LRA. The Proposed Project Site is located within a relatively flat area of the City, surrounded by a mix of residential and rural residential development. There are no slope areas located within the vicinity of the Proposed Project Site that would act as a conduit for wildland fire, and the

Project would also have surrounding roadways and driveways, which would act as fire breaks should a fire occur within or near the Proposed Project Site. Therefore, the Project would not exacerbate wildfire risks, and no impact would occur. No mitigation is required.

c) *Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

No Impact. As stated above, the Proposed Project Site is not located within a FHSZ in an SRA or within a VHFHSZ in an LRA. The proposed Project would require the installation of associated infrastructure include new roads. However, the Project is located in a relatively flat topographical area and proposed roadways and driveways would act as fire breaks should a fire occur within or near the Proposed Project Site. The Project would comply with all CFC and County regulatory requirements during construction and future maintenance activities to ensure the Project would not exacerbate wildfire risk during installation and maintenance of the proposed roads. Therefore, the Project would not exacerbate wildfire risks, and no impact would occur. No mitigation is required.

d) *Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

No Impact. As stated above, the Proposed Project Site is not located within a FHSZ in an SRA or within a VHFHSZ in an LRA. The Project is in a generally flat topographical area away from downslope or landslide areas. The Proposed Project Site is also not within a flood hazard area or landslide hazard area that would be subject to mud flows. Therefore, implementation of the Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, no impact would occur, and no mitigation is required.

4.20.2 Mitigation Measures

No mitigation measures associated with impacts to Wildfire apply to the Proposed Project.

4.20.3 Conclusion

The Proposed Project would have no impact associated with Wildfire risk, and no mitigation would be required.

4.21 Mandatory Findings of Significance

CEQA Thresholds	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
MANDATORY FINDINGS OF SIGNIFICANCEE: Would the project:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

Discussion

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant With Mitigation Incorporated. As described throughout the IS/MND analysis, with the incorporation of the **MM BIO-1 through MM BIO-4**, implementation of the proposed Project would not degrade the quality of the environment; would not substantially reduce the habitats of fish or wildlife species; would not cause a fish or wildlife population to drop below self-sustaining levels; would not threaten to eliminate a plant or animal; and would not eliminate important examples of major periods of California history or prehistory.

With respect to the quality of the environment, the Project would not preclude the ability to achieve long-term environmental goals. Implementation of **MM CUL-1**, which describes procedures to be followed if cultural resources are discovered, is recommended. Additionally, implementation of **MM GEO-1,** which requires a paleontological resources protocol, is incorporated into the Project and would prevent elimination of important examples of major periods of California history or prehistory. With mitigation measures incorporated, impacts related to this threshold would be less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less Than Significant With Mitigation Incorporated. While the Project may have the potential to impact the environment on a Project-specific basis, these impacts would be limited in nature, as detailed throughout this IS/MND analysis. Further, compliance with regulatory requirements and implementation of mitigation measures would reduce any potential impacts to less than significant levels. Therefore, the Project's contribution to a cumulative impact would be reduced to less than significant levels.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant With Mitigation Incorporated. Based on the analysis of the above-listed topics, the proposed Project could have the potential to impact human beings, either directly or indirectly; however, the implementation of the mitigation measures described throughout this document would reduce all potential impacts to less than significant levels.

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Chacon Farms

Air Quality, Greenhouse Gas, and Energy Impact Study

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GLOSSARY OF TERMS

AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH_4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
GHG	Greenhouse gas
HFCs	Hydrofluorocarbons
LST	Localized Significant Thresholds
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
O_3	Ozone
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
SRA	Source/Receptor Area
TAC	Toxic air contaminants
VOC	Volatile organic compounds
WRCC	Western Regional Climate Center

1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

This air quality, greenhouse gas (GHG), and energy analysis was prepared to evaluate whether the estimated criteria pollutants and GHG emissions generated from the project would cause a significant impact to the air resources in the project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The assessment is consistent with the methodology and emission factors endorsed by South Coast Air Quality Management District (SCAQMD), California Air Resource Board (CARB), and the United States Environmental Protection Agency (US EPA).

1.2 Project Summary

1.2.1 Site Location

The Project site is located at on northwest corner of Cawston Avenue and Esplanade Avenue in the City of San Jacinto, CA as shown in Exhibit A. The site is bordered by vacant land to the west, 7th Street to the north with residential uses beyond, Cawston Avenue to the east with residential further, and Esplanade Avenue to the south with farmland further.

1.2.2 Project Description

The project proposes to develop a 76.3-acre lot with 419 single-family housing units. Exhibit B provides the project Site Plan.

Construction activities within the Project area will consist of demolition of the existing structures onsite, site preparation, on-site grading, building, paving, and architectural coating. Table 1 summarizes the land use description for the Project Site.

Table 1: Land Use Summary

Land Use	Unit Amount	Size Metric
Single Family Residential	419	Dwelling Units

1.2.3 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution than others due to their exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, a sensitive receptor would be a location where a sensitive individual could remain for 24-hours or longer, such as residencies, hospitals, and schools (etc).

The closest existing sensitive receptors (to the site area) are the single-family residences located approximately 100 feet to the north.

1.3 Executive Summary of Findings and Mitigation Measures

The following is a summary of the analysis results:

Construction-Source Emissions
Project construction-source emissions would not exceed applicable regional thresholds of significance established by the SCAQMD. For localized emissions, the project will not exceed applicable Localized Significance Thresholds (LSTs) established by the SCAQMD.

Project construction-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP). As discussed herein, the project will comply with all applicable SCAQMD construction-source emission reduction rules and guidelines. Project construction source emissions would not cause or substantively contribute to violation of the California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS).

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

Operational-Source Emissions
Project operational-sourced emissions would not exceed regional operational air quality thresholds. Project operational-source emissions would not result in or cause a significant localized air quality impact as discussed in the Operations-Related Local Air Quality Impacts section of this report. Additionally, project-related traffic will not cause or result in CO concentrations exceeding applicable state and/or federal standards (CO “hotspots). Project operational-source emissions would therefore not adversely affect sensitive receptors within the vicinity of the project.

Project operational-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP). The project would not result in a significant cumulative impact. The project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential operational-source odor impacts are therefore considered less-than significant.

Project-related GHG emissions meet the goals of the WRCOG Subregional Climate Action Plan (CAP) and are also considered to be less than significant. The project also complies with the goals of the CARB Scoping Plan, AB-32, and SB-32**.**

Mitigation Measures

A. Construction Measures

Adherence to SCAQMD Rule 403 is required.

No construction mitigation required.

B. Operational Measures to Reduce Greenhouse Gas Emissions

No operational mitigation required.

Exhibit A

Location Map



Exhibit B

Site Plan



2.0 Regulatory Framework and Background

2.1 Air Quality Regulatory Setting

Air pollutants are regulated at the national, state, and air basin level; each agency has a different level of regulatory responsibility. The United States Environmental Protection Agency (EPA) regulates at the national level. The California Air Resources Board (ARB) regulates at the state level. The South Coast Air Quality Management District (SCAQMD) regulates at the air basin level.

2.1.1 National and State

The EPA is responsible for global, international, and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Air Quality Standards, also known as federal standards. There are six common air pollutants, called criteria pollutants, which were identified from the provisions of the Clean Air Act of 1970.

- Ozone
- Nitrogen Dioxide
- Lead
- Particulate Matter (PM10 and PM2.5)
- Carbon Monoxide
- Particulate Matter
- Sulfur Dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to project the public health.

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan incorporates individual federal attainment plans for regional air districts—air district prepares their federal attainment plan, which sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms. See http://www.arb.ca.gov/research/aaqs/aaqs.htm for additional information on criteria pollutants and air quality standards.

The federal and state ambient air quality standards are summarized in Table 2 and can also be found at http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

Table 2: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentrations[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O3)	1-Hour	0.09 ppm	Ultraviolet Photometry	- -	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm		0.070 ppm (147 µg/m³)		
Respirable Particulate Matter (PM10)[8]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µ/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		- -		
Fine Particulate Matter (PM2.5)[8]	24-Hour	- -	- -	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 µg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 µg/m³)	- -	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 µg/m³)		9 ppm (10 µg/m³)	- -	
	8-Hour (Lake Tahoe)	6 ppm (7 µg/m³)		- -	- -	
Nitrogen Dioxide (NO_2)[9]	1-Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	- -	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (357 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[10]	1-Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	- -	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3-Hour	- -		- -	0.5 ppm (1300 mg/m³)	
	24-Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[10]	- -	
	Annual Arithmetic Mean	- -		0.130ppm (for certain areas)[10]	- -	
Lead[11,12]	30 Day Average	1.5 µg/m³	Atomic Absorption	- -		
	Calendar Qrtr	- -		1.5 µg/m³ (for certain areas)[12]	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	- -		0.15 µg/m³		
Visibility Reducing Particles[13]	8-Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[11]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Notes:

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.

8. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

9. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

10. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

11. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

12. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

13. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Several pollutants listed in Table 2 are not addressed in this analysis. Analysis of lead is not included in this report because the project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The project is not expected to generate or be exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity.

2.1.2 South Coast Air Quality Management District

The agency for air pollution control for the South Coast Air Basin (basin) is the South Coast Air Quality Management District (SCAQMD). SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the basin. SCAQMD, in coordination with the Southern California Association of Governments, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the basin. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the federal and/or California ambient air quality standards. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

Every three (3) years the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon.

On March 23, 2017 CARB approved the 2016 AQMP. The 2016 AQMP is a regional blueprint for achieving the federal air quality standards and healthful air.

The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the Plan is not approved or if the NAAQS are not met on time. As with every AQMP, a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures is updated with the latest data and methods. The most significant air quality challenge in the Basin is to reduce nitrogen oxide (NOx) emissions sufficiently to meet the upcoming ozone standard deadlines. The primary goal of this Air Quality Management Plan is to meet clean air standards and protect public health, including ensuring benefits to environmental justice and disadvantaged communities. Now that the plan has been approved by CARB, it has been forwarded to the U.S. Environmental Protection Agency for its review. If approved by EPA, the plan becomes federally enforceable

South Coast AQMD adopted the 2022 AQMP on December 2, 2022, to address the attainment of the 2015 8-hour ozone standard (70 ppb) for South Coast Air Basin and Coachella Valley. To meet this standard, the AQMP determined NOx emissions must be reduced by 67% percent more than is required by adopted rules and regulations by 2037. The control strategy for the 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available zero-emission (ZE) and low NOx technologies and (2) developing new ZE and ultra-low NOx technologies for use in cases where the technology is not currently available. South Coast AQMD will prioritize distribution of incentive funding in environmental justice areas and seek opportunities to focus benefits on the most disadvantaged communities. Cost-effectiveness and affordability will be further considered during the rulemaking or incentive program development process.

South Coast Air Quality Management District Rules

The AQMP for the basin establishes a program of rules and regulations administered by SCAQMD to obtain attainment of the state and federal standards. Some of the rules and regulations that apply to this Project include, but are not limited to, the following:

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access

roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable suppression techniques are indicated below and include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas in active for 10 days or more).
- Water active sites at least three times daily.
- Cover all trucks hauling dirt, san, soil, or other loose materials, or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) section 23114.
- Pave construction access roads at least 100 feet onto the site from the main road.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar best management practices shall be provided where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-iste streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets.

SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of project must comply with Rule 1113.

Idling Diesel Vehicle Trucks – Idling for more than 5 minutes in any one location is prohibited within California borders.

Rule 2702. The SCAQMD adopted Rule 2702 on February 6, 2009, which establishes a voluntary air quality investment program from which SCAQMD can collect funds from parties that desire certified GHG emission reductions, pool those funds, and use them to purchase or fund GHG emission reduction projects within two years, unless extended by the Governing Board. Priority will be given to projects that result in co-benefit emission reductions of GHG emissions and criteria or toxic air pollutants within environmental justice areas. Further, this voluntary program may compete with the cap-and-trade program identified for implementation in CARB's Scoping Plan, or a Federal cap and trade program.

2.1.3 Local

Local jurisdictions, such as the County of Riverside and City of San Jacinto, have the authority and responsibility to reduce air pollution through their police power and decision-making authority. Specifically, the County and City are responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The County and City are also responsible for the implementation of transportation control measures as outlined in the 2022 AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the County and City assess the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

The County and City rely on the expertise of the SCAQMD and utilizes the SCAQMD CEQA Air Quality Handbook as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

County of Riverside General Plan

The Air Quality Element of the County of Riverside General Plan summarizes air quality issues in the Basin, air quality-related plans and programs administered by federal, state, and special purpose agencies, and establishes goals and policies to improve air quality. These goals and policies in the Air Quality Element that relate to the proposed project include:

Multi-jurisdictional Cooperation:

AQ 1.1 Promote and participate with regional and local agencies, both public and private, to protect and improve air quality.

AQ 1.2 Support the Southern California Association of Government's (SCAG) Regional Growth Management Plan by developing intergovernmental agreements with appropriate governmental entities such as the Western Riverside Council of Governments (WRCOG), the Coachella Valley Association of Governments (CVAG), sanitation districts, water districts, and those subregional entities identified in the Regional Growth Management Plan.

AQ 1.3 Participate in the development and update of those regional air quality management plans required under federal and state law, and meet all standards established for clean air in these plans.

AQ 1.4 Coordinate with the SCAQMD and MDAQMD to ensure that all elements of air quality plans regarding reduction of air pollutant emissions are being enforced.

AQ 1.5 Establish and implement air quality, land use and circulation measures that improve not only the County's environment but the entire regions.

AQ 1.6 Establish a level playing field by working with local jurisdictions to simultaneously adopt policies similar to those in this Air Quality Element.

AQ 1.7 Support legislation which promotes cleaner industry, clean fuel vehicles and more efficient burning engines and fuels.

AQ 1.8 Support the introduction of federal, state or regional enabling legislation to permit the County to promote inventive air quality programs, which otherwise could not be implemented.

AQ 1.9 Encourage, publicly recognize and reward innovative approaches that improve air quality.

AQ 1.10 Work with regional and local agencies to evaluate the feasibility of implementing a system of charges (e.g., pollution charges, user fees, congestion pricing and toll roads) that requires individuals who undertake polluting activities to bear the economic cost of their actions where possible.

AQ 1.11 Involve environmental groups, the business community, special interests, and the general public in the formulation and implementation of programs that effectively reduce airborne pollutants.

Sensitive Receptors:

AQ 2.1 The County land use planning efforts shall assure that sensitive receptors are separated and protected from polluting point sources to the greatest extent possible.

AQ 2.2 Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible.

AQ 2.3 Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution.

Stationary Pollution Sources:

AQ 4.1 Encourage the use of building materials/methods which reduce emissions.

AQ 4.2 Require the use of all feasible efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units.

AQ 4.3 Require centrally heated facilities to utilize automated time clocks or occupant sensors to control heating where feasible.

AQ 4.5 Require stationary pollution sources to minimize the release of toxic pollutants through:

- Design features;
- Operating procedures;
- Preventive maintenance;
- Operator training; and
- Emergency response planning

AQ 4.6 Require stationary air pollution sources to comply with applicable air district rules and control measures.

AQ 4.7 To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SOCAB, the Environmental Protection Agency and the California Air Resources Board.

AQ 4.8 Expand, as appropriate, measures contained in the County's Fugitive Dust Reduction Program for the Coachella Valley to the entire County.

AQ 4.9 Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.

AQ 4.10 Coordinate with the SCAQMD and MDAQMD to create a communications plan to alert those conducting grading operations in the County of first, second, and third stage smog alerts, and when wind speeds exceed 25 miles per hour. During these instances all grading operations should be suspended.

Energy Efficiency and Conservation:

AQ 5.1 Utilize source reduction, recycling and other appropriate measures to reduce the amount of solid waste disposed of in landfills.

AQ 5.4 Encourage the incorporation of energy-efficient design elements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.

Particulate Matter:

AQ 15.1 Identify and monitor sources, enforce existing regulations, and promote stronger controls to reduce particulate matter.

Multi-jurisdictional Cooperation:

AQ 16.1 Cooperate with local, regional, state and federal jurisdictions to better control particulate matter.

Control Measures:

AQ 17.1 Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way, and off-road vehicles to the extent possible.

AQ 17.3 Identify and create a control plan for areas within the County prone to wind erosion of soil.

AQ 17.4 Adopt incentives, regulations and/or procedures to manage paved and unpaved roads and parking lots so they produce the minimum practicable level of particulates.

AQ 17.5 Adopt incentives and/or procedures to limit dust from agricultural lands and operations, where applicable.

AQ 17.6 Reduce emissions from building materials and methods that generate excessive pollutants, through incentives and/or regulations.

City of San Jacinto General Plan

Goal: Resource Management Goal 6: Improve air quality.

Policy 6.1: Cooperate with the South Coast Air Quality Management District, Southern California Association of Governments, and the Western Riverside Council of Governments in their efforts to implement the regional Air Quality Management Plan.

Policy 6.2: Cooperate and participate in regional air quality management planning, programs, and enforcement measures.

Policy 6.3: Achieve a greater balance between jobs and housing in San Jacinto.

Policy 6.4: Promote the growth of clean industry as a method of managing and improving air quality.

Policy 6.5: Promote energy conservation and recycling by the public and private sectors.

Policy 6.6: Encourage alternative modes of transportation to reduce vehicular emissions and improve air quality.

Policy 6.7: Encourage pedestrian scale development and pedestrian friendly access to reduce vehicle emissions.

Policy 6.8: In appropriate areas, allow mixed use development that combines housing, employment, and retail activities on one site.

Policy 6.9: Concentrate higher density development at transportation nodes and areas served by a well- developed vehicular network.

Policy 6.10: Support sustainable development patterns and green building standards that reduce energy use.

2.2 Greenhouse Gas Regulatory Setting

2.2.1 International

Many countries around the globe have made an effort to reduce GHGs since climate change is a global issue.

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations. The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). Under the Convention, governments gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

The 2014 UN Climate Change Conference in Lima Peru provided a unique opportunity to engage all countries to assess how developed countries are implementing actions to reduce emissions.

Kyoto Protocol. The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5 percent from 1990 levels during the first commitment period of 2008 – 2012 (UNFCCC 1997). On December 8, 2012, the Doha Amendment to the Kyoto Protocol was adopted. The amendment includes: New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from 2013 – 2020; a revised list of greenhouse gases (GHG) to be reported on by Parties in the second commitment period; and Amendments to several articles of the Kyoto Protocol which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period.

2.2.2 National

Greenhouse Gas Endangerment. On December 2, 2009, the EPA announced that GHGs threaten the public health and welfare of the American people. The EPA also states that GHG emissions from on-road vehicles contribute to that threat. The decision was based on *Massachusetts v. EPA* (Supreme Court Case 05-1120) which argued that GHGs are air pollutants covered by the Clean Air Act and that the EPA has authority to regulate those emissions.

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). The second phase of the national program would involve proposing new fuel economy and greenhouse gas standards for model years 2017 – 2025 by September 1, 2011.

On October 25, 2010, the EPA and the U.S. Department of Transportation proposed the first national standards to reduce greenhouse gas emissions and improve fuel efficiency of heavy-duty trucks and buses. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles and 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the agencies are proposing engine and vehicle standards starting in the 2014 model year which would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions by 2018 model year.

Mandatory Reporting of Greenhouse Gases. On January 1, 2010, the EPA started requiring large emitters of heat-trapping emissions to begin collecting GHG data under a new reporting system. Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse gas emissions are required to submit annual reports to the EPA.

Climate Adaption Plan. The EPA Plan identifies priority actions the Agency will take to incorporate considerations of climate change into its programs, policies, rules and operations to ensure they are effective under future climatic conditions. The following link provides more information on the EPA Plan: https://www.epa.gov/arc-x/planning-climate-change-adaptation

2.2.3 California

California Code of Regulations (CCR) Title 24, Part 6. CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. 2013 and 2016 standards have been approved and became effective July 1, 2014 and January 1, 2016, respectively.

California Code of Regulations (CCR) Title 24, Part 11. All buildings for which an application for a building permit is submitted on or after January 1, 2023 must follow the 2022 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions. The following links provide more information on Title 24, Part 11:
https://www.dgs.ca.gov/BSC/Codes
https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency

California Green Building Standards. On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Housing and Community Development (HCD) updated CALGreen through the 2015 Triennial Code Adoption Cycle, during the 2016 to 2017 fiscal year. During the 2022-2023 fiscal year, the Department of Housing and Community Development (HCD) updated CALGreen through the 2023 Triennial Code Adoption Cycle.

The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings. CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24, Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures

and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.

The CEC estimates that over 30 years the 2022 Energy Code will provide $1.5 billion in consumer benefits and reduce 10 million metric tons of GHG. Changes compared to the 2019 Energy Code include increases to on-site renewable energy generation from solar, increases to electric load flexibility to support grid reliability, reduction of emissions from newly constructed buildings, reduction of air pollution for improved public health, and increased adoption of environmentally beneficial efficient electric technologies.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided, they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official. The following link provides more on CalGreen Building Standards:
http://www.bsc.ca.gov/Home/CALGreen.aspx

Executive Order S-3-05. California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following targets:

- By 2010, California shall reduce greenhouse gas emissions to 2000 levels;
- By 2020, California shall reduce greenhouse gas emissions to 1990 levels.
- By 2050, California shall reduce greenhouse gas emissions to 80 percent below 1990 levels.

The executive order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

Executive Order S-01-07. Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. The low carbon fuel standard is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded", with more reductions required in the last five years, than the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

SB 97. Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Resource Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance are provided and no specific mitigation measures are identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.

- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. ARB is the state agency charged with monitoring and regulating sources of greenhouse gases. AB 32 states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB Board approved the 1990 greenhouse gas emissions level of 427 million metric tons of carbon dioxide equivalent (MMTCO2e) on December 6, 2007 (California Air Resources Board 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO2e. Emissions in 2020 in a "business as usual" scenario are estimated to be 596 MMTCO2e.

Under AB 32, the ARB published its Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California. Discrete early action measures are currently underway or are enforceable by January 1, 2010. The ARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of these early action measures, nine are considered discrete early action measures, as they are regulatory and enforceable by January 1, 2010. The ARB estimates that the 44 recommendations are expected to result in reductions of at least 42 MMTCO2e by 2020, representing approximately 25 percent of the 2020 target.

The ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 (California Air Resources Board 2008). The Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a

different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 greenhouse gas target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, Including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. "Capped" strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. "Uncapped" strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional greenhouse gas emission reductions.[4]

The 2022 Scoping Plan was adopted by CARB in November 2022 and expands upon earlier plans with a target of reducing GHG emissions to 85% below 1990 levels by 2045.

Senate Bill 100. Senate Bill 100 (SB 100) requires 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 was adopted September 2018.

The interim thresholds from prior Senate Bills and Executive Orders would also remain in effect. These include Senate Bill 1078 (SB 1078), which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) which changed the target date to 2010. Executive Order S-14-08, which was signed on November 2008 and expanded the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed the CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

SB 375. Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

The proposed project is located within the Southern California Association of Governments (SCAG), which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 13 percent below 2005 per capita GHG emissions levels by 2035. On April 4, 2024, SCAG adopted the 2024-2050 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), which meets the CARB emission reduction requirements.

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, new provisions of CEQA would incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as "transit priority projects."

Assembly Bill 939 and Senate Bill 1374. Assembly Bill 939 (AB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

Executive Order S-13-08. Executive Order S-13-08 indicates that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resource Agency 2009) was adopted, which is the "… first statewide, multi-sector, region-specific, and information-based climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15. Executive Order B-30-15, establishing a new interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030, was signed by Governor Brown in April 2015.

Executive Order B-29-15. Executive Order B-29-15, mandates a statewide 25% reduction in potable water usage and was signed into law on April 1, 2015.

Executive Order B-37-16. Executive Order B-37-16, continuing the State's adopted water reduction, was signed into law on May 9, 2016. The water reduction builds off the mandatory 25% reduction called for in EO B-29-15.

2.2.4 South Coast Air Quality Management District

The Project is within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD Regulation XXVII currently includes three rules:

- The purpose of Rule 2700 is to define terms and post global warming potentials.
- The purpose of Rule 2701, SoCal Climate Solutions Exchange, is to establish a voluntary program to encourage, quantify, and certify voluntary, high quality certified greenhouse gas emission reductions in the SCAQMD.
- Rule 2702, Greenhouse Gas Reduction Program, was adopted on February 6, 2009. The purpose of this rule is to create a Greenhouse Gas Reduction Program for greenhouse gas emission reductions in the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

SCAQMD Threshold Development

The SCAQMD has established recommended significance thresholds for greenhouse gases for local lead agency consideration ("SCAQMD draft local agency threshold"). SCAQMD has published a five-tiered draft GHG threshold which includes a 10,000 metric ton of CO_2e per year for stationary/industrial sources and 3,000 metric tons of CO_2e per year significance threshold for residential/commercial projects (South Coast Air Quality Management District 2010c). Tier 3 is anticipated to be the primary tier by which the SCAQMD will determine significance for projects. The Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90-precent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to CEQA analysis. The 90-percent capture rate GHG significance screening level in Tier 3 for stationary sources was derived using the SCAQMD's annual Emissions Reporting Program.

The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether or not the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose but must be consistent. A project's construction emissions are averaged over 30 years and are added to a project's

operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant:

  - All land use types: 3,000 MTCO2e per year
  - Based on land use types: residential is 3,500 MTCO2e per year; commercial is 1,400 MTCO2e per year; mixed use is 3,000 MTCO2e per year; and industrial is 10,000 MTCO2e per year

- Tier 4 has the following options:
  - Option 1: Reduce emissions from business as usual by a certain percentage; this percentage is currently undefined
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
  - Option 3: Year 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO2e/SP/year for projects and 6.6 MTCO2e/SP/year for plans;
  - Option 3, 2035 target: 3.0 MTCO2e/SP/year for projects and 4.1 MTCO2e/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

2.2.5 Local

WRCOG Subregional Climate Action Plan

The City of San Jacinto is part of the Western Riverside Council of Government (WRCOG). The WRCOG adopted the WRCOG Subregional Climate Action Plan (CAP) in September 2014. Twelve cities in the subregion joined efforts to develop the Subregional CAP, which set forth a subregional emissions reduction target, emissions reduction measures, and action steps to assist each community to demonstrate consistency with California's Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32). The CAP consists of an emissions reduction target of 15% below 2010 levels by 2020, and 49% below 2010 levels by 2035. As indicated in the CAP the emission reduction target of 15% from 2010 levels equates to a GHG emissions reduction of nearly 2,330,647 metric tons below business-as-usual (BAU) conditions by 2020. In order to reach these goals, the CAP provides feasible strategies, while affording its communities other economic and environmental benefits.

Therefore, to determine whether the project's GHG emissions are significant, this analysis uses the WRCOG CAP.

The project will be subject to the latest requirements of the California Green Building and Title 24 Energy Efficiency Standards (currently 2022) which would reduce project-related greenhouse gas emissions.

3.0 Setting

3.1 Existing Physical Setting

The project site is located in the City of San Jacinto, which is part of the South Coast Air Basin (SCAB) that includes all of Orange County as well as the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The South Coast Air Basin is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the South Coast Air Basin is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter.

3.1.1 Local Climate and Meteorology

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal areas and around the Los Angeles area is transported inland until it reaches the mountains where the combination of mountains and inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The annual average temperature varies little throughout much of the basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas where the project site is located. The majority of the annual rainfall in the basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thunderstorms in the coastal regions and slightly heavier showers in the eastern portion of the basin along the coastal side of the mountains. Year-to-year patterns in rainfall are unpredictable because of fluctuations in the weather.

Temperature inversions limit the vertical depth through which pollution can be mixed. Among the most common temperature inversions in the basin are radiation inversions, which form on clear winter nights when cold air off mountains sink to the valley floor while the air aloft over the valley remains warm. These inversions, in conjunction with calm winds, trap pollutants near the source. Other types of temperature inversions that affect the basin include marine, subsidence, and high-pressure inversions.

Summers are often periods of hazy visibility and occasionally unhealthful air. Strong temperature inversions may occur that limit the vertical depth through which air pollution can be dispersed. Air pollutants concentrate because they cannot rise through the inversion layer and disperse. These inversions are more common and persistent during the summer months. Over time, sunlight produces photochemical reactions within this inversion layer that creates ozone, a particularly harmful air

pollutant. Occasionally, strong thermal convections occur which allows the air pollutants to rise high enough to pass over the mountains and ultimately dilute the smog cloudtrap pollutants such as automobile exhaust near their source. While these inversions may lead to air pollution "hot spots" in heavily developed coastal areas of the basin, there is not enough traffic in inland valleys to cause any winter air pollution problems. Despite light wind conditions, especially at night and in the early morning, winter is generally a period of good air quality in the project vicinity.

In the winter, light nocturnal winds result mainly from the drainage of cool air off of the mountains toward the valley floor while the air aloft over the valley remains warm. This forms a type of inversion known as a radiation inversion. Such winds are characterized by stagnation and poor local mixing and trap pollutants such as automobile exhaust near their source. While these inversions may lead to air pollution "hot spots" in heavily developed coastal areas of the basin, there is not enough traffic to cause any winter air pollution problems. Despite light wind conditions, especially at night and in the early morning, winter is generally a period of good air quality in the project vicinity.

The temperature and precipitation levels for the City of San Jacinto are in Table 3. Table 3 shows that August is typically the warmest month and December is typically the coolest month. Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table 3: Meteorological Summary

Month	Temperature (˚F)		Average Precipitation (inches)
	Average High	Average Low	
January	67.0	37.9	2.6
February	67.6	39.6	2.6
March	70.6	42.4	1.9
April	77.2	45.8	0.8
May	83.2	51.0	0.4
June	90.9	55.2	0.1
July	97.1	60.6	0.2
August	98.4	61.5	0.2
September	93.3	57.8	0.3
October	84.0	50.2	0.6
November	73.9	41.6	0.9
December	67.2	36.1	1.6
Annual Average	**80.9**	**48.3**	**12.2**

Notes:
[1] Source: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7813

3.1.2 Local Air Quality

The SCAQMD is divided into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The project site is located in the City of San Jacinto in the Hemet/San Jacinto Valley Source Receptor Area (Area 28). The nearest air monitoring station to the project site is

the Banning Airport Station. The Banning Airport Station is located approximately 13 miles northeast of the project site, at 200 S Hathaway Street, Banning; however this location does not provide all ambient weather data. Therefore, additional data was pulled from the SCAQMD historical data for the Hemet/San Jacinto Area (Area 28) for both sulfur dioxide and carbon monoxide to provide the existing levels. Table 4 presents the monitored pollutant levels within the vicinity. However, it should be noted that due to the air monitoring station distance from the project site, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy, local air quality conditions at the project site.

Table 4: Local Area Air Quality Levels from the Banning Monitoring Stations

Pollutant (Standard)[2]	Year		
	2020	**2021**	**2022**
Ozone:			
Maximum 1-Hour Concentration (ppm)	0.150	0.139	0.116
Days > CAAQS (0.09 ppm)	**29**	**41**	**30**
Maximum 8-Hour Concentration (ppm)	0.115	0.116	0.100
Days > NAAQS (0.07 ppm)	**68**	**80**	**56**
Days > CAAQS (0.070 ppm)	**71**	**82**	**59**
Carbon Monoxide:			
Maximum 1-Hour Concentration (ppm)	*	*	*
Days > NAAQS (20 ppm)	*	*	*
Maximum 8-Hour Concentration (ppm)	*	*	*
Days > NAAQS (9 ppm)	*	*	*
Nitrogen Dioxide:			
Maximum 1-Hour Concentration (ppm)	0.051	0.057	0.052
Days > NAAQS (0.25 ppm)	0	0	0
Sulfur Dioxide:			
Maximum 1-Hour Concentration (ppm)	*	*	*
Days > CAAQS (0.25 ppm)	*	*	*
Inhalable Particulates (PM10):			
Maximum 24-Hour Concentration (ug/m^3)	69.3	48.6	52.4
Days > NAAQS (150 ug/m^3)	0	0	0
Days > CAAQS (50 ug/m^3)	1	0	0
Annual Average (ug/m^3)	21.2	21.2	22.5
Annual > NAAQS (50 ug/m^3)	No	No	No
Annual > CAAQS (20 ug/m^3)	**Yes**	**Yes**	**Yes**
Ultra-Fine Particulates (PM2.5):			
Maximum 24-Hour Concentration (ug/m^3)	46.7	40.9	37.9
Days > NAAQS (35 ug/m^3)	-	-	-
Annual Average (ug/m^3)	10.5	11.7	9.4
Annual > NAAQS (15 ug/m3)	No	No	No
Annual > CAAQS (12 ug/m^3)	No	No	No

[1.] Source: obtained from https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year and /or https://www.arb.ca.gov/adam/topfour/topfour1.php

[2] CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million

[3] No data available.

The monitoring data presented in Table 4 shows that ozone and particulate matter (PM10) are the air pollutants of primary concern in the project area, which are detailed below.

Ozone
During the 2020 to 2022 monitoring period, the State 1-hour concentration standard for ozone has been exceeded between 29 and 41 days each year at the Banning Airport Station. The State 8-hour ozone standard has been exceeded between 59 and 82 days each year over the past three years at the Banning Airport Station. The Federal 8-hour ozone standard has been exceeded between 56 and 80 days each year over the past three years at the Banning Airport Station.

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO_2, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of the SCAQMD contribute to the ozone levels experienced at the monitoring station, with the more significant areas being those directly upwind.

Carbon Monoxide
CO is another important pollutant that is due mainly to motor vehicles. The Hemet/San Jacinto Area did not record an exceedance of the state or federal 1-hour or 8-hour CO standards for the last three years.

Nitrogen Dioxide
The Banning Airport Station did not record an exceedance of the State or Federal NO_2 standards for the last three years.

Sulfur Dioxide
The Hemet/San Jacinto Area did not record an exceedance of the State SO_2 standards for the last three years.

Particulate Matter
During the 2020 to 2022 monitoring period, the Banning Airport Station did not record an exceedance of the Federal 24-hour concentration standards for PM10, while State 24-hour concentration standards for PM10 were exceeded each year.

During the 2020 to 2022 monitoring period, there was insufficient data for the Federal 24-hour standard for PM2.5 at the Banning Airport Station.

According to the EPA, some people are much more sensitive than others to breathing fine particles (PM10 and PM2.5). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM10 and PM2.5. Other groups considered

sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, because many breathe through their mouths during exercise.

3.1.3 Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or 'form' of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard. Table 5 lists the attainment status for the criteria pollutants in the basin.

Table 5: South Coast Air Basin Attainment Status

Pollutant	Averaging Time	National Standards[1]	Attainment Date[2]	California Standards[3]
1979 1-Hour Ozone[4]	1-Hour (0.12 ppm)	Nonattainment (Extreme)	11/15/2010 (Not attained[4])	Extreme Nonattainment
1997 8-Hour Ozone[5]	8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024	Nonattainment
2008 8-Hour Ozone	8-Hour (0.075 ppm)	Nonattainment (Extreme)	12/31/2032	
2015 8-Hour Ozone	8-Hour (0.070 ppm)	Designations Pending	~2037	
CO	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (Attained)	Maintenance
NO_2[6]	1-Hour (100 ppb) Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (Attained)	Attainment
SO_2[7]	1-Hour (75 ppb)	Designations Pending	Pending	Attainment
	24-Hour (0.14 ppm) Annual (0.03 ppm)	Unclassifiable/ Attainment	3/19/1979 (Attained)	
PM10	24-Hour (150 µg/m^3)	Nonattainment (Serious)[8]	12/31/2006 (Redesignation request submitted)[8]	Nonattainment
PM2.5	24-Hour (35 µg/m^3)	Nonattainment	12/31/2006 (Redesignation request submitted)[8]	Unclassified
Lead	3-Months Rolling (0.15 µg/m^3)	Nonattainment (Partial)[9]	12/31/2015	Nonattainment (Partial)[9]

Notes:
[1] Obtained from Draft 2012 AQMP, SCAQMD, 2012. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassified/Attainment or Unclassifiable.
[2] A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration.
[3] Obtained from http://www.arb.ca.gov/desig/adm/adm.htm.
[4] 1-hour O_3 standard (0.13 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard based on 2008-2010 data has some continuing obligations under the former standard.
[5] 1997 8-hour O_3 standard (0.08 ppm) was reduced (0.075 ppm), effective May 27, 2008; the 1997 O3 standard and most related implementation rules remain in place until the 1997 standard is revoked by U.S. EPA.
[6] New NO_2 1-hour standard, effective August 2, 2010; attainment designations June, 2013; annual NO_2 standard retained.
[7] The 1971 annual and 24-hour SO_2 standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO_2 1-hour standard. Area designations expected in 2012, with SSAB designated Unclassifiable/Attainment.
[8] Annual PM10 standard was revoked, effective December 18, 2006; redesignation request to Attainment of the 24-hour PM10 standard is pending with U.S. EPA
[9] Partial Nonattainment designation - Los Angeles County portion of Basin only.

3.2 Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO_2 and nitrous oxide (NO_2) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO_2, where CO_2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. Table 6 provides a description of each of the greenhouse gases and their global warming potential.

Additional information is available: https://www.arb.ca.gov/cc/inventory/data/data.htm

<Table 6 on next page>

Table 6: Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (N_20),also known as laughing gas is a colorless gas. It has a lifetime of 114 years. Its global warming potential is 298.	Microbial processes in soil and water, fuel combustion, and industrial processes. In addition to agricultural sources, some industrial processes (nylon production, nitric acid production) also emit N_20.
Methane	Methane (CH_4) is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 25.	A natural source of CH_4 is from the decay of organic matter. Methane is extracted from geological deposits (natural gas fields). Other sources are from the decay of organic material in landfills, fermentation of manure, and cattle farming.
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). They are gases formed synthetically by replacing all hydrogen atoms in methane or methane with chlorine and/or fluorine atoms. Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone, therefore their production was stopped as required by the Montreal Protocol.
Hydrofluorocarbons	Hydrofluorocarbons (HFCs) are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.
Perfluorocarbons	Perfluorocarbons (PFCs) have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above the Earth's surface. They have a lifetime 10,000 to 50,000 years. They have a global warming potential range of 6,200 to 9,500.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Notes:
1. Sources: Intergovernmental Panel on Climate Change 2014a and Intergovernmental Panel on Climate Change 2014b. https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

4.0 Modeling Parameters and Assumptions

4.1 Construction

Typical emission rates from construction activities were obtained from CalEEMod Version 2022.1.1.22 CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2017 computer program to calculate the emission rates specific for the southwestern portion of Riverside County for construction-related employee vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy truck operations. EMFAC2017 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Using CalEEMod, the peak daily air pollutant emissions were calculated and presented below. These emissions represent the highest level of emissions for each of the construction phases in terms of air pollutant emissions.

The analysis assesses the emissions associated with the construction of the proposed project as indicated in Table 1. The project was modeled to be operational in 2027 and begin construction in 2024. The phases of the construction activities which have been analyzed below are: 1) demolition, 2) site preparation, 3) grading, 4) building, 5) paving, and 6) architectural coating. For details on construction modeling and construction equipment for each phase, please see Appendix A.

The project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of the Project area (disturbance area of approximately 4 acres per day per Table 7) and the fact that the project won't export more than 5,000 cubic yards of material a day a Fugitive Dust Control Plan or Large Operation Notification would not be required.

SCAQMD's Rule 403 minimum requirements require that the application of the best available dust control measures are used for all grading operations and include the application of water or other soil stabilizers in sufficient quantity to prevent the generation of visible dust plumes. Compliance with Rule 403 would require the use of water trucks during all phases where earth moving operations would occur. Compliance with Rule 403 is required.

4.2 Operations

Operational or long-term emissions occur over the life of the Project. Both mobile and area sources generate operational emissions. Area source emissions arise from consumer product usage, heaters that consume natural gas, gasoline-powered landscape equipment, and architectural coatings

(painting). Mobile source emissions from motor vehicles are the largest single long-term source of air pollutants from the operation of the Project. Small amounts of emissions would also occur from area sources such as the consumption of natural gas for heating, hearths, from landscaping emissions, and consumer product usage. The operational emissions were estimated using the latest version of CalEEMod.

Mobile Sources
Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project are based upon the trip generation rates given in the ITE trip generation manual. The traffic analysis shows a trip generation rate of approximately 3,952 trips per day.

The program then applies the emission factors for each trip which is provided by the EMFAC2017 model to determine the vehicular traffic pollutant emissions. The CalEEMod default trip lengths were used in this analysis. Please see CalEEMod output comments sections in Appendix A for details.

Area Sources
Area sources include emissions from consumer products, landscape equipment and architectural coatings. Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers, as well as air compressors, generators, and pumps. As specifics were not known about the landscaping equipment fleet, CalEEMod defaults were used to estimate emissions from landscaping equipment.

Per SCAQMD Rule 1113 as amended on June 3, 2011, the architectural coatings that would be applied after January 1, 2014 will be limited to an average of 50 grams per liter or less and the CalEEMod model default was utilized as the new model takes this rule into account.

Energy Usage
2022.1.1.22 CalEEMod defaults were utilized. The project will be 100% electric. Solar photovoltaic panels have been included in the analysis per Title 24 requirements (Part 6 – Section 110.10).

4.3 Localized Construction Analysis

The SCAQMD has published a "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (South Coast Air Quality Management District 2011b). CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the localized significance threshold lookup tables, the CEQA document should contain in its project design features or its mitigation measures the following parameters:

1. The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
2. The maximum number of acres disturbed on the peak day.
3. Any emission control devices added onto off-road equipment.

4. Specific dust suppression techniques used on the day of construction activity with maximum emissions.

The construction equipment showing the equipment associated with the maximum area of disturbance is shown in Table 7.

Table 7: Construction Equipment Assumptions[1]

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Site Preparation	Rubber Tired Dozers	3	0.5	1.5
	Tractors/Loaders/Backhoes	4	0.5	2.0
Total Per Phase				**3.5**
Grading	Graders	1	0.5	0.5
	Rubber Tired Dozers	1	0.5	0.5
	Scrapers	2	1.0	2.0
	Tractors/Loaders/Backhoes	2	0.5	1.0
Total Per Phase				**4.0**

Notes:

1. Source: South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2

As shown in Table 7, the maximum number of acres disturbed in a day would be 4.0 acres during grading.

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized Significance Threshold Methodology, prepared by SCAQMD, revised July 2008. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM10, and PM2.5 from the proposed project could result in a significant impact to the local air quality. The emission thresholds were based on the Hemet/San Jacinto Valley source receptor area (SRA 28) and a disturbance of 4 acres per day at a distance of 25 meters (82 feet). The closest receptors are located 30 meters to the north of the site. The 4-acre threshold is interpolated from the 2- and 5-acre thresholds.

4.4 Localized Operational Analysis

For operational emissions, the screening tables for a disturbance area of 5 acres per day, as the project 76.3 acres, and a distance of 25 meters were used to determine significance. The tables were compared to the project's onsite operational emissions.

5.0 Thresholds of Significance

5.1 Air Quality Thresholds of Significance

5.1.1 CEQA Guidelines for Air Quality

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated.

The following air quality significance thresholds are contained in Appendix G of the CEQA Guidelines. A significant impact would occur if the project would:

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national or state ambient air quality standard;

c) Expose sensitive receptors to substantial pollutant concentrations; or

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, SCAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the Lead Agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. There are daily emission thresholds for construction and operation of a proposed project in the basin.

5.1.2 Regional Significance Thresholds for Construction Emissions

The following CEQA significance thresholds for construction emissions are established for the Basin:

- 75 pounds per day (lbs/day) of VOC
- 100 lbs/day of NO_x
- 550 lbs/day of CO
- 150 lbs/day of PM_{10}
- 55 lbs/day of $PM_{2.5}$
- 150 lbs/day of SO_2

Projects in the basin with construction-related emissions that exceed any of the emission thresholds are considered to be significant under SCAQMD guidelines.

5.1.3 Regional Significance Thresholds for Operational Emissions

The daily operational emissions significance thresholds for the basin are as follows:

- 55 pounds per day (lbs/day) of VOC
- 55 lbs/day of NO_x
- 550 lbs/day of CO
- 150 lbs/day of PM_{10}
- 55 lbs/day of $PM_{2.5}$
- 150 lbs/day of SO_2

Local Microscale Concentration Standards The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm

5.1.4 Thresholds for Localized Significance

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. The SCAQMD has also provided Final Localized Significant Threshold Methodology (LST Methodology), June 2003, which details the methodology to analyze local air emission impacts. The Localized Significant Threshold Methodology found that the primary emissions of concern are NO2, CO, PM10, and PM2.5.

The emission thresholds were calculated based on the Hemet/San Jacinto Valley source receptor area (SRA 28) and a disturbance of 4 acres per day at a distance of 25 meters (82 feet), for construction and 5 acres a day for screening of localized operational emissions.

5.2 Greenhouse Gas Thresholds of Significance

5.2.1 CEQA Guidelines for Greenhouse Gas

CEQA Guidelines define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in the environment.” To determine if a project would have a significant impact on greenhouse gases, the type, level, and impact of emissions generated by the project must be evaluated.

The following greenhouse gas significance thresholds are contained in Appendix G of the CEQA Guidelines, which were amendments adopted into the Guidelines on March 18, 2010, pursuant to SB 97. A significant impact would occur if the project would:

(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

(b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

However, despite this, currently neither the CEQA statutes, OPR guidelines, nor the draft proposed changes to the CEQA Guidelines prescribe thresholds of significance or a particular methodology for performing an impact analysis; as with most environmental topics, significance criteria are left to the judgment and discretion of the Lead Agency. As previously discussed (Section 2.2.4 of this report), the SCAQMD has adopted draft interim thresholds. The project was compared to the Tier 4 per service population threshold, interpolated for opening year 2027 at 3.96 $MTCO_2e$ per year per service population. The project was also compared to the goals of the WRCOG CAP for this analysis.

6.0 Air Quality Emissions Impact

6.1 Construction Air Quality Emissions Impact

The latest version of CalEEMod was used to estimate the onsite and offsite construction emissions. The emissions incorporate Rule 402 and 403. Rule 402 and 403 (fugitive dust) are not considered mitigation measures as the project by default is required to incorporate these rules during construction.

6.1.1 Regional Construction Emissions

The construction emissions for the project would not exceed the SCAQMD's daily emission thresholds at the regional level as demonstrated in Table 8, and therefore would be considered less than significant.

Table 8: Regional Significance - Construction Emissions (pounds/day)

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Demolition						
On-Site[2]	2.40	22.20	19.90	0.03	1.52	0.93
Off-Site[3]	0.08	0.91	1.36	0.01	0.41	0.12
Total	**2.48**	**23.11**	**21.26**	**0.04**	**1.93**	**1.05**
Site Preparation						
On-Site[2]	3.31	31.60	30.20	0.05	9.04	5.20
Off-Site[3]	0.07	0.08	1.02	0.00	0.23	0.05
Total	**3.38**	**31.68**	**31.22**	**0.05**	**9.27**	**5.25**
Grading						
On-Site[2]	3.20	29.70	28.30	0.06	4.87	2.57
Off-Site[3]	0.41	23.10	6.63	0.13	6.25	1.90
Total	**3.61**	**52.80**	**34.93**	**0.19**	**11.12**	**4.47**
Building Construction						
On-Site[2]	1.13	10.40	13.00	0.02	0.43	0.40
Off-Site[3]	0.71	2.31	12.08	0.01	2.37	0.59
Total	**1.84**	**12.71**	**25.08**	**0.03**	**2.80**	**0.99**
Paving						
On-Site[2]	0.74	6.94	9.95	0.01	0.30	0.27
Off-Site[3]	0.07	0.54	1.15	0.00	0.34	0.09
Total	**0.81**	**7.48**	**11.10**	**0.01**	**0.64**	**0.36**
Architectural Coating						
On-Site[2]	56.91	1.13	0.00	0.00	0.02	0.02
Off-Site[3]	0.11	0.12	1.51	0.00	0.39	0.09
Total	**57.02**	**1.25**	**1.51**	**0.00**	**0.41**	**0.11**
Total of overlapping phases[4]	**59.67**	**21.44**	**37.69**	**0.04**	**3.85**	**1.46**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	No	No	No	No	No	No

Notes:
[1] Source: CalEEMod Version 2022.1.1.22
[2] On-site emissions from equipment operated on-site that is not operated on public roads.
[3] Off-site emissions from equipment operated on public roads.

[4] Construction, architectural coatings and paving phases may overlap.

6.1.2 Localized Construction Emissions

The data provided in Table 9 shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact would occur from construction of the proposed project.

Table 9: Localized Significance – Construction

Phase	On-Site Pollutant Emissions (pounds/day)[1]			
	NOx	CO	PM10	PM2.5
Demolition	22.20	19.90	1.52	0.93
Site Preparation	31.60	30.20	9.04	5.20
Grading	29.70	28.30	4.87	2.57
Building Construction	10.40	13.00	0.43	0.40
Paving	6.94	9.95	0.30	0.27
Architectural Coating	1.13	0.00	0.02	0.02
Total of overlapping phases	18.47	22.95	0.75	0.69
SCAQMD Threshold for 25 meters (82 feet) or less[2]	**325.3**	**1,676.7**	**11.0**	**6.7**
Exceeds Threshold?	No	No	No	No

Notes:
[1] Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for 4 acres in Hemet/San Jacinto Valley Source Receptor Area (SRA 28). Project will disturb a maximum of 4.0 acres per day (see Table 7).
[2] The nearest sensitive receptor is located 30 meters north; therefore, the 25-meter threshold has been used.

6.1.3 Odors

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected cease upon the drying or hardening of the odor producing materials. Diesel exhaust and VOCs would be emitted during construction of the project, which are objectionable to some; however, emissions would disperse rapidly from the project site and therefore should not reach an objectionable level at the nearest sensitive receptors. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed project.

The SCAQMD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine whether the project would result in excessive nuisance odors, as defined under the California Code of Regulations and Section 41700 of the California Health and Safety Code, and thus would constitute a public nuisance related to air quality.

Potential sources that may emit odors during the on-going operations of the proposed project would include odor emissions from trash storage areas and vehicle emissions. Due to the distance of the nearest receptors from the project site and through compliance with SCAQMD's Rule 402 no significant impact related to odors would occur during the on-going operations of the proposed project.

6.1.4 Construction-Related Toxic Air Contaminant Impact

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. The Office of Environmental Health Hazard Assessment (OEHHA) has issued the Air Toxic Hot Spots Program Risk Assessment Guidelines and Guidance Manual for the Preparation of Health Risk Assessments, February 2015 to provide a description of the algorithms, recommended exposure variates, cancer and noncancer health values, and the air modeling protocols needed to perform a health risk assessment (HRA) under the Air Toxics Hot Spots Information and Assessment Act of 1987. Hazard identification includes identifying all substances that are evaluated for cancer risk and/or non-cancer acute, 8-hour, and chronic health impacts. In addition, identifying any multi-pathway substances that present a cancer risk or chronic non-cancer hazard via non-inhalation routes of exposure.

A health risk assessment has been prepared for the project by MD Acoustics which found that project construction would not have a significant impact from onsite emissions of diesel particulates from construction (MD Acoustics, 2024).

6.2 Operational Air Quality Emissions Impact

6.2.1 Regional Operational Emissions

The operations-related criteria air quality impacts created by the proposed project have been analyzed through the use of CalEEMod model. The operating emissions were based on year 2027. The summer and winter emissions created by the proposed project's long-term operations were calculated and the highest emissions from either summer or winter are summarized in Table 10.

Table 10: Regional Significance - Unmitigated Operational Emissions (lbs/day)

Activity	Pollutant Emissions (pounds/day)[1]					
	VOC	**NOx**	**CO**	**SO2**	**PM10**	**PM2.5**
Area Sources[2]	21.00	0.23	23.80	0.00	0.01	0.01
Energy Usage[3]	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources[4]	14.40	13.10	116.00	0.30	27.60	7.17
Total Emissions	**35.40**	**13.33**	**139.80**	**0.30**	**27.61**	**7.18**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

Notes:
[1] Source: CalEEMod Version 2022.1.1.22
[2] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
[3] Energy usage consists of emissions from on-site natural gas usage.
[4] Mobile sources consist of emissions from vehicles and road dust.

Table 10 provides the Project's unmitigated operational emissions. Table 10 shows that the Project does not exceed the SCAQMD daily emission threshold and regional operational emissions are considered to be less than significant.

6.2.2 Localized Operational Emissions

Table 11 shows the calculated emissions for the proposed operational activities compared with appropriate LSTs. The LST analysis only includes on-site sources; however, the CalEEMod software outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table 11 include all on-site project-related stationary sources and 10% of the project-related new mobile sources. This percentage is an estimate of the amount of project-related new vehicle traffic that will occur on-site.

Table 11: Localized Significance – Unmitigated Operational Emissions

On-Site Emission Source	On-Site Pollutant Emissions (pounds/day)[1]			
	NOx	**CO**	**PM10**	**PM2.5**
Area Sources[2]	0.23	23.80	0.01	0.01
Energy Usage[3]	0.00	0.00	0.00	0.00
On-Site Vehicle Emissions[4]	0.44	3.87	0.92	0.24
Total Emissions	**0.67**	**27.67**	**0.93**	**0.25**
SCAQMD Threshold for 25 meters (82 feet) or less[2]	**371**	**1,965**	**4**	**2**
Exceeds Threshold?	No	No	No	No

Notes:
[1] Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for 5 acres in Hemet/San Jacinto Valley Source Receptor Area (SRA 28). Project will be approximately 76.3 acres.
[2] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
[3] Energy usage consists of emissions from generation of electricity and on-site natural gas usage.
[4] On-site vehicular emissions based on 1/10 of the gross vehicular emissions and road dust.
[5] The nearest sensitive receptor is located 30 meters north; therefore, the 25-meter threshold has been used.

Table 11 indicates that the local operational emission would not exceed the LST thresholds at the nearest sensitive receptors, located adjacent to the project. Therefore, the project will not result in significant Localized Operational emissions.

6.3 CO Hot Spot Emissions

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards which were presented in above in Section 5.0.

To determine if the proposed project could cause emission levels in excess of the CO standards discussed above in Section 5.0, a sensitivity analysis is typically conducted to determine the potential for CO "hot spots" at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, "hot spots" potentially can occur at high traffic volume intersections with a Level of Service E or worse.

Micro-scale air quality emissions have traditionally been analyzed in environmental documents where the air basin was a non-attainment area for CO. However, the SCAQMD has demonstrated in the CO attainment redesignation request to EPA that there are no "hot spots" anywhere in the air basin, even

at intersections with much higher volumes, much worse congestion, and much higher background CO levels than anywhere in Riverside County. If the worst-case intersections in the air basin have no "hot spot" potential, any local impacts will be below thresholds.

The traffic analysis showed that the project would generate 3,952 trips per day. The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection which has a daily traffic volume of approximately 100,000 vehicles per day would not violate the CO standard. The volume of traffic at project buildout would be well below 100,000 vehicles and below the necessary volume to even get close to causing a violation of the CO standard. Therefore no CO "hot spot" modeling was performed and no significant long-term air quality impact is anticipated to local air quality with the on-going use of the proposed project.

6.4 Cumulative Regional Air Quality Impacts

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the project's air quality must be generic by nature.

The Project area is out of attainment for both ozone and PM10 particulate matter. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the South Coast Air Basin. The greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. The Project does not exceed any of the thresholds of significance and therefore is considered less than significant.

6.5 Air Quality Compliance

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and Regional Plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD Air Quality Management Plan (AQMP). Therefore, this section discusses any potential inconsistencies of the proposed project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP in 2016 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

A. Criterion 1 - Increase in the Frequency or Severity of Violations

Based on the air quality modeling analysis contained in this Air Analysis, short-term construction impacts will not result in significant impacts based on the SCAQMD regional and local thresholds of significance. This Air Analysis also found that, long-term operations impacts would result in significant impacts based on the SCAQMD regional thresholds of significance.

Therefore, the proposed Project is not projected to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

B. Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The 2020-2045 Regional Transportation/Sustainable Communities Strategy, prepared by SCAG, 2020, includes chapters on: the challenges in a changing region, creating a plan for our future, and the road to greater mobility and sustainable growth. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For this project, the City of San Jacinto Land Use Plans define the assumptions that are represented in the AQMP.

The land use designation is currently VLDR (Very Low Density Residential) with a zoning designation of RR Zone (Rural Residential). The Project includes a General Plan Amendment from VLDR to LDR (Low Density Residential) and a Zone change from RR to LDR Zone (Residential – Low Density).

The proposed project is a residential development. Therefore, the proposed project would not result in an inconsistency with the land use designation in the City's General Plan. Therefore, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed Project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur.

7.0 Greenhouse Gas Impact Analysis

7.1 Construction Greenhouse Gas Emissions Impact

The greenhouse gas emissions from project construction equipment and worker vehicles are shown in Table 12. The emissions are from all phases of construction. The total construction emissions amortized over a period of 30 years are estimated at 97.95 metric tons of CO_2e per year. Annual CalEEMod output calculations are provided in Appendix A.

Table 12: Construction Greenhouse Gas Emissions

Activity	Emissions ($MTCO_2e$)[1]		
	Onsite	**Offsite**	**Total**
Demolition	46.80	13.52	60.32
Site Preparation	96.40	4.23	100.63
Grading	330.00	1050.30	1380.30
Building Construction	545.00	765.30	1310.30
Paving	51.60	22.32	73.92
Coating	3.39	9.74	13.13
Total	1073.19	1865.41	2938.60
Averaged over 30 years[2]	35.77	62.18	97.95

Notes:
[1.] $MTCO_2e$=metric tons of carbon dioxide equivalents (includes carbon dioxide, methane and nitrous oxide).
[2.] The emissions are averaged over 30 years because the average is added to the operational emissions, pursuant to SCAQMD.
* CalEEMod output (Appendix A)

7.2 Operational Greenhouse Gas Emissions Impact

Operational emissions occur over the life of the project. The operational emissions for the project are 5,354 metric tons of CO_2e per year or 3.957 metric tons of CO_2e per service population as shown in Table 13. The project would be below the 2027 interpolated SCAQMD threshold of 3.96 metric tons of CO_2e per service population, and therefore the project would have a less than significant impact.

<Table 13, next page>

Table 13: Opening Year Unmitigated Project-Related Greenhouse Gas Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year)[1]						
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	R	CO_2e
Area Sources[2]	0.00	7.21	7.21	0.00	0.00	0.00	7.23
Energy Usage[3]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources[4]	0.00	4,873.00	4,873.00	0.21	0.23	6.35	4,954.00
Solid Waste[5]	34.20	0.00	34.20	3.42	0.00	0.00	120.00
Water[6]	5.41	150.00	155.41	0.56	0.01	0.00	174.00
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.97	0.97
Construction[7]	0.00	95.24	95.24	0.00	0.01	0.07	97.95
Total Emissions	39.61	5,125.45	5,165.06	4.19	0.25	7.39	**5,354.15**
Service Population							**1,353**
Total Emissions per Service Population (MTCO2e/yr/SP)							**3.957**
2027 Interpolated SCAQMD Threshold (MTCO2e/yr/SP)							**3.960**
Exceeds Threshold?							**No**

Notes:
[1] Source: CalEEMod Version 2022.1.1.22
[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
[3] Energy usage consist of GHG emissions from electricity and natural gas usage.
[4] Mobile sources consist of GHG emissions from vehicles.
[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
[7] Construction GHG emissions based on a 30-year amortization rate.

7.3 Greenhouse Gas Plan Consistency

The proposed project would have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. The City of San Jacinto is participating the Western Riverside Council of Governments (WRCOG) Subregional Climate Action Plan. The WRCOG Subregional CAP establishes a community-wide emissions reduction target of 15% below 2010, following guidance from CARB and the Governor's Office of Planning and Research. CARB and the California Attorney General have determined this approach to be consistent with the state-wide AB 32 goal of reducing emissions to 1990 levels.

As shown in Table 14, the project is consistent with applicable local reduction measures identified in the WRCOG Subregional CAP and would result in a less than significant impact.

CARB Scoping Plan Consistency

The ARB Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (California Air Resources Board 2008). The measures in the Scoping Plan have been in place since 2012.

This Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

In May 2014, CARB released its *First Update to the Climate Change Scoping Plan* (CARB 2014). This *Update* identifies the next steps for California's leadership on climate change. While California continues on its path to meet the near-term 2020 greenhouse gas limit, it must also set a clear path toward long-term, deep GHG emission reductions. This report highlights California's success to date in reducing its GHG emissions and lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.

In November 2017, CARB release the 2017 Scoping Plan. This Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals, and includes a description of a suite of specific actions to meet the State's 2030 GHG limit. In addition, Chapter 4 provides a broader description of the many actions and proposals being explored across the sectors, including the natural resources sector, to achieve the State's mid and long-term climate goals.

Guided by legislative direction, the actions identified in the 2017 Scoping Plan reduce overall GHG emissions in California and deliver policy signals that will continue to drive investment and certainty in a low carbon economy. The 2017 Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and Trade Program, which constrains and reduces emissions at covered sources.

As the latest, 2022 Scoping Plan builds upon previous versions, project consistency with applicable strategies of the 2008, 2017, and 2022 Plan are assessed in Table 15. As shown in Table 15, the project is consistent with the applicable strategies and would result in a less than significant impact.

Therefore, the project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. Furthermore, the project will also comply with applicable Green Building Standards and City of San Jacinto's policies regarding sustainability (as dictated by the City's General Plan). With incorporation of regulatory compliance and credit for reductions due to CAPCOA location-based efficiency measures, impacts are considered to be less than significant, further analysis is not warranted.

Table 14: Applicable WRCOG Subregional CAP Local Reduction Measure Project Comparison[1]

WRCOG Local Reduction Measure	Measure Description	Project Compliance with Measure
E-1: Energy Action Plan	Improve municipal and community wide energy efficiency and reduce energy consumption through the adoption of local Energy Action Plans (EAP).	Not directly applicable to the project; however, the project will be compliant with the current Title 24 standards, including solar PV installations.
E-3: Shade Trees	Strategically plant trees to reduce the urban heat island effect.	The proposed project is to include trees per City requirements for new developments.
T-2: Bicycle Parking	Provide additional options for bicycle parking.	The proposed project will follow City requirements for bicycle parking.
T-8: Density	Improve jobs-housing balance and reduce vehicle miles traveled by increasing household and employment densities.	The proposed project is residential and located within 0.5 miles of a multiple schools and commercial uses.
T-10: Design/Site Planning	Design neighborhoods and sites to reduce VMT.	The proposed project is residential and located within 0.5 miles of a multiple schools and commercial uses.
T-14: Voluntary Transportation Demand Management	Reduce demand for roadway travel through incentives for alternative modes of transportation and disincentives for driving	The proposed project is residential and located within 0.5 miles of a multiple schools and commercial uses.
SW-1: Yard Waste Collection	Provide green waste collection bins community-wide.	The project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.
SW-2: Food Scrap and Paper Division	Divert food and paper waste from landfills by implementing collection system.	The project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.

[1] Source: WRCOG Subregional Climate Action Plan (2014).

Table 15: Project Consistency with CARB Scoping Plan Policies and Measures1

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Energy Efficiency – Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	Consistent. The project will be compliant with the current Title 24 standards.

Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	Consistent. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that are mandatory in the 2022 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The project will be subject to these mandatory standards.
High Global Warming Potential Gases – Adopt measures to reduce high global warming potential gases.	Consistent. CARB identified five measures that reduce HFC emissions from vehicular and commercial refrigeration systems; vehicles that access the project that are required to comply with the measures will comply with the strategy.
Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	Consistent. The state is currently developing a regulation to reduce methane emissions from municipal solid waste landfills. The project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.
Water – Continue efficiency programs and use cleaner energy sources to move and treat water.	Consistent. The project will comply with all applicable City ordinances and CAL Green requirements.
2017 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	Project Compliance with Recommended Action
Implement Mobile Source Strategy: Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Car regulations.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025 and at least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.

Implement Mobile Source Strategy: Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement SB 350 by 2030: Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.	Consistent. The project will be compliant with the current Title 24 standards.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	Consistent. The project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.
2022 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	Project Compliance with Recommended Action
Deploy ZEVs and reduce driving demand	Consistent. The Project will be in an urbanized area within 0.5 miles of a multiple schools and commercial uses.
Coordinate supply of liquid fossil fuels with declining California fuel demand	Consistent. The Project will be compliant with the current Title 24 standards.
Generate clean electricity	Consistent. The Project will be compliant with the current Title 24 standards and would not interfere with clean energy generation.
Decarbonize industrial energy supply	Consistent. The Project will be compliant with the current Title 24 standards and would be a hospital, therefore would not interfere with this goal.
Decarbonize buildings	Consistent. The Project will be compliant with the current Title 24 standards.
Reduce non-combustion emissions	Consistent. The Project will be compliant with the current Title 24 standards.
Notes: 1 Source: CARB Scoping Plan (2008 and 2017)	

8.0 Energy Analysis

Information from the CalEEMod 2022.1.1.22 Daily and Annual Outputs contained in the air quality and greenhouse gas analyses above was utilized for this analysis. The CalEEMod outputs detail project related construction equipment, transportation energy demands, and facility energy demands.

8.1 Construction Energy Demand

8.1.1 Construction Equipment Electricity Usage Estimates

Electrical service will be provided by Southern California Edison (SCE). Based on the 2017 National Construction Estimator, Richard Pray (2017)[1], the typical power cost per 1,000 square feet of building construction per month is estimated to be $2.32. The project plans to develop the site with approximately 817,050 square feet of new residential space over the course of approximately 39 months. Based on Table 16, the total power cost of the on-site electricity usage during the construction of the proposed project is estimated to be approximately $73,926.68. As shown in Table 16, the total electricity usage from Project construction related activities is estimated to be approximately 1,344,122 kWh.[2]

Table 16: Project Construction Power Cost and Electricity Usage

Power Cost (per 1,000 square foot of building per month of construction)	Total Building Size (1,000 Square Foot)[1]	Construction Duration (months)	Total Project Construction Power Cost
$2.32	817.050	39	$73,926.68

Cost per kWh	Total Project Construction Electricity Usage (kWh)
$0.06	1,344,122

* Assumes the project will be under the GS-1 General Service rate under SCE.

[1] Pray, Richard. 2017 National Construction Estimator. Carlsbad: Craftsman Book Company, 2017.
[2] LADWP's Small Commercial & Multi-Family Service (A-1) is approximately $0.06 per kWh of electricity Southern California Edison (SCE). Rates & Pricing Choices: General Service/Industrial Rates. https://library.sce.com/content/dam/sce-doclib/public/regulatory/historical/electric/2020/schedules/general-service-&-industrial-rates/ELECTRIC_SCHEDULES_GS-1_2020.pdf

8.1.2 Construction Equipment Fuel Estimates

Using the CalEEMod data input, the project's construction phase would consume electricity and fossil fuels as a single energy demand, that is, once construction is completed their use would cease. CARB's 2017 Emissions Factors Tables show that on average aggregate fuel consumption (gasoline and diesel fuel) would be approximately 18.5 hp-hr-gal.[3] As presented in Table 17 below, project construction activities would consume an estimated 108,685 gallons of diesel fuel.

Table 17: Construction Equipment Fuel Consumption Estimates

Phase	Number of Days	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	HP hrs/ day	Total Fuel Consumption (gal diesel fuel)[1]
Demolition	30	Concrete/Industrial Saws	1	8	33	0.73	193	313
	30	Excavators	3	8	36	0.38	328	532
	30	Rubber Tired Dozers	2	8	367	0.4	2,349	3,809
Site Preparation	40	Rubber Tired Dozers	3	8	367	0.4	3,523	7,618
	40	Tractors/Loaders/Backhoes	4	8	84	0.37	995	2,150
Grading	110	Excavators	2	8	36	0.38	219	1,301
	110	Graders	1	8	148	0.41	485	2,886
	110	Rubber Tired Dozers	1	8	367	0.4	1,174	6,983
	110	Scrapers	2	8	423	0.48	3,249	19,316
	110	Tractors/Loaders/Backhoes	2	8	84	0.37	497	2,957
Building Construction	500	Cranes	1	7	367	0.29	745	20,135
	500	Forklifts	3	8	82	0.2	394	10,638
	500	Generator Sets	1	8	14	0.74	83	2,240
	500	Tractors/Loaders/Backhoes	3	7	84	0.37	653	17,640
	500	Welders	1	8	46	0.45	166	4,476
Paving	75	Pavers	2	8	81	0.42	544	2,207
	75	Paving Equipment	2	8	89	0.36	513	2,078
	75	Rollers	2	8	36	0.38	219	887
Architectural Coating	90	Air Compressors	1	6	37	0.48	107	518
CONSTRUCTION FUEL DEMAND (gallons of diesel fuel)								**108,685**

Notes:
[1]Using Carl Moyer Guidelines Table D-21 Fuel consumption rate factors (bhp-hr/gal) for engines less than 750 hp.

[3] Aggregate fuel consumption rate for all equipment was estimated at 18.5 hp-hr/day (from CARB's 2017 Emissions Factors Tables and fuel consumption rate factors as shown in Table D-21 of the Moyer Guidelines: (https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf).

(Source: https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf)

8.1.3 Construction Worker Fuel Estimates

It is assumed that all construction worker trips are from light duty autos (LDA) along area roadways. With respect to estimated VMT, the construction worker trips would generate an estimated 3,772,243 VMT. Vehicle fuel efficiencies for construction workers were estimated in the air quality and greenhouse gas analysis using information generated using CARB's EMFAC model (see Appendix B for details). Table 18 shows that an estimated 121,882 gallons of fuel would be consumed for construction worker trips.

Table 18: Construction Worker Fuel Consumption Estimates

Phase	Number of Days	Worker Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Demolition	30	15.0	18.5	8,325	30.95	269
Site Preparation	40	17.5	18.5	12,950	30.95	418
Grading	110	20.0	18.5	40,700	30.95	1,315
Building Construction	500	385.0	18.5	3,561,250	30.95	115,065
Paving	75	15.0	18.5	20,813	30.95	672
Architectural Coating	90	77.0	18.5	128,205	30.95	4,142
Total Construction Worker Fuel Consumption						**121,882**

Notes:
[1]Assumptions for the worker trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.22 defaults.

8.1.4 Construction Vendor/Hauling Fuel Estimates

Tables 19 and 20 show the estimated fuel consumption for vendor and hauling during building construction and architectural coating. With respect to estimated VMT, the vendor and hauling trips would generate an estimated 1,000,455 VMT. For the architectural coatings it is assumed that the contractors would be responsible for bringing coatings and equipment with them in their light duty vehicles.[4] Tables 19 and 20 show that an estimated 134,056 gallons of fuel would be consumed for vendor and hauling trips.

<Tables 19 and 20, next page>

[4] Vendors delivering construction material or hauling debris from the site during grading would use medium to heavy duty vehicles with an average fuel consumption of 9.22 mpg for medium heavy-duty trucks and 6.74 mpg for heavy heavy-duty trucks (see Appendix B for details).

Table 19: Construction Vendor Fuel Consumption Estimates (MHD Trucks)[1]

Phase	Number of Days	Vendor Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Demolition	30	0	10.2	0	9.22	0
Site Preparation	40	0	10.2	0	9.22	0
Grading	110	0	10.2	0	9.22	0
Building Construction	500	68.4	10.2	348,840	9.22	37,835
Paving	75	15.0	10.2	11,475	9.22	1,245
Architectural Coating	90	0	10.2	0	9.22	0
Total Vendor Fuel Consumption						**39,080**

Notes:
[1] Assumptions for the vendor trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.22 defaults.

Table 20: Construction Hauling Fuel Consumption Estimates (HHD Trucks)[1]

Phase	Number of Days	Hauling Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Demolition	30	10.9	20	6,540	6.74	970
Site Preparation	40	0.0	20	0	6.74	0
Grading	110	288.0	20	633,600	6.74	94,006
Building Construction	500	0	20	0	6.74	0
Paving	75	0	20	0	6.74	0
Architectural Coating	90	0	20	0	6.74	0
Total Construction Hauling Fuel Consumption						**94,976**

Notes:
[1]Assumptions for the hauling trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.22 defaults.

8.1.5 Construction Energy Efficiency/Conservation Measures

Construction equipment used over the approximately 39-month construction phase would conform to CARB regulations and California emissions standards and is evidence of related fuel efficiencies. In addition, the CARB Airborne Toxic Control Measure limits idling times of construction vehicles to no more than five minutes, thereby minimizing unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Furthermore, the project has been designed in compliance with California's Energy Efficiency Standards and 2022 CALGreen Standards.

Construction of the proposed residential development would require the typical use of energy resources. There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies).

Equipment employed in construction of the project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

8.2 Operational Energy Demand

Energy consumption in support of or related to project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

8.2.1 Transportation Fuel Consumption

The largest source of operational energy use would be vehicle operation of customers. The site is located in an urbanized area just in close proximity to transit stops. Using the CalEEMod output, it is assumed that an average trip length would be 9.944 miles. To show a worst-case analysis, as the proposed project is a residential project, it was assumed that vehicles would operate 365 days per year. Table 21 shows the worst-case estimated annual fuel consumption for all classes of vehicles from autos to heavy-heavy trucks.[5] Table 21 shows that an estimated 571,336 gallons of fuel would be consumed per year for the operation of the proposed project.

Table 21: Estimated Vehicle Operations Fuel Consumption[1]

Vehicle Type	Vehicle Mix	Number of Vehicles	Average Trip (miles)[2]	Daily VMT	Average Fuel Economy (mpg)	Total Gallons per Day	Total Annual Fuel Consumption (gallons)
Light Auto	Automobile	2,194	9.944	21,813	31.82	685.52	250,215
Light Truck	Automobile	229	9.944	2,280	27.16	83.96	30,645
Light Truck	Automobile	706	9.944	7,024	25.6	274.37	100,145
Medium Truck	Automobile	564	9.944	5,613	20.81	269.74	98,454
Light Heavy Truck	2-Axle Truck	106	9.944	1,051	13.81	76.08	27,769
Light Heavy Truck 10,000 lbs +	2-Axle Truck	29	9.944	292	14.18	20.57	7,507
Medium Heavy Truck	3-Axle Truck	47	9.944	464	9.58	48.46	17,688
Heavy Heavy Truck	4-Axle Truck	77	9.944	761	7.14	106.61	38,913
Total		3,952	--	39,298	--	1565.30	--
Total Annual Fuel Consumption							**571,336**

Notes:
[1] The project is to generate 3,952 total net new trips after reduction of existing uses. Default CalEEMod vehicle fleet mix utilized.
[2] Based on the size of the site and relative location, trips were assumed to be local rather than regional.

Trip generation generated by the proposed project are consistent with other similar residential uses of similar scale and configuration as reflected in the traffic data. That is, the proposed project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips, nor

[5] Average fuel economy based on aggregate mileage calculated in EMFAC 2017 for opening year (2023). See Appendix B for EMFAC output.

associated excess and wasteful vehicle energy consumption. Therefore, project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

8.2.2 Facility Energy Demands (Electricity)

The annual electricity demands were provided per the CalEEMod output and are provided in Table 22. The project will be 100% electric and will not require natural gas.

Table 22: Project Unmitigated Annual Operational Energy Demand Summary[1]

Electricity Demand	kWh/year
Single Family Housing	8,280,326
Total	8,280,326

Notes:
[1]Taken from the CalEEMod 2022.1.1.22 annual output.

As shown in Table 22, the estimated electricity demand for the proposed project is approximately 8,280,326 kWh per year. In 2022, the residential sector of the County of Riverside consumed approximately 9,061 million kWh of electricity.[6] Therefore, the increase in both electricity demand from the proposed project is insignificant compared to the County's 2022 demand. However, electricity for the project will be provided by onsite solar which will not affect the County's demand.

8.3 Renewable Energy and Energy Efficiency Plan Consistency

Regarding federal transportation regulations, the project site is located in an already developed area. Access to/from the project site is from existing roads. These roads are already in place so the project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be proposed pursuant to the ISTEA because SCAG is not planning for intermodal facilities in the project area.

Regarding the State's Energy Plan and compliance with Title 24 CCR energy efficiency standards, the applicant is required to comply with the California Green Building Standard Code requirements for energy efficient buildings and appliances as well as utility energy efficiency programs implemented by the SCE and Southern California Gas Company.

Regarding the State's Renewable Energy Portfolio Standards, the project would be required to meet or exceed the energy standards established in the California Green Building Standards Code, Title 24, Part 11 (CALGreen). CalGreen Standards require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials.

[6] California Energy Commission, Electricity Consumption by County. https://ecdms.energy.ca.gov/elecbycounty.aspx

9.0 References

The following references were used in the preparing this analysis.

California Air Pollution Control Officers Association
2009 Health Risk Assessments for Proposed Land Use Projects

California Air Resources Board
2008 Resolution 08-43

2008 Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act

2008 ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk – Frequently Asked Questions

2008 Climate Change Scoping Plan, a framework for change.

2011 Supplement to the AB 32 Scoping Plan Functional Equivalent Document

2013 Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities

2014 First Update to the Climate Change Scoping Plan, Building on the Framework Pursuant to AB32, the California Global Warming Solutions Act of 2006. May.

2018 Historical Air Quality, Top 4 Summary

County of Riverside
2015 County of Riverside General Plan. December 8.

Governor's Office of Planning and Research
2008 CEQA and Climate: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review

2009 CEQA Guideline Sections to be Added or Amended

Office of Environmental Health Hazard Assessment
2015 Air Toxics Hot Spots Program Risk Assessment Guidelines

Psomas
2024 Health Risk Assessment for the Chacon Farms Project. March.

South Coast Air Quality Management District

1993 CEQA Air Quality Handbook

2005 Rule 403 Fugitive Dust

2007 2007 Air Quality Management Plan

2008 Final Localized Significance Threshold Methodology, Revised

2011 Appendix A Calculation Details for CalEEMod

2012 Final 2012 Air Quality Management Plan

2016 Final 2016 Air Quality Management Plan

Appendix A:

CalEEMod Emission Output

Chacon Farms Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Chacon Farms
Construction Start Date	7/1/2025
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	22.4
Location	33.77790497388584, -117.01814341883531
County	Riverside-South Coast
City	San Jacinto
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5570
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	419	Dwelling Unit	63.4	817,050	4,907,687	—	1,353	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-17	Require Renewable-Surplus Buildings

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	57.0	31.7	31.5	0.05	1.37	7.89	9.26	1.26	3.99	5.25	—	5,826	5,826	0.23	0.30	10.7	5,931
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.58	52.8	34.9	0.19	1.62	9.11	10.7	1.52	3.99	5.25	—	26,697	26,697	0.65	3.18	1.12	27,664
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.3	14.3	17.3	0.05	0.50	2.55	2.98	0.46	0.95	1.41	—	6,809	6,809	0.18	0.60	5.04	6,997
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.62	2.61	3.16	0.01	0.09	0.47	0.54	0.08	0.17	0.26	—	1,127	1,127	0.03	0.10	0.83	1,158

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.39	31.7	31.5	0.05	1.37	7.89	9.26	1.26	3.99	5.25	—	5,542	5,542	0.23	0.15	2.38	5,564
2026	1.74	11.9	24.2	0.03	0.40	2.35	2.75	0.37	0.57	0.94	—	5,826	5,826	0.22	0.30	10.7	5,931
2027	1.66	11.3	23.4	0.03	0.36	2.35	2.71	0.33	0.57	0.90	—	5,762	5,762	0.15	0.29	9.71	5,862
2028	57.0	7.12	11.0	0.02	0.26	0.39	0.59	0.24	0.09	0.32	—	2,144	2,144	0.07	0.09	1.59	2,172
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.58	52.8	34.9	0.19	1.62	9.11	10.7	1.52	3.99	5.25	—	26,697	26,697	0.65	3.18	1.12	27,664
2026	3.42	49.6	34.0	0.19	1.50	9.11	10.6	1.41	2.95	4.37	—	26,346	26,346	0.64	3.18	1.06	27,312
2027	1.63	11.4	21.0	0.03	0.36	2.35	2.71	0.33	0.57	0.90	—	5,600	5,600	0.15	0.29	0.25	5,690
2028	1.57	10.9	20.4	0.03	0.32	2.35	2.68	0.30	0.57	0.86	—	5,535	5,535	0.14	0.29	0.23	5,625
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.18	14.3	11.0	0.04	0.50	2.47	2.97	0.46	0.95	1.41	—	5,458	5,458	0.15	0.55	3.26	5,630
2026	1.44	13.6	17.3	0.05	0.43	2.55	2.98	0.40	0.72	1.12	—	6,809	6,809	0.18	0.60	5.04	6,997
2027	1.16	8.21	15.2	0.02	0.25	1.66	1.91	0.24	0.40	0.64	—	4,016	4,016	0.11	0.21	2.99	4,084
2028	14.3	2.51	4.41	0.01	0.08	0.33	0.42	0.08	0.08	0.16	—	976	976	0.03	0.04	0.54	990
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.22	2.61	2.01	0.01	0.09	0.45	0.54	0.08	0.17	0.26	—	904	904	0.02	0.09	0.54	932
2026	0.26	2.49	3.16	0.01	0.08	0.47	0.54	0.07	0.13	0.20	—	1,127	1,127	0.03	0.10	0.83	1,158
2027	0.21	1.50	2.78	< 0.005	0.05	0.30	0.35	0.04	0.07	0.12	—	665	665	0.02	0.03	0.50	676
2028	2.62	0.46	0.80	< 0.005	0.01	0.06	0.08	0.01	0.01	0.03	—	162	162	< 0.005	0.01	0.09	164

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.39	31.7	31.5	0.05	1.37	7.89	9.26	1.26	3.99	5.25	—	5,542	5,542	0.23	0.15	2.38	5,564
2026	1.74	11.9	24.2	0.03	0.40	2.35	2.75	0.37	0.57	0.94	—	5,826	5,826	0.22	0.30	10.7	5,931
2027	1.66	11.3	23.4	0.03	0.36	2.35	2.71	0.33	0.57	0.90	—	5,762	5,762	0.15	0.29	9.71	5,862
2028	57.0	7.12	11.0	0.02	0.26	0.39	0.59	0.24	0.09	0.32	—	2,144	2,144	0.07	0.09	1.59	2,172
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.58	52.8	34.9	0.19	1.62	9.11	10.7	1.52	3.99	5.25	—	26,697	26,697	0.65	3.18	1.12	27,664
2026	3.42	49.6	34.0	0.19	1.50	9.11	10.6	1.41	2.95	4.37	—	26,346	26,346	0.64	3.18	1.06	27,312
2027	1.63	11.4	21.0	0.03	0.36	2.35	2.71	0.33	0.57	0.90	—	5,600	5,600	0.15	0.29	0.25	5,690
2028	1.57	10.9	20.4	0.03	0.32	2.35	2.68	0.30	0.57	0.86	—	5,535	5,535	0.14	0.29	0.23	5,625
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.18	14.3	11.0	0.04	0.50	2.47	2.97	0.46	0.95	1.41	—	5,458	5,458	0.15	0.55	3.26	5,630
2026	1.44	13.6	17.3	0.05	0.43	2.55	2.98	0.40	0.72	1.12	—	6,809	6,809	0.18	0.60	5.04	6,997
2027	1.16	8.21	15.2	0.02	0.25	1.66	1.91	0.24	0.40	0.64	—	4,016	4,016	0.11	0.21	2.99	4,084
2028	14.3	2.51	4.41	0.01	0.08	0.33	0.42	0.08	0.08	0.16	—	976	976	0.03	0.04	0.54	990
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.22	2.61	2.01	0.01	0.09	0.45	0.54	0.08	0.17	0.26	—	904	904	0.02	0.09	0.54	932
2026	0.26	2.49	3.16	0.01	0.08	0.47	0.54	0.07	0.13	0.20	—	1,127	1,127	0.03	0.10	0.83	1,158
2027	0.21	1.50	2.78	< 0.005	0.05	0.30	0.35	0.04	0.07	0.12	—	665	665	0.02	0.03	0.50	676
2028	2.62	0.46	0.80	< 0.005	0.01	0.06	0.08	0.01	0.01	0.03	—	162	162	< 0.005	0.01	0.09	164

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	34.7	11.7	135	0.30	0.21	27.4	27.6	0.20	6.96	7.16	239	43,466	43,706	26.0	1.50	84.8	44,887
Mit.	34.7	11.7	135	0.30	0.21	27.4	27.6	0.20	6.96	7.16	239	43,466	43,706	26.0	1.50	84.8	44,887
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	31.8	12.3	94.5	0.28	0.20	27.4	27.6	0.19	6.96	7.15	239	41,565	41,804	26.0	1.54	7.90	42,922
Mit.	31.8	12.3	94.5	0.28	0.20	27.4	27.6	0.19	6.96	7.15	239	41,565	41,804	26.0	1.54	7.90	42,922
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	33.1	12.7	114	0.28	0.21	27.0	27.2	0.19	6.86	7.06	239	41,874	42,113	26.0	1.55	39.9	43,267
Mit.	33.1	12.7	114	0.28	0.21	27.0	27.2	0.19	6.86	7.06	239	41,874	42,113	26.0	1.55	39.9	43,267
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.04	2.31	20.8	0.05	0.04	4.93	4.97	0.04	1.25	1.29	39.6	6,933	6,972	4.31	0.26	6.61	7,163
Mit.	6.04	2.31	20.8	0.05	0.04	4.93	4.97	0.04	1.25	1.29	39.6	6,933	6,972	4.31	0.26	6.61	7,163
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13.8	11.5	112	0.30	0.20	27.4	27.6	0.19	6.96	7.15	—	30,430	30,430	1.17	1.32	78.9	30,932
Area	20.9	0.22	23.8	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.6	63.6	< 0.005	< 0.005	—	63.8
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	12,068	12,068	0.75	0.09	—	12,114
Water	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Waste	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	34.7	11.7	135	0.30	0.21	27.4	27.6	0.20	6.96	7.16	239	43,466	43,706	26.0	1.50	84.8	44,887
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.9	12.3	94.5	0.28	0.20	27.4	27.6	0.19	6.96	7.15	—	28,592	28,592	1.21	1.36	2.05	29,031
Area	18.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	12,068	12,068	0.75	0.09	—	12,114
Water	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Waste	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	31.8	12.3	94.5	0.28	0.20	27.4	27.6	0.19	6.96	7.15	239	41,565	41,804	26.0	1.54	7.90	42,922
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.8	12.5	97.8	0.28	0.20	27.0	27.2	0.19	6.86	7.05	—	28,857	28,857	1.21	1.38	34.1	29,332
Area	20.3	0.15	16.3	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.5	43.5	< 0.005	< 0.005	—	43.7
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	12,068	12,068	0.75	0.09	—	12,114
Water	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Waste	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	33.1	12.7	114	0.28	0.21	27.0	27.2	0.19	6.86	7.06	239	41,874	42,113	26.0	1.55	39.9	43,267
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	2.34	2.29	17.8	0.05	0.04	4.93	4.97	0.03	1.25	1.29	—	4,778	4,778	0.20	0.23	5.64	4,856
Area	3.70	0.03	2.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.21	7.21	< 0.005	< 0.005	—	7.23
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,998	1,998	0.12	0.02	—	2,006
Water	—	—	—	—	—	—	—	—	—	—	5.41	150	155	0.56	0.01	—	174
Waste	—	—	—	—	—	—	—	—	—	—	34.2	0.00	34.2	3.42	0.00	—	120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	6.04	2.31	20.8	0.05	0.04	4.93	4.97	0.04	1.25	1.29	39.6	6,933	6,972	4.31	0.26	6.61	7,163

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13.8	11.5	112	0.30	0.20	27.4	27.6	0.19	6.96	7.15	—	30,430	30,430	1.17	1.32	78.9	30,932
Area	20.9	0.22	23.8	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.6	63.6	< 0.005	< 0.005	—	63.8
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	12,068	12,068	0.75	0.09	—	12,114
Water	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Waste	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	34.7	11.7	135	0.30	0.21	27.4	27.6	0.20	6.96	7.16	239	43,466	43,706	26.0	1.50	84.8	44,887
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.9	12.3	94.5	0.28	0.20	27.4	27.6	0.19	6.96	7.15	—	28,592	28,592	1.21	1.36	2.05	29,031
Area	18.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	12,068	12,068	0.75	0.09	—	12,114
Water	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Waste	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	31.8	12.3	94.5	0.28	0.20	27.4	27.6	0.19	6.96	7.15	239	41,565	41,804	26.0	1.54	7.90	42,922
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.8	12.5	97.8	0.28	0.20	27.0	27.2	0.19	6.86	7.05	—	28,857	28,857	1.21	1.38	34.1	29,332
Area	20.3	0.15	16.3	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.5	43.5	< 0.005	< 0.005	—	43.7
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	12,068	12,068	0.75	0.09	—	12,114
Water	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Waste	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	33.1	12.7	114	0.28	0.21	27.0	27.2	0.19	6.86	7.06	239	41,874	42,113	26.0	1.55	39.9	43,267
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.34	2.29	17.8	0.05	0.04	4.93	4.97	0.03	1.25	1.29	—	4,778	4,778	0.20	0.23	5.64	4,856
Area	3.70	0.03	2.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.21	7.21	< 0.005	< 0.005	—	7.23
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,998	1,998	0.12	0.02	—	2,006
Water	—	—	—	—	—	—	—	—	—	—	5.41	150	155	0.56	0.01	—	174
Waste	—	—	—	—	—	—	—	—	—	—	34.2	0.00	34.2	3.42	0.00	—	120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	6.04	2.31	20.8	0.05	0.04	4.93	4.97	0.04	1.25	1.29	39.6	6,933	6,972	4.31	0.26	6.61	7,163

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	0.60	0.60	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.82	1.64	< 0.005	0.08	—	0.08	0.07	—	0.07	—	282	282	0.01	< 0.005	—	282
Demolition	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.33	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.6	46.6	< 0.005	< 0.005	—	46.8
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	1.16	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.78	215
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.84	0.20	0.01	0.01	0.20	0.21	0.01	0.06	0.07	—	753	753	0.01	0.12	1.61	791
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.2	16.2	< 0.005	< 0.005	0.03	16.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.9	61.9	< 0.005	0.01	0.06	64.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.68	2.68	< 0.005	< 0.005	< 0.005	2.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.01	10.8

3.2. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	0.60	0.60	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.82	1.64	< 0.005	0.08	—	0.08	0.07	—	0.07	—	282	282	0.01	< 0.005	—	282
Demolition	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.33	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.6	46.6	< 0.005	< 0.005	—	46.8
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	1.16	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.78	215
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.84	0.20	0.01	0.01	0.20	0.21	0.01	0.06	0.07	—	753	753	0.01	0.12	1.61	791
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.2	16.2	< 0.005	< 0.005	0.03	16.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.9	61.9	< 0.005	0.01	0.06	64.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.68	2.68	< 0.005	< 0.005	< 0.005	2.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.01	10.8

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.47	3.31	0.01	0.15	—	0.15	0.14	—	0.14	—	580	580	0.02	< 0.005	—	582
Dust From Material Movement	—	—	—	—	—	0.84	0.84	—	0.43	0.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.63	0.60	< 0.005	0.03	—	0.03	0.03	—	0.03	—	96.1	96.1	< 0.005	< 0.005	—	96.4
Dust From Material Movement	—	—	—	—	—	0.15	0.15	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	1.35	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	247	247	0.01	0.01	0.91	250
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	1.02	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	227	227	0.01	0.01	0.02	230
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.2	25.2	< 0.005	< 0.005	0.04	25.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.17	4.17	< 0.005	< 0.005	0.01	4.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.47	3.31	0.01	0.15	—	0.15	0.14	—	0.14	—	580	580	0.02	< 0.005	—	582
Dust From Material Movement	—	—	—	—	—	0.84	0.84	—	0.43	0.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.63	0.60	< 0.005	0.03	—	0.03	0.03	—	0.03	—	96.1	96.1	< 0.005	< 0.005	—	96.4
Dust From Material Movement	—	—	—	—	—	0.15	0.15	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	1.35	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	247	247	0.01	0.01	0.91	250
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	1.02	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	227	227	0.01	0.01	0.02	230
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.2	25.2	< 0.005	< 0.005	0.04	25.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.17	4.17	< 0.005	< 0.005	0.01	4.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	3.64	3.64	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	4.99	4.76	0.01	0.21	—	0.21	0.19	—	0.19	—	1,111	1,111	0.05	0.01	—	1,114
Dust From Material Movement	—	—	—	—	—	0.61	0.61	—	0.24	0.24	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.91	0.87	< 0.005	0.04	—	0.04	0.03	—	0.03	—	184	184	0.01	< 0.005	—	184
Dust From Material Movement	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.17	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	259	259	0.01	0.01	0.03	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.30	23.0	5.46	0.13	0.38	5.21	5.59	0.38	1.46	1.84	—	19,839	19,839	0.37	3.12	1.10	20,780
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.21	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.2	44.2	< 0.005	< 0.005	0.08	44.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	3.91	0.91	0.02	0.06	0.87	0.93	0.06	0.24	0.31	—	3,338	3,338	0.06	0.53	3.05	3,499
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.31	7.31	< 0.005	< 0.005	0.01	7.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.71	0.17	< 0.005	0.01	0.16	0.17	0.01	0.04	0.06	—	553	553	0.01	0.09	0.51	579

3.6. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622

Dust From Material Movement	—	—	—	—	—	3.64	3.64	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	4.99	4.76	0.01	0.21	—	0.21	0.19	—	0.19	—	1,111	1,111	0.05	0.01	—	1,114
Dust From Material Movement	—	—	—	—	—	0.61	0.61	—	0.24	0.24	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.91	0.87	< 0.005	0.04	—	0.04	0.03	—	0.03	—	184	184	0.01	< 0.005	—	184
Dust From Material Movement	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.17	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	259	259	0.01	0.01	0.03	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.30	23.0	5.46	0.13	0.38	5.21	5.59	0.38	1.46	1.84	—	19,839	19,839	0.37	3.12	1.10	20,780

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.21	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.2	44.2	< 0.005	< 0.005	0.08	44.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	3.91	0.91	0.02	0.06	0.87	0.93	0.06	0.24	0.31	—	3,338	3,338	0.06	0.53	3.05	3,499
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.31	7.31	< 0.005	< 0.005	0.01	7.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.71	0.17	< 0.005	0.01	0.16	0.17	0.01	0.04	0.06	—	553	553	0.01	0.09	0.51	579

3.7. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	3.64	3.64	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	3.62	3.67	0.01	0.15	—	0.15	0.14	—	0.14	—	878	878	0.04	0.01	—	881

Dust From Material Movement	—	—	—	—	—	0.48	0.48	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.66	0.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	0.09	0.09	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.09	1.09	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	254	254	< 0.005	0.01	0.02	257
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.29	22.3	5.35	0.13	0.38	5.21	5.59	0.38	1.46	1.84	—	19,494	19,494	0.37	3.12	1.04	20,434
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.2	34.2	< 0.005	< 0.005	0.05	34.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.99	0.70	0.02	0.05	0.69	0.74	0.05	0.19	0.24	—	2,593	2,593	0.05	0.42	2.29	2,721
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.66	5.66	< 0.005	< 0.005	0.01	5.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.55	0.13	< 0.005	0.01	0.13	0.13	0.01	0.04	0.04	—	429	429	0.01	0.07	0.38	450

3.8. Grading (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	3.64	3.64	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	3.62	3.67	0.01	0.15	—	0.15	0.14	—	0.14	—	878	878	0.04	0.01	—	881
Dust From Material Movement	—	—	—	—	—	0.48	0.48	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.66	0.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	0.09	0.09	—	0.03	0.03	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.09	1.09	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	254	254	< 0.005	0.01	0.02	257
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.29	22.3	5.35	0.13	0.38	5.21	5.59	0.38	1.46	1.84	—	19,494	19,494	0.37	3.12	1.04	20,434
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.2	34.2	< 0.005	< 0.005	0.05	34.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.99	0.70	0.02	0.05	0.69	0.74	0.05	0.19	0.24	—	2,593	2,593	0.05	0.42	2.29	2,721
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.66	5.66	< 0.005	< 0.005	0.01	5.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.55	0.13	< 0.005	0.01	0.13	0.13	0.01	0.04	0.04	—	429	429	0.01	0.07	0.38	450

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	5.73	7.54	0.01	0.22	—	0.22	0.20	—	0.20	—	1,393	1,393	0.06	0.01	—	1,398
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.05	1.38	< 0.005	0.04	—	0.04	0.04	—	0.04	—	231	231	0.01	< 0.005	—	231
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.59	10.8	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	2,080	2,080	0.09	0.07	7.05	2,111
Vendor	0.03	1.44	0.45	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,348	1,348	0.03	0.21	3.69	1,415
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.60	0.66	8.21	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	1,913	1,913	0.03	0.07	0.18	1,936
Vendor	0.03	1.50	0.46	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,349	1,349	0.03	0.21	0.10	1,412
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.42	4.99	0.00	0.00	1.13	1.13	0.00	0.26	0.26	—	1,126	1,126	0.02	0.04	1.77	1,141
Vendor	0.02	0.88	0.26	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	784	784	0.02	0.12	0.92	821
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.08	0.91	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	186	186	< 0.005	0.01	0.29	189
Vendor	< 0.005	0.16	0.05	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	130	130	< 0.005	0.02	0.15	136
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	5.73	7.54	0.01	0.22	—	0.22	0.20	—	0.20	—	1,393	1,393	0.06	0.01	—	1,398

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.05	1.38	< 0.005	0.04	—	0.04	0.04	—	0.04	—	231	231	0.01	< 0.005	—	231
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.59	10.8	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	2,080	2,080	0.09	0.07	7.05	2,111
Vendor	0.03	1.44	0.45	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,348	1,348	0.03	0.21	3.69	1,415
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.60	0.66	8.21	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	1,913	1,913	0.03	0.07	0.18	1,936
Vendor	0.03	1.50	0.46	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,349	1,349	0.03	0.21	0.10	1,412
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.42	4.99	0.00	0.00	1.13	1.13	0.00	0.26	0.26	—	1,126	1,126	0.02	0.04	1.77	1,141
Vendor	0.02	0.88	0.26	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	784	784	0.02	0.12	0.92	821
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.08	0.91	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	186	186	< 0.005	0.01	0.29	189
Vendor	< 0.005	0.16	0.05	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	130	130	< 0.005	0.02	0.15	136
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.61	0.52	10.0	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	2,042	2,042	0.02	0.07	6.34	2,070
Vendor	0.03	1.38	0.43	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,324	1,324	0.03	0.20	3.37	1,387

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.57	0.59	7.57	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	1,878	1,878	0.03	0.07	0.16	1,900
Vendor	0.03	1.45	0.45	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,325	1,325	0.03	0.20	0.09	1,385
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.47	5.68	0.00	0.00	1.39	1.39	0.00	0.33	0.33	—	1,358	1,358	0.02	0.05	1.95	1,376
Vendor	0.02	1.03	0.32	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	946	946	0.02	0.14	1.04	990
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	1.04	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	225	225	< 0.005	0.01	0.32	228
Vendor	< 0.005	0.19	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	157	157	< 0.005	0.02	0.17	164
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.61	0.52	10.0	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	2,042	2,042	0.02	0.07	6.34	2,070
Vendor	0.03	1.38	0.43	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,324	1,324	0.03	0.20	3.37	1,387
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.57	0.59	7.57	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	1,878	1,878	0.03	0.07	0.16	1,900
Vendor	0.03	1.45	0.45	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,325	1,325	0.03	0.20	0.09	1,385
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.47	5.68	0.00	0.00	1.39	1.39	0.00	0.33	0.33	—	1,358	1,358	0.02	0.05	1.95	1,376
Vendor	0.02	1.03	0.32	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	946	946	0.02	0.14	1.04	990
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	1.04	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	225	225	< 0.005	0.01	0.32	228
Vendor	< 0.005	0.19	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	157	157	< 0.005	0.02	0.17	164
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.66	0.96	< 0.005	0.02	—	0.02	0.02	—	0.02	—	178	178	0.01	< 0.005	—	179
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.5	29.5	< 0.005	< 0.005	—	29.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.59	7.06	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	1,843	1,843	0.03	0.07	0.15	1,865
Vendor	0.03	1.38	0.44	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,295	1,295	0.02	0.20	0.08	1,354
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.55	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	139	139	< 0.005	0.01	0.18	141
Vendor	< 0.005	0.10	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	96.2	96.2	< 0.005	0.01	0.10	101
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	23.0	23.0	< 0.005	< 0.005	0.03	23.3
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	15.9	15.9	< 0.005	< 0.005	0.02	16.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Building Construction (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.66	0.96	< 0.005	0.02	—	0.02	0.02	—	0.02	—	178	178	0.01	< 0.005	—	179
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.5	29.5	< 0.005	< 0.005	—	29.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.59	7.06	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	1,843	1,843	0.03	0.07	0.15	1,865
Vendor	0.03	1.38	0.44	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,295	1,295	0.02	0.20	0.08	1,354
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.55	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	139	139	< 0.005	0.01	0.18	141
Vendor	< 0.005	0.10	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	96.2	96.2	< 0.005	0.01	0.10	101
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	23.0	23.0	< 0.005	< 0.005	0.03	23.3
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	15.9	15.9	< 0.005	< 0.005	0.02	16.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Paving (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.36	2.04	< 0.005	0.05	—	0.05	0.05	—	0.05	—	310	310	0.01	< 0.005	—	312
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.25	0.37	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.4	51.4	< 0.005	< 0.005	—	51.6
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.93	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	199	199	< 0.005	0.01	0.57	202
Vendor	0.01	0.44	0.14	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	433	433	0.01	0.07	1.03	454
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.06	0.70	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	183	183	< 0.005	0.01	0.01	185
Vendor	0.01	0.46	0.15	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	434	434	0.01	0.07	0.03	454
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.1	38.1	< 0.005	< 0.005	0.05	38.6
Vendor	< 0.005	0.10	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	89.1	89.1	< 0.005	0.01	0.09	93.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.31	6.31	< 0.005	< 0.005	0.01	6.40
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.02	15.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Paving (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.36	2.04	< 0.005	0.05	—	0.05	0.05	—	0.05	—	310	310	0.01	< 0.005	—	312
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.25	0.37	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.4	51.4	< 0.005	< 0.005	—	51.6
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.93	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	199	199	< 0.005	0.01	0.57	202
Vendor	0.01	0.44	0.14	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	433	433	0.01	0.07	1.03	454
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.06	0.70	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	183	183	< 0.005	0.01	0.01	185
Vendor	0.01	0.46	0.15	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	434	434	0.01	0.07	0.03	454
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.1	38.1	< 0.005	< 0.005	0.05	38.6
Vendor	< 0.005	0.10	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	89.1	89.1	< 0.005	0.01	0.09	93.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.31	6.31	< 0.005	< 0.005	0.01	6.40
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.02	15.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.20	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.9	32.9	< 0.005	< 0.005	—	33.0
Architectural Coatings	14.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.45	5.45	< 0.005	< 0.005	—	5.47
Architectural Coatings	2.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	1.87	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	401	401	< 0.005	0.01	1.14	406
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.37	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	92.0	92.0	< 0.005	< 0.005	0.12	93.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.2	15.2	< 0.005	< 0.005	0.02	15.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.20	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.9	32.9	< 0.005	< 0.005	—	33.0
Architectural Coatings	14.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.45	5.45	< 0.005	< 0.005	—	5.47
Architectural Coatings	2.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	1.87	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	401	401	< 0.005	0.01	1.14	406
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.37	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	92.0	92.0	< 0.005	< 0.005	0.12	93.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.2	15.2	< 0.005	< 0.005	0.02	15.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Total	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Total	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,998	1,998	0.12	0.02	—	2,006
Total	—	—	—	—	—	—	—	—	—	—	—	1,998	1,998	0.12	0.02	—	2,006

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Total	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Total	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,998	1,998	0.12	0.02	—	2,006
Total	—	—	—	—	—	—	—	—	—	—	—	1,998	1,998	0.12	0.02	—	2,006

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	17.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.06	0.22	23.8	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.6	63.6	< 0.005	< 0.005	—	63.8
Total	20.9	0.22	23.8	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.6	63.6	< 0.005	< 0.005	—	63.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	17.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	18.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.26	0.03	2.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.21	7.21	< 0.005	< 0.005	—	7.23
Total	3.70	0.03	2.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.21	7.21	< 0.005	< 0.005	—	7.23

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	17.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.06	0.22	23.8	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.6	63.6	< 0.005	< 0.005	—	63.8
Total	20.9	0.22	23.8	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.6	63.6	< 0.005	< 0.005	—	63.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	17.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	18.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.26	0.03	2.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.21	7.21	< 0.005	< 0.005	—	7.23
Total	3.70	0.03	2.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.21	7.21	< 0.005	< 0.005	—	7.23

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Total	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Total	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	5.41	150	155	0.56	0.01	—	174
Total	—	—	—	—	—	—	—	—	—	—	5.41	150	155	0.56	0.01	—	174

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Total	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Total	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	5.41	150	155	0.56	0.01	—	174
Total	—	—	—	—	—	—	—	—	—	—	5.41	150	155	0.56	0.01	—	174

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Total	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Total	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	34.2	0.00	34.2	3.42	0.00	—	120
Total	—	—	—	—	—	—	—	—	—	—	34.2	0.00	34.2	3.42	0.00	—	120

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Total	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Total	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	34.2	0.00	34.2	3.42	0.00	—	120
Total	—	—	—	—	—	—	—	—	—	—	34.2	0.00	34.2	3.42	0.00	—	120

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	7/1/2025	8/11/2025	5.00	30.0	—
Site Preparation	Site Preparation	8/12/2025	10/6/2025	5.00	40.0	—
Grading	Grading	10/7/2025	3/9/2026	5.00	110	—
Building Construction	Building Construction	3/10/2026	2/7/2028	5.00	500	—
Paving	Paving	2/8/2028	5/22/2028	5.00	75.0	—
Architectural Coating	Architectural Coating	5/23/2028	9/25/2028	5.00	90.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40

Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT

Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	288	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	151	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	44.8	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	15.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	30.2	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	10.9	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	288	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	151	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	44.8	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	15.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	30.2	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT

Demolition	Hauling	10.9	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,654,526	551,509	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	28,500	—
Site Preparation	—	—	60.0	0.00	—
Grading	253,203	—	330	0.00	—
Paving	0.00	0.00	0.00	0.00	4.62

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	4.62	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005
2028	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	3,952	3,952	3,952	1,442,480	38,745	38,745	38,744	14,141,873

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	3,952	3,952	3,952	1,442,480	38,745	38,745	38,744	14,141,873

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1654526.25	551,509	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	8,280,326	532	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	8,280,326	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	17,042,312	95,107,059

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	17,042,312	95,107,059

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	384	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	384	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.1	annual days of extreme heat
Extreme Precipitation	2.95	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	17.0	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	95.3
AQ-PM	42.5
AQ-DPM	42.8
Drinking Water	10.2
Lead Risk Housing	12.3
Pesticides	53.6
Toxic Releases	24.2
Traffic	58.3
Effect Indicators	—
CleanUp Sites	37.6
Groundwater	35.0
Haz Waste Facilities/Generators	95.9
Impaired Water Bodies	0.00
Solid Waste	35.7
Sensitive Population	—
Asthma	62.8
Cardio-vascular	81.6
Low Birth Weights	61.4
Socioeconomic Factor Indicators	—
Education	41.2
Housing	51.4
Linguistic	20.6
Poverty	65.5
Unemployment	90.3

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	37.40536379
Employed	25.70255357
Median HI	42.78198383
Education	—
Bachelor's or higher	19.73566021
High school enrollment	12.22892339
Preschool enrollment	5.774412935
Transportation	—
Auto Access	51.48209932
Active commuting	4.735018606
Social	—
2-parent households	61.60657
Voting	35.86552034
Neighborhood	—
Alcohol availability	79.19928141
Park access	2.194276915
Retail density	42.78198383
Supermarket access	36.44296163
Tree canopy	2.155780829
Housing	—
Homeownership	85.42281535
Housing habitability	77.15898884
Low-inc homeowner severe housing cost burden	45.13024509
Low-inc renter severe housing cost burden	75.02887206
Uncrowded housing	62.10701912
Health Outcomes	—

Insured adults	29.96278712
Arthritis	4.7
Asthma ER Admissions	45.0
High Blood Pressure	8.9
Cancer (excluding skin)	8.6
Asthma	34.7
Coronary Heart Disease	4.7
Chronic Obstructive Pulmonary Disease	12.3
Diagnosed Diabetes	38.1
Life Expectancy at Birth	33.0
Cognitively Disabled	13.1
Physically Disabled	15.4
Heart Attack ER Admissions	10.8
Mental Health Not Good	46.4
Chronic Kidney Disease	14.8
Obesity	33.9
Pedestrian Injuries	60.1
Physical Health Not Good	36.4
Stroke	13.0
Health Risk Behaviors	—
Binge Drinking	58.7
Current Smoker	40.0
No Leisure Time for Physical Activity	38.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	67.0
Elderly	15.7

English Speaking	75.4
Foreign-born	36.4
Outdoor Workers	33.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	68.9
Traffic Density	34.8
Traffic Access	23.0
Other Indices	—
Hardship	65.4
Other Decision Support	—
2016 Voting	51.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	63.0
Healthy Places Index Score for Project Location (b)	24.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per site plan
Construction: Construction Phases	Adjusted for 2028 opening year
Operations: Hearths	No woodstoves
Operations: Energy Use	Project will be all electric

Appendix B:

EMFAC2017 Output

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Y	Vehicle Cat	Model Year	Speed	Fuel	Population	VMT	Trips	Fuel Consumption	Fuel Consumption	Total Fuel Consumption	VMT	Total VMT	Miles Per Gallon	Vehicle Class
South Coas	2023	HHDT	Aggregate	Aggregate	Gasoline	75.10442936	8265.097	1502.689	1.936286145	1936.286145	1913466.474	8265.097	13656273.03	7.14	**HHD**
South Coas	2023	HHDT	Aggregate	Aggregate	Diesel	109818.6753	13648008	1133618	1911.530188	1911530.188		13648008			
South Coas	2023	LDA	Aggregate	Aggregate	Gasoline	6635002.295	2.53E+08	31352477	7971.24403	7971244.03	8020635.698	2.53E+08	255180358.3	31.82	**LDA**
South Coas	2023	LDA	Aggregate	Aggregate	Diesel	62492.97958	2469816	297086.6	49.3916685	49391.6685		2469816			
South Coas	2023	LDA	Aggregate	Aggregate	Electricity	150700.3971	6237106	751566	0	0		6237106			
South Coas	2023	LDT1	Aggregate	Aggregate	Gasoline	758467.6481	27812996	3504563	1023.913006	1023913.006	1024279.466	27812996	27821405.09	27.16	**LDT1**
South Coas	2023	LDT1	Aggregate	Aggregate	Diesel	360.7799144	8408.618	1256.88	0.366459477	366.4594769		8408.618			
South Coas	2023	LDT1	Aggregate	Aggregate	Electricity	7122.93373	303507.5	35798.19	0	0		303507.5			
South Coas	2023	LDT2	Aggregate	Aggregate	Gasoline	2285150.139	85272416	10723315	3338.798312	3338798.312	3356536.438	85272416	85922778.34	25.60	**LDT2**
South Coas	2023	LDT2	Aggregate	Aggregate	Diesel	15594.68309	650362.8	76635.83	17.73812611	17738.12611		650362.8			
South Coas	2023	LDT2	Aggregate	Aggregate	Electricity	28809.63735	917592.8	145405.4	0	0		917592.8			
South Coas	2023	LHDT1	Aggregate	Aggregate	Gasoline	174910.3847	6216643	2605904	583.3851736	583385.1736	811563.1022	6216643	11211395.79	13.81	**LHDT1**
South Coas	2023	LHDT1	Aggregate	Aggregate	Diesel	125545.0822	4994753	1579199	228.1779285	228177.9285		4994753			
South Coas	2023	LHDT2	Aggregate	Aggregate	Gasoline	30102.75324	1034569	448486.2	111.5753864	111575.3864	209423.5025	1034569	2969599.008	14.18	**LHDT2**
South Coas	2023	LHDT2	Aggregate	Aggregate	Diesel	50003.13116	1935030	628976.5	97.84811618	97848.11618		1935030			
South Coas	2023	MCY	Aggregate	Aggregate	Gasoline	305044.5141	2104624	610089	57.849018	57849.018	57849.018	2104624	2104623.657	36.38	**MCY**
South Coas	2023	MDV	Aggregate	Aggregate	Gasoline	1589862.703	55684188	7354860	2693.883526	2693883.526	2744536.341	55684188	57109879.73	20.81	**MDV**
South Coas	2023	MDV	Aggregate	Aggregate	Diesel	36128.1019	1425691	176566.9	50.65281491	50652.81491		1425691			
South Coas	2023	MDV	Aggregate	Aggregate	Electricity	16376.67653	537591.7	83475.95	0	0		537591.7			
South Coas	2023	MH	Aggregate	Aggregate	Gasoline	34679.50542	330042.9	3469.338	63.26295123	63262.95123	74893.26955	330042.9	454344.9436	6.07	**MH**
South Coas	2023	MH	Aggregate	Aggregate	Diesel	13122.69387	124302	1312.269	11.63031832	11630.31832		124302			
South Coas	2023	MHDT	Aggregate	Aggregate	Gasoline	25624.3151	1363694	512691.3	265.2060557	265206.0557	989975.6425	1363694	9484317.768	9.58	**MHDT**
South Coas	2023	MHDT	Aggregate	Aggregate	Diesel	122124.488	8120623	1221858	724.7695868	724769.5868		8120623			
South Coas	2023	OBUS	Aggregate	Aggregate	Gasoline	5955.291639	245774	119153.5	48.07750689	48077.50689	86265.88761	245774	579743.8353	6.72	**OBUS**
South Coas	2023	OBUS	Aggregate	Aggregate	Diesel	4286.940093	333969.8	41558.29	38.18838072	38188.38072		333969.8			
South Coas	2023	SBUS	Aggregate	Aggregate	Gasoline	2783.643068	112189.6	11134.57	12.19474692	12194.74692	39638.85935	112189.6	323043.5203	8.15	**SBUS**
South Coas	2023	SBUS	Aggregate	Aggregate	Diesel	6671.825716	210853.9	76991.94	27.44411242	27444.11242		210853.9			
South Coas	2023	UBUS	Aggregate	Aggregate	Gasoline	957.7686184	89782.63	3831.074	17.62416327	17624.16327	17863.66378	89782.63	91199.2533	5.11	**UBUS**
South Coas	2023	UBUS	Aggregate	Aggregate	Diesel	13.00046095	1416.622	52.00184	0.239500509	239.5005093		1416.622			
South Coas	2023	UBUS	Aggregate	Aggregate	Electricity	16.11693886	1320.163	64.46776	0			1320.163			

Chacon Farms
Health Risk Assessment
City of San Jacinto, CA

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GLOSSARY OF TERMS

CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH_4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
GHG	Greenhouse gas
HFCs	Hydrofluorocarbons
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
SRA	Source/Receptor Area
TAC	Toxic air contaminants
VOC	Volatile organic compounds
WRCC	Western Regional Climate Center

1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

This health risk analysis was prepared to evaluate whether the diesel air emissions generated by the construction of the project would cause a significant impact to the air resources in the project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The assessment is consistent with the methodology and emission factors endorsed by the State Office of Environmental Health Hazard Assessment (OEHHA), South Coast Air Quality Management District (SCAQMD), California Air Resource Board (CARB), and the United States Environmental Protection Agency (US EPA).

1.2 Project Summary

1.2.1 Site Location

The Project site is located at on northwest corner of Cawston Avenue and Esplanade Avenue in the City of San Jacinto, CA as shown in Exhibit A. The site is bordered by vacant land to the west, 7th Street to the north with residential uses beyond, Cawston Avenue to the east with residential further, and Esplanade Avenue to the south with farmland further.

1.2.2 Project Description

The project proposes to develop a 76.3-acre lot with 419 single-family housing units. Exhibit B provides the project Site Plan.

1.2.3 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution than others due to their exposure. As identified by the California Air Resources Board (CARB), sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, a sensitive receptor would be a location where a sensitive individual could remain for 24-hours or longer, such as residencies, hospitals, and schools (etc).

The closest existing sensitive receptors (to the site area) are the single-family residences located approximately 100 feet to the north.

1.3 Executive Summary of Findings and Mitigation Measures

The following is a summary of the analysis results:

The analysis shows that the nearby sensitive receptors would not be exposed to elevated cancer risk from project construction-related diesel emissions in excess of 10 in a million, and therefore impacts are less than significant. The health risk impacts for non-cancer related impacts are less than 1.0; therefore, they are also considered to be less than significant.

Mitigation Measures

Construction Measures

No construction mitigation required.

2.0 Regulatory Framework and Background

2.1 Health Risk Regulatory Setting

Health Risk Assessments for Proposed Land Use Projects CAPCOA Guidance Document. This guidance was adopted July 2009 to ensure consistency in assessing the health risk impacts from and to proposed land use projects. This CAPCOA guidance document focuses on the acute, chronic, and cancer impacts of sources affected by CEQA. It also outlines the recommended procedures to identify when a project should undergo further risk evaluation, how to conduct the health risk assessment (HRA), how to engage the public, what to do with the results from the HRA, and what mitigation measures may be appropriate for various land use projects. With respect to health risks associated with locating sensitive land uses in proximity to freeways and other high traffic roadways, HRA modeling may not thoroughly characterize all the health risk associated with nearby exposure to traffic generated pollutants.

California Code of Regulations (CCR) Title 13 Section 2485. The Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling applies to diesel-fueled commercial motor vehicles that operate in the State of California with gross vehicle weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. It limits applicable vehicles from idling more than five consecutive minutes at any location.

South Coast Air Quality Management District. The SCAQMD has jurisdiction over stationary sources of emissions occurring within the Basin. TACs are regulated by numerous SCAQMD rules, which include Rules 1401 and 212. Rule 1401 – New Source Review for Toxic Air Contaminants establishes requirements for obtaining a permit to operate from the SCAQMD. Rule 212 – Standards for Approving Permits establishes emissions control requirements for emission sources.

The SCAQMD also conducted a detailed TAC emission inventory, air sampling, and dispersion modeling study called the Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-IV). The MATES-V study provided information on the importance of various TACs in terms of their relative health risks, as well as their spatial magnitude and distribution across the Basin. The MATES-V information can be used to characterize the “background” health risks from both regional and local TAC emission sources. Approximately two-thirds of the cancer risk from TACs is due to diesel exhaust, while the remaining portion mainly comprises exposures to benzene, formaldehyde, acrolein, and 1,3-butadiene, which primarily come from gasoline fueled vehicles. The risk levels provided within the MATES-V study are produced from a comprehensive macro-level study of all emission sources within the Basin. Because of the scale of the MATES-V analysis, localized conditions cannot be readily discerned from this study and project-level HRAs are conducted to account for local conditions. The SCAQMD has its own Risk Assessment guidelines and required assumptions that incorporate the OEHHA guidance and the options to be used when using the CARB’s Hotspots Analysis and Reporting Program Version 2 (HARP 2) program for risk assessment calculations.

3.0 Thresholds of Significance

3.1 Toxic Air Contaminants

The SCAQMD has defined several health risk significance thresholds that it recommends Lead Agencies use in assessing a project's health risk impacts. Fontana has not adopted its own set of thresholds. Therefore, the following SCAQMD thresholds are used for this analysis.

The SCAQMD has established the following project-specific health risk significance thresholds:[1]

- Maximum Incremental Cancer Risk: >=10 in 1 million.
- Maximum facility-wide cancer risk at a school or school under construction within 500 feet of the project: >=1 in 1 million.[2]
- Hazard Index (project increment) >=1.0.

A significant impact would occur if a project's impacts exceeded any of these thresholds. Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

4.0 Health Risk Assessment

4.1 Diesel Emissions Health Risk Assessment

The construction of the proposed project would generate toxic air contaminant emissions from diesel truck emissions and off-road equipment. According to OEHHA methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 30-year lifetime will contract cancer, based on the use of revised Office of Environmental Health Hazard Assessment (OEHHA) risk-assessment methodology.[3]

A health risk assessment requires the completion and interaction of four general steps:

[1]South Coast Air Quality Management District (SCAQMD). 2019. South Coast AQMD Air Quality Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. Accessed September 21, 2021.

[2] SCAQMD. 2015. Rule 1401.1 Requirements for New and Relocated Facilities near Schools. http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1401-1.pdf. Accessed March 15, 2022.

[3] In February 2015, the Office of Environmental Health Hazard Assessment updated their "Air Toxics Hot Spots Program, Risk Assessments Guidelines, Guidance Manual for Preparation of Health Risk Assessments; however, the updated OEHHA guidance states in the page footers "do not cite or quote." SCAQMD staff have incorporated the updates into their methodology for SCAQMD's Rules 1401, 1401.1, 1402, and 212, and have updated their HRA Guidance for permitting; however, they are still in the process of updating the guidance for CEQA analyses (via working group sessions); however, to be conservative, the new OEHHA guidance was used to assess HRA impacts in this analysis.

1. Quantify project-generated TAC emissions.
2. Identify nearby ground-level receptor locations that may be affected by the emissions (including any special sensitive receptor locations such as residences, schools, hospitals, convalescent homes, and daycare centers).
3. Perform air dispersion modeling analyses to estimate ambient pollutant concentrations at each receptor location using project TAC emissions and representative meteorological data to define the transport and dispersion of those emissions in the atmosphere.
4. Characterize and compare the calculated health risks with the applicable health risk significance thresholds.

4.1.1 Health Risk Assessment Assumptions

Important issues that affect the dispersion modeling include the following: (1) Model Selection, (2) Source Treatment, (3) Meteorological Data, and (4) Receptor Grid. Each of these issues is addressed below.

Construction-Generated Air Toxics

Construction-related activities would result in temporary, short-term project-generated emissions of diesel particulate matter (DPM) from the exhaust of off-road, heavy-duty diesel equipment for site grading; soil hauling truck traffic; vertical building construction; paving; application of architectural coatings; and other miscellaneous activities. For construction activity, DPM is the primary air toxic of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a toxic air contaminant (TAC) by the California Air Resources Board (CARB) in 1998.

To assess the project's total health risk impacts, impacts from both construction and operations were considered in this HRA; therefore, the construction HRA is summarized below.

The construction HRA evaluated DPM (represent as exhaust PM10 from CalEEMod) emissions generated during construction of the proposed project and the related health risk impacts for sensitive receptors located within 1,000 feet of the project boundary. Exhaust PM10 emissions from construction of the project were calculated in CalEEMod (see Appendix B). A project would result in a significant impact if it would individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 10 in one million or an increased non-cancer risk of greater than 1.0 on the hazard index.

The project site is located within 1,000 feet from existing sensitive receptors that could be exposed to diesel emission exhaust during the construction period. To estimate the potential cancer risk associated with construction of the proposed project from equipment exhaust (including DPM), a dispersion model was used to translate an emission rate from the source location to concentrations at the receptor locations of interest (i.e., receptors at nearby residences).

Estimate of Emission Factors

The DPM emissions were calculated from CalEEMod model, using default estimates for construction length and equipment usage. The emissions factors were derived for Riverside County. Third trimester exposure used opening year (2026) emissions factors, 2-year factors (for infant exposure) reflect years 2026 and 2027, 14-year average factors (for child exposure during years 2-16) reflect emissions during the first 14 years of operation (2028 to 2041), the second 14 years of exposure (years 2042-2055) were used for assessment of exposure during years 16 to 30.

Emission Source Characterization

Each of the emission source types described above also requires geometrical and emission release specifications for use in the air dispersion model. Table 1 provides a summary of the assumptions used to configure the various emission sources. The following definitions are used to characterize the emission source geometrical configurations referred to in Table 1:

- Line source: A series of volume sources along a path, for example, vehicular traffic volumes along a roadway.

- Area source: A source where individual emission sources are moving and can be assumed to be evenly distributed over a defined area, such as truck idling covering an area.

Table 1: Summary of Emission Configurations

Emission Source Type	Geometric Configuration	Relevant Assumptions
On-Site Diesel Equipment Usage	Area source	Stack release height: 12 feet
		Entire project area
		Emission estimate: CalEEMod v. 2022.1.1.29

Exhibit A provides the location of the project buildings, emission source locations, and the locations of the nearest sensitive receptors (single-family detached residential dwelling units located adjacent to the project's northern property line). Residential receptors are labeled 1 through 10. The direction of on-site and off-site truck travel were obtained from either the site plan and/or based on City truck routes and location of nearest freeways.

4.1.2 Receptor Network

The assessment requires that a network of receptors be specified where the impacts can be computed at the various locations surrounding the project. Discrete receptors were located at existing sensitive residential receptors surrounding the proposed project (as detailed above). Discrete receptors are labeled 1 through 10. In addition, the identified sensitive receptor's locations were supplemented by the specification of a modeling grid that extended around the proposed project to identify other potential locations of impact. See Exhibit A for details.

4.1.3 Dispersion Modeling

The next step in the assessment process utilizes the emissions inventory along with a mathematical air dispersion model and representative meteorological data to calculate impacts at the various receptor locations. The dispersion model used in this assessment is described below.

Model Selection

The assessment of air quality and health risk impacts from pollutant emissions from this project applied the USEPA AERMOD Model, which is an air dispersion model accepted by the SCAQMD for performing health risk assessment analyses. AERMOD predicts pollutant concentrations from point, area, volume, line, and flare sources with variable emissions in terrain from flat to complex with the inclusion of building downwash effects from buildings on pollutant dispersion (as applicable). It captures the essential atmospheric physical processes and provides reasonable estimates over a wide range of meteorological conditions and modeling scenarios.

General Model Assumptions

A summary of Emission Configurations is shown in Table 1. The basic options used in the dispersion modeling are summarized in Table 2.

As indicated in Table 2, the analysis takes into account the effects of building downwash on the dispersion of emissions from the various sources located on the project's property. Building downwash occurs when the aerodynamic turbulence, induced by nearby buildings, causes pollutants emitted from an elevated source to be mixed rapidly toward the ground (downwash), resulting in potentially higher ground-level concentrations than if the buildings were not present. The AERMOD dispersion model contains algorithms to account for building downwash effects. The required information includes the location of the emission source; the location of adjacent buildings; and the building geometry in terms of length, width, and height. For purposes of this analysis, the emission source and building locations were taken from the project site plan. The CalEEMod output used for model inputs can be found in Appendix A.

Table 2: General Modeling Assumptions – AERMOD Model

Feature	Option Selected
Terrain processing	AERMAP-generated NED GEOTIFF 30 m
Regulatory dispersion options	See Table 1
Land use	Urban
Coordinate system	UTM Zone 11 North
Building downwash	Included in calculations
Receptor height	0 meters above ground (per OEHHA methodology)
Meteorological data	Perris Meteorological Data

Meteorological Data

Meteorological data from the Perris station was selected for this modeling application.[4] The meteorological input files were processed using AERMET program from Lakes Environmental. They are developed based on the five years data sets covering 1/1/2010 to 1/2/2016.

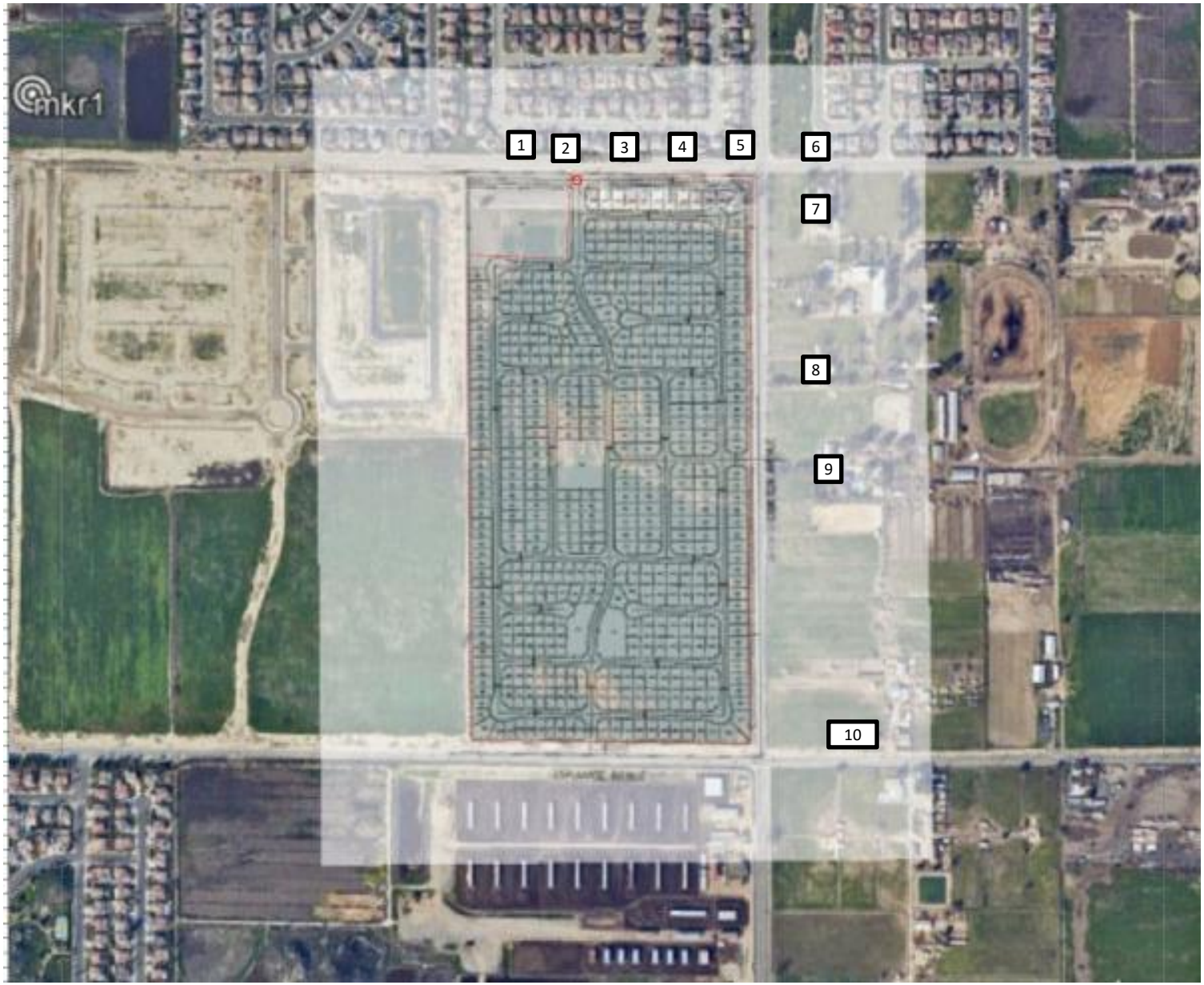
4.1.4 Estimation of Health Risks

Health risks from diesel particulate matter are twofold. First, diesel particulate matter is a carcinogen according to the State of California. Second, long-term chronic exposure to diesel particulate matter can cause health effects to the respiratory system. Each of these health risks is discussed below. Health risk calculations were based on the most-recent Office of Environmental Health Hazard Assessment guidance as detailed below.

[4] Source: https://ww2.arb.ca.gov/resources/documents/harp-aermod-meteorological-files

Exhibit A

AERMOD Model Source and Receptor Placement



Cancer Risks

According to the *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*, released by the Office of Environmental Health Hazard Assessment (OEHHA) in February 2015 and formally adopted in March 2015, the residential inhalation dose for long-term cancer risk assessment should be calculated using the following formula:

[Dose-air (mg/(Kg-day)]*Cancer Potency*[1x10^{-6}] = Potential Cancer Risk

Where:
Cancer Potency Factor = 1.1
Dose-inh = (C¬air * DBR * A * EF * ED *ASF*FAH* 10-6) / AT

Where:
DBR [Daily breathing rate (L/kg body weight – day)] = 261 for adults, 572 for children, and 1,090 for infants, and 361 for 3rd trimester per OEHHA guidance.
A [Inhalation absorption factor] = 1
EF [Exposure frequency (days/year)] = 350
ED [Exposure duration (years)] = 30 for adults (for an individual who is an adult at opening year), 14 for children (from 2-16 years), 14 for adults (from 16-30 years), 2 for infants, and 1 for 3rd Trimester
ASF [Age sensitivity factor) = 10 for 3rd trimester to 2 years of age, 3 for 2 to 16 years of age, and 1 for 16 to 30 years of age
FAH [Fraction of time spent at home] = 1 for 3rd trimester to 2 years of age, 1 for 2 to 16 years of age, and 0.73 for 16 to 30 years of age
10^6 [Micrograms to milligrams conversion]
AT [Average time period over which exposure is averaged in days] = 25,550

The model run results are shown in Appendix B. HARP2 (Hotspots Analysis and Report Program) from CARB was used to calculate risk. Exhibit B shows the dispersion from operation of the project.

Estimated cancer risk was based a construction duration of three years. Based on these assumptions, the maximum carcinogenic health risk from construction (beginning 3rd trimester [-0.25 to 1.75 years] scenario) would be 0.86 at receptor 3.

Table 3: Cumulative Carcinogenic Risk, 3-Year Exposure Scenario

Receptor ID	Construction (3 years)		Noncarcinogenic Hazards Index
	Average Annual Concentration (ug/m3)	Cumulative RISK (per million)	
1	0.00145	0.55	0.000286
2	0.00192	0.73	0.000378
3	0.00227	0.86	0.000450
4	0.00215	0.82	0.000424
5	0.00149	0.57	0.000294
6	0.00060	0.23	0.000118
7	0.00069	0.26	0.000136
8	0.00083	0.32	0.000164
9	0.00083	0.32	0.000164
10	0.00055	0.21	0.000108
SCAQMD Threshold	-	**10**	**1**

Therefore, as the residential cancer risk is below 10 in a million, construction of the proposed project would result in a less than significant impact due to the cancer risk from diesel emissions created by the proposed project.

To provide context of the 10 in a million-risk level threshold, discussion of the overall cancer risk at the Project site is provided. While this project-level analysis of health risk provides a refined estimation of risk than is provided by the MATES-V study, the MATES-V provides risk levels for the entire air basin and consequently averages risk levels for. As such, the project-level analysis provides a focused quantification of health risk that is generated by the Project, the MATES-V Study provides an overall risk level for areas proximate to the Project site. The project-level analysis of carcinogenic risk indicates that project-related exhaust from construction activities contribute to less than 10 in a million-health risk (refer to Table 2), which is a relatively small component of the 455 in a million carcinogenic risk noted within the MATES-V interactive map (SCAQMD 2021). For purposes of comparison, the carcinogenic risk for other areas within air basin are listed below in Table 4.

Table 4: Health Risks at the Site and Other Locations

Location	Carcinogenic Risk per Million
Project Site	**254**
Lake Elsinore	299
Promenade Temecula	276
University of California Riverside	427
Laguna Beach	234
Lake Perris	332
Ontario International Airport	600
Angel Stadium	482
Port of Long Beach	714
Downtown Los Angeles	810
Basin-wide Average	**455**
Source: SCAQMD 2021	

As shown in Table 4, the levels of TAC in other areas of the County result in varying levels of cancer risk levels. The overall cancer risk at the Project site of 254 per million health risk is generally lower than other areas identified within this table and substantially less than the basin-wide average of 455 in a million health risk. The carcinogenic risk at the Project site and surrounding area is comparable to other areas within the County and less than the Basin-wide average.

Non-Cancer Risks

The relationship for non-cancer health effects is given by the equation:

HIDPM = CDPM/RELDPM

Where,
HIDPM = Hazard Index; an expression of the potential for non-cancer health effects.
CDPM = Annual average diesel particulate matter concentration in µg/m3.
RELDPM = Reference Exposure Level (REL) for diesel particulate matter; the diesel particulate matter concentration at which no adverse health effects are anticipated.

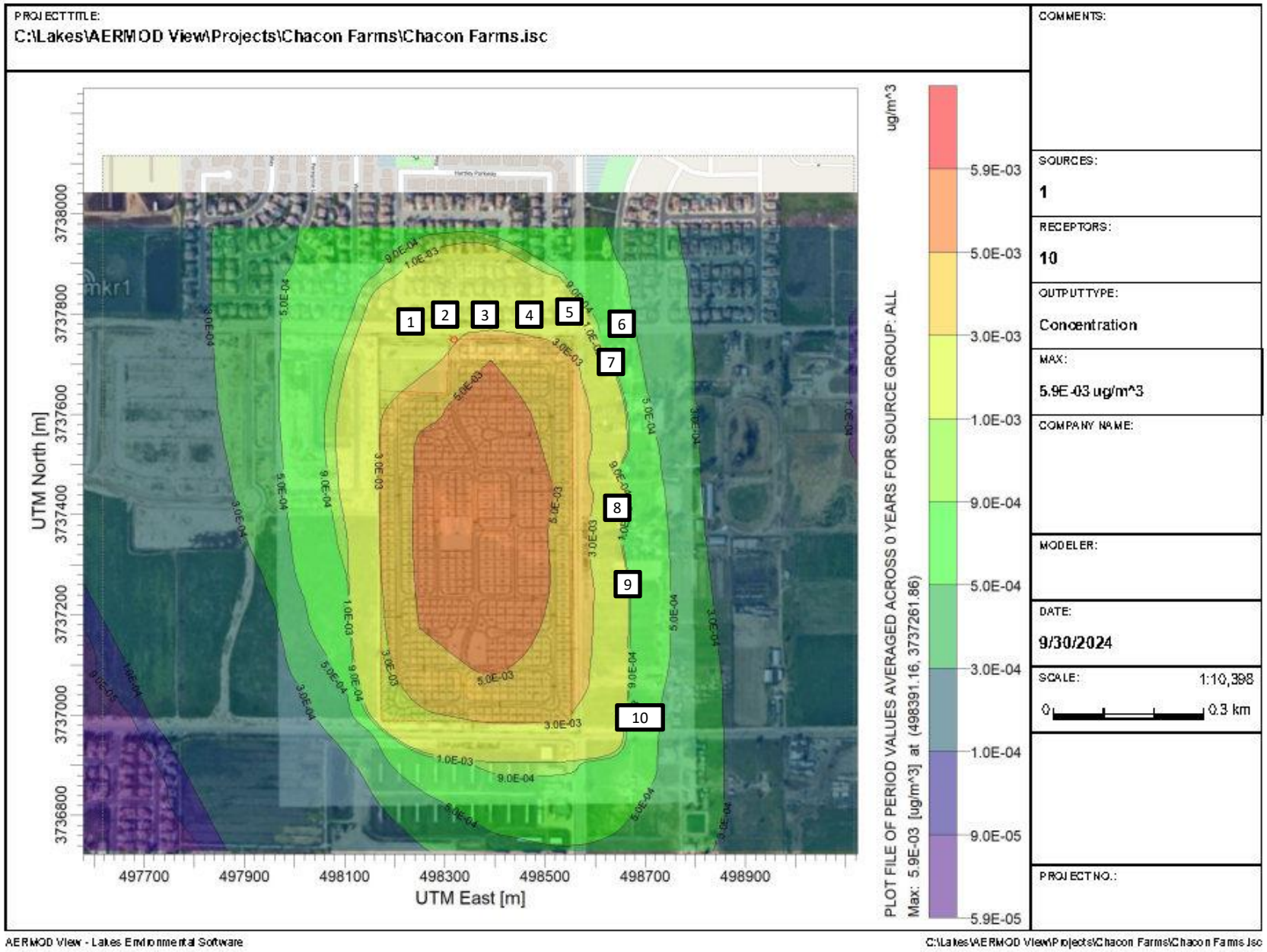
The non-carcinogenic hazards are also detailed in Table 3. The RELDPM is 5 µg/m3. The Office of Environmental Health Hazard Assessment as protective for the respiratory system has established this concentration. Using the maximum DPM concentration from years 2026-2029, the resulting Hazard Index is:

HIDPM = 0. 00227/5 = 0. 00045

The criterion for significance is a Hazard Index increase of 1.0 or greater. Therefore, the proposed project would have a less than significant impact due to the non-cancer risk from diesel emissions created by the proposed project.

Exhibit B

Unmitigated Annual DPM Emissions - Construction



5.0 References

The following references were used in the preparing this analysis.

California Air Pollution Control Officers Association
2009 Health Risk Assessments for Proposed Land Use Projects

California Air Resources Board
2005 Air Quality and Land Use Handbook: A Community Health Perspective. April.

2008 Resolution 08-43

2008 ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk – Frequently Asked Questions

Governor's Office of Planning and Research
2008 CEQA and Climate: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review

2009 CEQA Guideline Sections to be Added or Amended

Office of Environmental Health Hazard Assessment
2015 Air Toxics Hot Spots Program Risk Assessment Guidelines

South Coast Air Quality Management District (SCAQMD). 2021 (accessed on April 28, 2025). MATES V Interactive Map – Cancer Risk. https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/Main-Page?views=Cancer-Risk%2CClick-tabs-for-other-data

Appendix A:

CalEEMod Output

Chacon Farms Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Chacon Farms
Construction Start Date	7/1/2025
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	22.4
Location	33.77790497388584, -117.01814341883531
County	Riverside-South Coast
City	San Jacinto
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5570
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	419	Dwelling Unit	63.4	817,050	4,907,687	—	1,353	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-17	Require Renewable-Surplus Buildings

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	57.0	31.7	31.5	0.05	1.37	7.89	9.26	1.26	3.99	5.25	—	5,826	5,826	0.23	0.30	10.7	5,931
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.58	52.8	34.9	0.19	1.62	9.11	10.7	1.52	3.99	5.25	—	26,697	26,697	0.65	3.18	1.12	27,664
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.3	14.3	17.3	0.05	0.50	2.55	2.98	0.46	0.95	1.41	—	6,809	6,809	0.18	0.60	5.04	6,997
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.62	2.61	3.16	0.01	0.09	0.47	0.54	0.08	0.17	0.26	—	1,127	1,127	0.03	0.10	0.83	1,158

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.39	31.7	31.5	0.05	1.37	7.89	9.26	1.26	3.99	5.25	—	5,542	5,542	0.23	0.15	2.38	5,564
2026	1.74	11.9	24.2	0.03	0.40	2.35	2.75	0.37	0.57	0.94	—	5,826	5,826	0.22	0.30	10.7	5,931
2027	1.66	11.3	23.4	0.03	0.36	2.35	2.71	0.33	0.57	0.90	—	5,762	5,762	0.15	0.29	9.71	5,862
2028	57.0	7.12	11.0	0.02	0.26	0.39	0.59	0.24	0.09	0.32	—	2,144	2,144	0.07	0.09	1.59	2,172
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.58	52.8	34.9	0.19	1.62	9.11	10.7	1.52	3.99	5.25	—	26,697	26,697	0.65	3.18	1.12	27,664
2026	3.42	49.6	34.0	0.19	1.50	9.11	10.6	1.41	2.95	4.37	—	26,346	26,346	0.64	3.18	1.06	27,312
2027	1.63	11.4	21.0	0.03	0.36	2.35	2.71	0.33	0.57	0.90	—	5,600	5,600	0.15	0.29	0.25	5,690
2028	1.57	10.9	20.4	0.03	0.32	2.35	2.68	0.30	0.57	0.86	—	5,535	5,535	0.14	0.29	0.23	5,625
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.18	14.3	11.0	0.04	0.50	2.47	2.97	0.46	0.95	1.41	—	5,458	5,458	0.15	0.55	3.26	5,630
2026	1.44	13.6	17.3	0.05	0.43	2.55	2.98	0.40	0.72	1.12	—	6,809	6,809	0.18	0.60	5.04	6,997
2027	1.16	8.21	15.2	0.02	0.25	1.66	1.91	0.24	0.40	0.64	—	4,016	4,016	0.11	0.21	2.99	4,084
2028	14.3	2.51	4.41	0.01	0.08	0.33	0.42	0.08	0.08	0.16	—	976	976	0.03	0.04	0.54	990
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.22	2.61	2.01	0.01	0.09	0.45	0.54	0.08	0.17	0.26	—	904	904	0.02	0.09	0.54	932
2026	0.26	2.49	3.16	0.01	0.08	0.47	0.54	0.07	0.13	0.20	—	1,127	1,127	0.03	0.10	0.83	1,158
2027	0.21	1.50	2.78	< 0.005	0.05	0.30	0.35	0.04	0.07	0.12	—	665	665	0.02	0.03	0.50	676
2028	2.62	0.46	0.80	< 0.005	0.01	0.06	0.08	0.01	0.01	0.03	—	162	162	< 0.005	0.01	0.09	164

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.39	31.7	31.5	0.05	1.37	7.89	9.26	1.26	3.99	5.25	—	5,542	5,542	0.23	0.15	2.38	5,564
2026	1.74	11.9	24.2	0.03	0.40	2.35	2.75	0.37	0.57	0.94	—	5,826	5,826	0.22	0.30	10.7	5,931
2027	1.66	11.3	23.4	0.03	0.36	2.35	2.71	0.33	0.57	0.90	—	5,762	5,762	0.15	0.29	9.71	5,862
2028	57.0	7.12	11.0	0.02	0.26	0.39	0.59	0.24	0.09	0.32	—	2,144	2,144	0.07	0.09	1.59	2,172
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.58	52.8	34.9	0.19	1.62	9.11	10.7	1.52	3.99	5.25	—	26,697	26,697	0.65	3.18	1.12	27,664
2026	3.42	49.6	34.0	0.19	1.50	9.11	10.6	1.41	2.95	4.37	—	26,346	26,346	0.64	3.18	1.06	27,312
2027	1.63	11.4	21.0	0.03	0.36	2.35	2.71	0.33	0.57	0.90	—	5,600	5,600	0.15	0.29	0.25	5,690
2028	1.57	10.9	20.4	0.03	0.32	2.35	2.68	0.30	0.57	0.86	—	5,535	5,535	0.14	0.29	0.23	5,625
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.18	14.3	11.0	0.04	0.50	2.47	2.97	0.46	0.95	1.41	—	5,458	5,458	0.15	0.55	3.26	5,630
2026	1.44	13.6	17.3	0.05	0.43	2.55	2.98	0.40	0.72	1.12	—	6,809	6,809	0.18	0.60	5.04	6,997
2027	1.16	8.21	15.2	0.02	0.25	1.66	1.91	0.24	0.40	0.64	—	4,016	4,016	0.11	0.21	2.99	4,084
2028	14.3	2.51	4.41	0.01	0.08	0.33	0.42	0.08	0.08	0.16	—	976	976	0.03	0.04	0.54	990
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.22	2.61	2.01	0.01	0.09	0.45	0.54	0.08	0.17	0.26	—	904	904	0.02	0.09	0.54	932
2026	0.26	2.49	3.16	0.01	0.08	0.47	0.54	0.07	0.13	0.20	—	1,127	1,127	0.03	0.10	0.83	1,158
2027	0.21	1.50	2.78	< 0.005	0.05	0.30	0.35	0.04	0.07	0.12	—	665	665	0.02	0.03	0.50	676
2028	2.62	0.46	0.80	< 0.005	0.01	0.06	0.08	0.01	0.01	0.03	—	162	162	< 0.005	0.01	0.09	164

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	34.7	11.7	135	0.30	0.21	27.4	27.6	0.20	6.96	7.16	239	43,466	43,706	26.0	1.50	84.8	44,887
Mit.	34.7	11.7	135	0.30	0.21	27.4	27.6	0.20	6.96	7.16	239	43,466	43,706	26.0	1.50	84.8	44,887
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	31.8	12.3	94.5	0.28	0.20	27.4	27.6	0.19	6.96	7.15	239	41,565	41,804	26.0	1.54	7.90	42,922
Mit.	31.8	12.3	94.5	0.28	0.20	27.4	27.6	0.19	6.96	7.15	239	41,565	41,804	26.0	1.54	7.90	42,922
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	33.1	12.7	114	0.28	0.21	27.0	27.2	0.19	6.86	7.06	239	41,874	42,113	26.0	1.55	39.9	43,267
Mit.	33.1	12.7	114	0.28	0.21	27.0	27.2	0.19	6.86	7.06	239	41,874	42,113	26.0	1.55	39.9	43,267
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.04	2.31	20.8	0.05	0.04	4.93	4.97	0.04	1.25	1.29	39.6	6,933	6,972	4.31	0.26	6.61	7,163
Mit.	6.04	2.31	20.8	0.05	0.04	4.93	4.97	0.04	1.25	1.29	39.6	6,933	6,972	4.31	0.26	6.61	7,163
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13.8	11.5	112	0.30	0.20	27.4	27.6	0.19	6.96	7.15	—	30,430	30,430	1.17	1.32	78.9	30,932
Area	20.9	0.22	23.8	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.6	63.6	< 0.005	< 0.005	—	63.8
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	12,068	12,068	0.75	0.09	—	12,114
Water	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Waste	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	34.7	11.7	135	0.30	0.21	27.4	27.6	0.20	6.96	7.16	239	43,466	43,706	26.0	1.50	84.8	44,887
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.9	12.3	94.5	0.28	0.20	27.4	27.6	0.19	6.96	7.15	—	28,592	28,592	1.21	1.36	2.05	29,031
Area	18.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	12,068	12,068	0.75	0.09	—	12,114
Water	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Waste	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	31.8	12.3	94.5	0.28	0.20	27.4	27.6	0.19	6.96	7.15	239	41,565	41,804	26.0	1.54	7.90	42,922
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.8	12.5	97.8	0.28	0.20	27.0	27.2	0.19	6.86	7.05	—	28,857	28,857	1.21	1.38	34.1	29,332
Area	20.3	0.15	16.3	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.5	43.5	< 0.005	< 0.005	—	43.7
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	12,068	12,068	0.75	0.09	—	12,114
Water	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Waste	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	33.1	12.7	114	0.28	0.21	27.0	27.2	0.19	6.86	7.06	239	41,874	42,113	26.0	1.55	39.9	43,267
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	2.34	2.29	17.8	0.05	0.04	4.93	4.97	0.03	1.25	1.29	—	4,778	4,778	0.20	0.23	5.64	4,856
Area	3.70	0.03	2.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.21	7.21	< 0.005	< 0.005	—	7.23
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,998	1,998	0.12	0.02	—	2,006
Water	—	—	—	—	—	—	—	—	—	—	5.41	150	155	0.56	0.01	—	174
Waste	—	—	—	—	—	—	—	—	—	—	34.2	0.00	34.2	3.42	0.00	—	120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	6.04	2.31	20.8	0.05	0.04	4.93	4.97	0.04	1.25	1.29	39.6	6,933	6,972	4.31	0.26	6.61	7,163

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13.8	11.5	112	0.30	0.20	27.4	27.6	0.19	6.96	7.15	—	30,430	30,430	1.17	1.32	78.9	30,932
Area	20.9	0.22	23.8	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.6	63.6	< 0.005	< 0.005	—	63.8
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	12,068	12,068	0.75	0.09	—	12,114
Water	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Waste	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	34.7	11.7	135	0.30	0.21	27.4	27.6	0.20	6.96	7.16	239	43,466	43,706	26.0	1.50	84.8	44,887
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.9	12.3	94.5	0.28	0.20	27.4	27.6	0.19	6.96	7.15	—	28,592	28,592	1.21	1.36	2.05	29,031
Area	18.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	12,068	12,068	0.75	0.09	—	12,114
Water	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Waste	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	31.8	12.3	94.5	0.28	0.20	27.4	27.6	0.19	6.96	7.15	239	41,565	41,804	26.0	1.54	7.90	42,922
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.8	12.5	97.8	0.28	0.20	27.0	27.2	0.19	6.86	7.05	—	28,857	28,857	1.21	1.38	34.1	29,332
Area	20.3	0.15	16.3	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.5	43.5	< 0.005	< 0.005	—	43.7
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	12,068	12,068	0.75	0.09	—	12,114
Water	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Waste	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	33.1	12.7	114	0.28	0.21	27.0	27.2	0.19	6.86	7.06	239	41,874	42,113	26.0	1.55	39.9	43,267
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.34	2.29	17.8	0.05	0.04	4.93	4.97	0.03	1.25	1.29	—	4,778	4,778	0.20	0.23	5.64	4,856
Area	3.70	0.03	2.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.21	7.21	< 0.005	< 0.005	—	7.23
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,998	1,998	0.12	0.02	—	2,006
Water	—	—	—	—	—	—	—	—	—	—	5.41	150	155	0.56	0.01	—	174
Waste	—	—	—	—	—	—	—	—	—	—	34.2	0.00	34.2	3.42	0.00	—	120
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	6.04	2.31	20.8	0.05	0.04	4.93	4.97	0.04	1.25	1.29	39.6	6,933	6,972	4.31	0.26	6.61	7,163

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	0.60	0.60	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.82	1.64	< 0.005	0.08	—	0.08	0.07	—	0.07	—	282	282	0.01	< 0.005	—	282
Demolition	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.33	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.6	46.6	< 0.005	< 0.005	—	46.8
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	1.16	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.78	215
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.84	0.20	0.01	0.01	0.20	0.21	0.01	0.06	0.07	—	753	753	0.01	0.12	1.61	791
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.2	16.2	< 0.005	< 0.005	0.03	16.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.9	61.9	< 0.005	0.01	0.06	64.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.68	2.68	< 0.005	< 0.005	< 0.005	2.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.01	10.8

3.2. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	0.60	0.60	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.82	1.64	< 0.005	0.08	—	0.08	0.07	—	0.07	—	282	282	0.01	< 0.005	—	282
Demolition	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.33	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.6	46.6	< 0.005	< 0.005	—	46.8
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	1.16	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	211	211	0.01	0.01	0.78	215
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.84	0.20	0.01	0.01	0.20	0.21	0.01	0.06	0.07	—	753	753	0.01	0.12	1.61	791
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.2	16.2	< 0.005	< 0.005	0.03	16.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.9	61.9	< 0.005	0.01	0.06	64.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.68	2.68	< 0.005	< 0.005	< 0.005	2.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.01	10.8

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.47	3.31	0.01	0.15	—	0.15	0.14	—	0.14	—	580	580	0.02	< 0.005	—	582
Dust From Material Movement	—	—	—	—	—	0.84	0.84	—	0.43	0.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.63	0.60	< 0.005	0.03	—	0.03	0.03	—	0.03	—	96.1	96.1	< 0.005	< 0.005	—	96.4
Dust From Material Movement	—	—	—	—	—	0.15	0.15	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	1.35	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	247	247	0.01	0.01	0.91	250
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	1.02	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	227	227	0.01	0.01	0.02	230
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.2	25.2	< 0.005	< 0.005	0.04	25.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.17	4.17	< 0.005	< 0.005	0.01	4.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	3.47	3.31	0.01	0.15	—	0.15	0.14	—	0.14	—	580	580	0.02	< 0.005	—	582
Dust From Material Movement	—	—	—	—	—	0.84	0.84	—	0.43	0.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.63	0.60	< 0.005	0.03	—	0.03	0.03	—	0.03	—	96.1	96.1	< 0.005	< 0.005	—	96.4
Dust From Material Movement	—	—	—	—	—	0.15	0.15	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	1.35	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	247	247	0.01	0.01	0.91	250
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	1.02	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	227	227	0.01	0.01	0.02	230
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.2	25.2	< 0.005	< 0.005	0.04	25.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.17	4.17	< 0.005	< 0.005	0.01	4.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	3.64	3.64	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	4.99	4.76	0.01	0.21	—	0.21	0.19	—	0.19	—	1,111	1,111	0.05	0.01	—	1,114
Dust From Material Movement	—	—	—	—	—	0.61	0.61	—	0.24	0.24	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.91	0.87	< 0.005	0.04	—	0.04	0.03	—	0.03	—	184	184	0.01	< 0.005	—	184
Dust From Material Movement	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.17	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	259	259	0.01	0.01	0.03	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.30	23.0	5.46	0.13	0.38	5.21	5.59	0.38	1.46	1.84	—	19,839	19,839	0.37	3.12	1.10	20,780
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.21	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.2	44.2	< 0.005	< 0.005	0.08	44.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	3.91	0.91	0.02	0.06	0.87	0.93	0.06	0.24	0.31	—	3,338	3,338	0.06	0.53	3.05	3,499
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.31	7.31	< 0.005	< 0.005	0.01	7.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.71	0.17	< 0.005	0.01	0.16	0.17	0.01	0.04	0.06	—	553	553	0.01	0.09	0.51	579

3.6. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622

Dust From Material Movement	—	—	—	—	—	3.64	3.64	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	4.99	4.76	0.01	0.21	—	0.21	0.19	—	0.19	—	1,111	1,111	0.05	0.01	—	1,114
Dust From Material Movement	—	—	—	—	—	0.61	0.61	—	0.24	0.24	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.91	0.87	< 0.005	0.04	—	0.04	0.03	—	0.03	—	184	184	0.01	< 0.005	—	184
Dust From Material Movement	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.17	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	259	259	0.01	0.01	0.03	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.30	23.0	5.46	0.13	0.38	5.21	5.59	0.38	1.46	1.84	—	19,839	19,839	0.37	3.12	1.10	20,780

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.21	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.2	44.2	< 0.005	< 0.005	0.08	44.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	3.91	0.91	0.02	0.06	0.87	0.93	0.06	0.24	0.31	—	3,338	3,338	0.06	0.53	3.05	3,499
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.31	7.31	< 0.005	< 0.005	0.01	7.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.71	0.17	< 0.005	0.01	0.16	0.17	0.01	0.04	0.06	—	553	553	0.01	0.09	0.51	579

3.7. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	3.64	3.64	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	3.62	3.67	0.01	0.15	—	0.15	0.14	—	0.14	—	878	878	0.04	0.01	—	881

Dust From Material Movement	—	—	—	—	—	0.48	0.48	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.66	0.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	0.09	0.09	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.09	1.09	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	254	254	< 0.005	0.01	0.02	257
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.29	22.3	5.35	0.13	0.38	5.21	5.59	0.38	1.46	1.84	—	19,494	19,494	0.37	3.12	1.04	20,434
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.2	34.2	< 0.005	< 0.005	0.05	34.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.99	0.70	0.02	0.05	0.69	0.74	0.05	0.19	0.24	—	2,593	2,593	0.05	0.42	2.29	2,721
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.66	5.66	< 0.005	< 0.005	0.01	5.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.55	0.13	< 0.005	0.01	0.13	0.13	0.01	0.04	0.04	—	429	429	0.01	0.07	0.38	450

3.8. Grading (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	3.64	3.64	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	3.62	3.67	0.01	0.15	—	0.15	0.14	—	0.14	—	878	878	0.04	0.01	—	881
Dust From Material Movement	—	—	—	—	—	0.48	0.48	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.66	0.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	0.09	0.09	—	0.03	0.03	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.09	1.09	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	254	254	< 0.005	0.01	0.02	257
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.29	22.3	5.35	0.13	0.38	5.21	5.59	0.38	1.46	1.84	—	19,494	19,494	0.37	3.12	1.04	20,434
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.2	34.2	< 0.005	< 0.005	0.05	34.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	2.99	0.70	0.02	0.05	0.69	0.74	0.05	0.19	0.24	—	2,593	2,593	0.05	0.42	2.29	2,721
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.66	5.66	< 0.005	< 0.005	0.01	5.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.55	0.13	< 0.005	0.01	0.13	0.13	0.01	0.04	0.04	—	429	429	0.01	0.07	0.38	450

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	5.73	7.54	0.01	0.22	—	0.22	0.20	—	0.20	—	1,393	1,393	0.06	0.01	—	1,398
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.05	1.38	< 0.005	0.04	—	0.04	0.04	—	0.04	—	231	231	0.01	< 0.005	—	231
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.59	10.8	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	2,080	2,080	0.09	0.07	7.05	2,111
Vendor	0.03	1.44	0.45	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,348	1,348	0.03	0.21	3.69	1,415
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.60	0.66	8.21	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	1,913	1,913	0.03	0.07	0.18	1,936
Vendor	0.03	1.50	0.46	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,349	1,349	0.03	0.21	0.10	1,412
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.42	4.99	0.00	0.00	1.13	1.13	0.00	0.26	0.26	—	1,126	1,126	0.02	0.04	1.77	1,141
Vendor	0.02	0.88	0.26	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	784	784	0.02	0.12	0.92	821
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.08	0.91	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	186	186	< 0.005	0.01	0.29	189
Vendor	< 0.005	0.16	0.05	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	130	130	< 0.005	0.02	0.15	136
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	5.73	7.54	0.01	0.22	—	0.22	0.20	—	0.20	—	1,393	1,393	0.06	0.01	—	1,398

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.05	1.38	< 0.005	0.04	—	0.04	0.04	—	0.04	—	231	231	0.01	< 0.005	—	231
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.59	10.8	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	2,080	2,080	0.09	0.07	7.05	2,111
Vendor	0.03	1.44	0.45	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,348	1,348	0.03	0.21	3.69	1,415
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.60	0.66	8.21	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	1,913	1,913	0.03	0.07	0.18	1,936
Vendor	0.03	1.50	0.46	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,349	1,349	0.03	0.21	0.10	1,412
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.42	4.99	0.00	0.00	1.13	1.13	0.00	0.26	0.26	—	1,126	1,126	0.02	0.04	1.77	1,141
Vendor	0.02	0.88	0.26	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	784	784	0.02	0.12	0.92	821
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.08	0.91	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	186	186	< 0.005	0.01	0.29	189
Vendor	< 0.005	0.16	0.05	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	130	130	< 0.005	0.02	0.15	136
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.61	0.52	10.0	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	2,042	2,042	0.02	0.07	6.34	2,070
Vendor	0.03	1.38	0.43	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,324	1,324	0.03	0.20	3.37	1,387

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.57	0.59	7.57	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	1,878	1,878	0.03	0.07	0.16	1,900
Vendor	0.03	1.45	0.45	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,325	1,325	0.03	0.20	0.09	1,385
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.47	5.68	0.00	0.00	1.39	1.39	0.00	0.33	0.33	—	1,358	1,358	0.02	0.05	1.95	1,376
Vendor	0.02	1.03	0.32	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	946	946	0.02	0.14	1.04	990
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	1.04	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	225	225	< 0.005	0.01	0.32	228
Vendor	< 0.005	0.19	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	157	157	< 0.005	0.02	0.17	164
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.61	0.52	10.0	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	2,042	2,042	0.02	0.07	6.34	2,070
Vendor	0.03	1.38	0.43	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,324	1,324	0.03	0.20	3.37	1,387
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.57	0.59	7.57	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	1,878	1,878	0.03	0.07	0.16	1,900
Vendor	0.03	1.45	0.45	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,325	1,325	0.03	0.20	0.09	1,385
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.47	5.68	0.00	0.00	1.39	1.39	0.00	0.33	0.33	—	1,358	1,358	0.02	0.05	1.95	1,376
Vendor	0.02	1.03	0.32	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	946	946	0.02	0.14	1.04	990
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	1.04	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	225	225	< 0.005	0.01	0.32	228
Vendor	< 0.005	0.19	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	157	157	< 0.005	0.02	0.17	164
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.66	0.96	< 0.005	0.02	—	0.02	0.02	—	0.02	—	178	178	0.01	< 0.005	—	179
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.5	29.5	< 0.005	< 0.005	—	29.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.59	7.06	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	1,843	1,843	0.03	0.07	0.15	1,865
Vendor	0.03	1.38	0.44	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,295	1,295	0.02	0.20	0.08	1,354
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.55	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	139	139	< 0.005	0.01	0.18	141
Vendor	< 0.005	0.10	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	96.2	96.2	< 0.005	0.01	0.10	101
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	23.0	23.0	< 0.005	< 0.005	0.03	23.3
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	15.9	15.9	< 0.005	< 0.005	0.02	16.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Building Construction (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.66	0.96	< 0.005	0.02	—	0.02	0.02	—	0.02	—	178	178	0.01	< 0.005	—	179
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.5	29.5	< 0.005	< 0.005	—	29.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.59	7.06	0.00	0.00	1.97	1.97	0.00	0.46	0.46	—	1,843	1,843	0.03	0.07	0.15	1,865
Vendor	0.03	1.38	0.44	0.01	0.02	0.38	0.40	0.02	0.11	0.13	—	1,295	1,295	0.02	0.20	0.08	1,354
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.55	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	139	139	< 0.005	0.01	0.18	141
Vendor	< 0.005	0.10	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	96.2	96.2	< 0.005	0.01	0.10	101
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	23.0	23.0	< 0.005	< 0.005	0.03	23.3
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	15.9	15.9	< 0.005	< 0.005	0.02	16.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Paving (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.36	2.04	< 0.005	0.05	—	0.05	0.05	—	0.05	—	310	310	0.01	< 0.005	—	312
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.25	0.37	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.4	51.4	< 0.005	< 0.005	—	51.6
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.93	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	199	199	< 0.005	0.01	0.57	202
Vendor	0.01	0.44	0.14	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	433	433	0.01	0.07	1.03	454
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.06	0.70	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	183	183	< 0.005	0.01	0.01	185
Vendor	0.01	0.46	0.15	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	434	434	0.01	0.07	0.03	454
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.1	38.1	< 0.005	< 0.005	0.05	38.6
Vendor	< 0.005	0.10	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	89.1	89.1	< 0.005	0.01	0.09	93.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.31	6.31	< 0.005	< 0.005	0.01	6.40
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.02	15.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Paving (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.36	2.04	< 0.005	0.05	—	0.05	0.05	—	0.05	—	310	310	0.01	< 0.005	—	312
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.25	0.37	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.4	51.4	< 0.005	< 0.005	—	51.6
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.93	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	199	199	< 0.005	0.01	0.57	202
Vendor	0.01	0.44	0.14	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	433	433	0.01	0.07	1.03	454
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.06	0.70	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	183	183	< 0.005	0.01	0.01	185
Vendor	0.01	0.46	0.15	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	434	434	0.01	0.07	0.03	454
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.1	38.1	< 0.005	< 0.005	0.05	38.6
Vendor	< 0.005	0.10	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	89.1	89.1	< 0.005	0.01	0.09	93.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.31	6.31	< 0.005	< 0.005	0.01	6.40
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.02	15.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.20	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.9	32.9	< 0.005	< 0.005	—	33.0
Architectural Coatings	14.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.45	5.45	< 0.005	< 0.005	—	5.47
Architectural Coatings	2.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	1.87	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	401	401	< 0.005	0.01	1.14	406
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.37	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	92.0	92.0	< 0.005	< 0.005	0.12	93.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.2	15.2	< 0.005	< 0.005	0.02	15.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	56.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.20	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.9	32.9	< 0.005	< 0.005	—	33.0
Architectural Coatings	14.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.45	5.45	< 0.005	< 0.005	—	5.47
Architectural Coatings	2.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	1.87	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	401	401	< 0.005	0.01	1.14	406
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.37	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	92.0	92.0	< 0.005	< 0.005	0.12	93.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.2	15.2	< 0.005	< 0.005	0.02	15.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Total	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Total	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,998	1,998	0.12	0.02	—	2,006
Total	—	—	—	—	—	—	—	—	—	—	—	1,998	1,998	0.12	0.02	—	2,006

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Total	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Total	—	—	—	—	—	—	—	—	—	—	—	12,068	12,068	0.75	0.09	—	12,114
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,998	1,998	0.12	0.02	—	2,006
Total	—	—	—	—	—	—	—	—	—	—	—	1,998	1,998	0.12	0.02	—	2,006

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	17.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.06	0.22	23.8	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.6	63.6	< 0.005	< 0.005	—	63.8
Total	20.9	0.22	23.8	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.6	63.6	< 0.005	< 0.005	—	63.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	17.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	18.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.26	0.03	2.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.21	7.21	< 0.005	< 0.005	—	7.23
Total	3.70	0.03	2.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.21	7.21	< 0.005	< 0.005	—	7.23

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	17.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.06	0.22	23.8	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.6	63.6	< 0.005	< 0.005	—	63.8
Total	20.9	0.22	23.8	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.6	63.6	< 0.005	< 0.005	—	63.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	17.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	18.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.26	0.03	2.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.21	7.21	< 0.005	< 0.005	—	7.23
Total	3.70	0.03	2.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.21	7.21	< 0.005	< 0.005	—	7.23

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Total	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Total	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	5.41	150	155	0.56	0.01	—	174
Total	—	—	—	—	—	—	—	—	—	—	5.41	150	155	0.56	0.01	—	174

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Total	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Total	—	—	—	—	—	—	—	—	—	—	32.7	905	937	3.40	0.09	—	1,048
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	5.41	150	155	0.56	0.01	—	174
Total	—	—	—	—	—	—	—	—	—	—	5.41	150	155	0.56	0.01	—	174

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Total	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Total	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	34.2	0.00	34.2	3.42	0.00	—	120
Total	—	—	—	—	—	—	—	—	—	—	34.2	0.00	34.2	3.42	0.00	—	120

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Total	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Total	—	—	—	—	—	—	—	—	—	—	207	0.00	207	20.7	0.00	—	723
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	34.2	0.00	34.2	3.42	0.00	—	120
Total	—	—	—	—	—	—	—	—	—	—	34.2	0.00	34.2	3.42	0.00	—	120

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.85	5.85
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.97	0.97

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	7/1/2025	8/11/2025	5.00	30.0	—
Site Preparation	Site Preparation	8/12/2025	10/6/2025	5.00	40.0	—
Grading	Grading	10/7/2025	3/9/2026	5.00	110	—
Building Construction	Building Construction	3/10/2026	2/7/2028	5.00	500	—
Paving	Paving	2/8/2028	5/22/2028	5.00	75.0	—
Architectural Coating	Architectural Coating	5/23/2028	9/25/2028	5.00	90.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40

Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT

Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	288	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	151	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	44.8	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	15.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	30.2	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	10.9	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	288	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	151	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	44.8	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	15.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	30.2	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT

Demolition	Hauling	10.9	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,654,526	551,509	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	28,500	—
Site Preparation	—	—	60.0	0.00	—
Grading	253,203	—	330	0.00	—
Paving	0.00	0.00	0.00	0.00	4.62

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	4.62	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005
2028	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	3,952	3,952	3,952	1,442,480	38,745	38,745	38,744	14,141,873

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	3,952	3,952	3,952	1,442,480	38,745	38,745	38,744	14,141,873

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1654526.25	551,509	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	8,280,326	532	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	8,280,326	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	17,042,312	95,107,059

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	17,042,312	95,107,059

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	384	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	384	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.1	annual days of extreme heat
Extreme Precipitation	2.95	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	17.0	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	95.3
AQ-PM	42.5
AQ-DPM	42.8
Drinking Water	10.2
Lead Risk Housing	12.3
Pesticides	53.6
Toxic Releases	24.2
Traffic	58.3
Effect Indicators	—
CleanUp Sites	37.6
Groundwater	35.0
Haz Waste Facilities/Generators	95.9
Impaired Water Bodies	0.00
Solid Waste	35.7
Sensitive Population	—
Asthma	62.8
Cardio-vascular	81.6
Low Birth Weights	61.4
Socioeconomic Factor Indicators	—
Education	41.2
Housing	51.4
Linguistic	20.6
Poverty	65.5
Unemployment	90.3

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	37.40536379
Employed	25.70255357
Median HI	42.78198383
Education	—
Bachelor's or higher	19.73566021
High school enrollment	12.22892339
Preschool enrollment	5.774412935
Transportation	—
Auto Access	51.48209932
Active commuting	4.735018606
Social	—
2-parent households	61.60657
Voting	35.86552034
Neighborhood	—
Alcohol availability	79.19928141
Park access	2.194276915
Retail density	42.78198383
Supermarket access	36.44296163
Tree canopy	2.155780829
Housing	—
Homeownership	85.42281535
Housing habitability	77.15898884
Low-inc homeowner severe housing cost burden	45.13024509
Low-inc renter severe housing cost burden	75.02887206
Uncrowded housing	62.10701912
Health Outcomes	—

Insured adults	29.96278712
Arthritis	4.7
Asthma ER Admissions	45.0
High Blood Pressure	8.9
Cancer (excluding skin)	8.6
Asthma	34.7
Coronary Heart Disease	4.7
Chronic Obstructive Pulmonary Disease	12.3
Diagnosed Diabetes	38.1
Life Expectancy at Birth	33.0
Cognitively Disabled	13.1
Physically Disabled	15.4
Heart Attack ER Admissions	10.8
Mental Health Not Good	46.4
Chronic Kidney Disease	14.8
Obesity	33.9
Pedestrian Injuries	60.1
Physical Health Not Good	36.4
Stroke	13.0
Health Risk Behaviors	—
Binge Drinking	58.7
Current Smoker	40.0
No Leisure Time for Physical Activity	38.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	67.0
Elderly	15.7

English Speaking	75.4
Foreign-born	36.4
Outdoor Workers	33.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	68.9
Traffic Density	34.8
Traffic Access	23.0
Other Indices	—
Hardship	65.4
Other Decision Support	—
2016 Voting	51.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	63.0
Healthy Places Index Score for Project Location (b)	24.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per site plan
Construction: Construction Phases	Adjusted for 2028 opening year
Operations: Hearths	No woodstoves
Operations: Energy Use	Project will be all electric

Appendix B:

AERMOD Model Printouts

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 2/13/2025
** File: C:\Lakes\AERMOD View\Projects\Chacon Farms\Chacon Farms.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\Projects\Chacon Farms\Chacon Farms.isc
   MODELOPT DFAULT CONC
   AVERTIME 1 PERIOD
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "Chacon Farms.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION PAREA1       AREAPOLY   498318.161  3737749.179      459.660
** DESCRSRC Construction PM10
** Source Parameters **
```

```
   SRCPARAM PAREA1       1.4608E-10     1.000         8
   AREAVERT PAREA1       498318.161 3737749.179 498555.988 3737754.979
   AREAVERT PAREA1       498553.087 3736983.493 498173.145 3736989.293
   AREAVERT PAREA1       498170.244 3737633.166 498170.244 3737647.667
   AREAVERT PAREA1       498303.659 3737641.867 498309.460 3737757.880
   SRCGROUP ALL
SO FINISHED
**
**********************************
** AERMOD Receptor Pathway
**********************************
**
**
RE STARTING
   INCLUDED "Chacon Farms.rou"
RE FINISHED
**
**********************************
** AERMOD Meteorology Pathway
**********************************
**
**
ME STARTING
   SURFFILE "..\..\Met Data\PerrisADJU (2)\PERI_V9_ADJU\PERI_v9.SFC"
   PROFFILE "..\..\Met Data\PerrisADJU (2)\PERI_V9_ADJU\PERI_v9.PFL"
   SURFDATA 3171 2010
   UAIRDATA 3190 2010
   SITEDATA 99999 2010
   PROFBASE 0.0 METERS
ME FINISHED
**
**********************************
** AERMOD Output Pathway
**********************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "Chacon Farms.AD\01H1GALL.PLT" 31
   PLOTFILE PERIOD ALL "Chacon Farms.AD\PE00GALL.PLT" 32
   SUMMFILE "Chacon Farms.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186      67       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
0.50
 ME W187      67       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************
```

```
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\Projects\Chacon Farms\Chacon
Farms.isc          ***        02/13/25
 *** AERMET - VERSION  16216 ***   ***
***        17:10:13

PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                                ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses RURAL Dispersion Only.

 **Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.

 **Other Options Specified:
        ADJ_U*   - Use ADJ_U* option for SBL in AERMET
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  DPM
```

```
 **Model Calculates  1 Short Term Average(s) of:   1-HR
    and Calculates PERIOD Averages

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      10 Receptor(s)

               with:       0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                and:       0 VOLUME source(s)
                and:       1 AREA type source(s)
                and:       0 LINE source(s)
                and:       0 RLINE/RLINEXT source(s)
                and:       0 OPENPIT source(s)
                and:       0 BUOYANT LINE source(s) with a total of     0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  16216

 **Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing
Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =     0.00 ;  Decay Coef. =
0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                ;  Emission Rate
Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3
```

```
**Approximate Storage Requirements of Model =      3.5 MB of RAM.

**Input Runstream File:          aermod.inp
**Output Print File:             aermod.out

**Detailed Error/Message File:   Chacon Farms.err
**File for Summary of Results:   Chacon Farms.sum
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
PAREA1	0	0.14608E-09	498318.2	3737749.2	459.7	1.00	8	0.00	NO	

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	PAREA1 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(498241.3, 3737789.9, 459.8, 753.4, 0.0); (498305.4, 3737792.4, 460.2, 753.4, 0.0);
(498384.3, 3737789.9, 459.9, 753.4, 0.0); (498468.1, 3737787.5, 460.3, 753.4, 0.0);
(498532.2, 3737797.3, 460.6, 753.4, 0.0); (498647.2, 3737786.8, 460.4, 753.4, 0.0);
(498636.1, 3737724.8, 460.2, 753.4, 0.0); (498649.4, 3737487.1, 460.7, 753.4, 0.0);
(498655.0, 3737355.9, 460.9, 753.4, 0.0); (498706.1, 3736990.7, 461.2, 753.4, 0.0);

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

1 1 1

```
1.54,   3.09,   5.14,   8.23,  10.80,
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\..\Met Data\PerrisADJU (2)\PERI_V9_ADJU\PERI_v9.SFC
Met Version: 16216
Profile file: ..\..\Met Data\PerrisADJU (2)\PERI_V9_ADJU\PERI_v9.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 3171 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2010 Year: 2010

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
10	01	01	1	01	-7.9	0.125	-9.000	-9.000	-999.	106.	21.2	0.19	0.61	1.00	1.30	335.	9.1	282.5	5.5
10	01	01	1	02	-3.9	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90	142.	9.1	280.9	5.5
10	01	01	1	03	-3.9	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90	324.	9.1	280.4	5.5
10	01	01	1	04	-1.3	0.064	-9.000	-9.000	-999.	39.	18.3	0.19	0.61	1.00	0.40	294.	9.1	278.8	5.5
10	01	01	1	05	-3.9	0.088	-9.000	-9.000	-999.	62.	15.0	0.19	0.61	1.00	0.90	205.	9.1	278.1	5.5
10	01	01	1	06	-1.3	0.065	-9.000	-9.000	-999.	39.	18.3	0.19	0.61	1.00	0.40	3.	9.1	277.0	5.5
10	01	01	1	07	-8.0	0.125	-9.000	-9.000	-999.	106.	21.0	0.19	0.61	1.00					

```
1.30   99.    9.1  277.0    5.5
 10 01 01   1 08   -3.3  0.086 -9.000 -9.000 -999.   61.     16.8  0.19   0.61   0.54
0.90  319.    9.1  278.8    5.5
 10 01 01   1 09   20.1  0.128  0.307  0.010   49.  110.     -9.0  0.19   0.61   0.33
0.90  239.    9.1  284.2    5.5
 10 01 01   1 10   56.7  0.087  0.560  0.010  107.   62.     -1.0  0.19   0.61   0.26
0.40  188.    9.1  289.2    5.5
 10 01 01   1 11   81.5  0.323  0.867  0.008  277.  441.    -35.9  0.19   0.61   0.23
2.70  310.    9.1  290.9    5.5
 10 01 01   1 12   97.1  0.281  1.058  0.008  421.  357.    -19.7  0.19   0.61   0.22
2.20  357.    9.1  293.1    5.5
 10 01 01   1 13   92.2  0.279  1.117  0.008  523.  354.    -20.4  0.19   0.61   0.22
2.20  356.    9.1  293.8    5.5
 10 01 01   1 14   77.6  0.275  1.102  0.008  595.  347.    -23.2  0.19   0.61   0.23
2.20   50.    9.1  294.2    5.5
 10 01 01   1 15   54.9  0.230  1.006  0.008  640.  266.    -19.2  0.19   0.61   0.27
1.80   53.    9.1  293.8    5.5
 10 01 01   1 16   12.3  0.206  0.613  0.008  648.  225.    -61.5  0.19   0.61   0.36
1.80   11.    9.1  292.5    5.5
 10 01 01   1 17   -3.6  0.087 -9.000 -9.000 -999.   71.     15.6  0.19   0.61   0.64
0.90  351.    9.1  290.4    5.5
 10 01 01   1 18   -3.8  0.087 -9.000 -9.000 -999.   62.     15.2  0.19   0.61   1.00
0.90  186.    9.1  287.5    5.5
 10 01 01   1 19   -3.8  0.087 -9.000 -9.000 -999.   62.     15.2  0.19   0.61   1.00
0.90  275.    9.1  285.9    5.5
 10 01 01   1 20   -1.2  0.064 -9.000 -9.000 -999.   39.     18.1  0.19   0.61   1.00
0.40  181.    9.1  285.4    5.5
 10 01 01   1 21   -7.8  0.125 -9.000 -9.000 -999.  106.     21.3  0.19   0.61   1.00
1.30  318.    9.1  284.9    5.5
 10 01 01   1 22   -3.8  0.088 -9.000 -9.000 -999.   62.     15.1  0.19   0.61   1.00
0.90  196.    9.1  283.1    5.5
 10 01 01   1 23   -3.8  0.088 -9.000 -9.000 -999.   62.     15.1  0.19   0.61   1.00
0.90  330.    9.1  281.4    5.5
 10 01 01   1 24   -7.9  0.125 -9.000 -9.000 -999.  106.     21.2  0.19   0.61   1.00
1.30  332.    9.1  280.9    5.5
```

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	5.5	0	-999.	-99.00	282.6	99.0	-99.00	-99.00
10	01	01	01	9.1	1	335.	1.30	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43824 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): PAREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
498241.28	3737789.92	0.00145	498305.38	3737792.39	0.00192
498384.27	3737789.92	0.00227	498468.10	3737787.46	0.00215
498532.20	3737797.32	0.00149	498647.24	3737786.82	0.00060
498636.08	3737724.80	0.00069	498649.36	3737487.09	0.00083
498654.98	3737355.91	0.00083	498706.14	3736990.70	0.00055

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
498241.28	3737789.92	0.01773	(14020408)	498305.38	3737792.39	0.02443	(14020408)
498384.27	3737789.92	0.02568	(14060606)	498468.10	3737787.46	0.02614	(14060606)
498532.20	3737797.32	0.02518	(15061906)	498647.24	3737786.82	0.01633	(15062106)
498636.08	3737724.80	0.01694	(15062106)	498649.36	3737487.09	0.01517	(15101507)
498654.98	3737355.91	0.01392	(15020508)	498706.14	3736990.70	0.01314	(11100207)

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43824 HRS) RESULTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

NETWORK GROUP ID		AVERAGE CONC		RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID
ALL	1ST HIGHEST VALUE IS	0.00227 AT	(498384.27, 3737789.92, 459.95, 753.40, 0.00) DC	
	2ND HIGHEST VALUE IS	0.00215 AT	(498468.10, 3737787.46, 460.34, 753.40, 0.00) DC	
	3RD HIGHEST VALUE IS	0.00192 AT	(498305.38, 3737792.39, 460.16, 753.40, 0.00) DC	
	4TH HIGHEST VALUE IS	0.00149 AT	(498532.20, 3737797.32, 460.64, 753.40, 0.00) DC	
	5TH HIGHEST VALUE IS	0.00145 AT	(498241.28, 3737789.92, 459.81, 753.40, 0.00) DC	
	6TH HIGHEST VALUE IS	0.00083 AT	(498654.98, 3737355.91, 460.85, 753.40, 0.00) DC	
	7TH HIGHEST VALUE IS	0.00083 AT	(498649.36, 3737487.09, 460.72, 753.40, 0.00) DC	
	8TH HIGHEST VALUE IS	0.00069 AT	(498636.08, 3737724.80, 460.18,	

```
753.40,    0.00)  DC
          9TH HIGHEST VALUE IS       0.00060 AT (  498647.24,  3737786.82,   460.37,
753.40,    0.00)  DC
         10TH HIGHEST VALUE IS       0.00055 AT (  498706.14,  3736990.70,   461.17,
753.40,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF DPM IN MICROGRAMS/M**3
**

NETWORK GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.02614	ON 14060606: AT (498468.10, 3737787.46, 460.34, 753.40, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

```
 *** AERMOD - VERSION 21112  ***   *** C:\Lakes\AERMOD View\Projects\Chacon Farms\Chacon
Farms.isc          ***        02/13/25
 *** AERMET - VERSION  16216 ***   ***
***        17:10:13

PAGE  11
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            4 Warning Message(s)
 A Total of         2028 Informational Message(s)

 A Total of        43824 Hours Were Processed

 A Total of          978 Calm Hours Identified

 A Total of         1050 Missing Hours Identified (  2.40 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186      67       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
0.50
 ME W187      67       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
 MX W450   17521       CHKDAT: Record Out of Sequence in Meteorological File at:
14010101
 MX W450   17521       CHKDAT: Record Out of Sequence in Meteorological File at:    2 year
gap

    ***********************************
```

```
*** AERMOD Finishes Successfully ***
************************************
```

Appendix B-1

Habitat Assessment for Chacon Farms Property

Psomas

Revised March 5, 2024

Habitat Assessment for
Chacon Farms Property
Assessor Parcel Numbers: 432-260-009, 432-260-026, and 432-260-027
(75.6-Acre Project, Total Area Surveyed: 75.6 Acres)
Cawston Avenue in the City of San Jacinto,
Lakeview U.S. Geological Survey's 7.5-Minute Series Map
Township 4S, Range 1W, Section 31 and 32

Prepared For:
Ramona Dairy, LLC
2452 Ramona Expressway
San Jacinto, California 92582

Prepared By:
Psomas
5 Hutton Centre Drive, Suite 300
Santa Ana, California 92707
Amber Heredia
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Principal Investigator:
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255 South Lake Avenue, Suite 1000
Pasadena, California 91101
Trevor Bristle
Trevor.bristle@psomas.com

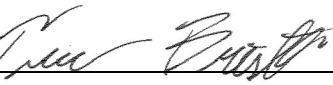
Surveys Conducted By:
Trevor Bristle
Allison Rudalevige

Surveys Conducted On:
September 19, 2022

Report Date:
November 28, 2022
Revised March 5, 2024

CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: 3/5/2024 SIGNED: 

DATE: 3/5/2024 SIGNED: 

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SECTION 1.0

COUNTY OF RIVERSIDE ATTACHMENTS

BIOLOGICAL REPORT SUMMARY SHEET

(Submit two copies to the County)

Applicant Name: Ramona Dairy, LLC
Assessor's Parcel Number (APN): 432-260-009, 432-260-026, and 432-260-027
APN cont. : _____
Site Location: Section: 31, 32 **Township:** 4S **Range:** 1W
Site Address: Cawstton Avenue and 7th Street
Related Case Number(s): _____ **PDB Number:** _____

CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Yes, No or N/A regarding species findings on the referenced site)		
	Arroyo Southwestern Toad	Yes	No	N/A
✓	Blueline Stream(s)	Yes	(No)	N/A
	Coachella Valley Fringed-Toed Lizard	Yes	No	N/A
	Coastal California Gnatcatcher	Yes	No	N/A
✓	Coastal Sage Scrub	Yes	(No)	N/A
	Delhi Sands Flower-Loving Fly	Yes	No	N/A
	Desert Pupfish	Yes	No	N/A
	Desert Slender Salamander	Yes	No	N/A
	Desert Tortoise	Yes	No	N/A
	Flat-Tailed Horned Lizard	Yes	No	N/A
	Least Bell's Vireo	Yes	No	N/A
✓	Oak Woodlands	Yes	(No)	N/A
	Quino Checkerspot Butterfly	Yes	No	N/A
✓	Riverside Fairy Shrimp	Yes	(No)	N/A
	Santa Ana River Woolystar	Yes	No	N/A
	San Bernardino Kangaroo Rat	Yes	No	N/A
	Slender Horned Spineflower	Yes	No	N/A
	Stephen's Kangaroo Rat	Yes	No	N/A
✓	Vernal Pools	Yes	(No)	N/A
✓	Wetlands	Yes	(No)	N/A

CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Yes, No or N/A regarding species findings on the referenced site)		
✓	Other: Riparian/Riverine	Yes	No	N/A
✓	Other: Jurisdictional Waters	Yes	No	N/A
✓	Other: Riverside fairy shrimp/vernal pool fairy shrimp	Yes	No	N/A
✓	Other: Burrowing Owl (see note)	Yes	No	N/A
✓	Other: Narrow Endemic Plants (see note)	Yes	No	N/A
	Other:	Yes	No	N/A
	Other:	Yes	No	N/A
	Other:	Yes	No	N/A
	Other:	Yes	No	N/A
	Other:	Yes	No	N/A
	Other:	Yes	No	N/A
	Other:	Yes	No	N/A

Species of concern shall be any unique, rare endangered, or threatened species. It shall include species used to delineate wetlands and riparian corridors. It shall also include any hists, perching, or food plants used by any animals listed as rare, endangered, threatened or candidate species by either State, or Federal regulations, or for Riverside County as listed by the California Department of Fish and Game Natural Diversity Data Base (NDDB).

I declare under penalty of perjury that the information provided on this summary sheet is in accordance with the information provided in the biological report.

Psomas 3/5/2024

Signature and Company Name Report Date

10(a) Permit Number (if applicable) Permit Expiration Date

County Use Only

Received by: _____ **Date:** _____

PD-B#_____

The Habitat Assessment found that there was suitable habitat for fairy shrimp, burrowing owl, and Narrow Endemic plant species. Focused surveys were conducted for these species following MSHCP guidelines; none of these species were observed on the Project site. Pre-construction survey for burrowing owl will be needed.

LEVEL OF SIGNIFICANCE CHECKLIST
For Biological Resources
(Submit Two Copies)

Case Number: _____ Lot/Parcel No. 432-260-009, 432-260-026, and 432-260-027 **EA Number_____**

Wildlife & Vegetation

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

(Check the level of impact the applies to the following questions)

a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?
☐ ☑ ☐ ☐

b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?
☐ ☐ ☐ ☑

c) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U. S. Wildlife Service?
☐ ☑ ☐ ☐

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?
☐ ☑ ☐ ☐

e) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?
☐ ☐ ☐ ☑

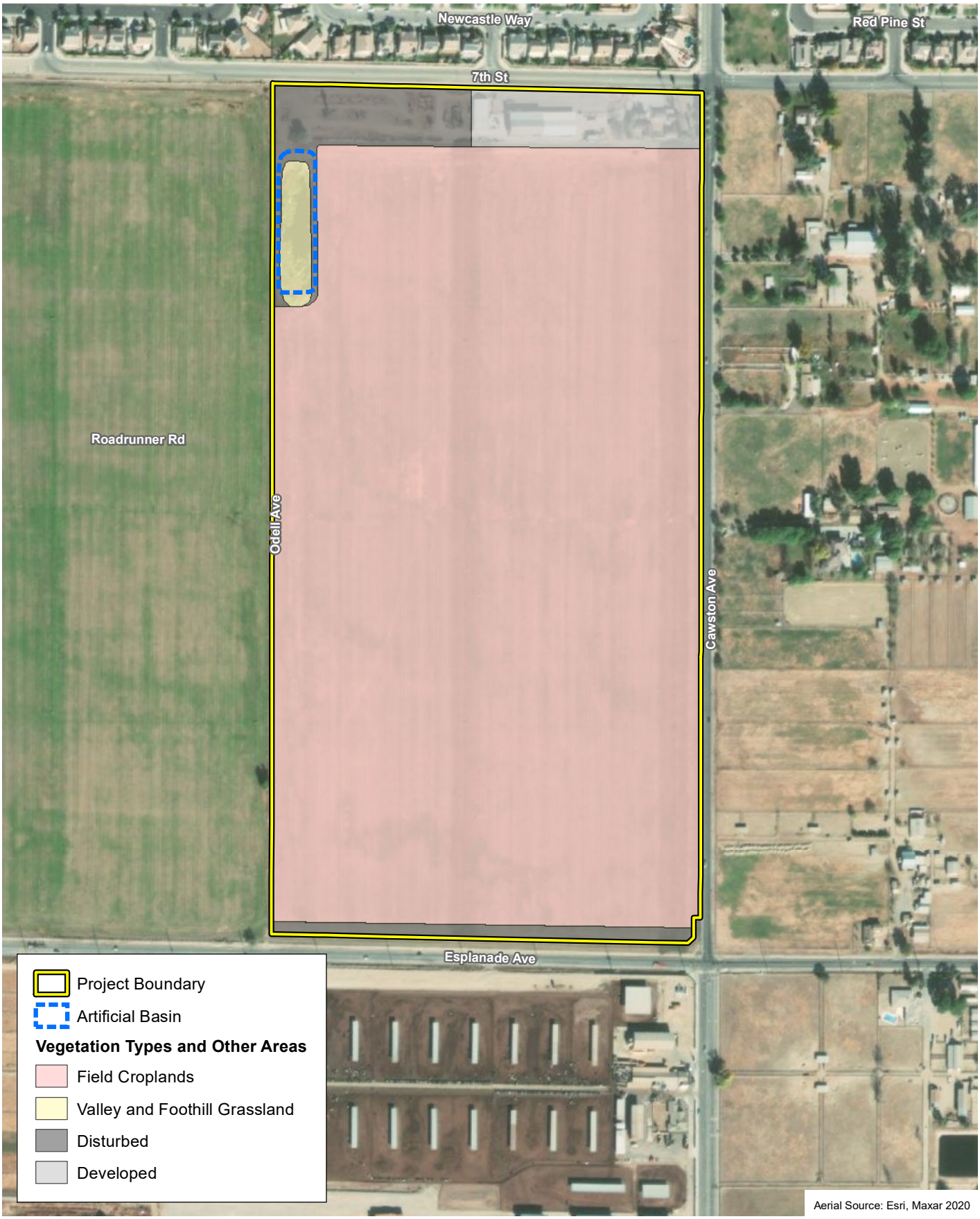
f) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
☐ ☐ ☐ ☑

g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
☐ ☐ ☐ ☑

Source: CGP Fig. VI.36-VI.40

Findings of Fact:
An artificial basin is present that provides potentially suitable habitat for fairy shrimp; no Riverside fairy shrimp or vernal pool fairy shrimp were observed during focused surveys. Because the basin is artificial, it would not be considered a vernal pool. No Riparian/Riverine resources are present. No jurisdictional waters under the regulatory authority of the USACE, the RWQCB, and/or the CDFW are present. Focused surveys were conducted for Narrow Endemic plant species; no special status plant species were observed. The project site has suitable habitat for burrowing owl; focused burrowing owl surveys were conducted and no burrowing owls were observed. A pre-construction burrowing owl survey would be required.
Mitigation:
The MSHCP mitigation fee for medium-density development will be required. A pre-construction survey for burrowing owl will be required. A pre-construction survey for nesting birds/raptors will be required if construction is initiated February 1 to June 30.

Monitoring Recommended:
MSHCP Construction Minimization Measures (Section 7.5.3) will be required, including a pre-construction nesting bird survey for construction activities initiated during the breeding season, worker environmental awareness program training, and use of applicable BMPs.



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Vegetation Types and Other Areas

Attachment E-5

Chacon Farms

N
W E
S

400 200 0 400

Feet

PSOMAS

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View of project site, facing southeast from the northwest corner.



View of project site facing northeast from the southwest corner.

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Site Photographs

Attachment E-6a

Chacon Farms

PSOMAS

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View of project site facing northwest from the southeast corner.



View of basin area, facing northeast, at the northwestern corner of the site.

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Site Photographs

Attachment E-6b

Chacon Farms

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View of developed area, facing west, at the northern end of the site.



View of disturbed area, facing east, at the southern end of the site.

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Site Photographs

Attachment E-6c

Chacon Farms

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SECTION 2.0

HABITAT ASSESSMENT

This report presents the findings of a habitat assessment and focused surveys for the Chacon Farms Property (hereinafter referred to as "the project site") located in the City of San Jacinto in Riverside County, California. The proposed project is to build residential housing. It is assumed that the entire project site would be impacted.

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) requires that project sites be evaluated for a number of factors to assess how they meet MSHCP criteria. This information is used to determine whether a project site should be acquired as part of the habitat reserve or whether it should be allowed for development. The biological resources evaluation also assists the Lead Agency in determining whether additional mitigation would be required for Criteria Area or Additional Survey Needs species. According to the Western Riverside County Regional Conservation Authority (RCA) MSHCP Information Mapping Tool (RCA 2022), the project site is not located within any designated MSHCP "Criteria Area" cells. The general habitat assessment for the project site includes assessments for riparian/riverine areas and associated species; vernal pools and associated species; urban/wildlands interface issues; and areas under the jurisdictions of the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Wildlife (CDFW), and/or the Regional Water Quality Control Board (RWQCB). According to the RCA MSHCP Mapping Application (RCA 2022), a habitat assessment is required for burrowing owl (*Athene cunicularia*) and Narrow Endemic plant species; a habitat assessment is not required for Criteria Area plant species, amphibians, or mammalian species. This report has been prepared in accordance with the MSHCP guidelines.

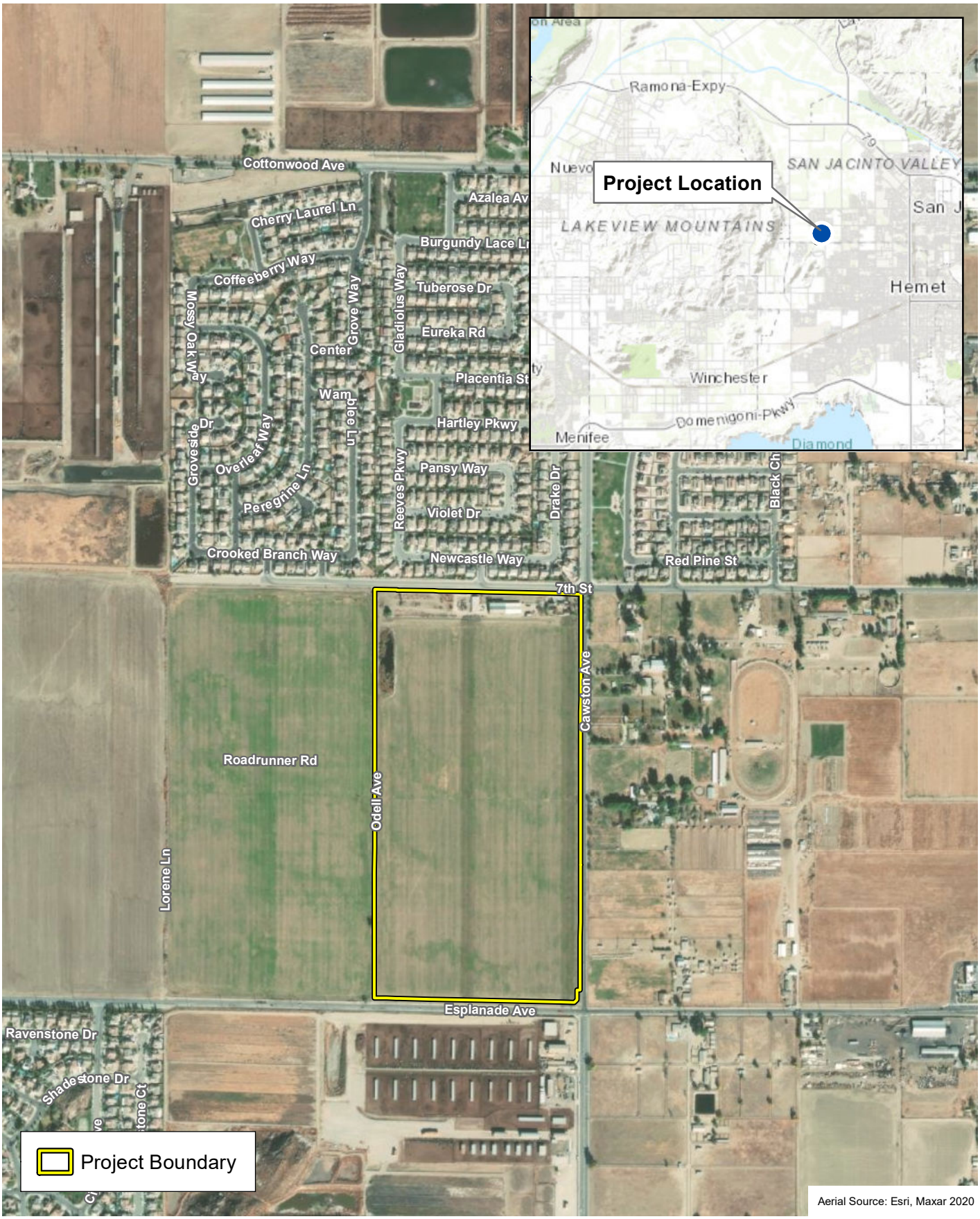
GENERAL SITE INFORMATION

The project site is located north of Esplanade Avenue, west of Cawston Avenue North, South of 7th Street, and east of an unimproved road through agricultural land (Odell Avenue) in the City of San Jacinto in Riverside County, California (Exhibit 1). The project site includes Assessor Parcel Numbers (APNs) 432-260-009, 432-260-026, and 432-260-027.

The project site is located on the U.S. Geological Survey's (USGS') Lakeview 7.5-minute quadrangle of the San Bernardino Meridian at Township 4 South, Range 1 West, Section 31 and 32 (Exhibit 2). Topography on the project site is relatively flat with an elevation of approximately 1,500 to 1,510 feet above mean sea level. Soils on the project site are mapped as Grangeville loamy fine sand, drained (0 to 5 percent slopes); Grangeville sandy loam, sandy substratum, drained, saline-alkali (0 to 5 percent slopes); Traver loamy fine sand (eroded); Traver loamy fine sand, saline-alkali (eroded); and Traver fine sandy loam, strongly saline-alkali, eroded (Exhibit 3). Surrounding land uses include dairies, agricultural, residential, and rural residential. Active construction was occurring on the property to the west at the time of the field survey.

The project site is located within the MSHCP and is within the "San Jacinto Valley Area Plan". The project site is not located within an MSHCP Criteria Cell; the nearest Criteria Cell is approximately 0.25 miles southwest of the project site.

The project site occurs approximately 1,375 feet (0.25 mile) northeast of MSHCP Criteria Cell 3291. Cell 3291 contributes to Proposed Noncontiguous Habitat Block 7. Conservation within this Cell Group focuses on grassland habitat. Proposed Noncontiguous Habitat Block 7 is comprised of a complex of vernal pools west of the City of Hemet. These parcels preserve important populations of Narrow Endemic Plant Species, including Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), thread-leaved brodiaea (*Brodiaea filifolia*), little mousetail (*Myosurus minimus* ssp. *apus*), California Orcutt grass (*Orcuttia californica*), and spreading navarretia (*Navarretia fossalis*), as well as vernal pool fairy shrimp (*Branchinecta lynchi*). Maintenance of vernal pool hydrology, water quality associated with Salt Creek and Traver-Willow-Domino soil series is important for these species. Proposed Noncontiguous Habitat Block 7 is constrained by existing urban development and agricultural use. Treatment and management of edge conditions will be



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Project Location

Exhibit 1

Chacon Farms

N W E S

1,000 500 0 1,000 Feet

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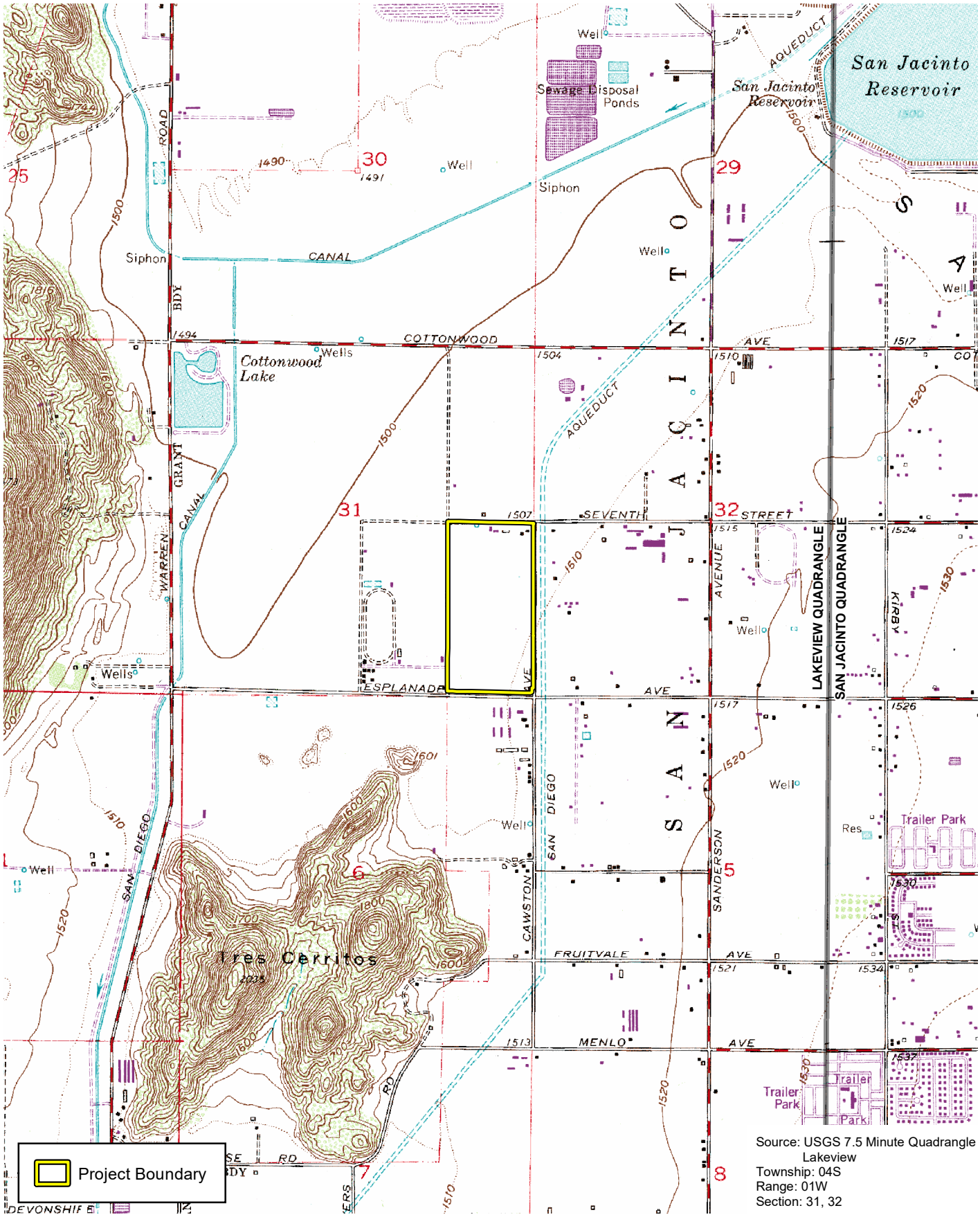

Source: USGS 7.5 Minute Quadrangle
Lakeview
Township: 04S
Range: 01W
Section: 31, 32

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Topography

Exhibit 2

Chacon Farms

N W E S

2,000 1,000 0 2,000 Feet

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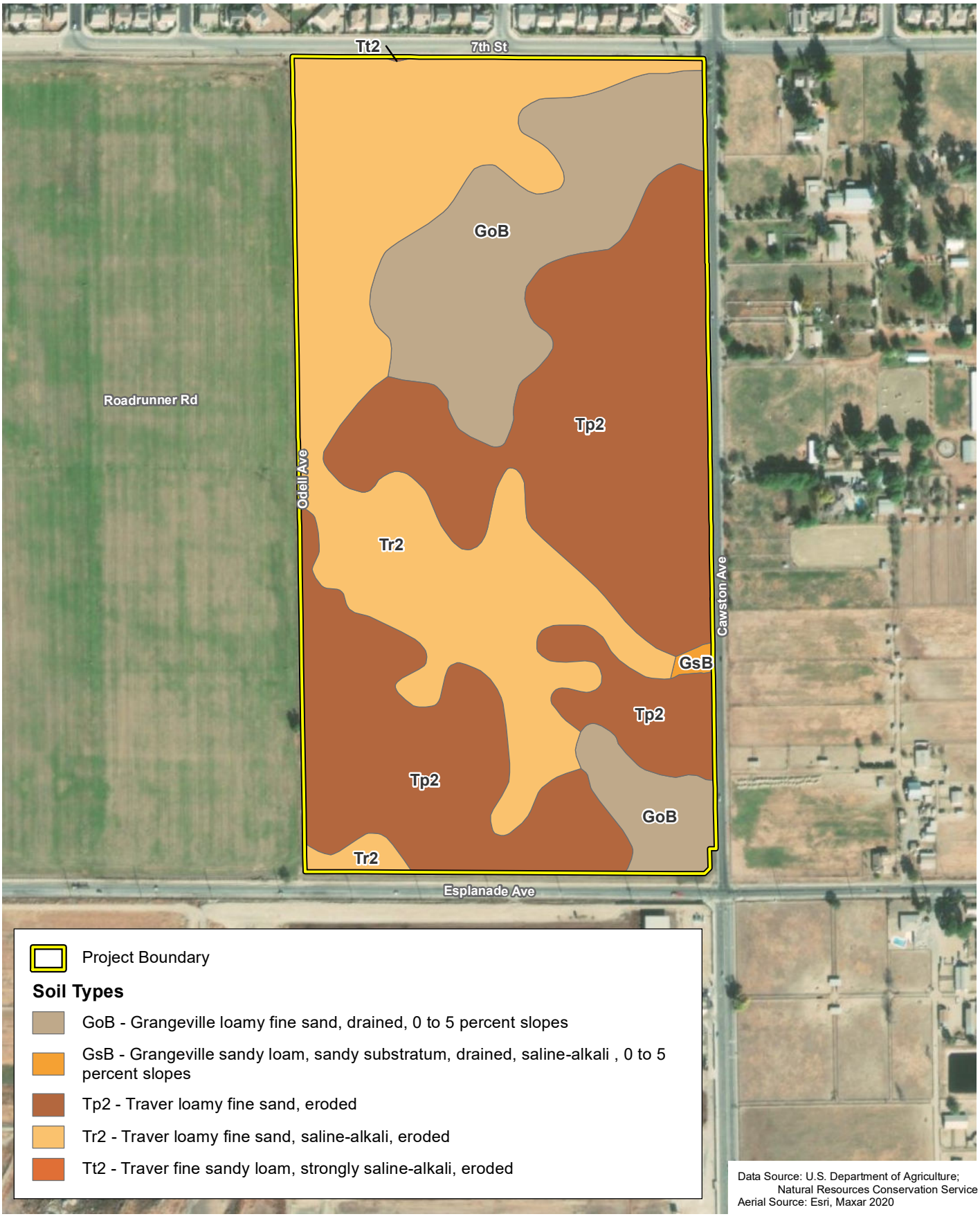

Data Source: U.S. Department of Agriculture; Natural Resources Conservation Service
Aerial Source: Esri, Maxar 2020

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Soils

Exhibit 3

Chacon Farms

N W E S

410 205 0 410

Feet

PSOMAS

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necessary to ensure that habitat quality and vernal pool hydrology are maintained as planned land uses are developed along the edge of this habitat block.

METHODS

Habitat Assessment

A literature review was conducted prior to the field survey to identify special status plant and wildlife species reported to occur in the project vicinity. The California Native Plant Society's (CNPS') Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2022) and the CDFW's California Natural Diversity Database (CDFW 2022a) were reviewed and included the Sunnymead, El Casco, Beaumont, Perris, Lakeview, San Jacinto, Romoland, Winchester, and Hemet USGS 7.5-minute quadrangles. The RCA MSHCP Information Mapping Tool was used to determine MSHCP requirements using APNs 432-260-009, 432-260-026, and 432-260-027. In addition, the Report and General Soil Maps for the Western Riverside Area (USDA NRCS 2019) was reviewed to determine whether suitable soils are present to support special status plant and wildlife species.

The general site assessment was conducted on September 19, 2022, by Psomas Biologist Trevor Bristle and Senior Biologist Allison Rudalevige. The weather was clear with temperatures between 62–71 degrees Fahrenheit and light winds between 0–2 miles per hour. The general assessment was conducted by walking the project site and recording plant and wildlife species observed. Vegetation was mapped in the field on an aerial photograph at a scale of 1-inch equals 200 feet (1"=200'). Vegetation types were mapped and were generally described using categories outlined in the MSHCP (Dudek 2003). Photographs were also taken during the general assessment (see Attachment E-6).

All plant and wildlife species observed were recorded in field notes. Plant species were identified in the field or collected for later identification. Plants were identified using taxonomic keys in the Jepson eFlora (Jepson Flora Project 2022). Taxonomy follows the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2022b) for special status species and the Jepson eFlora (Jepson Flora Project 2022) for all other taxa. A list of plant species observed during the surveys is included in Table A-1 of Appendix A.

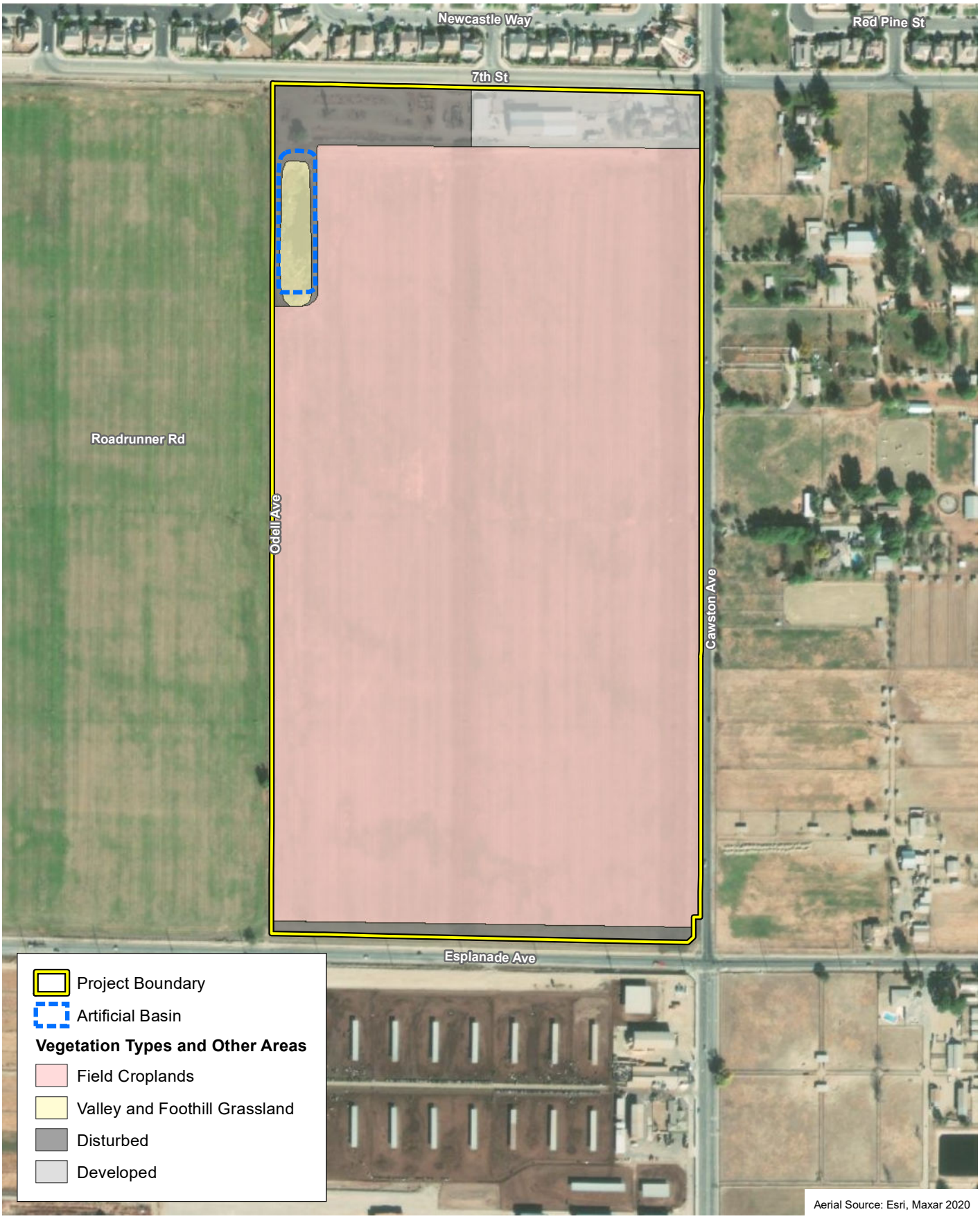
All wildlife species detected during the course of the surveys were documented in field notes. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic sign, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows Crother (2017) for amphibians and reptiles, American Ornithologists' Society (2021) for birds, and Smithsonian National Museum of Natural History (SNMNH 2011) for mammals. A list of wildlife species observed during the surveys is included in Table A-2 of Appendix A.

EXISTING CONDITIONS

Vegetation Types and Other Areas

Vegetation types observed on the project site include field croplands and valley and foothill grassland; disturbed and developed landcovers are also present (Exhibit 4).

Field croplands occur over most of the project site and consist of active agricultural uses. Alfalfa (*Medicago sativa*), a non-native crop, is currently growing. The field also contains large amounts of sprangletop (*Leptochloa fusca*), a native grass.



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Vegetation Types and Other Areas

Exhibit 4

Chacon Farms

N W E S

400 200 0 400

Feet

PSOMAS

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Valley and foothill grassland occurs around an artificial basin in the northwest corner of the project site. This vegetation type is dominated by sprangletop with other scattered native and non-native grasses and forbs such as Palmer's amaranth (*Amaranthus palmeri*), lance-leaf ground-cherry (*Physalis lanceifolia*), and cock's spur barnyard grass (*Echinochloa crus-galli*).

Disturbed areas occur along the margins of the project site and around the artificial basin. These areas consist primarily of bare ground with minimal scattered vegetation. The area along the northern edge of the project site is used for storage of irrigation equipment. The area along the southern edge of the project site is undergoing active construction for installation of a pipeline. This area has some stockpiled gravel and pipes. The margins of the field are also disturbed, but these areas are too narrow to map separately from field croplands.

A developed area occurs in the northeastern corner of the project site. This area consists of structures and associated landscaping such as pepper tree (*Schinus 3mer*), Mexican fan palm (*Washingtonia robusta*), and California fan palm (*Washingtonia filifera*).

Wildlife

As described above, the project site consists of agricultural areas with developed and disturbed areas around the edges. An artificial basin is present in the northwest corner. The majority of the site is considered low quality for wildlife due to the lack of native vegetation and surrounding immediate vicinity.

No fish are expected to occur on the project site; the artificial basin consists of irrigation runoff and does not connect to a natural waterway.

No amphibian species were observed during the survey. While the artificial basin contains water, it also undergoes routine maintenance from heavy equipment. Additionally, the basin does not have any native habitat around it. Amphibians with limited potential to occur include western toad (*Anaxyrus boreas*) and Baja California treefrog (*Pseudacris hypochondriaca*).

No reptile species were observed during the survey; however, common side-blotched lizard (*Uta stansburiana*), western fence lizard (*Sceloporus occidentalis*), and gopher snake (*Pituophis catenifer*) have potential to occur on the project site.

Bird species observed during the survey include rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), black phoebe (*Sayomis nigricans*), Say's phoebe (*Sayornis saya*), common raven (*Corvus corax*), cliff swallow (*Petrochelidon pyrrhonota*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Spinus psaltria*), and California towhee (*Melozone crissalis*).

No mammal species were observed during the survey; however, California ground squirrel (*Spermophilus beecheyi*) and desert cottontail (*Sylvilagus audubonii*) are expected to occur.

Wildlife Movement

The project site is surrounded by development, with suburban development to the north and east, a dairy farm to the south, and construction an additional residential development to the west. Additionally, the project site is not located within a "Core" or "Linkage" area designated by the MSHCP. Wildlife could move locally through the project site and adjacent residential, agricultural, and dairy land. The project site is expected to be used for local movement by urban-tolerant species such as coyote (*Canis latrans*).

SPECIAL STATUS RESOURCES

Special status resources include plant and wildlife species and vegetation types. These species have generally been afforded this recognition by federal and State resource agencies and by private conservation organizations (e.g., the CNPS). In general, the principal reason an individual taxon (e.g., species, subspecies, or variety) is given such recognition is a documented or perceived decline or limitation of its population size, geographic range, and/or distribution that results, in most cases, from habitat loss.

The Riverside County Board of Supervisors approved the MSHCP in 2003 and received permitting approval from the U.S. Fish and Wildlife Service (USFWS) in June 2004. This plan establishes Criteria Areas (i.e., reserves) to adequately conserve many federal and State-listed species. Impacts on Covered Species would be considered fully mitigated with payment of a mitigation fee for each acre impacted. With the exception of a few species (e.g., Riparian/Riverine species, Additional Survey Needs species, Criteria Area species, and Narrow Endemic species), focused surveys are not required for Covered Species, and no additional permitting would be necessary. As discussed above, the project site is not located in any designated Criteria Area Cells. However, the MSHCP has identified some species or habitats with Additional Survey Needs that may require surveys and additional consultation (discussed below).

Riparian/Riverine Resources

As defined by Section 6.1.2 of the MSHCP, Riparian/Riverine areas are lands that contain habitat dominated by trees, shrubs, persistent 4mergent, or emergent mosses and lichens, which occur close to or depend upon soil moisture from a nearby fresh water source or areas with fresh water flow during all or a portion of the year (Dudek 2003). Riparian areas are those with riparian habitat (e.g., mule fat [*Baccharis salicifolia* ssp. *salicifolia*], willows [*Salix* spp.]) whereas riverine areas are areas that convey water that supports downstream riparian habitat. Areas may be considered Riverine if they support downstream resources, even if they are unvegetated or underground for a portion of their length.

As described above, there is a basin in the northwest corner of the project site. This area was reviewed in the field and was found to be an artificial basin with no riparian vegetation present at the time of the survey. Therefore, focused surveys for riparian bird species would not be necessary.

The artificial basin undergoes routine maintenance and appears to have been plowed multiple times in the past based on historical aerials. The main source of water for this basin appears to be irrigation from the adjacent agricultural fields; no natural inlet or outlet was observed in the field. The basin does not connect to a natural drainage; therefore, it would not be considered riverine.

Vernal Pools

As defined by the MSHCP, vernal pools are seasonal wetlands that occur in sunken areas that have wetland soils, vegetation, and hydrology during the wetter portion of the growing season but lack hydrology and/or vegetation during the drier portion of the year (Dudek 2003). The artificial basin at the northwest corner of the project site was observed to support ponding; the source of the water appears to be irrigation from the adjacent agricultural fields. Historic aerials were examined on Google Earth between 1996 to 2021 to examine the extent of ponding over time. The artificial basin appears to have been intermittently ponded beginning in 2009. During dry periods, the area appears to have been plowed and blends in with the surrounding agricultural field. As stated in the MSHCP, stock ponds, ephemeral pools, and other features that are artificially created are not considered vernal pools meeting the requirements of Section 6.1.2

(Dudek 2003). However, they may still provide habitat for vernal pool invertebrate species that are protected by the MSHCP.

Riverside fairy shrimp (*Streptocephalus woottoni*) is a federally Endangered species and a MSHCP Additional Survey Needs Species (i.e., Section 6.1.2). Riverside fairy shrimp are restricted to deep seasonal vernal pools, vernal pool like ephemeral ponds, stock ponds and other human modified depressions (Eng, Belk, and Eriksen 1990; USFWS 1993, 2001). Riverside fairy shrimp prefer warm-water pools that have low to moderate dissolved solids, are less predictable, and remained filled for extended periods of time (Eriksen and Belk 1999). The artificial basin provides potentially suitable habitat for Riverside fairy shrimp. Therefore, per MSHCP requirements, focused surveys were required.

Vernal pool fairy shrimp (*Branchinecta lynchi*) is a federally Threatened species and a MSHCP Additional Survey Needs Species (i.e., Section 6.1.2). Vernal pool fairy shrimp is restricted to seasonal vernal pools (Eng, Belk, and Eriksen 1990; USFWS 1994). The vernal pool fairy shrimp prefers cool-water pools that have low to moderate dissolved solids, are unpredictable, and often short lived (Eriksen and Belk 1999). The artificial basin provides marginally suitable habitat for vernal pool fairy shrimp. Therefore, per MSHCP requirements, focused surveys were required.

Critical habitat has been designated for the Riverside fairy shrimp and the vernal pool fairy shrimp (USFWS 2006, 2012). The project site is not located within designated critical habitat for either species.

One wet season focused survey and one dry season focused survey were conducted for Riverside fairy shrimp and vernal pool fairy shrimp in 2022-2023 (Appendix B). Neither of these species was observed during the wet season fairy shrimp surveys (Appendix B). Dry season sampling was conducted in August 2023; *Branchinecta* cysts were observed but the lab results were inconclusive. Of the cysts observed, only one cyst hatched; it was identified as versatile fairy shrimp (*Branchinecta lindalii*), a common fairy shrimp species (Appendix B). The *Brancinecta* cysts collected during dry season sampling were then sent to Washington State University for a genetic analysis; results of the genetic analysis confirmed the genetic material was from versatile fairy shrimp (Appendix B). No Riverside fairy shrimp or vernal pool fairy shrimp were observed during focused surveys; therefore, there would be no impact on these species.

Jurisdictional Resources

Section 404 of the Clean Water Act (CWA) and Section 1602 of the *California Fish and Game Code* regulate activities affecting water resources under the jurisdiction of the USACE and the CDFW, respectively. “Waters of the U.S.” include navigable coastal and inland waters, lakes, rivers, and streams and their tributaries; interstate waters and their tributaries; wetlands adjacent to such waters; intermittent streams; and other waters that could affect interstate commerce. Section 401 of the CWA provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed, federally permitted activity that may affect water quality.

The artificial basin present in the northwest corner of the project site was artificially created in uplands that were previously used for croplands. This area is irrigated, as evidenced by rills in the banks adjacent to the active agricultural field. This type of waterbody is excluded from being a Waters of the U.S. because it is isolated. Artificial wetlands less than one acre in size are not considered Waters of the State under the authority of the RWQCB. Based on historic aerial imagery and topographic maps, this area does not appear to have been part of a historic drainage. Therefore, it would not be under the regulatory authority of the CDFW. Therefore, no drainages or other waters that would be under the jurisdiction of the USACE, CDFW, or RWQCB occur on the project site.

Criteria Area, Narrow Endemic, and Other Special Status Plant Species

According to the Western Riverside County Regional Conservation Authority MSHCP Information Mapping Application, the project site does not require surveys for Criteria Area plant species. However, the project site is required to be assessed for Narrow Endemic plant species. The project site has also been assessed for special status plant species not covered by the MSHCP that have been reported from the project vicinity.

Narrow Endemic species that need to be assessed for the project site include Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), many-stemmed dudleya (*Dudleya multicaulis*), spreading navarretia (*Navarretia fossalis*), Californica Orcutt grass (*Orcuttia californica*), and Wright's trichocoronis (*Trichocoronis wrightii*). Of these Narrow Endemic plant species, San Diego ambrosia, spreading navarretia, California Orcutt grass, and Wright's trichocoronis have limited potential to occur based on the presence of marginally suitable habitat (i.e., the on-site basin and/or margins of the agricultural field). Therefore, special status plant surveys were required. Munz's onion and many-stemmed dudleya would not be expected to occur based on lack of suitable habitat.

The majority of the special status plant species reported in the database searches are MSHCP Covered Species; aside from the species listed above, no focused surveys would be needed for MSHCP Covered Species because populations of these species are adequately conserved. However, a few species reported from the vicinity are not MSHCP Covered Species. Salt Spring checkerbloom (*Sidalcea neomexicana*, California Rare Plant Rank [CRPR] 2B.2[1]) occurs in mesic habitats, such as riparian scrub, meadows, seeps (often alkali), and playas (alkali). Alkali soils are present on the project site; therefore, this species has a limited potential to occur around the edges of the artificial basin in the northwestern corner of the northern parcel. Therefore, focused surveys for this species would be needed to determine whether it is present or absent. The remaining species with a CRPR of 1 or 2 reported from the literature review are not expected to occur due to lack of suitable habitat.

Species that are not covered by the MSHCP with a CRPR of 3 or 4 are not typically considered constraints on development.

Focused surveys for Narrow Endemic plant species and species not covered by the MSHCP were conducted in spring/summer 2023. No Narrow Endemic or other special status plants were observed (Appendix C).

Burrowing Owl

The western burrowing owl is a grassland specialist distributed throughout western North America, where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments, with well-drained, level to gently sloping areas characterized by sparse vegetation and bare ground (Haug et al. 1993; Dechant et al. 2003). Burrowing owls in Florida excavate their own burrows, but western burrowing owls depend upon the presence of burrowing mammals whose burrows are used for roosting and nesting (Haug et al. 1993). The presence or absence of colonial mammal burrows (e.g., California ground squirrels) is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drainpipes, stand-pipes, and dry culverts. Burrowing mammals may burrow beneath rocks; debris; or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. Large, hard objects

[1] CRPR 2B.2: Plants rare, threatened, or endangered in California but common elsewhere; 20–80% of occurrences threatened.

at burrow entrances stabilize the entrance from collapse and may inhibit excavation by predators. In Southern California, burrowing owls breed and forage in grasslands and prefer flat to low rolling hills in treeless terrain. They are small owls that nest in burrows, typically in open habitats most often along banks and roadsides. The burrowing owl has declined in many other areas due to habitat modification, poisoning of its prey items, shooting, and human disturbance (Remsen 1978).

The burrowing owl is a California Species of Special Concern; burrow sites are protected. This species is considered an Additional Survey Needs species under the MSHCP (Section 6.3.2); the project site is within the area that needs to be assessed for burrowing owl. Suitable habitat is present on the project site; therefore, focused surveys were required.

Focused surveys for burrowing owl were conducted in spring/summer 2023. No burrowing owls or evidence of their presence was observed (Appendix D).

Because site conditions change over time and burrowing owls move seasonally, all projects located within the Additional Survey Area for burrowing owl are required to conduct a pre-construction survey for burrowing owl within 30 days prior to construction to ensure the project would not impact any active burrows.

OTHER ISSUES

Crotch Bumble Bee

The Crotch bumble bee (*Bombus crotchii*) was proposed as a Candidate to be State listed as Endangered in 2019. As a result of a trial court decision and subsequent appeal, this species was initially determined ineligible to be listed under the California Endangered Species Act because the law does not specifically mention invertebrates; the Candidate status was withdrawn. However, the Third District Court of Appeals ruled that the bees and other invertebrates could be protected because elsewhere in the *California Fish and Game Code*, the definition of fish includes invertebrates. In September 2022, the California Supreme Court decided that it would not review the petition for appeal, allowing the decision from the Third District Court to stand, stating that the intent of the law is to protect declining species. Therefore, in October 2022, CDFW reinstated the Candidate Endangered status with their release of the CDFW Special Animals List (CDFW 2022c). This species is not a Covered Species in the MSHCP.

The Crotch bumble bee is a ground nester and often makes its nest in abandoned mammal burrows; it can be found in most native habitat types, although it prefers grassland and scrub habitats. It is primarily associated with plants from the following families: *Fabaceae, Apocynaceae, Asteraceae, Lamiaceae,* and *Boraginaceae* (Richardson 2017, Thorp et. al. 1983). This species has been observed at several locations in the Project region (both historic and recent). The nearest observation of this species was in 1946 near Homeland, approximately 5.5 miles southwest of the project site (CDFW 2022a). There are multiple recent (2020) sightings of this species near Moreno Valley and Beaumont (CDFW 2022a). The project site has been an agricultural area that lacks vegetation; the site has been regularly tilled (detrimental to ground-nesting bees) and may have been exposed to pesticides. While the edges of the agricultural fields may be considered marginally suitable, this species is not expected to occur because the surrounding land uses are agricultural or residential; there are no adjacent areas of grassland or scrub habitats.

Mountain Lion

The mountain lion (*Puma concolor*) is currently a Candidate to be State listed as Threatened as an Evolutionary Significant Unit (ESU); CDFW is in the process of reviewing the petition for listing and evaluating available information. Regardless of the outcome of the proposed listing, this species is already a MSHCP Covered Species. The mountain lion occurs throughout most of California except for the Mojave and Colorado Deserts and the croplands of the Central Valley. Mountain lions occur in a variety of habitats, especially brushy habitats and riparian areas with interspersed irregular terrain, rocky outcrops, and tree/brush edges. Mountain lions use caves, natural cavities, and thickets for cover. Mountain lions use habitat connections for movement among fragmented core habitat (Zeiner 1988). A major threat to this species is fragmentation of habitat by spread of human developments and associated roads. Mountain lion is not expected to occur on the project site due to lack of suitable habitat. Additionally, the project site is also not within an area designated as a MSHCP linkage.

Stephens' Kangaroo Rat

In response to the listing of Stephens' kangaroo rat (*Dipodomys stephensi*), the Riverside County Habitat Conservation Agency (RCHCA) developed a Stephens' Kangaroo Rat Habitat Conservation Plan (SKR HCP). The City of San Jacinto is not a participant in the SKR HCP; however, the MSHCP provides take authorization for projects outside the boundaries of the SKR HCP but within the MSHCP boundaries. Stephens' kangaroo rat is not expected to occur on the project site due to lack of suitable habitat.

Urban/Wildlands Interface Issues

Indirect impacts, often called "edge effects", are those that affect the quality of nearby wildlife habitat resulting from disturbance by construction (such as noise, dust, and urban pollutants) and/or the long-term use of the proposed project site. Development in proximity to an MSHCP Conservation Area may result in edge effects that adversely affect biological resources within the MSHCP Conservation Area. The text below each subheading states the objective of each of these measures as described in the MSHCP.

The proposed project is not immediately adjacent to any MSHCP Criteria Cell but occurs approximately 1,375 feet east of Cell 3291. Lands within Cell 3291 provide for vernal pool species (i.e., Narrow Endemic plants and fairy shrimp).

Drainage

Proposed developments near the MSHCP Conservation Area shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System requirements, to ensure that the quantity and quality of runoff discharged to the MSHCP Conservation Area is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into the MSHCP Conservation Area. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes within the MSHCP Conservation Area. This can be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

Toxics

Land uses proposed in proximity to the MSHCP Conservation Area that require use of chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife species, habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in discharge to the MSHCP Conservation Area. Measures such as those employed to address drainage issues shall be implemented.

Lighting

Night lighting shall be directed away from the MSHCP Conservation Area (i.e., Criteria Cell 3291) to protect species within the MSHCP Conservation Area from direct night lighting. Additionally, shielding should be incorporated in Project designs of all projects as a best management practice to ensure ambient lighting is focused on the areas intended to be illuminated. This would benefit other night-foraging predators such as bats and owls. As the project site is not immediately adjacent to Cell 3291, night lighting is not expected to affect Cell 3291.

Noise

Proposed noise generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms, or walls to minimize the effects of noise on MSHCP Conservation Area (i.e., Criteria Cell 3291) resources pursuant to applicable rules, regulations, and guidelines related to land use noise standards. As the project site is not immediately adjacent to Cell 3291, noise is not expected to affect Cell 3291.

Invasives

When approving landscape plans for development near MSHCP Conservation Areas, Permittees shall consider the invasive, non-native plant species (see MSHCP Table 6-2) and shall require revisions to landscape plans to avoid the use of invasive species for the portions of development that are near an MSHCP Conservation Area. Considerations in reviewing the applicability of this list shall include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography, and other features.

Barriers

Proposed land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate, in individual Project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in the MSHCP Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage, and/or other appropriate mechanisms. As the project site is not immediately adjacent to Cell 3291, no barriers would be necessary.

Grading/Land Development

Manufactured slopes associated with proposed site development shall not extend into the MSHCP Conservation Area. As the project site is not immediately adjacent to Cell 3291, grading and development of the Project would not affect Cell 3291.

Mitigation Fee

The MSHCP requires a Local Development Mitigation Fee for residential development to be paid to the City of San Jacinto. The Project Applicant will be required to pay the fee applicable at the time building permits are issued. The fee varies depending on the proposed residential density. The fees through June 30, 2024 are as follows: low density developments (less than 8 dwelling units per acre) are $4,236/dwelling unit; medium-density developments (9 to 14 dwelling units per acre) are $1,766 per dwelling unit; and high-density developments (more than 14 units per acre) are $781 per dwelling unit. The Local Development Mitigation Fee schedule is automatically adjusted annually; the fee schedule may also be periodically reviewed and the amounts adjusted.

Construction Minimization Measures

Section 7.5.3 of the MSHCP contains a list of standard measures to minimize direct and indirect impacts on biological resources within and adjacent to the project site. These measures are related to protecting water quality, controlling dust, minimizing the spread of invasive plant species, minimizing fire hazards, and other measures. These measures also include requirements to mark project limits through staking/flagging as verified by monitoring personnel (Appendix E).

Nesting Birds/Raptors

The Migratory Bird Treaty Act (MBTA) protects the taking of migratory birds and their nests and eggs. Bird species protected under the provisions of the MBTA are identified by the List of Migratory Birds (*Code of Federal Regulations*, Title 50, §10.13). Section 3503 of the *California Fish and Game Code* makes it unlawful to take, possess, or destroy any bird's nest or any bird's eggs. Section 3513 of the *California Fish and Game Code* prohibits the take and possession of any migratory nongame bird, as designated in the MBTA. Birds have potential to nest throughout the survey area in vegetation, on bare ground, and on structures. If construction would be initiated during the peak bird nesting season (i.e., March 1 to June 30, as defined by Section 7.5.3 of the MSHCP), a pre-construction survey would be required to ensure that no nests are impacted. If an active nest is present, construction may be restricted in the immediate vicinity of the nest until nesting is complete.

Trees in in the northeastern corner of the project site and adjacent to the project site have potential to be used for nesting by raptors such as the American kestrel (*Falco sparverius*). Regulations prohibit activities that "take, possess, or destroy" any raptor nest or egg (*California Fish and Game Code* §3503, 3503.5, and 3513). Additionally, the noise and disturbance associated with construction may disturb a nesting raptor adjacent to the project site. If construction would be initiated during the raptor nesting season (generally between February 1 and June 30), a pre-construction survey would be required to ensure that no raptor nests are impacted. If an active nest is present, construction may be temporarily restricted in the immediate vicinity of the nest until nesting is complete.

Tree Ordinance

The City of San Jacinto Municipal Code prohibits removal of trees from public streets or parkways; authorization must be obtained from the City Council (Section 12.20). Any trees removed for the convenience of construction require replacement at the expense of the entity requesting their removal. The replacement tree must be approved by the parks and recreation commission.

There is no restriction on the removal of trees located on private property; however, tentative tract maps must show the location of all trees having a diameter of four inches or greater.

A tree survey was conducted; a total of 22 trees were that have a diameter of four inches or greater occur on the project site (Appendix F). These include one tree of heaven (*Ailanthus altissima*), one lemon tree (*Citrus limon*), two Mondell pine (*Pinus eldarica*), one peach tree (*Prunus persica*), four Peruvian pepper trees (*Schinus molle*), four California fan palms (*Washingtonia filifera*), and nine Mexican fan palms (*Washingtonia robusta*). The majority of the trees on the Project site are located in the northeast corner of the project site surrounding existing structures. One Peruvian pepper tree is located along the southwest boundary. This tree is rooted outside of the Project boundary, but it has a canopy extending into the project site.

RECOMMENDATIONS

The following is a list of recommendations to ensure that the project is consistent with the MSHCP and other regulations protecting biological resources.

1. A pre-construction survey for burrowing owl will be required regardless of the absence of the species during the 2023 focused burrowing owl surveys. The pre-construction burrowing owl survey must occur 30 days prior to construction in accordance with Section 6.3.2 of the MSHCP. During the breeding season (i.e., March 1 to August 31), restrictions may be placed on construction activities in the vicinity of any active burrow until the burrow is no longer active, as determined by a qualified Biologist. During the wintering season, an active burrow may be closed following CDFW-approved procedures. If possible, construction should be timed to be initiated during the wintering season to minimize potential constraints.
2. If construction activities occur during nesting season for birds (i.e., March 1 to June 30) or nesting raptors (i.e., February 1 to June 30), a pre-construction survey for active bird/raptor nests would be required. Restrictions may be placed on construction activities in the vicinity of any active nest until the nest is no longer active, as determined by a qualified Biologist.
3. Applicable Construction Minimization Measures (Section 7.5.3, Appendix E) would be required to avoid and minimize effects during construction.
4. The proposed project will be required to pay the MSHCP Fee applicable to the proposed density of residential development.

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APPENDIX A

PLANT AND WILDLIFE COMPENDIA

PLANT SPECIES OBSERVED DURING THE SURVEY

Species	
Scientific Name	**Common Name**
GYMNOSPERMS	
PINACEAE – PINE FAMILY	
*Pinus eldarica**	Mondell pine
*Pinus halepense**	Aleppo pine
EUDICOTS	
AMARANTHACEAE – AMARANTH FAMILY	
Amaranthus palmeri	Palmer's amaranth
ANACARDIACEAE – SUMAC FAMILY	
*Schinus molle**	pepper tree
ASTERACEAE – SUNFLOWER FAMILY	
*Centaurea melitensis**	tocalote
*Cotula australis**	Australian cotula
Eclipta prostrata	false daisy
*Erigeron bonariensis**	flax-leaved horseweed
Erigeron canadensis	horseweed
Gnaphalium palustre	marsh cudweed
Helianthus annuus	annual sunflower
*Lactuca serriola**	prickly lettuce
*Oncosiphon pilulifer**	stinknet
*Pseudognaphalium luteoalbum**	white lamb cudweed
*Pulicaria paludosa**	marsh pulicaria
*Senecio vulgaris**	common groundsel
*Sonchus asper ssp. asper**	prickly sow thistle
*Sonchus oleraceus**	common sow thistle
BORAGINACEAE – BORAGE FAMILY	
Amsinckia menziesii	common fiddleneck
Heliotropium curassavicum var. oculatum	seaside heliotrope
BRASSICACEAE – MUSTARD FAMILY	
*Capsella bursa-pastoris**	shepherd's purse
*Descurainia sophia**	wise tansy mustard
*Hirschfeldia incana**	grayish shortpod mustard
*Lepidium didymum**	lesser swine grass
*Sisymbrium irio**	London rocket
CARYOPHYLLACEAE – PINK FAMILY	
*Spergularia bocconi**	Boccone's sand-spurrey
CHENOPODIACEAE – GOOSEFOOT FAMILY	
*Salsola tragus**	Russian thistle
CONVOLVULACEAE – MORNING–GLORY	
Calystegia sp.	morning-glory
EUPHORBIACEAE – SPURGE FAMILY	
Euphorbia albomarginata	rattlesnake sandmat

PLANT SPECIES OBSERVED DURING THE SURVEY

Species	
Scientific Name	**Common Name**
FABACEAE – LEGUME FAMILY	
*Acacia sp.**	acacia
*Medicago sativa**	alfalfa
*Melilotus indicus**	sourclover
GERANIACEAE – GERANIUM FAMILY	
*Erodium cicutarium**	redstem filaree
LYTHRACEAE – LOOSESTRIFE FAMILY	
*Lythrum hyssopifolia**	hyssop-leaf loosestrife
MALVACEAE – MALLOW FAMILY	
*Malva parviflora**	cheeseweed
PLANTAGINACEAE – PLANTAIN FAMILY	
*Plantago major**	common plantain
Veronica peregrina ssp. xalapensis	purslane speedwell
POLYGONACEAE – BUCKWHEAT FAMILY	
*Polygonum aviculare**	knotweed
*Rumex crispus**	curly dock
PORTULACACEAE – PURSLANE FAMILY	
*Portulaca oleracea**	purslane
ROSACEAE – ROSE FAMILY	
*Prunus persica**	peach
RUTACEAE – CITRUS FAMILY	
*Citrus x limon**	lemon tree
SALICACEAE – WILLOW FAMILY	
Salix gooddingii	Goodding's black willow
Salix lasiolepis	arroyo willow
SIMAROUBACEAE – SIMAROUBA FAMILY	
*Ailanthus altissima**	tree of heaven
SOLANACEAE – NIGHTSHADE FAMILY	
*Nicotiana glauca**	tree tobacco
Physalis acutifolia	sharpleaf ground-cherry
*Solanum elaeagnifolium**	white horse-nettle
ZYGOPHYLLACEAE – CALTROP FAMILY	
*Tribulus terrestris**	puncture vine
MONOCOTS	
ARECACEAE – PALM FAMILY	
Washingtonia filifera	California fan palm
*Washingtonia robusta**	Mexican fan palm
CYPERACEAE – SEDGE FAMILY	
Cyperus sp.	flatsedge
JUNCACEAE – RUSH FAMILY	
Juncus bufonius	toad rush

PLANT SPECIES OBSERVED DURING THE SURVEY

Species	
Scientific Name	**Common Name**
POACEAE – GRASS FAMILY	
*Bromus catharticus**	rescue grass
*Bromus rubens**	red brome
*Chloris verticillata**	windmill grass
*Cynodon dactylon**	Bermuda grass
Distichlis spicata	salt grass
*Echinochloa crus-galli**	cock's spur barnyard grass
*Festuca perennis**	rye grass
*Hordeum murinum**	wall barley
Leptochloa fusca	sprangletop
Phalaris sp.	canary grass
*Polypogon monspeliensis**	annual beard grass
TYPHACEAE – CATTAIL FAMILY	
Typha sp.	cattail
* Non-native or invasive species	

WILDLIFE SPECIES OBSERVED DURING THE SURVEYS

Species	
Scientific Name	**Common Name**
BIRDS	
ANATIDAE – SWAN, GOOSE, AND DUCK FAMILY	
Mareca americana	American wigeon
Anas platyrhynchos	mallard
Oxyura jamaicensis	ruddy duck
COLUMBIDAE – PIGEONS AND DOVES	
*Columba livia**	rock pigeon
Zenaida macroura	mourning dove
RALLIDAE – RAIL AND COOT FAMILY	
Fulica americana	American coot
RECURVIROSTRIDAE – STILT AND AVOCET FAMILY	
Himantopus mexicanus	black-necked stilt
SCOLOPACIDAE – SANDPIPER FAMILY	
Limosa fedoa	marbled godwit
Calidris minutilla	least sandpiper
LARIDAE – GULL AND TERN FAMILY	
Larus delawarensis	ring-billed gull
CATHARTIDAE – NEW WORLD VULTURE FAMILY	
Cathartes aura	turkey vulture
ACCIPITRIDAE – HAWK FAMILY	
Buteo jamaicensis	red-tailed hawk
TYRANNIDAE – TYRANT FLYCATCHERS	
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus verticalis	western kingbird
CORVIDAE – JAY AND CROW FAMILY	
Corvus brachyrhynchos	American crow
Corvus corax	common raven
ALAUDIDAE – LARK FAMILY	
Eremophila alpestris	horned lark
HIRUNDINIDAE – SWALLOW FAMILY	
Petrochelidon pyrrhonota	cliff swallow
MIMIDAE – THRASHERS	
Mimus polyglottos	northern mockingbird
STURNIDAE – STARLINGS	
*Sturnus vulgaris**	European starling
PASSERIDAE – OLD WORLD SPARROW FAMILY	
*Passer domesticus**	house sparrow
FRINGILLIDAE – FINCHES	
Haemorhous mexicanus	house finch
Spinus psaltria	lesser goldfinch

WILDLIFE SPECIES OBSERVED DURING THE SURVEYS

Species	
Scientific Name	**Common Name**
ICTERIDAE – BLACKBIRDS AND ORIOLES	
Sturnella neglecta	western meadowlark
Molothrus ater	brown-headed cowbird
Euphagus cyanocephalus	Brewer's blackbird
PASSERELLIDAE – NEW WORLD SPARROW FAMILY	
Melozone crissalis	California towhee
* Non-native Species	

APPENDIX B

FAIRY SHRIMP SURVEYS

August 22, 2023

Stacey Love
Recovery Permit Coordinator
U.S. Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

VIA EMAIL
Stacey_Love@fws.gov

Subject: Results of Wet Season Vernal Pool Branchiopod Surveys for the Chacon Farms Property, City of San Jacinto, California

Dear Ms. Love:

This Letter Report presents the findings of wet season vernal pool branchiopod (i.e., fairy shrimp) surveys conducted in 2022–2023 for the Chacon Farms Property (hereinafter referred to as the "Project site") located in the City of San Jacinto in Riverside County, California (Exhibit 1). Surveys were conducted from October 2022 to April 2023 according to guidelines established by the U.S. Fish and Wildlife Service (USFWS) by a Biologist with the necessary Federal Endangered Species Act (ESA) 10(a) survey permit.

PROJECT LOCATION AND DESCRIPTION

The Project site is located north of Esplanade Avenue, west of Cawston Avenue North, South of 7th Street, and east of an unimproved road through agricultural land (Odell Avenue) in the City of San Jacinto in Riverside County, California (Exhibit 1). The Project site is an approximately 75.6-acre property and includes Assessor Parcel Numbers 432-260-009, 432-260-026, and 432-260-027. The Project site is located on the U.S. Geological Survey's (USGS') Lakeview 7.5-minute quadrangle of the San Bernardino Meridian at Township 4 South, Range 1 West, Section 31 and 32 (Exhibit 2).

The proposed Project would provide a new residential housing community. The site plan is still under development and subject to change. Currently, the Project plans to retain the on-site retention basin in the northwestern portion of the Project site.

The Project site is located in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) area, specifically, within the San Jacinto Valley Area Plan. The City of San Jacinto is a signatory to the MSHCP; therefore, the Project would be subject to the provisions of the MSHCP. Per Section 6.1.2 of the MSHCP, the Project site must be assessed for the presence of vernal pools and other habitat for vernal pool branchiopods (i.e., fairy shrimp). The Project site is not located within a MSHCP Criteria Cell; the nearest Criteria Cell (discussed below) is approximately 0.25 miles southwest of the Project site.

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ENVIRONMENTAL SETTING

Topography on the Project site is relatively flat with an elevation of approximately 1,500 to 1,510 feet above mean sea level (msl). Soils mapped on the Project site include Grangeville loamy fine sand, drained, 0 to 5 percent slopes; Grangeville sandy loam, sandy substratum, drained, saline-alkali, 0 to 5 percent slopes; Traver loamy fine sand, eroded; Traver loamy fine sand, saline-alkali, eroded; and Traver fine sandy loam, strongly saline-alkali, eroded (Exhibit 3).

The Project site contains the following vegetation types and other areas: field croplands, valley and foothill grassland, disturbed, and developed. The agricultural field is periodically tilled or disced. Surrounding land uses include dairies, agricultural, residential, and rural residential. Active construction was occurring on the property to the west at the time of the field surveys.

There is a basin in the northwest corner of the Project site. This area was reviewed in the field and was found to be an artificial basin with no riparian vegetation present at the time of the survey. The artificial basin undergoes routine maintenance and appears to have been plowed multiple times in the past based on historical aerials. The main source of water for this basin appears to be irrigation from the adjacent agricultural fields; no natural inlet or outlet was observed in the field. The basin does not connect to a natural drainage; therefore, it would not be considered riverine.

The Project site occurs approximately 1,375 feet (0.25 mile) northeast of MSHCP Criteria Cell 3291. Cell 3291 contributes to Proposed Noncontiguous Habitat Block 7. Conservation within this Cell Group focuses on grassland habitat. Proposed Noncontiguous Habitat Block 7 is comprised of a complex of vernal pools west of the City of Hemet. These parcels preserve important populations of Narrow Endemic plant species, including Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), thread-leaved brodiaea (*Brodiaea filifolia*), little mousetail (*Myosurus minimus* ssp. *apus*), California Orcutt grass (*Orcuttia californica*), and spreading navarretia (*Navarretia fossalis*), as well as vernal pool fairy shrimp (*Branchinecta lynchi*)[1]. Maintenance of vernal pool hydrology, water quality associated with Salt Creek, and Traver-Willow-Domino soil series is important for these species. Proposed Noncontiguous Habitat Block 7 is constrained by existing urban development and agricultural use. Treatment and management of edge conditions will be necessary to ensure that habitat quality and vernal pool hydrology are maintained as planned land uses are developed along the edge of this habitat block (Dudek 2003).

BACKGROUND

Fairy shrimp are members of the Order Anostraca that are restricted to inland (i.e., non-marine), non-flowing, primarily ephemeral waters (Eriksen and Belk 1999). They produce embryonated resting eggs called "cysts" that allow them to persist in ephemeral waters. These cysts are viable in conditions such as drying, freezing, or digestion by animals. This characteristic allows them to be distributed between pools over great distances either in the digestive tract or via mud on the bodies of other animals such as waterfowl or cattle. The cysts hatch under appropriate environmental conditions for a particular species.

A search of the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB) was conducted prior to initiating the survey effort to determine which listed branchiopod(s) may reside in close proximity to the Project. The search included the Sunnymead, El Casco, Beaumont, Perris, Lakeview, San Jacinto, Romoland, Winchester, and Hemet USGS 7.5-minute

[1] This occurrence is reported in the MSHCP but is not in the CNDDB.

quadrangles (CDFW 2022). Background information on these listed fairy shrimp species is provided below.

Vernal Pool Fairy Shrimp

The USFWS listed the vernal pool fairy shrimp as a Threatened species on September 19, 1994. It is found primarily in the Central Valley and the foothills of the Sierra Nevada Mountains in Northern California north to Oregon (Eriksen and Belk 1999; USFWS 2005a). In Southern California, the species is known only from western Riverside County, the vicinity of Santa Clarita, and the Los Padres National Forest of Ventura County (CDFW 2022). They have been reported at elevations between 25 and 500 feet above msl (USFWS 2005a). The species is usually found in small and shallow vernal pools, although they are sometimes found in a range of natural and artificially created ephemeral habitats such as alkali pools, seasonal drainages, stock ponds, vernal swales, and rock outcrops (USFWS 2005a). They occur in alluvial fans, bedrock, bedrock escarpments, basin rim, floodplain, high terrace, stream terrace, volcanic mudflow, and low terrace formations (USFWS 2005a). Vernal pool fairy shrimp hatch at 50 degree Fahrenheit (10 degrees Celsius) and have been known to reach maturation in as little as 18 days, though 41 days is more typical when water temperature is cooler (Eriksen and Belk 1999). This allows the species to exist in pools that persist for only six to seven weeks in the winter and less in the spring.

The nearest reported occurrence of this species is approximately 4.3 miles to the southwest; this population is presumed extant (CDFW 2022).

On August 6, 2003, the USFWS published a Final Rule designating 839,460 acres of land as critical habitat for the vernal pool fairy shrimp in 21 counties from Oregon south to Ventura County, California (USFWS 2003). Following lawsuits, the USFWS proposed and subsequently finalized a revised critical habitat designation on August 11, 2005. The current final critical habitat designation covers 597,821 acres in 25 counties from Oregon south to Ventura County, California (USFWS 2005a). The Project site is not located in final critical habitat for the vernal pool fairy shrimp.

Riverside Fairy Shrimp

The USFWS listed the Riverside fairy shrimp (*Streptocephalus woottoni*) as an Endangered species on August 3, 1993. The distribution of this species is among the most restricted ranges for any of the fairy shrimp on the west coast. They are known from Ventura, Los Angeles, Orange, western San Diego, and Riverside counties and immediately south of the international border in Baja California, Mexico (USFWS 2005b). They are generally found only in natural and created pools that are deep (greater than 11.8 inches [30 centimeters]). Development and maturation are much slower in this species than other fairy shrimp, with an average of seven to eight weeks to full maturity (Hathaway and Simovich 1996). Due to this slow development, the minimum duration for inundation of a pool that can support Riverside fairy shrimp is nine to ten weeks (Gonzalez et al. 1996; Hathaway and Simovich 1996).

The nearest reported occurrence of this species is approximately 8.7 miles to the southwest; however, this population is listed as extirpated (CDFW 2022). The closest presumed extant population is approximately 12.2 miles to the southwest (CDFW 2022).

On May 30, 2001, the USFWS published a Final Rule designating 6,870 acres of land as critical habitat for the Riverside fairy shrimp in Los Angeles, Orange, Riverside, San Diego, and Ventura Counties (USFWS 2001). USFWS proposed and subsequently finalized a revised critical habitat designation first on April 12, 2005, and again on December 4, 2012. The latter final critical habitat designation currently covers 1,724 acres of land in Orange, San Diego, and Ventura counties (USFWS 2012). The Project site is not located in final critical habitat for Riverside fairy shrimp.

METHODS

The general site assessment was conducted on September 19, 2022, by Psomas Senior Biologist Allison Rudalevige and Psomas Biologist Trevor Bristle. Ms. Rudalevige and Mr. Bristle assessed the Project site and found that the on-site basin provides potential habitat for fairy shrimp; therefore, focused surveys were recommended.

The area surveyed for fairy shrimp consists of two ponding areas on the Project site: Pond 1 and Pond 2 (Exhibits 1 and 2). The USFWS (Carlsbad field office) and the CDFW were notified regarding wet and dry season survey initiation on September 22, 2022. As described above, Pond 1 is an artificial basin that captures runoff from irrigation. Pond 1 was inundated prior to the start of wet season surveys.

Sampling followed the USFWS' *Survey Guidelines for the Listed Large Branchiopods* (USFWS 2017). Psomas Senior Biologist Allison Rudalevige (TE No. 177979-2) performed all surveys. Pond 1 was continuously inundated for 120 days and surveys were performed between October 14, 2022, and February 9, 2023. Pond 2 was initially inundated on November 18, 2022, dried, and was reinundated on December 14, 2022; it held water continuously for 120 days and surveys were completed on April 12, 2023.

The location of each ponding feature was recorded with a Garmin Etrex Vista Global Positioning System (GPS) receiver. During each survey visit, approximate pond surface area, water depth, water temperature, air temperature, and habitat condition were recorded for each feature on USFWS vernal pool data sheets. Photographs of each ponding feature and the surrounding area are included in Attachment A.

Sampling for branchiopod species was performed with the aid of a hand net and/or dip net; the nets were passed through all ponds that retained water at least 1.2 inches (3 centimeters) deep at the time of the survey. Sampling occurred randomly through all portions (e.g., along the margins and throughout the center) of each of the ponds from the bottom to the surface. The net was periodically inspected for fairy shrimp or other aquatic invertebrates.

SURVEY RESULTS

Annual precipitation in 2022/2023 was above average. The region received approximately 16.84 inches of precipitation between May 1, 2022, and April 30, 2023 (data taken from San Jacinto, CA station) (NOAA 2023). The average annual precipitation in the region is 12.20 inches (data averaged from 1991–2020) (NOAA 2023).

Pond 1 and Pond 2 both experienced 120 days of inundation during the 2022/2023 wet season. Pond 1 is an artificial basin collecting irrigation runoff from the adjacent agricultural field, as well as precipitation. Based on historic aerial images, it appears to have been created between 1996 and 2002, filled in between 2002 and 2009, and was recreated in 2009 (NETR 2023). Pond 2 is a slight depressional area adjacent to Pond 1 that was identified to hold water (from irrigation runoff and precipitation) partway through the surveys. This area appears to have been previously graded and tire tracks were observed during the surveys. During periods of high precipitation, Pond 2 overflowed into Pond 1. The ponds' extents shown on Exhibit 1 and 2 represent an intermediate level of inundation. The north end of Pond 1 was periodically dry and Pond 2 varied between a smaller, oval shape; the "U" shape shown; and a continuous surface connection with Pond 1. Table 1 summarizes the results of the survey effort. Attachment B includes the USFWS Vernal Pool Data Sheets.

No listed or non-listed fairy shrimp were observed in Pond 1 or Pond 2 during the survey period. Other aquatic invertebrates observed include Cladocera (i.e., *Daphnia*), Coleoptera, Hemiptera, Culicidae

larvae, and Ephemeroptera larvae. A variety of waterfowl also utilized the ponds, including mallard (*Anas platyrhynchos*), ruddy duck (*Oxyura jamaicensis*), American wigeon (*Mareca americana*), Canada goose (*Branta canadensis*), American coot (*Fulica americana*), and killdeer (*Charadrius vociferus*).

TABLE 1
SUMMARY OF VERNAL POOL BRANCHIOPOD SURVEY RESULTS

Date	Ponding Feature No.	Pond Depth (cm)	Approximate Pond Size (m^2)[b]	Branchiopod Species Detected	Species Density	Number Collected (Males/Females)
October 14, 2022	1 2	25 dry	2,000 n/a	– –	– –	– –
October 19, 2022	1 2	15 dry	1,404 n/a	– –	– –	– –
October 26, 2022	1 2	9 dry	732 n/a	– –	– –	– –
November 2, 2022	1 2	47 dry	2,310 n/a	– –	– –	– –
November 9, 2022	1 2	84 dry	3,042 n/a	– –	– –	– –
November 18, 2022	1 2	55 10	2,332 64	– –	– –	– –
November 23, 2022	1 2	55 8	2,226 36	– –	– –	– –
December 1, 2022	1 2	30 dry	2,240 n/a	– –	– –	– –
December 7, 2022	1 2	20 dry	1,824 n/a	– –	– –	– –
December 14, 2022	1 2	20 4	1,368 36	– –	– –	– –
December 21, 2022	1 2	9 6	1,088 6	– –	– –	– –
December 28, 2022	1 2	14 4	1,056 20	– –	– –	– –
January 4, 2023	1 2	50 15	2,140 144	– –	– –	– –
January 11, 2023	1 2	70 11	2,875 551	– –	– –	– –
January 18, 2023	1 2	120+ 15	3,654 551	– –	– –	– –
January 26, 2023	1 2	110 10	3,375 76	– –	– –	– –
February 1, 2023	1 2	110 8	3,240 57	– –	– –	– –
February 9, 2023[a]	1 2	110 9	3,276 432	– –	– –	– –
February 15, 2023	1 2	n/a 14	n/a 570	– –	– –	– –
February 22, 2023	1 2	n/a 10	n/a 95	– –	– –	– –
March 1, 2023	1 2	n/a 22	n/a 600+	– –	– –	– –
March 8, 2023	1 2	n/a 12	n/a 442	– –	– –	– –

TABLE 1
SUMMARY OF VERNAL POOL BRANCHIOPOD SURVEY RESULTS

Date	Ponding Feature No.	Pond Depth (cm)	Approximate Pond Size (m^2)[b]	Branchiopod Species Detected	Species Density	Number Collected (Males/Females)
March 14, 2023	1 2	n/a 13	n/a 560	– –	– –	– –
March 23, 2023	1 2	n/a 17	n/a 600+	– –	– –	– –
March 31, 2023	1 2	n/a 15	n/a 600+	– –	– –	– –
April 5, 2023	1 2	n/a 15	n/a 600+	– –	– –	– –
April 12, 2023	1 2	n/a 5	n/a 39	– –	– –	– –

cm: centimeters; m^2: square meters; n/a: not applicable; "–" indicates that no fairy shrimp were observed.

[a] Pond 1 experienced 120 days of continuous inundation on February 9, 2023. Data was not collected after this date.
[b] When values for Pond 2 are listed as 600+, the surface water overflowed into Pond 1.

CONCLUSIONS

The results of the wet season surveys conducted for the Project site during the 2022/2023 wet season were negative for listed fairy shrimp. Additionally, no non-listed fairy shrimp were observed. Surveys were conducted during a period of above average precipitation and the two ponds each experienced 120 days of continuous inundation.

According to USFWS protocol, a complete survey consists of one wet season and one dry season survey conducted within a three-year period. Dry season sampling will occur once the substrate in both Pond 1 and Pond 2 have dried sufficiently to avoid damage to cysts.

If you have any comments or questions, please contact Amber Heredia at Amber.Heredia@psomas.com or 714.751.7373.

Sincerely,
PSOMAS

Amber O Heredia
Amber O. Heredia
Senior Project Manager

Allison D. Rudalevige
Allison D. Rudalevige
Senior Biologist

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Allison D. Rudalevige
Allison D. Rudalevige (TE No. 177979-2)
Senior Biologist

August 22, 2023
Date

Enclosures: Exhibit 1 – Project Location
Exhibit 2 – USGS 7.5-Minute Digital Quadrangle
Exhibit 3 – Soil Types
Exhibit 4 – Ponding Features
Attachment A – Representative Photographs
Attachment B – Vernal Pool Data Sheets

cc: Richard Michael, Ramona Dairy, LLC
Justin Garcia, CDFW
Chad Hirano, CDFW
Lacey Greene, CDFW

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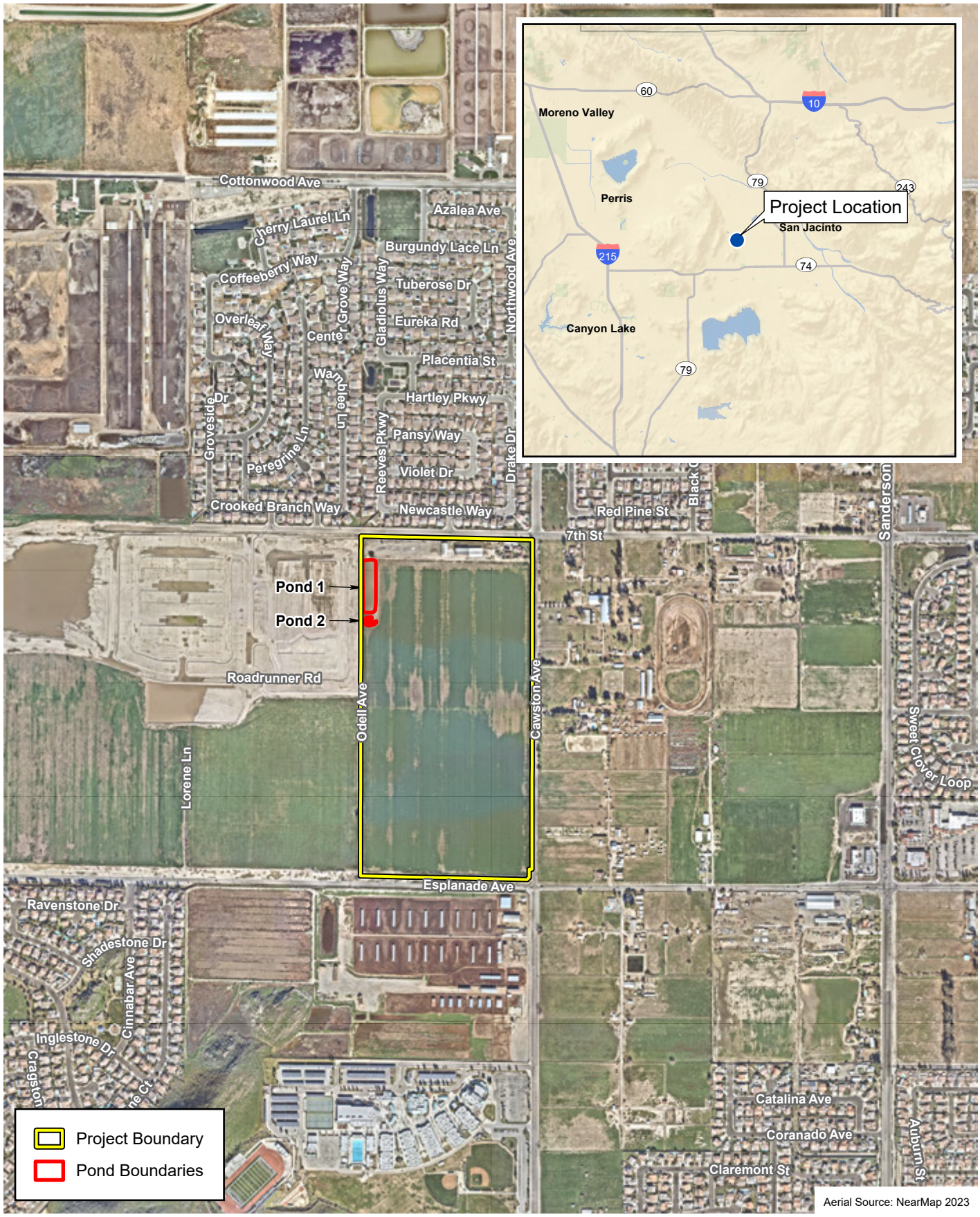

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Project Location

Exhibit 1

Chacon Farms Property

N W E S

1,000 500 0 1,000 Feet

PSOMAS

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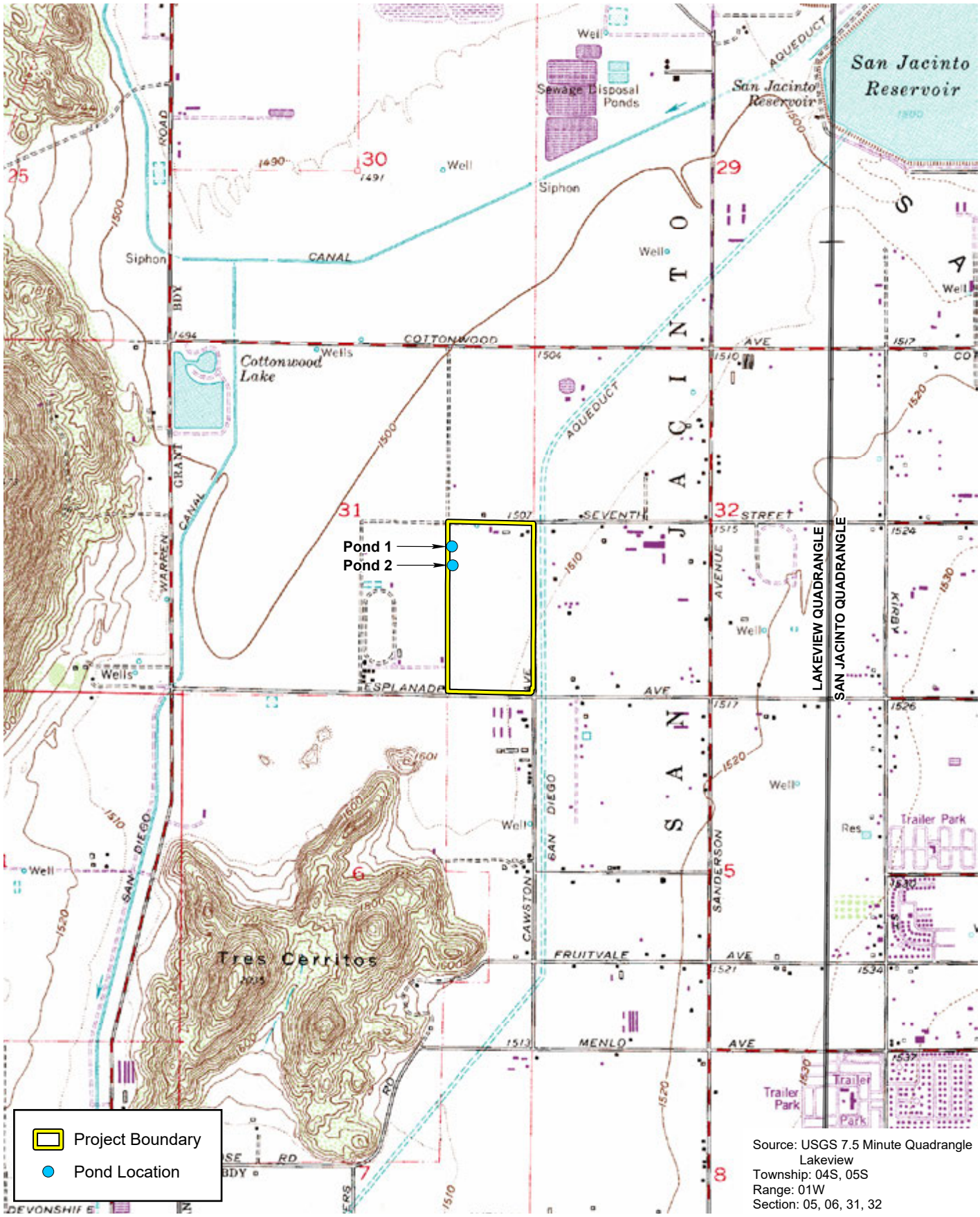

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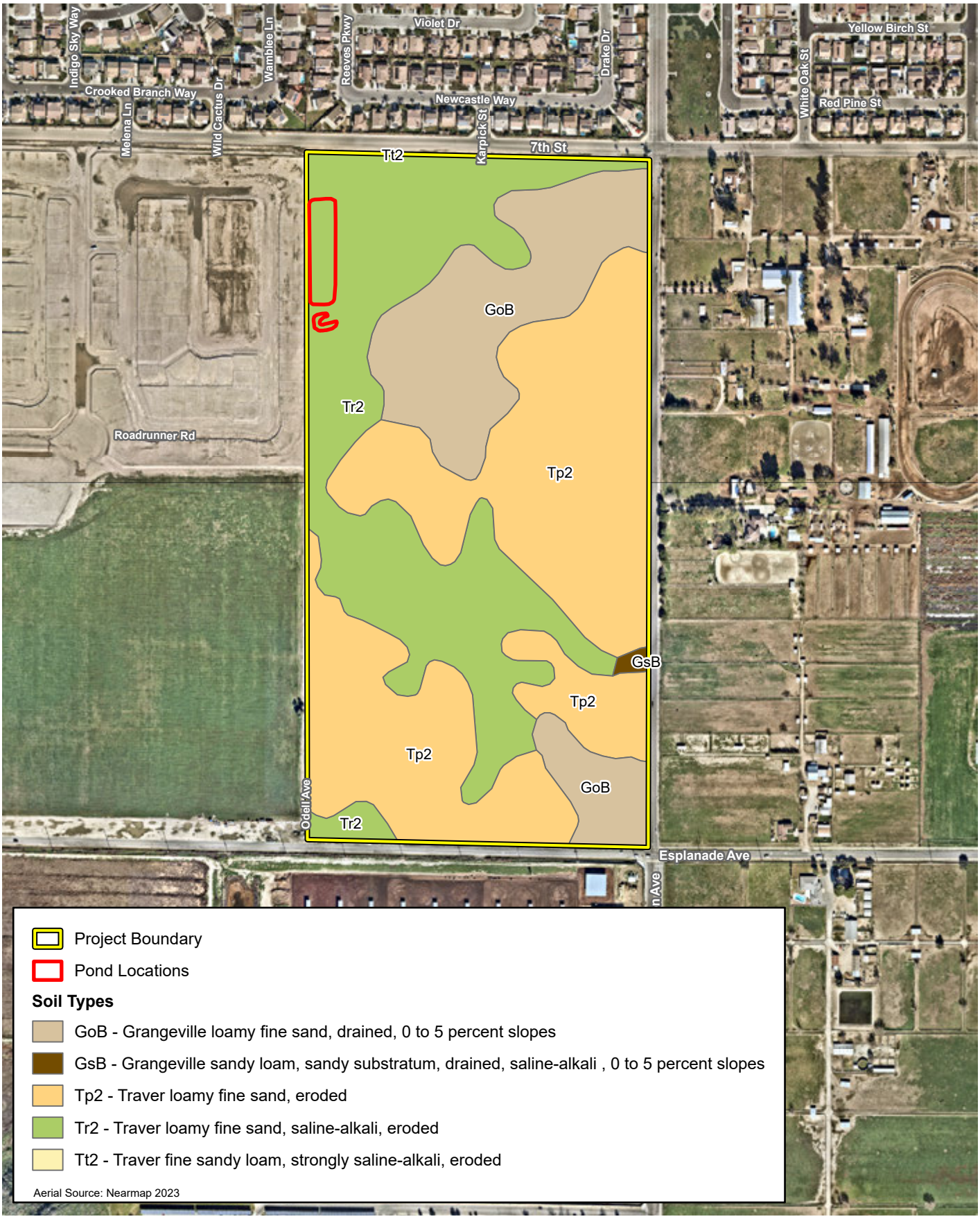
U.S. Geological Survey 7.5-Minute Quadrangle

Exhibit 2

Chacon Farms Property

PSOMAS



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Soil Types

Exhibit 3

Chacon Farms Property

N W E S

500 250 0 500 Feet

PSOMAS

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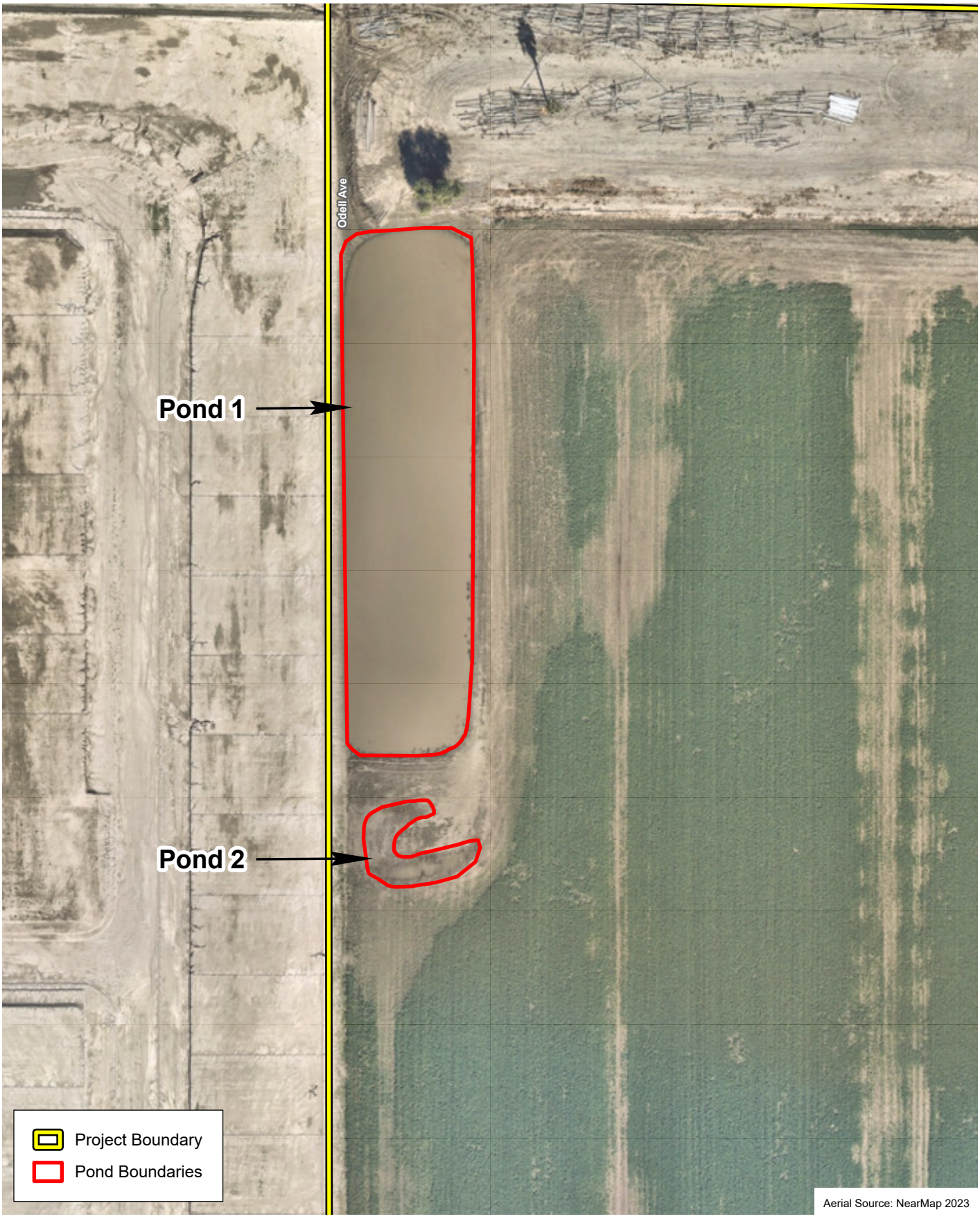

D:\Projects\4RAM_BaseFiles\Chacon_Farms\PRO\Chacon_Farms_Project\Chacon_Farms_Project.aprx\Pond Features Map

Pond Features

Exhibit 4

Chacon Farms Property

N W E S

100 50 0 100 Feet

PSOMAS

(Rev: 8-21-2023 JMC) R:\Projects\4RAM\020100\Graphics\FShrimp\ex_PondFeatures.pdf

ATTACHMENT A

REPRESENTATIVE PHOTOGRAPHS



October 26, 2022. Overview of the northwestern corner of the Project site. Photo taken by Allison D. Rudalevige (ADR) from southeast of 7th Street and Odell Avenue, facing south.



November 23, 2022. Overview of the northwestern corner of the Project site. Photo taken by ADR from southeast of 7th Street and Odell Avenue, facing north.

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Representative Photographs

Attachment A-1

Chacon Farms Property

PSOMAS

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October 26, 2022. Northern side of Pond 1 during a period of low inundation. Photo taken by ADR from southeast of 7th Street and Odell Avenue, facing south.



November 9, 2022. Northern side of Pond 1 during a period of high inundation. Photo taken by ADR from southeast of 7th Street and Odell Avenue, facing south.

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Representative Photographs

Attachment A-2

Chacon Farms Property

PSOMAS

(07/21/2023 JMC) T:\Projects\4RAM\020100\Graphics\FShrimp\ex_AttA.pdf



November 23, 2022. Western side of Pond 2 during a period of relatively low inundation. Photo taken by ADR from southeast of 7th street and Odell Avenue, facing east.



February 15, 2023. Southwestern corner of Pond 2 (foreground) during a period of moderate inundation. Photo taken by ADR from southeast of 7th Street and Odell Avenue, facing northeast.

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Representative Photographs

Attachment A-3

Chacon Farms Property

PSOMAS

(07/21/2023 JMC) R:\Projects\4RAM\020100\Graphics\FShrimp\ex_AttA.pdf

ATTACHMENT B

VERNAL POOL DATA SHEETS

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 10/14/2022 Time: 1120 Weather Conditions: cloudy, cloud 100%, wind 0-1mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	24	20	25	120+	2000	3654					✓	✓	✓	✓			CP	
2	11 S 498182 3737559 WGS84																	NP, D:TT	not inundated

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 10/19/2022 Time: 1000 Weather Conditions: sunny, cloud 0%, wind 0-1mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	28	17	15	120+	1404	3654					✓	✓	✓	✓			CP	
2	11 S 498182 3737559 WGS84																	NP, D:TT	not inundated

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 10/26/2022 Time: 1030 Weather Conditions: sunny, cloud 5%, wind 0-3 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	25	16	9	120+	732	3654					✓		✓	✓			CP	
2	11 S 498182 3737559 WGS84																	NP, D:TT	not inundated

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 11/02/2022 Time: 1100 Weather Conditions: overcast, cloud 100%, wind 2-5 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	15	14	47	120+	2310	3654					✓	✓	✓	✓			CP	
2	11 S 498182 3737559 WGS84																	NP, D:TT	not inundated

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 11/09/2022 Time: 1100 Weather Conditions: sunny, cloud 30%, wind 1-3 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	15	12	84	120+	3042	3654					✓	✓	✓	✓			CP	
2	11 S 498182 3737559 WGS84																	NP, D:TT	not inundated

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 11/18/2022 Time: 1240 Weather Conditions: sunny, cloud 1%, wind 0-2 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	22	13	55	120+	2332	3654					✓			✓			CP	
2	11 S 498182 3737559 WGS84	22	19	10	22	64	600+					✓			✓			NP, D:TT	

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 11/23/2022 Time: 1230 Weather Conditions: sunny, cloud 5%, wind 0-2 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	22	13	55	120+	2226	3654					✓		✓				CP	
2	11 S 498182 3737559 WGS84	22	20	8	22	36	600+					✓			✓			NP, D:TT	

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 12/01/2022 Time: 1230 Weather Conditions: overcast, cloud 90%, wind 1-3 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	10	12	30	120+	2240	3654					✓		✓				CP	
2	11 S 498182 3737559 WGS84																	NP, D:TT	not inundated

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 12/07/2022 Time: 1115 Weather Conditions: overcast, cloud 95%, wind 0-2 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	12	14	20	120+	1824	3654					✓						CP	
2	11 S 498182 3737559 WGS84																	NP, D:TT	not inundated

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 12/14/2022 Time: 1100 Weather Conditions: sunny, cloud 0%, wind 0-2 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	13	10	20	120+	1368	3654					✓		✓				CP	
2	11 S 498182 3737559 WGS84	13	17	4	22	36	600+											NP, D:TT	

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 12/21/2022 Time: 1115 Weather Conditions: sunny, cloud 0%, wind 0-2 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	13	13	9	120+	1088	3654					✓		✓				CP	
2	11 S 498182 3737559 WGS84	13	19	6	22	6	600+					✓						NP, D:TT	

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 12/28/2022 Time: 1200 Weather Conditions: partly cloudy, cloud 45%, wind 1-3 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	14	19	14	120+	1056	3654					✓		✓				CP	
2	11 S 498182 3737559 WGS84	14	20	4	22	20	600+					✓						NP, D:TT	

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 1/4/2023 Time: 1015 Weather Conditions: cloudy, cloud 100%, wind 1-3 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	17	12	50	120+	2140	3654					✓		✓				CP	
2	11 S 498182 3737559 WGS84	17	14	15	22	144	600+											NP, D:TT	

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 1/11/2023 Time: 1130 Weather Conditions: sunny, cloud 60%, wind 0-3 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	14	13	70	120+	2875	3654					✓		✓				CP	
2	11 S 498182 3737559 WGS84	14	14	11	22	551	600+											NP, D:TT	pond "U" shaped

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms | **County:** Riverside | **Quad:** Lakeview | **Township:** 4S | **Range:** 1W | **Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 1/18/2023 | Time: 1215 | Weather Conditions: sunny, cloud 10%, wind 0-2 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	13	15	120+	120+	3654	3654					✓	✓	✓				CP	
2	11 S 498182 3737559 WGS84	13	15	15	22	551	600+					✓						NP, D:TT	pond "U" shaped

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 1/26/2023 Time: 1350 Weather Conditions: sunny, cloud 0%, wind 5-10 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	12	11	110	120+	3375	3654					✓		✓				CP	
2	11 S 498182 3737559 WGS84	12	18	10	22	76	600+					✓	✓					NP, D:TT	

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 2/1/2023 | Time: 1320 | Weather Conditions: sunny, cloud 0%, wind 2-5 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	19	16	110	120+	3240	3654					✓	✓	✓				CP	
2	11 S 498182 3737559 WGS84	19	20	8	22	57	600+					✓	✓					NP, D:TT	

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 2/9/2023 Time: 1010 Weather Conditions: sunny, cloud 0%, wind 1-3 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84	13	12	110	120+	3276	3654					✓		✓				CP	120 days inundation
2	11 S 498182 3737559 WGS84	13	9	9	22	432	600+					✓						NP, D:TT	pond "U" shaped

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 2/15/2023 Time: 1315 Weather Conditions: sunny, cloud 0%, wind 0-2 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84																		>120 days inundation
2	11 S 498182 3737559 WGS84	11	20	14	22	570	600+					✓	✓					NP, D:TT	pond "U" shaped

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 2/22/2023 Time: 1030 Weather Conditions: partly cloudy, cloud 40%, wind 5-8 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84																		>120 days inundation
2	11 S 498182 3737559 WGS84	11	14	10	22	95	600+					✓			✓			NP, D:TT	

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 3/1/2023 Time: 1100 Weather Conditions: cloudy, showers, cloud 100%, wind 5-10 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84																		>120 days inundation
2	11 S 498182 3737559 WGS84	8	10	22	22	600+	600+					✓			✓			NP, D:TT	pond overflowing

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

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Site or Project Name: Chacon Farms | **County:** Riverside | **Quad:** Lakeview | **Township:** 4S | **Range:** 1W | **Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 3/8/2023 | Time: 1030 | Weather Conditions: sunny, cloud 60%, wind 3-5 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84																		>120 days inundation
2	11 S 498182 3737559 WGS84	15	20	12	22	442	600+					✓	✓					NP, D:TT	pond "U" shaped

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 3/14/2023 Time: 0945 Weather Conditions: cloudy, cloud 100%, wind 1-3 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84																		>120 days inundation
2	11 S 498182 3737559 WGS84	17	15	13	22	560	600+					✓						NP, D:TT	pond "U" shaped

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 3/23/2023 Time: 1215 Weather Conditions: cloudy, showers, cloud 100%, wind 1-3 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84																		>120 days inundation
2	11 S 498182 3737559 WGS84	12	15	17	22	600+	600+					✓						NP, D:TT	pond overflowing

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms	**County:** Riverside	**Quad:** Lakeview	**Township:** 4S	**Range:** 1W	**Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 3/31/2023 | Time: 1015 | Weather Conditions: sunny, cloud 10%, wind 0-3 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84																		>120 days inundation
2	11 S 498182 3737559 WGS84	18	15	15	22	600+	600+					✓	✓	✓	✓			NP, D:TT	pond overflowing

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

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Site or Project Name: Chacon Farms | **County:** Riverside | **Quad:** Lakeview | **Township:** 4S | **Range:** 1W | **Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 4/5/2023 | Time: 1130 | Weather Conditions: sunny, cloud 0%, wind 0-3 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84																		>120 days inundation
2	11 S 498182 3737559 WGS84	18	20	15	22	600+	600+					✓			✓			NP, D:TT	pond overflowing

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys For Listed Large Branchiopods

Site or Project Name: Chacon Farms | **County:** Riverside | **Quad:** Lakeview | **Township:** 4S | **Range:** 1W | **Section:** 31,32

SURVEYOR / Permit Number: Allison Rudalevige, TE 177979-2

Date: 4/12/2023 | Time: 1330 | Weather Conditions: sunny, cloud 0%, wind 0-3 mph

Feature ID #	UTM (Northing, Easting, Datum)	Temp (˚C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	11 S 498192 3737627 WGS84																		>120 days inundation
2	11 S 498182 3737559 WGS84	21	20	5	22	39	600+					✓	✓		✓			NP, D:TT	120 days inundation

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = *Linderiella occidentalis*, BRLI = *Branchinecta lindahli)*.
For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.
(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

MEMORANDUM

January 24, 2024

To:
Richard Michael
Ramona Dairy, LLC

From:
Amber Heredia
Allison D. Rudalevige
Psomas

Subject: Summary of Dry Season Soil Collection for Vernal Pool Branchiopods Conducted for the Chacon Farms Property in the City of San Jacinto, California

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This memo summarizes dry season soil collection activities conducted for vernal pool branchiopods (i.e., fairy shrimp) for the Chacon Farms Property (hereinafter referred to as the "Project site") located in the City of San Jacinto in Riverside County, California (Exhibit 1). The Project site is on the U.S. Geological Survey's Lakeview 7.5-minute quadrangle of the San Bernardino Meridian at Township 4 South, Range 1 West, Section 31 and 32 (Exhibit 2). The proposed Project would provide a new residential housing community. The Project's site plan is still under development and subject to change. Currently, the Project plans to retain the on-site retention basin in the northwestern portion of the Project site.

A complete fairy shrimp survey consists of one wet season survey and one dry season survey within a three-year period. Notification of wet and dry season surveys was submitted to the U.S. Fish and Wildlife Service (USFWS) on September 22, 2022. Wet season surveys were performed between October 14, 2022, and April 12, 2023; no fairy shrimp were observed. Soil sampling for dry season surveys was conducted in accordance with the USFWS' *Survey Guidelines for the Listed Large Branchiopods*.[1] Soil samples were collected by Psomas Senior Biologist Allison Rudalevige (TE No. 177979-3), whose permit authorizes collection of an unquantified number of fairy shrimp cysts contained within soil samples pursuant to Special Term and Condition 7.d of the permit noted above.

The sampling area for vernal pool branchiopods was assessed during a general survey for the Project.[2] An artificial basin (Pond 1) was observed in the northwestern corner of the Project site. During wet season surveys, a second area of ponding (Pond 2) was observed just south of the basin. It should be noted that the second area of ponding is a portion of the active agricultural field. Ponding was likely a result of cropland irrigation coupled with the very high rainfall over the 2022–2023 wet season; rainfall in the Project region over the 2022–2023 season was 16.84 inches compared to an average of 12.20 inches (NOAA 2023[3]). Nevertheless, because this area held water over the wet season survey period, dry season samples were collected from the area. Therefore, a total of two features had soils collected for processing (Exhibit 3). Attachment A provides representative photographs of the two sampled features.

Soil samples were collected on August 1, 2023. The number of soil samples collected was based upon the feature size (i.e., maximum area of inundation observed during wet season surveys). Pond 1 had a maximum size of approximately 3,654 square meters and 100 samples were collected. Pond 2 had a maximum size of approximately 600 square meters and 50 samples were collected. Between 50 and 100 milliliters of soil was collected from each of the sampling points. Soils were dry at the time of sampling. The area around Pond 2 had been graded/tilled following the end of the wet season surveys. Intact clumps

1 U.S. Fish and Wildlife Service. 2017 (November 7). *Survey Guidelines for the Listed Large Branchiopods*. Sacramento, CA: USFWS.
2 Psomas. 2022 (November 28). *Habitat Assessment for Chacon Farms Property*. Santa Ana, CA: Psomas.
3 National Oceanic and Atmospheric Administration (NOAA). 2023 (July 5, date accessed). Regional Climate Center (RCC) Agricultural Applied Climate Information System (AgACIS): San Jacinto, CA station. agacis.rcc-acis.org/.

of soil were prioritized for sampling. A hand spade was used to carefully lift soil from the top 1 to 3 centimeters of the soil surface. Care was taken to leave the soil in clumps to protect cysts that might be present. Soil was placed in a ziptop plastic bag, which was labeled and sealed. Soil samples were shipped to Helm Biological Consulting (Brent Helm TE #795930-12) for analysis and culturing. A small number of *Branchinecta* sp. cysts were observed in the soil samples for both features. However, no cysts hatched during processing.

At the suggestion of Helm Biological Consulting, additional soil was collected to increase the number of cysts to increase the probability of collecting cysts that would hatch. On September 29, 2023, additional soil was collected from Pond 2; Pond 1 was inundated at the time. On October 13, 2023, additional soil was collected from Pond 1. Approximately 2/3 of the pond was inundated; soil was collected from dry areas. The additional soil samples were shipped to Helm Biological Consulting for analysis and culturing. The second set of soil samples from Ponds 1 and 2 contained *Branchinecta* sp. cysts. No cysts hatched during processing of Pond 2 samples. A single cyst from Pond 1 hatched and was reared to maturity. It was identified as versatile fairy shrimp (*Branchinecta lindahli*), a common fairy shrimp species. Because only one cyst hatched out of all the cysts in four samples (i.e., two samples for two pond features) that each went through multiple rounds of hatching treatments, the results was determined not adequate to determine whether the federally Threatened vernal pool fairy shrimp (*Branchinecta lynchi*) was present or absent. Therefore, the *Branchinecta* cysts have been transferred to Caren Goldberg (Washington State University) for DNA extraction and analysis using methods optimized in Steele et al. (2009).[4] Sequences will be analyzed for a match with vernal pool fairy shrimp, the federally Threatened species, or versatile fairy shrimp, a common fairy shrimp species. Additionally, a qPCR assay may be used to detect versatile fairy shrimp DNA. Detailed cyst analysis, culturing methods and results, and DNA results will be provided to the USFWS under separate covers.

If you have any questions regarding the content of this memo, please contact Allison Rudalevige at 714.751.7373.

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Allison D. Rudalevige (TE No. 177979-3)
Senior Biologist

Enclosures: Exhibits 1–3
Attachment A – Representative Photographs

cc: Stacey Love, USFWS
Chad Hirano, CDFW

R:\Projects\4RAM\020100\Technical Reports\Fairy Shrimp\Dry Season Memo-012424.docx

[4] Steele, A.N., M.A. Simovich, D. Pepino, K. McNamarra Schroeder, A.G. Vandergast, and A.J. Bohobak. 2009. Optimized DNA Extraction Methods for Encysted Embryos of the Endangered Fairy Shrimp, *Branchinecta sandiegonensis*. *Conservation Genetics* 10:1777–1781.



Aerial Source: NearMap 2023

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Project Location

Exhibit 1

Chacon Farms Property

N W E S

1,000 500 0 1,000 Feet

PSOMAS

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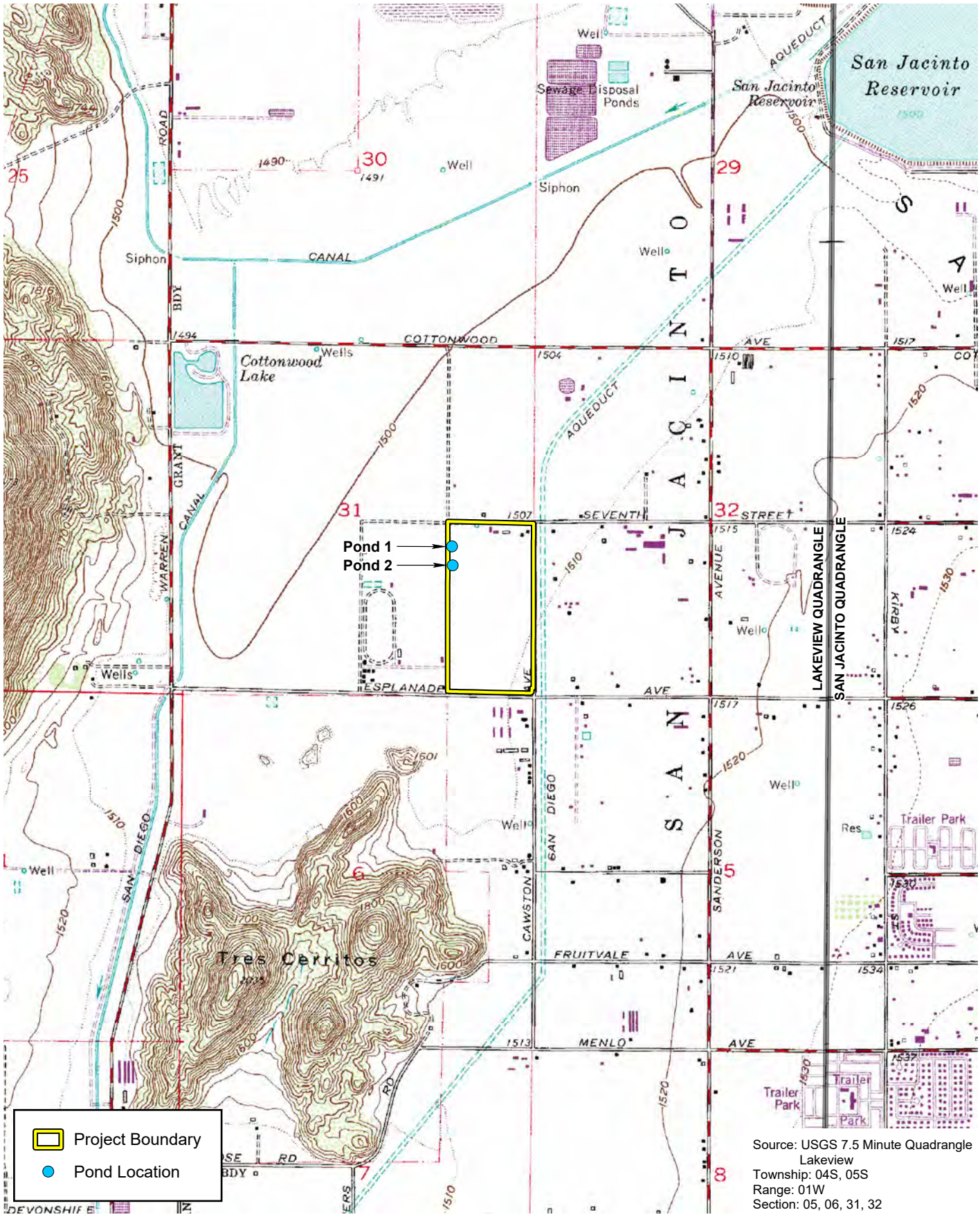

Source: USGS 7.5 Minute Quadrangle
Lakeview
Township: 04S, 05S
Range: 01W
Section: 05, 06, 31, 32

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U.S. Geological Survey 7.5-Minute Quadrangle

Exhibit 2

Chacon Farms Property

N W E S

2,000 1,000 0 2,000 Feet

PSOMAS

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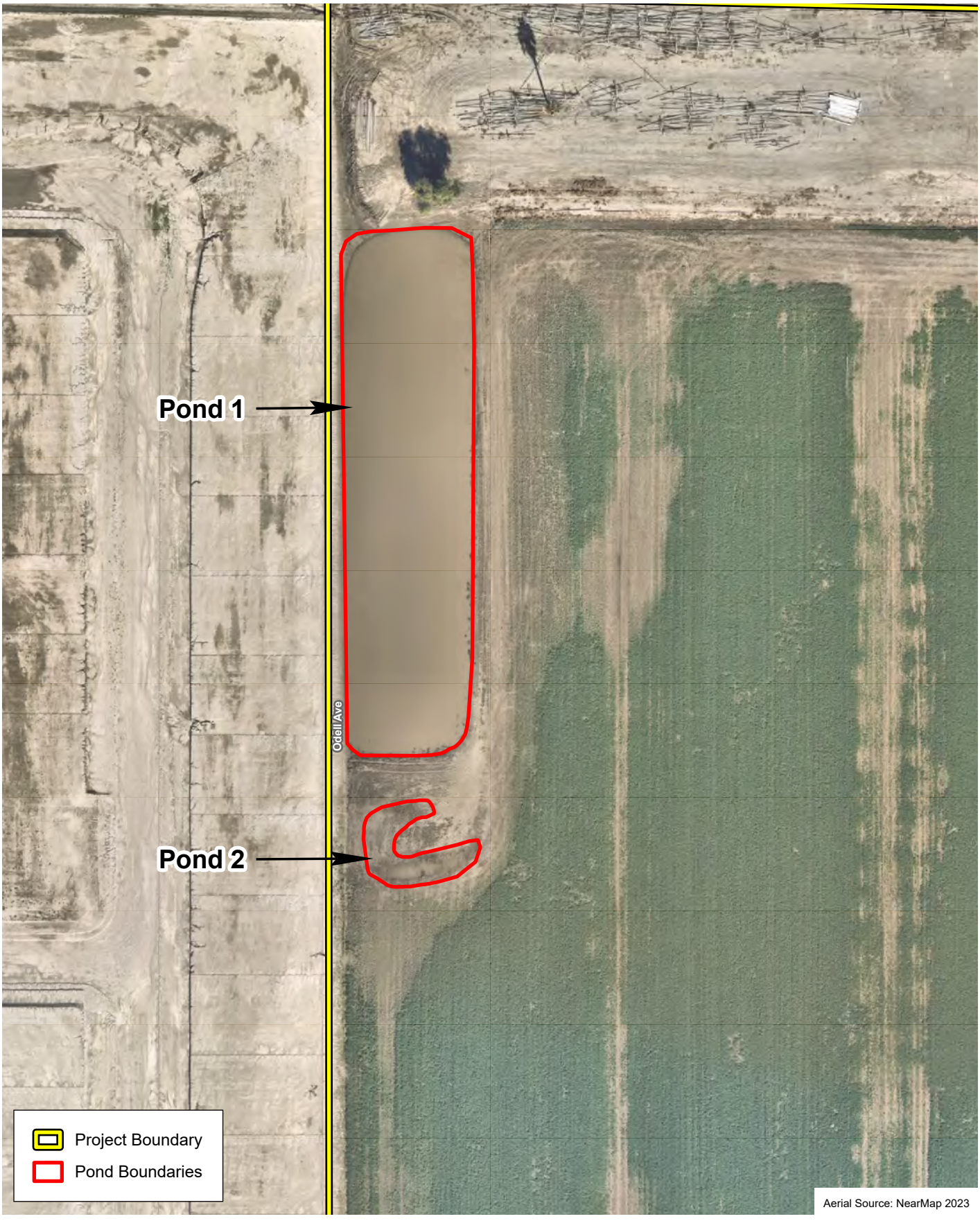

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Pond Features

Exhibit 3

Chacon Farms Property

N
W E
S

100 50 0 100

Feet

PSOMAS

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ATTACHMENT A

REPRESENTATIVE PHOTOGRAPHS



Photo 1. Overview of the northwestern corner of the Project site from southeast of 7th Street and Odell Avenue. Photo taken by Allison D. Rudalevige (ADR) of Pond 1 on August 1, 2023.



Photo 2. Undisturbed soils in Pond 1. Photo taken by Allison D. Rudalevige (ADR) on August 1, 2023.

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Representative Photographs

Attachment A-1

Chacon Farms Property

PSOMAS



Photo 3. Overview of the northwestern portion of the Project site from southeast of 7th Street and Odell Avenue. Photo taken by Allison D. Rudalevige (ADR) of Pond 2 on August 1, 2023.



Photo 4. Overview of the northwestern portion of the Project site from southeast of 7th Street and Odell Avenue. Photo taken by Allison D. Rudalevige (ADR) of Pond 2 on September 29, 2023.

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Representative Photographs

Attachment A-2

Chacon Farms Property

PSOMAS

DRY SOIL ANALYSIS AND CYSTS CULTURING FOR THE DETECTION OF FEDERALLY-LISTED LARGE BRANCHIOPODS AT THE CHACON FARMS-CAWSTON AVENUE PROJECT SITE, HEMET, RIVERSIDE COUNTY, CALIFORNIA



Prepared for:

PSOMAS

PSOMAS
5 Hutton Centre Dr., Ste 300
Santa Ana, CA 92707
***Contact*: Amber Heredia**
(916) 335-0503

***Prepared by*:**

HELM BIOLOGICAL CONSULTING
4600 Karchner Rd, Sheridan, CA 95681

HELM BIOLOGICAL CONSULTING
4600 Karchner Road
Sheridan, CA 95681
***Contact*: Dr. Brent Helm**
(530) 633-0220

February 2024

HELM
BIOLOGICAL CONSULTING
A Tansley Team Division
4600 Karchner Rd, Sheridan, CA 95681

DRY SOIL ANALYSIS AND CYSTS CULTURING FOR THE DETECTION OF FEDERALLY-LISTED LARGE BRANCHIOPODS AT THE CHACON FARMS-CAWSTON AVENUE PROJECT, HEMET, RIVERSIDE COUNTY, CALIFORNIA

INTRODUCTION

Helm Biological Consulting (HBC), a division of Tansley Team, Inc., was contracted by Psomas to perform an analysis of soils and cysts culturing collected from dry seasonally inundated depressions (hereafter "ponds") at the Chacon Farms-Cawston Avenue Project (hereafter "Project"), for the presence of large branchiopods (fairy shrimp, tadpole shrimp, and clam shrimp) that are listed as threatened or endangered under the federal Endangered Species Act (e.g., the endangered Riverside fairy shrimp [*Streptocephalus woottoni*], and the threatened vernal pool fairy shrimp [*Branchinecta lynchi*]).

The Project is located in the City of San Jacinto in Riverside County, California, (Figure 1). The project involves construction of a new residential development. The Project is located on the eastern ½ of the south-eastern ¼ of Section 31, Township 4 South, Range 1 West, and San Bernardino Base & Meridian of the U.S. Geological Survey's (USGS') Lakeview 7.5-minute quadrangle map; approximate center coordinates are: 33.776206, -121923819. The Project is located on Assessor Parcel Numbers 432-260-009, 432-260-026, and 432-260- 027 (Figure 2).

The remainder of this report discusses the methods and results of the soil examinations and subsequent cyst culturing to determine the potential presence of federally-listed large branchiopods at the Project.

"I certify that the information in this survey report and attached exhibits fully and accurately represents my work."

Brent P. Helm Signature _____ Date 2-2-2023
(TE-795930-12)



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Project Location

Exhibit 1

Chacon Farms Property

N W E S

1,000 500 0 1,000 Feet

PSOMAS

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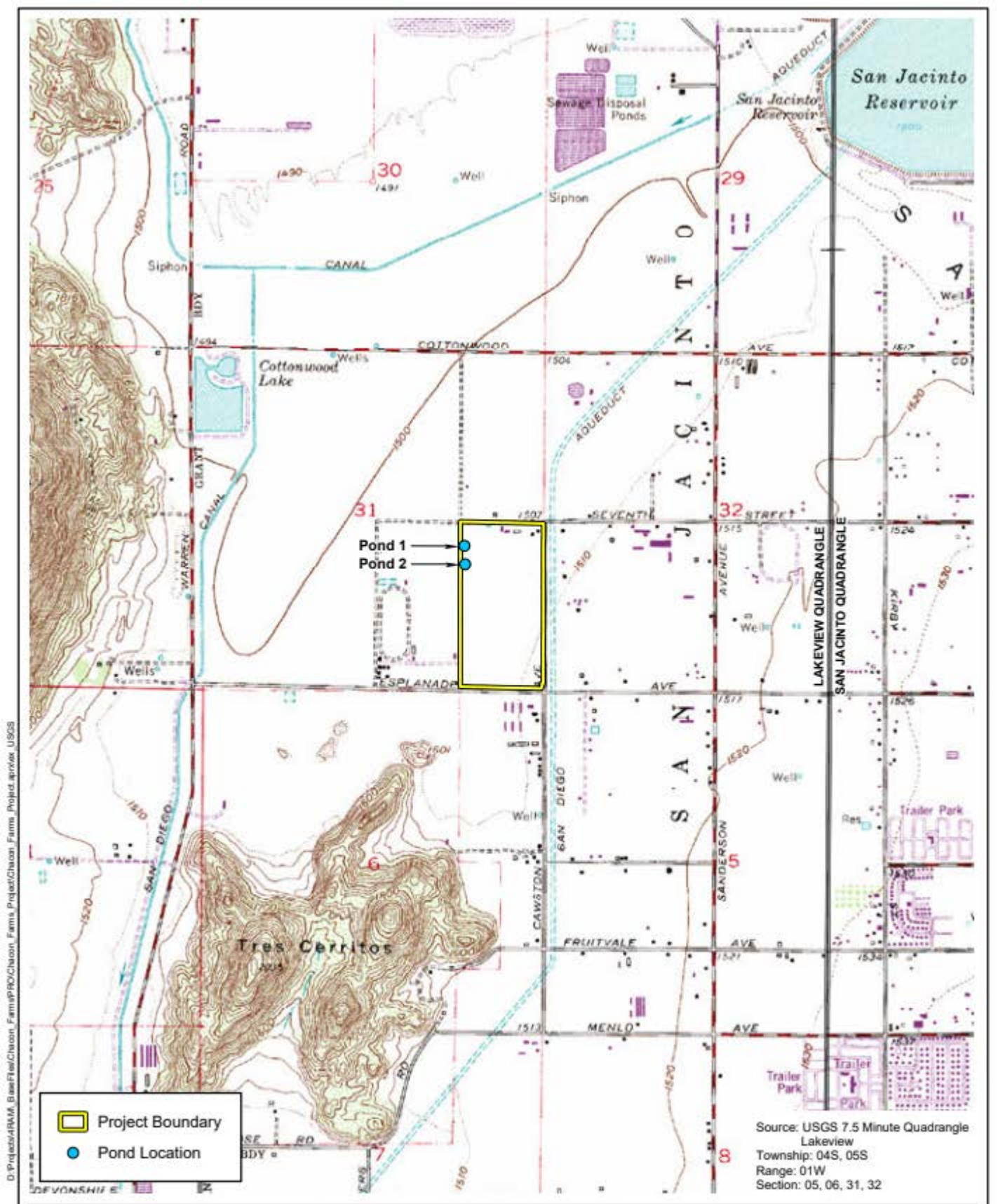

U.S. Geological Survey 7.5-Minute Quadrangle

Exhibit 2

Chacon Farms Property

N W E S

2,000 1,000 0 2,000 Feet

PSOMAS

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METHODS

Methods followed U.S. Fish and Wildlife Service's (USFWS 2017) *Survey Guidelines for Listed Large Branchiopods* for dry-season sampling and consisted of soil collection, processing, and analysis as described below.

SOIL COLLECTION

Dry-season soil samples were collected on August 1, 2023 by Psomas permitted biologist Allison Rudalevige as authorized by USFWS under permit number TE-177979-2 of Section 10(a)(1)(A) of the federal Endangered Species Act (ESA), 16 U.S.C. 1531 *et seq.,* and its implementing regulations (Appendix A). The collected soils were delivered to HBC for subsequent processing and analysis as described below.

SOIL PROCESSING AND ANALYSIS

Soil samples obtained from Psomas were processed and analyzed by Dr. Brent Helm of HBC under recovery permit numbers TE-795930-12 of Section 10(a)(1)(A) of the federal Endangered Species Act (ESA), 16 U.S.C. 1531 *et seq.,* and its implementing regulations. In HBC's laboratory, a brine solution was prepared by mixing table salt (NaCl) with lukewarm tap water in a large container. The collected soil material was placed in the brine solution. The soil material was then gently worked by hand to breakdown any persistent soil structure. The organic material rising to the top of the brine solution was skimmed off and placed in a 600-micron diameter pore-size sieve stacked atop a 75-micron diameter pore-size sieve. The soil material was processed through the top sieve by flushing it with lukewarm tap water while gently rubbing it with a soft-bristle brush. The soil retained from the 75-micron diameter pore size sieve was then removed and thinly (≈1.0 mm) spread into plastic petri dishes.

The contents of each petri dish were examined under a 10 to 252-power zoom binocular microscope. A minimum of 0.5-hour was spent searching the contents of each petri dish for large branchiopod cysts (embryonic eggs). Dr. Helm's large branchiopod cyst reference collection and scanning electron micrographs of cysts (Belk 1989, Brendock *et al*. 2008, Gilchrist 1978, Hill and Shepard 1998, Mura 1991, Thiery *et al.* 1995, and Rabet 2010) were used to identify and compare any cysts observed within the soil samples. This processing method (described above) favors the detection of cysts belonging to the genera *Branchinecta*, *Lepidurus*, and *Streptocephalus* since these three genera have species that are federally listed. However, this method is less precise in detecting the presence of *Linderiella* cysts since they are fragile and often lose their spines in the process, rendering their external cyst morphology similar to other invertebrates (e.g., copepods and hydracarina) eggs/cysts. Evidence of other aquatic macroinvertebrates encountered was also noted on the laboratory data sheet.

CYST CULTURING

Petri dishes containing soils with *Branchinecta* cysts were placed into individual six-quart plastic containers. The soils were saturated with 50° F well water (non-chlorinated) and allowed to dry. This saturation and drying process was repeated three times. The soils were then inundated completely with 50° F well water. The containers holding the inundated soils were inserted into an environmental chamber. The environmental chamber controls were set to mimic the winter light, humidity, and temperature fluctuations of the Project's vicinity. The contents of the containers were monitored daily for fairy shrimp hatchlings (instars).

If no hatchlings were observed after ten (10) days, the containers were removed from the environmental chamber and the soils were allowed to completely dry before reinitiating the hatching process described above. A total of three hatching attempts were performed on each soil sample.

Fairy shrimp hatchlings were feed ground fish food and reared in the environmental chamber until they were mature enough to be identified using dichotomous keys and diagrams from "Fairy Shrimps of California's Puddles, Pools, and Playas" (Eriksen and Belk 1999) and two more recent publications concerning the identification of San Diego fairy shrimp (*Branchinecta sandiegonensis*) (Simovich *et al.* 2013, Patel *et al.* 2018); along with comparisons to Dr. Helm's large branchiopod reference collection.

RESULTS

SOIL COLLECTION

Soils were collected from two targeted ponds onsite that could potentially support federally-listed large branchiopods (Figure 3).

SOIL ANALYSIS

Visual examinations of the soils after processing revealed the presence of cysts belonging to the genus *Branchinecta* in both of the ponds sampled (Table 1). Representative photographs of the ponds sampled are provided in Appendix B.

CYST CULTURING

The non-special status versatile fairy shrimp (*Branchinecta lindahli*) was successfully hatched and raised to maturity from one of the two pond soils that were observed to have *Branchinecta* cysts (Table 2).

Table 1. Results of Soil Examinations For PSOMAS-Chacon Farms-Caw ston Ave Project

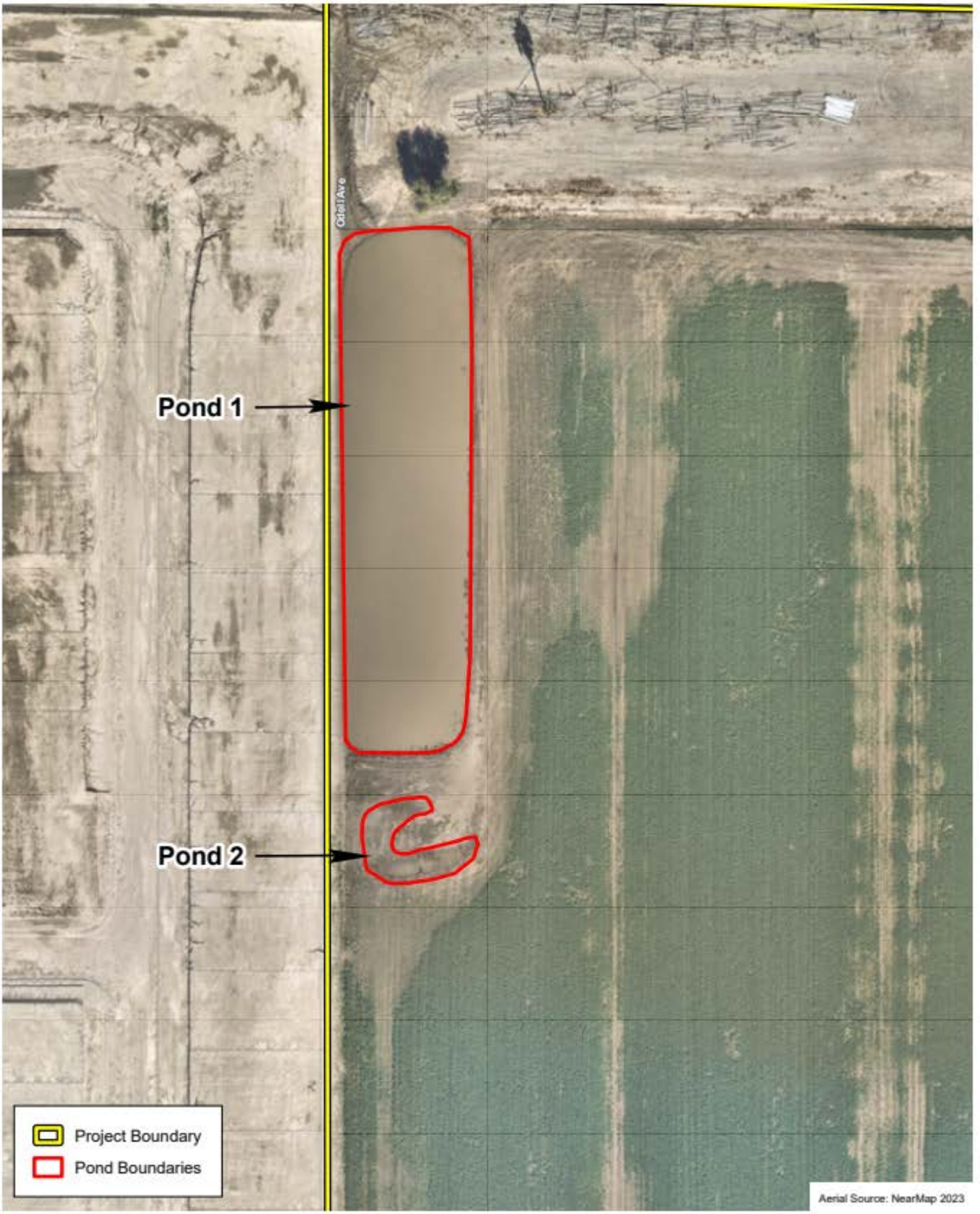
Pond No.	Insect Exo-Skeletons	Cladocera Ephippia	Ostracods Live/Cysts/ Carapaces	Branchiopod (*Branchinecta* sp.)	Nematoda	Collembola
Pond 1	X	X	X	*Med*	X	X
Pond 2	X	X		*Med*	X	X
X=Present						

*Abundance categories are derived from USFWS's Survey Guidelines for the Listed Large Branchiopods - Section VI(d) (none = no cysts found in sample; low abundance = estimate of 1-10 cysts/100 ml soil; medium abundance = estimate of 11-50 cysts/100 ml soil; high abundance = estimate of more than 50 cysts/100 ml soil)

Table 2. Cyst Culturing Results from Soils Collected at the Chacon Farms- Cawston Avenue Project, Riverside County, California

	Hatching Round #									Total		
	1			2			3					
Pond #	# of BRsp Hatched	# of Identified BRLI Male	Female	# of BRsp Hatched	# of Identified BRLI Male	Female	# of BRsp Hatched	# of Identified BRLI Male	Female	# of BRsp Hatched	# of Identified BRLI Male	Female
1	0	0	0	0	0	0	1	1	0	1	1	0
2	0	0	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**1**	**1**	**0**

Note: BRsp = Immature *Branchinecta* sp., BRLI = versatile fairy shrimp (*Branchinecta lindahli*)



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Pond Features

Exhibit 4

Chacon Farms Property

N W E S

100 50 0 100 Feet

PSOMAS

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DISCUSSION

For more conclusive evidence of the absence of federally-listed fairy shrimp, the *Branchinecta* cysts were sent to Dr. Caren Goldberg of Washington State University at the request of Psomas.

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Thiery, A., J. Brtek, and C. Gasc. 1995. Cysts morphology of European branchiopods (Crustacea: Anostraca, Notostraca, Spinicaudata, Laevicaudata). Bulletin du Muséum national d'histoire naturelle.17 (1-2): 107-140.

U.S. Department of the Interior, U.S. Fish and Wildlife Service (USFWS). 2017. Survey guidelines for the listed large branchiopods. 24 pp. Dated: 31 May 2015 (Revised November 13, 2017).

APPENDIX A.
USFWS AUTHORIZATION LETTER

PSOMAS

Balancing the Natural and Built Environment

September 22, 2022

Stacey Love
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

VIA EMAIL
Stacey_Love@fws.gov

Subject: Notification of Wet and Dry Season Vernal Pool Branchiopod Surveys for the Cawston Avenue Property in the City of San Jacinto, Riverside County, California

Dear Ms. Love:

This letter is to inform the U.S. Fish and Wildlife Service (USFWS) that Psomas anticipates conducting wet and dry season surveys for vernal pool branchiopods (i.e., fairy shrimp) for the Cawston Avenue Property (hereinafter referred to as the "project site") within 15 days of receipt of this notification. The project site is located in the City of San Jacinto in Riverside County, California, (Exhibit 1). The project involves construction of a new residential development. The Project site is located on the U.S. Geological Survey's (USGS') Lakeview 7.5-minute quadrangle at Township 4 South, Range 1 West, Section 31 (Exhibit 2). The Project is located on Assessor Parcel Numbers 432-260-009, 432-260-026, and 432-260-027. One ponding feature (approximately 1 acre in size) was observed during a general habitat assessment and will be sampled. This feature is an artificial depression that appears to receive irrigation runoff from the surrounding agriculture fields. Inundation was observed during the habitat assessment performed on September 19, 2022.

Survey methods will follow current USFWS survey protocol. A wet season survey will be initiated within 15 days of this notification, given the presence of inundation on September 19, 2022. If the ponding feature dries over the course of the survey, the site will be monitored for inundation following rain events. Per permit authorization, no more than 20 individuals of each species (or less than 50 percent of the estimated subpopulation) will be collected from each feature per sampling visit. Collection of soil samples will occur when the soil is dry. Processing and identification of vernal pool branchiopods to species will use high resolution microscopy and hydration/hatching/rearing of individual eggs. Permitted Biologist Allison Rudalevige (TE #177979-2) will perform the wet season survey and collect the soil samples; authorization to collect an unquantifiable number of vernal pool branchiopod eggs contained within soil samples is given in Special Terms and Conditions 7.d of Ms. Rudalevige's permit. Permitted Biologist Brent Helm (TE #795930-10.2) will process the soil samples and hydrate/hatch/rear/identify the eggs.

5 Hutton Centre Drive
Suite 300
Santa Ana, CA 92707

Tel 714.751.7373
Fax 714.545.8883
www.Psomas.com

Please contact Amber Heredia or Allison Rudalevige at (714) 751-7373 if you have any questions.

Sincerely,
PSOMAS

Amber O. Heredia
Senior Project Manager

Allison D. Rudalevige
Senior Biologist
(Permit No. TE# 177979-2)

Attachments: Exhibits 1 and 2

cc: Justin Garcia, CDFW
Richard Michael, Ramona Dairy, LLC

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APPENDIX B.
REPRESENTATIVE PHOTOGRAPHS



(Above) Photo of Pond 1 taken from the north end facing south, taken by Psomas senior biologist, Allison Rudalevige. (Below) Photo of Pond 2 taken from the west end facing east, taken by Psomas senior biologist Allison Rudalevige.



Fairy Shrimp Species Identification

Report to PSOMAS (Amber Heredia amber.heredia@psomas.com)

Caren Goldberg and Mary Sterling

February 21, 2024

Context: As communicated during contracting, we are an academic lab that has not previously worked with fairy shrimp cysts or *B. lynchi.* Because we do not have a positive control or validated assay for *B. lynchi*, we ran several tests.

Conclusion:

Sequences and qPCR results confirm that one of the samples from Pond 2 was *B. lindahli.* We cannot conclude anything about the other samples.

Methods and Results:

We received fairy shrimp cysts on January 23, 2024, that had gone through three rounds of processing under a variety of temperature/humidity conditions prior to being sent to us.

We used techniques from Steele et al. (2009) to extract DNA from the embryos in 35 of the cysts. Specifically, while using a dissecting scope, we soaked each cyst in bleach for 5-10 minutes until the outer capsule had separated from the embryo and transferred to an NaCl detergent for another 5 minutes before transferring to 1.5 mL pop top tube. We then followed the Qiagen Supplementary Protocol: Purification of total DNA from insects using the DNeasy Blood & Tissue Kit.

Samples run in a 1% gel did not produce visible bands, indicating no or very low quantities of DNA recovered.

Samples were analyzed with a qPCR assay for *B. lindahli* and one sample from Pond 2 tested positive. However, this assay has not been fully validated against *B. lynchi*.

We attempted to amplify all DNA extracts using J-2 and 2198-2 primers (Steele et al. 2009). The PCR reaction contained 1x Qiagen Multiplex PCR Mastermix, 0.2µM of each primer, 3µl of DNA per sample and 6.2µl of water to reach final volume of 20µl. The thermocycling profile was 95°C for 15 min followed by 50 cycles of 94°C denaturing for 30 s, 51°C annealing for 90 s, 72°C extension for 1 minute; final extension was 60°C for 30 min. This resulted in an amplicon for 2 of the samples as visualized in a 2% gel, both from Pond 2 and including the sample that had tested positive in qPCR. These amplicons were Sanger sequenced and the one that also tested positive in qPCR resulted in a match to *B. lindahli*, with a query cover of 96% and percentage of identity of 99.84%. This sequence differed from *B. lynchi* at many locations. The other sequence did not match anything in Genbank.

Finally, samples were tested following the methods for *B. lynchi* amplification from Deiner et al. (2017), using COI-FS-intF and BrUniR (2042) (Vandergast et al. 2009). The PCR reaction contained 1x Qiagen Multiplex PCR Mastermix, 0.2µl of 10uM each primer, 3µl of DNA per sample and 6.2µl of water to reach final volume of 20µl. The thermocycling profile was 95°C for 15 min followed by 50 cycles of 94°C denaturing for 30 s, 50°C annealing for 1 min 30 s, 72°C extension for 1 minute; final extension was 60°C

for 30 min. In a 2% agarose gel, only positive controls for *B. lindahli* and *B. sandiegonensis* produced products; all DNA extractions from cysts tested negative.

Literature cited

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APPENDIX C

SPECIAL STATUS PLANT SURVEYS

August 22, 2023

Richard Michael
Ramon Dairy, LLC
2452 Ramona Expressway
San Jacinto, California 92582

VIA EMAIL
richard@homealaska.net

Subject: Results of Special Status Plant Surveys for the Chacon Farms Property in the City of San Jacinto, Riverside County, California

Dear Mr. Michael:

This Letter Report presents the results of focused surveys for special status plant species for the Chacon Farms Property (hereinafter referred to as the "Project site") located in the City of San Jacinto in Riverside County, California (Exhibit 1). The purpose of the surveys was to determine the presence or absence of special status plant species on the Project site.

PROJECT LOCATON AND DESCRIPTION

The Project site is located north of Esplanade Avenue, west of Cawston Avenue North, South of 7th Street, and east of an unimproved road through agricultural land (Odell Avenue) in the City of San Jacinto in Riverside County, California (Exhibit 1). The Project site is an approximately 75.6-acre property and includes Assessor Parcel Numbers 432-260-009, 432-260-026, and 432-260-027. The Project site is located on the U.S. Geological Survey's (USGS') Lakeview 7.5-minute quadrangle of the San Bernardino Meridian at Township 4 South, Range 1 West, Section 31 and 32 (Exhibit 2).

The proposed Project would provide a new residential housing community. The site plan is still under development and subject to change. Currently, the Project plans to retain the on-site retention basin in the northwestern portion of the Project site.

The Project is located in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) area, specifically, within the San Jacinto Valley Area Plan. The City of San Jacinto is a signatory to the MSHCP; therefore, the Project would be subject to the provisions of the MSHCP. The Project site is not located within an MSHCP Criteria Cell; the nearest Criteria Cell is approximately 0.25 miles southwest of the Project site. According to the Western Riverside County Regional Conservation Authority MSHCP Information Mapping Application (2023), the Project site is required to be assessed for Narrow Endemic plant species.

EXISTING CONDITIONS

Topography on the Project site is relatively flat with an elevation of approximately 1,500 to 1,510 feet above mean sea level. Soils mapped on the Project site include Grangeville loamy fine sand, drained, 0 to 5 percent slopes; Grangeville sandy loam, sandy substratum, drained, saline-alkali, 0 to 5 percent slopes; Traver loamy fine sand, eroded; Traver loamy fine sand, saline-alkali, eroded; and Traver fine sandy loam, strongly saline-alkali, eroded (Exhibit 3).

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The Project site contains the following vegetation types and other areas: field croplands, valley and foothill grassland, disturbed, and developed. The agricultural field is periodically tilled or disced. Representative site photos of the Project site are included in Attachment A. Surrounding land uses include dairies, agricultural, residential, and rural residential. Active construction was occurring on the property to the west at the time of the field surveys.

There is a basin in the northwest corner of the Project site. This area was reviewed in the field and was found to be an artificial basin with no riparian vegetation present at the time of the survey. The artificial basin undergoes routine maintenance and appears to have been plowed multiple times in the past based on historical aerials. The main source of water for this basin appears to be irrigation from the adjacent agricultural fields; no natural inlet or outlet was observed in the field.

The Project site occurs approximately 1,375 feet (0.25 mile) northeast of MSHCP Criteria Cell 3291. Cell 3291 contributes to Proposed Noncontiguous Habitat Block 7. Conservation within this Cell Group focuses on grassland habitat. Proposed Noncontiguous Habitat Block 7 is comprised of a complex of vernal pools west of the City of Hemet. These parcels preserve important populations of Narrow Endemic plant species, including Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), thread-leaved brodiaea (*Brodiaea filifolia*), little mousetail (*Myosurus minimus* ssp. *apus*), California Orcutt grass (*Orcuttia californica*), and spreading navarretia (*Navarretia fossalis*), as well as vernal pool fairy shrimp (*Branchinecta lynchi*). Maintenance of vernal pool hydrology, water quality associated with Salt Creek, and Traver-Willow-Domino soil series is important for these species. Proposed Noncontiguous Habitat Block 7 is constrained by existing urban development and agricultural use. Treatment and management of edge conditions will be necessary to ensure that habitat quality and vernal pool hydrology are maintained as planned land uses are developed along the edge of this habitat block (Dudek 2003).

According to the Western Riverside County Regional Conservation Authority MSHCP Information Mapping Application (2023), the Project site is required to be assessed for the following Narrow Endemic plant species: Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), many-stemmed dudleya (*Dudleya multicaulis*), spreading navarretia (*Navarretia fossalis*), Californica Orcutt grass (*Orcuttia californica*), and Wright's trichocoronis (*Trichocoronis wrightii*). Of these Narrow Endemic plant species, San Diego ambrosia, spreading navarretia, California Orcutt grass, and Wright's trichocoronis were determined to have limited potential to occur based on the presence of marginally suitable habitat (i.e., the on-site basin and/or margins of the agricultural field). Focused botanical surveys would be required to determine the presence or absence of these species on the Project site. Munz's onion and many-stemmed dudleya would not be expected to occur based on lack of suitable habitat.

SURVEY METHODS

Botanical surveys were floristic in nature and consistent with the protocols created by the California Department of Fish and Wildlife (CDFW; CDFW 2018).

Prior to the field surveys, a literature search was conducted to identify special status plant species reported from the vicinity of the Project site. As discussed above, the following Narrow Endemic plant species were determined to have potential to occur on the Project site: San Diego ambrosia, spreading navarretia, California Orcutt grass, and Wright's trichocoronis. The Project site was also assessed for special status plant species not covered by the MSHCP. Sources reviewed include the USGS Lakeview, San Jacinto, Winchester, and Hemet 7.5-minute quadrangles in the California Native Plant Society's Inventory of Rare and Endangered Plants (CNPS 2023) and the CDFW's California Natural Diversity Database (CDFW 2023a).

Annual precipitation in 2022/2023 was above average. The region received approximately 16.84 inches of precipitation between May 1, 2022, and April 30, 2023 (data taken from San Jacinto, CA station) (NOAA 2023). The average annual precipitation in the region is 12.20 inches (data averaged from 1991 – 2020) (NOAA 2023).

Reference populations are monitored for annual and difficult-to-detect target species to ensure that the surveys were comprehensive. This is especially relevant during periods of unusual rainfall patterns or below average rainfall. If conditions at a nearby reference population are suitable for germination and growth, then it can be inferred that conditions would also be suitable on the survey area. Reference populations were not monitored for species with a California Rare Plant Rank (CRPR) of 3 or 4 or for species lacking a publicly accessible reference population. San Diego ambrosia was observed in a vegetative state in Lake Elsinore on April 26, 2023. Reference populations for other target species (spreading navarretia and Wright's trichocoronis) at publicly-accessible locations have been unreliable in recent years.

Surveys were conducted on May 3 and July 6, 2023, by Psomas Senior Biologist Allison Rudalevige. The total number of person-hours spent surveying was approximately 3 hours. A systematic survey was conducted in all areas of suitable special status plant habitat in the survey area. All plant species observed were recorded in field notes. Plant species were identified in the field or collected for future identification. Plants were identified to the taxonomic level necessary to determine whether they were a special status species. Plants were identified using taxonomic keys, descriptions, and illustrations in Jepson Flora Project (2022) and Baldwin et al. (2012). Nomenclature of plant taxa conform to the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2023b) for special status species and the Jepson eFlora (Jepson Flora Project 2022) for all other taxa.

Any special status plant species observed would have been mapped on an iPad loaded with Avenza Maps software or with a handheld Garmin Global Positioning System (GPS) unit. Data would have been collected on the number and phenology of individuals (estimated for large populations) and microsite characteristics (e.g., slope, aspect, soil texture, surrounding habitat, and associated species).

SURVEY RESULTS

No special status plant species were observed during the surveys. Table 2 identifies the special status plants reported from the literature review with their potential to occur on the Project site and the survey results. A list of all plants observed in the survey area during special status plant surveys is included in Attachment B.

Although reference populations and regional rainfall amounts were monitored to ensure the scientific adequacy of these focused surveys, there is always a minimal potential for false negative survey results as species could possibly be present on a project site but may not be detectable at the time of the surveys.

TABLE 2
SPECIAL STATUS PLANT SPECIES REPORTED
FROM THE PROJECT SITE VICINITY

Species	Federal Status	State Status	California Rare Plant Rank	MSHCP Coverage	Habitat*	Potential to Occur in the Survey Area; Results of the Surveys
Abronia villosa var. *aurita* chaparral sand-verbena	—	—	1B.1	Not Covered	Sandy areas in chaparral, coastal scrub, desert dunes. Blooms: (January) March – September.	Not expected to occur; no suitable habitat.
Allium munzii Munz's onion	FE	ST	1B.1	Narrow Endemic	Clay and mesic areas in chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland. Blooms: March – May.	Not expected to occur; no suitable habitat.
Ambrosia pumila San Diego ambrosia	FE	—	1B.1	Narrow Endemic	A variety of substrates (including alkaline, clay, loam, and sand) in chaparral, coastal scrub, valley and foothill grassland, vernal pools, and often disturbed areas. Blooms: April – October.	Not expected to occur because not observed during focused surveys; marginally suitable habitat.
Deinandra paniculata paniculate tarplant	—	—	4.2	Not Covered	Usually vernally mesic, sometimes sandy substrate in coastal scrub, valley and foothill grassland, and vernal pools. Blooms: (March) April – November.	Not expected to occur because not observed during focused surveys; marginally suitable habitat.
Dudleya multicaulis many-stemmed dudleya	—	—	1B.2	Narrow Endemic	Heavy, often clayey soils or grassy slopes in chaparral, coastal scrub, valley and foothill grassland. Blooms: April – July.	Not expected to occur; no suitable habitat.
Imperata brevifolia California satintail	—	—	2B.1	Not Covered	Mesic areas in chaparral, coastal scrub, meadows and seeps, Mojavean desert scrub, riparian scrub. Blooms: September – May.	Not expected to occur; no suitable habitat.

TABLE 2
SPECIAL STATUS PLANT SPECIES REPORTED
FROM THE PROJECT SITE VICINITY

Species	Federal Status	State Status	California Rare Plant Rank	MSHCP Coverage	Habitat*	Potential to Occur in the Survey Area; Results of the Surveys
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	—	—	4.3	Not Covered	Dry soils in chaparral and coastal scrub. Blooms: January – July.	Not expected to occur because not observed during focused surveys; marginally suitable habitat.
Navarretia fossalis spreading navarretia	FT	—	1B.1	Narrow Endemic	Chenopod scrub, marshes and swamps, playas, vernal pools. Blooms: April – June.	Not expected to occur because not observed during focused surveys; marginally suitable habitat.
Orcuttia californica California Orcutt grass	FE	SE	1B.1	Narrow Endemic	Vernal pools. Blooms: April – August.	Not expected to occur because not observed during focused surveys; marginally suitable habitat.
Parkinsonia microphylla little-leaved palo verde	—	—	4.3	Not Covered	Mojavean desert scrub. Blooms: April – May.	Not expected to occur; no suitable habitat.
Pseudognaphalium leucocephalum Salt Spring white rabbit-tobacco	—	—	2B.2	Not Covered	Gravelly and sandy areas of chaparral, cismontane woodland, coastal scrub, riparian woodland. Blooms: (July) August – November (December)	Not expected to occur; no suitable habitat.
Sidalcea neomexicana Salt Spring checkerbloom	—	—	2B.2	Not Covered	Alkali springs and marshes in playas, chaparral, coastal scrub, lower montane coniferous forest, and Mojavean desert scrub. Blooms: March – June.	Not expected to occur because not observed during focused surveys; marginally suitable habitat.
Tortula californica California screw moss	—	—	1B.2	Not Covered	Sandy areas in chenopod scrub, valley and foothill grassland.	Not expected to occur; no suitable habitat.

TABLE 2
SPECIAL STATUS PLANT SPECIES REPORTED
FROM THE PROJECT SITE VICINITY

Species	Federal Status	State Status	California Rare Plant Rank	MSHCP Coverage	Habitat*	Potential to Occur in the Survey Area; Results of the Surveys
Trichocoronis wrightii Wright's trichocoronis	—	—	2B.1	Narrow Endemic	Marshes and swamps, meadows and seeps, riparian forest, vernal pools. Blooms May – September.	Not expected to occur because not observed during focused surveys; marginally suitable habitat.

MSHCP: Multiple Species Habitat Conservation Plan
LEGEND:

Federal Status		**State Status**	
FE	Endangered	SE	Endangered
FT	Threatened	ST	Threatened

California Rare Plant Rank (CRPR)
1B Plants Rare, Threatened, or Endangered in California and elsewhere
2B Plants Rare, Threatened, or Endangered in California but more common elsewhere
4 Plants of limited distribution – A Watch List

CRPR Threat Code Extensions
.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 Fairly threatened in California (20–80% of occurrences threatened; moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known)

For blooming period, months included in parentheses are uncommon.

* Sources include CNPS 2023 and Jepson Flora Project 2022.

Psomas appreciates the opportunity to assist on this Project. If you have any comments or questions, please contact Amber Heredia (Amber.Heredia@psomas.com) or Allison Rudalevige (Allison.Rudalevige@psomas.com).

Sincerely,
PSOMAS

Amber O. Heredia
Senior Project Manager, Resource Management

Allison D. Rudalevige
Senior Biologist

Attachments: Exhibits 1–3
A – Representative Site Photos
B – Plant Compendium

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REFERENCES

Baldwin, B.G., D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (Eds.). 2012. *The Jepson Manual: Vascular Plants of California* (Second ed.). Berkeley, CA: University of California Press.

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Project Location

Exhibit 1

Chacon Farms Property

N W E S

1,000 500 0 1,000 Feet

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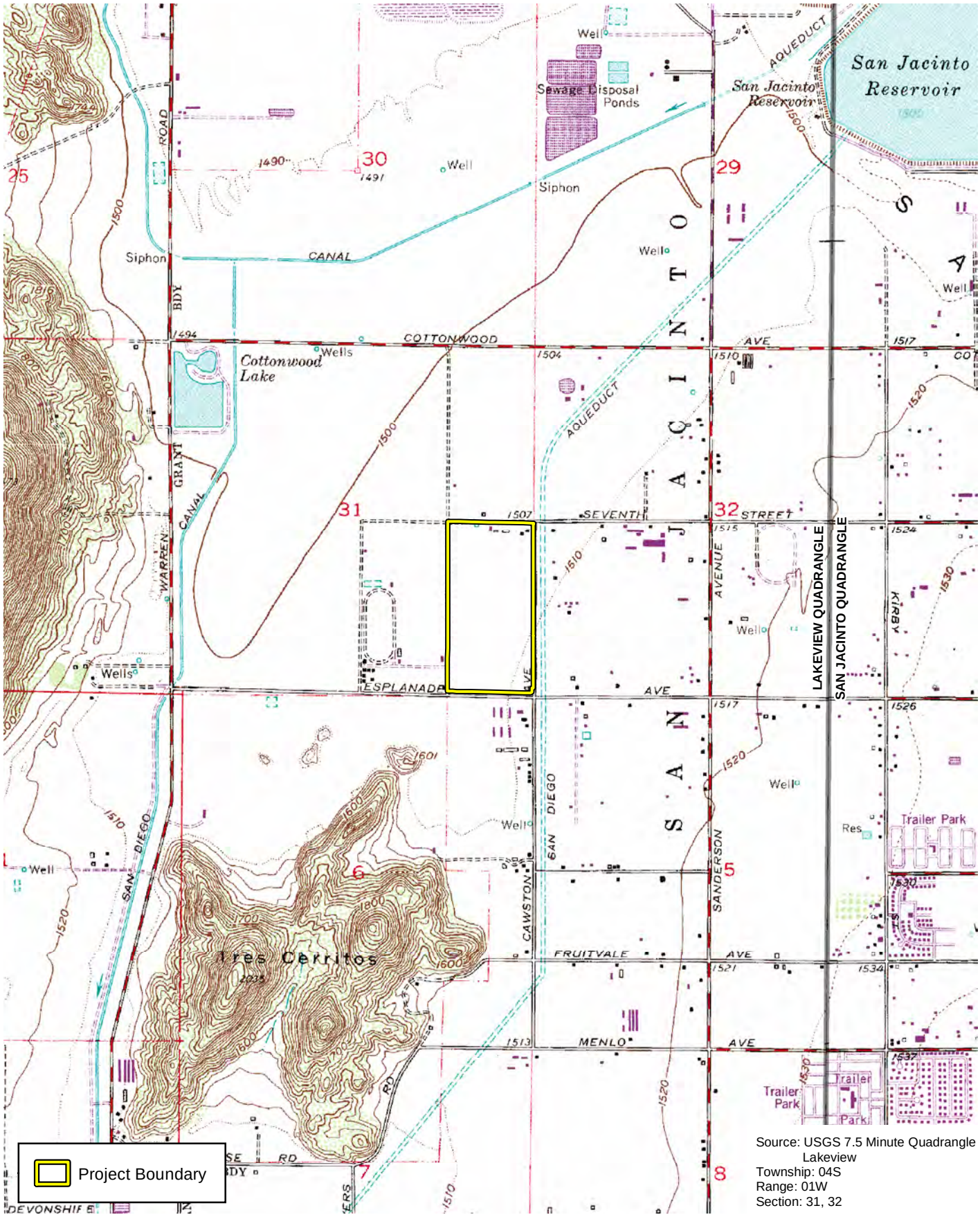

Source: USGS 7.5 Minute Quadrangle
Lakeview
Township: 04S
Range: 01W
Section: 31, 32

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Topography

Exhibit 2

Chacon Farms Property

N W E S

2,000 1,000 0 2,000 Feet

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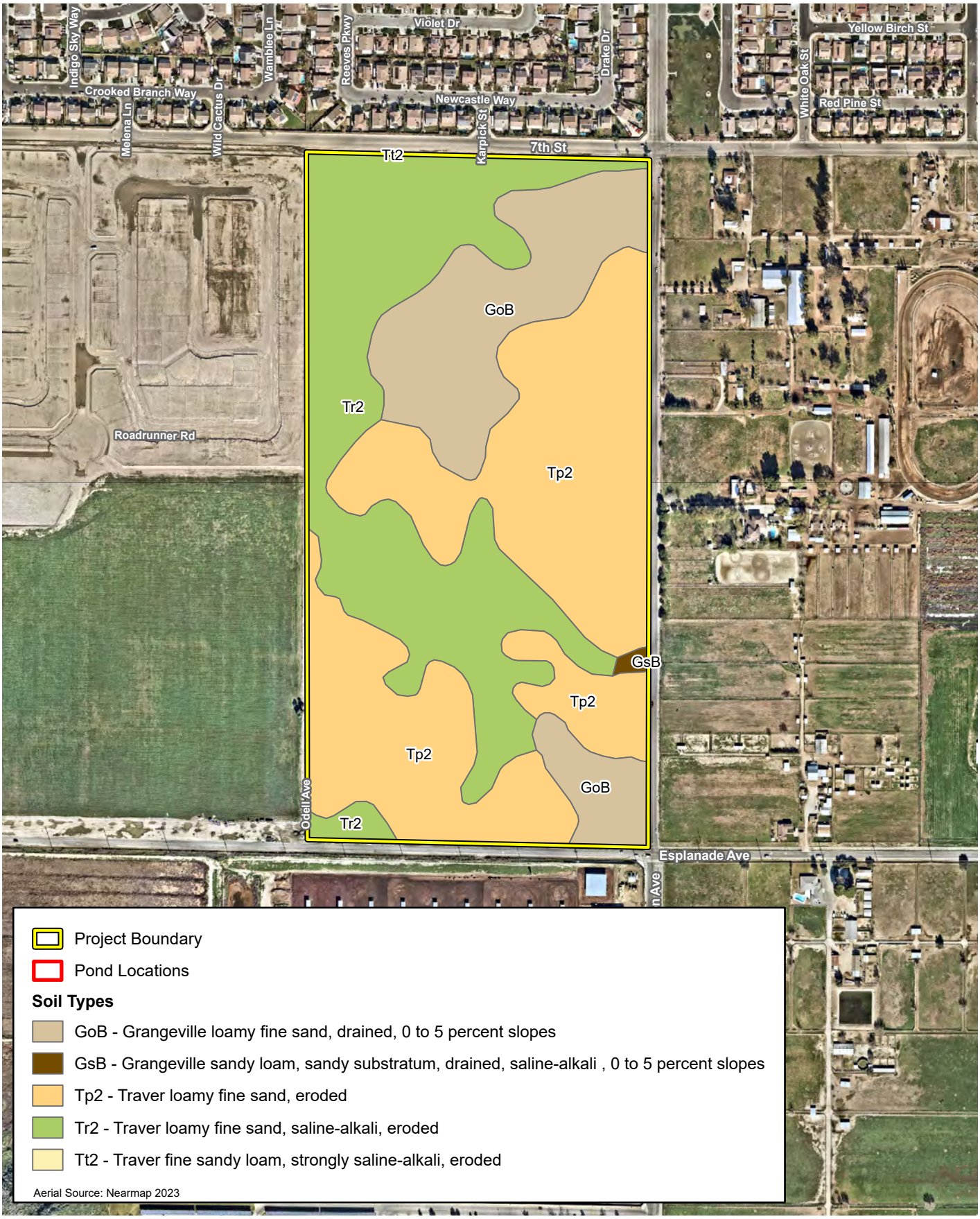

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Soil Types

Exhibit 3

Chacon Farms Property

N W E S

500 250 0 500 Feet

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ATTACHMENT A

REPRESENTATIVE SITE PHOTOS



May 3, 2023. Representative habitat on the Project site.



July 6, 2023. View of representative habitat within the on-site basin on the Project site.

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Site Photographs

Attachment A

Chacon Farms Property

PSOMAS

ATTACHMENT B

PLANT COMPENDIUM

PLANTS OBSERVED IN THE SURVEY AREA DURING SPECIAL STATUS PLANT SURVEYS

Species	
Species	**Common Name**
GYMNOSPERMS	
PINACEAE – PINE FAMILY	
*Pinus eldarica**	Mondell pine
*Pinus halepense**	Aleppo pine
EUDICOTS	
AMARANTHACEAE – AMARANTH FAMILY	
Amaranthus palmeri	Palmer's amaranth
ANACARDIACEAE – SUMAC FAMILY	
*Schinus molle**	pepper tree
ASTERACEAE – SUNFLOWER FAMILY	
*Cotula australis**	Australian cotula
Eclipta prostrata	false daisy
*Erigeron bonariensis**	flax-leaved horseweed
Erigeron canadensis	horseweed
Gnaphalium palustre	marsh cudweed
Helianthus annuus	annual sunflower
*Lactuca serriola**	prickly lettuce
*Oncosiphon pilulifer**	stinknet
*Pseudognaphalium luteoalbum**	white lamb cudweed
*Pulicaria paludosa**	marsh pulicaria
*Senecio vulgaris**	common groundsel
*Sonchus asper ssp. asper**	prickly sow thistle
*Sonchus oleraceus**	common sow thistle
BORAGINACEAE – BORAGE FAMILY	
Amsinckia menziesii	common fiddleneck
Heliotropium curassavicum var. oculatum	seaside heliotrope
BRASSICACEAE – MUSTARD FAMILY	
*Capsella bursa-pastoris**	shepherd's purse
*Descurainia sophia**	wise tansy mustard
*Hirschfeldia incana**	grayish shortpod mustard
*Lepidium didymum**	lesser swine grass
*Sisymbrium irio**	London rocket
CARYOPHYLLACEAE – PINK FAMILY	
*Spergularia bocconi**	Boccone's sand-spurrey
CHENOPODIACEAE – GOOSEFOOT FAMILY	
*Salsola tragus**	Russian thistle
EUPHORBIACEAE – SPURGE FAMILY	
Euphorbia albomarginata	rattlesnake sandmat
FABACEAE – LEGUME FAMILY	
*Acacia sp.**	acacia
*Medicago sativa**	alfalfa
*Melilotus indicus**	sourclover

PLANTS OBSERVED IN THE SURVEY AREA DURING SPECIAL STATUS PLANT SURVEYS

Species	
Species	**Common Name**
GERANIACEAE – GERANIUM FAMILY	
*Erodium cicutarium**	redstem filaree
LYTHRACEAE – LOOSESTRIFE FAMILY	
*Lythrum hyssopifolia**	hyssop-leaf loosestrife
MALVACEAE – MALLOW FAMILY	
*Malva parviflora**	cheeseweed
PLANTAGINACEAE – PLANTAIN FAMILY	
*Plantago major**	common plantain
Veronica peregrina ssp. xalapensis	purslane speedwell
POLYGONACEAE – BUCKWHEAT FAMILY	
*Polygonum aviculare**	knotweed
*Rumex crispus**	curly dock
PORTULACACEAE – PURSLANE FAMILY	
*Portulaca oleracea**	purslane
ROSACEAE – ROSE FAMILY	
*Prunus persica**	peach
RUTACEAE – CITRUS FAMILY	
*Citrus x limon**	lemon tree
SALICACEAE – WILLOW FAMILY	
Salix gooddingii	Goodding's black willow
Salix lasiolepis	arroyo willow
SIMAROUBACEAE – SIMAROUBA FAMILY	
*Ailanthus altissima**	tree of heaven
SOLANACEAE – NIGHTSHADE FAMILY	
*Nicotiana glauca**	tree tobacco
Physalis acutifolia	sharpleaf ground-cherry
*Solanum elaeagnifolium**	white horse-nettle
ZYGOPHYLLACEAE – CALTROP FAMILY	
*Tribulus terrestris**	puncture vine
MONOCOTS	
ARECACEAE – PALM FAMILY	
Washingtonia filifera	California fan palm
*Washingtonia robusta**	Mexican fan palm
CYPERACEAE – SEDGE FAMILY	
Cyperus sp.	flatsedge
JUNCACEAE – RUSH FAMILY	
Juncus bufonius	toad rush
POACEAE – GRASS FAMILY	
*Bromus catharticus**	rescue grass
*Bromus rubens**	red brome
*Chloris verticillata**	windmill grass
*Cynodon dactylon**	Bermuda grass
Distichlis spicata	salt grass

PLANTS OBSERVED IN THE SURVEY AREA DURING SPECIAL STATUS PLANT SURVEYS

Species	
Species	**Common Name**
*Echinochloa crus-galli**	cock's spur barnyard grass
*Festuca perennis**	rye grass
*Hordeum murinum**	wall barley
Leptochloa fusca	sprangletop
Phalaris sp.	canary grass
*Polypogon monspeliensis**	annual beard grass
TYPHACEAE – CATTAIL FAMILY	
Typha sp.	cattail
* Non-native or invasive species	

APPENDIX D

BURROWING OWL SURVEYS

Western Burrowing Owl Surveys for Chacon Farms Property Assessor Parcel Numbers: 432-260-009, 432-260-026, and 432-260-027 (75.6-Acre Project, Total Area Surveyed: 75.6 Acres) Cawston Avenue in the City of San Jacinto, Perris USGS 7.5-Minute Series Map Township 4S, Range 3W, Section 6

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Ramona Dairy, LLC
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Surveys Conducted By:
Jonathan Aguayo
Trevor Bristle

Surveys Conducted On:
April 13, May 10, June 19, and July 12, 2023

Report Date:
August 21, 2023

CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: 8/22/2023 SIGNED: 

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4 Potential Burrow Locations 3

LIST OF APPENDICES

A Site Photographs
B Wildlife Compendium

This report presents the findings of focused surveys for the western burrowing owl (*Athene cunicularia hypugaea*) for the Chacon Farms Property (hereinafter referred to as the "Project site") located in the City of San Jacinto in Riverside County, California. The purpose of the surveys was to determine the presence or absence of the western burrowing owl during its nesting period (i.e., March 1 to August 31) on or immediately adjacent to the Project site. The surveys were completed in accordance with the Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (County of Riverside 2006).

The Project site is located within the MSHCP "San Jacinto Valley Area Plan" but is not within an MSHCP Criteria Cell. The Riverside County Integrated Project Conservation Summary Report Generator requires a habitat assessment for western burrowing owl. The assessment determined that suitable habitat for the western burrowing owl was present in the Project site and adjacent areas; therefore, focused surveys were required.

PROJECT LOCATION AND DESCRIPTION

The proposed Project would provide a new residential housing community. The Project site is located north of Esplanade Avenue, west of Cawston Avenue, south of 7th Street, and east of an unimproved road through agricultural land (Odell Avenue) in the City of San Jacinto in Riverside County, California (Exhibit 1). The Project site includes Assessor Parcel Numbers 432-260-009, 432-260-026, and 432-260-027.

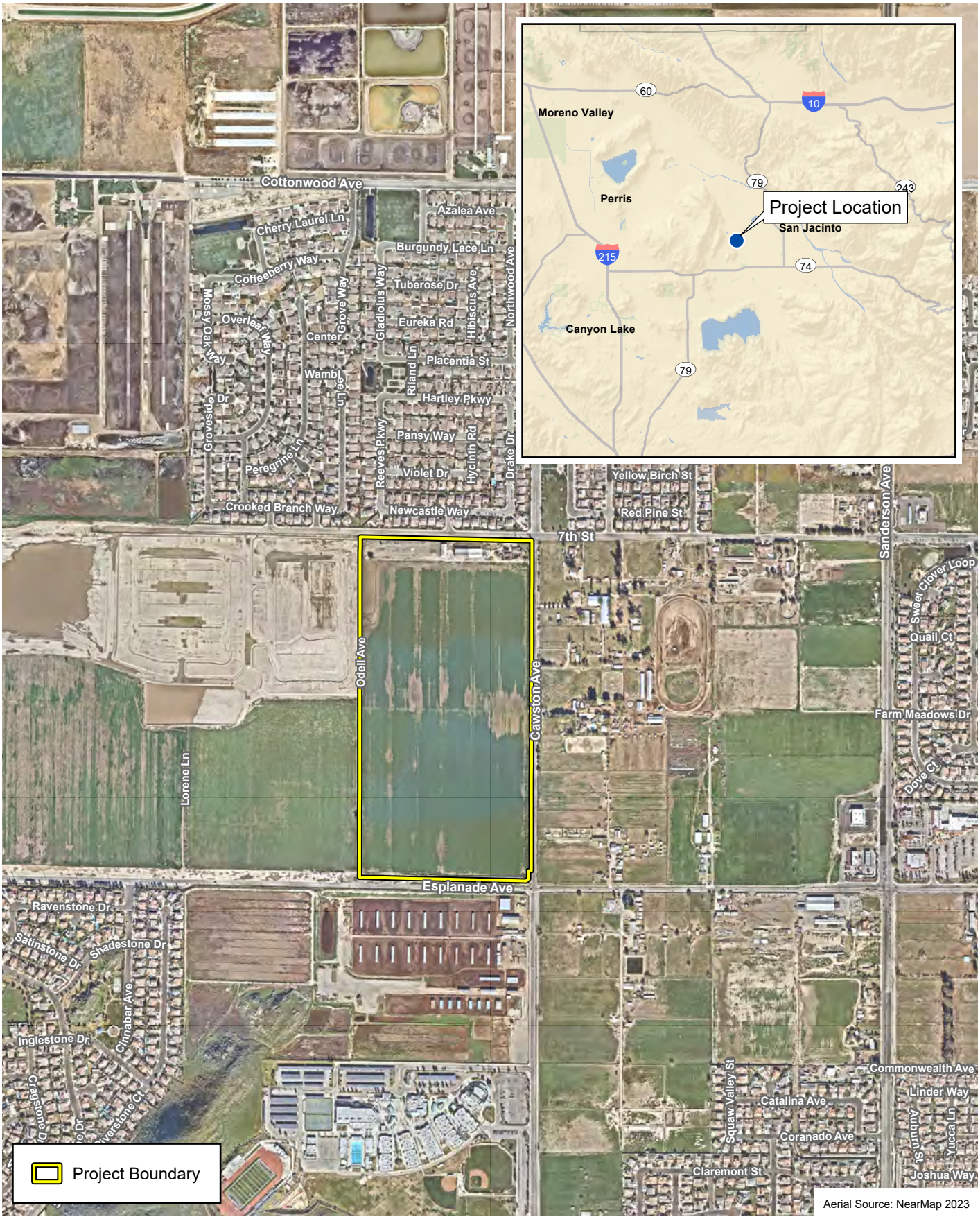
The Project site is located on the U.S. Geological Survey's (USGS') Lakeview 7.5-minute quadrangle of the San Bernardino Meridian at Township 4 South, Range 1 West, Section 31 and 32 (Exhibit 2). Topography on the Project site is relatively flat with an elevation of approximately 1,500 to 1,510 feet above mean sea level. Surrounding land uses include dairies, agricultural, residential, and rural residential. Active construction was occurring on the property to the west at the time of the focused surveys.

Vegetation types observed on the Project site include field croplands and valley and foothill grassland; disturbed and developed landcovers are also present (Exhibit 3).

The burrowing owl focused survey was conducted throughout the Project site. Adjacent areas were on private property and were not accessible. However, when possible, areas containing suitable habitat within 500 feet of the Project site were surveyed using binoculars. Representative site photos are included in Appendix A.

BACKGROUND

The western burrowing owl is a grassland specialist distributed throughout western North America, where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments, with well-drained, level to gently sloping areas characterized by sparse vegetation and bare ground (Haug et al. 1993; Dechant et al. 2003). Burrowing owls in Florida excavate their own burrows, but western burrowing owls depend upon the presence of burrowing mammals whose burrows are used for roosting and nesting (Haug et al. 1993). The presence or absence of colonial mammal burrows (e.g., California ground squirrels [*Spermophilus beecheyi*]) is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities (e.g., buried and non-functioning drainpipes, stand-pipes, and dry culverts). Burrowing mammals may burrow beneath rocks; debris; or large, heavy objects (e.g., abandoned cars, concrete blocks, or concrete pads).



Aerial Source: NearMap 2023

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Project Location

Exhibit 1

Chacon Farms Property

N
W E
S

1,000 500 0 1,000 Feet

PSOMAS

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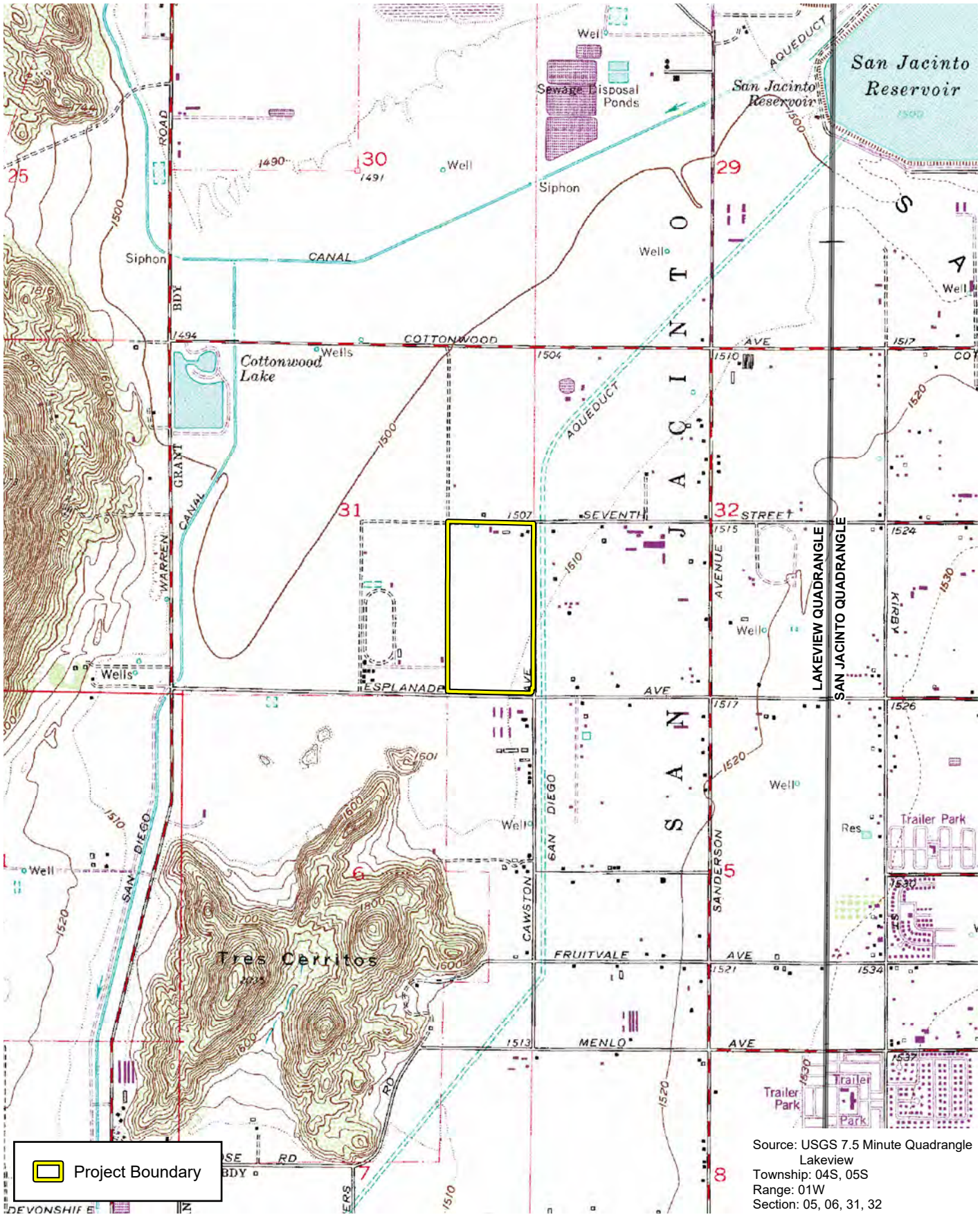

Project Boundary

Source: USGS 7.5 Minute Quadrangle
Lakeview
Township: 04S, 05S
Range: 01W
Section: 05, 06, 31, 32

U.S. Geological Survey 7.5-Minute Quadrangle

Exhibit 2

Chacon Farms Property

N W E S

2,000 1,000 0 2,000 Feet

PSOMAS

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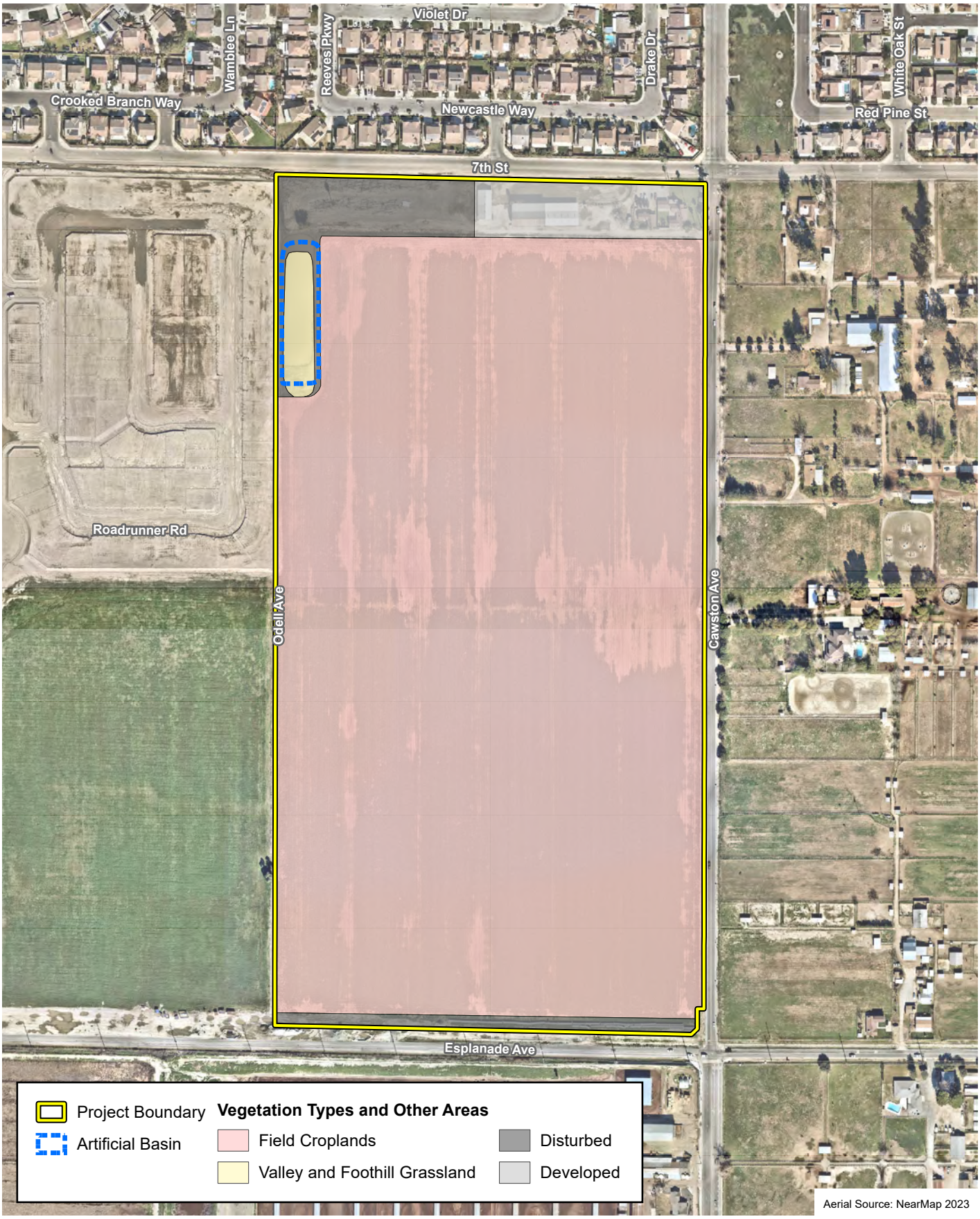

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Vegetation Types

Exhibit 3

Chacon Farms Property

N W E S

400 200 0 400

Feet

PSOMAS

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Large, hard objects at burrow entrances stabilize the entrance from collapse and may inhibit excavation by predators.

Burrowing owls often use “satellite”, or non-nesting burrows, moving chicks into them from the nesting burrow, presumably to reduce the risk of predation (Desmond and Savidge 1998) and possibly to avoid nest parasites (Dechant et al. 2003). One pair may use up to ten satellite burrows (James and Seabloom 1968). Individual burrowing owls have a moderate to high site fidelity to previously used burrow complexes and often use the same burrows for nesting year after year.

The western burrowing owl was once abundant and widely distributed within coastal Southern California, but it has declined precipitously in Los Angeles, Orange, San Diego, Riverside, and San Bernardino Counties. A petition was submitted to list the California population of the western burrowing owl as an Endangered or Threatened species (CBD et al. 2003); the California Department of Fish and Wildlife (CDFW) declined to list the burrowing owl as either Threatened or Endangered in consideration of its overall population throughout the State. However, the CDFW considers the burrowing owl to be a California Species of Special Concern.

A search of the CDFW’s California Natural Diversity Database was conducted prior to initiating the survey effort. There are several occurrences reported within five miles; the majority of the occurrences are located to the southwest towards Winchester (CDFW 2023).

SURVEY METHODS

Surveys followed the survey instructions in the Western Riverside County MSHCP (Riverside County 2006). These guidelines outline a survey methodology that has been approved by the CDFW and the U.S. Fish and Wildlife Service. Surveys for the burrowing owl are conducted during the breeding season, which extends from March 1 to August 31. These surveys are done in three phases: (1) habitat assessment; (2) burrow surveys; and (3) focused owl surveys.

HABITAT ASSESSMENT

The first step, habitat assessment, identifies whether the Project site provides potential habitat for the species. This determination is made by a Biologist that is knowledgeable in burrowing owl habitat, ecology, and identification. The Biologist conducts the assessment by walking the Project site and an approximate 500-foot buffer area around the Project site (if it is accessible) to visually inspect and assess the potential for burrowing owls.

The habitat assessment was conducted on September 19, 2022, by Psomas Senior Biologist Allison Rudalevige and Psomas Biologist Trevor Bristle. The assessment was conducted by walking the Project site to visually inspect it and assess its potential for burrowing owls. The Project site was considered to be suitable for the western burrowing owl. Focused burrow surveys were recommended for the Project site.

BURROW SURVEY

The second step, burrow survey, identifies suitable burrow(s) and location(s) of occupied burrow(s). A qualified Biologist conducts the burrow survey by walking through suitable habitat on the Project site and areas within approximately 500 feet of the Project site (if it is accessible) via transects spaced no more than approximately 100 feet apart in order to ensure 100 percent visual coverage of the ground surface. If no potentially active burrows are detected, then no focused owl surveys are required. Psomas Senior Biologist Jonathan Aguayo and Mr. Bristle conducted the burrow survey on April 13, 2023. Any natural or man-made cavities large enough to allow a burrowing owl to enter were inspected for evidence of occupation. Evidence of occupation may

include prey remains, cast pellets, white-wash, feathers, and observations of owls adjacent to burrows. The burrow survey was not conducted within five days of rain, which could have washed away potential sign. Surveys beyond fenced property boundaries were limited to what could be observed with binoculars.

Any burrows observed were mapped on an aerial photograph and recorded with a Global Positioning System (GPS) unit or iPad (Exhibit 4).

CREPUSCULAR SURVEYS

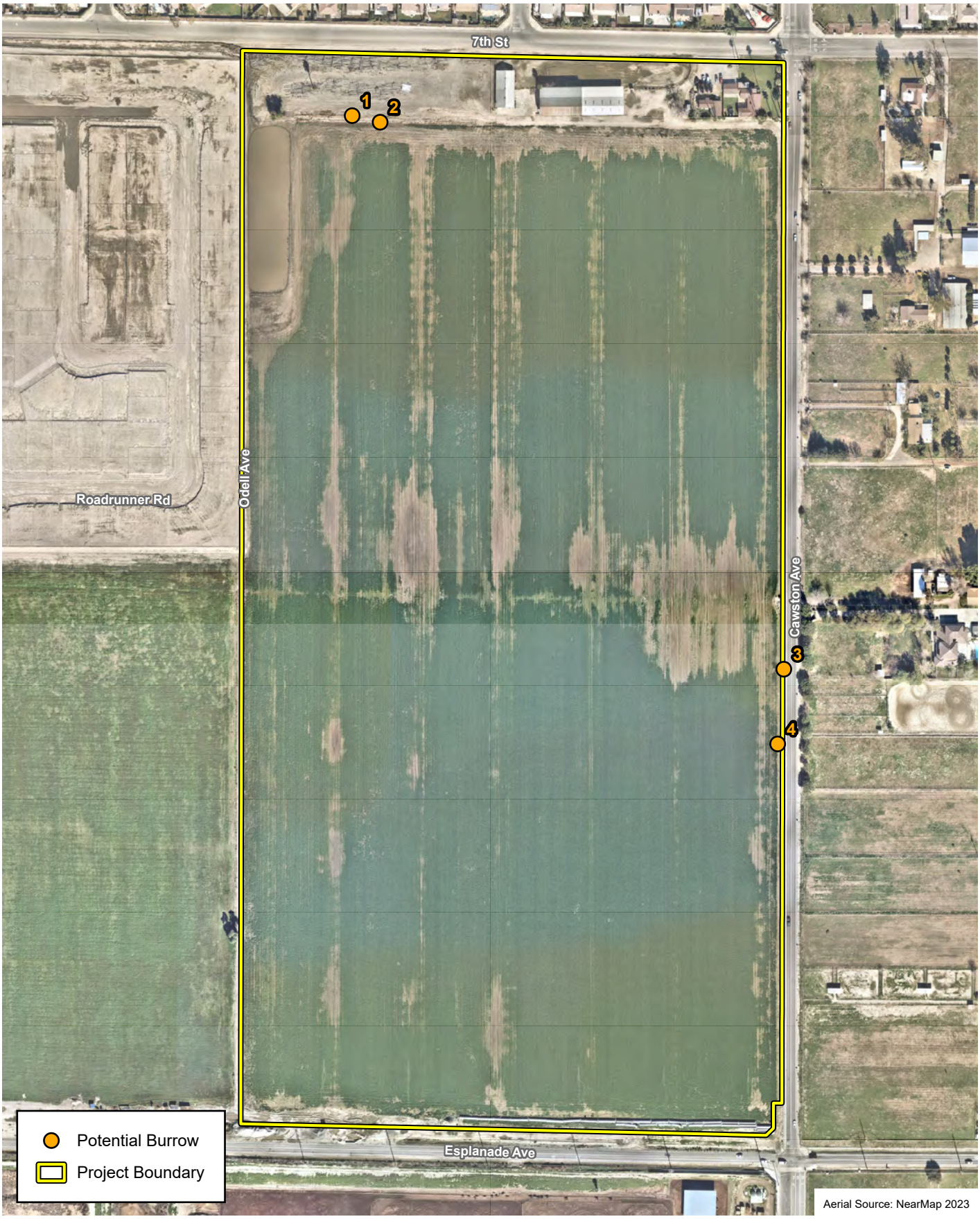
If owls or potentially-occupied burrows or cavities are located during the burrow survey, then crepuscular (dawn or dusk) focused burrowing owl surveys are required. Focused surveys were conducted within the Project site where burrowing owls had a potential to occur based on the results of the habitat assessment and the burrow survey. These surveys were conducted from either one hour before sunrise to two hours after, or from two hours before sunset to one hour after. These surveys are conducted only with sufficient light to follow burrowing owl flights. Mr. Aguayo and Mr. Bristle conducted the initial crepuscular survey on April 13, 2023. Subsequent surveys were conducted by Mr. Aguayo on May 10, June 19, and July 12, 2023. All potential habitat in the Project site was surveyed to achieve 100 percent visual coverage of the area. Surveys beyond fenced property boundaries were limited to what could be observed with binoculars. Binoculars were also used to inspect holes; crevices; and potential perches (e.g., rocks, fence posts, and other elevated structures) for the presence of owls while listening for owl calls.

Any active burrows and burrowing owl sightings would have been mapped on an aerial photograph and recorded with a GPS unit or iPad.

SURVEY RESULTS

Suitable habitat for burrowing owl is present on the Project site within field croplands and disturbed areas. Vegetation in these areas was low in stature at the time of the surveys. These areas supported scattered California ground squirrel burrows; however, no burrowing owls, occupied owl burrows, or other evidence of owl presence (e.g., cast pellets, white-wash, feathers, or prey remains) were observed during the focused surveys. Survey times and weather conditions are summarized in Table 1 below.

A complete list of all wildlife species observed during the surveys is provided in Appendix B of this report.



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Potential Burrow Locations

Exhibit 4

Chacon Farms Property

N
W E
S

400 200 0 400

Feet

PSOMAS

(Rev: 8-22-2023 JMC) R:\Projects\4RAM\020100\Graphics\BUOW\ex_Burrow.pdf

TABLE 1
SUMMARY OF BURROWING OWL SURVEYS

Survey Number	Date	Time (Start/End)	Surveyor	Weather Conditions			Results
				Temperature (°F) (Start/End)	Wind (mph) (Start/End)	Cloud Cover (%) (Start/End)	
Burrow Survey/ Crepuscular Survey 1	4/13/2023	6:31 AM/ 8:26 AM	Aguayo, Bristle	50/54	5/7	100	Suitable burrows observed. No burrowing owl observed.
Crepuscular Survey 2	5/10/2023	6:32 AM/ 9:00 AM	Aguayo	49/53	5	100	No burrowing owl observed.
Crepuscular Survey 3	6/19/2023	6:02 AM/ 8:30 AM	Aguayo	55/61	2/3	100	No burrowing owl observed.
Crepuscular Survey 4	7/12/2023	5:41 AM/ 8:46 AM	Aguayo	67/80	2	40/20	No burrowing owl observed.

°F: degrees Fahrenheit; mph: miles per hour; % percent.

RECOMMENDATIONS

Because burrowing owls move around from season to season, the County of Riverside requires pre-construction surveys prior to any ground disturbance for development regardless of the results of focused surveys. Pre-construction surveys are required year-round within 30 days prior to any ground disturbance to avoid direct take of burrowing owl (County of Riverside 2006).

If an active burrow is observed outside the breeding season (i.e., September 1–February 28) and the burrow would be impacted by the Project, a qualified Biologist shall monitor the active burrow. When the owl is away from the burrow, the Biologist shall exclude the owl from the burrow following approved CDFW (2012) guidelines, and then will remove the burrow so the burrowing owl cannot return to the burrow.

If an active burrow is present during the breeding season (i.e., March 1–August 31), the active nest site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. To protect the active burrow, a protective buffer shall be established following approved CDFW (2012) guidelines. No vegetation clearing, access, or surveying will be allowed within the protective buffer for any active burrow, unless otherwise determined by a qualified Biologist. Encroachment into the protective buffer will only be allowed if the Biologist determines that the proposed activity will not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest and the burrow is no longer active.

REFERENCES

California Department of Fish and Game (CDFG). 2012 (March). Staff Report on Burrowing Owl Mitigation. Sacramento, CA: CDFG, Natural Heritage Division.

California Department of Fish and Wildlife (CDFW). 2023 (August). California Natural Diversity Database. Records of Occurrence for Burrowing Owl in Riverside County. Sacramento, CA: CDFW, Natural Heritage Division.

Center for Biological Diversity, Defenders of Wildlife, California State Park Rangers Association, Santa Clara Valley Audubon Society, San Bernardino Valley Audubon Society, and Tri-county Conservation League (CBD et al.). 2003. *Petition to the State of California Fish and Game Commission and Supporting Information for Listing the California Population of the Western Burrowing Owl (Athene cunicularia hypugaea) as an Endangered or Threatened Species under the California Endangered Species Act*. Oakland, CA: CBD et al. http://www.biologicaldiversity.org/swcbd/species/b-owl/petition.pdf.

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Haug, E.A., B.A. Milsap, and M.S. Martell. 1993. Burrowing Owl (Speotyto cunicularia). The Birds of North America, No. 61 (A. Poole and F. Gill, Eds.). Philadelphia, PA and Washington, D.C.: The Academy of Natural Sciences and the American Ornithologists' Union.

James, T.R. and R.W. Seabloom. 1968. Notes on the Burrow Ecology and Food Habits of the Burrowing Owl in Southwestern North Dakota. Blue Jay 26:83–84.

Riverside, County of. 2006 (as amended). *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area.* Riverside, CA: the County. http://www.tlma.co.riverside.ca.us/epd/documents/Burrowing_Owl_Survey_Instructions.pdf.

APPENDIX A

SITE PHOTOGRAPHS



View of the project site, facing northeast from the southwest corner.



View of the project site, facing southwest from the northeast portion.

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Site Photographs

Appendix A-1

Chacon Farms Property

PSOMAS

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View of a burrow in the northwestern portion of the project site. No owl sign was observed at the burrow.



View of a burrow along eastern boundary of the project site. No owl sign was observed at the burrow.

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Site Photographs

Appendix A-2

Chacon Farms Property

PSOMAS

APPENDIX B

WILDLIFE COMPENDIUM

WILDLIFE SPECIES OBSERVED DURING THE SURVEY

Species	
Scientific Name	**Common Name**
BIRDS	
ANATIDAE – SWAN, GOOSE, AND DUCK FAMILY	
Mareca americana	American wigeon
Anas platyrhynchos	mallard
Oxyura jamaicensis	ruddy duck
COLUMBIDAE – PIGEONS AND DOVES	
*Columba livia**	rock pigeon
Zenaida macroura	mourning dove
RALLIDAE – RAIL AND COOT FAMILY	
Fulica americana	American coot
RECURVIROSTRIDAE – STILT AND AVOCET FAMILY	
Himantopus mexicanus	black-necked stilt
SCOLOPACIDAE – SANDPIPER FAMILY	
Limosa fedoa	marbled godwit
Calidris minutilla	least sandpiper
LARIDAE – GULL AND TERN FAMILY	
Larus delawarensis	ring-billed gull
ACCIPITRIDAE – HAWK FAMILY	
Buteo jamaicensis	red-tailed hawk
TYRANNIDAE – TYRANT FLYCATCHERS	
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus verticalis	western kingbird
CORVIDAE – JAY AND CROW FAMILY	
Corvus brachyrhynchos	American crow
Corvus corax	common raven
ALAUDIDAE – LARK FAMILY	
Eremophila alpestris	horned lark
HIRUNDINIDAE – SWALLOW FAMILY	
Petrochelidon pyrrhonota	cliff swallow
MIMIDAE – THRASHERS	
Mimus polyglottos	northern mockingbird
STURNIDAE – STARLINGS	
*Sturnus vulgaris**	European starling
PASSERIDAE – OLD WORLD SPARROW FAMILY	
*Passer domesticus**	house sparrow
FRINGILLIDAE – FINCHES	
Haemorhous mexicanus	house finch
Spinus psaltria	lesser goldfinch
ICTERIDAE – BLACKBIRDS AND ORIOLES	
Sturnella neglecta	western meadowlark
Molothrus ater	brown-headed cowbird
Euphagus cyanocephalus	Brewer's blackbird
* Non-native Species	

APPENDIX E

CONSTRUCTION MINIMIZATION MEASURES

- Plans for water pollution and erosion control will be prepared for all Discretionary Projects involving the movement of earth in excess of 50 cubic yards. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, use of plant material for erosion control. Plans will be reviewed and approved by the County of Riverside and participating jurisdiction prior to construction.
- Timing of construction activities will consider seasonal requirements for breeding birds and migratory non-resident species. Habitat clearing will be avoided during species active breeding season defined as March 1 to June 30.
- Sediment and erosion control measures will be implemented until such time soils are determined to be successfully stabilized.
- Short-term stream diversions will be accomplished by use of sand bags or other methods that will result in minimal in-stream impacts. Short-term diversions will consider effects on wildlife.
- Silt fencing or other sediment trapping materials will be installed at the downstream end of construction activities to minimize the transport of sediments off-site.
- Settling ponds where sediment is collected will be cleaned in a manner that prevents sediment from re-entering the stream or damaging/disturbing adjacent areas. Sediment from settling ponds will be removed to a location where sediment cannot re-enter the stream or surrounding drainage area. Care will be exercised during removal of silt fencing to minimize release of debris or sediment into streams.
- No erodible materials will be deposited into water courses. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks.
- The footprint of disturbance will be minimized to the maximum extent feasible. Access to sites will occur on pre-existing access routes to the greatest extent possible.
- Equipment storage, fueling and staging areas will be sited on non-sensitive upland habitat types with minimal risk of direct discharge into riparian areas or other sensitive habitat types.
- The limits of disturbance, including the upstream, downstream and lateral extents, will be clearly defined and marked in the field. Monitoring personnel will review the limits of disturbance prior to initiation of construction activities.
- During construction, the placement of equipment within the stream or on adjacent banks or adjacent upland habitats occupied by Covered Species that are outside of the project footprint will be avoided.
- Exotic species removed during construction will be properly handled to prevent sprouting or regrowth.
- Training of construction personnel will be provided.
- Ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of best management practices.
- When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, water tankers) shall be available on the site during all phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventative methods shall be used during grinding, welding, and other spark-inducing activities. Personnel

trained in fire hazards, preventative actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities.

- Active construction areas shall be watered regularly to control dust and minimize impacts to adjacent vegetation.
- All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances shall occur only in designated areas within the proposed grading limits of the project site. These designated areas shall be clearly marked and located in such a manner as to contain run-off.
- Waste, dirt, rubble, or trash shall not be deposited in the Conservation Area or on native habitat.

APPENDIX F

TREE SURVEY

April 28, 2023

Richard Michael
Ramon Dairy, LLC
2452 Ramona Expressway
San Jacinto, California 92582

VIA EMAIL
richard@homealaska.net

Subject: Tree Inventory Report for the Chacon Farms Property, City of San Jacinto, California

Dear Mr. Michael:

Psomas is pleased to provide this Tree Inventory Report for the Chacon Farms Property (hereinafter referred to as the "Project") located in the City of San Jacinto in Riverside County, California. The Project site is located north of Esplanade Avenue, west of Cawston Avenue North, South of 7th Street, and east of an unimproved road through agricultural land (Odell Avenue) (Exhibit 1).

SITE DESCRIPTION

The Project site includes approximately 75.6-acres consisting of Assessor Parcel Numbers (APNs) 432-260-009, 432-260-026, and 432-260-027 and is located on the U.S. Geological Survey's (USGS') Lakeview 7.5-minute quadrangle of the San Bernardino Meridian at Township 4 South, Range 1 West, Section 31 and 32. Topography on the Project site is relatively flat with an elevation of approximately 1,500 to 1,510 feet above mean sea level. Surrounding land uses include dairies, agricultural, residential, and rural residential. Active construction was occurring on the property to the west at the time of the field survey.

The Project proposes to build residential housing; it is assumed that the entire Project site would be impacted.

REGULATORY AUTHORITY

The City of San Jacinto Municipal Code prohibits removal of trees from public streets or parkways; authorization must be obtained from the City Council (Section 12.20). Any trees removed for the convenience of construction require replacement at the expense of the entity requesting their removal. The replacement tree must be approved by the parks and recreation commission.

There is no restriction on the removal of trees located on private property; however, tentative tract maps must show the location of all trees having a diameter of 9.5 inches or greater. Oak trees of having a diameter of 4 inches or greater are also required to be shown.

METHODS

Psomas' Certified Arborist Trevor Bristle (International Society of Arboriculture Certificate No. WE-10233A) visited the Project site on March 22, 2023, to document the type, quantity, and condition of existing trees on the Project site. Each tree was assigned an individual identifier (i.e., number), and the trunk, branches, and foliage were carefully examined. During the site visit, the following data were recorded: tree species, number of trunks, trunk diameter at breast height (dbh), tree height, canopy diameter, and qualitative assessment ratings on aesthetics and health. Tree locations were recorded on an aerial image of the Project site.

RESULTS

A total of 22 trees were identified that are subject to the above referenced regulatory requirements (Exhibit 2). These include one tree of heaven (*Ailanthus altissima*), one lemon tree (*Citrus limon*), two Mondell pine (*Pinus eldarica*), one peach tree (*Prunus persica*), four Peruvian pepper trees (*Schinus molle*), four California fan palms (*Washingtonia filifera*), and nine Mexican fan palms (*Washingtonia robusta*).

The majority of the trees on the Project site are located in the northeast corner of the Project site surrounding existing structures. The trees' conditions are generally good with few defects (e.g., minor necrotic foliage, small dead branches, wilting). Most trees showed no conspicuous signs of stress or decay (e.g., trunk cavities, bleeding sap, signs of defoliation, or general lack of vigor); however, Tree No. 16 and 17 exhibited severe defects and appear to be in decline.

One Peruvian pepper tree is located along the southwest boundary (Tree No. 22). This tree is rooted outside of the Project boundary, but it has a canopy extending into the Project site. Therefore, this tree was included in this report.

Please contact Trevor Bristle at Trevor.Bristle@psomas.com or 626.351.2000 with any questions related to this report.

Sincerely,
PSOMAS

Amber O. Heredia
Senior Project Manager, Resource Management

Trevor Bristle
Certified Arborist
International Society of Arboriculture
Certificate No. WE-10233A

Attachments: Exhibits 1 and 2
A – Tree Data Summary



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Project Location

Exhibit 1

Chacon Farms

N
W E
S

1,000 500 0 1,000

Feet

PSOMAS

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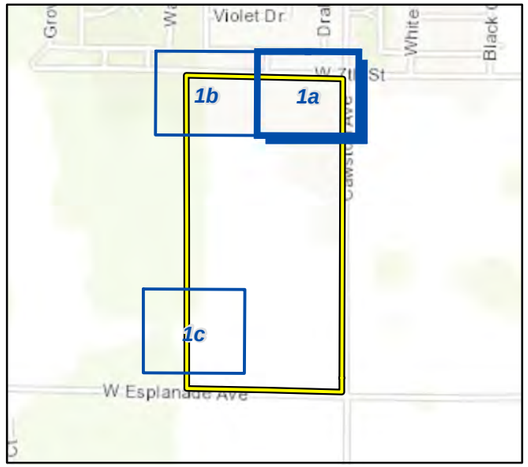

Project Boundary

Tree Types

- California fan palm *(Washingtonia filifera)*
- Lemon *(Citrus limon)*
- Mexican fan palm *(Washingtonia robusta)*
- Mondell pine *(Pinus eldarica)*
- Peach *(Prunus persica)*
- Peruvian peppertree *(Schinus molle)*
- Tree of heaven *(Ailanthus altissima)*

N
W E
S

70 35 0 70
Feet

Aerial Source: Nearmap, 2023

Tree Locations — Exhibit 2a

Chacon Farms

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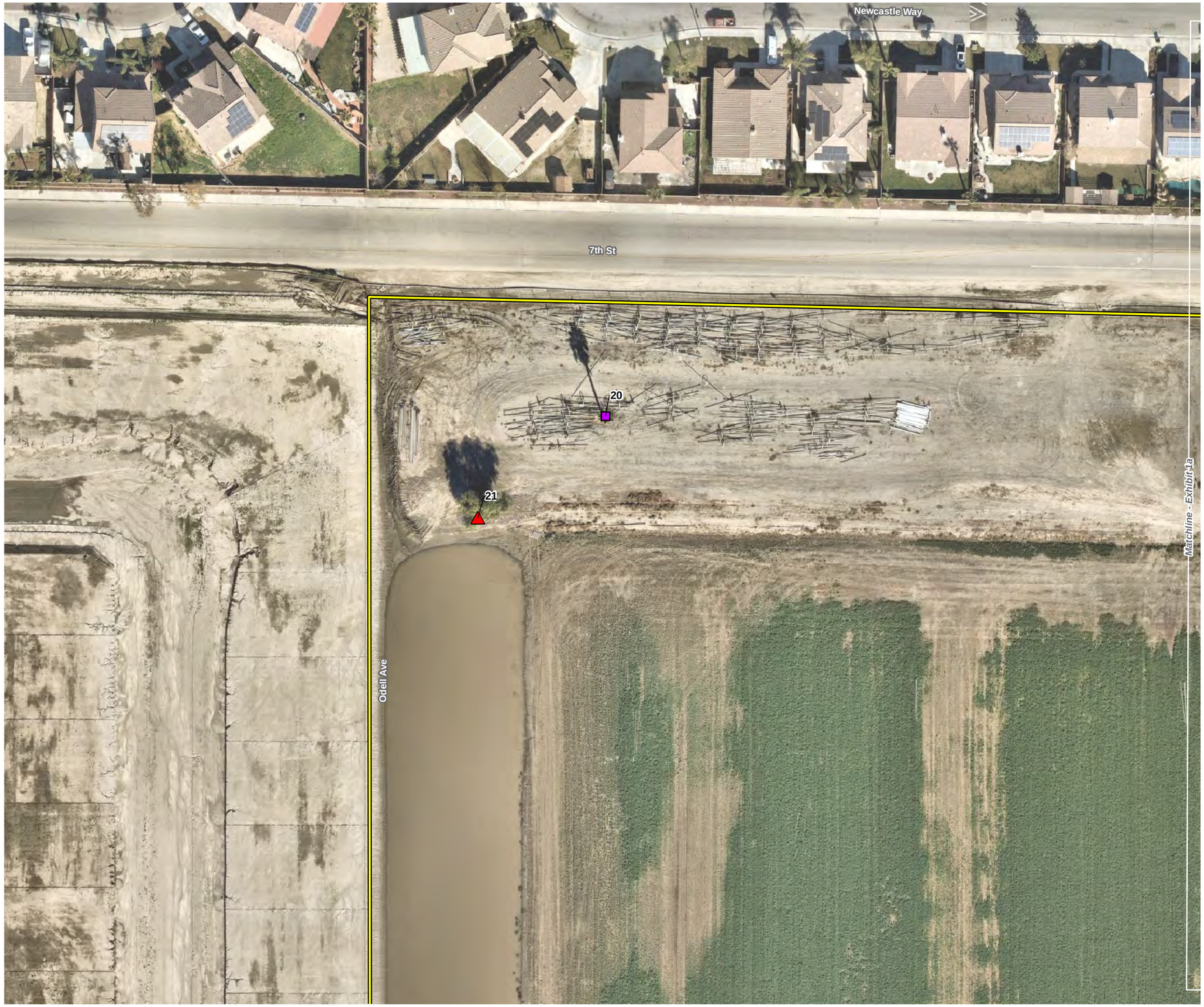

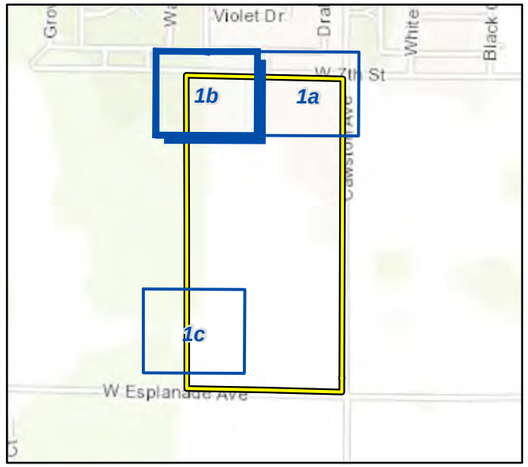

Project Boundary

Tree Types

- Mexican fan palm *(Washingtonia robusta)*
- Peruvian peppertree *(Schinus molle)*

N
W E
S

70 35 0 70
Feet

Aerial Source: Nearmap, 2023

Tree Locations — Exhibit 2b

Chacon Farms

PSOMAS

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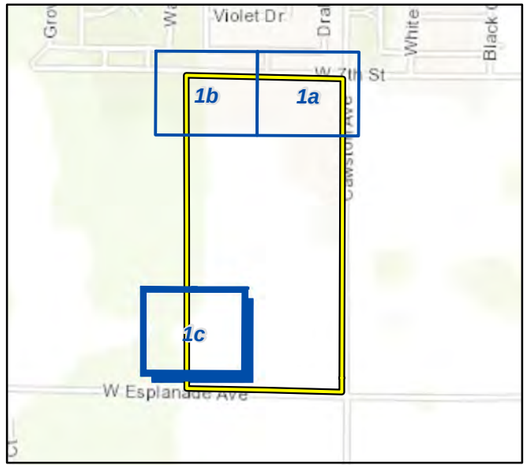

Project Boundary

Tree Types

Peruvian peppertree *(Schinus molle)*

N
W E
S

70 35 0 70
Feet

Aerial Source: Nearmap, 2023

Tree Locations

Exhibit 2c

Chacon Farms

PSOMAS

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ATTACHMENT A

TREE DATA SUMMARY

TREE DATA SUMMARY

Tree Tag #	Common Name	Species	# Main Trunks	dbh (in)	Total DBH	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating
1	Mondell pine	*Pinus eldarica*	1	11.9	11.9	25	20	4	4
2	California fan palm	*Washingtonia filifera*	1	34.1	34.1	35	10	4	4
3	California fan palm	*Washingtonia filifera*	1	34.1	34.1	35	10	4	4
4	California fan palm	*Washingtonia filifera*	1	31.5	31.5	35	8	4	4
5	California fan palm	*Washingtonia filifera*	1	33.5	33.5	35	10	4	4
6	Mexican fan palm	*Washingtonia robusta*	1	18.5	18.5	50	8	4	4
7	Mexican fan palm	*Washingtonia robusta*	1	19.0	19.0	35	8	4	4
8	lemon	*Citrus limon*	3	4.0, 3.5, 2.0	9.5	10	10	4	3
9	Peruvian peppertree	*Schinus molle*	2	7.0, 6.8	13.8	30	25	4	4
10	Mexican fan palm	*Washingtonia robusta*	1	18.3	18.3	55	10	4	4
11	Mexican fan palm	*Washingtonia robusta*	2	13.8, 13.5	27.3	50	20	4	4
12	Mexican fan palm	*Washingtonia robusta*	1	14.3	14.3	50	8	4	4
13	Mexican fan palm	*Washingtonia robusta*	1	18.7	18.7	55	10	4	4
14	peach	*Prunus persica*	1	9.5	9.5	12	6	4	3
15	Mexican fan palm	*Washingtonia robusta*	3	13.0, 13.0, 12.0	38.0	50	25	4	4
16	Peruvian peppertree	*Schinus molle*	1	12.0	12.0	25	15	2	2
17	Mondell pine	*Pinus eldarica*	1	18.6	18.6	40	45	1	1
18	tree of heaven	*Ailanthus altissima*	1	16.4	16.4	30	20	4	3
19	Mexican fan palm	*Washingtonia robusta*	1	15.0	15.0	25	10	4	4
20	Mexican fan palm	*Washingtonia robusta*	1	19.0	19.0	35	10	4	4
21	Peruvian peppertree	*Schinus molle*	1	19.6	19.6	30	35	4	3
22	Peruvian peppertree	*Schinus molle*	1	22.6	22.6	35	30	4	3

dbh: diameter at breast height; ft: feet

Aesthetics/Health Rating: 1=Very Poor, 2=Poor, 3=Fair, 4=Good, and 5=Excellent

Appendix B-2

Tree Inventory Report for the Chacon Farms Property City of San Jacinto, California

Psomas

April 28, 2023

April 28, 2023

Richard Michael
Ramon Dairy, LLC
2452 Ramona Expressway
San Jacinto, California 92582

VIA EMAIL
richard@homealaska.net

Subject: Tree Inventory Report for the Chacon Farms Property, City of San Jacinto, California

Dear Mr. Michael:

Psomas is pleased to provide this Tree Inventory Report for the Chacon Farms Property (hereinafter referred to as the "Project") located in the City of San Jacinto in Riverside County, California. The Project site is located north of Esplanade Avenue, west of Cawston Avenue North, South of 7th Street, and east of an unimproved road through agricultural land (Odell Avenue) (Exhibit 1).

SITE DESCRIPTION

The Project site includes approximately 75.6-acres consisting of Assessor Parcel Numbers (APNs) 432-260-009, 432-260-026, and 432-260-027 and is located on the U.S. Geological Survey's (USGS') Lakeview 7.5-minute quadrangle of the San Bernardino Meridian at Township 4 South, Range 1 West, Section 31 and 32. Topography on the Project site is relatively flat with an elevation of approximately 1,500 to 1,510 feet above mean sea level. Surrounding land uses include dairies, agricultural, residential, and rural residential. Active construction was occurring on the property to the west at the time of the field survey.

The Project proposes to build residential housing; it is assumed that the entire Project site would be impacted.

REGULATORY AUTHORITY

The City of San Jacinto Municipal Code prohibits removal of trees from public streets or parkways; authorization must be obtained from the City Council (Section 12.20). Any trees removed for the convenience of construction require replacement at the expense of the entity requesting their removal. The replacement tree must be approved by the parks and recreation commission.

There is no restriction on the removal of trees located on private property; however, tentative tract maps must show the location of all trees having a diameter of 9.5 inches or greater. Oak trees of having a diameter of 4 inches or greater are also required to be shown.

METHODS

Psomas' Certified Arborist Trevor Bristle (International Society of Arboriculture Certificate No. WE-10233A) visited the Project site on March 22, 2023, to document the type, quantity, and condition of existing trees on the Project site. Each tree was assigned an individual identifier (i.e., number), and the trunk, branches, and foliage were carefully examined. During the site visit, the following data were recorded: tree species, number of trunks, trunk diameter at breast height (dbh), tree height, canopy diameter, and qualitative assessment ratings on aesthetics and health. Tree locations were recorded on an aerial image of the Project site.

RESULTS

A total of 22 trees were identified that are subject to the above referenced regulatory requirements (Exhibit 2). These include one tree of heaven (*Ailanthus altissima*), one lemon tree (*Citrus limon*), two Mondell pine (*Pinus eldarica*), one peach tree (*Prunus persica*), four Peruvian pepper trees (*Schinus molle*), four California fan palms (*Washingtonia filifera*), and nine Mexican fan palms (*Washingtonia robusta*).

The majority of the trees on the Project site are located in the northeast corner of the Project site surrounding existing structures. The trees' conditions are generally good with few defects (e.g., minor necrotic foliage, small dead branches, wilting). Most trees showed no conspicuous signs of stress or decay (e.g., trunk cavities, bleeding sap, signs of defoliation, or general lack of vigor); however, Tree No. 16 and 17 exhibited severe defects and appear to be in decline.

One Peruvian pepper tree is located along the southwest boundary (Tree No. 22). This tree is rooted outside of the Project boundary, but it has a canopy extending into the Project site. Therefore, this tree was included in this report.

Please contact Trevor Bristle at Trevor.Bristle@psomas.com or 626.351.2000 with any questions related to this report.

Sincerely,
PSOMAS

Amber O. Heredia
Senior Project Manager, Resource Management

Trevor Bristle
Certified Arborist
International Society of Arboriculture
Certificate No. WE-10233A

Attachments: Exhibits 1 and 2
A – Tree Data Summary



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Project Location

Exhibit 1

Chacon Farms

N
W E
S

1,000 500 0 1,000

Feet

PSOMAS

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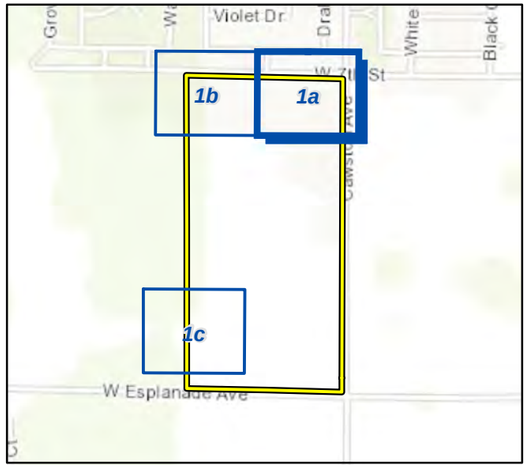

Project Boundary

Tree Types

- California fan palm *(Washingtonia filifera)*
- Lemon *(Citrus limon)*
- Mexican fan palm *(Washingtonia robusta)*
- Mondell pine *(Pinus eldarica)*
- Peach *(Prunus persica)*
- Peruvian peppertree *(Schinus molle)*
- Tree of heaven *(Ailanthus altissima)*

N
W E
S

70 35 0 70
Feet

Aerial Source: Nearmap, 2023

Tree Locations — Exhibit 2a

Chacon Farms

PSOMAS

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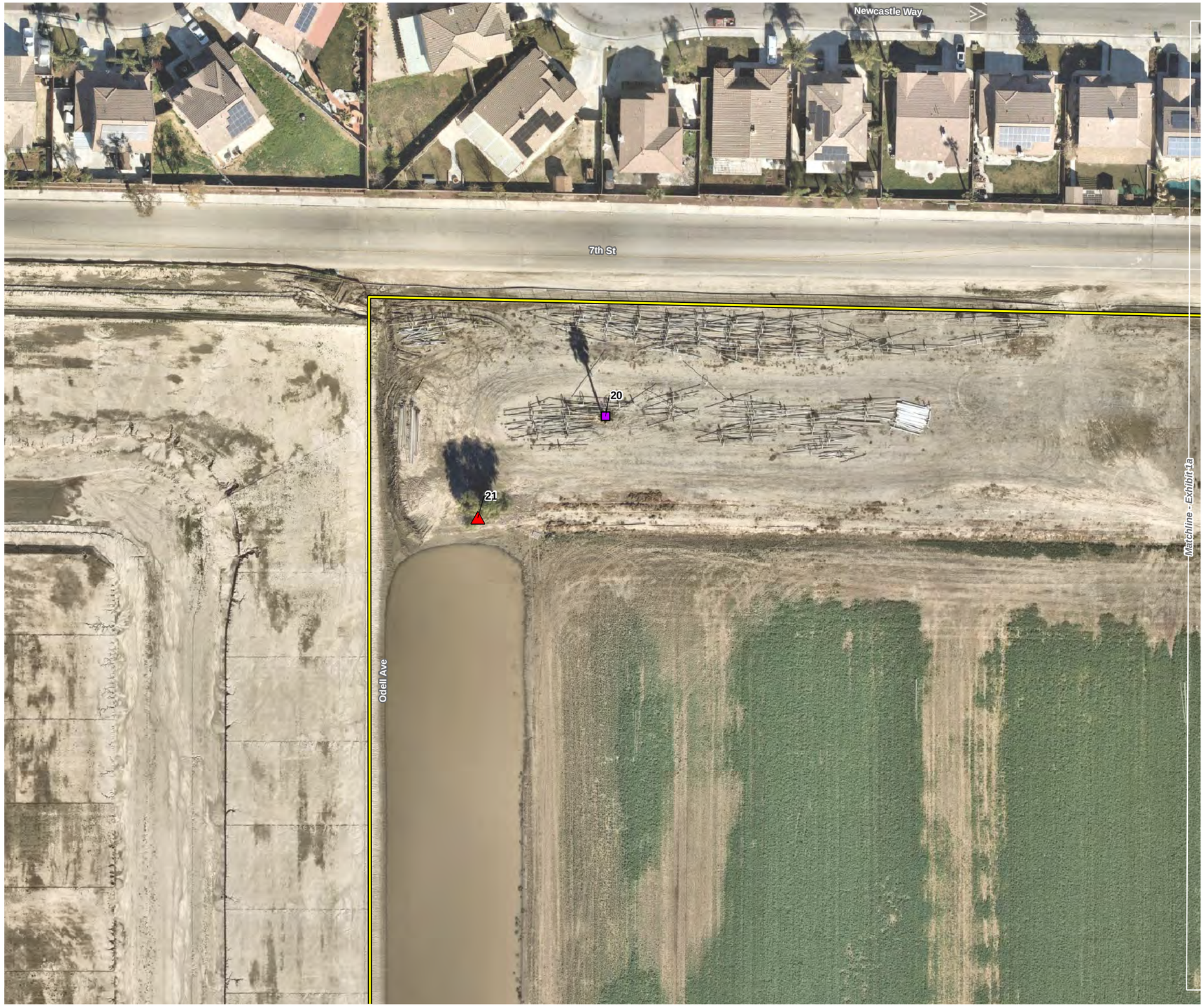

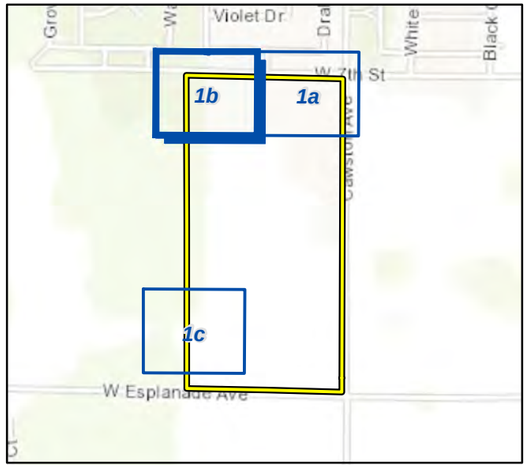

Project Boundary

Tree Types

- Mexican fan palm *(Washingtonia robusta)*
- Peruvian peppertree *(Schinus molle)*

N
W E
S

70 35 0 70
Feet

Aerial Source: Nearmap, 2023

Tree Locations — Exhibit 2b

Chacon Farms

PSOMAS

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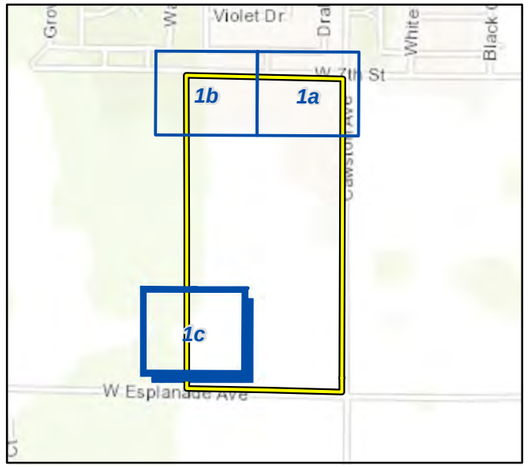

Project Boundary

Tree Types

Peruvian peppertree *(Schinus molle)*

N
W E
S

70 35 0 70
Feet

Aerial Source: Nearmap, 2023

Tree Locations

Exhibit 2c

Chacon Farms

PSOMAS

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ATTACHMENT A

TREE DATA SUMMARY

TREE DATA SUMMARY

Tree Tag #	Common Name	Species	# Main Trunks	dbh (in)	Total DBH	Height (ft)	Canopy Diameter (ft)	Health Rating	Aesthetic Rating
1	Mondell pine	*Pinus eldarica*	1	11.9	11.9	25	20	4	4
2	California fan palm	*Washingtonia filifera*	1	34.1	34.1	35	10	4	4
3	California fan palm	*Washingtonia filifera*	1	34.1	34.1	35	10	4	4
4	California fan palm	*Washingtonia filifera*	1	31.5	31.5	35	8	4	4
5	California fan palm	*Washingtonia filifera*	1	33.5	33.5	35	10	4	4
6	Mexican fan palm	*Washingtonia robusta*	1	18.5	18.5	50	8	4	4
7	Mexican fan palm	*Washingtonia robusta*	1	19.0	19.0	35	8	4	4
8	lemon	*Citrus limon*	3	4.0, 3.5, 2.0	9.5	10	10	4	3
9	Peruvian peppertree	*Schinus molle*	2	7.0, 6.8	13.8	30	25	4	4
10	Mexican fan palm	*Washingtonia robusta*	1	18.3	18.3	55	10	4	4
11	Mexican fan palm	*Washingtonia robusta*	2	13.8, 13.5	27.3	50	20	4	4
12	Mexican fan palm	*Washingtonia robusta*	1	14.3	14.3	50	8	4	4
13	Mexican fan palm	*Washingtonia robusta*	1	18.7	18.7	55	10	4	4
14	peach	*Prunus persica*	1	9.5	9.5	12	6	4	3
15	Mexican fan palm	*Washingtonia robusta*	3	13.0, 13.0, 12.0	38.0	50	25	4	4
16	Peruvian peppertree	*Schinus molle*	1	12.0	12.0	25	15	2	2
17	Mondell pine	*Pinus eldarica*	1	18.6	18.6	40	45	1	1
18	tree of heaven	*Ailanthus altissima*	1	16.4	16.4	30	20	4	3
19	Mexican fan palm	*Washingtonia robusta*	1	15.0	15.0	25	10	4	4
20	Mexican fan palm	*Washingtonia robusta*	1	19.0	19.0	35	10	4	4
21	Peruvian peppertree	*Schinus molle*	1	19.6	19.6	30	35	4	3
22	Peruvian peppertree	*Schinus molle*	1	22.6	22.6	35	30	4	3

dbh: diameter at breast height; ft: feet

Aesthetics/Health Rating: 1=Very Poor, 2=Poor, 3=Fair, 4=Good, and 5=Excellent

Appendix C

Phase I Archaeological and Paleontological Resources Inventory

Psomas

October 2023

Phase I Archaeological and Paleontological Resources Inventory

Chacon Farm Project,
San Jacinto, Riverside County, California

Prepared for

Ramona Dairy, LLC
2451 Ramona Expressway
San Jacinto, California 92582

Prepared by

Psomas
225 South Lake Avenue, Suite 1000
Pasadena, California 91101
626.204.6520

October 2023

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B	Native American Heritage Commission Sacred Lands File Search Results
C	Western Science Center Paleontology Records Search Results
D	Historic Built Environment Assessment for the Chacon Farms Project

ACRONYMS LIST

AB	Assembly Bill
APN	Assessor's Parcel Numbers
ca.	circa
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information Center
CRHR	California Register of Historic Resources
EIC	Eastern Information Center
ft	feet
GPS	global positioning system
km	kilometer
NADB	National Archaeological Database
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places
PRC	California Public Resources Code
RPA	Registered Professional Archaeologist
SB	Senate Bill
SLF	Sacred Lands File
SR	State Route
USC	United States Code
USGS	United States Geological Survey
WSC	Western Science Center

NATIONAL ARCHAEOLOGICAL DATABASE (NADB)

INFORMATION SHEET

Phase I Archaeological and Paleontological Resources Inventory for the Chacon Farms Project,

Riverside County, California

BY

Charles W. Cisneros, M.S., RPA

October 2023

Submitted by:

Charles Cisneros, M.S., RPA
Psomas
225 South Lake Avenue, Suite 1000
Pasadena, California 91101
626.204.6520

Submitted to:

Ramona Dairy, LLC
2451 Ramona Expressway
San Jacinto, California 92582

Prepared for: CEQA Documentation
USGS Geologic Map Lakeview 7.5-Minute Quadrangles

Psomas Project Number: 4RAM020100
Key Words: Cultural Resource Survey, Negative Survey, San Jacinto, Riverside County

EXECUTIVE/MANAGEMENT SUMMARY

PURPOSE AND SCOPE

The purpose of this Phase I Archaeological and Paleontological Resource Inventory (report) study is to determine the potential for impacts to archaeological and paleontological resources within the proposed Chacon Farms Project (hereinafter referred to as the "Project"), located in Riverside County, California.

Psomas' study consisted of an Eastern Information Center (EIC) records and literature search, a Sacred Lands File (SLF) search from the Native American Heritage Commission (NAHC), a Western Science Center (WSC) paleontological records search, and an archaeological and paleontological field survey of the proposed Project Site. This report documents the results of this study.

DATES OF INVESTIGATION

Psomas requested the cultural resources literature and records search for the Project from the EIC on September 19, 2022. The EIC completed its search on October 25, 2022. On September 19, 2022, Psomas requested that the NAHC conduct a search of its SLF to determine if cultural resources important to Native Americans have been recorded within the Project Site or in the immediate vicinity of the Project Site. The NAHC completed its search on November 22, 2022. Additionally, Psomas requested a paleontological resource record search from the WSC on November 21, 2022. The WSC completed its search on February 2, 2023.

A pedestrian survey of the Project Site was conducted on February 9, 2023. This study was completed in October 2023 and is based on the findings from the records and literature searches and the field survey of the proposed Project Site.

FINDINGS OF THE INVESTIGATION

Psomas conducted archaeological and paleontological resources field investigations within the proposed Project Site on February 9, 2023. The main goal of the investigations was to gather and analyze information needed to determine if the Project would have a significant impact on properties eligible for the California Register of Historic Resources (CRHR) and to provide mitigation measures for those resources. The results of the 2022 EIC cultural resources records searches identified five previously recorded cultural resources within a 0.8 kilometer (km, i.e., 1/2- mile) of the Project Site. The previously recorded resources include five historic structures/buildings. None of the five cultural resources identified by the EIC are located within the proposed Project. Furthermore, the NAHC Sacred Lands File search was negative for sacred sites. Additionally, the WSC paleontological resource records search was negative for paleontological resources (i.e., fossils). The 2023 field survey (archaeological and paleontological) did not identify archaeological and paleontological resources; however, it should be noted ground visibility was obscured by dense vegetation and recent flooding from rain. Additionally, the structures located on at the northern end of the Project Site date to 1940s. A separate historic built environment assessment of the structures and report will be prepared by South Environmental (see Attachment D).

DISPOSITION OF DATA

This report will be on file with Psomas, EIC, and the WSC. All field notes and other documentation related to the report are on file at Psomas.

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION AND LOCATION

The Project Site consists of three lots with approximately 75.47 acres of total lot area and is located west of Cawston Avenue North, northeast of Warren Road, north of West Esplanade Avenue, and south of West Seventh Street. The Project Site is located at 710 Cawston Avenue North in the City of San Jacinto, Riverside County within Assessor's Parcel Numbers (APNs) 432-260-009, 026, and 027. The site is surrounded by a mixture of residential and agricultural uses. Regional access to the vicinity is provided by State Route (SR) 74, approximately 3.9 miles south of the Project Site and SR-79, approximately 5.5 miles northeast of the site. More specifically, the Project Site is located on the Perris 7.5-minute United States Geological Survey (USGS) topographic quadrangle within Township 4 South, Range 3 West, and Sections 4, 33, and 34 of the San Bernardino Base and Meridian (Exhibits 1 and 2).

The properties are currently zoned RR (Rural Residential) with a General Plan Land Use Designation of VLDR (Very Low Density Residential).

The Applicant is requesting a General Plan Amendment to revise the land use designation from VLDR (Very Low Density Residential) to MDR (Medium Density Residential) for the Project Site; and a Zoning Map Amendment (Zone Change) to revise the Project Site zoning from RR Zone (Rural Residential) to the MR Zone (Medium Residential).

1.2 PROJECT PERSONNEL

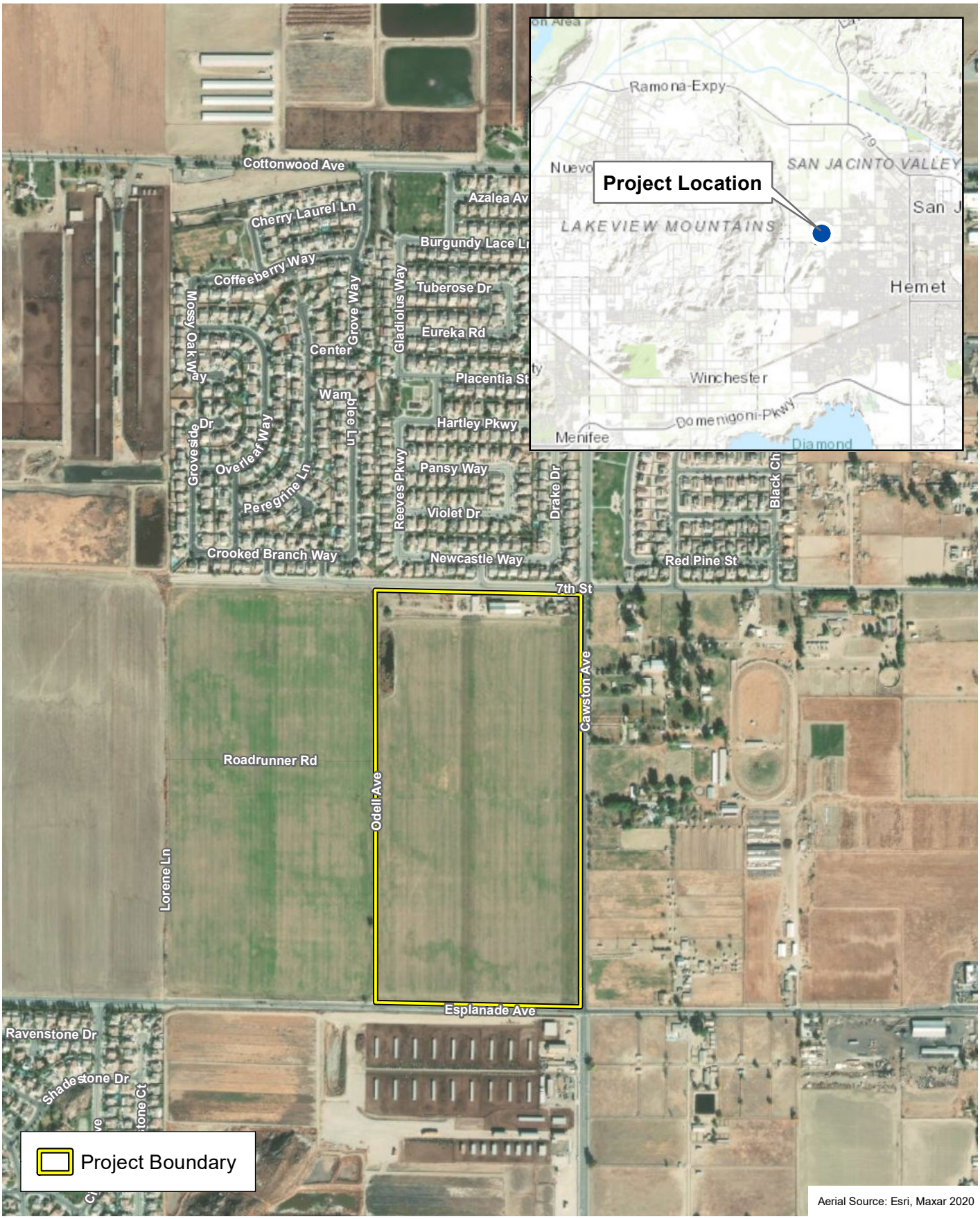
The staff members for the proposed Project were selected based on their familiarity with the Site's geographic location and understanding of the archaeology and paleontology discipline. The team includes experts with extensive experience in California archaeology and prehistory, paleontology, cultural resources management, project administration, and other appropriate skills including spatial analysis. Key personnel are Registered Professional Archaeologists (RPA) who meet or exceed the Secretary of the Interior's Professional Qualification Standards (NPS 1994) for archaeology and the Society for Vertebrate Paleontology (SVP). Project roles and responsibilities are summarized below.

1.2.1 Charles Cisneros, M.S., RPA

Charles Cisneros is an RPA and served as the Project's Principal Investigator. Mr. Cisneros supervised all aspects of the archaeological Project, including the field survey and the preparation of this report.

1.2.2 Daniella Balassa

Daniella Balassa was responsible for contributing to the geological and paleontological history section of this report.



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Project Location

Exhibit 1

Cawston Avenue Property

N W E S

1,000 500 0 1,000 Feet

PSOMAS

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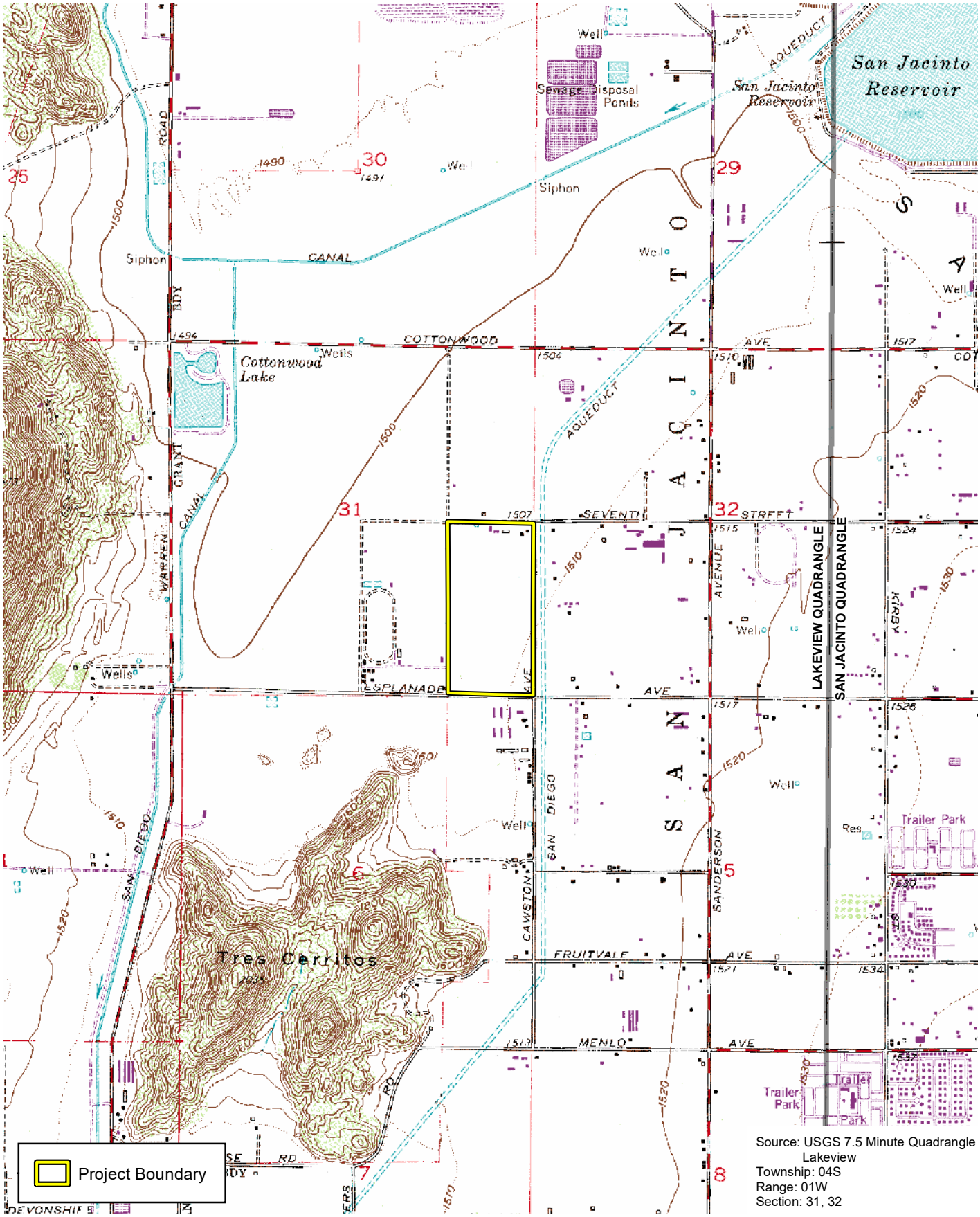

Source: USGS 7.5 Minute Quadrangle
Lakeview
Township: 04S
Range: 01W
Section: 31, 32

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Topography

Exhibit 2

Cawston Avenue Property

N
W E
S

2,000 1,000 0 2,000
Feet

PSOMAS

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2.0 REGULATORY SETTING

2.1 CULTURAL RESOURCES

Cultural resource laws, regulations, and guidelines set up the processes for defining what is or is not a significant cultural resource and include various agency procedures for managing these archaeological and historical resources and for assessing the information from the cultural remains to determine their significance. Most importantly is whether these resources are eligible for inclusion in a national or State register (i.e., the National Register of Historic Places [NRHP] and CRHR). As defined by archaeologists Thomas Neumann and Robert Sanford (2001: 27), the laws and regulations serve to do the following:

- Set forth the criteria for assessing the relative importance of cultural remains;
- Outline the procedures for reviewing assessments;
- Delineate the responsible parties involved in making such assessments;
- Identify and then define the extent of jurisdiction and responsibility of each party in the evaluation process;
- Set forth the criteria for making a determination of significance, as well as indicating which party can or cannot make such determinations;
- Set forth the criteria for the archaeological and historic preservation work performed; and
- Set forth the criteria regarding who can perform the archaeological and historic preservation work.

A summary of State and local laws, regulations, and standards that govern cultural resource management within the Project Site is provided below.

2.1.1 State Regulatory Setting

California Register of Historical Resources

The California Environmental Quality Act (CEQA) requires a lead agency to determine whether a project would have a significant effect on one or more historical resources. According to Section 15064.5(a) of the State CEQA Guidelines, a “historical resource” is defined as a resource listed in or determined to be eligible for listing in the CRHR (*California Public Resources Code* [PRC] Section 21084.1); a resource included in a local register of historical resources (*California Code of Regulations* [CCR], Title 14, Section 15064.5[a][2]); or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (14 CCR 15064.5[a][3]).

Section 5024.1 of the PRC, Section 15064.5 of the State CEQA Guidelines (CCR, Title 14, Chapter 3, Sections 15000–15387), and Sections 21083.2 and 21084.1 of the CEQA (PRC, Sections 21000–21189) were used as the basic guidelines for the cultural resources study. PRC Section 5024.1 requires an evaluation of historical resources to determine their eligibility for listing in the CRHR. The purpose of the CRHR is to maintain listings of the State’s historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR, which were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP (per the criteria listed at 36 *Code of Federal Regulations* [CFR] 60.4), are stated below.

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and that:

(1) Are associated with events that have made a significant contribution to the broad patterns of our history; or

(2) Are associated with the lives of persons significant in our past; or

(3) Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(4) Have yielded, or may be likely to yield, information important in prehistory or history.

According to Section 15064.5(a)(3) (A–D) of the State CEQA Guidelines, a resource is considered historically significant if it meets the criteria for listing in the NRHP, as stated above, in addition to the CRHR. Impacts that affect those characteristics of the resource, that qualify it for the NRHP or that would adversely alter the significance of a resource listed in or eligible for listing in the CRHR, are considered to have a significant effect on the environment. Impacts to cultural resources from the proposed Project are thus considered significant if the Project: (1) physically destroys or damages all or part of a resource; (2) changes the character of the use of the resource or physical feature within the setting of the resource that contributes to its significance; or (3) introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

The purpose of a cultural resources' investigation is to evaluate whether any cultural resources remain exposed on the surface of a project site or can reasonably be expected to exist in the subsurface. If resources are discovered, management recommendations would be required for evaluation of the resources for CRHR eligibility.

Senate Bill 18

Senate Bill (SB) 18 became effective on March 1, 2005, and it requires local governments to invite Native American tribes and Tribal Representatives, identified by the Native American Heritage Commission (NAHC), to participate in consultation about the proposed General Plan and Specific Plan adoptions or amendments for the purpose of preserving or mitigating potential impacts from a project to Native American cultural places. Once Native American tribes receive a project notification letter, they have 90 days to respond and identify if they wish to initiate consultation regarding the project, including subjects such as mitigation for any potential project impacts to tribal cultural resources.

Assembly Bill 52

Assembly Bill (AB) 52 (Chapter 532, Statutes of 2014), which became effective on July 1, 2015, requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a proposed project, if they have requested such notice in writing. Once Native American tribes receive a project notification, they have 30 days to respond and identify if they wish to initiate consultation regarding the project, including subjects such as mitigation for any potential project impacts to tribal cultural resources. A tribal cultural resource is defined as either a site, feature, place, or cultural landscape that is geographically defined in terms of size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is eligible for the CRHR or a local historic register. If a tribe requests

consultation and the lead agency and the tribe ultimately agree on mitigation to address any potentially significant impacts to tribal cultural resources, the mitigation measures agreed upon during consultation must be recommended for inclusion in the environmental document.

2.1.2 Human Remains

Section 7050.5 of the *California Health and Safety Code* provides for the disposition of accidentally discovered human remains. Section 7050.5 states that, if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains would occur until the County Coroner has determined the appropriate treatment and disposition of the human remains.

Section 5097.98 of the PRC states that, if remains are determined by the Coroner to be of Native American origin, the Coroner must notify the NAHC within 24 hours. The NAHC, in turn, must identify the person or persons it believes to be the most likely descendant of the deceased Native American. The descendant shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

2.1.3 Paleontological Resources

Paleontological resources are afforded protection by environmental legislation set forth under CEQA. Appendix G of the CEQA Guidelines provides guidance relative to significant impacts on paleontological resources, indicating that a project will have a significant impact on paleontological resources if it disturbs or destroys a unique paleontological resource or site or unique geological feature.

Under Guidelines for the Implementation of CEQA, as amended March 29, 1999 (Title 14, Division 6, Chapter 3, California Code of Regulations: 15000 et seq.), procedures define types of activities, persons, and public agencies required to comply with CEQA and include as one of the questions to be answered in the Environmental Checklist: “Will the proposed project disturb paleontological resources?” (Appendix G, Section VII, Part f)

The California Public Resources Code Section 5097.5 states:

a) “No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

b) As used in this section, “public lands” means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.”

2.2 LOCAL REGULATORY SETTING

2.2.1 City of San Jacinto Municipal Code Chapter 17.510 – Historic Preservation

17.510.050 – Criteria for Designation

In considering a request for a designation, the following criteria shall be used in determining eligibility:

A. Character, interest, or value as part of the heritage of the City.

B. Location as a site of historical event.

C. Identification with a person(s) or group(s) who significantly contributed to the cultural and development of the City.

D. Exemplification of a particular architectural style or way of life important to the City.

E. Identification as the work of a person(s) whose work has influenced the heritage of the City, the State of California, or the United States.

F. Embodiment of elements of outstanding attention to architectural design, craftsmanship, detail, materials, or the best remaining architectural type in an area.

G. Relationship to other landmarks, where the preservation of one has a bearing on the preservation of another.

H. A unique location or singular physical characteristic representing an established and familiar visual feature of a neighborhood.

I. Integrity as a natural environment that strongly contributes to the wellbeing f the people of the City.

2.2.2 Envision San Jacinto – General Plan

Goal RM-3 Heritage Resources

San Jacinto has a rich history dating back to the area's first inhabitants more than 10,000 years ago. The City's paleontological, archaeological, historical, and tribal cultural resources help define the community and offer opportunities for cultural, education, and community enrichment. The City encourages the protection and enhancement of these resources for generations to come.

RM-3 Policies

RM-3.1 Preservation: Protect areas containing significant historic, archaeological, paleontological, and tribal cultural resources, as defined by the California Public Resources Code.

RM-3.2 Cultural Reminders: Seek to incorporate reminders of San Jacinto's culture in the build and natural environment through adaptive reuse, signage, markers, and other reminders of San Jacinto's heritage.

RM-3.3 Public Education: Educate and actively involve the public in preserving cultural assets, including techniques, incentives, and legal requirements for preservation.

RM-3.4 Tribal Consultation: Consult with Native American tribes whose cultural resources maybe impacted by proposed developments, as necessary, and in accordance with state, local, tribal intergovernmental consultation requirements, in an effort to mitigate or avoid significant effects to resources(s).

RM-3.5 Public Art: Promote the use of public art that celebrates the diverse and culturally rich history of San Jacinto at key gateways, major projects, and public gathering places.

RM-3.6 Historic Preservation: Identify, designate, and protect buildings, districts, eligible properties and sites of historic importance within San Jacinto.

RM-3.7 Funding: Identifying funding programs to assist private property owners in the preservation of historic resources.

3.0 SETTING

3.1 CONTEMPORARY SETTING

The subject property (Figure 1) is currently occupied by Chacon Farms and Bruno Ranches for residential and agricultural use. Onsite operations consist of typical residential living activities, the cultivation of alfalfa, and routine facility maintenance. The subject property consists of two occupied single-family residences with detached garages, two storage barns, and tool shed. In addition to the current structures and alfalfa crops, the subject property is also improved with a capped irrigation well, cattle corrals, irrigation infrastructure, two septic systems, asphalt pavement beneath the storage barns, a grain storage vessel, concrete driveway, and unpaved roads that surround and bisect the property. Additionally, a drainage lagoon is located on the northwestern portion of the subject property.



FIGURE 1: PROJECT SITE (VIEW LOOKING EAST)

3.2 GEOLOGICAL SETTING

The proposed Project Site lies within the Perris Block of the Peninsular Range Geomorphic Province. The Peninsular Range is known as one of the largest masses of granitic rock in Southern California bounded by the San Jacinto Fault Zone and San Jacinto Mountains to the northeast, the Elsinore Fault Zone and Santa Ana Mountains to the southwest, and the San Gabriel Fault Zone to the North. The Menifee, Moreno, Perris, and San Jacinto Valleys are separated by granitic mountain outcrops of the Peninsular Range. The valley floor is composed of late Pleistocene- recent Holocene plutonic and metamorphic sediments eroded by the local granitic mountains of the Perris Block.

The Perris Block lies between two other blocks that are locked in place by faulting. To the west of the Perris Block lies the Santa Ana Block and to the east lies the San Jacinto Block. Internally unfaulted itself, the Perris Block is composed of an eroded mass of Cretaceous granitic rock of the Southern California Batholith. Overlying this granite are alluvial sediments of the Pliocene-Pleistocene. This layer is mostly 20 feet (ft)–200ft in thickness with some areas being 2,000ft thick. Granitic bedrock consists of quartz diorite and displays outcrops which include large

boulders on the surface. The granitic outcrops of the Perris Block are part of a felsic intrusive igneous pluton composed of biotite-hornblende Tonalite known as the Domenigoni Valley Pluton. The pluton is mostly fine grained with some concentrations of foliated hornblende dikes.

The northern part of the Perris Block is located north of the Santa Ana River which is buried beneath sediments of the Transverse Ranges as they rose over the last 2–3 million years. These sediments form the Inland Santa Ana River Basin Aquifer. The aquifer spreads into the Central Perris Plain where it drains into the San Jacinto Basin. North of the basin, the plain is drained by Sycamore Canyon and Tequesquito Arroyo into the Santa Ana River. The sediments within the Perris Block are of late Pleistocene- recent Holocene age. They are moderate to well consolidated sands and silts with some of the older Pleistocene alluvium containing areas with conglomerates. These alluvial fan deposits can be seen throughout the valley floors with the younger more recent Holocene aged sediments being found in low lying areas.

3.3 PALEONTOLOGICAL SETTING

Paleontological sensitivity refers to the potential of encountering any significant paleontological resources in a geologic unit that might be disturbed in a project. Geologic units composed of all sedimentary rocks older than 11,000 years, certain extrusive volcanic rocks and mildly metamorphosed rocks are considered to be of high potential for significant paleontological finds. These geological units are of Fossil Deposit Significance. Fossil significance relates to fossils that are identifiable vertebrates large or small, uncommon invertebrates, plant, and trace fossils. In other words, any data that is consistent with the taphonomic, taxonomic, phylogenetic, paleoecological, stratigraphic, and/or have biochronological information would make these finds significant.

Within the Perris Block lies the Young Alluvial Valley Deposits and the Early Pleistocene Very Old Alluvial Fan Deposits where any significant paleontological resources have been found. These Deposits are all Pleistocene in age where any fossil resources have been found below 5ft from the surface. The Young Alluvial Valley Deposits are dated late Pleistocene and into recent Holocene so the sensitivity of paleontological resources in this deposit is low. The deposits below this layer are of Early Pleistocene where sensitivity is high. For example, nearby at Diamond Valley Lake, what is considered to be the largest Late Pleistocene faunal assemblages in the southwest, over 100,000 fossil specimens from 105 plant and animal species from the Early Pleistocene Very Old Alluvial Fan Deposits were recovered in the 1990s.

3.4 PRECONTACT SETTING

Southern California has a long history of human occupation, with dates of the earliest evidence of human occupation during the late Pleistocene, circa (ca.) 11,000 years B.C. (Glassow et al. 2007: 191). Prehistoric material culture in the State's southern region has been categorized according to periods or patterns that define technological, economic, social, and ideological elements. Within these periods, archaeologists have defined cultural patterns or complexes specific to prehistory within the State's southern region, including the Project area.

The following text and table (Table 1) illustrates the chronological framework developed for Southern California. This framework is divided into four major periods: Paleoindian period (ca. 11,000–7000 B.C.), Milling Stone period (7000 B.C.–3000 B.C.), Intermediate period (3000 B.C.–A.D. 500), and Late Prehistoric period (A.D. 500–Historic Contact). Within these broad temporal periods are variations in the timing and nomenclature of cultural complexes for the region. The timescales referenced in the following discussion are presented as calendar dates (years B.C.–A.D.).

TABLE 1
CULTURAL CHRONOLOGY FOR SOUTHERN CALIFORNIA

Period	Cultural Traits	Years (B.C.–A.D.)
Paleoindian	Clovis and Folsom Fluted Projectile Points	11,000 B.C.–7000 B.C.
Milling Stone	Ground Stone Implements; Large Leaf-Shaped Projectile Points	7000 B.C.–3000 B.C.
Intermediate	Large Side-Notched, Stemmed, and Leaf-Shaped Projectile Points; Mortar and Pestle	3000 B.C.–A.D. 500
Late Prehistoric	Smaller Projectile Points with Convex or Concave Bases, Bow and Arrow; Increased Population Size	A.D. 500–1769

3.4.1 Paleoindian Period (11,000–7000 B.C.)

Recent data from coastal and inland sites during this period indicate that the economy was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many coastal areas and on Pleistocene lakeshores (Moratto 1984:90–92). Although few Clovis-like or Folsom-like fluted points have been found in Southern California, it is widely thought that there was a greater emphasis on hunting at near-coastal and inland sites during the Paleoindian Period than in later periods (e.g., Dillon 2002; Erlandson et al. 1987). Subsistence patterns shifted around 6,000 B.C., concurrent with the gradual desiccation associated with the onset of the Altithermal, a warm and dry period that lasted for about 3,000 years. As the climate changed, a greater emphasis was placed on plant foods and small animals.

3.4.2 Milling Stone Period (7000–3000 B.C.)

The Milling Stone Period (Wallace 1955, 1978) is the earliest well-established period of occupation in Southern California (Glassow et al. 2007: 192). This period is characterized by an ecological adaptation to collecting, accompanied by a dependence on ground stone implements associated with the horizontal motion of grinding small seeds: milling stones (metates, slabs) and hand stones (manos, mullers). Milling stones are found in large numbers for the first time and become more numerous toward the end of this period. As evidenced by their tool kits and shell middens in coastal sites, people during this period practiced a mixed food-procurement strategy. Subsistence patterns became more specialized as groups became better adapted to their regional or local environments. Projectile points from the period are relatively rare, but are large and generally leaf-shaped, and were probably employed with darts or spears thrown with atlatls. Bone tools, such as awls, and items made from shell, including beads, pendants, and abalone dishes, are also quite uncommon. Evidence of weaving or basketry is present at a few sites. The mortar and pestle, associated with the vertical motion of pounding foods such as acorns, were introduced during the Milling Stone Period but do not become common until the Intermediate Period.

3.4.3 Intermediate Period (3000 B.C.–A.D. 500)

The Intermediate Period is characterized by a shift toward a hunting and maritime subsistence strategy, along with a wider use of plant foods. During this period, a pronounced trend toward greater adaptation to regional or local resources can be observed. For example, the remains of fish, land mammals, and marine mammals are increasingly abundant and diverse in sites along the Southern California coast. Chipped stone tools suitable for hunting are more common and both stylistically and technologically varied. Projectile points include large side-notched, stemmed, and lanceolate or leaf-shaped forms. Larger knives, a variety of stone flake scrapers, and drill-like implements are also common during this period. Shell fishhooks become an integral part of the tool kit. Bone tools, including awls, are more numerous than in the preceding period; and the use of asphaltum adhesive becomes more common.

3.4.4 Late Prehistoric Period (A.D. 500–1769)

During the Late Prehistoric Period, use of plant food resources increased in conjunction with land and marine mammal hunting. The variety and complexity of material culture also increased during this period, demonstrated by more diverse classes of artifacts. The recovery of many small, finely-chipped projectile points, usually stemless with convex or concave bases, suggests an increased utilization of the bow and arrow for hunting rather than the atlatl and dart.

During this period, an increase in population size is accompanied by the advent of larger, more permanent villages with greater numbers of inhabitants (Wallace 1955:223). Some coastal and near coastal settlements were occupied by as many as 1,500 people. Many of these larger settlements were permanent villages where at least some people resided year-round. The populations of these villages may have also increased seasonally.

3.5 ETHNOGRAPHIC SETTING

3.5.1 Luiseño

The study area is within the ancestral territory occupied by the Luiseño, named by the Spanish after the Mission San Luis Rey de Francia in the present-day City of Oceanside, where some of their linguistic group frequented. The Luiseño cultural area included southern Riverside County, northern San Diego County, and eastern Orange County; and the area was linguistically comprised of a language of the Shoshonean language family (Kroeber 1925: Plate 57). The contact period ethnicity of the Project area is clear, belonging to the Luiseño culture to which the nearby Indian reservations/communities of Pechanga and Pala attest. Ethnographic literature pertinent to the Luiseño, Cahuilla, and surrounding ethnographic groups is fairly extensive and has been collected since the 1800s (Barrows 1900; Sparkman 1908; Kroeber 1925; White 1963; Bean 1972).

Linguistically, the Luiseño belonged to the Cupan group of the Takic subfamily of the more widespread Uto-Aztecan family. This was earlier called the Southern Californian Shoshonean and includes the languages of the Gabrielino, Serrano, Cahuilla, and Cupeño (Bean and Shipek 1978). Although Kroeber (1925) and Harrington (1933) had distinguished the Luiseño from the Juaneño tribe at the Mission San Juan Capistrano based on linguistic differences, later work by R.C. White (1963) showed both groups to be one ethnic nationality (Bean and Shipek 1978).

Several researchers (Sparkman 1908; Kroeber 1925; White 1963; Bean and Shipek 1978) have attempted to reconstruct past Luiseño lifeways. Based on their work, the following conclusions are suggested. The Luiseño were intensive hunters and gatherers that used both coastal and inland resources. They lived in large sedentary villages that were typically located along valley bottoms, streams, coastal strands, and mountain ranges. These villages were usually in good defensive locations near perennial water sources with every village having access to a number of well-defined and well-defended resource areas that were usually within a day's travel from the village. These resource areas were owned either individually, by a family, or by the village as a whole; and it was only with permission that one could exploit another's territory (Bean and Shipek 1978). Typically, the village contained specialized activity areas that included residence houses, sweathouses, and special ceremonial enclosures (True 1966).

Each village was a politically independent clan triblet of patrilineally-related people headed by a hereditary chief whose powers included religious, economic, and warfare duties. The chief was assisted by a council of ritual specialists and shamans whose positions were also hereditary (Sparkman 1908; Bean and Shipek 1978).

3.6 HISTORIC SETTING

Post-contact history for the state of California is generally divided into three periods: the Spanish period (1769 to 1822), Mexican period (1822 to 1848), and American period (1848 to present). Although Spanish, Russian, and British explorers made brief visits from 1529 to 1769, the Spanish period in California began with the establishment of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain marks the beginning of the Mexican period. The signing of the Treaty of Guadalupe Hidalgo in 1848, signifying the end of the Mexican-American War, marks the beginning of the American period, when California became a territory, and two years later in 1850, when it became the seventeenth State of the United States of America.

3.6.1 Spanish Period (1769–1822)

The first significant European settlement of California began during the Mission Period (1769 to 1822) with the founding of the first mission in San Diego and lasted until 1833–1834, when the Mexican secularization laws effectively opened the area to social and economic growth. The establishment of the Mission System had several impacts on the indigenous populations of Southern California, including those in Los Angeles County. The mission system was dismantled after Mexican governors introduced new secularization acts between 1822 and 1833, thus freeing the Native Americans from mission control.

3.6.2 Mexican Period (1822–1848)

After secularization, the dominance of the large land grant ranchos was established. In 1810, the Spanish government granted the first rancho to José Antonio Yorba and his nephew Juan Pablo Peralta. The Mexican government granted ranchos throughout California to Spanish and Hispanic soldiers and settlers (Castillo 1978). During this period, the entire area was almost constantly involved in political and military revolts. The tense situation ended in 1847, when California gained independence from Mexico during the “Bear Flag” revolt. One year later, the United States gained control of the territory following the conclusion of the Mexican-American War.

3.6.3 American Period (1848–Present)

Although California had been under the control of the United States since 1847, the American Period did not really begin in the Project area until 1851, when the Land Act required rancho dons to confirm the ownership of their lands. Many rancho dons lacked funds and legal documents to confirm land ownership. In addition to legal problems related to the Land Act and new taxes imposed by the United States, many second-generation dons experienced a disastrous two-year drought. This combination of hardships resulted in many rancho families losing their lands. The railroads attracted a steady influx of Euro-American settlers. The Euro-Americans expanded commercial and land development primarily in farming and dairy endeavors. In the twentieth century, independent businesses began to dominate the economic strategy, much as they do today. The city of San Jacinto was founded in 1870 during this period and incorporated on April 20, 1888, making it one of the oldest cities in Riverside County. In the late 19th century and early 20th century, the city became a home to many dairies, and a center for agriculture.

4.0 METHODS

4.1 CULTURAL RESOURCES

4.1.1 Cultural Resource Records Search and Literature Review

Psomas requested a literature and records search from the EIC on September 19, 2022. The EIC is a designated branch of the California Historical Resources Information Center (CHRIS) and houses records regarding archaeological and historic resources recorded in Riverside County. The records search included a 0.8-kilometer (½-mile) search radius around the proposed Project Site and consisted of a detailed examination of the USGS' 7.5-minute Lakeview Quadrangle. The purpose of the literature search was to identify precontact or historic archaeological sites or historic buildings and structures previously recorded within and around the Project Site. The EIC also reviewed the NRHP, the CRHR, local registers, and Archaeological Determinations of Eligibility (ADOE). The records were reviewed to accomplish the following:

- Identify cultural resources (e.g., archaeological sites) in the Project Site and surrounding areas;
- Identify and determine the adequacy of previous cultural resources studies in the Project Site;
- Develop management recommendations for cultural resources within or adjacent to the Project Site; and
- Assess what additional cultural resources studies would need to be undertaken for the proposed Project.

The EIC completed its search on October 25, 2022. The results of the records searches are presented below in Subsection 5.1.

4.1.2 Native American Sacred Lands File Review

An inquiry was made of the NAHC on September 19, 2022, to request a review of the Sacred Lands File (SLF) database regarding the possibility of Native American cultural resources and/or sacred places in the Project vicinity that are not documented on other databases. The results of the SFL Review are presented below in Subsection 5.2.

4.1.3 Western Science Center Paleontological Records Search

Psomas requested a literature and records search from the WSC on November 21, 2022. The WSC houses records regarding paleontological resources recorded in Riverside County. The records search included a 1.6-kilometer (1-mile) search radius around the proposed Project Site and consisted of a detailed examination of the USGS' 7.5-minute Lakeview Quadrangle. The purpose of the literature search was to identify paleontological resources and/or unique geological units previously recorded within and around the Project Site. The results of the WSC record search are presented below in Subsection 5.3.

4.1.4 Archaeological Field Survey

Psomas surveyed the Project Site on February 9, 2023 (Figure 2). The entire Project Site was surveyed by walking evenly spaced transects spaced no more than 10 meters (32 feet) apart. The archaeologist examined all areas considered highly sensitive for cultural resources and the ground surface for the presence of the following:

- Precontact artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools);
- Historic artifacts (e.g., metal, glass, ceramics);
- Sediment discoloration that might indicate the presence of a cultural midden; and
- Depressions and other features indicative of the former presence of structures or buildings (e.g., post holes, foundations).

Psomas maintained transect accuracy in the Project Site using a Garmin global positioning system (GPS) receiver and Project field maps. A field notebook and a digital camera were used to record the survey conditions and findings. The results of the field survey are presented below in Subsection 5.4.



FIGURE 2: PROJECT SITE (LOOKING NORTH)

5.0 REPORT OF FINDINGS

5.1 CALIFORNIA HISTORICAL RECORDS INFORMATION SYSTEM

5.1.1 Eastern Information Center (EIC)

The EIC record search identified 14 prior cultural resources studies within 0.8 km (1/2-mile) of the Project Site (Table 2). The studies were completed between 1990 and 2014. One of the cultural resource studies (RI-06821and RI-08160) traversed the Project Site. The 14 studies consisted of archaeological field studies and literature reviews. The prior studies are listed in Table 2, and the records search results summary letter from EIC is presented as Attachment A.

TABLE 2
PRIOR CULTURAL RESOURCES STUDIES
WITHIN 1/2-MILE OF THE PROJECT SITE

Report	Author	Year	Study	Type of Study	Proximity to Project Site
RI-02885	Arkush, Brooke	1990	An Archaeological Assessment of Five Potential Sites for the Perris Water Treatment Plant, Located Near Lakeview in Western Riverside County, California	Cultural Resources Study	Outside
RI-04404	Jones and Stokes Associates	2000	Final Cultural Resources Inventory Report for the Williams Communications, Inc., Fiber Optic Cable System Installation Project, Riverside to San Diego, California Vol I–IV.	Cultural Resources Study	Outside
RI-04981	McKenna et al.	2003	A Phase I Cultural Resources Survey of the Esplanade Specific Plan Project Area Near Hemet, Riverside County, California	Cultural Resources Study	Outside
RI-05103	Applied Earthworks	2002	Cultural Resources Survey of Tentative Tract 30560, Hemet, California	Cultural Resources Study	Outside
RI-05555	Applied Earthworks	2003	Cultural Resources Survey of Tentative Tract 31184, Hemet, California	Cultural Resources Study	Outside
RI-06821	Dudgeon-Commendador, Amy and Beth Padon	2006	Phase I Cultural Resource Assessment for the Proposed Cawston Avenue Development Project, San Jacinto, Riverside County, California	Cultural Resources Study	Within
RI-06824	Austerman, Virginia	2007	Cultural Resources Assessment, Sanderson Avenue Development Project, San Jacinto, Riverside, California	Cultural Resources Study	Outside
RI-06846	Padon, Beth and Sheila McElroy	2006	Letter Report: Phase I Architectural Assessment for 40-Acre Parcel, San Jacinto, California	Cultural Resources Study	Outside
RI-06944	Demcak, Carol R.	2006	Report of Phase I Archaeological Assessment of West Esplanade Project (APN 431-190-010 & APN 431-190-011), City of San Jacinto, Riverside County, California	Cultural Resources Study	Outside
RI-07558	Joan, George	2008	Phase I Cultural Resources Survey KZ Holdings Project, San Jacinto, California	Cultural Resources Study	Outside
RI-07883	Smallwood, Josh and Laura Hensley Shaker	2008	Historical & Archaeological Resources Survey Report: Cottonwood Avenue Mixed-Use Project, City of San Jacinto, Riverside County, California	Cultural Resources Study	Outside

TABLE 2
PRIOR CULTURAL RESOURCES STUDIES
WITHIN 1/2-MILE OF THE PROJECT SITE

Report	Author	Year	Study	Type of Study	Proximity to Project Site
RI-08160	Hogan, Michael and Bai Tong	2008	Historical & Archaeological Resources Survey Report San Jacinto Master Drainage Plan in and near the City of San Jacinto Riverside County, California	Cultural Resources Study	Within
RI-08495	Joan George, Vanessa Mirro, and Elizabeth Dennison	2010	Supplemental Cultural Resources Survey Report: Cultural Resources in Southern San Jacinto Valley: Realign State Route 79 between Domenigoni Parkway and Gilman Springs Road in the Cities of Hemet and San Jacinto and the County of Riverside, Riverside County, California	Cultural Resources Study	Outside
RI-09689	Delu, Antonina M., John J. Eddy, and Gabrielle Duff	2014	First Supplemental Historic Property Survey Report Realign State Route 79 Between Domenigoni Parkway and Gilman Sprinfs Road in the Cities of Hemet and San Jacinto and the County of Riverside, Riverside County, California	Cultural Resources Study	Outside
Source: EIC 2022					

The EIC records searches also identified five previously recorded cultural resources within 0.8 km (1/2-mile) of the Project Site (Table 3). The previously recorded resources include historic buildings and structures. No precontact cultural resources were identified by the EIC. None of the five historic buildings and structures are located within the proposed Project Site.

TABLE 3
PREVIOUSLY RECORDED CULTURAL RESOURCES
WITHIN 1-MILE OF THE PROJECT SITE

Primary Number	Trinomial	Resource Description	Recording of Events	Proximity to Project Site
P-33-006287	–	Historic: building, structure	1982 (Warner, Jim); 2007 (Tibbet, Casey)	Outside
P-33-007301	–	Historic: building	1982 (Swift, Laura), 2006 (McElroy, Sheila)	Outside
P-33-014791	–	Historic: building, structure	2003 (Livingstone, D.)	Outside
P-33-015267	–	Historic: building	2006 (McElroy, Sheila)	Outside
P-33-017928	–	Historic: structure	2010 (Dice, Michael)	Outside
Source: EIC 2022				

5.2 NATIVE AMERICAN SACRED LANDS FILE REVIEW RESULTS

On September 19, 2022, Psomas requested that the NAHC conduct a search of its SLF to determine if cultural resources important to Native Americans have been recorded in the Project Site or in the immediate vicinity. The results of the NAHC SLF search were received on November 22, 2022, and were negative; however, it should be noted that the records maintained by the NAHC, and the CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. Furthermore, a tribe may be the only

source of information regarding the existence of a tribal cultural resource. The review included a list of tribes affiliated with the Project area. These tribes (see Table 4) will be contacted by the City and offered an opportunity to consult on the Project to comply with the requirements of AB 52 and SB 18. The SLF search results summary letter from the NAHC is presented as Attachment B.

TABLE 4
NAHC TRIBAL REPRESENTATIVES CONTACT LIST

Tribal Organization	Ethnographic Affiliation	Contact(s)
Agua Caliente Band of Cahuilla Indians	Cahuilla	Reid Milanovich; Patricia Garcia-Plotkin
Augustine Band of Cahuilla Mission Indians	Cahuilla	Amanda Vance
Cabazon Band of Mission Indians	Cahuilla	Doug Welmas
Cahuilla Band of Indians	Cahuilla	Daniel Salgado
Campo Band of Diegueno Mission Indians	Diegueno	Ralph Goff
Ewiiaapaayp Band of Kumeyaay Indians	Diegueno	Robert Pinto; Michael Garcia
La Posta Band of Diegueno Mission Indians	Diegueno	Gwendolyn Parada; Javaughn Miller
Los Coyotes Band of Cahuilla and Cupeno Indians	Cahuilla	Ray Chapparosa
Morongo Band of Mission Indians	Cahuilla; Serrano	Robert Martin
Pala Band of Mission Indians	Cupeno; Luiseno	Shasta Gaughen
Pechanga Band of Luiseno Indians	Luiseno	Mark Macarro
Quechan Tribe of the Fort Yuma Reservation	Quechan	Jill McCormick
Ramona Band of Cahuilla	Cahuilla	Joseph Hamilton
Rincon Band of Luiseno Indians	Luiseno	Cheryl Madrigal; Bo Mazetti
Manzanita Band of Kumeyaay Nation	Diegueno	Michael Linton
Santa Rosa Band of Cahuilla Indians	Cahuilla	Lovina Redner
Mesa Grande Band of Diegueno Mission Indians	Diegueno	Michael Linton
Soboba Band of Luiseno Indians	Cahuilla; Luiseno	Isaiah Vivanco
Torres-Martinez Desert Cahuilla	Cahuilla	Thomas Tortez

5.3 WESTERN SCIENCE CENTER PALEONTOLOGICAL RESOURCES RECORD SEARCH

The WSC paleontological literature review and record searches did not identify paleontological resources within the Project Site or the 1-mile search buffer/radius. Furthermore, the WSC noted that the geologic units underlying the Project Site are mapped entirely as active valley deposits dating to the Holocene which is estimated to be between 5,000 years old and present. While Holocene alluvial units are of high preservation value, material found is unlikely to be fossil material due to the relatively modern associated dates of the deposits. However, the WSC also noted that if development requires any substantial depth of disturbance, the likelihood of reaching older Holocene or Late Pleistocene alluvial sediments would increase. The paleontological search results summary letter from WSC is presented as Attachment C.

5.4 ARCHAEOLOGICAL/PALEONTOLOGICAL FIELD SURVEY RESULTS

As indicated above, a Psomas cultural resource specialist surveyed the Project Site on February 9, 2023. The archaeological and paleontological resources field survey did not identify archaeological and paleontological resources; however, it should be noted ground visibility was obscured by dense vegetation and recent flooding from rain (Figure 3 and Figure 4). Additionally, the structures located on at the northern end of the Project Site date to 1940s. A separate historic

built environment assessment of the structures and report has been prepared by South Environmental (Attachment D).



FIGURE 3: PROJECT SITE (LOOKING WEST)



FIGURE 4: PROJECT SITE (LOOKING NORTH)

6.0 DISCUSSION AND IMPACT ANALYSIS

Psomas conducted archaeological and paleontological resources field investigations within the proposed Project Site on February 9, 2023. The main goal of the investigations was to gather and analyze information needed to determine if the Project would have a significant impact on properties eligible for the CRHR and to provide mitigation measures for those resources. The results of the 2022 EIC cultural resources records searches identified five previously recorded cultural resources within 0.8 km (1/2-mile) of the Project Site. The previously recorded resources include five historic structures/buildings. None of the five cultural resources identified by the EIC are located within the proposed Project. Furthermore, the 2022 NAHC SLF search was negative for sacred sites. Additionally, the 2023 WSC paleontological resource records search was negative for paleontological resources (i.e., fossils).

The 2023 field survey (archaeological and paleontological) did not identify archaeological and paleontological resources however, it should be noted ground visibility was obscured by dense vegetation and recent flooding from rain. Additionally, the structures located on at the northern end of the Project Site date to 1940s. A separate historical evaluation of the structures and report has been prepared by South Environmental (Attachment D).

7.0 RECOMMENDED MITIGATION MEASURES AND PROTOCOLS

While no significant archaeological and/or cultural resources eligible for the CRHR were identified in the proposed Project Site, five cultural resources from historic period of California history have been documented within 0.8 km (1/2-mile) of the Project Site.

Furthermore, no paleontological resources were identified in the Project Site and the results from the WSC suggest the Holocene alluvial sediments located within the Project Site are unlikely to contain fossil material due to the relatively modern associated dates of the deposits. However, the WSC also noted that if development requires any substantial depth of disturbance, the likelihood of reaching older Holocene or Late Pleistocene alluvial sediments would increase.

Therefore, Psomas recommends the following mitigation measures in the event of discovery of archaeological and/or paleontological resources and adherence to existing regulations and protocols for the discovery of human remains. Furthermore, additional mitigation measures may be requested during the AB 52 and SB 18 tribal consultation process.

7.1 MITIGATION MEASURE 1

The Applicant shall retain a professional Archaeologist prior to the issuance of grading permits. The Archaeologist shall monitor the initial ground-altering activities within undisturbed native sediment for the Project Site for the unearthing of previously unknown archaeological and/or cultural resources. The Archaeological Monitor shall maintain daily field notes and a photographic record and report all finds to the Applicant and local Native American community in a timely manner. The Archaeological Monitor shall be equipped to record and salvage cultural resources that may be unearthed during grading activities. The Archaeological Monitor shall be empowered to temporarily halt or divert grading equipment to allow recording and removal of the unearthed resources.

If archaeological resources are discovered at the Project Site, the handling of the discovered resources will occur as described below. All artifacts discovered shall be inventoried and analyzed by the professional Archaeologist. If any artifacts of Native American origin are discovered, all activities in the immediate vicinity of the find (within a 50-foot radius) shall stop, and the Archaeological Monitor shall notify the Applicant and Lead Agency (i.e., City) and tribes identified by the California NAHC as being affiliated with the area. A designated Native American observer from one of the tribes identified by the NAHC as being affiliated with the area shall be retained to help analyze the Native American artifacts for identification as everyday life and/or religious or sacred items, cultural affiliation, temporal placement, and function, as deemed possible. The significance of Native American resources shall be evaluated in accordance with the provisions of CEQA and shall consider the religious beliefs, customs, and practices of the affiliated tribes. All items found in association with Native American human remains shall be considered grave goods or sacred in origin and subject to special handling.

Native American artifacts that are relocated/reburied at the Project Site would be subject to a fully executed relocation/reburial agreement with the assisting Native American tribes or bands. This shall include measures and provisions to protect the reburial area from any future impacts. Relocation/reburial shall not occur until all cataloging and basic recordation have been completed. Native American artifacts that cannot be avoided or relocated at the Project Site shall be prepared in a manner for curation at an accredited curation facility in Riverside County that meets federal standards per 36 CFR Part 79 and makes the artifacts available to other archaeologists/researchers for further study. The Archaeological Monitor shall deliver the Native American artifacts, including title, to the accredited curation facility within a reasonable amount of time, along with the fees necessary for permanent curation.

Non-Native American artifacts shall be inventoried, assessed, and analyzed for cultural affiliation, personal affiliation (prior ownership), function, and temporal placement. After analysis and reporting, these artifacts will be subjected to curation or returned to the property owner, as deemed appropriate. All artifacts, except for human remains and related grave goods or sacred/ceremonial objects, belong to the property owner.

7.2 MITIGATION MEASURE 2

In the event that potential paleontological resources are discovered during ground-disturbing activities, work will stop in that area and within 30 feet of the find until a qualified paleontologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures may include monitoring by a qualified paleontologist during construction-related ground-disturbing activities. The monitor will retain the option to reduce monitoring if it is determined that the sediments were previously disturbed. Monitoring may also be reduced if potentially fossiliferous units are not present or, if present, are determined to have a low potential to contain fossil resources. The monitor will be equipped to salvage fossils and samples of sediments as they are unearthed and will be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Recovered specimens will be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Specimens will be curated into a professional, accredited museum repository with permanent retrievable storage. A report of findings, with an appended itemized inventory of specimens, will be prepared and will signify completion of the mitigation.

7.3 REGULATORY REQUIREMENT — PROTOCOLS FOR THE DISCOVERY OF HUMAN REMAINS

All discovered human remains shall be treated with respect and dignity. California State law (*California Health & Safety Code* Section 7050.5) and federal law and regulations ([*Archaeological Resources Protection Act* 16 *United States Code* (USC) 470 & 43 CFR 7], [*Native American Graves Protection & Repatriation Act* 25 USC 3001 & 43 CFR 10] and [Public Lands, Interior 43 CFR 8365.1–7]) require a defined protocol if human remains are discovered in the State of California regardless of whether the remains are modern or archaeological in origin.

Upon discovery of human remains, all work must cease immediately within 100-feet of the discovery; nothing would be disturbed; the area would be secured; and the County Coroner's Office would be notified. The Coroner has two working days to examine the remains after notification. The property owner of the site shall also be called and informed of the discovery. If the remains are located on federal lands, federal land managers/federal law enforcement/federal archaeologist would be informed as well due to complementary jurisdiction issues. The Coroner would determine if the bones are historic/archaeological or a modern legal case.

7.3.1 Modern Remains

If the Coroner's Office determines the remains are of modern origin, the appropriate law enforcement officials would be notified by the Coroner to conduct the required procedures. Work would not resume until law enforcement has released the area.

7.3.2 Archaeological Remains

If the remains are determined to be archaeological in origin and there are no legal concerns, the protocol changes depending on whether the discovery site is located on federally or non-federally owned/managed lands. The proposed Project Site is located on non-federal lands.

Remains Discovered on Non-Federally Owned/Managed Lands

After the Coroner has determined the remains on non-federally owned/managed lands are archaeological and there is no legal concern, the Coroner would make recommendations concerning the treatment and disposition of the remains to the person responsible for the excavation, or to his or her authorized representative. If the Coroner believes the remains to be those of a Native American, he/she would contact the NAHC by telephone within 24 hours. The NAHC would immediately notify the person it believes to be the most likely descendant of the remains. The most likely descendant has 48 hours to make recommendations to the landowner for treatment or disposition of the human remains. If the descendant does not make recommendations within 48 hours, the landowner would rebury the remains in an area of the property secure from further disturbance. If the landowner does not accept the descendant's recommendations, the owner or the descendant may request mediation by the NAHC.

8.0 CERTIFICATION

I hereby certify that the statements furnished above in this draft report and in the attached exhibits present the data and information required for this draft Phase I Cultural Resource Inventory, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: October 19, 2023 SIGNED: _____

Charles Cisneros, M.S., RPA
Senior Archaeologist

9.0 REFERENCES CITED

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ATTACHMENT A

EASTERN INFORMATION CENTER RECORDS SEARCH RESULTS

ReportNum	DocAddlCitLetter	Status	OtherIDs	Xrefs	Authors	CitYear	CitMonth
RI-**0288**5			NADB-R - 1083489; Voided - MF-3083		ARKUSH, BROOKE	1990	
RI-04404			NADB-R - 1085736; Voided - MF-4913		JONES AND STOKES ASSOCIATES, INC.	2000	Aug
RI-04981			NADB-R - 1086343; Submitter - 03-03-04-725		MCKENNA ET AL.	2003	
RI-05103			NADB-R - 1086465		APPLIED EARTH WORKS, INC.	2002	
RI-05555			NADB-R - 1086918		APPLIED EARTHWORKS	2003	
RI-06821					Dudgeon-Commendador, Amy and Beth Padon	2006	
RI-06824			Submitter - LSA Project No. SSJ0701		Austerman, Virginia	2007	
RI-06846					Beth Padon and Sheila McElroy	2006	Jul

ReportNum	DocAddlCitLetter	Status	OtherIDs	Xrefs	Authors	CitYear	CitMonth
RI-06944					Carol R. Demcak	2006	
RI-07558					George, Joan	2008	
RI-07883			Submitter - CRM TECH Contract No. 2255		Smallwood, Josh and Laura Hensley Shaker	2008	
RI-08495			Agency Nbr - District 8-RIV-79-KP R25.4/R54.4 (PM R15.78/R33.80) 08-494000; Caltrans - District 8-RIV-79-KP R25.4/R54.4 (PM R15.78/R33.80) 08-494000		Joan George, Vanessa Mirro, and Elizabeth Dennison	2010	
RI-09689				See also RI-09690; See also RI-09691	Antonina M. Delu, John J. Eddy, and Gabrielle Duff	2014	Dec

ReportNum	CitTitle	CitPublisher	CitPages	CitMaps
RI-**0288**5	AN ARCHAEOLOGICAL ASSESSMENT OF FIVE POTENTIAL SITES FOR THE PERRIS WATER TREATMENT PLANT, LOCATED NEAR LAKEVIEW IN WESTERN RIVERSIDE COUNTY, CALIFORNIA.	ARCHAEOLOGICAL RESEARCH UNIT	16	
RI-04404	FINAL CULTURAL RESOURCES INVENTORY REPORT FOR THE WILLIAMS COMMUNICATIONS, INC., FIBER OPTIC CABLE SYSTEM INSTALLATION PROJECT, RIVERSIDE TO SAN DIEGO, CALIFORNIA VOL I-IV.	JONES AND STOKES ASSOCIATES, INC.	189	98
RI-04981	A PHASE I CULTURAL RESOURCES SURVEY OF THE ESPLANADE SPECIFIC PLAN PROJECT AREA NEAR HEMET, RIVERSIDE COUNTY, CALIFORNIA	MCKENNA ET AL.	82	
RI-05103	CULTURAL RESOURCES SURVEY OF TENTATIVE TRACT 30560, HEMET, CALIFORNIA	APPLIED EARTH WORKS, INC.	6	
RI-05555	CULTURAL RESORUCES SURVEY OF TENTATIVE TRACT 31184, HEMET, CALIFORNIA	APPLIED EARTHWORKS	9	
RI-06821	Phase 1 Cultural Assessment for the Proposed Cawston Avenue Development Project, San Jacinto, Riverside County, California	Discovery Works, Inc.	19	
RI-06824	Cultural Resources Assessment, Sanderson Avenue Widening Project, City of San Jacinto, Riverside County, California	LSA Associates, Inc.	12	
RI-06846	Letter Report: Phase One Architectural Assessment for 40-Acre Parcel, San Jacinto, California	Discovery World, Inc.	4	0

ReportNum	CitTitle	CitPublisher	CitPages	CitMaps
RI-06944	Report of Phase I Archaeological Assessment of West Esplanade Project (APN'S 431-190-010 and 431-190-011), City of San Jancinto, Riverside County, California	Archaeological Resource Management Corporation	9	
RI-07558	Phase-I Cultural Resources Survey KZ Holdings Project, San Jacinto, California	Applied EarthWorks, Inc.	13	
RI-07883	Historical/Archaeological Resources Survey Report: Cottonwood Avenue Mixed-Use Project, City of San Jacinto, Riverside County, California	CRM TECH	29	
RI-08495	Supplemental Cultural Resources Survey Report: Cultural Resources in Southern San Jacinto Valley: Realign State Route 79 between Domenigoni Parkway and Gilman Springs Road in the Cities of Hemet and San Jacinto and the County of Riverside. Riverside County, California	Applied EarthWorks	115	
RI-09689	First Supplemental Historic Property Survey Report Realign State Route 79 between Domenigoni Parkway and Gilman Springs Road in the Cities of Hemet and San Jacinto and the County of Riverside, Riverside County, California, District 8-RIV-79-KP R25.4/R54.4 (PM R15.78/R33.80), PN 0800000784/EA 08-49400	Applied Earthworks	608	

ReportNum	ReportType	InventorySize	InventoryDisclosure	InventoryCollections	InventoryNotes
RI-**0288**5	Archaeological, Field study	1150 Acres surveyed			
RI-04404	Archaeological, Field study, Literature search	12 Acres surveyed	Not for publication	No	
RI-04981	Archaeological, Field study	230 Acres surveyed	Not for publication	No	
RI-05103	Archaeological, Field study	65 Acres surveyed	Unrestricted	No	
RI-05555	Archaeological, Evaluation, Field study	120 Acres surveyed	Not for publication	No	
RI-06821	Archaeological, Evaluation, Field study	ca. 40 Acres surveyed			
RI-06824	Archaeological, Field study	56.8 Acres surveyed			
RI-06846	Architectural/historical, Evaluation	40 Acres surveyed	Not for publication	No	

ReportNum	ReportType	InventorySize	InventoryDisclosure	InventoryCollections	InventoryNotes
RI-06944	Archaeological, Field study	35 Acres surveyed	Not for publication	No	
RI-07558	Archaeological, Field study	16.7 Acres surveyed	Not for publication	No	
RI-07883	Archaeological, Field study	ca. 35 Acres surveyed	Not for publication	No	
RI-08495	Archaeological, Evaluation, Field study	30 Kilometers monitored	Not for publication	No	
RI-09689	Archaeological, Literature search		Not for publication	No	

ReportNum	Resources	ResourceCount	HasInformals	Counties	Maps	Address
RI-**0288**5	33-000397, 33-000402, 33-000403, 33-000405, 33-000407, 33-000551, 33-000575, 33-001138, 33-001842, 33-002916, 33-002920, 33-002921, 33-002922, 33-002924, 33-002925, 33-002926, 33-002927, 33-003309, 33-003310, 33-003311, 33-003312, 33-003313, 33-003314, 33-003315, 33-003316, 33-003318, 33-003319, 33-003958	28	No	Riverside	LAKEVIEW, WINCHESTER	
RI-04404	33-000816, 33-000817, 33-000862, 33-001845, 33-002970, 33-003081, 33-003839, 33-004202, 33-004624, 33-004744, 33-004768, 33-007587, 33-007601, 33-008105, 33-008172, 33-009772, 33-009773, 33-009774, 33-009775, 33-009776	20	No	Riverside	BACHELOR MTN, FONTANA, LAKE MATHEWS, LAKEVIEW, MURRIETA, PECHANGA, PERRIS, RIVERSIDE EAST, RIVERSIDE WEST, ROMOLAND, SAN JACINTO, STEELE PEAK, TEMECULA, WINCHESTER	
RI-04981		0	No	Riverside	LAKEVIEW	
RI-05103		0	No	Riverside	LAKEVIEW	
RI-05555	33-014791	1	No	Riverside	LAKEVIEW	
RI-06821	33-007302, 33-015267	2	No	Riverside	LAKEVIEW	
RI-06824		0	No	Riverside	LAKEVIEW	
RI-06846	33-007301, 33-015267	2	No	Riverside	LAKEVIEW	2540 Seventh Street San Jacinto (APN 431-190-003), 2670 Seventh Street San Jacinto (APN 431-190-027)

ReportNum	Resources	ResourceCount	HasInformals	Counties	Maps	Address
RI-06944		0	No	Riverside	LAKEVIEW	
RI-07558		0	No	Riverside	LAKEVIEW	
RI-07883	33-015734	1	No	Riverside	LAKEVIEW	
RI-08495	33-009014, 33-009632, 33-009712, 33-014251, 33-014815, 33-014818, 33-014819, 33-014821, 33-014822, 33-014823, 33-014826, 33-014827, 33-014829, 33-014830, 33-014831, 33-014832, 33-014833, 33-014834, 33-014835, 33-014836, 33-014837, 33-014838, 33-015446, 33-015447, 33-015661, 33-017631, 33-017632, 33-017633, 33-017634, 33-017635	30	No	Riverside	LAKEVIEW, SAN JACINTO, WINCHESTER	
RI-09689	33-005461, 33-005462, 33-006884, 33-007266, 33-007267, 33-007836, 33-007837, 33-014814, 33-014816, 33-014817, 33-014820, 33-014824, 33-014825, 33-014839, 33-014840, 33-014841, 33-015442, 33-015443, 33-015444, 33-015445, 33-015448, 33-015449, 33-015450, 33-015658, 33-015659, 33-015662, 33-015664, 33-015676	28	No	Riverside	LAKEVIEW, SAN JACINTO, WINCHESTER	N/A Hemet N/A (APN N/A), San Jacinto, Winchester

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-33-006287		OHP PRN - 33-2343-126; OHP Property Number - 061453; Other - Hanson Stock Farm	Building, Structure	Historic	HP02	1982 (Warner, Jim, Riverside County Historical Commission); 2007 (Tibbet, Casey, LSA Associates, Inc., Riverside)	RI-07937
P-33-007301		Other - Ser. No. 33-2383-5	Building	Historic	HP02	1982 (Laura Swift, Riv. Co. Historical Comm.); 2006 (Sheila McElroy, n/a)	RI-06846
P-33-014791		Other - AI-LE-1H (Buildings A & B)	Building, Structure	Historic	HP02	2003 (Livingstone, D., Applied EarthWorks, Inc.)	RI-05555
P-33-015267			Building	Historic	HP02	2006 (McElroy, Sheila, Historic Property Development)	RI-06821, RI-06846
P-33-017928		Other - APN#432-270-012	Structure	Historic	HP02	2010 (Michael H. Dice, Michael Btandman Associates)	

ATTACHMENT B

NATIVE AMERICAN HERITAGE COMMISSION
SACRED LANDS FILE SEARCH RESULTS

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
[Vacant]

COMMISSIONER
[**Vacant**]

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok/Nisenan

NAHC HEADQUARTERS
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Suite 100
West Sacramento,
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nahc@nahc.ca.gov
NAHC.ca.gov

November 2, 2022

Charles Cisneros
Psomas

Via Email to: Charles.Cisneros@psomas.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, 4RAM020100 Project, Riverside County

Dear Mr. Cisneros:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

    - Any report that may contain site forms, site significance, and suggested mitigation measures.

      All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
Riverside County
11/2/2022

Agua Caliente Band of Cahuilla Indians
Reid Milanovich, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919
laviles@aguacaliente.net

Agua Caliente Band of Cahuilla Indians
Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

Augustine Band of Cahuilla Mission Indians
Amanda Vance, Chairperson
84-001 Avenue 54 — Cahuilla
Coachella, CA, 92236
Phone: (760) 398 - 4722
Fax: (760) 369-7161
hhaines@augustinetribe.com

Cabazon Band of Mission Indians
Doug Welmas, Chairperson
84-245 Indio Springs Parkway — Cahuilla
Indio, CA, 92203
Phone: (760) 342 - 2593
Fax: (760) 347-7880
jstapp@cabazonindians-nsn.gov

Cahuilla Band of Indians
Daniel Salgado, Chairperson
52701 U.S. Highway 371 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 5549
Fax: (951) 763-2808
Chairman@cahuilla.net

Campo Band of Diegueno Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 — Diegueno
Campo, CA, 91906
Phone: (619) 478 - 9046
Fax: (619) 478-5818
rgoff@campo-nsn.gov

Ewiiaapaayp Band of Kumeyaay Indians
Michael Garcia, Vice Chairperson
4054 Willows Road — Diegueno
Alpine, CA, 91901
Phone: (619) 933 - 2200
Fax: (619) 445-9126
michaelg@leaningrock.net

Ewiiaapaayp Band of Kumeyaay Indians
Robert Pinto, Chairperson
4054 Willows Road — Diegueno
Alpine, CA, 91901
Phone: (619) 368 - 4382
Fax: (619) 445-9126
ceo@ebki-nsn.gov

La Posta Band of Diegueno Mission Indians
Javaughn Miller, Tribal Administrator
8 Crestwood Road — Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
jmiller@LPtribe.net

La Posta Band of Diegueno Mission Indians
Gwendolyn Parada, Chairperson
8 Crestwood Road — Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
LP13boots@aol.com

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This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed 4RAM020100 Project, Riverside County.

Native American Heritage Commission
Tribal Consultation List
Riverside County
11/2/2022

Los Coyotes Band of Cahuilla and Cupeño Indians
Ray Chapparosa, Chairperson
P.O. Box 189 — Cahuilla
Warner Springs, CA, 92086-0189
Phone: (760) 782 - 0711
Fax: (760) 782-0712

Manzanita Band of Kumeyaay Nation
Angela Elliott Santos, Chairperson
P.O. Box 1302 — Diegueno
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957

Mesa Grande Band of Diegueno Mission Indians
Michael Linton, Chairperson
P.O Box 270 — Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 782 - 3818
Fax: (760) 782-9092
mesagrandeband@msn.com

Morongo Band of Mission Indians
Ann Brierty, THPO
12700 Pumarra Road — Cahuilla, Serrano
Banning, CA, 92220
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road — Cahuilla, Serrano
Banning, CA, 92220
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov

Pala Band of Mission Indians
Shasta Gaughen, Tribal Historic Preservation Officer
PMB 50, 35008 Pala Temecula Rd. — Cupeno, Luiseno
Pala, CA, 92059
Phone: (760) 891 - 3515
Fax: (760) 742-3189
sgaughen@palatribe.com

Pechanga Band of Indians
Mark Macarro, Chairperson
P.O. Box 1477 — Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 6000
Fax: (951) 695-1778
epreston@pechanga-nsn.gov

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

Ramona Band of Cahuilla
Joseph Hamilton, Chairperson
P.O. Box 391670 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
admin@ramona-nsn.gov

Rincon Band of Luiseno Indians
Cheryl Madrigal, Tribal Historic Preservation Officer
One Government Center Lane — Luiseno
Valley Center, CA, 92082
Phone: (760) 297 - 2635
crd@rincon-nsn.gov

Rincon Band of Luiseno Indians
Bo Mazzetti, Chairperson
One Government Center Lane — Luiseno
Valley Center, CA, 92082
Phone: (760) 749 - 1051
Fax: (760) 749-5144
bomazzetti@aol.com

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This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed 4RAM020100 Project, Riverside County.

Santa Rosa Band of Cahuilla Indians
Lovina Redner, Tribal Chair
P.O. Box 391820 Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosa-nsn.gov

Soboba Band of Luiseno Indians
Isaiah Vivanco, Chairperson
P. O. Box 487 Cahuilla
San Jacinto, CA, 92581 Luiseno
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 Cahuilla
San Jacinto, CA, 92581 Luiseno
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Torres-Martinez Desert Cahuilla Indians
Thomas Tortez, Chairperson
P.O. Box 1160 Cahuilla
Thermal, CA, 92274
Phone: (760) 397 - 0300
Fax: (760) 397-8146
thomas.tortez@torresmartinez-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed 4RAM020100 Project, Riverside County.

ATTACHMENT C

WESTERN SCIENCE CENTER PALEONTOLOGY RECORDS SEARCH RESULTS

WESTERN SCIENCE CENTER

February 2nd, 2023

PSOMAS
Charles Cisneros
225 South Lake Avenue
Pasadena, CA 91101

Dear Mr. Cisneros,

This letter presents the results of a record search conducted for Psomas Project 4RAM020100 located the City of San Jacinto, Riverside County, CA. This Project is located south of W 7th Street, north of Esplanade Avenue, and west of Cawston Avenue in Township 4 South, Range 1 West, Section 00 of the *Lakeview, CA* USGS 7.5 minute quadrangle.

The geologic units underlying this project are mapped entirely as alluvial sand and clay deposits dating from the Holocene period (Dibblee and Minch, 2003). Holocene alluvial units are considered to be of high preservation value, but material found is unlikely to be fossil material due to the relatively modern associated dates of the deposits. However, if development requires any substantial depth of disturbance, the likelihood of reaching Pleistocene alluvial sediments would increase. The Western Science Center does not have localities within the project area, but the Eastside Pipeline Project lies within a mile radius east of the project.

Due to the proximity of the Eastside Pipeline Project, any fossil specimen from the Psomas Project 4RAM020100 would be scientifically significant. Excavation activity associated with the development of the project area would impact paleontologically sensitive Pleistocene alluvial units, and it is the recommendation of the Western Science Center that a paleontological resource mitigation program be put in place to monitor, salvage, and curate any recovered fossils associated with the study area.

If you have any questions, or would like further information about the Eastside Pipeline Project, please feel free to contact me at bstoneburg@westerncentermuseum.org.

Sincerely,

Brittney Elizabeth Stoneburg
Collections Manager

Psomas Project 4RAM020100

project area + 1 mile radius

Legend

- 1 Mile Radius
- Eastside Pipeline Project
- gr-m: pre-Cenozoic granitic and metamorphic rocks undivided (Early Proterozoic to Late Cretaceous)
- Psomas Project 4RAM020100
- Q: Quaternary alluvium and marine deposits (Pliocene to Holocene)

KB Home Eagle's Crest at The Cove

95SR12-12.1
95JB12-12.1
95JB12-8.1

95JB12-14.1
95JB12-14.2
95NB12-27.1
95NB12-28.1
95JB12-1.1

Budology

Cottonwood Ave

Warren Rd

S Sanderson Ave

W 7th St

S Kirby St

S Lyon Ave

412 Church

Blazed Utopia

S State St

Starbucks

W Esplanade Ave

Tahquitz High School

N Sanderson Ave

N Kirby St

N Lyon Ave

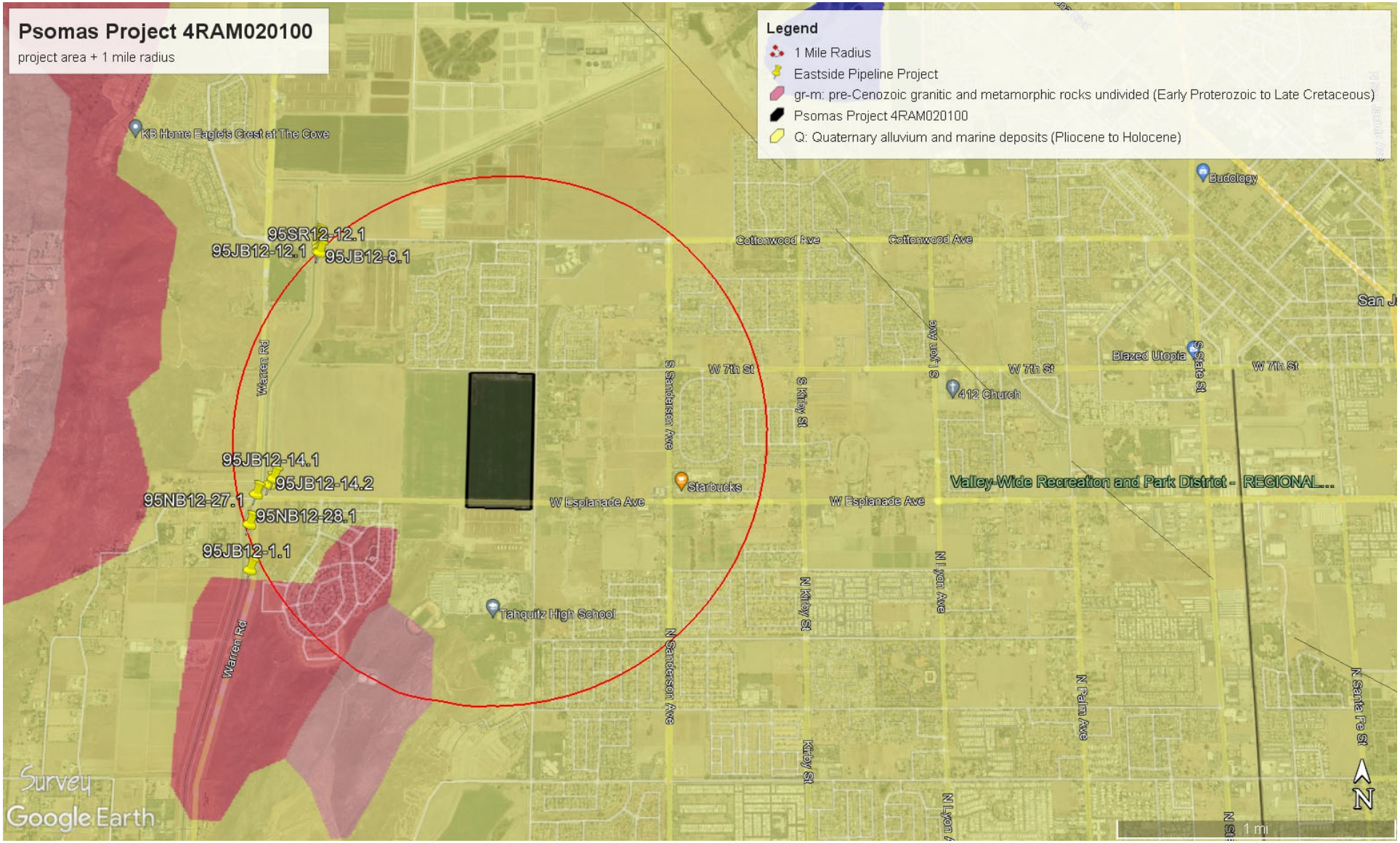
N Palm Ave

Valley-Wide Recreation and Park District - REGIONAL...

N Santa Fe St

Survey
Google Earth

1 mi


Psomas Project 4RAM020100
project area + 1 mile radius
Legend
1 Mile Radius
Eastside Pipeline Project
gr-m: pre-Cenozoic granitic and metamorphic rocks undivided (Early Proterozoic to Late Cretaceous)
Psomas Project 4RAM020100
Q: Quaternary alluvium and marine deposits (Pliocene to Holocene)
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95NB12-28.1
95JB12-1.1
Budology
Cottonwood Ave
Warren Rd
S Sanderson Ave
W 7th St
S Kirby St
S Lyon Ave
Blazed Utopia
S State St
412 Church
Starbucks
W Esplanade Ave
Valley-Wide Recreation and Park District - REGIONAL...
Tahquitz High School
N Sanderson Ave
N Kirby St
N Lyon Ave
N Palm Ave
Kirby St
N Santa Fe St
Survey
Google Earth
1 mi
N

ATTACHMENT D

HISTORIC BUILT ENVIRONMENT ASSESSMENT FOR THE CHACON FARMS PROJECT

September 27, 2023

Charles Cisneros, RPA
Senior Archaeologist
Psomas
Email: charles.cisneros@psomas.com

RE: Historic Built Environment Assessment for the Chacon Farms Project, City of San Jacinto, California

Dear Mr. Cisneros:

South Environmental was retained by Psomas to prepare an historic built environment assessment report in support of the Chacon Farms Project (project) in the City of San Jacinto, California. The purpose of this report is to determine if the proposed project will result in impacts to historic built environment resources located within the project site. This report was prepared in conformance of the requirements of the California Environmental Quality Act (CEQA) Guidelines § 15064.5 for historical resources.

The project site comprises three parcels containing two single-family residences, two detached garages, and one tool shed that were constructed over 45 years ago. In accordance with the requirements of CEQA Guidelines §15064.5 for historical resources, the properties were recorded and evaluated for historical significance and integrity on the appropriate set of State of California Department of Parks and Recreation Series 523 Forms (DPR forms, Attachment A).

This significance evaluation and associated impacts assessment was prepared by Architectural Historians Marlena Krcelich, BA and Laura Carías, MA who meet the Secretary of the Interior's Professional Qualification Standards for architectural history and history. Resumes for Ms. Krcelich and Ms. Carías are provided in Attachment B.

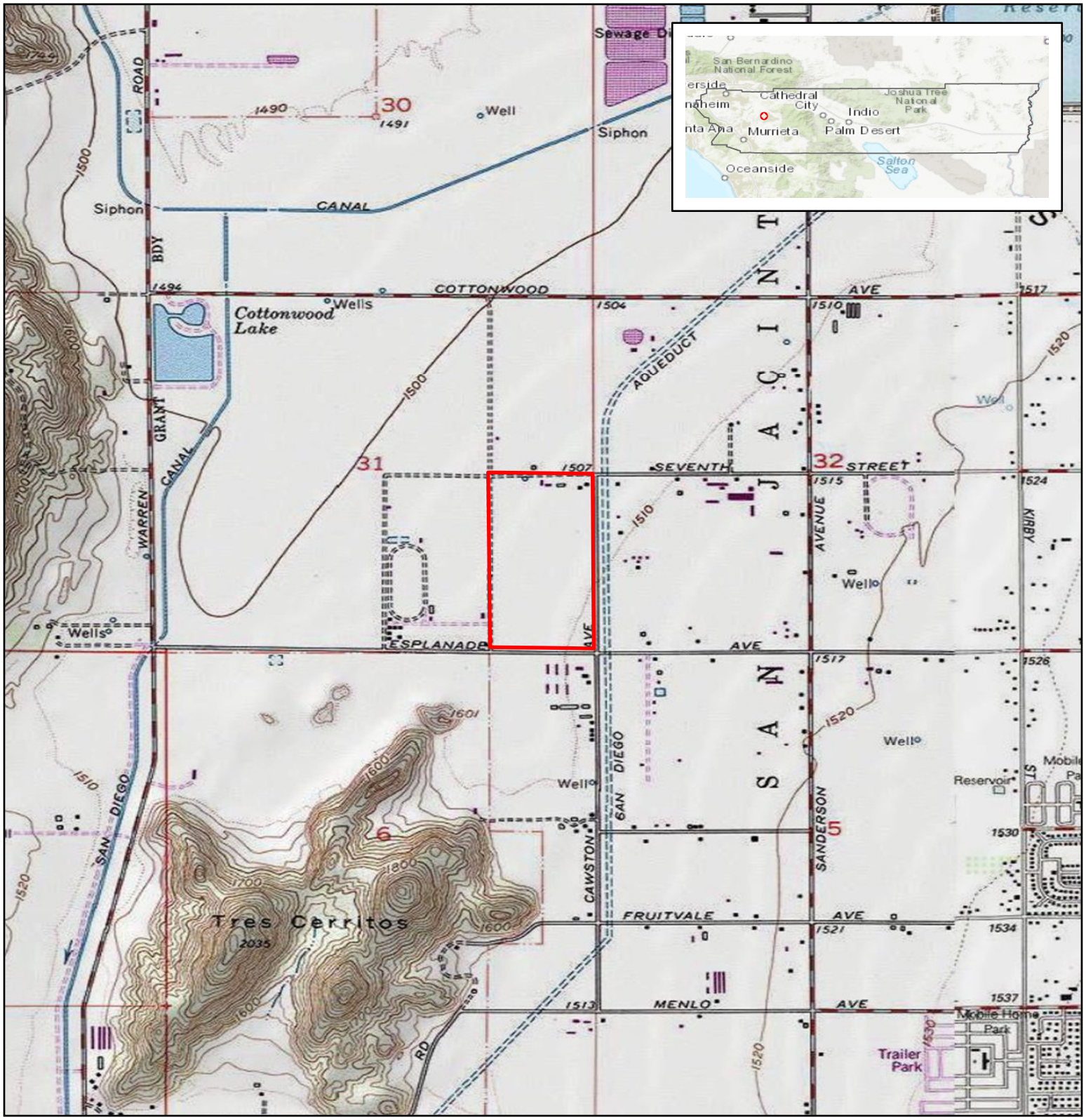
Introduction

Project Description

The Chacon Farms Project involves the development of a 76.3-acre residential community in the City of San Jacinto. The Project involves construction of 640 residential units, including 430 multifamily units and 210 single family units. The community would be connected via an internal roadway network gaining access via Cawston Avenue, 7th Street, and Esplanade Avenue. Numerous pedestrian trails and paths would provide access to the range of residential types and neighborhoods, as well as open spaces, parks, and a Neighborhood Park with a clubhouse and associated amenities.

Project Location

The project site consists of three parcels: APNs 432-260-009, 432-260-026, and 432-260-027 located at 710 Cawston Avenue North in the City of San Jacinto, California. The project site is located on the west of Cawston Avenue North and south of West 7th Street (Figure 1). It is bound to the north by West 7th Street, to the west by agricultural fields, to the south by West Esplanade Avenue, and to the east by Cawston Avenue North (Figure 2).



Source: ESRI USA Topo Maps and World Topo Map 2023

710 Cawston Avenue North Project

Figure 1. Project Location Map

Project Site

Project Site is within City of San Jacinto, California, in Riverside County on the USGS Lakeview 7.5-minute quadrangle map in Section 31 of Township 04 South and Range 01 West

Center Coordinate (Decimal Degrees):
Latitude: 33.7765141N Longitude: -117.0175392W

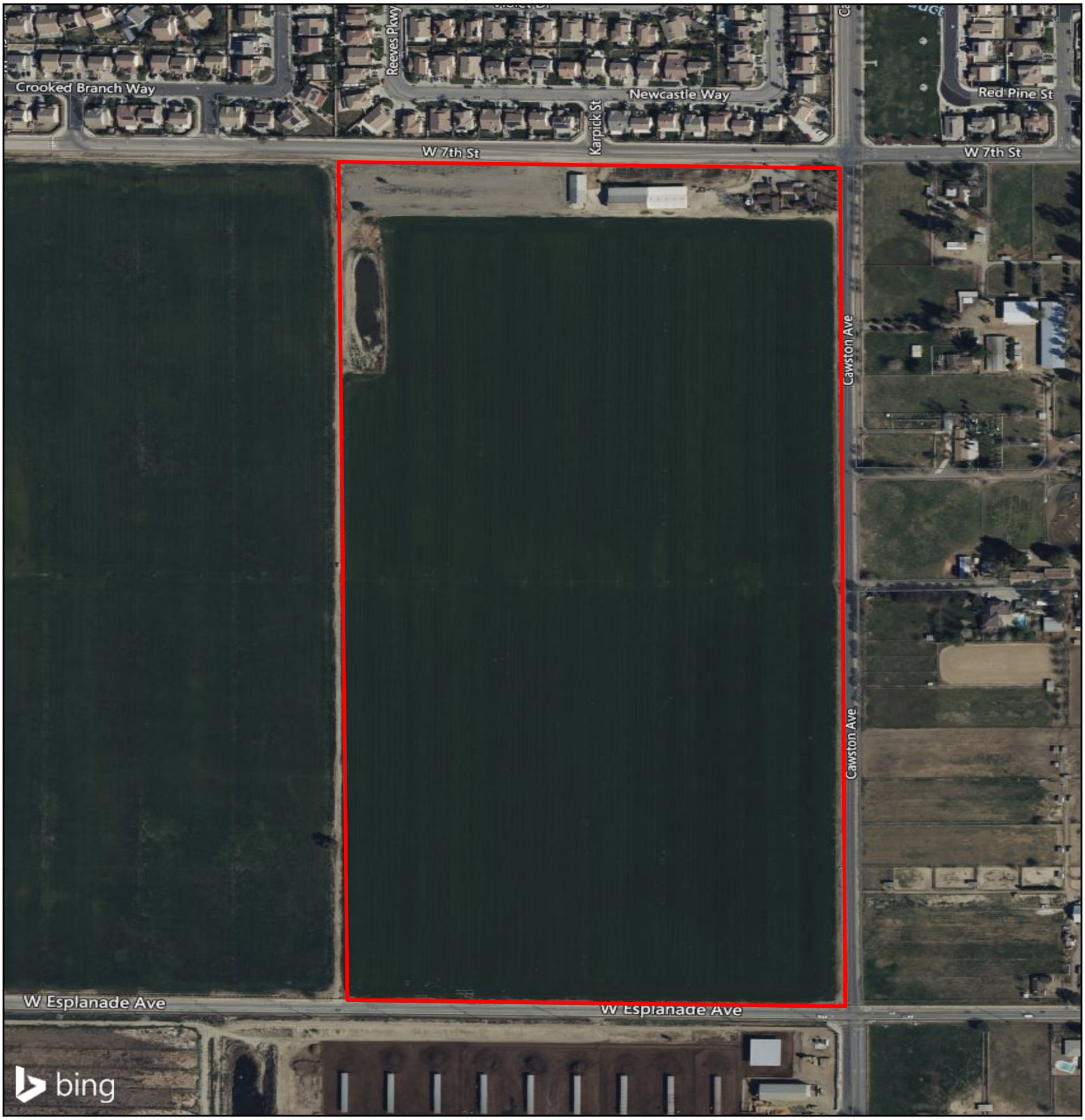


0 1,000 2,000 Feet

Scale: 1:24,000

N

SOUTH ENVIRONMENTAL



Source: Bing Aerial Imagery 2023

710 Cawston Avenue North Project

Figure 2. Project Site Detail

Project Site

0 250 500 Feet

N

Scale: 1:5,000

SOUTH ENVIRONMENTAL

Regulatory Setting

State

California Register of Historical Resources

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code Section 5020.1(j)). In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (California Public Resources Code Section 5024.1(a)). The criteria for listing resources on the CRHR (enumerated below) were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP). According to California Public Resources Code Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 CCR 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Environmental Quality Act

CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1). A historical resource is a resource listed in, or determined to be eligible for listing, in the CRHR, a resource included in a local register of historical resources or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]).

Under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(b).) If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources or identified as significant in a historical resources survey (meeting the requirements of California Public Resources Code Section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5(b)(1); California Public Resources Code Section 5020.1(q)). In turn, CEQA Guidelines section 15064.5(b)(2) states the significance of an historical resource is materially impaired when a project:

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

SE

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

Local

City of San Jacinto Municipal Code Chapter 17.510 – Historic Preservation

17.510.050 — Criteria for Designation

In considering a request for a designation, the following criteria shall be used in determining eligibility:

A. Character, interest, or value as part of the heritage of the City.

B. Location as a site of historical event.

C. Identification with a person(s) or group(s) who significantly contributed to the culture and development of the City.

D. Exemplification of a particular architectural style or way of life important to the City.

E. Identification as the work of a person(s) whose work has influenced the heritage of the City, the State of California, or the United States.

F. Embodiment of elements of outstanding attention to architectural design, craftsmanship, detail, materials, or the best remaining architectural type in an area.

G. Relationship to other landmarks, where the preservation of one has a bearing on the preservation of another.

H. A unique location or singular physical characteristic representing an established and familiar visual feature of a neighborhood.

I. Integrity as a natural environment that strongly contributes to the wellbeing of the people of the City.

Envision San Jacinto – General Plan 2040

Goal RM-3 Heritage Resources

San Jacinto has a rich history dating back to the area's first inhabitants more than 10,000 years ago. The City's paleontological, archeological, historical, and tribal cultural resources help define the community and offer opportunities for cultural, educational, and community enrichment. The City encourages the protection and enhancement of these resources for generations to come.



RM-3 Policies

RM-3.1 Preservation. Protect areas containing significant historic, archaeological, paleontological and tribal cultural resources, as defined by the California Public Resources Code.

RM-3.2 Cultural Reminders. Seek to incorporate reminders of San Jacinto's culture in the built and natural environment through adaptive reuse, signage, markers, and other reminders of San Jacinto's heritage.

RM-3.3 Public Education. Educate and actively involve the public in preserving cultural assets, including techniques, incentives, and legal requirements for preservation.

RM-3.4 Tribal Consultation. Consult with Native American tribes whose tribal cultural resources maybe impacted by proposed development, as necessary, and in accordance with state, local, and tribal intergovernmental consultation requirements, in an effort to mitigate or avoid significant effects to resource(s).

RM-3.5 Public Art. Promote the use of public art that celebrates the diverse and culturally rich history of San Jacinto at key gateways, major projects, and public gathering places.

RM-3.6 Historic Preservation. Identify, designate, and protect buildings, districts, eligible properties and sites of historic importance within San Jacinto.

RM-3.7 Funding. Identify funding programs to assist private property owners in the preservation of historic resources.

RM-3 Actions (as relevant to historic built environment resources)

RM-3a Continue to assess development proposals for potential impacts to sensitive historic, archaeological, and paleontological resources pursuant to the California Environmental Quality Act (CEQA).

RM-3b For structures that potentially have historic significance, the City shall require that a study be conducted by a professional archaeologist or historian to determine the actual significance of the structure and potential impacts of the proposed development in accordance with CEQA Guidelines Section 15064.5. The City may require modification of the project and/or mitigation measures to avoid any impact to a historic structure, when feasible, such as retaining or rehabilitating historic buildings pursuant to City of San Jacinto guidelines or relocating the historic building as feasible.

RM-3k Promote public awareness and encourage tourism in the City by actively identifying and enhancing the community's historic resources through the location of historic landmark plaques and a Historic Tour Guide. Promote tours of these sites on the City's and other organization's websites.

RM-3n Develop and implement programs and/or incentives to private property owners to help preserve, restore, or reuse historic structures while enhancing their historical significance and integrity.

RM-3o Conduct a historic properties inventory that takes into consideration buildings, neighborhoods, tribal cultural resources, eligible properties and other features of historic, architectural, or cultural significance.

Methods

Background Research

Background research was completed on the project site to establish a thorough and accurate historic context, and to confirm the development history of the property (see DPR form set in Attachment A). This included a search for all available building permits on file with the City of San Jacinto; historical newspapers covering San Jacinto and Riverside County via newspapers.com; historic aerial photographs of the project site via National Environmental Title Reference (NETR) and the University of Santa Barbara FrameFinder Maps (FrameFinder); and applicable primary and secondary sources on file with local libraries and repositories.

Survey

South Environmental Architectural Historian Marlena Krcelich, BA completed an intensive-level pedestrian survey of the project site on September 12, 2023. The built environment survey entailed walking the site and documenting the exterior of all buildings and structures and the property's setting with notes and photographs.

Findings

One built environment resource over 45 years old was identified within the project site: a residential farm located at 710 Cawston Avenue North comprising several buildings and structures. The property was recorded and evaluated for historical significance on the appropriate set of DPR Forms in consideration of CRHR and City designation criteria and integrity requirements (Attachment A). The property was found not eligible under all state and local designation criteria due to a lack of significant historical associations, a lack of architectural merit, and compromised integrity.

No historical resources were identified within the project site as a result of this study. Therefore, with respect to built environment resources, the proposed project will have a less than significant impact on historical resources under CEQA.

Should you have any questions regarding this report or its findings, please do not hesitate to contact us at smurray@southenvironmental.com or (818) 458-1162.

Sincerely,



Laura Carías, MA
Senior Architectural Historian



Samantha Murray, MA
Cultural Resources Director

Attachments

A. DPR Form Set for Chacon Farms

B. Resumes

ATTACHMENT A.

DPR Form Set for Chacon Farms

State of California — The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #
PRIMARY RECORD
Trinomial
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

Page 1 **of** 22 ***Resource Name or #:** (Assigned by recorder) Chacon Farms
P1. Other Identifier: 710 Cawston Avenue North/23511 Cawston Avenue (historic address)
***P2. Location:** ☐ **Not for Publication** ■ Unrestricted
***a. County** Riverside **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** Lakeview **Date** 2023 **T** 04 S ; **R** 21 W; _ ☐ **of** _ ☐ **of Sec** 31; SB **B.M.**.
c. Address 710 Cawston Avenue North **City** San Jacinto **Zip** 92582
d. UTM: Zone 11S , 498441.15 mE/ 3737730.17 mN
e. Other Locational Data:
APNs 432-260-009, 432-260-026, and 432-260-027. The subject property is located on approximately 76-acres of agricultural land that is bound to the south by West Esplanade Avenue, to the east by Cawston Avenue North, to the north by West 7th Street, and to the east by an agricultural field.

***P3a. Description:**
Chacon Farms is an approximately 76-acre farm with alfalfa fields and a small concentration of buildings at the northeast corner of the property. The buildings include two residences, two garages, two barns, and a tool shed (see Continuation Sheet).

***P3b. Resource Attributes:** (List attributes and codes) HP2. Single family property; P33. Farm/ranch

***P4.Resources Present:** ■ Building ■ Structure ☐ Object ■ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)
P5b. Description of Photo: (view, date, accession #) Overview of northeast corner of property with buildings, facing southwest (South Environmental 2023)



***P6. Date Constructed/Age and Source:** ■ Historic ☐ Prehistoric ☐ Both
1946 (Riverside County Assessor)

***P7. Owner and Address:**
Dejong Teunis J Trust
2451 Ramona Expressway
San Jacinto, CA 92582

***P8. Recorded by:**
Marlena Krcelich
South Environmental
2061 N. Los Robles Ave.
Ste. 205
Pasadena, CA 91104

***P9. Date Recorded:** 9/13/2023

***P10. Survey Type:** Intensive

***P11. Report Citation:**
Historic Built Environment Assessment for the Chacon Farms Project, City of San Jacinto, California (South Environmental 2023)

***Attachments:** ☐NONE ■Location Map ■Continuation Sheet ■Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ■ Other (List): Sketch Map

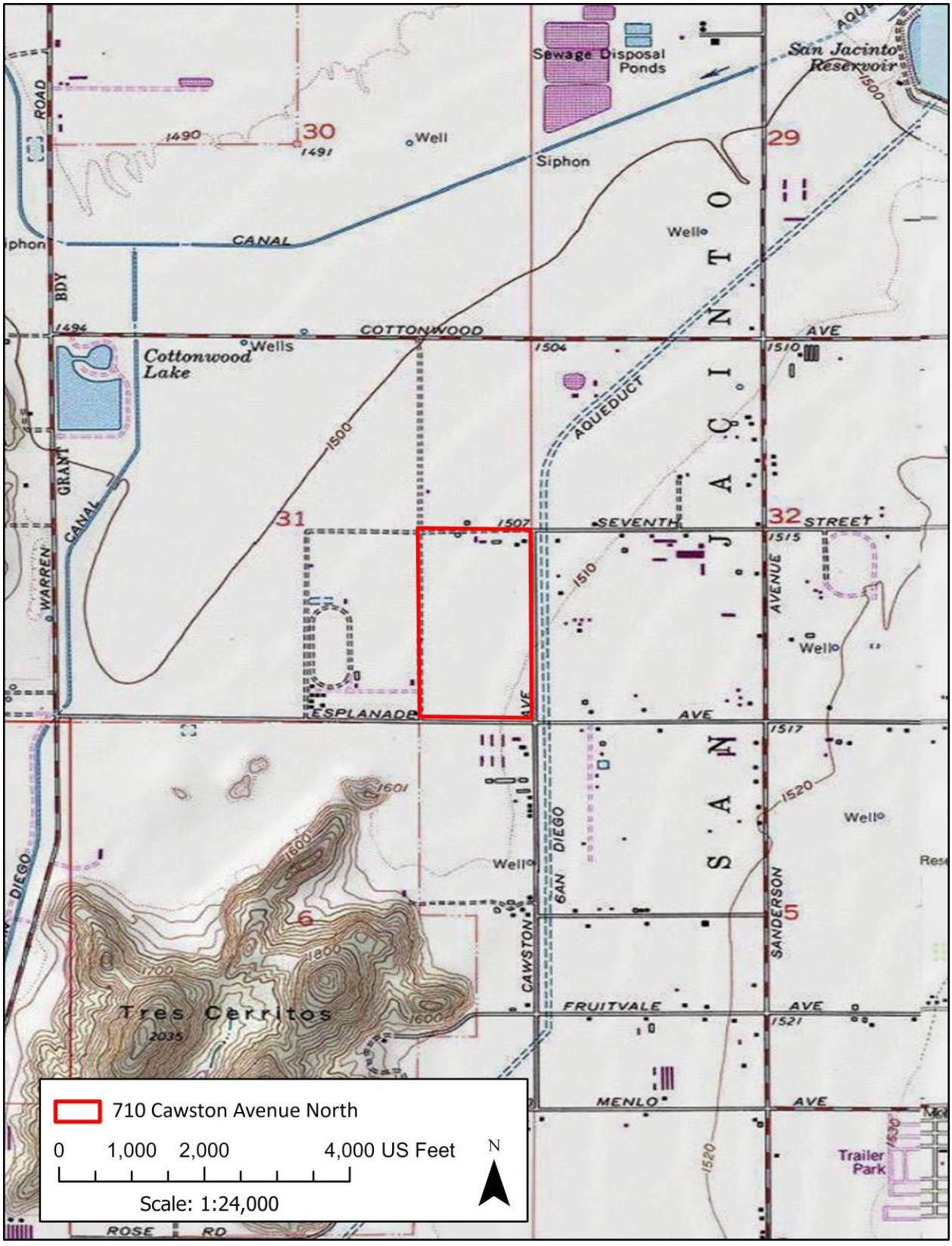
State of California Natural Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#

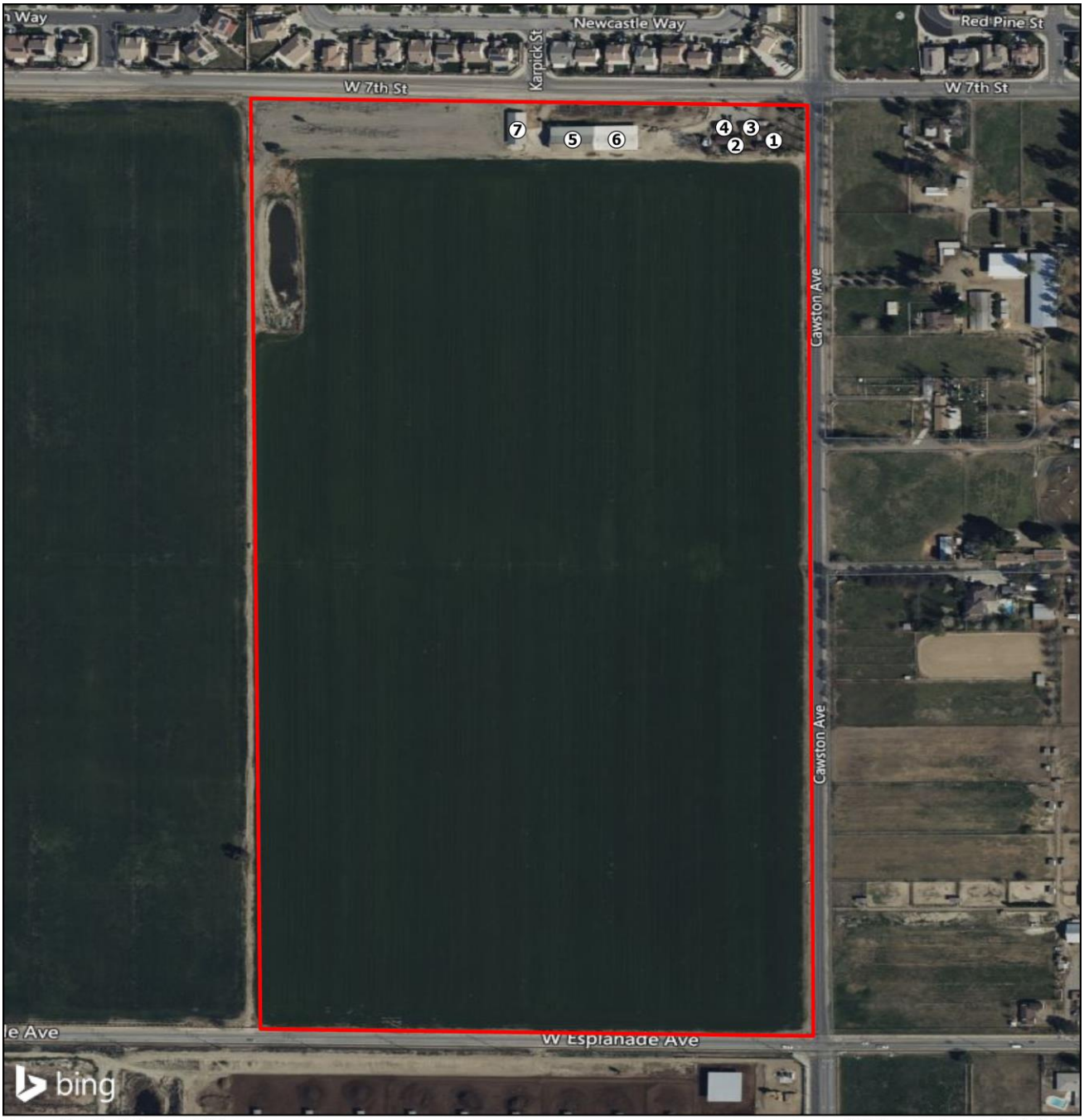
LOCATION MAP

Trinomial

Page 2 **of** 22 ***Resource Name or #** Chacon Farms

***Map Name:** Lakeview, California ***Scale:** 1:24,000 ***Date of map:** 2023





Source: Bing Aerial Imagery 2023

710 Cawston Avenue North Project

Figure 3. Sketch Map

0 225 450 Feet

N

Scale: 1:4,500

Project Site

Buildings

Buildings

1. Residence 1
2. Residence 2
3. Garage 1
4. Garage 2
5. Barn 1
6. Barn 2
7. Tool Shed

SOUTH ENVIRONMENTAL

State of California The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** Chacon Farms ***NRHP Status Code** 6Z

B1. Historic Name: n/a
B2. Common Name: Chacon Farms
B3. Original Use: Residential/agricultural B4. Present Use: Residential/agricultural
***B5. Architectural Style:** n/a
***B6. Construction History:** (Construction date, alterations, and date of alterations)

Residence 1 and Garage 1 were constructed in 1946 (Riverside County Assessor). Aerial imagery indicates that Residence 2, Garage 2, Barns 1 and 2, and the Tool Shed were constructed by 1961 (UCSB 1961). Other noted alterations include replacement of original windows; replacement exterior cladding in certain areas; and the addition of iron balustrades (dates unknown).

***B7. Moved?** ■**No** □**Yes** □**Unknown** **Date:** n/a **Original Location:** n/a
***B8. Related Features:**
B9a. Architect: unknown b. Builder: unknown
***B10. Significance: Theme** n/a **Area** n/a **Period of Significance** n/a **Property Type** n/a **Applicable Criteria** n/a

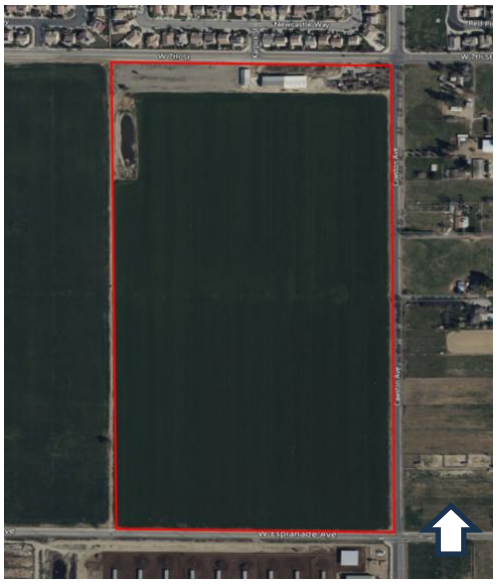
The subject property does not appear eligible for listing in the CRHR or City register due to a lack of important historical associations, a lack of architectural merit, compromised integrity (see Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes) n/a
***B12. References:** See Continuation Sheet

B13. Remarks:

***B14. Evaluator:** Laura Carías, South Environmental
***Date of Evaluation:** 9/13/2023

(Sketch Map with north arrow required.)



(This space reserved for official comments.)

***P3a. Description (Continued):**

Chain link fences are located along the eastern border of the residence and along the northern border by the agricultural buildings. A stucco covered brick wall runs along the south side of the two residences, separating them from the agricultural fields to the rear.

The primary residence (Residence 1) is a single-story house with a U-shaped floor plan. Exterior cladding includes wood shingles in some areas and bricks clad in stucco in others. It has a medium-pitched gable roof clad in composition shingles with varied roof lines. The primary (east) elevation of Residence 1 includes one entry door which is located on a front porch that runs most of the length of the elevation. The porch is supported by square posts and has metal balustrades. This elevation also has various sliding vinyl windows and faux wood shutters (Exhibit 1). The secondary elevations of Residence 1 are very similar, with a variety of vinyl window types including double-hung and sliding windows, as well as a bay window on the south elevation (Exhibits 2 and 3). On the north elevation is a concrete patio area with brick piers supporting a wooden pergola. This area is also enclosed with a metal balustrade. The detached garage is located west of Residence 1; they are both connected by a covered walkway (Exhibit 4).



Exhibit 1. Overview of primary (east) elevation of Residence 1, facing west.



Exhibit 2. Overview of south elevation of Residence 1, facing northwest.



Exhibit 3. Overview of west elevation of Residence 1, facing northeast.



Exhibit 4. Overview of north elevation of Residence 1, with patio area and breezeway, facing south.

Garage 1 has a simple rectangular floor plan with a medium-pitched roof gable and exposed wood rafter tails. The building is constructed of brick with horizontal wood siding in the gables. There is one non-original metal garage door on the north elevation and two double-hung windows on the south elevation (Exhibits 5 and 6).



Exhibit 5. Overview of Garage 1 north elevation, facing south.



Exhibit 6. Overview of south elevation of Garage 1, facing north.

Residence 2 is located behind Residence 1 and is separated from it via a wooden fence. It is one-story with an L-shaped floor plan. It has a medium-pitched gable roof and is clad in vertical wood siding, and wood shingle siding. The primary (north) elevation contains a small front porch stoop with an entry door and a roof overhead supported by square wooden posts (Exhibit 7). There is another porch running along the length of the west elevation that is also supported by square wooden posts and has two entry doors. Other elevations contain a mix of vinyl windows including sliding, and double-hung, as well as vinyl sliding glass doors and a single-entry door (Exhibits 8 and 9).



Exhibit 7. Overview of north and east elevations of Residence 2, facing southwest.



Exhibit 8. Overview of west elevation of Residence 2, facing east.



Exhibit 9. Overview of south and west elevation of Residence 2, facing northeast.

Garage 2 is a single-story building with a medium-pitched gable roof. The exterior consists of wood shingle siding and horizontal wood siding in the roof gables. The north elevation has three wooden garage doors (Exhibit 10).



Exhibit 10. Overview of north elevation of Garage 2, facing south.

Barns 1 and 2 are attached to each other and located to the east of the residences and garages. They are both constructed out of steel beams with corrugated metal roofs and are situated over concrete pads. They have gable roofs with very low-pitched shed roofs extending off the north elevations. Barn 1 is longer in length and is taller than Barn 2. Barn 2 is enclosed along the south elevation with metal siding. Barn 1 is enclosed partially on all elevations. The words, "Chacon Farms" are painted on the gable of the east elevation of Barn 2 (Exhibits 11, 12, and 13).



Exhibit 11. Overview of Barns 1 and 2, with Barn 2 in foreground, facing northwest.



Exhibit 12. Overview of Barn 1, facing northeast.



Exhibit 13. Overview of Barns 1 and 2, with Barn 2 in foreground, facing southwest.

The Tool Shed is designed in a similar style with a steel frame structure and a medium-pitched corrugated metal roof (Exhibit 14). On the south end of the Tool Shed is an enclosed area with metal siding, an entry door, and a roll-up garage door on the south elevation (Exhibit 15). The siding on the south elevation has been replaced.



Exhibit 14. Overview of Tool Shed, facing southwest.



Exhibit 15. Overview of south elevation of Tool Shed, facing northeast.

The remainder of the property consists of open agricultural fields (Exhibit 16).



Exhibit 16. Overview of agricultural fields, facing southwest.

B10. Significance (Continued):

Historic Context

San Jacinto

The first Spanish explorers entered the San Jacinto Valley (Valley) in the 1770s when Juan Batista de Anza led two expeditions through the area from Mexico. In these early years, the Valley was used as a main overland route to the rest of California. By 1820, the Mission San Luis Rey, situated in modern day Oceanside, established a cattle ranch in the Valley that operated until the mid-1830s, when California passed from Spanish to Mexican rule. The Mission was taken over by the Mexican government, and the 35,000 acres of ranch land was granted to Jose Antonio Estudillo and named Rancho San Jacinto Viejo. Other members of the Estudillo family received land grants in the area, totaling nearly 110,000 acres in the area that they used for their own cattle ranch. They constructed two brick mansions in the Valley, of which one still remains at the modern-day intersection of Main and Seventh Streets (San Jacinto History 2023).

In 1848, the end of the Mexican American War transferred California into the hands of the Americans. The Estudillo's continued to own most of the Valley until the 1880s, however in the 1860s, the Estudillo family began selling small portions of the rancho to newly arrived American settlers moving into the Valley. By 1868, a small community began to develop near the San Jacinto River on the south side of the Valley and within a couple of years had a school, a store, and a post office. Francisco Estudillo served

as the first postmaster. The store was opened by Russian immigrant Procco Akimo and was located southeast of modern downtown San Jacinto on what is now Hewitt Street. The town was officially founded in 1870 (San Jacinto History 2023).

The Estudillo lands were broken up by early 1889 and a group of investors from Los Angeles organized the San Jacinto Land Association, forming a new town site less than two miles away. For several years, these two small townsites battled for who would become the dominate site. In 1888, the Santa Fe Railroad built a branch line into the Valley from the town of Perris, which terminated on the west side of the newer townsite. This solidified the success of the new town, and the official City of San Jacinto was incorporated the same year (San Jacinto History 2023).

By the time the town was incorporated on April 9, 1888, the economy had shifted in the region from cattle ranching to horticulture, with many farmers growing grain, apricots, walnuts, and citrus (San Jacinto History 2023). Other crops included potatoes, onions, carrots, watermelons, pumpkins, cantaloupe, and cabbage (Warneke 2008: 7).

Dairy farms that began in 1900 became a major industry by the 1980s, at its height featuring 31 dairy farms. Thoroughbred horse ranches also dominated the area between the 1930s and 1990s which required many acres of alfalfa to feed the livestock (Warneke 2008: 7). San Jacinto remains largely agricultural today.

There were two devastating earthquakes in San Jacinto in 1899 and 1918 that decimated the commercial brick buildings on Main Street which caused a decline in population. The number of residents went from 2,000 in 1910 to 945 in 1920 after the last earthquake (Warneke 2008: 7).

Tourism became a source of income for the city beginning in 1900. Natural hot springs drew in visitors which then created a need for hotels and resorts for guests to stay. Gilman Hot Springs and Soboba Hot Springs were two of the better-known hot springs at the time (San Jacinto History 2023). Unfortunately, the hot springs dried up when the Metropolitan Water District redirected water from the Colorado River to Southern California in 1937 (Warneke 2008: 7).

One of the more exciting pieces of history in San Jacinto was the ostrich farm owned by Edwin Cawston. Cawston, a native of London, had read about the ostrich feather industry and the great profits with little effort. He brought birds from South Africa to California. Cawston established ostrich farms in Norwalk, South Pasadena, and San Jacinto. The South Pasadena location was used as an amusement park and petting zoo while the other two locations were used for breeding and production of feathers (Beyelia 2019). The San Jacinto farm was located at the intersection of present-day South Sanderson Avenue and West Esplanade Avenue, just 3,700 feet southeast of the subject property. Cawston sold his San Jacinto farm in 1914 (Hemet News 1914).

There are currently an estimated 55,000 residents in San Jacinto (Census 2020).

Chacon Farms

Based on aerial images, the subject property was developed for agricultural use since at least 1938 (UCSB 1938). In an interview with property owner, Gilbert Chacon, in 2020, he stated that the property was used for agricultural purposes since the 1930s and that the property was initially used as an ostrich farm until the 1940s, although no documentation was found to support that claim (Partner 2020). Chacon also said a cattle ranch operated on the site between the 1940s and 1970s. Aerial photographs from 1961 and 1967 do appear to show corrals at the northwestern most end of the parcel (UCSB 1961, 1967). Joe M. and Virgina Lucia Chacon, Gilbert's parents and owners of Chacon Farms, purchased the subject property in 1976. Joe Chacon came from a long line of farmers. In 1923 Joe's parents, Jose and Refugio Chacon, migrated from Chihuahua, Mexico to Coachella where they worked as agricultural laborers. Sometime between 1924 and 1925 they moved to Chino Valley and established their farming career. During the 1940s and 1950s, the Chacon family was well known in Chino and at one time were the largest growers of tomatoes in Southern California (Soria 1985). By 1985, three of their sons were still in the farming business: Robert, Joe, and Luz.

Joe and Virgina grew onions, potatoes, squash, alfalfa, and hay on their farm (Soria 1985). Joe died in 2002 and Virginia died in 2007 (Chino Champion 2002; Press-Enterprise 2004). The subject property is currently owned by Dejong Teunis J Trust. No other information was found on the property or known owners.

Property History

The earliest aerial imagery of the site is from 1938 and shows what appears to be one single-family house in the northeast corner of the property as well as other small accessory buildings. By 1949, the original residential building appears to have been removed and Residence 1 and Garage 1 were built in its place (UCSB 1949). There is a building located west of Residence 1, but it was removed by 1961 (UCSB 1961). Also by 1961, Residence 2, Garage 2, Barn 1, Barn 2, and the Tool Shed are present (UCSB 1961). The Barns are two separate buildings that become one by 1985 (UCSB 1985). The residences, garages, barns, and tool shed are all located along the northern border of the parcel along West 7th Street. The remainder of the parcel is developed for agriculture. Historic aerial photographs indicate that no other major changes occurred to the property after this time.

No permits were found for the subject property.

Architectural Style

Ranch (c.1930-1975)

The Ranch house is a style of architecture originating in Southern California. It was popular starting in the 1930s and fell out of popularity by the mid-1970s. In the 1930s and early 1940s, the Ranch house was part of the Small House movement that was brought into fashion by the Federal Housing Administration (FHA). After World War II, the Ranch style gained even more popularity as size and building restrictions were lifted and could be found across the country. FHA guidelines continued to exert a strong influence on building Ranch homes. Such as encouraging developers to build

entire neighborhoods at once, making Ranch style houses commonplace within large subdivisions.

In both the early years, and throughout the 1950s and 1960s, the Ranch house could be constructed quickly with modern, mass-produced materials. The style provided a quick and easy construction option both to create new housing to meet the needs of soldiers returning home after the war, and an affordable, yet larger and comfortable option in the later decades post-war.

The smaller Ranch houses of the 1930s and 1940s, and the larger versions from the 1950s and 1960s share many characteristics. "Rambling" Ranch style houses became more popular in the 1950s, due to the nation's increasing use of automobiles. This permitted developers to build larger homes on bigger, wider lots along winding roads in suburban areas, resulting in a sprawling façade with a focus on emphasizing the width. In contrast, the Ranch homes in the streetcar suburbs of the 1940s were constructed on narrower lots, and therefore had less horizontal emphasis. However, many of the other design features they shared remained the same. As such, the affordability and versatility of the Ranch house made it one of the most popular house choices throughout the United States and was purchased and occupied by people at almost all socio-economic levels.

Key characteristics of the Ranch style of architecture are the following (Gottfried and Jennings 2009; Hess 2004; McAlester 2015):

- One story in height
- Low pitch gabled or hipped roofs constructed with moderate overhangs
- Offset entry points and general façade asymmetry
- Focus on horizontal massing and rambling forms
- Focus on informality
- Main entry typically placed under the roof overhang or tucked into the facade
- Use of variety of window types, including large picture-style windows
- Variations on the eave overhang, typically boxed eaves or exposed rafter tails, or the less-common boxed rafters
- Large chimneys made of brick or stone
- Traditional exterior cladding, including brick veneer, wood siding, and stone veneer
- Attached garage or carport, typically incorporated into the façade
- Front and rear yards
- Simple floor plans based on rectangular blocks, usually L, U, or T shaped in plan

Significance Evaluation

CRHR and City Designation Criteria

The following presents an evaluation of the Chacon Farms property in consideration of CRHR and City designation criteria. Discussions of state and local criteria have been combined where appropriate to avoid duplicative text.

CRHR Criterion 1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

City Criterion B. Location as a site of historical event.

The subject property was constructed in 1946. Although the previous owner of the property stated that the subject property was once an ostrich farm, archival research failed to find evidence of this. The famed Cawston ostrich breeding farm was located southwest of the subject property but was sold in 1914, over 30 years before construction of the first buildings on the parcel. Archival research indicates that the subject property was once a cattle ranch and that it has operated as a farm since at least 1938 based on historic aerial photographs. The subject property is one of many agricultural properties in the area and archival research did not indicate that the subject property is associated with significant events in the history of the City or its agricultural development and is not the location of a historical event. Therefore, the property does not appear eligible under CRHR Criterion 1 or City Criteria B.

CRHR Criterion 2. Is associated with the lives of persons important in our past.

City Criterion C. Identification with a person(s) or group(s) who significantly contributed to the culture and development of the City.

While original ownership of the property is unknown, the first known owners of Chacon Farms were Joe M. and Virgina Chacon in 1976. Joe came from a long line of farmers, beginning with his parents who migrated to the United States from Chihuahua, Mexico in 1923 and eventually settled in Chino. The family was well known and were once the largest growers of tomatoes in Southern California. However, the subject property is not associated with the peak of their tomato business, therefore the subject property does not appear eligible under CRHR Criterion 2 or City Criterion C.

CRHR Criterion 3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

City Criterion D. Exemplification of a particular architectural style or way of life important to the City.

City Criterion E. Identification as the work of a person(s) whose work has influenced the heritage of the City, the State of California, or the United States.

City Criterion F. Embodiment of elements of outstanding attention to architectural design, craftsmanship, detail, materials, or the best remaining architectural type in an area.

The subject property was constructed in 1946 featuring a residence and garage. A secondary residence, garage, two barns, and tool shed were added circa 1961. The residences are of a simple design in the Ranch-style of architecture, with character-defining features such as a U-shape plan, full width porch, and side gabled roof. The original windows have been replaced with vinyl windows throughout all buildings; iron balustrades were added along the primary elevation of Residence 1 and between Residence 1 and Garage 1; and doors and exterior siding were replaced at Residence 2. The barns and tool sheds are ubiquitous examples of utilitarian farm structures and do not exhibit any character-defining features of a particular style. Further, there is no indication that any of the buildings represent the work of an important creative individual. Therefore, as a result of the subject property's lack of architectural merit and integrity, the subject property does not appear eligible under CRHR Criterion 3, or City Criteria D, E, or F.

CRHR Criterion 4. Has yielded, or may be likely to yield, information important in prehistory or history.

The subject property is not significant as a source, or likely source, of important historical information nor does it appear likely to yield important information about historic construction methods, materials, or technologies. the property does not appear eligible under CRHR Criterion 4.

City Criterion A. Character, interest, or value as part of the heritage of the City.
Archival research did not provide evidence that the subject property took a role in the City's history providing character, interest, or value as part of the heritage of the City. In fact, little to no information was found regarding the property. Therefore, the subject property is not eligible under City Criterion A.

City Criterion G. Relationship to other landmarks, where the preservation of one has a bearing on the preservation of another.
Archival research did not indicate that the subject property has a relationship to any landmarks. Therefore, the subject property is not eligible under City Criterion G.

City Criterion H. A unique location or singular physical characteristic representing an established and familiar visual feature of a neighborhood.
The subject property is located at the southwest corner of Cawston Avenue North and West 7th Street and has been at its location since 1946. Although it has been at its location for 77 years, it is not located in a unique location and there are no physical characteristics that have established it as a familiar feature of a neighborhood. Therefore, the subject property is not eligible under City Criterion H.

City Criterion I. Integrity as a natural environment that strongly contributes to the wellbeing of the people of the City.
The subject property is an active residence and agricultural farm and is not associated with a natural feature or part of a natural environment that strongly contributes to

the wellbeing of the people of San Jacinto. Therefore, the subject property is not eligible under City Criterion I.

Integrity

Location: The subject property retains integrity of location. The farm remains in its original location in its original orientation.

Design: The subject property lacks integrity of design. Twenty years after construction a second residence and garage were added to the property along with two barns and a toolshed. In the 1980s the barns were joined as one, thereby changing the original layout of the property.

Setting: The subject property retains partial integrity of setting as it continues to operate as a farm on what appears to be the original acreage. However, new residential development across the street has somewhat disrupted the historic setting.

Materials: The subject property lacks integrity of materials. Several of the original materials have been lost including windows, siding, and doors.

Workmanship: The subject property has diminished integrity of workmanship. The removal of the original windows and the addition of features such as a covered patio on the north elevation has obscured the original workmanship.

Feeling: The subject property retains integrity of feeling as it still feels like a rural agricultural farm from the mid-century.

Association: The subject property lacks integrity of association. The property was associated with the Chacon family, and they were not found to be significant in local, state, or national history.

The subject property does not appear eligible for listing in the CRHR or City register due to a lack of important historical associations, a lack of architectural merit, and compromised integrity.

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ATTACHMENT B.

Resumes

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EDUCATION

M.A., Public History, California State University, Sacramento, 2006

B.A., History and Chicano Studies, California State University, Dominguez Hills, 2003

PROFESSIONAL AFFILIATIONS

California Preservation Foundation

Society of Architectural Historians

National Trust for Historic Preservation

Laura G. Carías, MA

SENIOR ARCHITECTURAL HISTORIAN

Laura Carías has over 17 years' experience in the field of historic and cultural resources evaluation, identification, documentation, and preservation. Ms. Carías specializes in historic resources assessments including historic significance evaluation in consideration of the California Register of Historical Resources (CRHR), and the National Register of Historic Places (NRHP), and local-level evaluation criteria. She also has experience in intensive-level field surveys, historic structure reports, design consultation, conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties, Historic American Buildings Survey (HABS) and Historic American Engineering Record (HAER) documentation, local Mills Act contracts, and local, state, and national landmark designations.

Ms. Carías meets the Secretary of the Interior's Professional Qualification Standards for both Architectural History and History. She has experience preparing environmental compliance documentation in support of projects that fall under the California Environmental Quality Act (CEQA/National Environmental Quality Act (NEPA), and Section 106 of the National Historic Preservation Act (NHPA).

EXPERTISE

- CEQA, NEPA, and Section 106 of the NHPA compliance documentation in consideration of impacts to historical resources, and historic properties
- Historic resource significance evaluations in consideration of NRHP, CRHR, and local designation criteria
- Project design review for conformance with the Secretary of the Interior's Standards
- Preparation of archival documentation for HABS/HAER/HALS
- Historic Structure Reports
- Historic Preservation Certification Part 1 and 2 Tax Credit Applications

RECENT PROJECT EXPERIENCE

National Register of Historic Places Nomination, East Los Angeles Chicano Student Walkouts (Blowouts) (2023). South Environmental was retained by Sapphos Environmental, Inc. to prepare a National Register Nomination form and Multiple Property Documentation Form for the five main high schools and El Piranya Café directly associated with the planning and execution of East Los Angeles Chicano Student Walkouts of 1968. The five high schools included were James A. Garfield, Theodore Roosevelt, Abraham Lincoln, Belmont, and Woodrow Wilson. The East Los Angeles Chicano Student Walkouts (Blowouts) were a series of protests in 1968 where more than 15,000 school students walked out of class to demonstrate against the Los Angeles Board of Education due to unequal conditions in high schools. According to the Library of Congress, Mexican American students experienced a 60% dropout rate from high school, and those who did graduate averaged the reading level of an 8th grade Anglo student. The prejudices and inequalities in education culminated in students, teachers, parents, and activists organizing what would ultimately come to be known as the Walkouts. Ms. Carías served as co-author of the nomination.

Historic-Era Built Environmental Survey Report for SCE Sespe Creek Pole Replacement Project and Overhead Modification Project, Ventura County (2023). South Environmental was retained by Environmental Intelligence LLC, to complete a Historic-Era Built Environment Survey Report for the Southern California Edison (SCE) Sespe Creek Pole Replacement Project (proposed project) located in Ventura County, California. The report included the results of an intensive-level pedestrian survey of all built environmental resources over 50 years old within the project's Area of Potential Effect (APE) by a qualified architectural historian; building development and archival research; and recordation and evaluation of the idle Saugus-Fillmore-Santa Clara-Wakefield 66kV subtransmission line, a Quonset hut, and a single-family residence for historical significance in consideration of federal, state, and local designation criteria and integrity requirements. The report was prepared in conformance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulation Title 36 Code of Federal Regulations (CFR) Part 800, the California Environmental Quality Act (CEQA) Section 15064.5 for historical resources, and in consideration of all applicable local guidelines and regulations concerning cultural resources. In conclusion, no historic properties/historical resources were identified within the project APE. Therefore, with respect to historic built environment resources, the proposed project would have no adverse effect on historic properties under Section 106 of the NHPA and a less than significant impact on historical resources under CEQA. Ms. Carías performed the site visit and served as co-author of the report.

Cultural Resources Technical Report for Colton Truck and Trailer Repair Project, City of Colton, California (2023). South Environmental was retained by EcoTierra Consulting to complete a cultural resources technical report for the Colton Truck and Trailer Repair Project (Project) located in the City of Colton, California. This study includes the results of a California Historical Resources Information Center (CHRIS) records search of the Project site and a 0.5-mile radius; a paleontological records search of the Project site; an intensive pedestrian survey of the Project site by a qualified archaeologist and architectural historian; building development and archival research; and recordation and evaluation of the industrial property at 790 E. M Street for historical significance and integrity in consideration of California Register of Historical Resources (CRHR) and City of Colton designation criteria. This report was prepared in conformance with California Environmental Quality Act (CEQA) Guidelines Section 15064.5 for historical resources. No historical resources were identified within the project site as a result of this study. Therefore, with respect to built environment resources, the proposed project will have a less than significant impact on historical resources under CEQA. Ms. Carías served as senior architectural historian and author for the report.

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Mobile: 610-739-8956

EDUCATION

B.A., History of Architecture, Minor in Architecture with a focus in Construction Management, Syracuse University, 2019

PROFESSIONAL AFFILIATIONS

California Preservation Foundation

National Trust for Historic Preservation

Marlena Krcelich, BA

ARCHITECTURAL HISTORIAN

Marlena Krcelich is an Architectural Historian at South Environmental with a background in historic preservation, advocacy, and hands-on conservation work. She has experience in cultural resources preservation including identification, research, writing, historical significance evaluations in consideration of the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), and local-level designation criteria, and has experience working with local Mills Act program requirements.

Ms. Krcelich meets the Secretary of the Interior's Professional Qualification Standards for Architectural History. She has knowledge and experience regarding Section 106 of the NHPA, NEPA, and CEQA compliance, and mitigation.

EXPERTISE

- Resource significance evaluations in consideration of NRHP, CRHR, and local designation criteria.
- Project design review for conformance with the Secretary of the Interior's Standards.
- Assistance with project mitigation.

SPECIALIZED TRAINING

- U.S. Department of Transportation Federal Highway Administration Section 106 Tutorial, 2022
- Introduction to Preservation Law & Easements, NTHP, 2021
- Commission Assistance and Mentoring Program, National Alliance of Preservation Commissions, 2020
- Taking Stock of the Secretary of the Interior' s Standards, CPF, 2020
- Section 106 and NEPA, Advisory Council on Historic Preservation, 2019

PROJECT EXPERIENCE

Cultural Resources Technical Report for the 314 Date Avenue Project, City of Carlsbad, California (2023). South Environmental was retained by Don L. Looney, Architect to prepare a historical analysis for the 314 Date Avenue Project, located in the City of Carlsbad, San Diego County, California. This analysis included the results of an intensive-level, pedestrian survey of the project site by a qualified architectural historian; building development and archival research; and recordation and evaluation of one property for historical significance in consideration of CRHR, and City of Carlsbad historic resources inventory (HRI) designation criteria and integrity requirements. As a result of the property significance evaluation, the property was recommended not eligible under any criteria. Ms. Krcelich served as the Architectural Historian for the project and conducted the survey and prepared all deliverables.

Historical Analysis of 2879-2885 Hope Avenue, City of Carlsbad, California (2023). South Environmental was retained by Kirk Moeller Architects to prepare a historical analysis for the 2879-2885 Hope Avenue Project, located in the City of Carlsbad, San Diego County, California. This analysis included the results of an intensive-level, pedestrian survey of the project site by a qualified architectural historian; building development and archival research; and recordation and evaluation of one property for historical significance in consideration of CRHR, and City of Carlsbad historic resources inventory (HRI) designation criteria and integrity requirements. As a result of the property significance evaluation, the property was recommended not eligible under any criteria. Ms. Krcelich served as the Architectural Historian for the project and conducted the survey and prepared all deliverables.

Historical Resource Research Report for the 242-258 Rosemont Street Project, San Diego, San Diego County, California (2023). South Environmental was retained by Paragon Real Estate Investments to prepare a Historical Resource Research Report in support of the 242-258 Rosemont Street Project. Two built environment resources over 45 years old within the project site were identified and recorded. The resources were evaluated for historical significance in consideration of NRHP, CRHR and City designation criteria and integrity requirements and were found not eligible under all designation criteria and integrity requirements. The proposed project was found to have a less than significant impact on historical resources under CEQA. Ms. Krcelich served as the Architectural historian for the project and prepared all deliverables.

Historical Resource Research Report for the 2125 5th Avenue Project, San Diego, San Diego County, California (2023). South Environmental was retained by a property owner to prepare a Historical Resource Research Report in support of the 2125 5th Avenue Project. One built environment resource over 45 years old within the project site was identified and recorded. The resource was evaluated for historical significance in consideration of NRHP, CRHR and City designation criteria. The subject property was found eligible for designation in the NRHP, the CRHR, and as a City of San Diego Historical Resource under NRHP Criterion C, CRHR Criterion 3, and City Criterion C and D for its architectural merit and association with Master Architect Louis J. Gill. The subject property was determined a historical resource per CEQA Guidelines § 15064.5. Ms. Krcelich served as the Architectural historian for the project and prepared all deliverables.

Appendix D

Updated Geotechnical Investigation, SWC of 7th Street and Cawston Avenue, San Jacinto, California

Geocon West, Inc

January 2, 2024

UPDATED GEOTECHNICAL INVESTIGATION

SWC OF 7TH STREET AND CAWSTON AVENUE SAN JACINTO, CALIFORNIA

GEOCON
WEST, INC.
GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

RAMONA DAIRY, LLC.
2451 RAMONA EXPRESSWAY
SAN JACINTO, CALIFORNIA 92582

JANUARY 2, 2024
PROJECT NO. T2998-22-01

GEOCON
WEST, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. T2998-22-01
January 2, 2024

Ramona Dairy, LLC.
2451 Ramona Expressway
San Jacinto, California 92582

Attention: Mr. Richard Michael

Subject: UPDATED GEOTECHNICAL INVESTIGATION
SWC OF 7TH STREET AND CAWSTON AVENUE
SAN JACINTO, CALIFORNIA

Dear Mr. Michael:

In accordance with your authorization of our Work Order Authorization dated December 20, 2023, Geocon West, Inc. (Geocon) herein submits the results of our update to the preliminary geotechnical investigation dated November 4, 2022. The accompanying report presents an update to our preliminary findings, conclusions and recommendations pertaining to the geotechnical aspects of developing the property as presently proposed. Based on the results of this study, it is our opinion that the site is considered suitable for the proposed development provided the recommendations of this report are followed. The conclusions and recommendations provided in the 2022 report remain applicable unless superseded herein.

The primary intent of this report is to address the potential geologic hazards and geotechnical conditions that could impact site development and to provide an update to the preliminary geotechnical recommendations. Five geotechnical borings and four percolation tests were performed within the 76+ acre site for the preliminary geotechnical investigation. The northern portion of the site was occupied with a residence and basin at the time of the field work. Therefore, a supplemental geotechnical investigation should be performed with percolation testing performed at the BMP locations and elevations once grading plans have been developed. Additional analyses will be required in order to provide comprehensive geotechnical recommendations for design and construction when the scope of the proposed development has been established.

Should you have any questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON WEST, INC.

Lisa Battiato
CEG 2316

PROFESSIONAL GEOLOGIST
LISA A. BATTIATO
No. 2316
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Ashleigh D. Love
PE 79019

LICENSED PROFESSIONAL ENGINEER
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LAB:ADL:hd
(email) Addressee

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UPDATED GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of our updated geotechnical investigation for the proposed development of approximately 76 acres located southwest of 7th Street and Cawston Avenue in San Jacinto, California, as depicted on the *Vicinity Map*, Figure 1.

The purpose of our investigation in 2022 was to perform a preliminary evaluation of subsurface soil and geologic conditions underlying the site and based on the conditions encountered, provide preliminary recommendations pertaining to the geotechnical aspects of developing the property as proposed. Due to the preliminary nature of the project at this time, the primary intent of this updated report is to address the potential geologic hazards and geotechnical conditions that could impact site development and to provide preliminary recommendations with respect to the 2022 California Building Code. The information provided in the 2022 report remains applicable to the site unless superseded herein. Additional analyses will be required in order to provide comprehensive geotechnical recommendations for design and construction when the scope of the proposed development has been established.

2. SITE AND PROJECT DESCRIPTION

The *Vesting Tentative Tract Map No. 38787* prepared by Psomas indicates site development will include single-family homes, and townhomes with a community park and open space areas for storm water infiltration or retention.

The site grading plans, structural plans, and building loads were not available. Based on the site elevations and surrounding roadway elevations, we expect rough grading will entail cuts and fills of less than 5 feet, exclusive of remedial grading.

We understand that the site will likely be used for the construction of single- or townhouse residential structures, which are expected to have spread footing foundations with slab-on-grade floors. Single-family and townhouse structures will likely be two or three stories. We have assumed that column loads will be up to 300 kips, and wall loads will be up to 4 kips per linear foot for the heaviest loaded structure.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location, or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC HAZARDS

3.1 Subsidence

Regional subsidence has occurred in several valley areas in California due to withdrawal of groundwater or oil, and in some cases peat loss. The site is located in the San Jacinto Valley which is a deep northwest trending alluvial valley created along the San Jacinto fault. The valley is bounded on the northeast and southwest by granitic bedrock hills which extend along the valley margins to depths of several hundred feet. The site is not located in an Area of Land Subsidence in California according to the United States Geological Survey (USGS). The San Jacinto Valley is not included in an area currently undergoing a USGS subsidence study. Riverside County does include the site in an area of active subsidence. California Geological Survey does not address subsidence risk on its website. A search of the city of San Jacinto website GIS system did not yield results when the term "subsidence" was searched. Based on this information, ground subsidence could occur. However, the settlement is expected to occur over a relatively large geographic area and is not expected to cause differential settlement over a relatively short horizontal distance which would be addressed as a design concern as part of the site development.

4. SITE INFILTRATION

Percolation testing was performed at four locations within the site to provide preliminary information for project design. Additional percolation testing will be necessary at the proposed BMP locations and planned infiltration elevations once they are known. The testing was performed in general accordance with the procedures outlined in *Riverside County Flood Control and Water Conservation District LID BMP, Appendix A* (Handbook) to determine preliminary infiltration potential. The percolation test locations are depicted on the *Geologic Map*, Figure 2.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 General

5.1.1 Additional subsurface exploration and percolation testing will be required before site grading to provide adequate subsurface information for earthwork operations and provide the necessary percolation test data required by Riverside County BMP LID Handbook.

5.2 Soil and Excavation Characteristics

5.2.1 The upper 5 feet of existing site soils encountered during the investigation are considered to have a "very low" expansive potential (EI = 11) and are classified as "non-expansive" in accordance with the 2022 California Building Code (CBC) Section 1803.5.3. The recommendations presented herein assume that the building foundations and slabs will derive support in these materials.

5.2.2 As a minimum, it is recommended that the upper 8 feet of existing earth materials within the proposed building footprint areas be excavated and properly compacted for post-tensioned foundation system support. Deeper excavations should be conducted as necessary to remove deeper artificial fill or soft alluvial soil at the direction of the Geotechnical Engineer (a representative of Geocon). Proposed foundations should be underlain by at least 5 feet of newly placed engineered fill. The excavation should extend laterally a minimum distance of 6 feet beyond the building footprint area, including building appurtenances, or a distance equal to the depth of fill below the foundation, whichever is greater. The limits of existing fill and/or soft alluvial soils removal will be verified by the Geocon representative during site grading activities.

5.3 Soil and Minimum Resistivity, pH, and Water-Soluble Sulfate

5.3.1 Laboratory tests were performed on representative samples of the site materials to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B-4) and indicate that the on-site materials possess a sulfate exposure class of "S0" to concrete structures as defined by 2022 CBC Section 1904 and ACI 318-19 Chapter 19.

5.4 Seismic Design Criteria

5.4.1 The following table summarizes the site-specific design criteria obtained from the 2022 California Building Code (CBC; Based on the 2021 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the online application *U.S. Seismic Design Maps*, provided by the Structural Engineers Association of California (SEAOC). The short spectral response uses a period of

0.2 second. We evaluated the Site Class based on the discussion in Section 1613.2.2 of the 2022 CBC and Table 20.3-1 of ASCE 7-16. The values presented below are for the risk-targeted maximum considered earthquake (MCE_R).

5.4.2 Although there are soils susceptible to seismic settlement underlying the site, we expect the building possesses a fundamental period of less than 0.5 seconds; therefore, a site response analysis is not anticipated to be required in accordance with ASCE 7-16, Section 20.3.1.

2022 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2022 CBC Reference
Site Class	D	Section 1613.2.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	1.984g	Figure 1613.2.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.785g	Figure 1613.2.1(3)
Site Coefficient, F_A	1.009	Table 1613.2.3(1)
Site Coefficient, F_V	1.7*	Table 1613.2.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	1.984g	Section 1613.2.3 (Eqn 16-20)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	1.334g*	Section 1613.2.3 (Eqn 16-21)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.323g	Section 1613.2.4 (Eqn 16-22)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.889g*	Section 1613.2.4 (Eqn 16-23)

*Per Supplement 3 of ASCE 7-16, a ground motion hazard analysis (GMHA) shall be performed for projects on Site Class "D" sites with 1-second spectral acceleration (S_1) greater than or equal to 0.2g, which is true for this site. However, Supplement 3 of ASCE 7-16 provides an exception stating that that the GMHA may be waived provided that the parameter S_{M1} is increased by 50% for all applications of S_{M1}. The values for parameters S_{M1} and S_{D1} presented above have **not** been increased in accordance with Supplement 3 of ASCE 7-16.

5.4.3 Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

5.5 Post Tensioned Foundation Recommendations

5.5.1 The proposed residential structures may be supported on a post-tensioned concrete slab and foundation system deriving support in newly placed engineered fill subsequent to the recommended grading. Proposed foundations should be underlain by at least 5 feet of newly placed engineered fill. Foundation excavations must be observed and approved in writing by the Geotechnical Engineer, prior to placing reinforcing steel or concrete.

5.5.2 The post-tensioned system should be designed by a structural engineer experienced in post-tensioned slab design and design criteria of the Post-Tensioning Institute (PTI) DC 10.5-12 *Standard Requirements for Design and Analysis of Shallow Post-Tensioned Concrete Foundations on Expansive Soils* or *WRI/CRSI Design of Slab-on-Ground Foundations*, as required by the 2022 California Building Code (CBC Section 1808.6.2). Although this procedure was developed for expansive soil conditions, we understand it can also be used to reduce the potential for foundation distress due to differential settlement. The post-tensioned design should incorporate the geotechnical parameters presented in Table 5.5.2 below, which are based on the guidelines presented in the PTI, Third Edition design manual.

TABLE 5.5.2
POST-TENSIONED FOUNDATION SYSTEM DESIGN PARAMETERS

Post-Tensioning Institute (PTI) Third Edition Design Parameters	Value
Thornthwaite Index	-20
Equilibrium Suction	3.9
Edge Lift Moisture Variation Distance, e_M (feet)	4.9
Edge Lift, y_M (inches)	1.58
Center Lift Moisture Variation Distance, e_M (feet)	9.0
Center Lift, y_M (inches)	66

5.6 Foundation Settlement

5.6.1 The enclosed seismically induced settlement analysis indicates that the site soils could be susceptible to approximately 0.79 inch of total settlement as a result of the Design Earthquake peak ground acceleration (⅔PGA_M). The differential settlement at the foundation level is anticipated to be approximately 0.4 inch over a distance of 50 feet. These settlements are in addition to the static settlements indicated below and must be considered in the structural design.

5.6.2 The maximum expected static settlement for the proposed structures supported on a post-tensioned foundation system designed with a maximum bearing pressure of 3,000 psf and deriving support in newly placed engineered fill is estimated to be less than 1.25 inch and occur below the heaviest loaded structural element. A majority of the settlement of the foundation system is expected to occur on initial application of loading; however, minor additional settlements are expected within the first 12 months. Differential settlement is not expected to exceed 5/8 inch over a distance of 20 feet.

5.6.3 Based on seismic considerations, the proposed structures should be designed for a combined static and seismically induced differential settlement of 1 inch over a distance of 20 feet.

5.6.4 Once the design and foundation loading configurations for the proposed structures proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

5.7 Surface Drainage

5.7.1 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2022 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within 5 feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.

5.8 Plan Review

5.8.1 Grading, foundation, and, if applicable, shoring plans should be reviewed by the Geotechnical Engineer (a representative of Geocon), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations. Additional subsurface exploration and percolation are highly recommended to provide adequate coverage of the site prior to earthwork operations and to satisfy Riverside County requirements.

5.9 Testing and Observation Services During Construction

5.9.1 Geocon should provide geotechnical testing and observation services during the grading operations, foundation construction, utility installation, retaining wall backfill and pavement installation. Table 5.9.1 presents the typical geotechnical observations we would expect for the proposed improvements.

TABLE 5.9.1
EXPECTED GEOTECHNICAL TESTING AND OBSERVATION SERVICES

Construction Phase	Observations	Expected Time Frame
Ground Modification	Ground Modification Installation	Full Time
	Confirmation Testing	Part Time to Full Time
Grading	Base of Removal	Part Time During Removals
	Geologic Logging	Part Time to Full Time
	Fill Placement and Soil Compaction	Full Time
Soldier Piles	Solder Pile Drilling Depth	Part Time
Tieback Anchors	Tieback Drilling and Installation	Full Time
	Tieback Testing	Full Time
Soil Nail Walls	Soil Nail Drilling and Installation	Full Time
	Soil Nail Testing	Full Time
Foundations	Foundation Excavation Observations	Full Time
	Drilling Operations for Piles	Part Time
Utility Backfill	Fill Placement and Soil Compaction	Part Time to Full Time
Retaining Wall Backfill	Fill Placement and Soil Compaction	Part Time to Full Time
Subgrade for Sidewalks, Curb/Gutter and Pavement	Soil Compaction	Part Time
Pavement Construction	Base Placement and Compaction	Part Time
	Asphalt Concrete Placement and Compaction	Full Time

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.

2. This report is issued with the understanding that it is the responsibility of the owner, or of their representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

LIST OF REFERENCES

1. American Society of Civil Engineers (ASCE), *ASCE 7-16, Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, 2017.

2. California Building Standards Commission, 2022, *California Building Code (CBC)*, California Code of Regulations Title 24, Part 2.

3. California Geological Survey (CGS), *Earthquake Shaking Potential for California*, from USGS/CGS Seismic Hazards Model, CSSC No. 03-02, 2003.

4. California Geological Survey (CGS), *Probabilistic Seismic Hazards Mapping-Ground Motion Page*, 2003, CGS Website: www.conserv.ca.gov/cgs/rghm/pshamap.

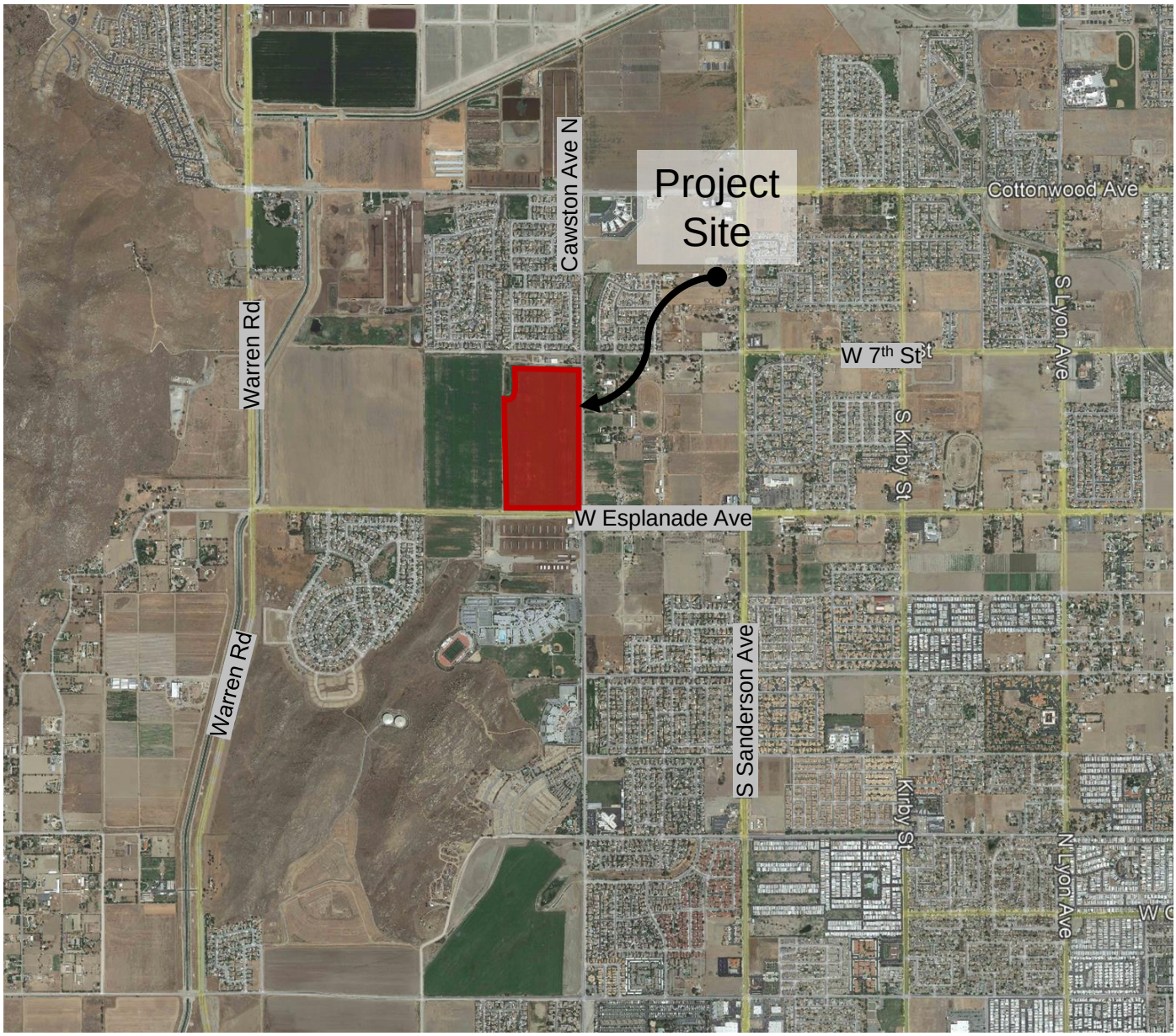
5. Geocon West, Inc., 2022, *Preliminary Geotechnical Investigation, SWC of 7th Street and Cawston Avenue, San Jacinto, California*, Project T2998-2-01, dated November 4.

6. OSHPD, *Seismic Design Maps*, seismicdesignmaps.org, accessed December 2023.

7. Riverside County GIS (RC GIS), *Map My County* website, http://mmc.rivcoit.org/MMC_Public/Custom/disclaimer/Default.htm; accessed December 2023.

8. USGS, *Areas of Land Subsidence in California*, ca.water.usgs.gov/land_subsidence/California-subsidence+areas.html, accessed December 2023.

9. USGS, *Unified Hazard Tool*, earthquake.usgs.gov/hazards/interactive, accessed December 2023.



N

0’ 2,700’ 5,400’

SCALE: 1” = 1,400’

SOURCE: Google Maps, 2022

VICINITY MAP

GEOCON
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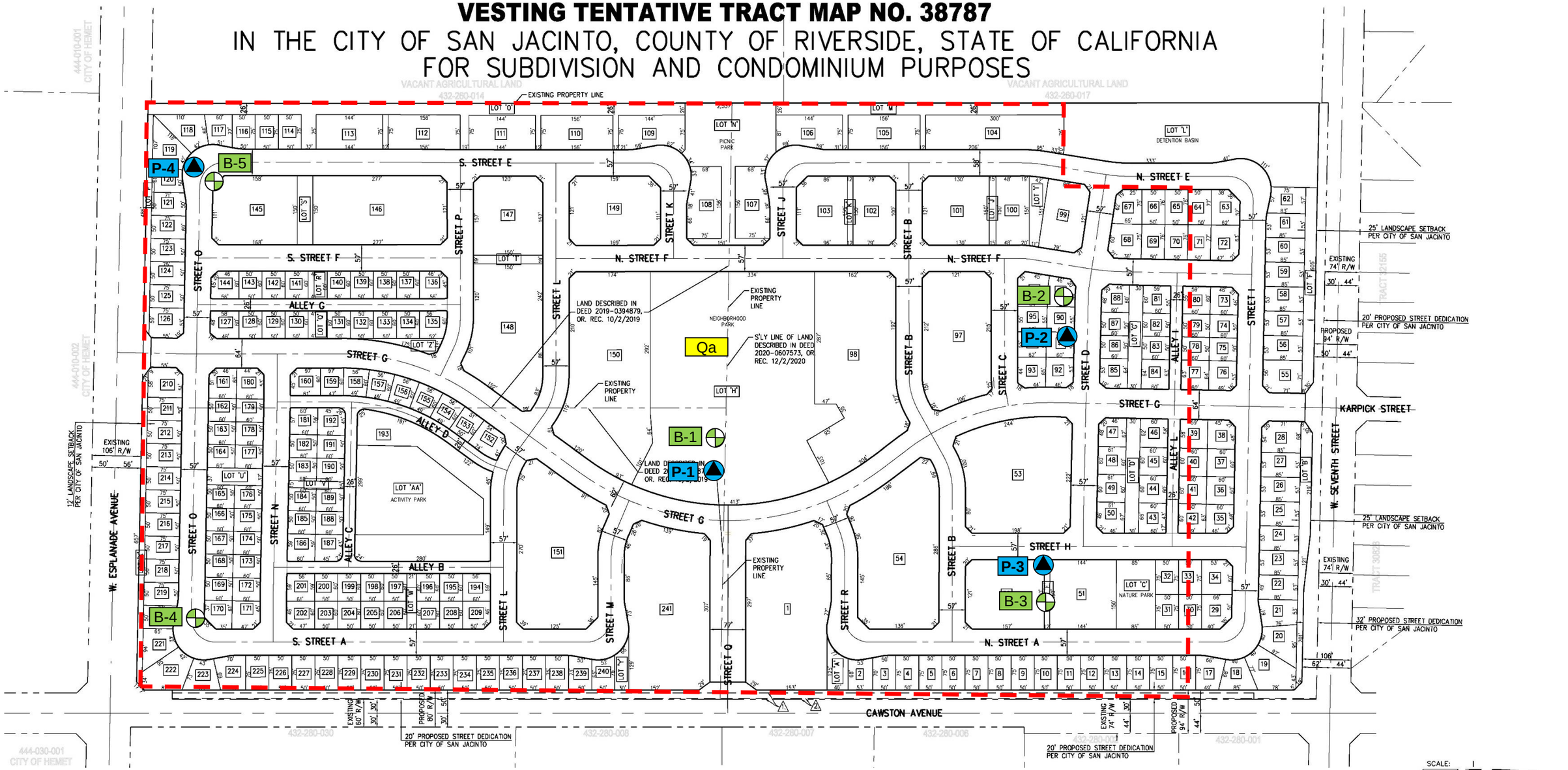
SWC 7TH STREET & CAWSTON AVENUE
SAN JACINTO, CALIFORNIA

ARK			JANUARY 2024	PROJECT NO. T2998-22-01	FIG. 1

VESTING TENTATIVE TRACT MAP NO. 38787

IN THE CITY OF SAN JACINTO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA
FOR SUBDIVISION AND CONDOMINIUM PURPOSES



GEOCON LEGEND

Locations are approximate

B-5 ..... BORING LOCATION

P-4 ..... PERCOLATION TEST LOCATION

..... PROJECT LIMITS

Qa ..... ALLUVIUM

Source: Vesting Tentative Tract Map No. 38787, Prepared by PSOMAS, dated 10/27/2023

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GEOLOGIC MAP

SWC 7TH STREET & CAWSTON AVENUE
SAN JACINTO, CALIFORNIA

HD			JANUARY 2024	PROJECT NO. T2998-22-01	FIG. 2

APPENDIX A

APPENDIX A

FIELD EXPLORATION

Geocon performed the field investigation on September 26 and 27, 2022, which included the drilling of five geotechnical borings (B-1 through B-5) and four percolation borings (P-1 through P-4) to depths between approximately 2 to 51½ feet, to observe the subsurface geological conditions, perform percolation testing at the site, collect relatively undisturbed in-situ and disturbed bulk samples for laboratory testing, and evaluate the depth to groundwater. Borings were drilled with a truck mounted CME-75 drill rig with 8-inch-diameter hollow stem augers.

We collected relatively undisturbed and bulk samples from the borings. The undisturbed samples were obtained by driving a 3-inch O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 140-pound hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2⅜-inch inside diameter brass sampler rings to facilitate removal and testing. Relatively undisturbed samples and bulk samples of disturbed soils were transported to our laboratory for testing. The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS).

Logs of the geotechnical borings are presented on Figures A-1 through A-5, percolation borings on A-6 through A-9, and percolation test data sheets on A-10 through A-13. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the logs were revised based on subsequent laboratory testing. The approximate locations of the borings are depicted on the *Geologic Map*, Figure 2.

PROJECT NO. T2998-22-01

BORING B-1

ELEV. (MSL.) **1512** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	B-1@0-5					SM	**TOPSOIL** Silty SAND, loose, moist, very dark brown; fine to medium sand; very silty			
2						SP	**ALLUVIUM (Qa)**			
	B-1@2.5						Poorly-graded SAND, loose, moist, strong brown; medium sand; some fine sand; little mica	7		
4										
6	B-1@5 B-1@5-10					ML	SILT with sand, soft to firm, very moist, olive brown; fine to medium sand; little mica	12	95.3	23.7
8	B-1@7.5						-Some mica	9	101.4	22.6
10	B-1@10						-Becomes micaceous; trace rootlets	11	96.4	27.2
12										
14										
16	B-1@15					SP-SM	Poorly-graded SAND with silt, medium dense, moist, olive gray; fine to medium sand; micaceous	40	102.9	19.1
18										
20	B-1@20					CL	CLAY, soft, wet, very dark olive; fine sand; micaceous	9	93.6	28.7
22										
24						SM	Silty SAND, medium dense, moist to wet, grayish brown; fine to medium sand; some coarse sand; trace gravel			
26	B-1@25							38		
28										

Figure 1,
Log of Boring B-1, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. T2998-22-01

BORING B-1

ELEV. (MSL.) **1512** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B-1@30						-Becomes very dense, pale yellow to yellow brown; fine to coarse sand; few gravel	80		
32										
34						SP	Poorly-graded SAND, very dense, moist, pale yellow to white; medium to coarse sand; trace fine sand; few mica; oxidation staining			
36	B-1@35							71		
38										
40	B-1@40					SM	Silty SAND, very dense, moist, dark gray brown; fine to medium sand; trace coarse sand; little mica	60		
42										
44										
46	B-1@45						-Becomes fine to coarse sand; trace gravel; mottle coloring	65		
48										
50	B-1@50						-Becomes dark brown; slightly oxidized	63		
							Total Depth = 51.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 1,
Log of Boring B-1, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING B-2

ELEV. (MSL.) **1509** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**ALLUVIUM (Qa)** SILT with sand, stiff, slightly moist, olive gray; fine sand; little mica; AC chunks and gravel at surface			
2	B-2@2-7 B-2@2.5						-Becomes light brown; little mica	38		
4						SM	Silty SAND, slightly moist, brown; fine to medium sand; little mica; very silty			
6	B-2@5							45		
8	B-2@7.5						-Becomes fine to medium sand; no coarse sand; few silt	30		
10	B-2@10					SM	Silty SAND, loose, slightly moist, olive gray; fine to medium sand; trace coarse sand; little mica	15	104.6	9.8
12										
14						ML	SILT, stiff, moist, brown; fine sand; little clay seams; mica			
16	B-2@15							21		
18										
20	B-2@20					SM	Silty SAND, medium dense, moist, dark brown; fine to medium sand; mica	31		
22										
24										
26	B-2@25						-Little coarse sand	44		
28										

Figure 2,
Log of Boring B-2, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING B-2** ELEV. (MSL.)**1509** DATE COMPLETED **9/26/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
							MATERIAL DESCRIPTION			
30	B-2@30						-Becomes strong brown; fine to coarse sand; micaceous	39		
32										
34										
36	B-2@35						-Becomes dark brown; fine to medium sand; trace coarse sand; little mica	45		
							Total Depth = 36.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 2,
Log of Boring B-2, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING B-3

ELEV. (MSL.) **1511** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**TOPSOIL** SILT, soft, slightly moist, olive gray; fine to medium sand			
2						SM	**ALLUVIUM (Qa)** Silty SAND, loose, moist, strong brown; fine to medium sand; little coarse sand; little mica			
2	B-3@2.5							13		
4										
6	B-3@5						-Little silt; some mica	15	107.8	12.4
8	B-3@7.5						-Few silt; micaceous	15	106.7	9.6
10	B-3@10						-Becomes less silty; moisture increases	16	97.8	19.3
12										
14										
16	B-3@15					SM	Silty SAND, medium dense, moist, strong brown to dark brown; fine to medium sand; some mica; laminated	26		
18										
20	B-3@20						-Becomes dense; inbedded with thin poorly-graded sand layers	44		
22										
24										
26	B-3@25						-Becomes wet, very dark brown; fine to coarse sand	15		
28										

T2998-22-01 BORING LOGS.GPJ

Figure 3,
Log of Boring B-3, Page 1 of 2

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING B-3** ELEV. (MSL.)**1511** DATE COMPLETED **9/26/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN** MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B-3@30						-Becomes micaceous; massive	30		
32										
34										
36	B-3@35						-Becomes fine to medium sand; slightly oxidized	37		
							Total Depth = 36.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 3,
Log of Boring B-3, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING B-4

ELEV. (MSL.) **1513** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**TOPSOIL** SILT, hard, slightly moist, very dark brown; fine to medium sand			
						SM	**ALLUVIUM (Qa)**			
2	B-4@2-7						Silty SAND, medium dense, slightly moist to moist, dark brown; fine to medium sand; little coarse sand; little mica			
	B-4@2.5							20		
4							-Little mica			
6	B-4@5						-Becomes very moist, dark olive gray; Interbedded SM, ML, & SP	18	80.5	38.3
						SM	Silty SAND, loose to medium dense, moist, olive; fine to medium sand; micaceous			
8	B-4@7.5							11	105.2	19.1
10	B-4@10					CL	CLAY, firm, very moist, olive brown	16	95.8	31.6
12										
14						SC	Clayey SAND with Gravel, medium dense, very moist, gray and pale brown; fine sand			
16	B-4@15							40	104.8	21.5
18						SM	Silty SAND, medium dense, very moist, olive gray; fine to medium sand; micaceous			
20	B-4@20							18	103.6	21.5
22										
24										
26	B-4@25						-Becomes medium dense; less silt	40		
28										

Figure 4,
Log of Boring B-4, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING B-4** ELEV. (MSL.)**1513** DATE COMPLETED **9/26/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
							MATERIAL DESCRIPTION			
30	B-4@30						-Becomes gray brown; oxidation staining and on peds	30		
32										
34										
36	B-4@35						-Becomes dense; Poorly-graded SAND lens 3-4" thick	54		
							Total Depth = 36.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 4,
Log of Boring B-4, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◹ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING B-5

ELEV. (MSL.) **1511** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**TOPSOIL** SILT, loose, slightly moist, dark brown; fine to medium sand			
2	B-5@2.5					SM	**ALLUVIUM (Qa)** Silty SAND, soft, slightly moist to moist, olive brown; fine to medium sand; very silty	9		
4										
6	B-5@5						-Becomes micaceous	5	92.4	24.1
8	B-5@7.5						-Becomes dark brown; very sandy; less silt	11	106.4	19.1
10	B-5@10					SC	Clayey SAND, loose, moist, dark olive brown; fine to medium sand; micaceous	15	92.9	22.3
12										
14						CL	CLAY, firm, very moist, olive gray			
16	B-5@15							26	89.0	37.1
18										
20	B-5@20						-Becomes dark brown	18	107.8	25.3
22						SM	Silty SAND, medium dense, moist, very dark brown; fine to medium sand; micaceous			
24										
26	B-5@25						-Becomes dark brown; less silt; little coarse sand	36		
28										

Figure 5,
Log of Boring B-5, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING B-5** ELEV. (MSL.)**1511** DATE COMPLETED **9/26/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
							MATERIAL DESCRIPTION			
30	B-5@30						-Becomes very dense; more silt; Poorly-graded SAND lens (3")	74		
32										
34						SP	Poorly-graded SAND, medium dense, slightly moist, pale brown; fine to medium sand; trace coarse sand; few oxidation staining			
36	B-5@35							34		
							Total Depth = 36.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 5,
Log of Boring B-5, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING P-1 / MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
							ELEV. (MSL.) **1513** DATE COMPLETED **9/27/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**			
0						SM	**TOPSOIL** Silty SAND, loose, moist, very dark brown; fine to medium sand; very silty			
2	P-1@1.5-2		■			SM	**ALLUVIUM (Qa)** Silty SAND, loose, moist, dark grayish brown; medium sand; some fine sand; some mica			
							Total Depth = 2' No groundwater encountered Percolation Test Equipment set Presaturated with 5 gallons of water Backfilled with cuttings 9/27/2022			

Figure 6,
Log of Boring P-1, Page 1 of 1

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING P-2

ELEV. (MSL.) **1505** DATE COMPLETED **9/27/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**ALLUVIUM (Qa)** SILT, stiff, slightly moist, dark brown; fine sand; little mica; AC chunks and gravel at surface			
2										
4						SM	Silty SAND, slightly moist, light grayish brown; fine to medium sand; few coarse sand; little mica			
6										
8										
10	P-2@9-10		■				Total Depth = 10' No groundwater encountered Percolation Test Equipment set Presaturated with 5 gallons of water Backfilled with cuttings 9/27/2022			

Figure 7,
Log of Boring P-2, Page 1 of 1

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING P-3

ELEV. (MSL.) **1511** DATE COMPLETED **9/27/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**TOPSOIL** SILT, soft, slightly moist, very dark brown; fine to medium sand			
						SM	**ALLUVIUM (Qa)**			
2	P-3@1.5-2		■				Silty SAND, loose, slightly moist, dark grayish brown; fine to medium sand; little mica			

Total Depth = 2'
No groundwater encountered
Percolation Test Equipment set
Presaturated with 5 gallons of water
Backfilled with cuttings 9/27/2022

Figure 8,
Log of Boring P-3, Page 1 of 1

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING P-4

ELEV. (MSL.) **1511** DATE COMPLETED **9/27/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**TOPSOIL** SILT, soft, slightly moist, dark brown; fine to medium sand			
						ML	**ALLUVIUM (Qa)** Sandy SILT, soft, slightly moist, dark gray brown; fine to medium sand			
2	P-4@1.5-2		■							

Total Depth = 2'
No groundwater encountered
Percolation Test Equipment set
Presaturated with 5 gallons of water
Backfilled with cuttings 9/27/2022

Figure 9,
Log of Boring P-4, Page 1 of 1

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PERCOLATION TEST REPORT							
Project Name:		Ramona San Jacinto			**Project No.:**		T2998-22-01
Test Hole No.:		P-1			**Date Excavated:**		9/26/2022
Length of Test Pipe:			24.0	inches	**Soil Classification:**		SM
Height of Pipe above Ground:			0.0	inches	**Presoak Date:**		9/26/2022
Depth of Test Hole:			24.0	inches	**Perc Test Date:**		9/27/2022
Check for Sandy Soil Criteria Tested by:				Weidman	**Percolation Tested by:**		Weidman
Water level measured from BOTTOM of hole							
Sandy Soil Criteria Test							
Trial No.	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
		Interval	**Elapsed**	**Level**	**Level**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	8:30 AM 8:55 AM	25	25	24.0	20.3	3.7	6.7
2	8:55 AM 9:20 AM	25	50	24.0	22.4	1.6	16.0
			Soil Criteria: Normal				
			Percolation Test				
Reading	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
No.		**Interval**	**Elapsed**	**Head**	**Head**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	9:20 AM 9:50 AM	30	30	24.0	22.0	2.0	14.7
2	9:50 AM 10:20 AM	30	60	24.0	22.8	1.2	25.0
3	10:20 AM 10:50 AM	30	90	24.0	22.7	1.3	22.7
4	10:50 AM 11:20 AM	30	120	24.0	22.6	1.4	20.8
5	11:20 AM 11:50 AM	30	150	24.0	22.8	1.2	25.0
6	11:50 AM 12:20 PM	30	180	24.0	22.6	1.4	20.8
7	12:20 PM 12:50 PM	30	210	24.0	22.8	1.2	25.0
8	12:50 PM 1:20 PM	30	240	24.0	23.0	1.0	31.3
9	1:20 PM 1:50 PM	30	270	24.0	23.3	0.7	41.7
10	1:50 PM 2:20 PM	30	300	24.0	23.3	0.7	41.7
11	2:20 PM 2:50 PM	30	330	24.0	23.4	0.6	50.0
12	2:50 PM 3:20 PM	30	360	24.0	23.4	0.6	50.0
Infiltration Rate (in/hr):			0.1				
Radius of test hole (in):			4				**Figure A-10**
Average Head (in):			23.7				

PERCOLATION TEST REPORT							
Project Name:		Ramona San Jacinto			**Project No.:**		T2998-22-01
Test Hole No.:		P-2			**Date Excavated:**		9/26/2022
Length of Test Pipe:			120.0	inches	**Soil Classification:**		SM
Height of Pipe above Ground:			0.0	inches	**Presoak Date:**		9/26/2022
Depth of Test Hole:			120.0	inches	**Perc Test Date:**		9/27/2022
Check for Sandy Soil Criteria Tested by:				Weidman	**Percolation Tested by:**		Weidman
Water level measured from BOTTOM of hole							
Sandy Soil Criteria Test							
Trial No.	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
		Interval	**Elapsed**	**Level**	**Level**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	8:33 AM 8:58 AM	25	25	48.0	13.6	34.4	0.7
2	8:58 AM 9:23 AM	25	50	48.0	19.2	28.8	0.9
			Soil Criteria: Sandy				
			Percolation Test				
Reading	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
No.		**Interval**	**Elapsed**	**Head**	**Head**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	9:23 AM 9:33 AM	10	10	48.0	38.4	9.6	1.0
2	9:33 AM 9:43 AM	10	20	48.0	39.6	8.4	1.2
3	9:43 AM 9:53 AM	10	30	48.0	40.2	7.8	1.3
4	9:53 AM 10:03 AM	10	40	48.0	43.2	4.8	2.1
5	10:03 AM 10:13 AM	10	50	48.0	45.0	3.0	3.3
6	10:13 AM 10:23 AM	10	60	48.0	45.6	2.4	4.2
Infiltration Rate (in/hr):			0.6				
Radius of test hole (in):			4				**Figure A-11**
Average Head (in):			46.8				

PERCOLATION TEST REPORT							
Project Name:		Ramona San Jacinto			**Project No.:**		T2998-22-01
Test Hole No.:		P-3			**Date Excavated:**		9/26/2022
Length of Test Pipe:			24.0	inches	**Soil Classification:**		SM
Height of Pipe above Ground:			0.0	inches	**Presoak Date:**		9/26/2022
Depth of Test Hole:			24.0	inches	**Perc Test Date:**		9/27/2022
Check for Sandy Soil Criteria Tested by:				Weidman	**Percolation Tested by:**		Weidman
Water level measured from BOTTOM of hole							
Sandy Soil Criteria Test							
Trial No.	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
		Interval	**Elapsed**	**Level**	**Level**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	8:38 AM 9:03 AM	25	25	24.0	17.8	6.2	4.0
2	9:03 AM 9:28 AM	25	50	24.0	21.6	2.4	10.4
			Soil Criteria: Normal				
			Percolation Test				
Reading	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
No.		**Interval**	**Elapsed**	**Head**	**Head**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	9:28 AM 9:58 AM	30	30	24.0	21.6	2.4	12.5
2	9:58 AM 10:28 AM	30	60	24.0	22.4	1.6	19.2
3	10:28 AM 10:58 AM	30	90	24.0	22.6	1.4	20.8
4	10:58 AM 11:28 AM	30	120	24.0	22.6	1.4	20.8
5	11:28 AM 11:58 AM	30	150	24.0	22.6	1.4	20.8
6	11:58 AM 12:28 PM	30	180	24.0	22.2	1.8	16.7
7	12:28 PM 12:58 PM	30	210	24.0	22.8	1.2	25.0
8	12:58 PM 1:28 PM	30	240	24.0	23.0	1.0	31.3
9	1:28 PM 1:58 PM	30	270	24.0	23.3	0.7	41.7
10	1:58 PM 2:28 PM	30	300	24.0	23.3	0.7	41.7
11	2:28 PM 2:58 PM	30	330	24.0	23.3	0.7	41.7
12	2:58 PM 3:28 PM	30	360	24.0	23.3	0.7	41.7
Infiltration Rate (in/hr):			0.1				
Radius of test hole (in):			4				**Figure A-12**
Average Head (in):			23.6				

PERCOLATION TEST REPORT							
Project Name:		Ramona San Jacinto			**Project No.:**		T2998-22-01
Test Hole No.:		P-4			**Date Excavated:**		9/26/2022
Length of Test Pipe:			24.0	inches	**Soil Classification:**		ML
Height of Pipe above Ground:			0.0	inches	**Presoak Date:**		9/26/2022
Depth of Test Hole:			24.0	inches	**Perc Test Date:**		9/27/2022
Check for Sandy Soil Criteria Tested by:				Weidman	**Percolation Tested by:**		Weidman
Water level measured from BOTTOM of hole							
Sandy Soil Criteria Test							
Trial No.	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
		Interval	**Elapsed**	**Level**	**Level**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	8:30 AM 8:55 AM	25	25	24.0	17.9	6.1	4.1
2	8:55 AM 9:20 AM	25	50	24.0	20.4	3.6	6.9
			Soil Criteria: Normal				
			Percolation Test				
Reading	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
No.		**Interval**	**Elapsed**	**Head**	**Head**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	9:20 AM 9:50 AM	30	30	24.0	20.6	3.4	8.9
2	9:50 AM 10:20 AM	30	60	24.0	21.1	2.9	10.4
3	10:20 AM 10:50 AM	30	90	24.0	21.6	2.4	12.5
4	10:50 AM 11:20 AM	30	120	24.0	21.8	2.2	13.9
5	11:20 AM 11:50 AM	30	150	24.0	22.2	1.8	16.7
6	11:50 AM 12:20 PM	30	180	24.0	23.0	1.0	31.3
7	12:20 PM 12:50 PM	30	210	24.0	22.8	1.2	25.0
8	12:50 PM 1:20 PM	30	240	24.0	22.7	1.3	22.7
9	1:20 PM 1:50 PM	30	270	24.0	22.8	1.2	25.0
10	1:50 PM 2:20 PM	30	300	24.0	22.7	1.3	22.7
11	2:20 PM 2:50 PM	30	330	24.0	22.8	1.2	25.0
12	2:50 PM 3:20 PM	30	360	24.0	22.8	1.2	25.0
Infiltration Rate (in/hr):			0.2				
Radius of test hole (in):			4				**Figure A-13**
Average Head (in):			23.4				

APPENDIX B

APPENDIX B

LABORATORY TESTING

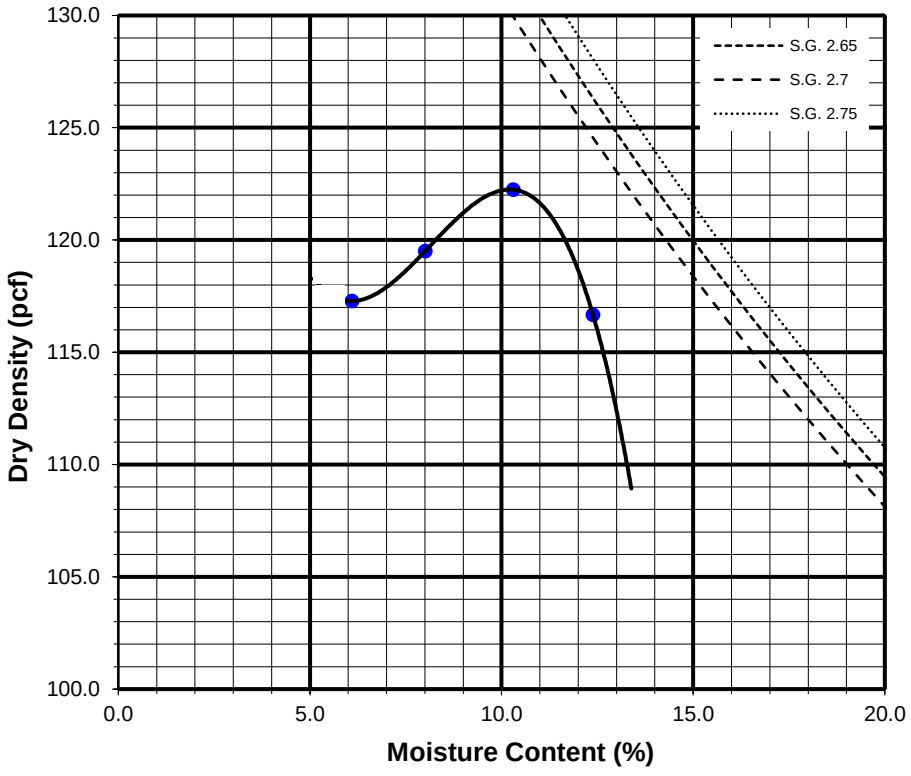
We performed laboratory tests in accordance with current, generally accepted test methods of ASTM International (ASTM) or other suggested procedures. We analyzed selected soil samples for in-situ density and moisture content, maximum dry density and optimum moisture content, corrosivity, grain size distribution, expansion potential, consolidation, and direct shear strength. The results of the laboratory tests are presented on Figures B-1 through B-32. The in-place dry density and moisture content of the samples tested are presented on the boring logs in *Appendix A.*

Sample No:

B-2@2-7	Silty SAND (SM), olive gray

TEST NO.		1	2	3	4	5	6
Wt. Compacted Soil + Mold	(g)	6139	6209	6296	6240		
Weight of Mold	(g)	4259	4259	4259	4259		
Net Weight of Soil	(g)	1880	1950	2037	1981		
Wet Weight of Soil + Cont.	(g)	690.7	655.9	818.6	810.9		
Dry Weight of Soil + Cont.	(g)	665.8	626.0	766.3	750.0		
Weight of Container	(g)	257.3	252.6	259.0	258.3		
Moisture Content	(%)	6.1	8.0	10.3	12.4		
Wet Density	(pcf)	124.4	129.1	134.8	131.1		
Dry Density	(pcf)	117.3	119.5	122.2	116.7		

Maximum Dry Density (pcf)	**122.0**	**Optimum Moisture Content (%)**	**10.0**



Preparation Method: A

GEOCON

COMPACTION CHARACTERISTICS USING MODIFIED EFFORT TEST RESULTS

ASTM D-1557

Checked by:

Project No.: T2998-22-01

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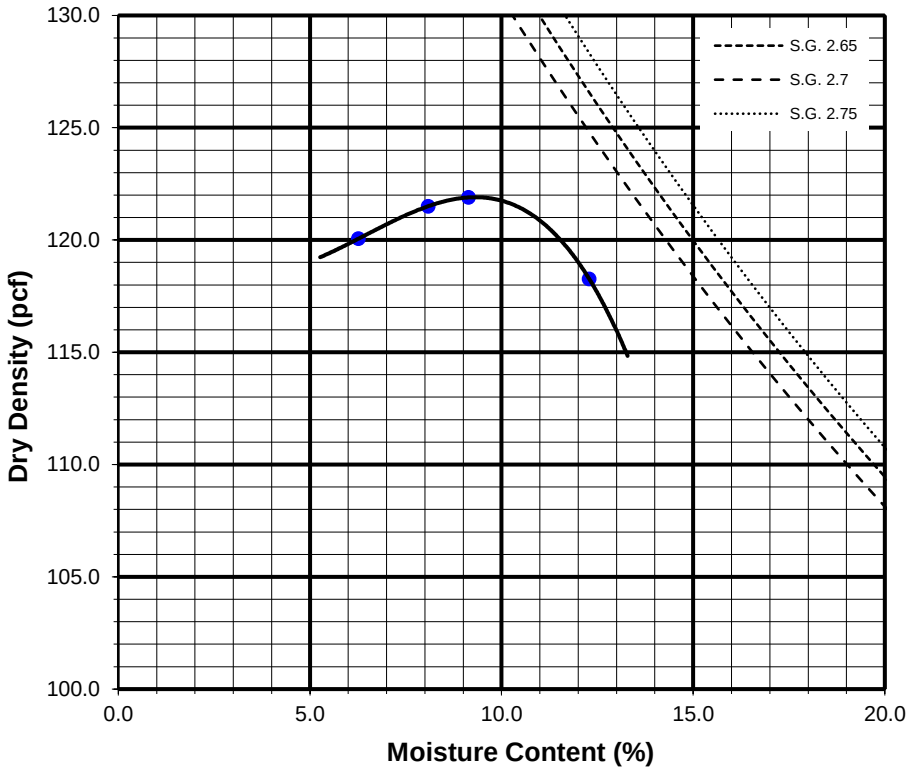
Nov 22 Figure B-1

Sample No:

B-4@2-7	Silty SAND (SM), dark brown

TEST NO.		1	2	3	4	5	6
Wt. Compacted Soil + Mold	(g)	6243	6269	6265	6187		
Weight of Mold	(g)	4259	4259	4259	4259		
Net Weight of Soil	(g)	1984	2009	2006	1927		
Wet Weight of Soil + Cont.	(g)	705.9	575.6	679.6	653.9		
Dry Weight of Soil + Cont.	(g)	672.5	548.7	633.4	630.4		
Weight of Container	(g)	259.2	254.2	257.4	255.4		
Moisture Content	(%)	8.1	9.1	12.3	6.3		
Wet Density	(pcf)	131.3	133.0	132.8	127.6		
Dry Density	(pcf)	121.5	121.9	118.3	120.1		

Maximum Dry Density (pcf)	**122.0**	**Optimum Moisture Content (%)**	**9.0**



Preparation Method: A

GEOCON

COMPACTION CHARACTERISTICS USING MODIFIED EFFORT TEST RESULTS

ASTM D-1557

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Nov 22 Figure B-2

B1@0-5

MOLDED SPECIMEN		BEFORE TEST	AFTER TEST
Specimen Diameter	(in.)	4.0	4.0
Specimen Height	(in.)	1.0	1.0
Wt. Comp. Soil + Mold	(gm)	606.5	632.2
Wt. of Mold	(gm)	200.4	200.4
Specific Gravity	(Assumed)	2.7	2.7
Wet Wt. of Soil + Cont.	(gm)	473.2	632.2
Dry Wt. of Soil + Cont.	(gm)	447.9	371.9
Wt. of Container	(gm)	173.2	200.4
Moisture Content	(%)	9.2	16.1
Wet Density	(pcf)	122.5	130.1
Dry Density	(pcf)	112.2	112.0
Void Ratio		0.5	0.5
Total Porosity		0.3	0.3
Pore Volume	(cc)	69.3	71.5
Degree of Saturation	(%) [S_{meas}]	49.8	83.8

Date	Time	Pressure (psi)	Elapsed Time (min)	Dial Readings (in.)
9/30/2022	10:00	1.0	0	0.3267
9/30/2022	10:10	1.0	10	0.3266
Add Distilled Water to the Specimen				
10/1/2022	10:00	1.0	1430	0.3376
10/1/2022	11:00	1.0	1490	0.3376

Expansion Index (EI meas) =	11
Expansion Index (Report) =	**11**

Expansion Index, EI_{50}	CBC CLASSIFICATION *	UBC CLASSIFICATION **
0-20	Non-Expansive	Very Low
21-50	Expansive	Low
51-90	Expansive	Medium
91-130	Expansive	High
>130	Expansive	Very High

* Reference: 2019 California Building Code, Section 1803.5.3

** Reference: 1997 Uniform Building Code, Table 18-I-B.

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EXPANSION INDEX TEST RESULTS

ASTM D-4829

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Nov 22 Figure B-3

SUMMARY OF LABORATORY
POTENTIAL OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS
AASHTO T289 ASTM D4972 and AASHTO T288 ASTM G187

Sample No.	pH	Resistivity (ohm centimeters)
B1@0-5	9.3	2300

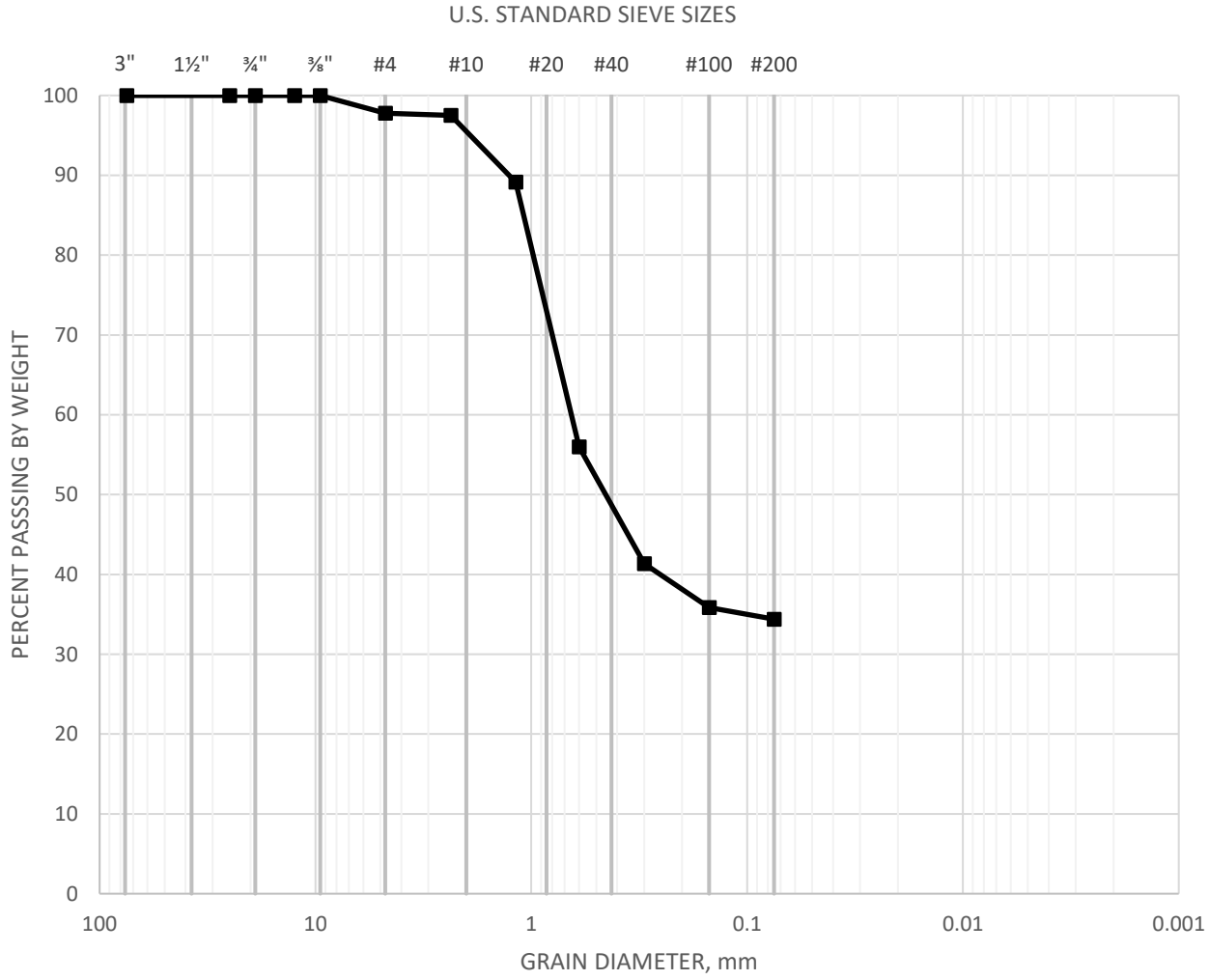
SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS
AASHTO T291 ASTM C1218

Sample No.	Chloride Ion Content (%)
B1@0-5	0.015

SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
AASHTO T290 ASTM C1580

Sample No.	Water Soluble Sulfate (% SO_4)	Sulfate Exposure
B1@0-5	0.001	S0

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P1@1.5-2.0	Silty SAND (SM), dark grayish brown	0.63	0.073	0.073

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GRAIN SIZE DISTRIBUTION

ASTM D 6913

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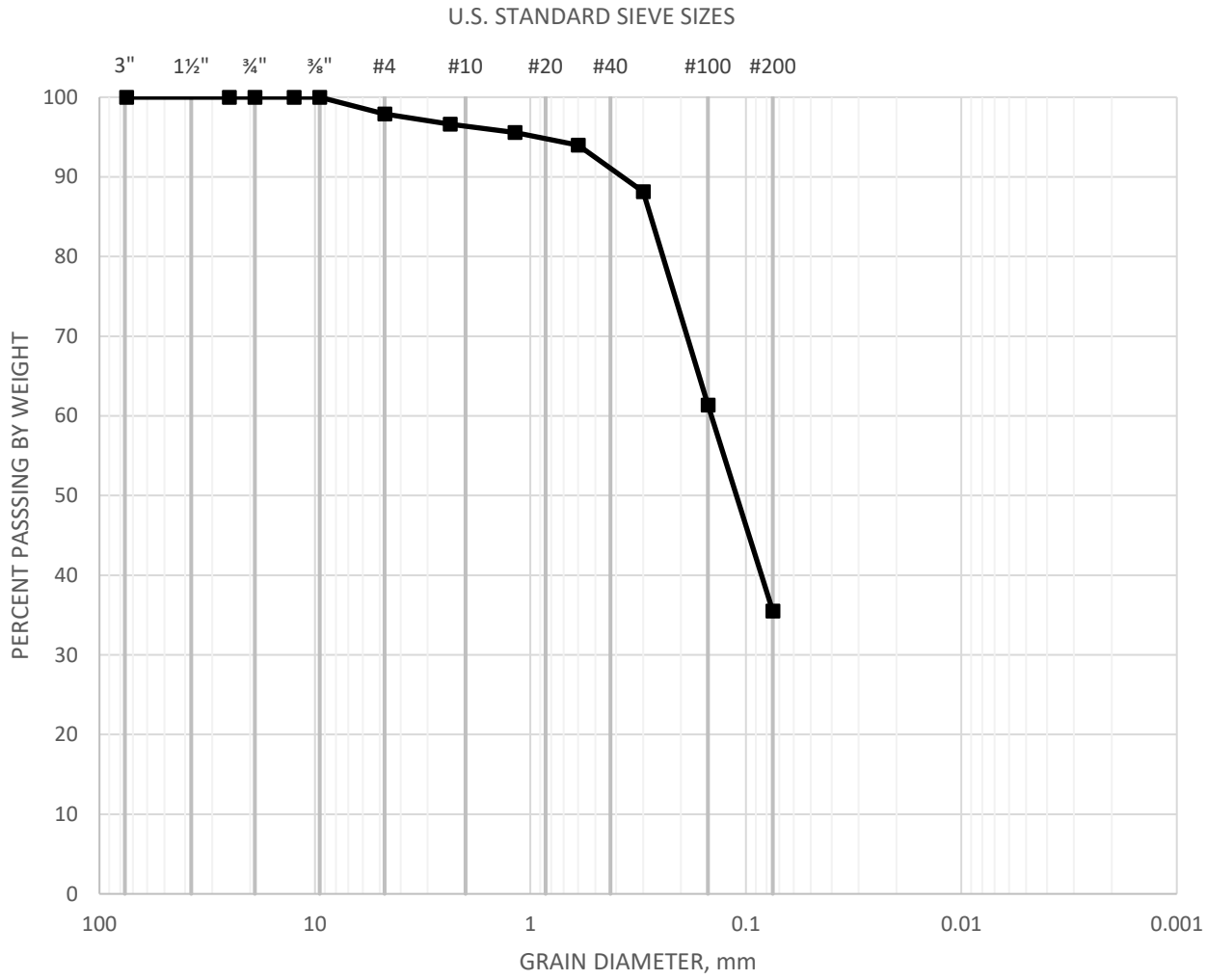
Nov 22 Figure B-5

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P2@9-10	Silty SAND (SM), light grayish brown	0.14	0.073	0.073

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GRAIN SIZE DISTRIBUTION

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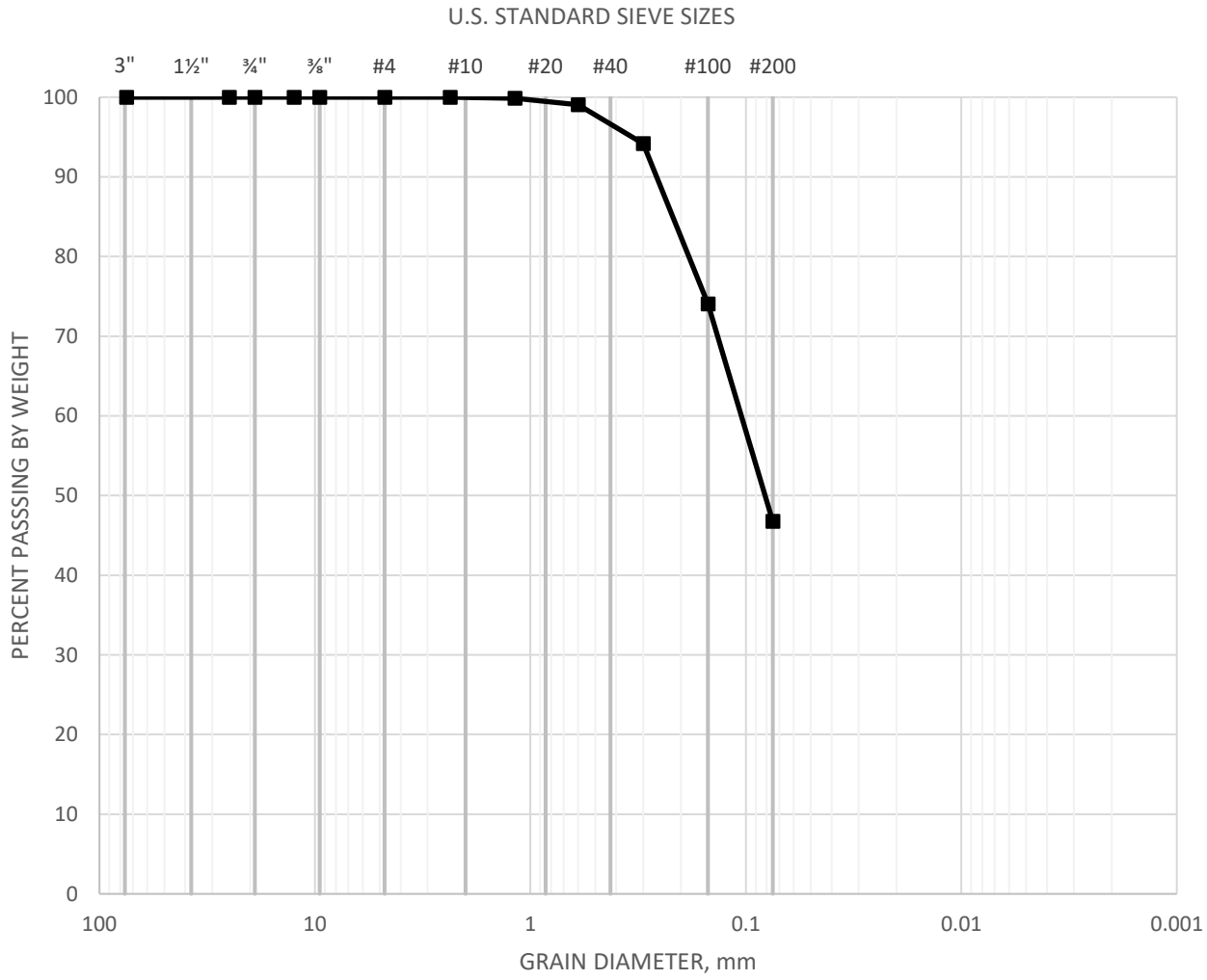
Nov 22 Figure B-6

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P3@1.5-2.0	Silty SAND (SM), dark grayish brown	0.1	0.073	0.073

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GRAIN SIZE DISTRIBUTION

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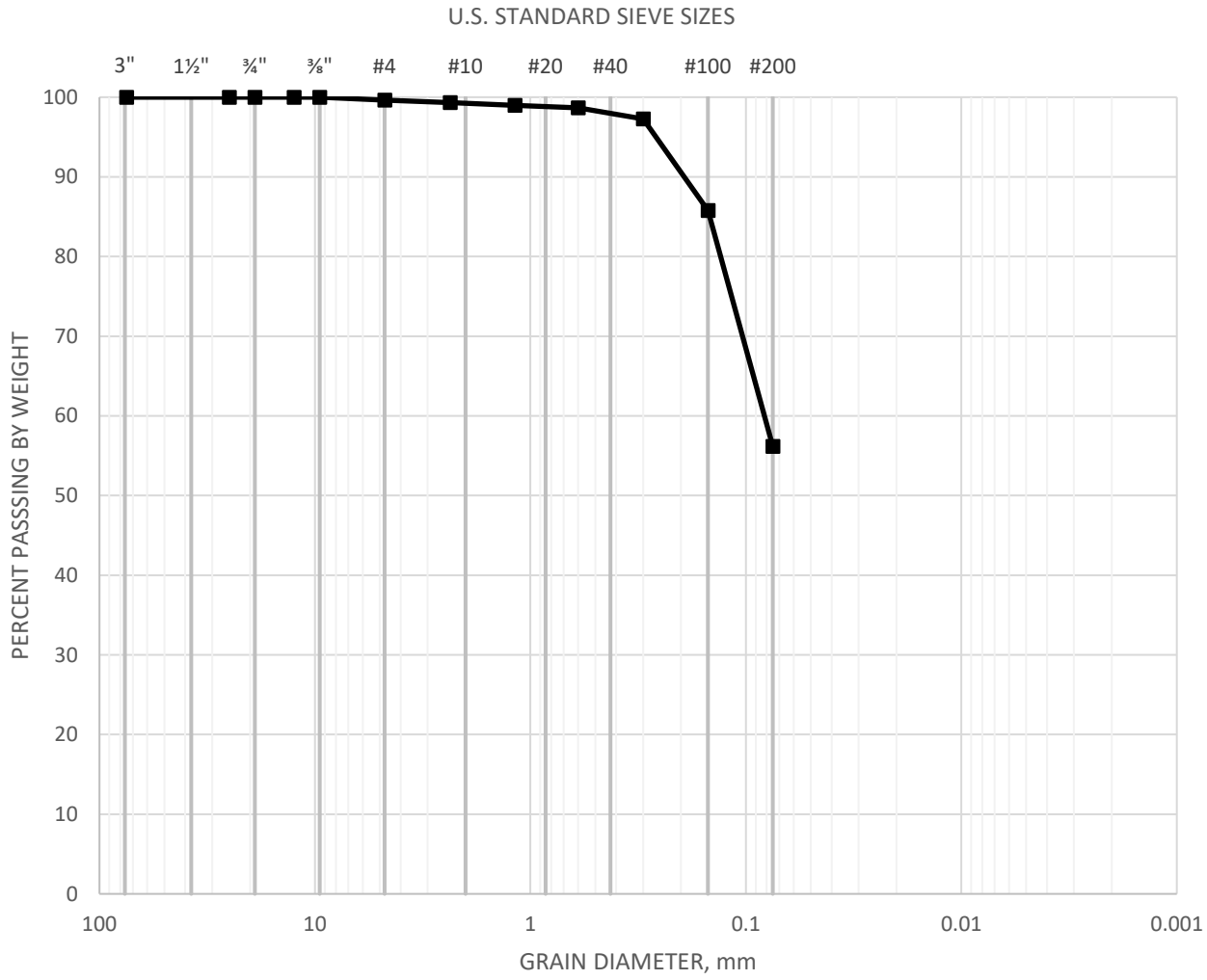
Nov 22 Figure B-7

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P4@1.5-2.0	SILT with Sand (ML), dark grayish brown	0.08	0.073	0.073

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GRAIN SIZE DISTRIBUTION

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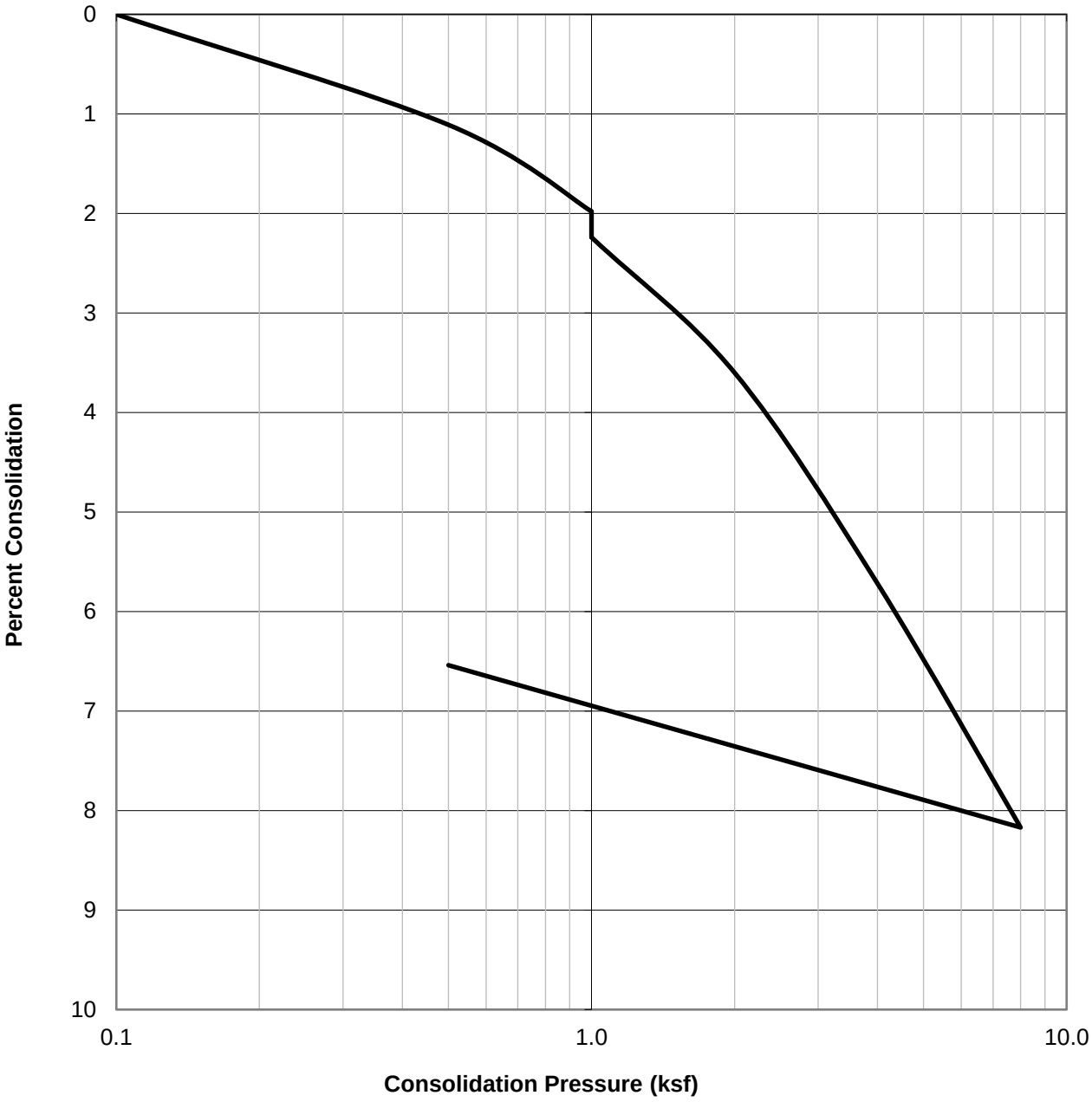
Nov 22 Figure B-8

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@5	SILT with Sand (ML), olive brown	95.2	24.2	24.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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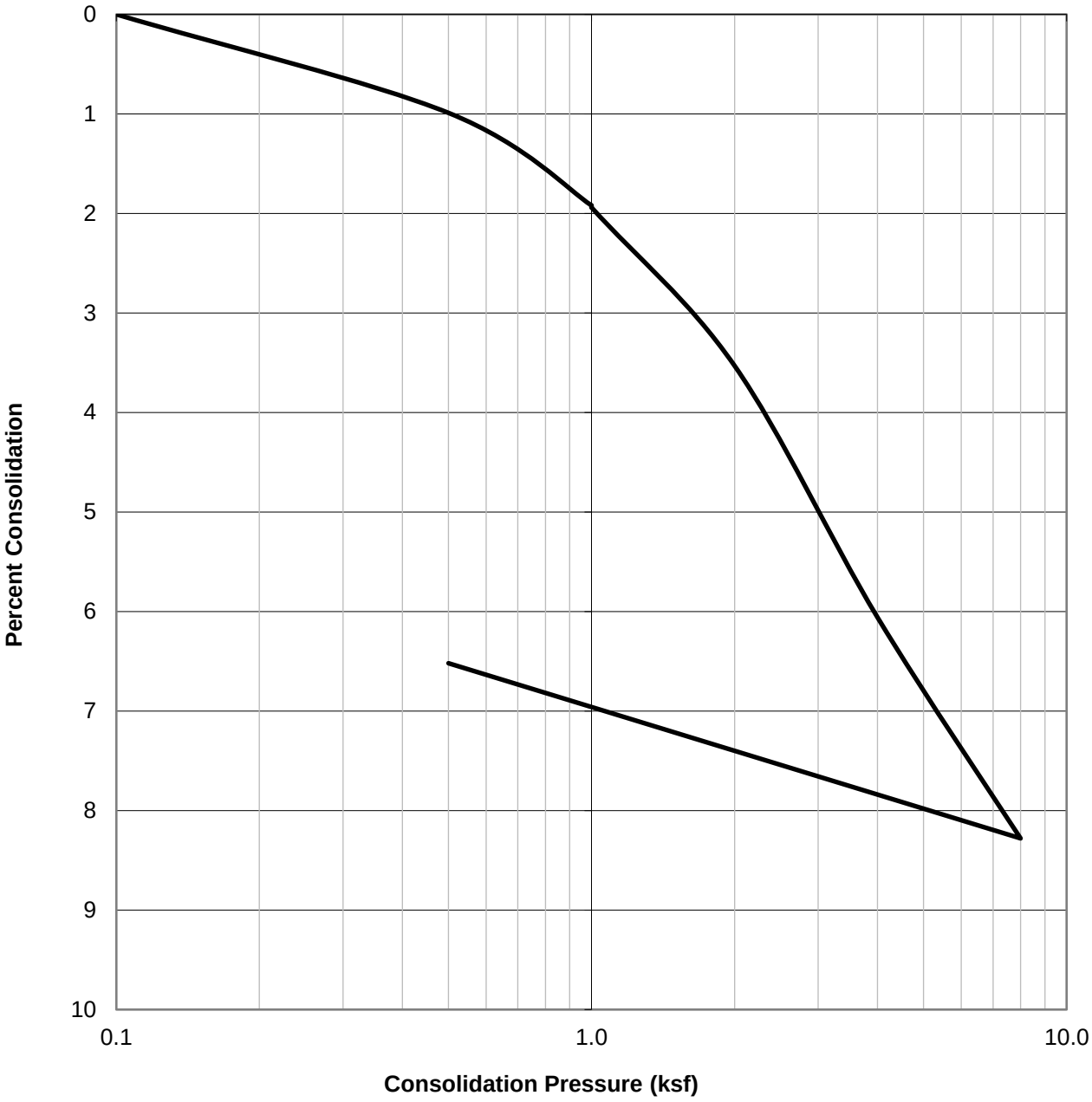
Nov 22 Figure B-9

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@7.5	SILT with Sand (ML), olive brown	99.8	23.2	22.5

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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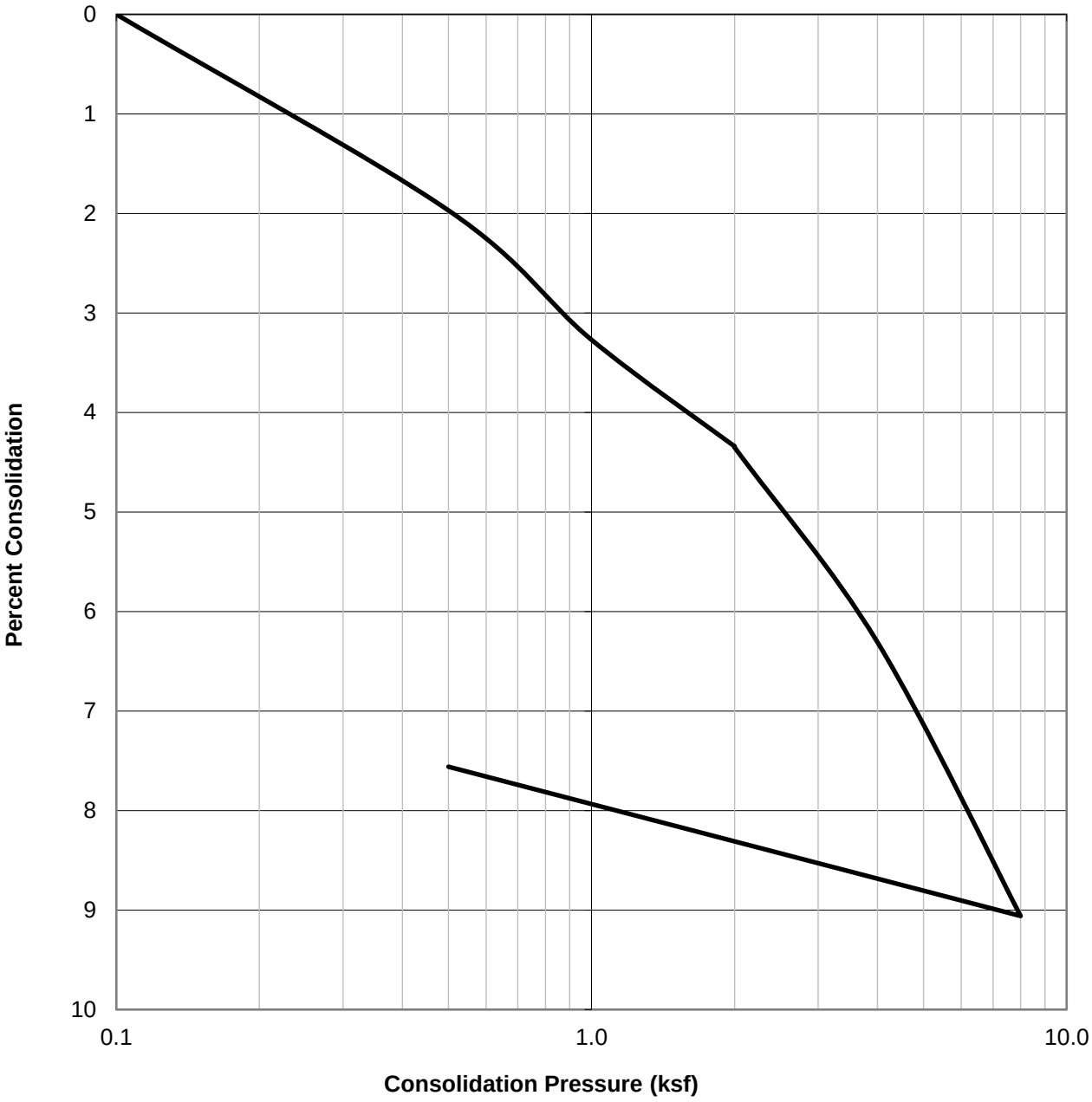
Nov 22 Figure B-10

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@10	SILT with Sand (ML), olive brown	91.4	30.0	27.7

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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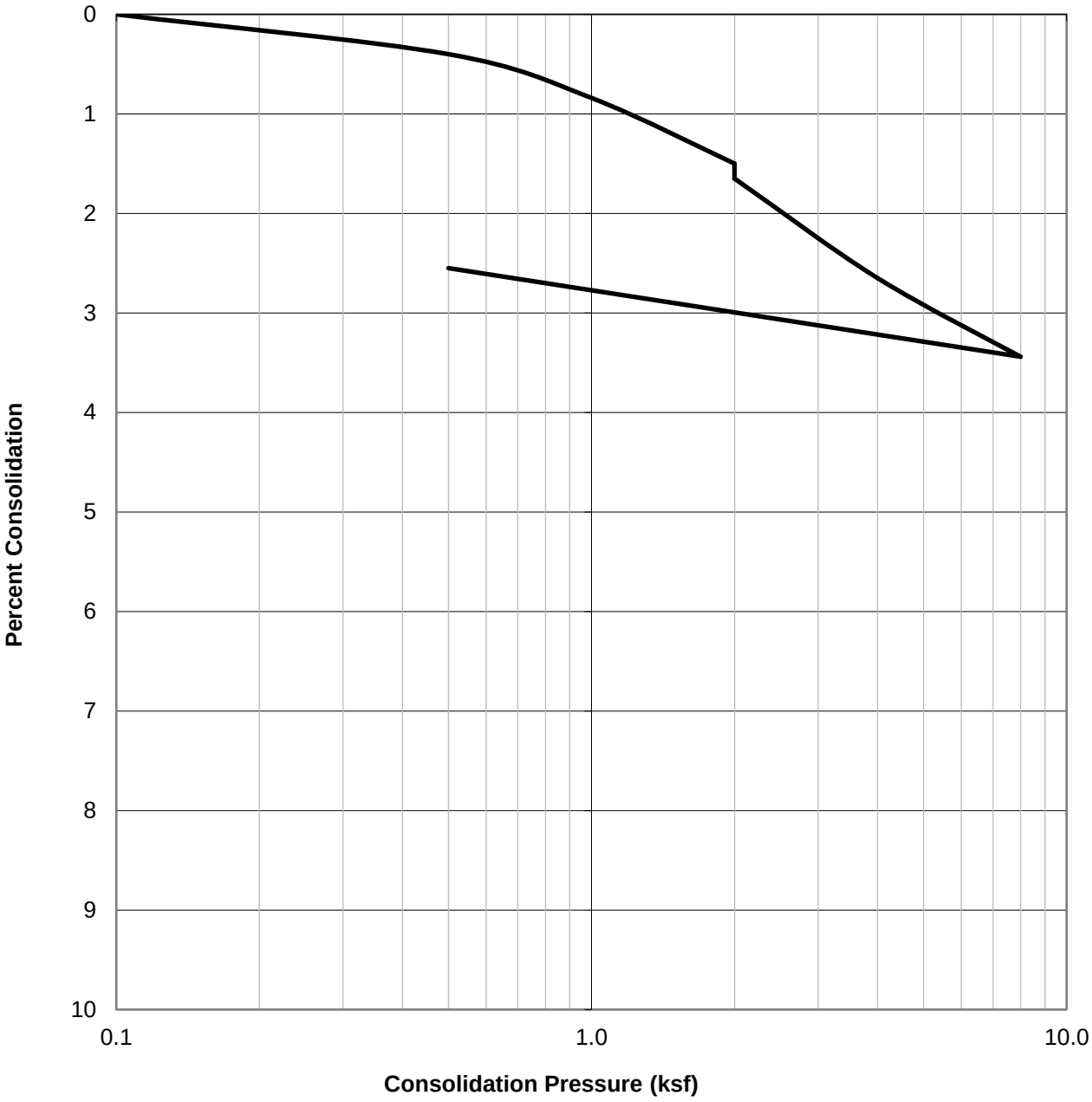
Nov 22 Figure B-11

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@15	Poorly Graded SAND with Silt (SP-SM), light olive gray	92.3	21.0	27.1

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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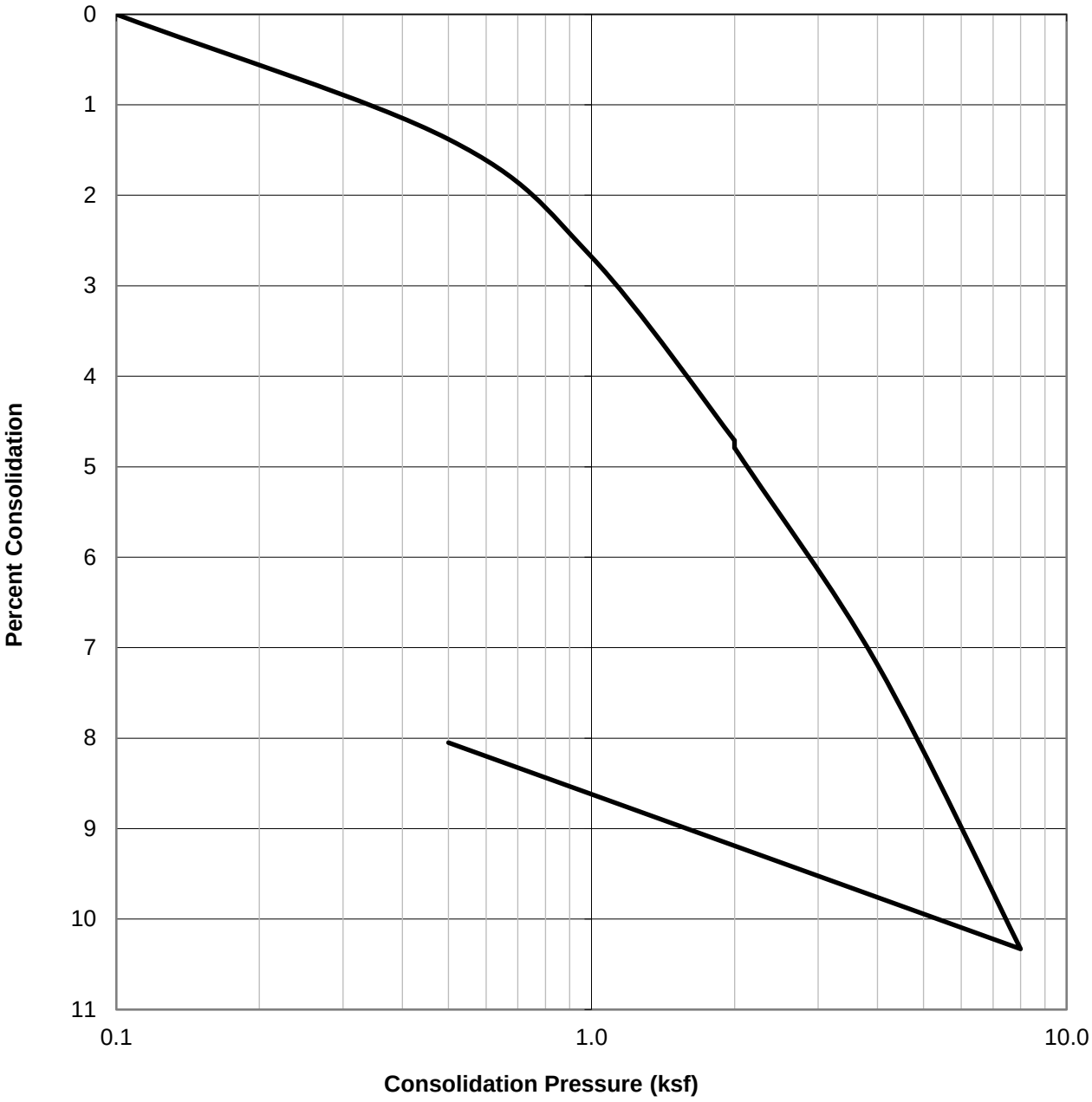
Nov 22 Figure B-12

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@20	CLAY (CL), dark olive gray	90.0	28.7	29.4

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CONSOLIDATION TEST RESULTS

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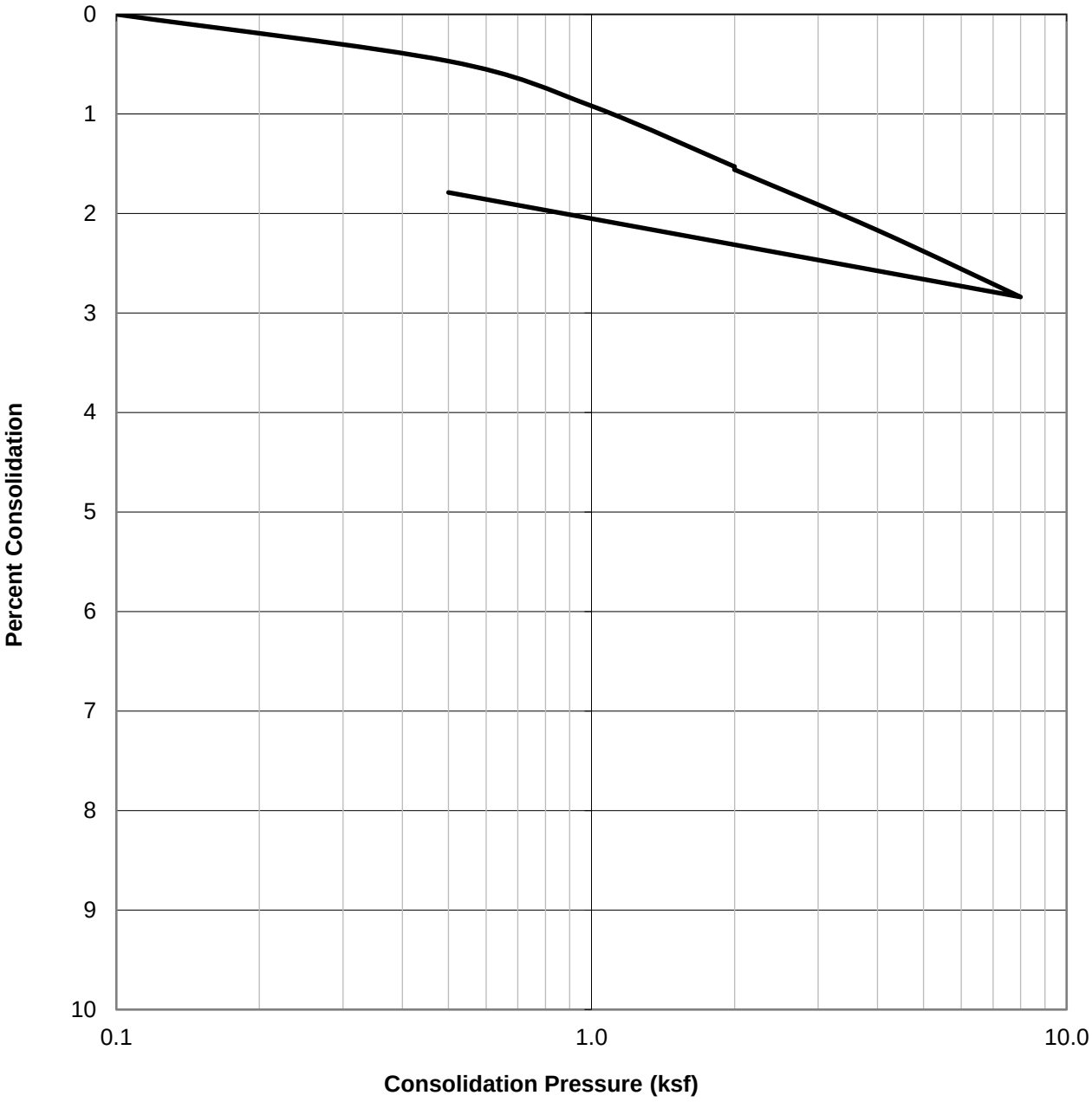
Nov 22 Figure B-13

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@2-7	Silty SAND (SM), olive gray	109.3	11.1	19.0

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by:

Project No.: T2998-22-01

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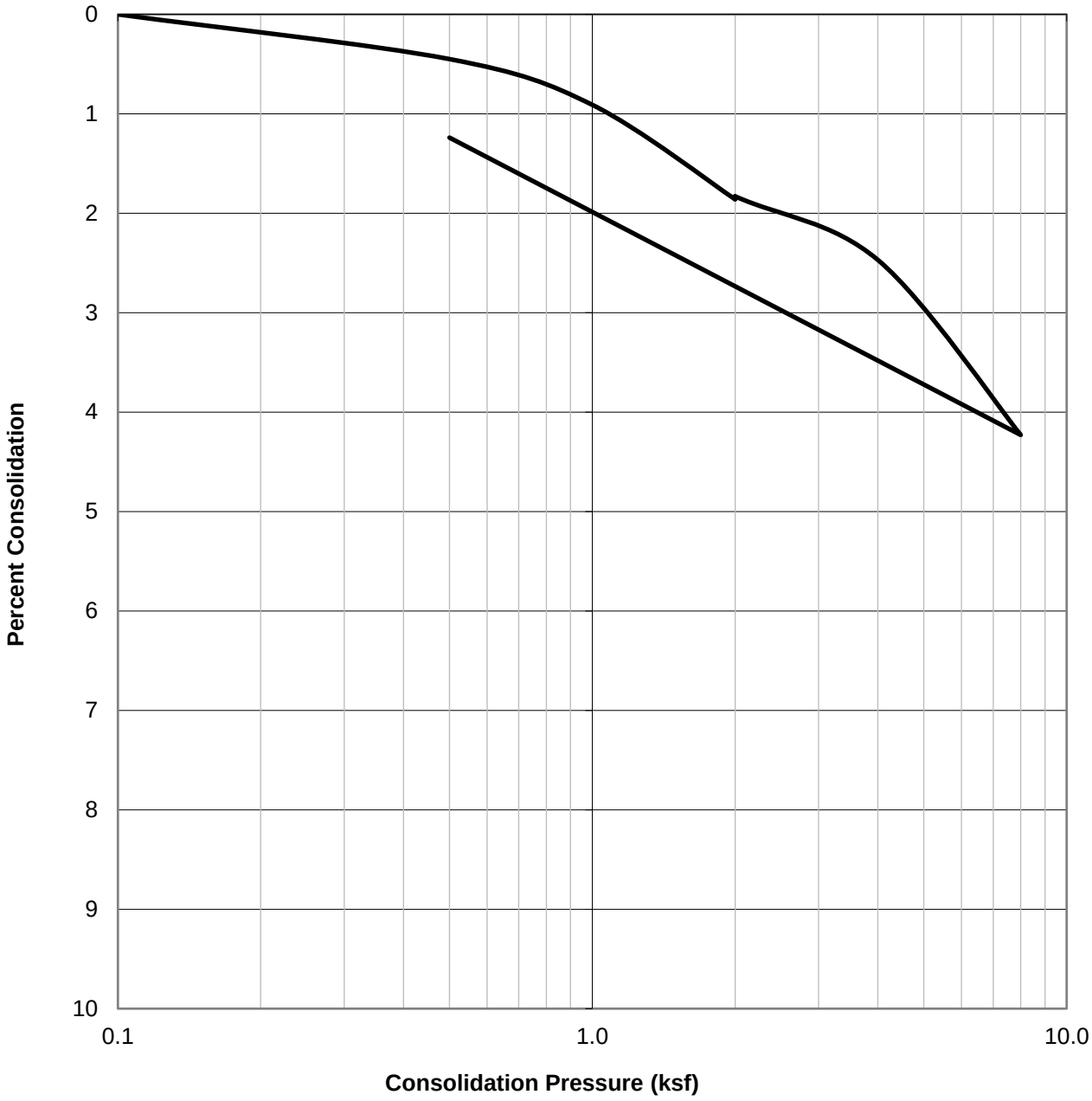
Nov 22 Figure B-14

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@10	Silty SAND (SM), olive gray	98.3	22.3	33.0

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by:

Project No.: T2998-22-01

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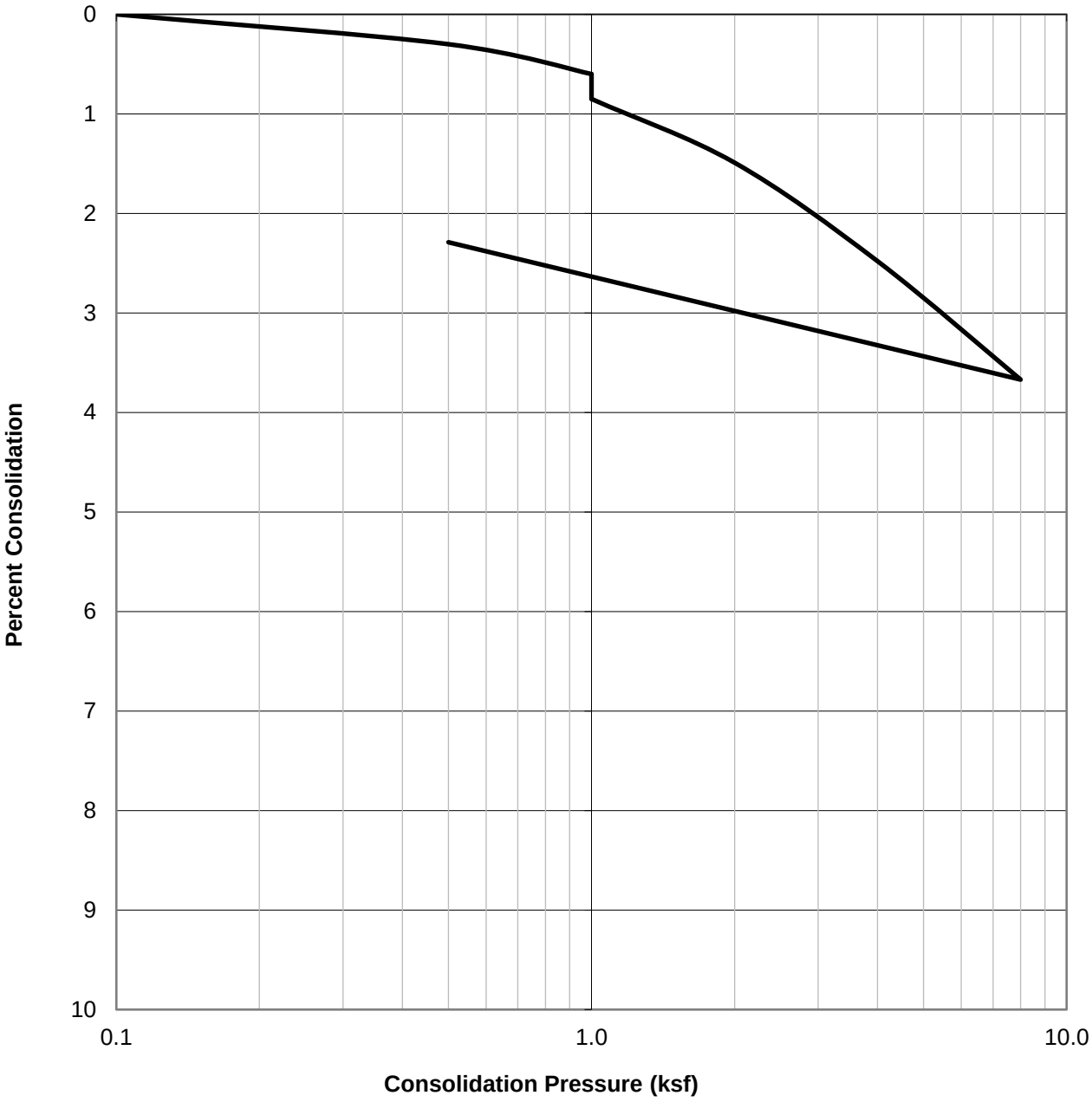
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-15

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@5	Silty SAND (SM), olive gray	105.9	15.1	18.7

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

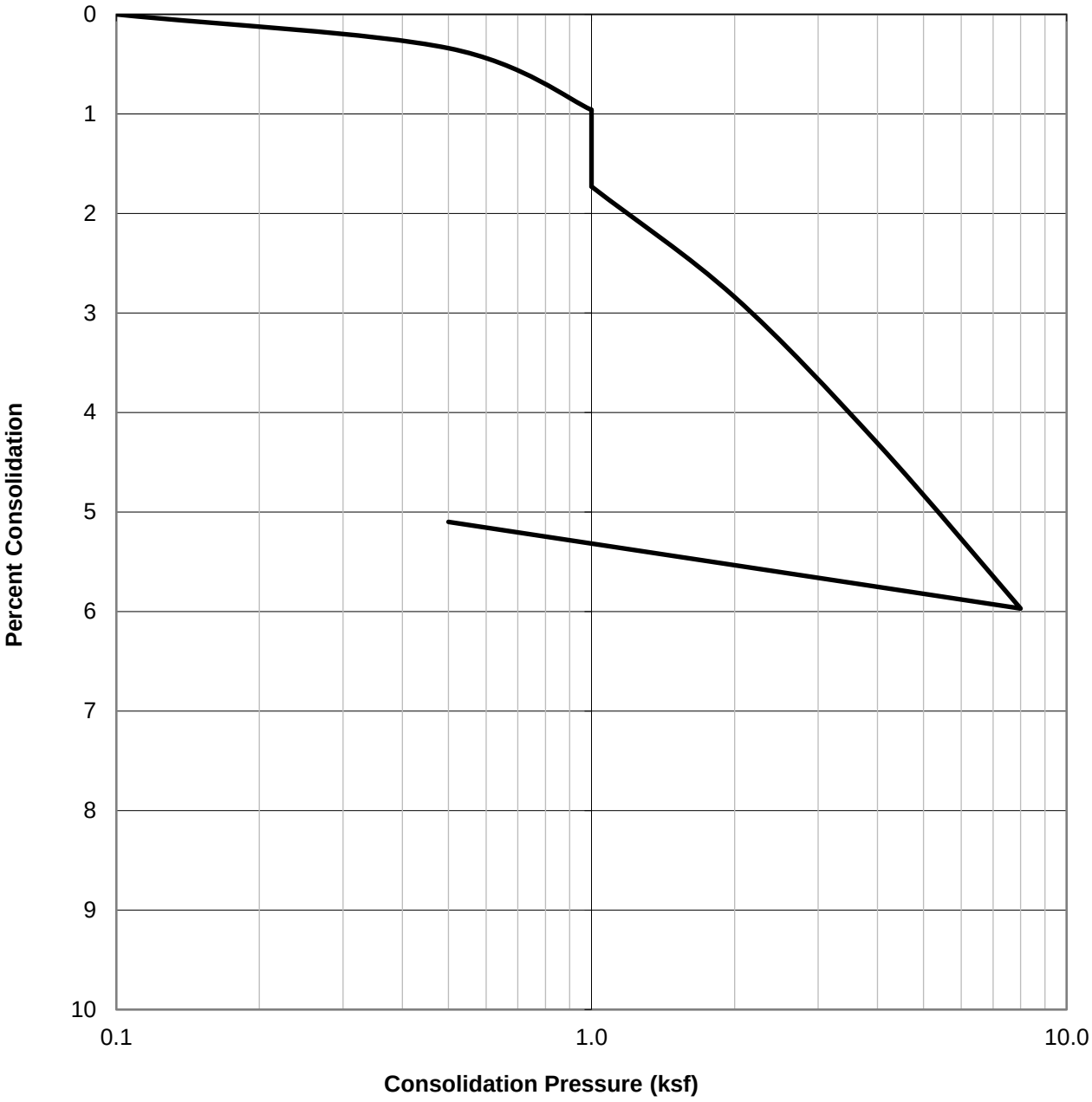
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-16

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@7.5	Silty SAND (SM), olive gray	101.5	9.6	18.9

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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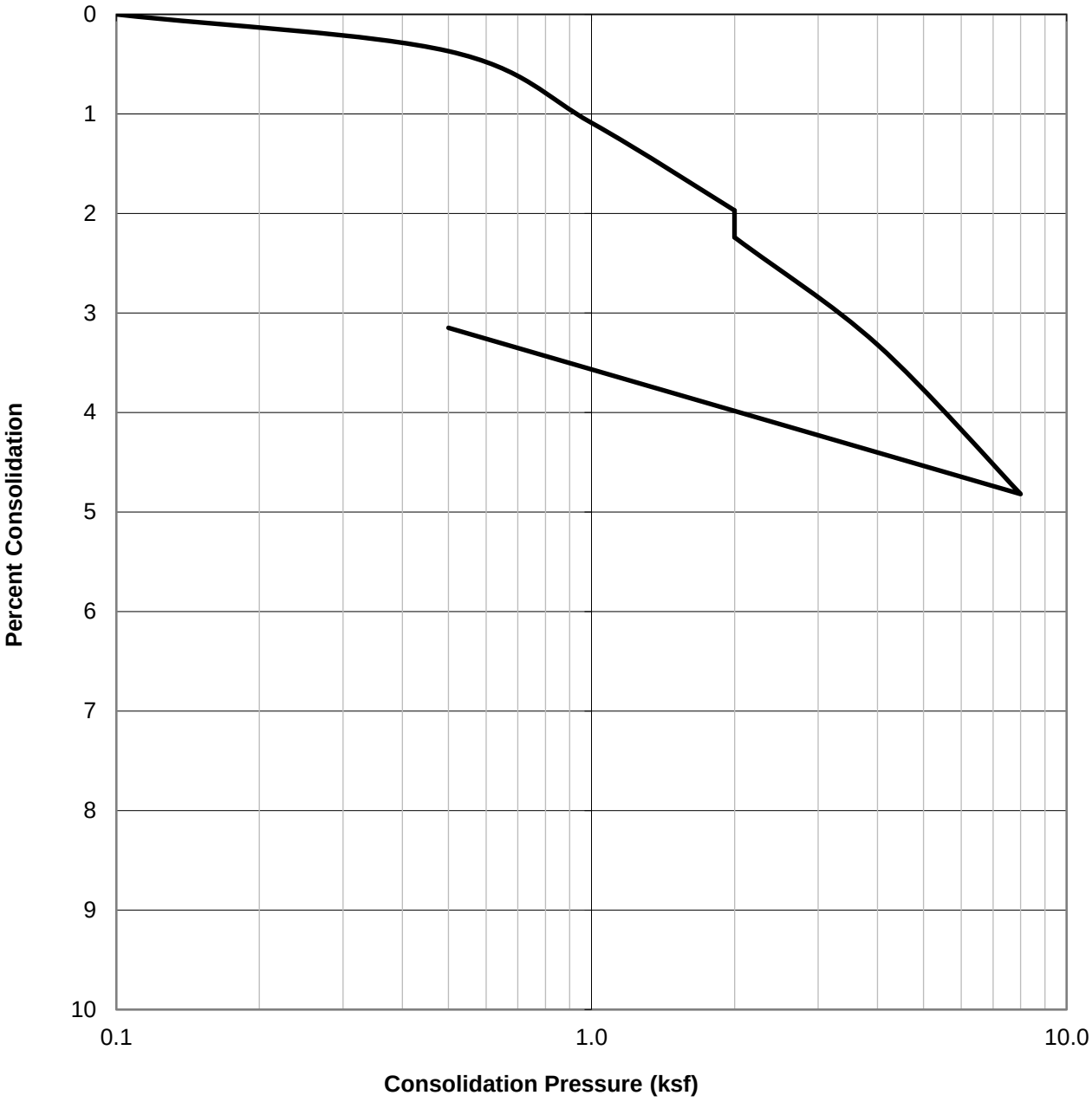
Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-17

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@10	Silty SAND (SM), dark olive gray	92.9	19.3	28.3

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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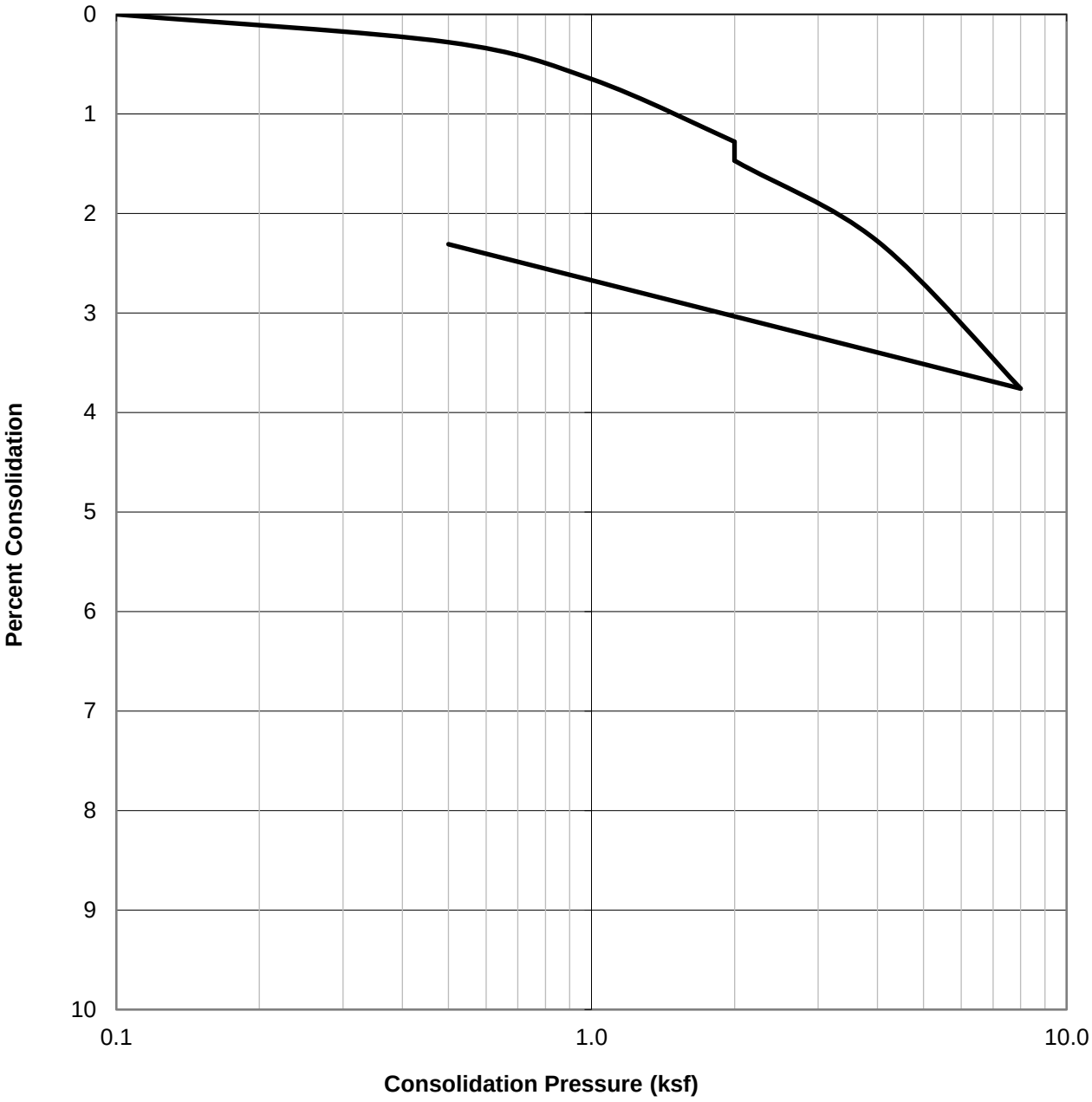
Nov 22 Figure B-18

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@2-7	Silty SAND (SM), dark brown	109.0	9.5	20.9

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

RAMONA DAIRY, LLC.
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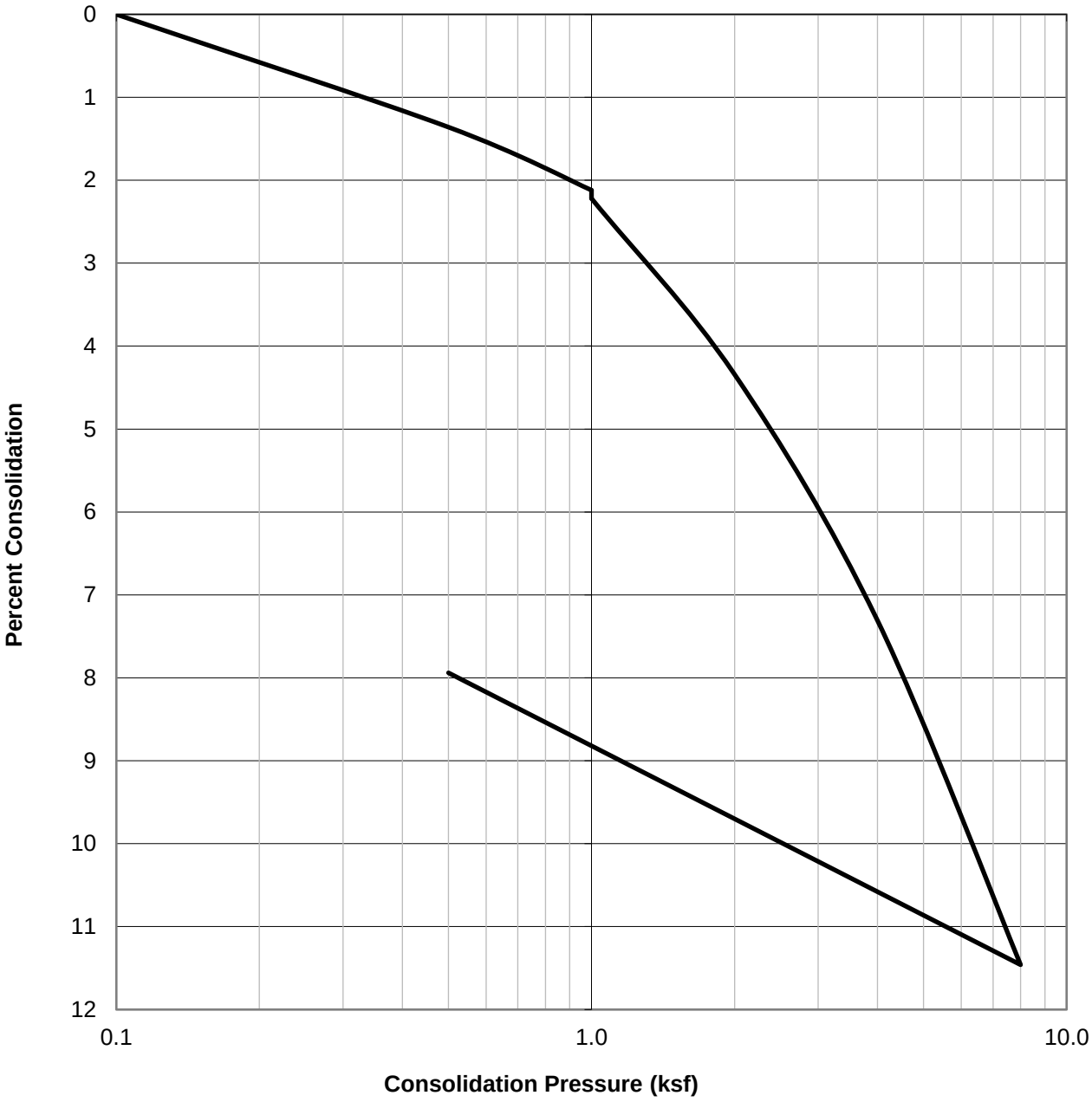
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-19

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@5	Silty SAND (SM), dark olive gray	81.1	38.3	36.9

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ASTM D-2435

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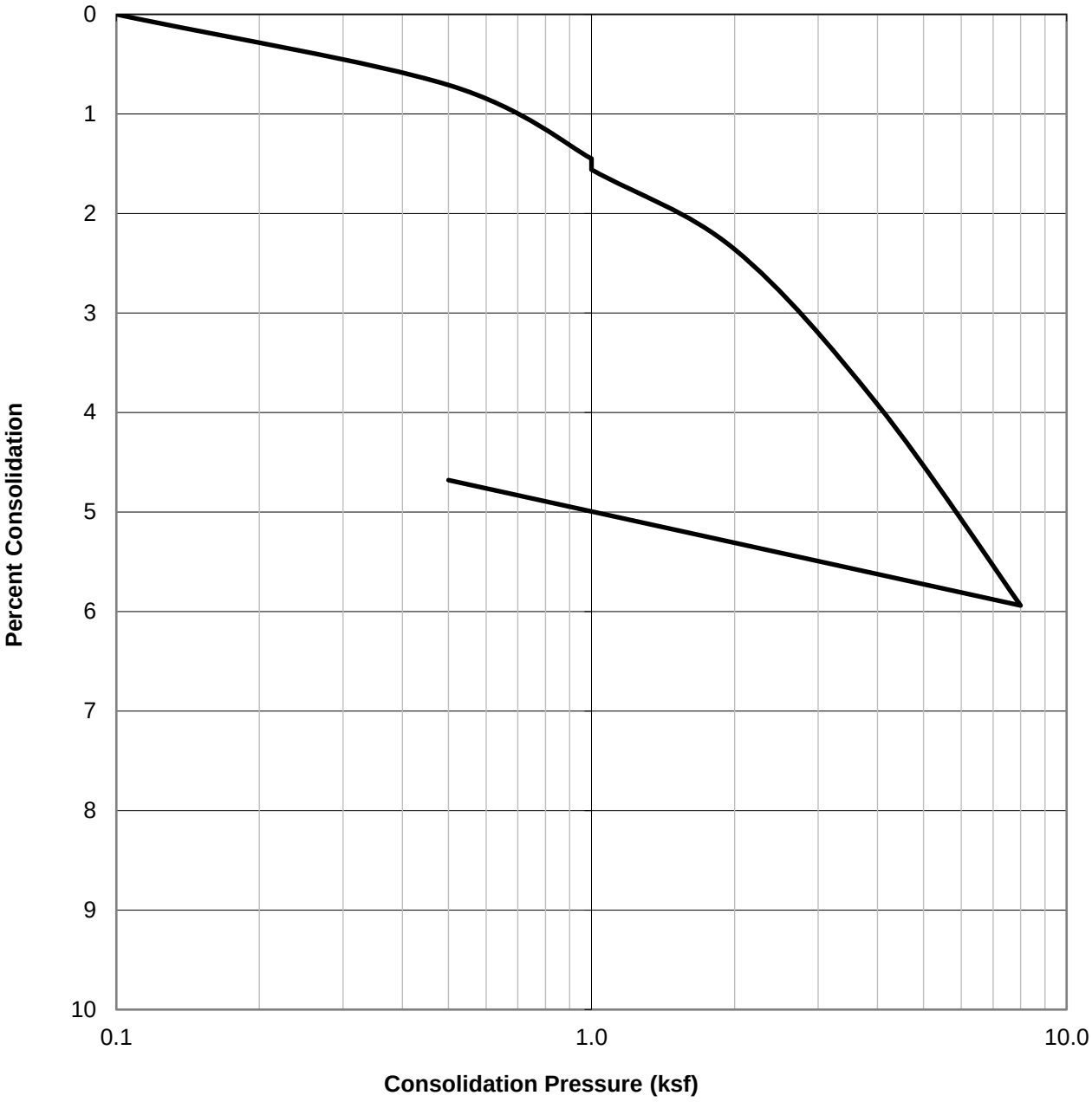
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-20

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@7.5	Silty SAND (SM), olive brown	102.9	19.1	21.2

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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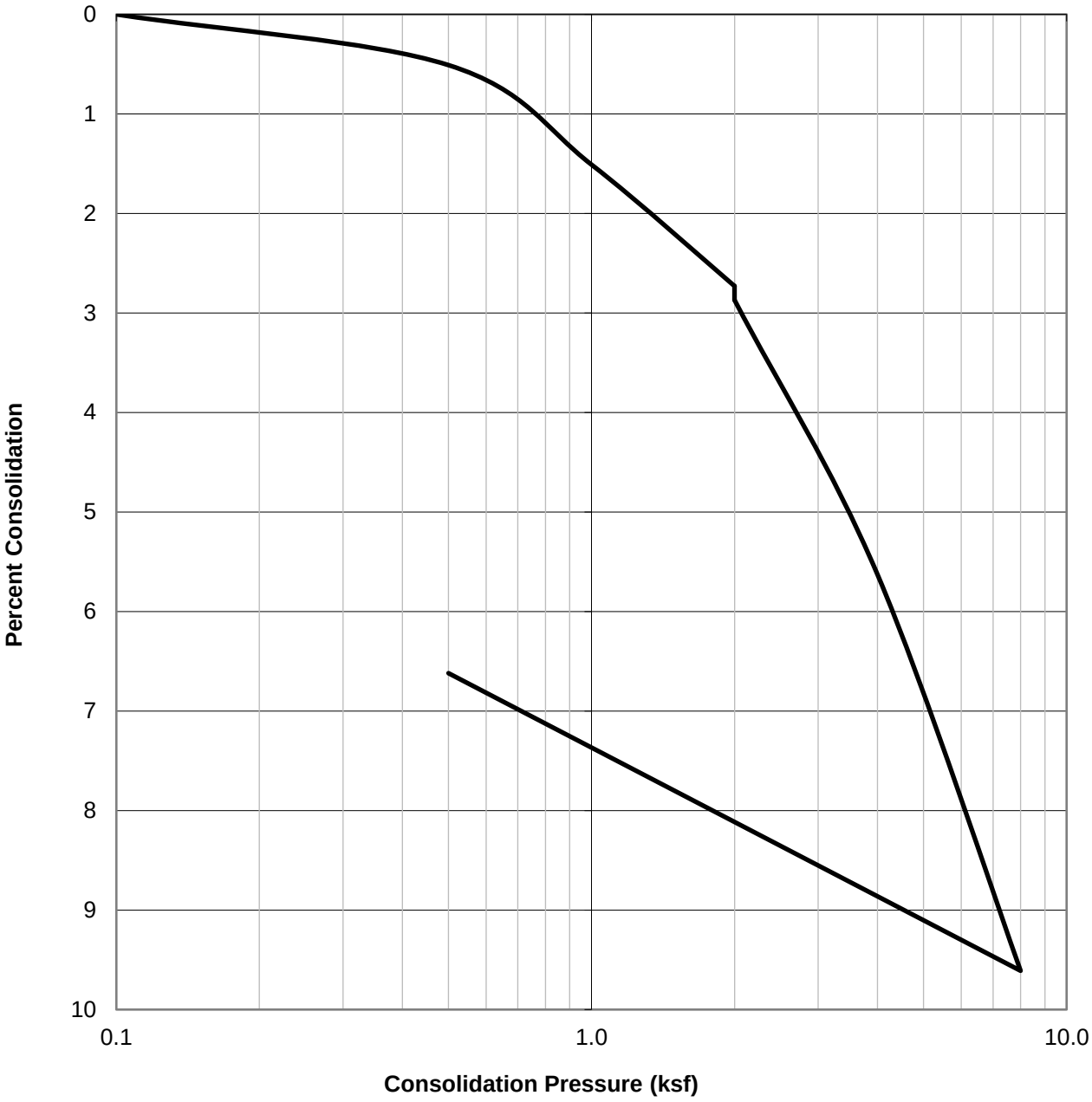
Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-21

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@10	CLAY (CL), olive brown	90.5	31.6	29.9

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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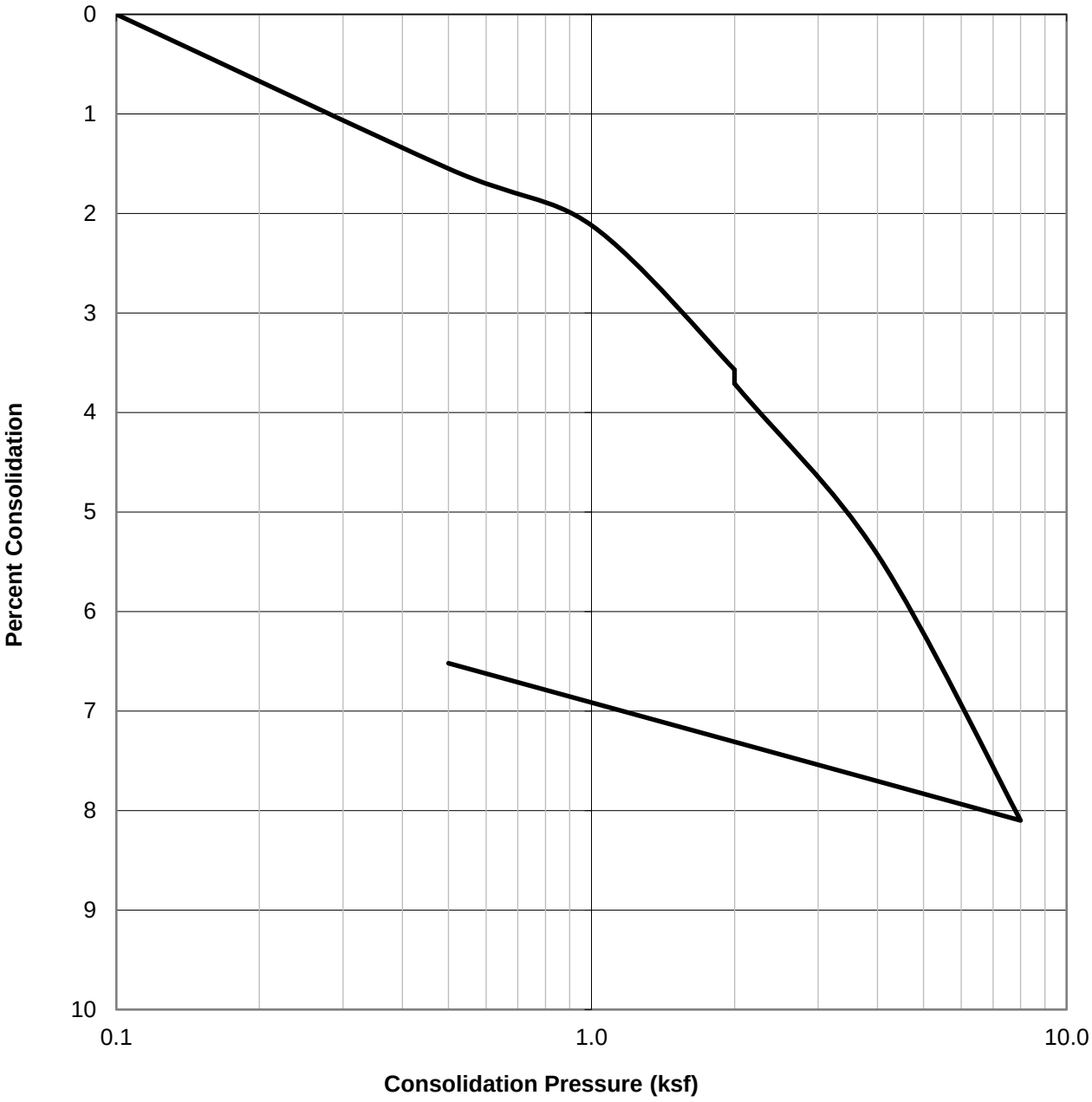
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-22

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@20	Silty SAND (SM), dark olive gray	103.6	21.5	20.6

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CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by:

Project No.: T2998-22-01

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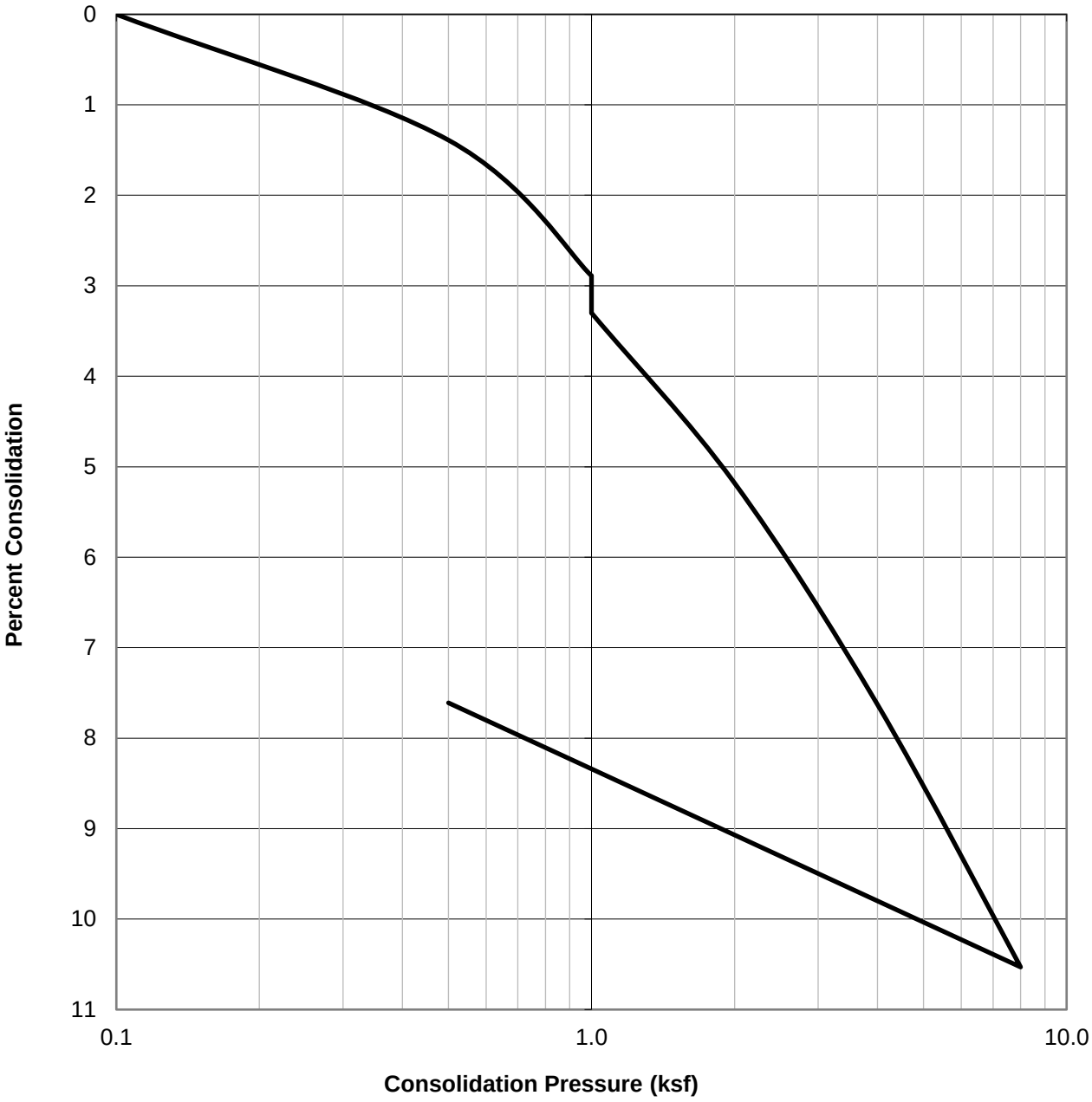
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-23

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@5	Silty SAND (SM), olive brown	79.9	24.1	37.4

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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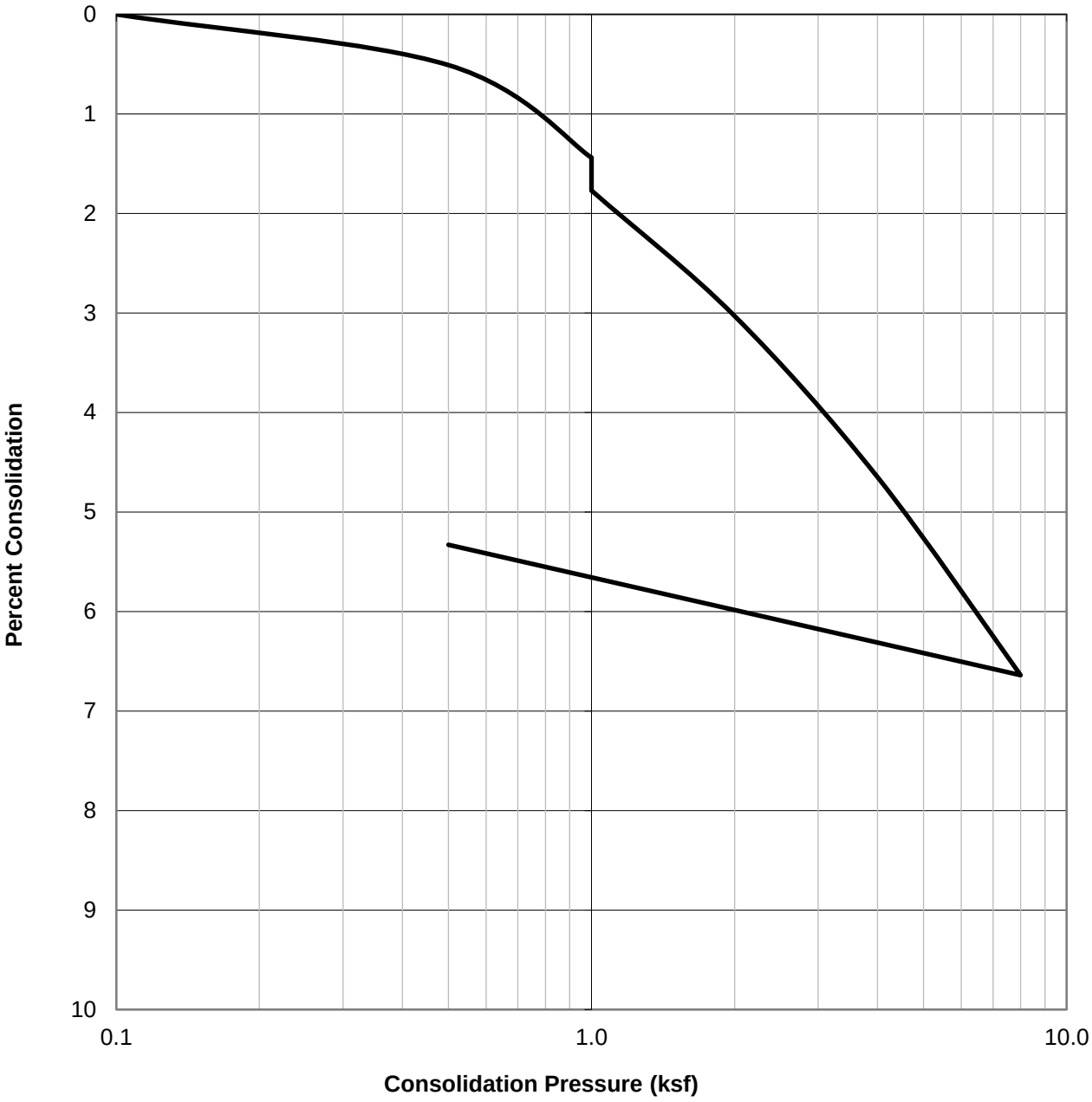
Nov 22

Figure B-24

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@7.5	Silty SAND (SM), dark brown	101.4	19.1	20.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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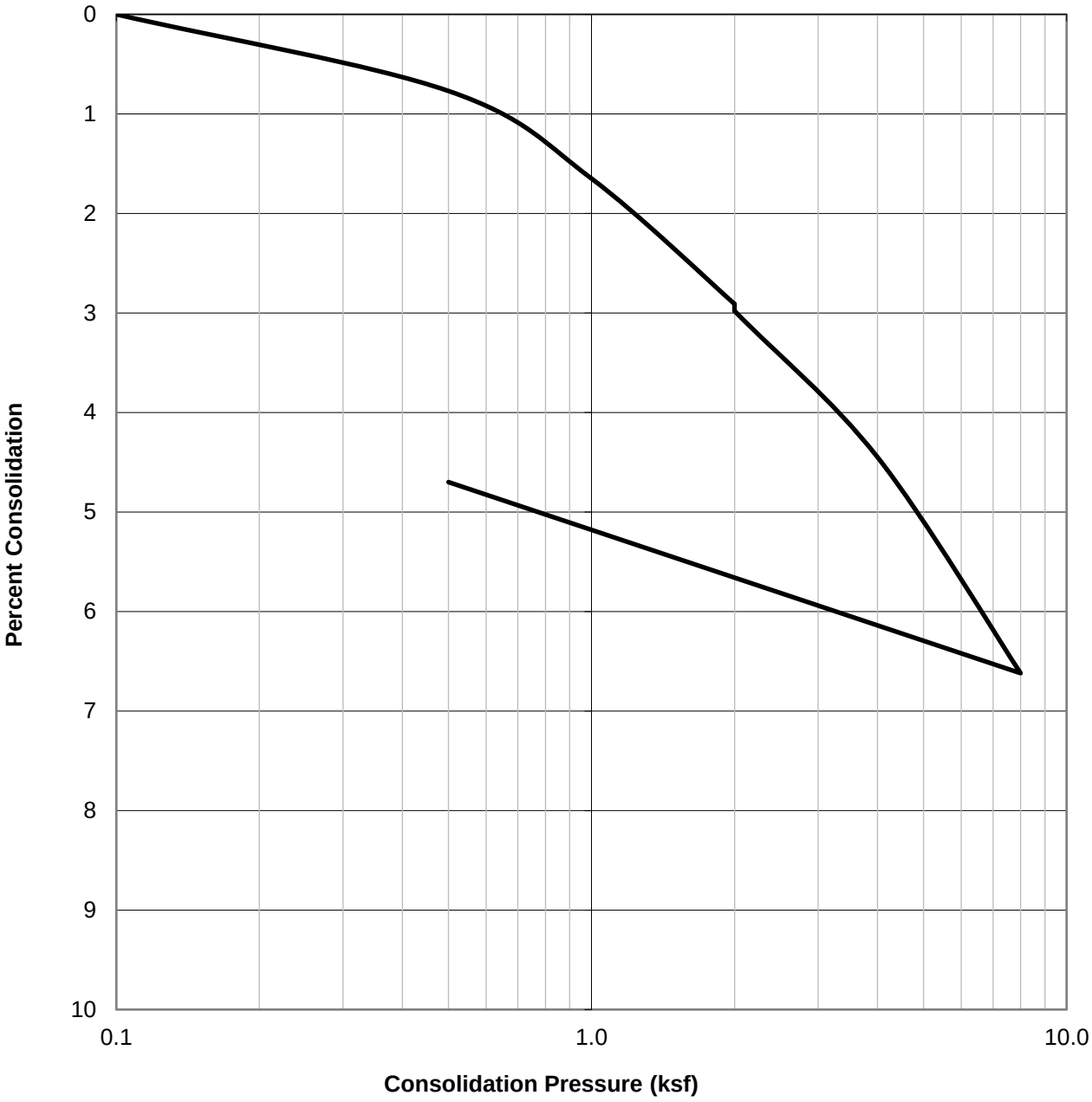
Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-25

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@10	Clayey SAND (SC), dark olive brown	92.1	22.3	27.5

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CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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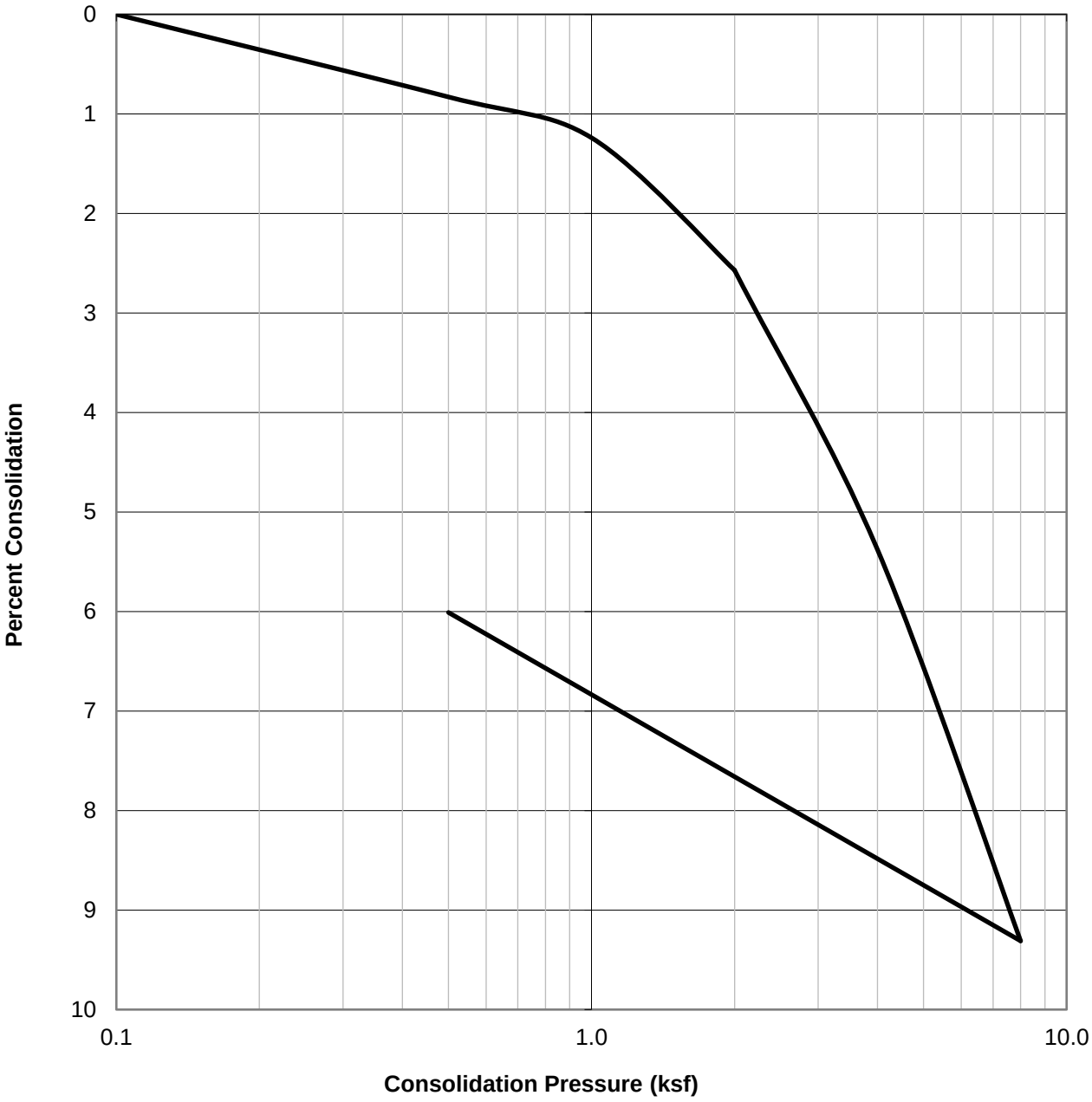
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-26

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@15	Lean CLAY (CL), olive gray	83.9	37.1	35.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

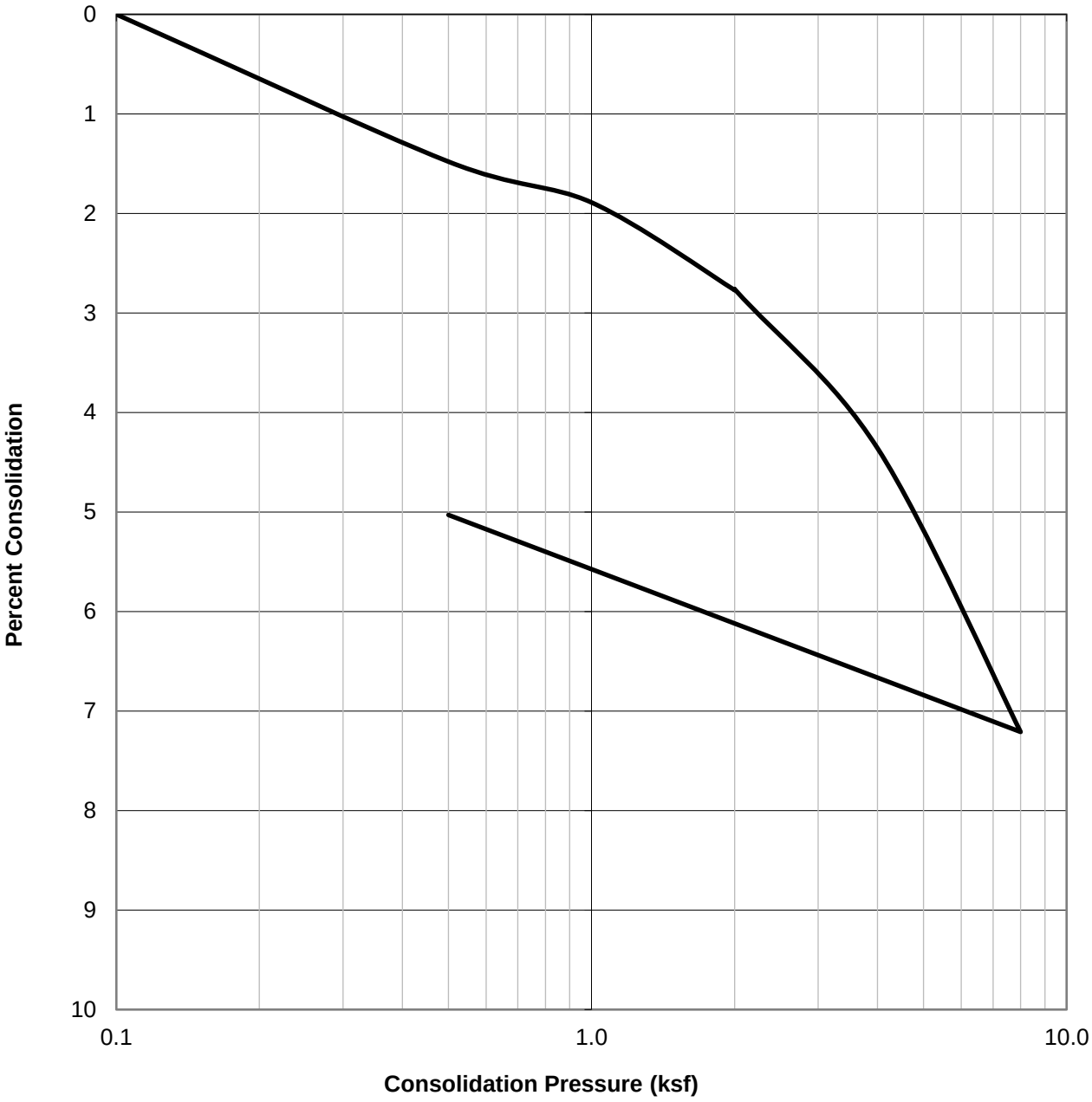
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-27

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@20	Lean CLAY (CL), dark brown	99.7	25.3	26.8

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CONSOLIDATION TEST RESULTS

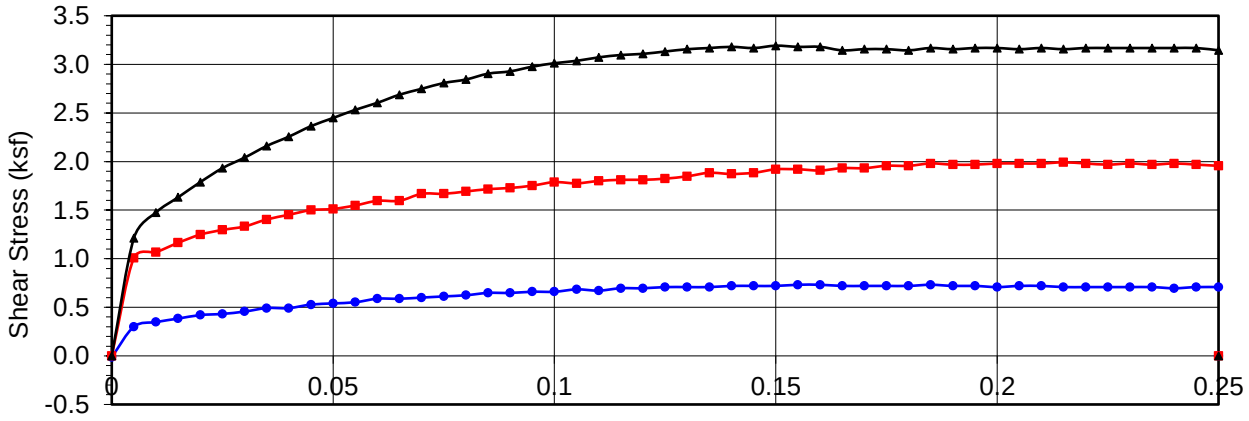
ASTM D-2435

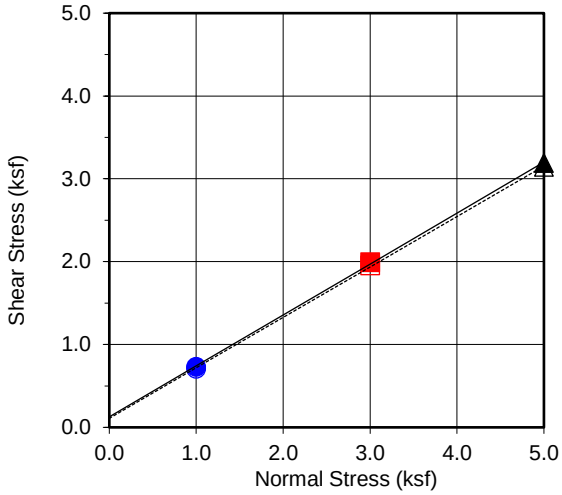
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-28





Boring No.	**B2**
Sample No.	**B2@2.5**
Depth (ft)	**2.5**
Sample Type:	Ring

Soil Identification:		
Silty SAND (SM), light brown		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	127	31.6
Ultimate	109	31.3

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.73	■ 1.99	▲ 3.19
Shear Stress @ End of Test (ksf)	○ 0.71	□ 1.96	△ 3.14
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	12.2	17.8	9.8
Initial Dry Density (pcf)	98.9	101.3	105.6
Initial Degree of Saturation (%)	46.8	72.2	44.5
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	24.2	14.2	21.9

GEOCON

DIRECT SHEAR TEST RESULTS

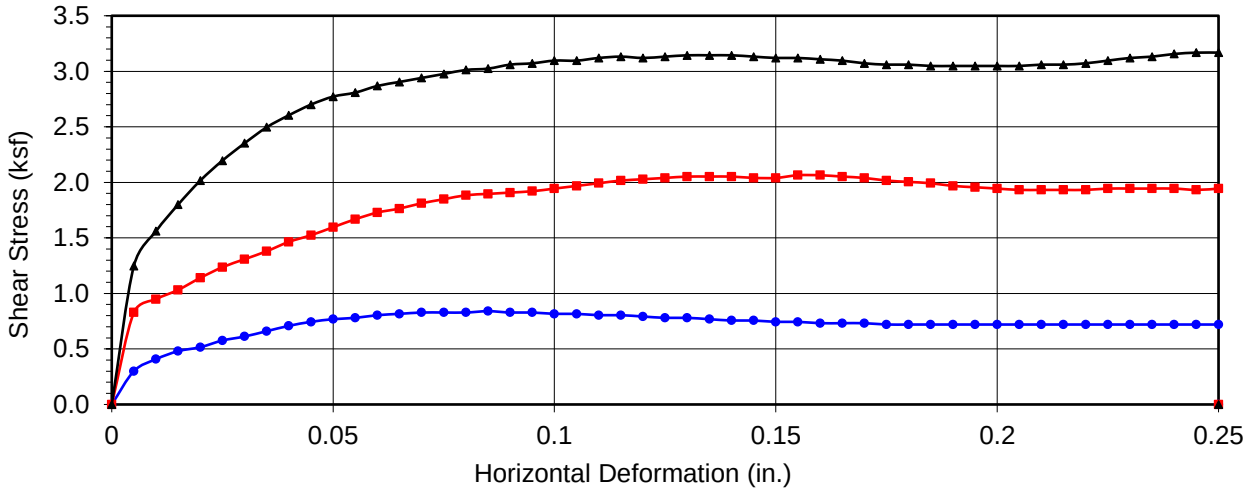
Consolidated Drained ASTM D-3080

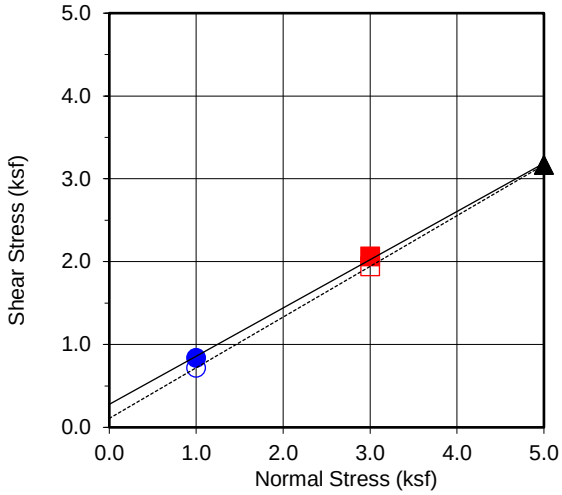
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-29





Boring No.	**B2**
Sample No.	**B2@2-7**
Depth (ft)	**2-7**
Sample Type:	Bulk

Soil Identification:

Silty SAND (SM), olive gray

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	278	30.2
Ultimate	108	31.5

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.84	■ 2.06	▲ 3.17
Shear Stress @ End of Test (ksf)	○ 0.72	□ 1.94	△ 3.17
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	10.1	10.1	10.1
Initial Dry Density (pcf)	110.1	110.1	110.1
Initial Degree of Saturation (%)	51.3	51.6	51.6
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	17.1	15.3	16.0

GEOCON

DIRECT SHEAR TEST RESULTS

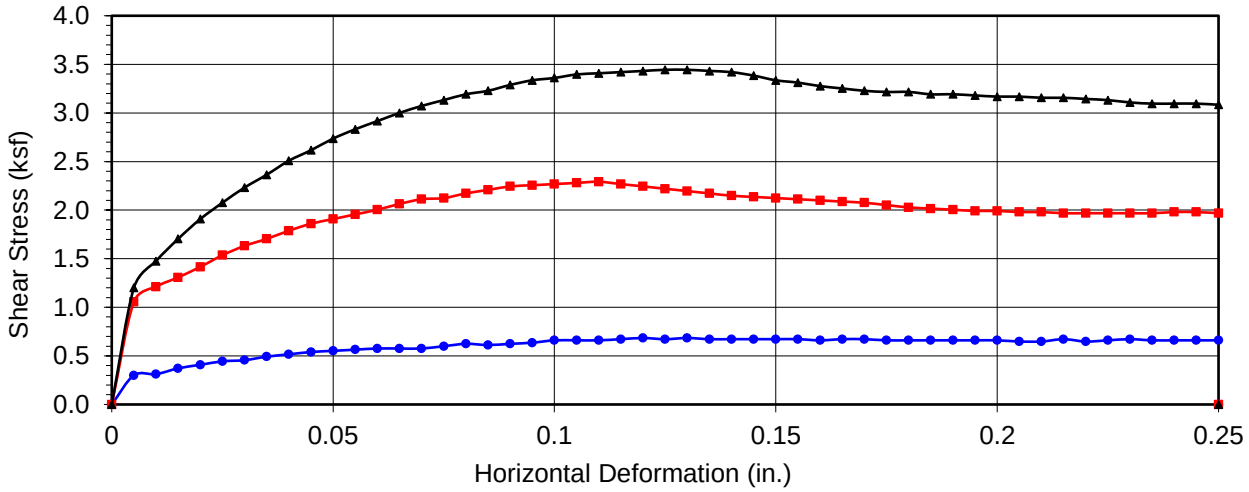
Consolidated Drained ASTM D-3080

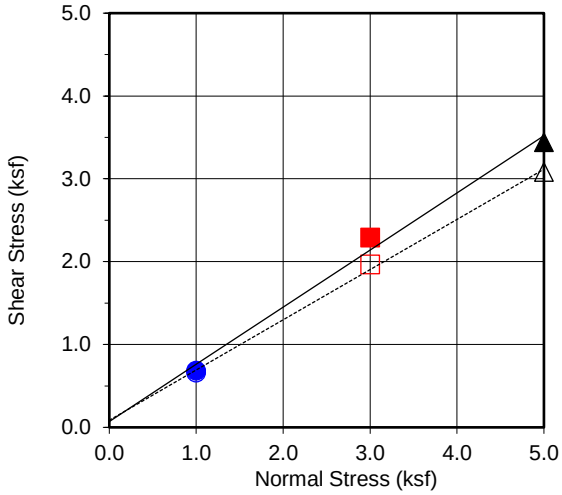
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-30





Boring No.	**B3**
Sample No.	**B3@2.5**
Depth (ft)	**2.5**
Sample Type:	ring

Soil Identification:		
Silty SAND (SM), brown		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	70	34.6
Ultimate	86	31.2

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.68	■ 2.29	▲ 3.44
Shear Stress @ End of Test (ksf)	○ 0.66	□ 1.97	△ 3.08
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	14.9	17.3	15.0
Initial Dry Density (pcf)	97.8	108.0	104.7
Initial Degree of Saturation (%)	55.8	83.1	66.2
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	21.8	19.6	16.8

GEOCON

DIRECT SHEAR TEST RESULTS

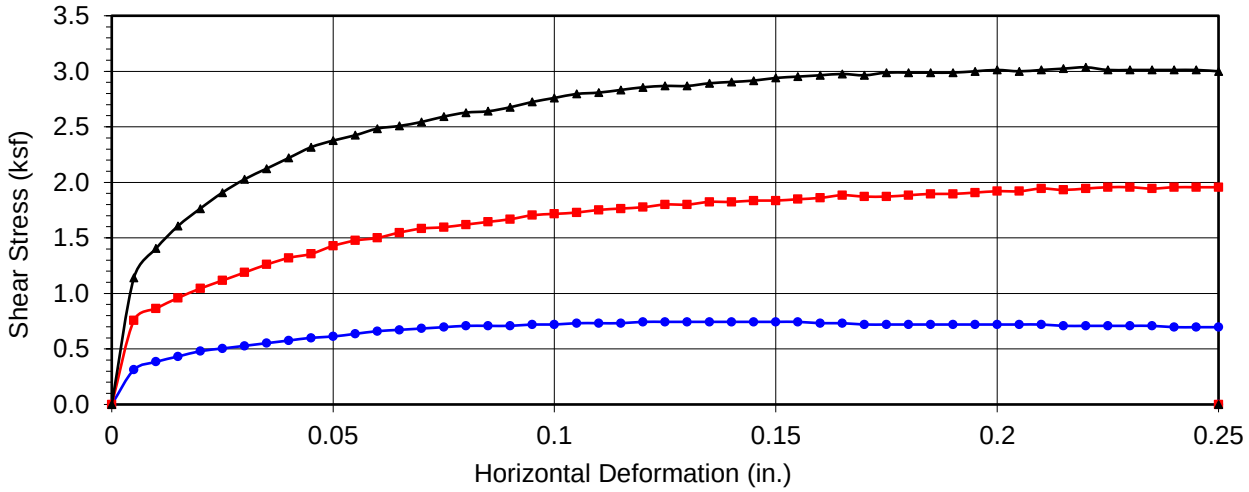
Consolidated Drained ASTM D-3080

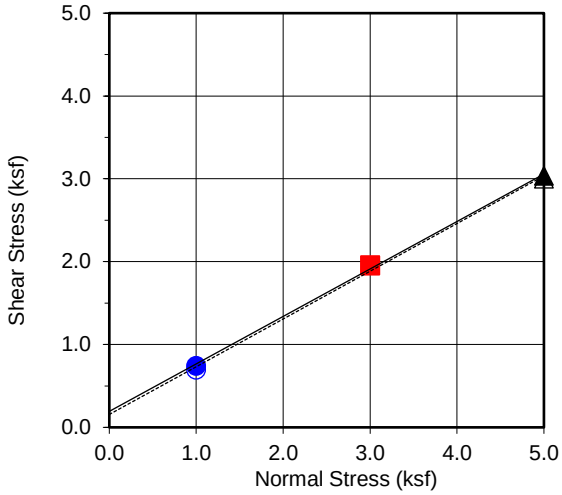
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-31





Boring No.	**B4**
Sample No.	**B4@2-7**
Depth (ft)	**2-7**
Sample Type:	Bulk

Soil Identification:

Silty SAND (SM), dark brown

Strength Parameters

	C (psf)	ϕ (°)
Peak	193	29.8
Ultimate	156	29.9

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.74	■ 1.96	▲ 3.04
Shear Stress @ End of Test (ksf)	○ 0.70	□ 1.96	△ 3.00
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	9.1	8.9	8.9
Initial Dry Density (pcf)	109.9	109.9	109.9
Initial Degree of Saturation (%)	45.9	45.1	45.0
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	16.4	15.2	14.9

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DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

Checked by:

Project No.: T2998-22-01

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SAN JACINTO, CALIFORNIA

Nov 22 Figure B-32

APPENDIX C

APPENDIX C

RECOMMENDED GRADING SPECIFICATIONS

FOR

SWC 7TH STREET AND CAWSTON AVENUE
SAN JACINTO, CALIFORNIA

PROJECT NO. T2998-22-01

RECOMMENDED GRADING SPECIFICATIONS

1. GENERAL

1.1 These Recommended Grading Specifications shall be used in conjunction with the Geotechnical Report for the project prepared by Geocon. The recommendations contained in the text of the Geotechnical Report are a part of the earthwork and grading specifications and shall supersede the provisions contained hereinafter in the case of conflict.

1.2 Prior to the commencement of grading, a geotechnical consultant (Consultant) shall be employed for the purpose of observing earthwork procedures and testing the fills for substantial conformance with the recommendations of the Geotechnical Report and these specifications. The Consultant should provide adequate testing and observation services so that they may assess whether, in their opinion, the work was performed in substantial conformance with these specifications. It shall be the responsibility of the Contractor to assist the Consultant and keep them apprised of work schedules and changes so that personnel may be scheduled accordingly.

1.3 It shall be the sole responsibility of the Contractor to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications and the approved grading plans. If, in the opinion of the Consultant, unsatisfactory conditions such as questionable soil materials, poor moisture condition, inadequate compaction, and/or adverse weather result in a quality of work not in conformance with these specifications, the Consultant will be empowered to reject the work and recommend to the Owner that grading be stopped until the unacceptable conditions are corrected.

2. DEFINITIONS

2.1 **Owner** shall refer to the owner of the property or the entity on whose behalf the grading work is being performed and who has contracted with the Contractor to have grading performed.

2.2 **Contractor** shall refer to the Contractor performing the site grading work.

2.3 **Civil Engineer** or **Engineer of Work** shall refer to the California licensed Civil Engineer or consulting firm responsible for preparation of the grading plans, surveying and verifying as-graded topography.

2.4 **Consultant** shall refer to the soil engineering and engineering geology consulting firm retained to provide geotechnical services for the project.

2.5 **Soil Engineer** shall refer to a California licensed Civil Engineer retained by the Owner, who is experienced in the practice of geotechnical engineering. The Soil Engineer shall be responsible for having qualified representatives on-site to observe and test the Contractor's work for conformance with these specifications.

2.6 **Engineering Geologist** shall refer to a California licensed Engineering Geologist retained by the Owner to provide geologic observations and recommendations during the site grading.

2.7 **Geotechnical Report** shall refer to a soil report (including all addenda) which may include a geologic reconnaissance or geologic investigation that was prepared specifically for the development of the project for which these Recommended Grading Specifications are intended to apply.

3. MATERIALS

3.1 Materials for compacted fill shall consist of any soil excavated from the cut areas or imported to the site that, in the opinion of the Consultant, is suitable for use in construction of fills. In general, fill materials can be classified as *soil* fills, *soil-rock* fills or *rock* fills, as defined below.

3.1.1 **Soil fills** are defined as fills containing no rocks or hard lumps greater than 12 inches in maximum dimension and containing at least 40 percent by weight of material smaller than ¾ inch in size.

3.1.2 **Soil-rock fills** are defined as fills containing no rocks or hard lumps larger than 4 feet in maximum dimension and containing a sufficient matrix of soil fill to allow for proper compaction of soil fill around the rock fragments or hard lumps as specified in Paragraph 6.2. **Oversize rock** is defined as material greater than 12 inches.

3.1.3 **Rock fills** are defined as fills containing no rocks or hard lumps larger than 3 feet in maximum dimension and containing little or no fines. Fines are defined as material smaller than ¾ inch in maximum dimension. The quantity of fines shall be less than approximately 20 percent of the rock fill quantity.

3.2 Material of a perishable, spongy, or otherwise unsuitable nature as determined by the Consultant shall not be used in fills.

3.3 Materials used for fill, either imported or on-site, shall not contain hazardous materials as defined by the California Code of Regulations, Title 22, Division 4, Chapter 30, Articles 9

and 10; 40CFR; and any other applicable local, state or federal laws. The Consultant shall not be responsible for the identification or analysis of the potential presence of hazardous materials. However, if observations, odors or soil discoloration cause Consultant to suspect the presence of hazardous materials, the Consultant may request from the Owner the termination of grading operations within the affected area. Prior to resuming grading operations, the Owner shall provide a written report to the Consultant indicating that the suspected materials are not hazardous as defined by applicable laws and regulations.

3.4 The outer 15 feet of *soil-rock* fill slopes, measured horizontally, should be composed of properly compacted *soil* fill materials approved by the Consultant. *Rock* fill may extend to the slope face, provided that the slope is not steeper than 2:1 (horizontal:vertical) and a soil layer no thicker than 12 inches is track-walked onto the face for landscaping purposes. This procedure may be utilized provided it is acceptable to the governing agency, Owner and Consultant.

3.5 Samples of soil materials to be used for fill should be tested in the laboratory by the Consultant to determine the maximum density, optimum moisture content, and, where appropriate, shear strength, expansion, and gradation characteristics of the soil.

3.6 During grading, soil or groundwater conditions other than those identified in the Geotechnical Report may be encountered by the Contractor. The Consultant shall be notified immediately to evaluate the significance of the unanticipated condition

4. CLEARING AND PREPARING AREAS TO BE FILLED

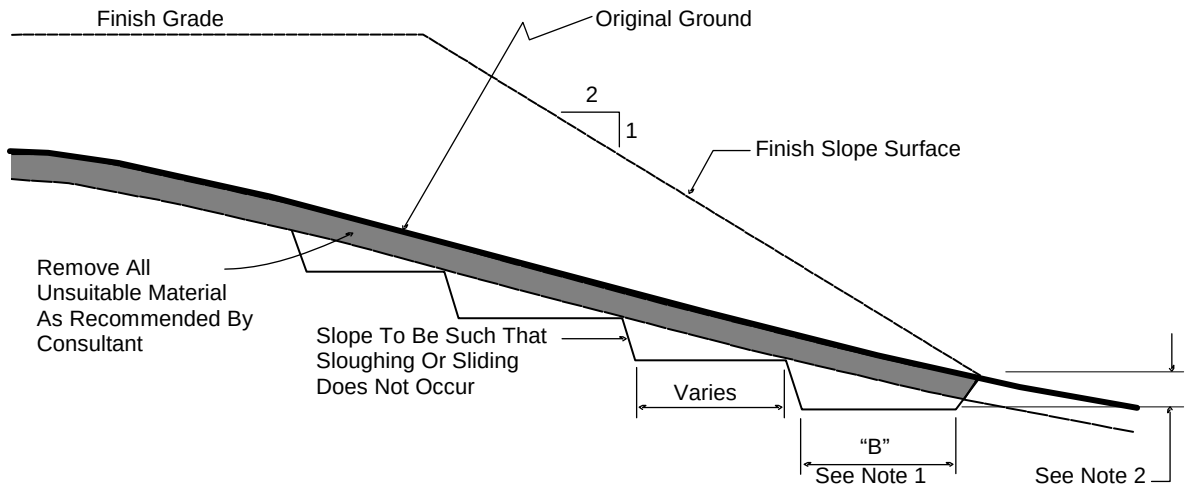
4.1 Areas to be excavated and filled shall be cleared and grubbed. Clearing shall consist of complete removal above the ground surface of trees, stumps, brush, vegetation, man-made structures, and similar debris. Grubbing shall consist of removal of stumps, roots, buried logs and other unsuitable material and shall be performed in areas to be graded. Roots and other projections exceeding 1½ inches in diameter shall be removed to a depth of 3 feet below the surface of the ground. Borrow areas shall be grubbed to the extent necessary to provide suitable fill materials.

4.2 Asphalt pavement material removed during clearing operations should be properly disposed at an approved off-site facility or in an acceptable area of the project evaluated by Geocon and the property owner. Concrete fragments that are free of reinforcing steel may be placed in fills, provided they are placed in accordance with Section 6.2 or 6.3 of this document.

4.3 After clearing and grubbing of organic matter and other unsuitable material, loose or porous soils shall be removed to the depth recommended in the Geotechnical Report. The depth of removal and compaction should be observed and approved by a representative of the Consultant. The exposed surface shall then be plowed or scarified to a minimum depth of 6 inches and until the surface is free from uneven features that would tend to prevent uniform compaction by the equipment to be used.

4.4 Where the slope ratio of the original ground is steeper than 5:1 (horizontal:vertical), or where recommended by the Consultant, the original ground should be benched in accordance with the following illustration.

TYPICAL BENCHING DETAIL



No Scale

DETAIL NOTES: (1) Key width "B" should be a minimum of 10 feet, or sufficiently wide to permit complete coverage with the compaction equipment used. The base of the key should be graded horizontal, or inclined slightly into the natural slope.

(2) The outside of the key should be below the topsoil or unsuitable surficial material and at least 2 feet into dense formational material. Where hard rock is exposed in the bottom of the key, the depth and configuration of the key may be modified as approved by the Consultant.

4.5 After areas to receive fill have been cleared and scarified, the surface should be moisture conditioned to achieve the proper moisture content, and compacted as recommended in Section 6 of these specifications.

5. COMPACTION EQUIPMENT

5.1 Compaction of *soil* or *soil-rock* fill shall be accomplished by sheepsfoot or segmented-steel wheeled rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers, or other types of acceptable compaction equipment. Equipment shall be of such a design that it will be capable of compacting the *soil* or *soil-rock* fill to the specified relative compaction at the specified moisture content.

5.2 Compaction of *rock* fills shall be performed in accordance with Section 6.3.

6. PLACING, SPREADING AND COMPACTION OF FILL MATERIAL

6.1 *Soil* fill, as defined in Paragraph 3.1.1, shall be placed by the Contractor in accordance with the following recommendations:

6.1.1 *Soil* fill shall be placed by the Contractor in layers that, when compacted, should generally not exceed 8 inches. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to obtain uniformity of material and moisture in each layer. The entire fill shall be constructed as a unit in nearly level lifts. Rock materials greater than 12 inches in maximum dimension shall be placed in accordance with Section 6.2 or 6.3 of these specifications.

6.1.2 In general, the *soil* fill shall be compacted at a moisture content at or above the optimum moisture content as determined by ASTM D 1557.

6.1.3 When the moisture content of *soil* fill is below that specified by the Consultant, water shall be added by the Contractor until the moisture content is in the range specified.

6.1.4 When the moisture content of the *soil* fill is above the range specified by the Consultant or too wet to achieve proper compaction, the *soil* fill shall be aerated by the Contractor by blading/mixing, or other satisfactory methods until the moisture content is within the range specified.

6.1.5 After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted by the Contractor to a relative compaction of at least 90 percent. Relative compaction is defined as the ratio (expressed in percent) of the in-place dry density of the compacted fill to the maximum laboratory dry density as determined in accordance with ASTM D 1557. Compaction shall be continuous over the entire area, and compaction equipment shall make sufficient passes so that the specified minimum relative compaction has been achieved throughout the entire fill.

6.1.6 Where practical, soils having an Expansion Index greater than 50 should be placed at least 3 feet below finish pad grade and should be compacted at a moisture content generally 2 to 4 percent greater than the optimum moisture content for the material.

6.1.7 Properly compacted *soil* fill shall extend to the design surface of fill slopes. To achieve proper compaction, it is recommended that fill slopes be over-built by at least 3 feet and then cut to the design grade. This procedure is considered preferable to track-walking of slopes, as described in the following paragraph.

6.1.8 As an alternative to over-building of slopes, slope faces may be back-rolled with a heavy-duty loaded sheepsfoot or vibratory roller at maximum 4-foot fill height intervals. Upon completion, slopes should then be track-walked with a D-8 dozer or similar equipment, such that a dozer track covers all slope surfaces at least twice.

6.2 *Soil-rock* fill, as defined in Paragraph 3.1.2, shall be placed by the Contractor in accordance with the following recommendations:

6.2.1 Rocks larger than 12 inches but less than 4 feet in maximum dimension may be incorporated into the compacted *soil* fill, but shall be limited to the area measured 15 feet minimum horizontally from the slope face and 5 feet below finish grade or 3 feet below the deepest utility, whichever is deeper.

6.2.2 Rocks or rock fragments up to 4 feet in maximum dimension may either be individually placed or placed in windrows. Under certain conditions, rocks or rock fragments up to 10 feet in maximum dimension may be placed using similar methods. The acceptability of placing rock materials greater than 4 feet in maximum dimension shall be evaluated during grading as specific cases arise and shall be approved by the Consultant prior to placement.

6.2.3 For individual placement, sufficient space shall be provided between rocks to allow for passage of compaction equipment.

6.2.4 For windrow placement, the rocks should be placed in trenches excavated in properly compacted *soil* fill. Trenches should be approximately 5 feet wide and 4 feet deep in maximum dimension. The voids around and beneath rocks should be filled with approved granular soil having a Sand Equivalent of 30 or greater and should be compacted by flooding. Windrows may also be placed utilizing an "open-face" method in lieu of the trench procedure, however, this method should first be approved by the Consultant.

6.2.5 Windrows should generally be parallel to each other and may be placed either parallel to or perpendicular to the face of the slope depending on the site geometry. The minimum horizontal spacing for windrows shall be 12 feet center-to-center with a 5-foot stagger or offset from lower courses to next overlying course. The minimum vertical spacing between windrow courses shall be 2 feet from the top of a lower windrow to the bottom of the next higher windrow.

6.2.6 Rock placement, fill placement and flooding of approved granular soil in the windrows should be continuously observed by the Consultant.

6.3 *Rock* fills, as defined in Section 3.1.3, shall be placed by the Contractor in accordance with the following recommendations:

6.3.1 The base of the *rock* fill shall be placed on a sloping surface (minimum slope of 2 percent). The surface shall slope toward suitable subdrainage outlet facilities. The *rock* fills shall be provided with subdrains during construction so that a hydrostatic pressure buildup does not develop. The subdrains shall be permanently connected to controlled drainage facilities to control post-construction infiltration of water.

6.3.2 *Rock* fills shall be placed in lifts not exceeding 3 feet. Placement shall be by rock trucks traversing previously placed lifts and dumping at the edge of the currently placed lift. Spreading of the *rock* fill shall be by dozer to facilitate *seating* of the rock. The *rock* fill shall be watered heavily during placement. Watering shall consist of water trucks traversing in front of the current rock lift face and spraying water continuously during rock placement. Compaction equipment with compactive energy comparable to or greater than that of a 20-ton steel vibratory roller or other compaction equipment providing suitable energy to achieve the required compaction or deflection as recommended in Paragraph 6.3.3 shall be utilized. The number of passes to be made should be determined as described in Paragraph 6.3.3. Once a *rock* fill lift has been covered with *soil* fill, no additional *rock* fill lifts will be permitted over the *soil* fill.

6.3.3 Plate bearing tests, in accordance with ASTM D 1196, may be performed in both the compacted *soil* fill and in the *rock* fill to aid in determining the required minimum number of passes of the compaction equipment. If performed, a minimum of three plate bearing tests should be performed in the properly compacted *soil* fill (minimum relative compaction of 90 percent). Plate bearing tests shall then be performed on areas of *rock* fill having two passes, four passes and six passes of the compaction equipment, respectively. The number of passes required for the *rock* fill shall be determined by comparing the results of the plate bearing tests for the *soil* fill and the *rock* fill and by evaluating the deflection

variation with number of passes. The required number of passes of the compaction equipment will be performed as necessary until the plate bearing deflections are equal to or less than that determined for the properly compacted *soil* fill. In no case will the required number of passes be less than two.

6.3.4 A representative of the Consultant should be present during *rock* fill operations to observe that the minimum number of "passes" have been obtained, that water is being properly applied and that specified procedures are being followed. The actual number of plate bearing tests will be determined by the Consultant during grading.

6.3.5 Test pits shall be excavated by the Contractor so that the Consultant can state that, in their opinion, sufficient water is present and that voids between large rocks are properly filled with smaller rock material. In-place density testing will not be required in the *rock* fills.

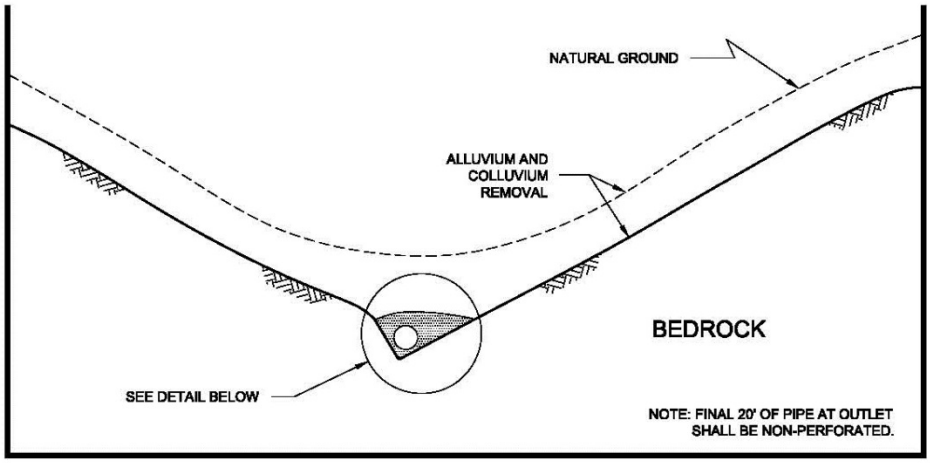
6.3.6 To reduce the potential for "piping" of fines into the *rock* fill from overlying *soil* fill material, a 2-foot layer of graded filter material shall be placed above the uppermost lift of *rock* fill. The need to place graded filter material below the *rock* should be determined by the Consultant prior to commencing grading. The gradation of the graded filter material will be determined at the time the *rock* fill is being excavated. Materials typical of the *rock* fill should be submitted to the Consultant in a timely manner, to allow design of the graded filter prior to the commencement of *rock* fill placement.

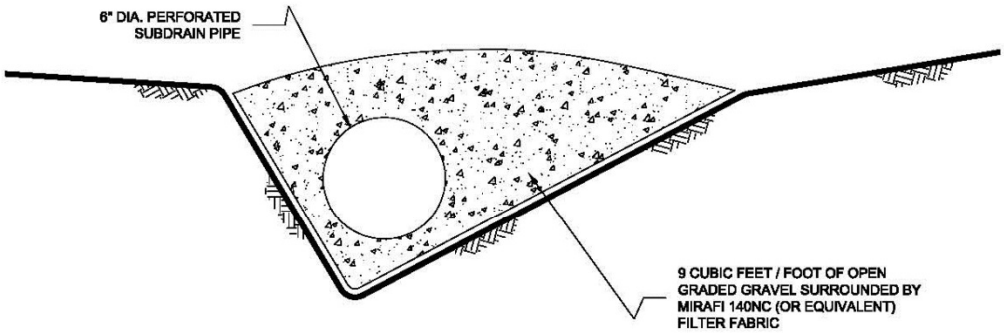
6.3.7 *Rock* fill placement should be continuously observed during placement by the Consultant.

7. SUBDRAINS

7.1 The geologic units on the site may have permeability characteristics and/or fracture systems that could be susceptible under certain conditions to seepage. The use of canyon subdrains may be necessary to mitigate the potential for adverse impacts associated with seepage conditions. Canyon subdrains with lengths in excess of 500 feet or extensions of existing offsite subdrains should use 8-inch-diameter pipes. Canyon subdrains less than 500 feet in length should use 6-inch-diameter pipes.

TYPICAL CANYON DRAIN DETAIL





NOTES:

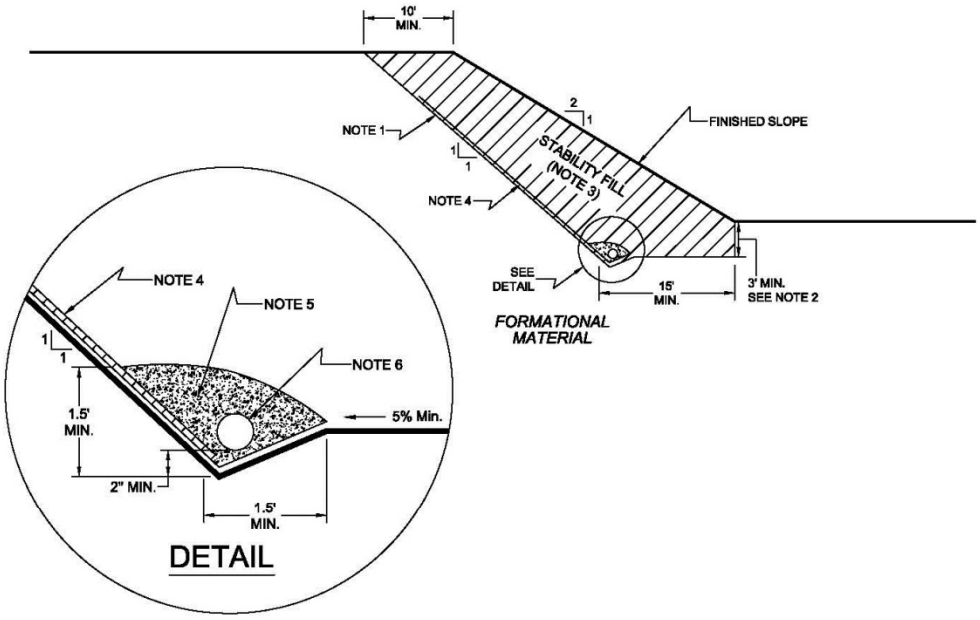
1.....6-INCH DIAMETER, SCHEDULE 80 PVC PERFORATED PIPE FOR FILLS
IN EXCESS OF 100-FEET IN DEPTH OR A PIPE LENGTH OF LONGER THAN 500 FEET.

2.....6-INCH DIAMETER, SCHEDULE 40 PVC PERFORATED PIPE FOR FILLS
LESS THAN 100-FEET IN DEPTH OR A PIPE LENGTH SHORTER THAN 500 FEET.

NO SCALE

7.2 Slope drains within stability fill keyways should use 4-inch-diameter (or lager) pipes.

TYPICAL STABILITY FILL DETAIL



NOTES:

1.....EXCAVATE BACKCUT AT 1:1 INCLINATION (UNLESS OTHERWISE NOTED).

2.....BASE OF STABILITY FILL TO BE 3 FEET INTO FORMATIONAL MATERIAL, SLOPING A MINIMUM 5% INTO SLOPE.

3.....STABILITY FILL TO BE COMPOSED OF PROPERLY COMPACTED GRANULAR SOIL.

4.....CHIMNEY DRAINS TO BE APPROVED PREFABRICATED CHIMNEY DRAIN PANELS (MIRADRAIN G200N OR EQUIVALENT) SPACED APPROXIMATELY 20 FEET CENTER TO CENTER AND 4 FEET WIDE. CLOSER SPACING MAY BE REQUIRED IF SEEPAGE IS ENCOUNTERED.

5.....FILTER MATERIAL TO BE 3/4-INCH, OPEN-GRADED CRUSHED ROCK ENCLOSED IN APPROVED FILTER FABRIC (MIRAFI 140NC).

6.....COLLECTOR PIPE TO BE 4-INCH MINIMUM DIAMETER, PERFORATED, THICK-WALLED PVC SCHEDULE 40 OR EQUIVALENT, AND SLOPED TO DRAIN AT 1 PERCENT MINIMUM TO APPROVED OUTLET.

NO SCALE

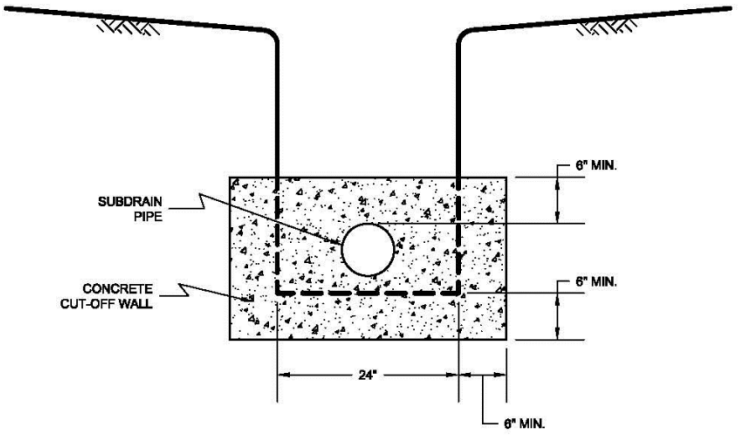
7.3 The actual subdrain locations will be evaluated in the field during the remedial grading operations. Additional drains may be necessary depending on the conditions observed and the requirements of the local regulatory agencies. Appropriate subdrain outlets should be evaluated prior to finalizing 40-scale grading plans.

7.4 *Rock* fill or *soil-rock* fill areas may require subdrains along their down-slope perimeters to mitigate the potential for buildup of water from construction or landscape irrigation. The subdrains should be at least 6-inch-diameter pipes encapsulated in gravel and filter fabric. *Rock* fill drains should be constructed using the same requirements as canyon subdrains.

7.5 Prior to outletting, the final 20-foot segment of a subdrain that will not be extended during future development should consist of non-perforated drainpipe. At the non-perforated/ perforated interface, a seepage cutoff wall should be constructed on the downslope side of the pipe.

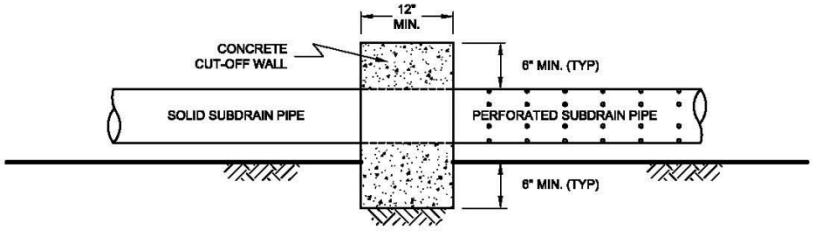
TYPICAL CUT OFF WALL DETAIL

FRONT VIEW



NO SCALE

SIDE VIEW

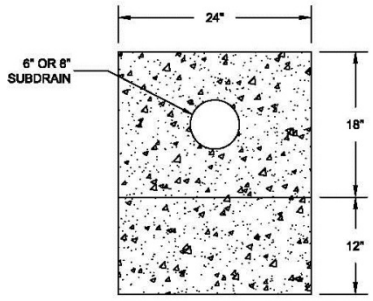


NO SCALE

7.6 Subdrains that discharge into a natural drainage course or open space area should be provided with a permanent headwall structure.

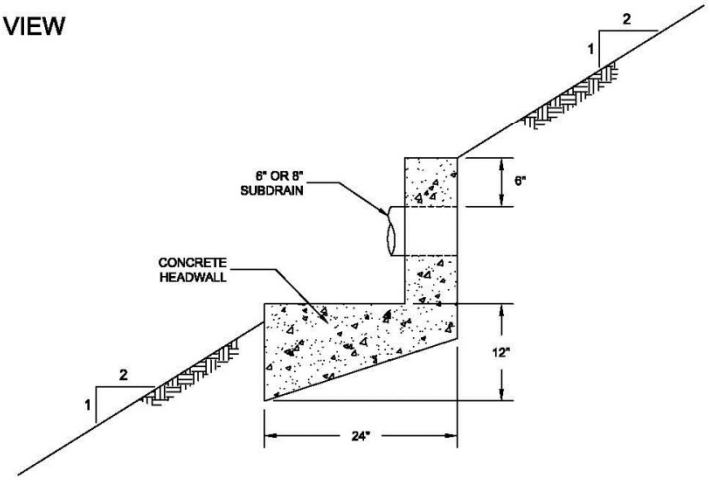
TYPICAL HEADWALL DETAIL

FRONT VIEW



NO SCALE

SIDE VIEW



NOTE: HEADWALL SHOULD OUTLET AT TOE OF FILL SLOPE
OR INTO CONTROLLED SURFACE DRAINAGE

NO SCALE

7.7 The final grading plans should show the location of the proposed subdrains. After completion of remedial excavations and subdrain installation, the project civil engineer should survey the drain locations and prepare an “as-built” map showing the drain locations. The final outlet and connection locations should be determined during grading operations. Subdrains that will be extended on adjacent projects after grading can be placed on formational material and a vertical riser should be placed at the end of the subdrain. The grading contractor should consider videoing the subdrains shortly after burial to check proper installation and functionality. The contractor is responsible for the performance of the drains.

8. OBSERVATION AND TESTING

8.1 The Consultant shall be the Owner's representative to observe and perform tests during clearing, grubbing, filling, and compaction operations. In general, no more than 2 feet in vertical elevation of *soil* or *soil-rock* fill should be placed without at least one field density test being performed within that interval. In addition, a minimum of one field density test should be performed for every 2,000 cubic yards of *soil* or *soil-rock* fill placed and compacted.

8.2 The Consultant should perform a sufficient distribution of field density tests of the compacted *soil* or *soil-rock* fill to provide a basis for expressing an opinion whether the fill material is compacted as specified. Density tests shall be performed in the compacted materials below any disturbed surface. When these tests indicate that the density of any layer of fill or portion thereof is below that specified, the particular layer or areas represented by the test shall be reworked until the specified density has been achieved.

8.3 During placement of *rock* fill, the Consultant should observe that the minimum number of passes have been obtained per the criteria discussed in Section 6.3.3. The Consultant should request the excavation of observation pits and may perform plate bearing tests on the placed *rock* fills. The observation pits will be excavated to provide a basis for expressing an opinion as to whether the *rock* fill is properly seated and sufficient moisture has been applied to the material. When observations indicate that a layer of *rock* fill or any portion thereof is below that specified, the affected layer or area shall be reworked until the *rock* fill has been adequately seated and sufficient moisture applied.

8.4 A settlement monitoring program designed by the Consultant may be conducted in areas of *rock* fill placement. The specific design of the monitoring program shall be as recommended in the Conclusions and Recommendations section of the project Geotechnical Report or in the final report of testing and observation services performed during grading.

8.5 We should observe the placement of subdrains, to check that the drainage devices have been placed and constructed in substantial conformance with project specifications.

8.6 Testing procedures shall conform to the following Standards as appropriate:

8.6.1 Soil and Soil-Rock Fills:

8.6.1.1 Field Density Test, ASTM D 1556, *Density of Soil In-Place By the Sand-Cone Method.*

8.6.1.2 Field Density Test, Nuclear Method, ASTM D 6938, *Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth).*

8.6.1.3 Laboratory Compaction Test, ASTM D 1557, *Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-Pound Hammer and 18-Inch Drop*.

8.6.1.4. Expansion Index Test, ASTM D 4829, *Expansion Index Test*.

9. PROTECTION OF WORK

9.1 During construction, the Contractor shall properly grade all excavated surfaces to provide positive drainage and prevent ponding of water. Drainage of surface water shall be controlled to avoid damage to adjoining properties or to finished work on the site. The Contractor shall take remedial measures to prevent erosion of freshly graded areas until such time as permanent drainage and erosion control features have been installed. Areas subjected to erosion or sedimentation shall be properly prepared in accordance with the Specifications prior to placing additional fill or structures.

9.2 After completion of grading as observed and tested by the Consultant, no further excavation or filling shall be conducted except in conjunction with the services of the Consultant.

10. CERTIFICATIONS AND FINAL REPORTS

10.1 Upon completion of the work, Contractor shall furnish Owner a certification by the Civil Engineer stating that the lots and/or building pads are graded to within 0.1 foot vertically of elevations shown on the grading plan and that all tops and toes of slopes are within 0.5 foot horizontally of the positions shown on the grading plans. After installation of a section of subdrain, the project Civil Engineer should survey its location and prepare an *as-built* plan of the subdrain location. The project Civil Engineer should verify the proper outlet for the subdrains and the Contractor should ensure that the drain system is free of obstructions.

10.2 The Owner is responsible for furnishing a final as-graded soil and geologic report satisfactory to the appropriate governing or accepting agencies. The as-graded report should be prepared and signed by a California licensed Civil Engineer experienced in geotechnical engineering and by a California Certified Engineering Geologist, indicating that the geotechnical aspects of the grading were performed in substantial conformance with the Specifications or approved changes to the Specifications.

UPDATED GEOTECHNICAL INVESTIGATION

SWC OF 7TH STREET AND CAWSTON AVENUE SAN JACINTO, CALIFORNIA

GEOCON
WEST, INC.
GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

RAMONA DAIRY, LLC.
2451 RAMONA EXPRESSWAY
SAN JACINTO, CALIFORNIA 92582

JANUARY 2, 2024
PROJECT NO. T2998-22-01

GEOCON
WEST, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. T2998-22-01
January 2, 2024

Ramona Dairy, LLC.
2451 Ramona Expressway
San Jacinto, California 92582

Attention: Mr. Richard Michael

Subject: UPDATED GEOTECHNICAL INVESTIGATION
SWC OF 7TH STREET AND CAWSTON AVENUE
SAN JACINTO, CALIFORNIA

Dear Mr. Michael:

In accordance with your authorization of our Work Order Authorization dated December 20, 2023, Geocon West, Inc. (Geocon) herein submits the results of our update to the preliminary geotechnical investigation dated November 4, 2022. The accompanying report presents an update to our preliminary findings, conclusions and recommendations pertaining to the geotechnical aspects of developing the property as presently proposed. Based on the results of this study, it is our opinion that the site is considered suitable for the proposed development provided the recommendations of this report are followed. The conclusions and recommendations provided in the 2022 report remain applicable unless superseded herein.

The primary intent of this report is to address the potential geologic hazards and geotechnical conditions that could impact site development and to provide an update to the preliminary geotechnical recommendations. Five geotechnical borings and four percolation tests were performed within the 76+ acre site for the preliminary geotechnical investigation. The northern portion of the site was occupied with a residence and basin at the time of the field work. Therefore, a supplemental geotechnical investigation should be performed with percolation testing performed at the BMP locations and elevations once grading plans have been developed. Additional analyses will be required in order to provide comprehensive geotechnical recommendations for design and construction when the scope of the proposed development has been established.

Should you have any questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON WEST, INC.

Lisa Battiato
CEG 2316

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LAB:ADL:hd
(email) Addressee

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UPDATED GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of our updated geotechnical investigation for the proposed development of approximately 76 acres located southwest of 7th Street and Cawston Avenue in San Jacinto, California, as depicted on the *Vicinity Map*, Figure 1.

The purpose of our investigation in 2022 was to perform a preliminary evaluation of subsurface soil and geologic conditions underlying the site and based on the conditions encountered, provide preliminary recommendations pertaining to the geotechnical aspects of developing the property as proposed. Due to the preliminary nature of the project at this time, the primary intent of this updated report is to address the potential geologic hazards and geotechnical conditions that could impact site development and to provide preliminary recommendations with respect to the 2022 California Building Code. The information provided in the 2022 report remains applicable to the site unless superseded herein. Additional analyses will be required in order to provide comprehensive geotechnical recommendations for design and construction when the scope of the proposed development has been established.

2. SITE AND PROJECT DESCRIPTION

The *Vesting Tentative Tract Map No. 38787* prepared by Psomas indicates site development will include single-family homes, and townhomes with a community park and open space areas for storm water infiltration or retention.

The site grading plans, structural plans, and building loads were not available. Based on the site elevations and surrounding roadway elevations, we expect rough grading will entail cuts and fills of less than 5 feet, exclusive of remedial grading.

We understand that the site will likely be used for the construction of single- or townhouse residential structures, which are expected to have spread footing foundations with slab-on-grade floors. Single-family and townhouse structures will likely be two or three stories. We have assumed that column loads will be up to 300 kips, and wall loads will be up to 4 kips per linear foot for the heaviest loaded structure.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location, or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC HAZARDS

3.1 Subsidence

Regional subsidence has occurred in several valley areas in California due to withdrawal of groundwater or oil, and in some cases peat loss. The site is located in the San Jacinto Valley which is a deep northwest trending alluvial valley created along the San Jacinto fault. The valley is bounded on the northeast and southwest by granitic bedrock hills which extend along the valley margins to depths of several hundred feet. The site is not located in an Area of Land Subsidence in California according to the United States Geological Survey (USGS). The San Jacinto Valley is not included in an area currently undergoing a USGS subsidence study. Riverside County does include the site in an area of active subsidence. California Geological Survey does not address subsidence risk on its website. A search of the city of San Jacinto website GIS system did not yield results when the term "subsidence" was searched. Based on this information, ground subsidence could occur. However, the settlement is expected to occur over a relatively large geographic area and is not expected to cause differential settlement over a relatively short horizontal distance which would be addressed as a design concern as part of the site development.

4. SITE INFILTRATION

Percolation testing was performed at four locations within the site to provide preliminary information for project design. Additional percolation testing will be necessary at the proposed BMP locations and planned infiltration elevations once they are known. The testing was performed in general accordance with the procedures outlined in *Riverside County Flood Control and Water Conservation District LID BMP, Appendix A* (Handbook) to determine preliminary infiltration potential. The percolation test locations are depicted on the *Geologic Map*, Figure 2.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 General

5.1.1 Additional subsurface exploration and percolation testing will be required before site grading to provide adequate subsurface information for earthwork operations and provide the necessary percolation test data required by Riverside County BMP LID Handbook.

5.2 Soil and Excavation Characteristics

5.2.1 The upper 5 feet of existing site soils encountered during the investigation are considered to have a "very low" expansive potential (EI = 11) and are classified as "non-expansive" in accordance with the 2022 California Building Code (CBC) Section 1803.5.3. The recommendations presented herein assume that the building foundations and slabs will derive support in these materials.

5.2.2 As a minimum, it is recommended that the upper 8 feet of existing earth materials within the proposed building footprint areas be excavated and properly compacted for post-tensioned foundation system support. Deeper excavations should be conducted as necessary to remove deeper artificial fill or soft alluvial soil at the direction of the Geotechnical Engineer (a representative of Geocon). Proposed foundations should be underlain by at least 5 feet of newly placed engineered fill. The excavation should extend laterally a minimum distance of 6 feet beyond the building footprint area, including building appurtenances, or a distance equal to the depth of fill below the foundation, whichever is greater. The limits of existing fill and/or soft alluvial soils removal will be verified by the Geocon representative during site grading activities.

5.3 Soil and Minimum Resistivity, pH, and Water-Soluble Sulfate

5.3.1 Laboratory tests were performed on representative samples of the site materials to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B-4) and indicate that the on-site materials possess a sulfate exposure class of "S0" to concrete structures as defined by 2022 CBC Section 1904 and ACI 318-19 Chapter 19.

5.4 Seismic Design Criteria

5.4.1 The following table summarizes the site-specific design criteria obtained from the 2022 California Building Code (CBC; Based on the 2021 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the online application *U.S. Seismic Design Maps*, provided by the Structural Engineers Association of California (SEAOC). The short spectral response uses a period of

0.2 second. We evaluated the Site Class based on the discussion in Section 1613.2.2 of the 2022 CBC and Table 20.3-1 of ASCE 7-16. The values presented below are for the risk-targeted maximum considered earthquake (MCE_R).

5.4.2 Although there are soils susceptible to seismic settlement underlying the site, we expect the building possesses a fundamental period of less than 0.5 seconds; therefore, a site response analysis is not anticipated to be required in accordance with ASCE 7-16, Section 20.3.1.

2022 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2022 CBC Reference
Site Class	D	Section 1613.2.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	1.984g	Figure 1613.2.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.785g	Figure 1613.2.1(3)
Site Coefficient, F_A	1.009	Table 1613.2.3(1)
Site Coefficient, F_V	1.7*	Table 1613.2.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	1.984g	Section 1613.2.3 (Eqn 16-20)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	1.334g*	Section 1613.2.3 (Eqn 16-21)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.323g	Section 1613.2.4 (Eqn 16-22)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.889g*	Section 1613.2.4 (Eqn 16-23)

*Per Supplement 3 of ASCE 7-16, a ground motion hazard analysis (GMHA) shall be performed for projects on Site Class "D" sites with 1-second spectral acceleration (S_1) greater than or equal to 0.2g, which is true for this site. However, Supplement 3 of ASCE 7-16 provides an exception stating that that the GMHA may be waived provided that the parameter S_{M1} is increased by 50% for all applications of S_{M1}. The values for parameters S_{M1} and S_{D1} presented above have **not** been increased in accordance with Supplement 3 of ASCE 7-16.

5.4.3 Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

5.5 Post Tensioned Foundation Recommendations

5.5.1 The proposed residential structures may be supported on a post-tensioned concrete slab and foundation system deriving support in newly placed engineered fill subsequent to the recommended grading. Proposed foundations should be underlain by at least 5 feet of newly placed engineered fill. Foundation excavations must be observed and approved in writing by the Geotechnical Engineer, prior to placing reinforcing steel or concrete.

5.5.2 The post-tensioned system should be designed by a structural engineer experienced in post-tensioned slab design and design criteria of the Post-Tensioning Institute (PTI) DC 10.5-12 *Standard Requirements for Design and Analysis of Shallow Post-Tensioned Concrete Foundations on Expansive Soils* or *WRI/CRSI Design of Slab-on-Ground Foundations*, as required by the 2022 California Building Code (CBC Section 1808.6.2). Although this procedure was developed for expansive soil conditions, we understand it can also be used to reduce the potential for foundation distress due to differential settlement. The post-tensioned design should incorporate the geotechnical parameters presented in Table 5.5.2 below, which are based on the guidelines presented in the PTI, Third Edition design manual.

TABLE 5.5.2
POST-TENSIONED FOUNDATION SYSTEM DESIGN PARAMETERS

Post-Tensioning Institute (PTI) Third Edition Design Parameters	Value
Thornthwaite Index	-20
Equilibrium Suction	3.9
Edge Lift Moisture Variation Distance, e_M (feet)	4.9
Edge Lift, y_M (inches)	1.58
Center Lift Moisture Variation Distance, e_M (feet)	9.0
Center Lift, y_M (inches)	66

5.6 Foundation Settlement

5.6.1 The enclosed seismically induced settlement analysis indicates that the site soils could be susceptible to approximately 0.79 inch of total settlement as a result of the Design Earthquake peak ground acceleration (⅔PGA_M). The differential settlement at the foundation level is anticipated to be approximately 0.4 inch over a distance of 50 feet. These settlements are in addition to the static settlements indicated below and must be considered in the structural design.

5.6.2 The maximum expected static settlement for the proposed structures supported on a post-tensioned foundation system designed with a maximum bearing pressure of 3,000 psf and deriving support in newly placed engineered fill is estimated to be less than 1.25 inch and occur below the heaviest loaded structural element. A majority of the settlement of the foundation system is expected to occur on initial application of loading; however, minor additional settlements are expected within the first 12 months. Differential settlement is not expected to exceed 5/8 inch over a distance of 20 feet.

5.6.3 Based on seismic considerations, the proposed structures should be designed for a combined static and seismically induced differential settlement of 1 inch over a distance of 20 feet.

5.6.4 Once the design and foundation loading configurations for the proposed structures proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

5.7 Surface Drainage

5.7.1 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2022 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within 5 feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.

5.8 Plan Review

5.8.1 Grading, foundation, and, if applicable, shoring plans should be reviewed by the Geotechnical Engineer (a representative of Geocon), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations. Additional subsurface exploration and percolation are highly recommended to provide adequate coverage of the site prior to earthwork operations and to satisfy Riverside County requirements.

5.9 Testing and Observation Services During Construction

5.9.1 Geocon should provide geotechnical testing and observation services during the grading operations, foundation construction, utility installation, retaining wall backfill and pavement installation. Table 5.9.1 presents the typical geotechnical observations we would expect for the proposed improvements.

TABLE 5.9.1
EXPECTED GEOTECHNICAL TESTING AND OBSERVATION SERVICES

Construction Phase	Observations	Expected Time Frame
Ground Modification	Ground Modification Installation	Full Time
	Confirmation Testing	Part Time to Full Time
Grading	Base of Removal	Part Time During Removals
	Geologic Logging	Part Time to Full Time
	Fill Placement and Soil Compaction	Full Time
Soldier Piles	Solder Pile Drilling Depth	Part Time
Tieback Anchors	Tieback Drilling and Installation	Full Time
	Tieback Testing	Full Time
Soil Nail Walls	Soil Nail Drilling and Installation	Full Time
	Soil Nail Testing	Full Time
Foundations	Foundation Excavation Observations	Full Time
	Drilling Operations for Piles	Part Time
Utility Backfill	Fill Placement and Soil Compaction	Part Time to Full Time
Retaining Wall Backfill	Fill Placement and Soil Compaction	Part Time to Full Time
Subgrade for Sidewalks, Curb/Gutter and Pavement	Soil Compaction	Part Time
Pavement Construction	Base Placement and Compaction	Part Time
	Asphalt Concrete Placement and Compaction	Full Time

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.

2. This report is issued with the understanding that it is the responsibility of the owner, or of their representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

LIST OF REFERENCES

1. American Society of Civil Engineers (ASCE), *ASCE 7-16, Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, 2017.

2. California Building Standards Commission, 2022, *California Building Code (CBC)*, California Code of Regulations Title 24, Part 2.

3. California Geological Survey (CGS), *Earthquake Shaking Potential for California*, from USGS/CGS Seismic Hazards Model, CSSC No. 03-02, 2003.

4. California Geological Survey (CGS), *Probabilistic Seismic Hazards Mapping-Ground Motion Page*, 2003, CGS Website: www.conserv.ca.gov/cgs/rghm/pshamap.

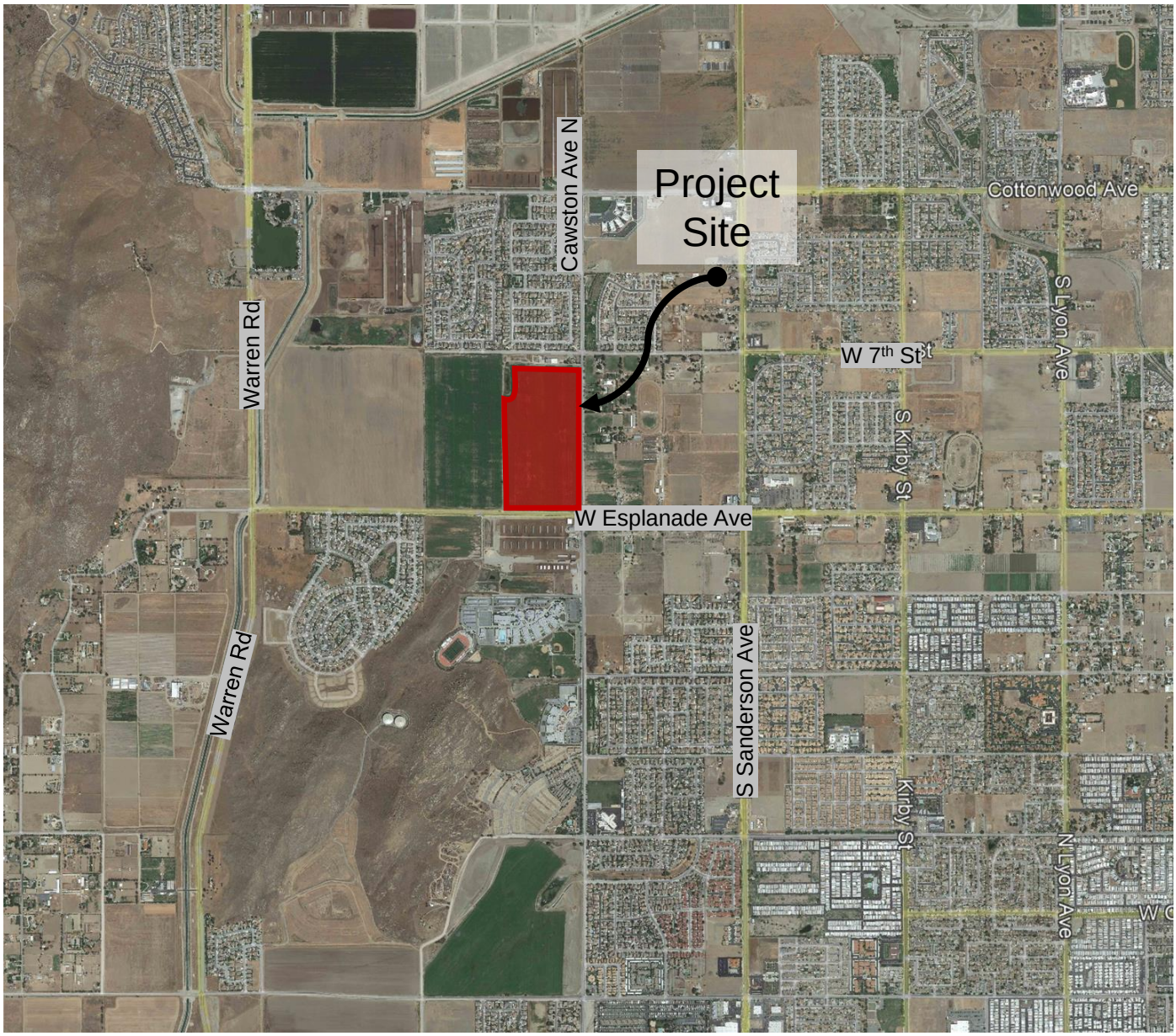
5. Geocon West, Inc., 2022, *Preliminary Geotechnical Investigation, SWC of 7th Street and Cawston Avenue, San Jacinto, California*, Project T2998-2-01, dated November 4.

6. OSHPD, *Seismic Design Maps*, seismicdesignmaps.org, accessed December 2023.

7. Riverside County GIS (RC GIS), *Map My County* website, http://mmc.rivcoit.org/MMC_Public/Custom/disclaimer/Default.htm; accessed December 2023.

8. USGS, *Areas of Land Subsidence in California*, ca.water.usgs.gov/land_subsidence/California-subsidence+areas.html, accessed December 2023.

9. USGS, *Unified Hazard Tool*, earthquake.usgs.gov/hazards/interactive, accessed December 2023.



N

0’ 2,700’ 5,400’

SCALE: 1” = 1,400’

SOURCE: Google Maps, 2022

VICINITY MAP

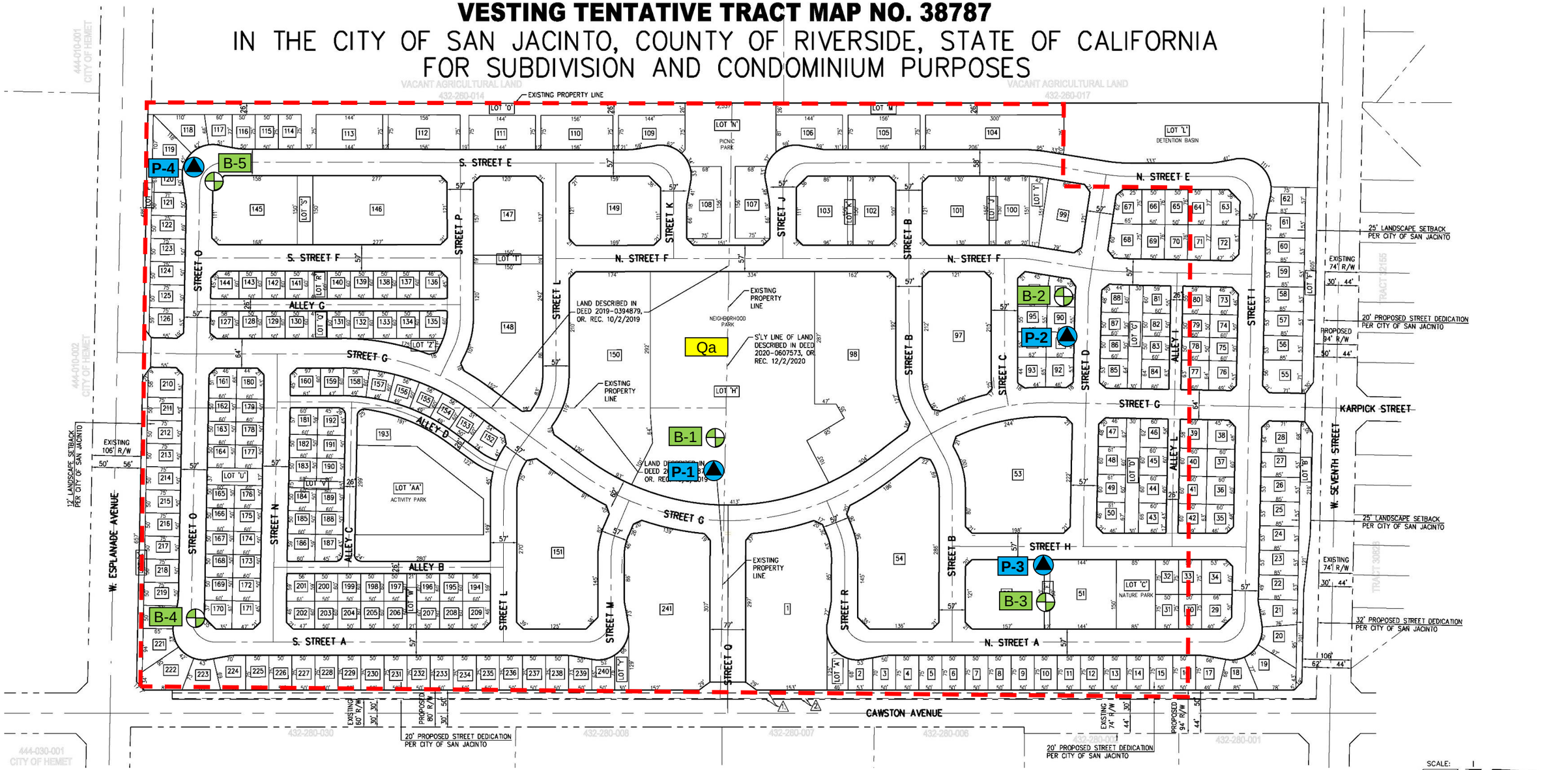
GEOCON
WEST, INC.
GEOTECHNICAL ENVIRONMENTAL MATERIALS
41571 CORNING PLACE, SUITE 101, MURRIETA, CA 92562-7065
PHONE 951-304-2300 www.geoconinc.com

SWC 7TH STREET & CAWSTON AVENUE
SAN JACINTO, CALIFORNIA

ARK			JANUARY 2024	PROJECT NO. T2998-22-01	FIG. 1

VESTING TENTATIVE TRACT MAP NO. 38787

IN THE CITY OF SAN JACINTO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA
FOR SUBDIVISION AND CONDOMINIUM PURPOSES



GEOCON LEGEND

Locations are approximate

B-5 ..... BORING LOCATION

P-4 ..... PERCOLATION TEST LOCATION

..... PROJECT LIMITS

Qa ..... ALLUVIUM

Source: Vesting Tentative Tract Map No. 38787, Prepared by PSOMAS, dated 10/27/2023

GEOCON WEST, INC.
GEOTECHNICAL, ENVIRONMENTAL, MATERIALS
41571 CORNING PLACE #101, MURRIETA, CALIFORNIA 92562
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GEOLOGIC MAP

SWC 7TH STREET & CAWSTON AVENUE
SAN JACINTO, CALIFORNIA

HD			JANUARY 2024	PROJECT NO. T2998-22-01	FIG. 2

APPENDIX A

APPENDIX A

FIELD EXPLORATION

Geocon performed the field investigation on September 26 and 27, 2022, which included the drilling of five geotechnical borings (B-1 through B-5) and four percolation borings (P-1 through P-4) to depths between approximately 2 to 51½ feet, to observe the subsurface geological conditions, perform percolation testing at the site, collect relatively undisturbed in-situ and disturbed bulk samples for laboratory testing, and evaluate the depth to groundwater. Borings were drilled with a truck mounted CME-75 drill rig with 8-inch-diameter hollow stem augers.

We collected relatively undisturbed and bulk samples from the borings. The undisturbed samples were obtained by driving a 3-inch O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 140-pound hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2⅜-inch inside diameter brass sampler rings to facilitate removal and testing. Relatively undisturbed samples and bulk samples of disturbed soils were transported to our laboratory for testing. The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS).

Logs of the geotechnical borings are presented on Figures A-1 through A-5, percolation borings on A-6 through A-9, and percolation test data sheets on A-10 through A-13. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the logs were revised based on subsequent laboratory testing. The approximate locations of the borings are depicted on the *Geologic Map*, Figure 2.

PROJECT NO. T2998-22-01

BORING B-1

ELEV. (MSL.) **1512** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	B-1@0-5					SM	**TOPSOIL** Silty SAND, loose, moist, very dark brown; fine to medium sand; very silty			
2						SP	**ALLUVIUM (Qa)**			
	B-1@2.5						Poorly-graded SAND, loose, moist, strong brown; medium sand; some fine sand; little mica	7		
4										
6	B-1@5 B-1@5-10					ML	SILT with sand, soft to firm, very moist, olive brown; fine to medium sand; little mica	12	95.3	23.7
8	B-1@7.5						-Some mica	9	101.4	22.6
10	B-1@10						-Becomes micaceous; trace rootlets	11	96.4	27.2
12										
14										
16	B-1@15					SP-SM	Poorly-graded SAND with silt, medium dense, moist, olive gray; fine to medium sand; micaceous	40	102.9	19.1
18										
20	B-1@20					CL	CLAY, soft, wet, very dark olive; fine sand; micaceous	9	93.6	28.7
22										
24						SM	Silty SAND, medium dense, moist to wet, grayish brown; fine to medium sand; some coarse sand; trace gravel			
26	B-1@25							38		
28										

Figure 1,
Log of Boring B-1, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. T2998-22-01

BORING B-1

ELEV. (MSL.) **1512** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B-1@30						-Becomes very dense, pale yellow to yellow brown; fine to coarse sand; few gravel	80		
32										
34						SP	Poorly-graded SAND, very dense, moist, pale yellow to white; medium to coarse sand; trace fine sand; few mica; oxidation staining			
36	B-1@35							71		
38										
40	B-1@40					SM	Silty SAND, very dense, moist, dark gray brown; fine to medium sand; trace coarse sand; little mica	60		
42										
44										
46	B-1@45						-Becomes fine to coarse sand; trace gravel; mottle coloring	65		
48										
50	B-1@50						-Becomes dark brown; slightly oxidized	63		
							Total Depth = 51.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 1,
Log of Boring B-1, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
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GEOCON

PROJECT NO. T2998-22-01

BORING B-2

ELEV. (MSL.) **1509** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**ALLUVIUM (Qa)** SILT with sand, stiff, slightly moist, olive gray; fine sand; little mica; AC chunks and gravel at surface			
2	B-2@2-7 B-2@2.5						-Becomes light brown; little mica	38		
4						SM	Silty SAND, slightly moist, brown; fine to medium sand; little mica; very silty			
6	B-2@5							45		
8	B-2@7.5						-Becomes fine to medium sand; no coarse sand; few silt	30		
10	B-2@10					SM	Silty SAND, loose, slightly moist, olive gray; fine to medium sand; trace coarse sand; little mica	15	104.6	9.8
12										
14						ML	SILT, stiff, moist, brown; fine sand; little clay seams; mica			
16	B-2@15							21		
18										
20	B-2@20					SM	Silty SAND, medium dense, moist, dark brown; fine to medium sand; mica	31		
22										
24										
26	B-2@25						-Little coarse sand	44		
28										

Figure 2,
Log of Boring B-2, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING B-2** ELEV. (MSL.)**1509** DATE COMPLETED **9/26/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
							MATERIAL DESCRIPTION			
30	B-2@30						-Becomes strong brown; fine to coarse sand; micaceous	39		
32										
34										
36	B-2@35						-Becomes dark brown; fine to medium sand; trace coarse sand; little mica	45		
							Total Depth = 36.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 2,
Log of Boring B-2, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING B-3

ELEV. (MSL.) **1511** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**TOPSOIL** SILT, soft, slightly moist, olive gray; fine to medium sand			
2						SM	**ALLUVIUM (Qa)** Silty SAND, loose, moist, strong brown; fine to medium sand; little coarse sand; little mica			
2	B-3@2.5							13		
4										
6	B-3@5						-Little silt; some mica	15	107.8	12.4
8	B-3@7.5						-Few silt; micaceous	15	106.7	9.6
10	B-3@10						-Becomes less silty; moisture increases	16	97.8	19.3
12										
14										
16	B-3@15					SM	Silty SAND, medium dense, moist, strong brown to dark brown; fine to medium sand; some mica; laminated	26		
18										
20	B-3@20						-Becomes dense; inbedded with thin poorly-graded sand layers	44		
22										
24										
26	B-3@25						-Becomes wet, very dark brown; fine to coarse sand	15		
28										

T2998-22-01 BORING LOGS.GPJ

Figure 3,
Log of Boring B-3, Page 1 of 2

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING B-3** ELEV. (MSL.)**1511** DATE COMPLETED **9/26/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN** MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B-3@30						-Becomes micaceous; massive	30		
32										
34										
36	B-3@35						-Becomes fine to medium sand; slightly oxidized	37		
							Total Depth = 36.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 3,
Log of Boring B-3, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING B-4

ELEV. (MSL.) **1513** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**TOPSOIL** SILT, hard, slightly moist, very dark brown; fine to medium sand			
						SM	**ALLUVIUM (Qa)**			
2	B-4@2-7						Silty SAND, medium dense, slightly moist to moist, dark brown; fine to medium sand; little coarse sand; little mica			
	B-4@2.5							20		
4							-Little mica			
6	B-4@5						-Becomes very moist, dark olive gray; Interbedded SM, ML, & SP	18	80.5	38.3
						SM	Silty SAND, loose to medium dense, moist, olive; fine to medium sand; micaceous			
8	B-4@7.5							11	105.2	19.1
10	B-4@10					CL	CLAY, firm, very moist, olive brown	16	95.8	31.6
12										
14						SC	Clayey SAND with Gravel, medium dense, very moist, gray and pale brown; fine sand			
16	B-4@15							40	104.8	21.5
18						SM	Silty SAND, medium dense, very moist, olive gray; fine to medium sand; micaceous			
20	B-4@20							18	103.6	21.5
22										
24										
26	B-4@25						-Becomes medium dense; less silt	40		
28										

Figure 4,
Log of Boring B-4, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING B-4** ELEV. (MSL.)**1513** DATE COMPLETED **9/26/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
							MATERIAL DESCRIPTION			
30	B-4@30						-Becomes gray brown; oxidation staining and on peds	30		
32										
34										
36	B-4@35						-Becomes dense; Poorly-graded SAND lens 3-4" thick	54		
							Total Depth = 36.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 4,
Log of Boring B-4, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◹ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING B-5

ELEV. (MSL.) **1511** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**TOPSOIL** SILT, loose, slightly moist, dark brown; fine to medium sand			
2	B-5@2.5					SM	**ALLUVIUM (Qa)** Silty SAND, soft, slightly moist to moist, olive brown; fine to medium sand; very silty	9		
4										
6	B-5@5						-Becomes micaceous	5	92.4	24.1
8	B-5@7.5						-Becomes dark brown; very sandy; less silt	11	106.4	19.1
10	B-5@10					SC	Clayey SAND, loose, moist, dark olive brown; fine to medium sand; micaceous	15	92.9	22.3
12										
14						CL	CLAY, firm, very moist, olive gray			
16	B-5@15							26	89.0	37.1
18										
20	B-5@20						-Becomes dark brown	18	107.8	25.3
22						SM	Silty SAND, medium dense, moist, very dark brown; fine to medium sand; micaceous			
24										
26	B-5@25						-Becomes dark brown; less silt; little coarse sand	36		
28										

Figure 5,
Log of Boring B-5, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING B-5** ELEV. (MSL.)**1511** DATE COMPLETED **9/26/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
							MATERIAL DESCRIPTION			
30	B-5@30						-Becomes very dense; more silt; Poorly-graded SAND lens (3")	74		
32										
34						SP	Poorly-graded SAND, medium dense, slightly moist, pale brown; fine to medium sand; trace coarse sand; few oxidation staining			
36	B-5@35							34		
							Total Depth = 36.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 5,
Log of Boring B-5, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING P-1 / MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
							ELEV. (MSL.) **1513** DATE COMPLETED **9/27/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**			
0						SM	**TOPSOIL** Silty SAND, loose, moist, very dark brown; fine to medium sand; very silty			
2	P-1@1.5-2		■			SM	**ALLUVIUM (Qa)** Silty SAND, loose, moist, dark grayish brown; medium sand; some fine sand; some mica			
							Total Depth = 2' No groundwater encountered Percolation Test Equipment set Presaturated with 5 gallons of water Backfilled with cuttings 9/27/2022			

Figure 6,
Log of Boring P-1, Page 1 of 1

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING P-2

ELEV. (MSL.) **1505** DATE COMPLETED **9/27/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**ALLUVIUM (Qa)** SILT, stiff, slightly moist, dark brown; fine sand; little mica; AC chunks and gravel at surface			
2										
4						SM	Silty SAND, slightly moist, light grayish brown; fine to medium sand; few coarse sand; little mica			
6										
8										
10	P-2@9-10		■				Total Depth = 10' No groundwater encountered Percolation Test Equipment set Presaturated with 5 gallons of water Backfilled with cuttings 9/27/2022			

Figure 7,
Log of Boring P-2, Page 1 of 1

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING P-3

ELEV. (MSL.) **1511** DATE COMPLETED **9/27/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**TOPSOIL** SILT, soft, slightly moist, very dark brown; fine to medium sand			
						SM	**ALLUVIUM (Qa)**			
2	P-3@1.5-2		■				Silty SAND, loose, slightly moist, dark grayish brown; fine to medium sand; little mica			

Total Depth = 2'
No groundwater encountered
Percolation Test Equipment set
Presaturated with 5 gallons of water
Backfilled with cuttings 9/27/2022

Figure 8,
Log of Boring P-3, Page 1 of 1

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING P-4

ELEV. (MSL.) **1511** DATE COMPLETED **9/27/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**TOPSOIL** SILT, soft, slightly moist, dark brown; fine to medium sand			
						ML	**ALLUVIUM (Qa)** Sandy SILT, soft, slightly moist, dark gray brown; fine to medium sand			
2	P-4@1.5-2		■							

Total Depth = 2'
No groundwater encountered
Percolation Test Equipment set
Presaturated with 5 gallons of water
Backfilled with cuttings 9/27/2022

Figure 9,
Log of Boring P-4, Page 1 of 1

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PERCOLATION TEST REPORT							
Project Name:		Ramona San Jacinto			**Project No.:**		T2998-22-01
Test Hole No.:		P-1			**Date Excavated:**		9/26/2022
Length of Test Pipe:			24.0	inches	**Soil Classification:**		SM
Height of Pipe above Ground:			0.0	inches	**Presoak Date:**		9/26/2022
Depth of Test Hole:			24.0	inches	**Perc Test Date:**		9/27/2022
Check for Sandy Soil Criteria Tested by:				Weidman	**Percolation Tested by:**		Weidman
Water level measured from BOTTOM of hole							
Sandy Soil Criteria Test							
Trial No.	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
		Interval	**Elapsed**	**Level**	**Level**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	8:30 AM 8:55 AM	25	25	24.0	20.3	3.7	6.7
2	8:55 AM 9:20 AM	25	50	24.0	22.4	1.6	16.0
			Soil Criteria: Normal				
			Percolation Test				
Reading	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
No.		**Interval**	**Elapsed**	**Head**	**Head**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	9:20 AM 9:50 AM	30	30	24.0	22.0	2.0	14.7
2	9:50 AM 10:20 AM	30	60	24.0	22.8	1.2	25.0
3	10:20 AM 10:50 AM	30	90	24.0	22.7	1.3	22.7
4	10:50 AM 11:20 AM	30	120	24.0	22.6	1.4	20.8
5	11:20 AM 11:50 AM	30	150	24.0	22.8	1.2	25.0
6	11:50 AM 12:20 PM	30	180	24.0	22.6	1.4	20.8
7	12:20 PM 12:50 PM	30	210	24.0	22.8	1.2	25.0
8	12:50 PM 1:20 PM	30	240	24.0	23.0	1.0	31.3
9	1:20 PM 1:50 PM	30	270	24.0	23.3	0.7	41.7
10	1:50 PM 2:20 PM	30	300	24.0	23.3	0.7	41.7
11	2:20 PM 2:50 PM	30	330	24.0	23.4	0.6	50.0
12	2:50 PM 3:20 PM	30	360	24.0	23.4	0.6	50.0
Infiltration Rate (in/hr):			0.1				
Radius of test hole (in):			4				**Figure A-10**
Average Head (in):			23.7				

PERCOLATION TEST REPORT							
Project Name:		Ramona San Jacinto			**Project No.:**		T2998-22-01
Test Hole No.:		P-2			**Date Excavated:**		9/26/2022
Length of Test Pipe:			120.0	inches	**Soil Classification:**		SM
Height of Pipe above Ground:			0.0	inches	**Presoak Date:**		9/26/2022
Depth of Test Hole:			120.0	inches	**Perc Test Date:**		9/27/2022
Check for Sandy Soil Criteria Tested by:				Weidman	**Percolation Tested by:**		Weidman
Water level measured from BOTTOM of hole							
Sandy Soil Criteria Test							
Trial No.	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
		Interval	**Elapsed**	**Level**	**Level**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	8:33 AM 8:58 AM	25	25	48.0	13.6	34.4	0.7
2	8:58 AM 9:23 AM	25	50	48.0	19.2	28.8	0.9
			Soil Criteria: Sandy				
			Percolation Test				
Reading	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
No.		**Interval**	**Elapsed**	**Head**	**Head**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	9:23 AM 9:33 AM	10	10	48.0	38.4	9.6	1.0
2	9:33 AM 9:43 AM	10	20	48.0	39.6	8.4	1.2
3	9:43 AM 9:53 AM	10	30	48.0	40.2	7.8	1.3
4	9:53 AM 10:03 AM	10	40	48.0	43.2	4.8	2.1
5	10:03 AM 10:13 AM	10	50	48.0	45.0	3.0	3.3
6	10:13 AM 10:23 AM	10	60	48.0	45.6	2.4	4.2
Infiltration Rate (in/hr):			0.6				
Radius of test hole (in):			4				**Figure A-11**
Average Head (in):			46.8				

PERCOLATION TEST REPORT							
Project Name:		Ramona San Jacinto			**Project No.:**		T2998-22-01
Test Hole No.:		P-3			**Date Excavated:**		9/26/2022
Length of Test Pipe:			24.0	inches	**Soil Classification:**		SM
Height of Pipe above Ground:			0.0	inches	**Presoak Date:**		9/26/2022
Depth of Test Hole:			24.0	inches	**Perc Test Date:**		9/27/2022
Check for Sandy Soil Criteria Tested by:				Weidman	**Percolation Tested by:**		Weidman
Water level measured from BOTTOM of hole							
Sandy Soil Criteria Test							
Trial No.	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
		Interval	**Elapsed**	**Level**	**Level**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	8:38 AM 9:03 AM	25	25	24.0	17.8	6.2	4.0
2	9:03 AM 9:28 AM	25	50	24.0	21.6	2.4	10.4
			Soil Criteria: Normal				
			Percolation Test				
Reading	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
No.		**Interval**	**Elapsed**	**Head**	**Head**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	9:28 AM 9:58 AM	30	30	24.0	21.6	2.4	12.5
2	9:58 AM 10:28 AM	30	60	24.0	22.4	1.6	19.2
3	10:28 AM 10:58 AM	30	90	24.0	22.6	1.4	20.8
4	10:58 AM 11:28 AM	30	120	24.0	22.6	1.4	20.8
5	11:28 AM 11:58 AM	30	150	24.0	22.6	1.4	20.8
6	11:58 AM 12:28 PM	30	180	24.0	22.2	1.8	16.7
7	12:28 PM 12:58 PM	30	210	24.0	22.8	1.2	25.0
8	12:58 PM 1:28 PM	30	240	24.0	23.0	1.0	31.3
9	1:28 PM 1:58 PM	30	270	24.0	23.3	0.7	41.7
10	1:58 PM 2:28 PM	30	300	24.0	23.3	0.7	41.7
11	2:28 PM 2:58 PM	30	330	24.0	23.3	0.7	41.7
12	2:58 PM 3:28 PM	30	360	24.0	23.3	0.7	41.7
Infiltration Rate (in/hr):			0.1				
Radius of test hole (in):			4				**Figure A-12**
Average Head (in):			23.6				

PERCOLATION TEST REPORT							
Project Name:		Ramona San Jacinto			**Project No.:**		T2998-22-01
Test Hole No.:		P-4			**Date Excavated:**		9/26/2022
Length of Test Pipe:			24.0	inches	**Soil Classification:**		ML
Height of Pipe above Ground:			0.0	inches	**Presoak Date:**		9/26/2022
Depth of Test Hole:			24.0	inches	**Perc Test Date:**		9/27/2022
Check for Sandy Soil Criteria Tested by:				Weidman	**Percolation Tested by:**		Weidman
Water level measured from BOTTOM of hole							
Sandy Soil Criteria Test							
Trial No.	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
		Interval	**Elapsed**	**Level**	**Level**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	8:30 AM 8:55 AM	25	25	24.0	17.9	6.1	4.1
2	8:55 AM 9:20 AM	25	50	24.0	20.4	3.6	6.9
			Soil Criteria: Normal				
			Percolation Test				
Reading	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
No.		**Interval**	**Elapsed**	**Head**	**Head**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	9:20 AM 9:50 AM	30	30	24.0	20.6	3.4	8.9
2	9:50 AM 10:20 AM	30	60	24.0	21.1	2.9	10.4
3	10:20 AM 10:50 AM	30	90	24.0	21.6	2.4	12.5
4	10:50 AM 11:20 AM	30	120	24.0	21.8	2.2	13.9
5	11:20 AM 11:50 AM	30	150	24.0	22.2	1.8	16.7
6	11:50 AM 12:20 PM	30	180	24.0	23.0	1.0	31.3
7	12:20 PM 12:50 PM	30	210	24.0	22.8	1.2	25.0
8	12:50 PM 1:20 PM	30	240	24.0	22.7	1.3	22.7
9	1:20 PM 1:50 PM	30	270	24.0	22.8	1.2	25.0
10	1:50 PM 2:20 PM	30	300	24.0	22.7	1.3	22.7
11	2:20 PM 2:50 PM	30	330	24.0	22.8	1.2	25.0
12	2:50 PM 3:20 PM	30	360	24.0	22.8	1.2	25.0
Infiltration Rate (in/hr):			0.2				
Radius of test hole (in):			4				**Figure A-13**
Average Head (in):			23.4				

APPENDIX B

APPENDIX B

LABORATORY TESTING

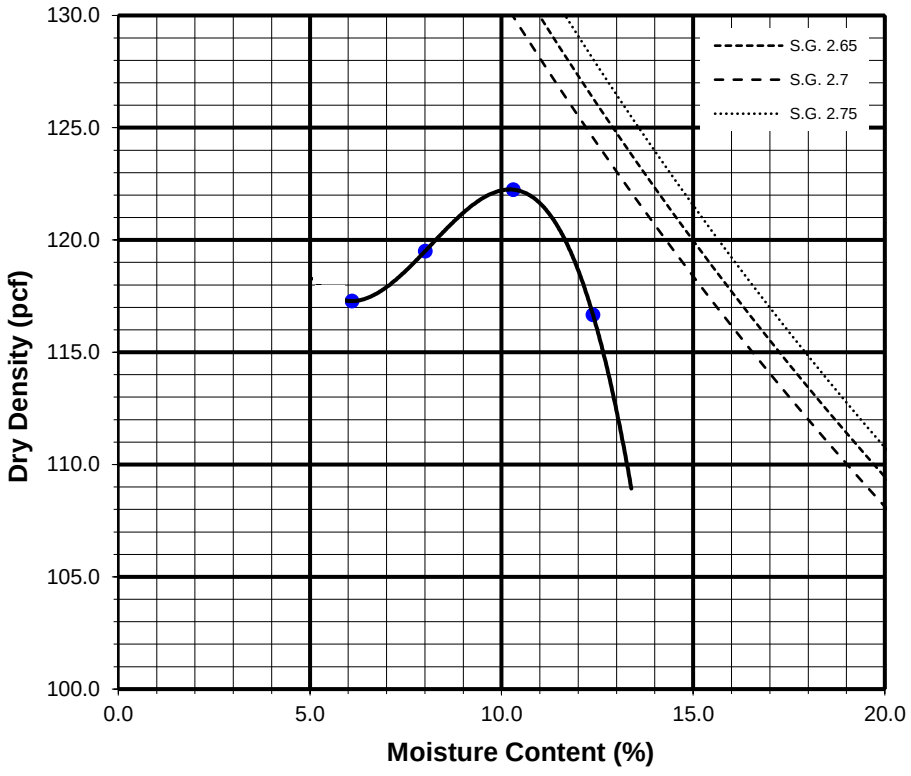
We performed laboratory tests in accordance with current, generally accepted test methods of ASTM International (ASTM) or other suggested procedures. We analyzed selected soil samples for in-situ density and moisture content, maximum dry density and optimum moisture content, corrosivity, grain size distribution, expansion potential, consolidation, and direct shear strength. The results of the laboratory tests are presented on Figures B-1 through B-32. The in-place dry density and moisture content of the samples tested are presented on the boring logs in *Appendix A.*

Sample No:

B-2@2-7	Silty SAND (SM), olive gray

TEST NO.		1	2	3	4	5	6
Wt. Compacted Soil + Mold	(g)	6139	6209	6296	6240		
Weight of Mold	(g)	4259	4259	4259	4259		
Net Weight of Soil	(g)	1880	1950	2037	1981		
Wet Weight of Soil + Cont.	(g)	690.7	655.9	818.6	810.9		
Dry Weight of Soil + Cont.	(g)	665.8	626.0	766.3	750.0		
Weight of Container	(g)	257.3	252.6	259.0	258.3		
Moisture Content	(%)	6.1	8.0	10.3	12.4		
Wet Density	(pcf)	124.4	129.1	134.8	131.1		
Dry Density	(pcf)	117.3	119.5	122.2	116.7		

Maximum Dry Density (pcf)	**122.0**	**Optimum Moisture Content (%)**	**10.0**



Preparation Method: A

GEOCON

COMPACTION CHARACTERISTICS USING MODIFIED EFFORT TEST RESULTS

ASTM D-1557

Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST, & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

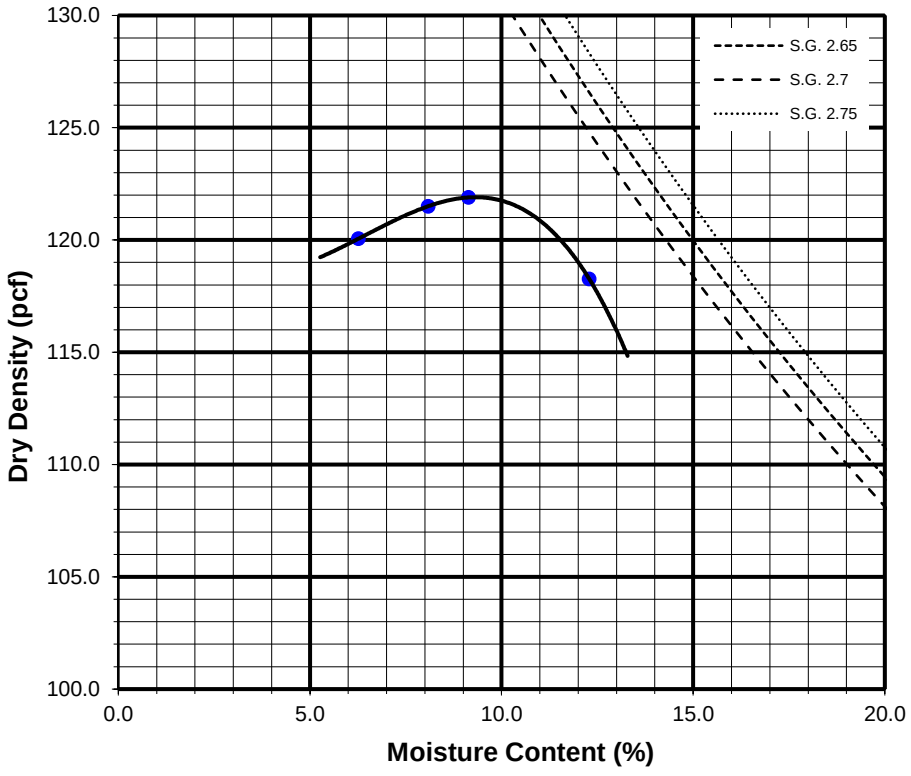
Nov 22 Figure B-1

Sample No:

B-4@2-7	Silty SAND (SM), dark brown

TEST NO.		1	2	3	4	5	6
Wt. Compacted Soil + Mold	(g)	6243	6269	6265	6187		
Weight of Mold	(g)	4259	4259	4259	4259		
Net Weight of Soil	(g)	1984	2009	2006	1927		
Wet Weight of Soil + Cont.	(g)	705.9	575.6	679.6	653.9		
Dry Weight of Soil + Cont.	(g)	672.5	548.7	633.4	630.4		
Weight of Container	(g)	259.2	254.2	257.4	255.4		
Moisture Content	(%)	8.1	9.1	12.3	6.3		
Wet Density	(pcf)	131.3	133.0	132.8	127.6		
Dry Density	(pcf)	121.5	121.9	118.3	120.1		

Maximum Dry Density (pcf)	**122.0**	**Optimum Moisture Content (%)**	**9.0**



Preparation Method: A

GEOCON

COMPACTION CHARACTERISTICS USING MODIFIED EFFORT TEST RESULTS

ASTM D-1557

Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST, & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-2

B1@0-5

MOLDED SPECIMEN		BEFORE TEST	AFTER TEST
Specimen Diameter	(in.)	4.0	4.0
Specimen Height	(in.)	1.0	1.0
Wt. Comp. Soil + Mold	(gm)	606.5	632.2
Wt. of Mold	(gm)	200.4	200.4
Specific Gravity	(Assumed)	2.7	2.7
Wet Wt. of Soil + Cont.	(gm)	473.2	632.2
Dry Wt. of Soil + Cont.	(gm)	447.9	371.9
Wt. of Container	(gm)	173.2	200.4
Moisture Content	(%)	9.2	16.1
Wet Density	(pcf)	122.5	130.1
Dry Density	(pcf)	112.2	112.0
Void Ratio		0.5	0.5
Total Porosity		0.3	0.3
Pore Volume	(cc)	69.3	71.5
Degree of Saturation	(%) [S_{meas}]	49.8	83.8

Date	Time	Pressure (psi)	Elapsed Time (min)	Dial Readings (in.)
9/30/2022	10:00	1.0	0	0.3267
9/30/2022	10:10	1.0	10	0.3266
Add Distilled Water to the Specimen				
10/1/2022	10:00	1.0	1430	0.3376
10/1/2022	11:00	1.0	1490	0.3376

Expansion Index (EI meas) =	11
Expansion Index (Report) =	**11**

Expansion Index, EI_{50}	CBC CLASSIFICATION *	UBC CLASSIFICATION **
0-20	Non-Expansive	Very Low
21-50	Expansive	Low
51-90	Expansive	Medium
91-130	Expansive	High
>130	Expansive	Very High

* Reference: 2019 California Building Code, Section 1803.5.3

** Reference: 1997 Uniform Building Code, Table 18-I-B.

GEOCON

EXPANSION INDEX TEST RESULTS

ASTM D-4829

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Project No.: T2998-22-01

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SAN JACINTO, CALIFORNIA

Nov 22 Figure B-3

SUMMARY OF LABORATORY
POTENTIAL OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS
AASHTO T289 ASTM D4972 and AASHTO T288 ASTM G187

Sample No.	pH	Resistivity (ohm centimeters)
B1@0-5	9.3	2300

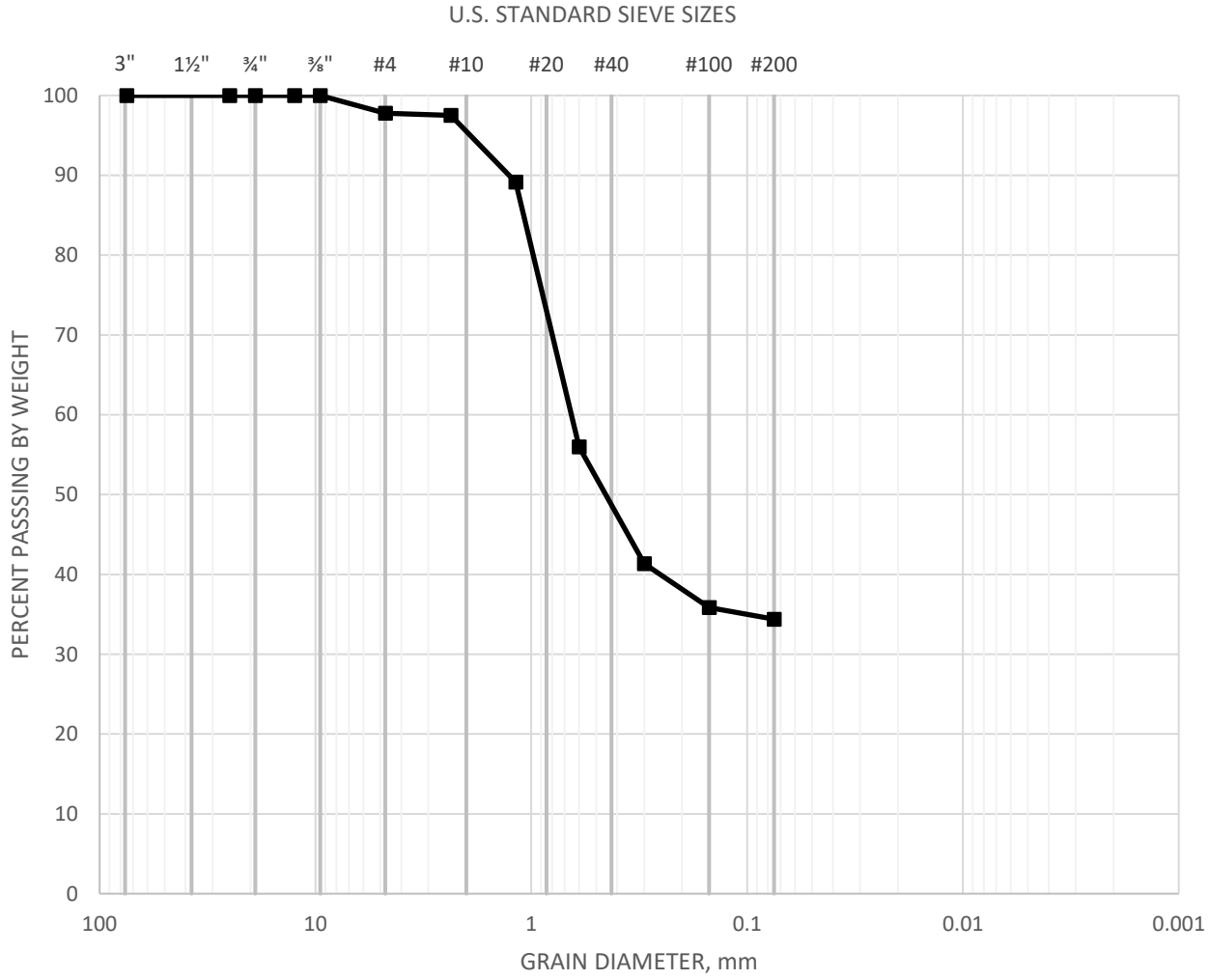
SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS
AASHTO T291 ASTM C1218

Sample No.	Chloride Ion Content (%)
B1@0-5	0.015

SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
AASHTO T290 ASTM C1580

Sample No.	Water Soluble Sulfate (% SO_4)	Sulfate Exposure
B1@0-5	0.001	S0

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P1@1.5-2.0	Silty SAND (SM), dark grayish brown	0.63	0.073	0.073

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D 6913

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Project No.: T2998-22-01

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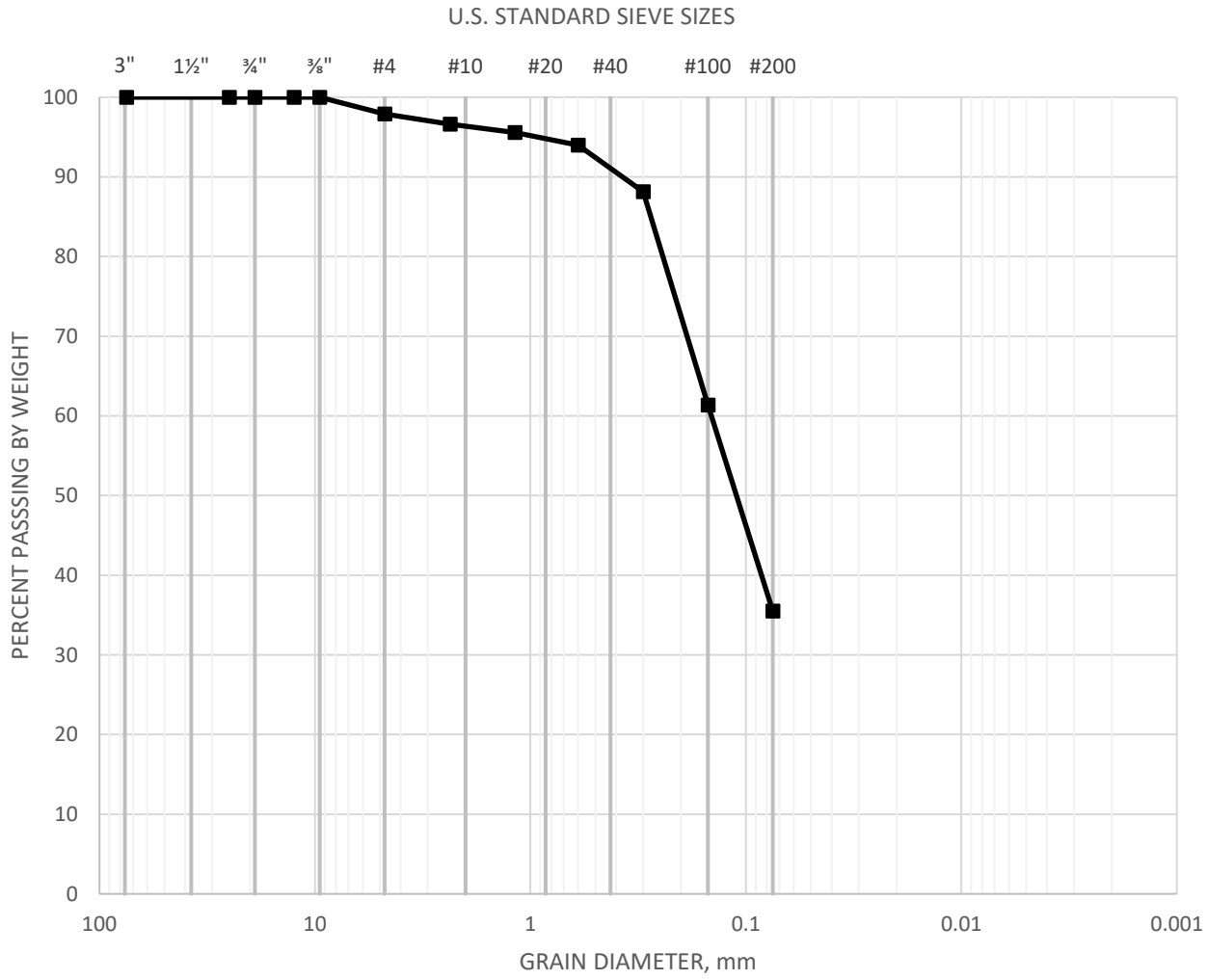
Nov 22 Figure B-5

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P2@9-10	Silty SAND (SM), light grayish brown	0.14	0.073	0.073

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D 6913

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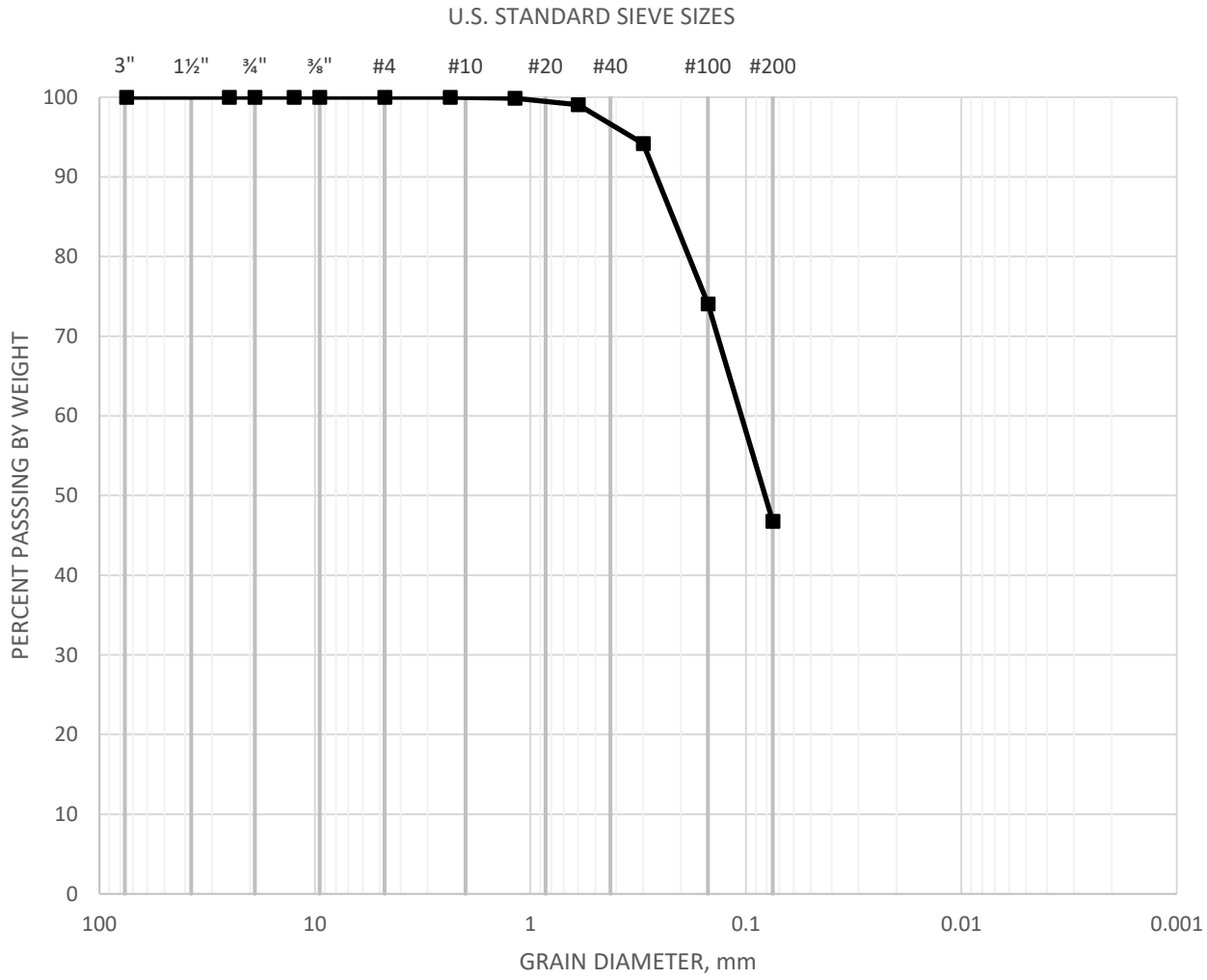
Nov 22 Figure B-6

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P3@1.5-2.0	Silty SAND (SM), dark grayish brown	0.1	0.073	0.073

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D 6913

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Project No.: T2998-22-01

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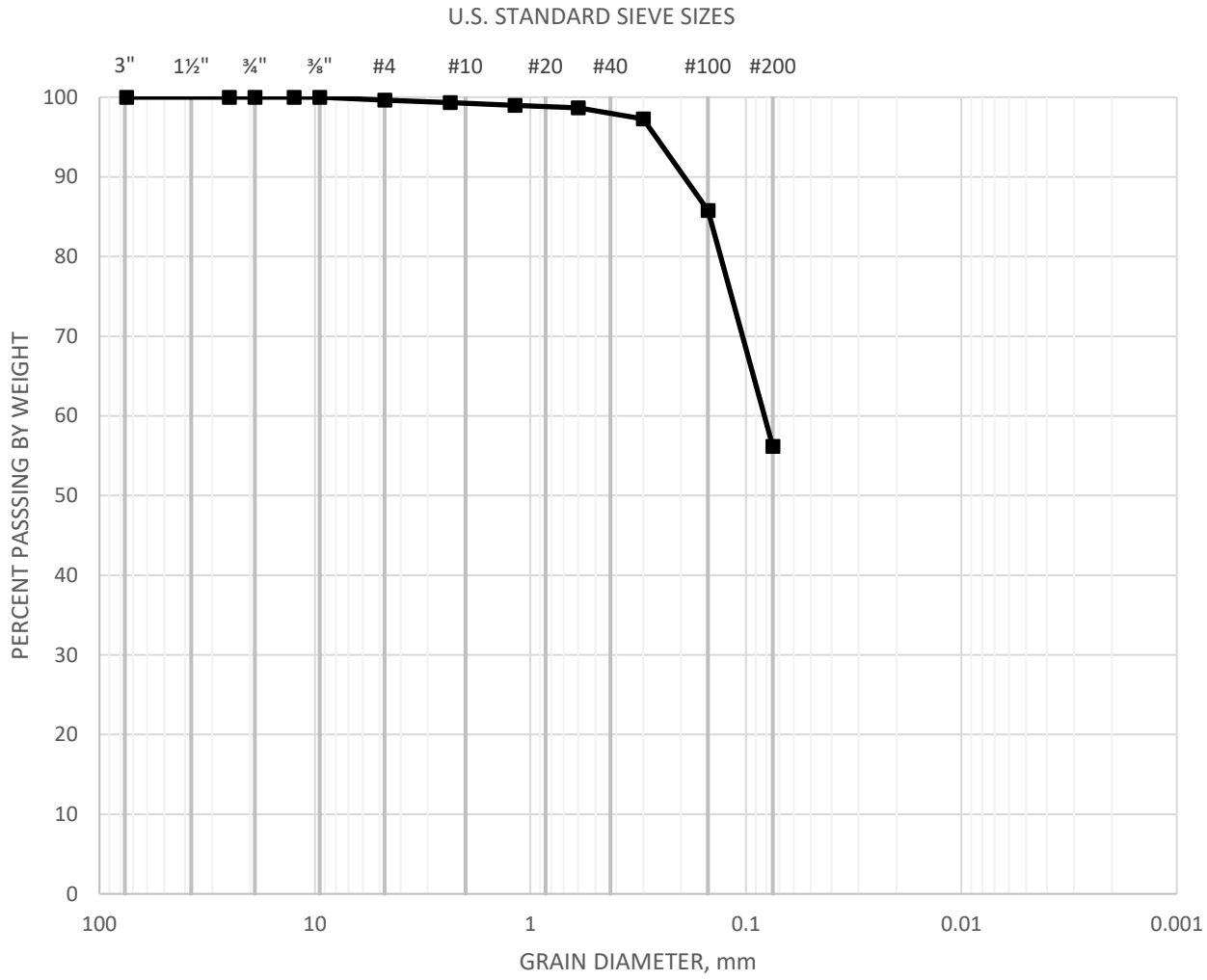
Nov 22 Figure B-7

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P4@1.5-2.0	SILT with Sand (ML), dark grayish brown	0.08	0.073	0.073

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D 6913

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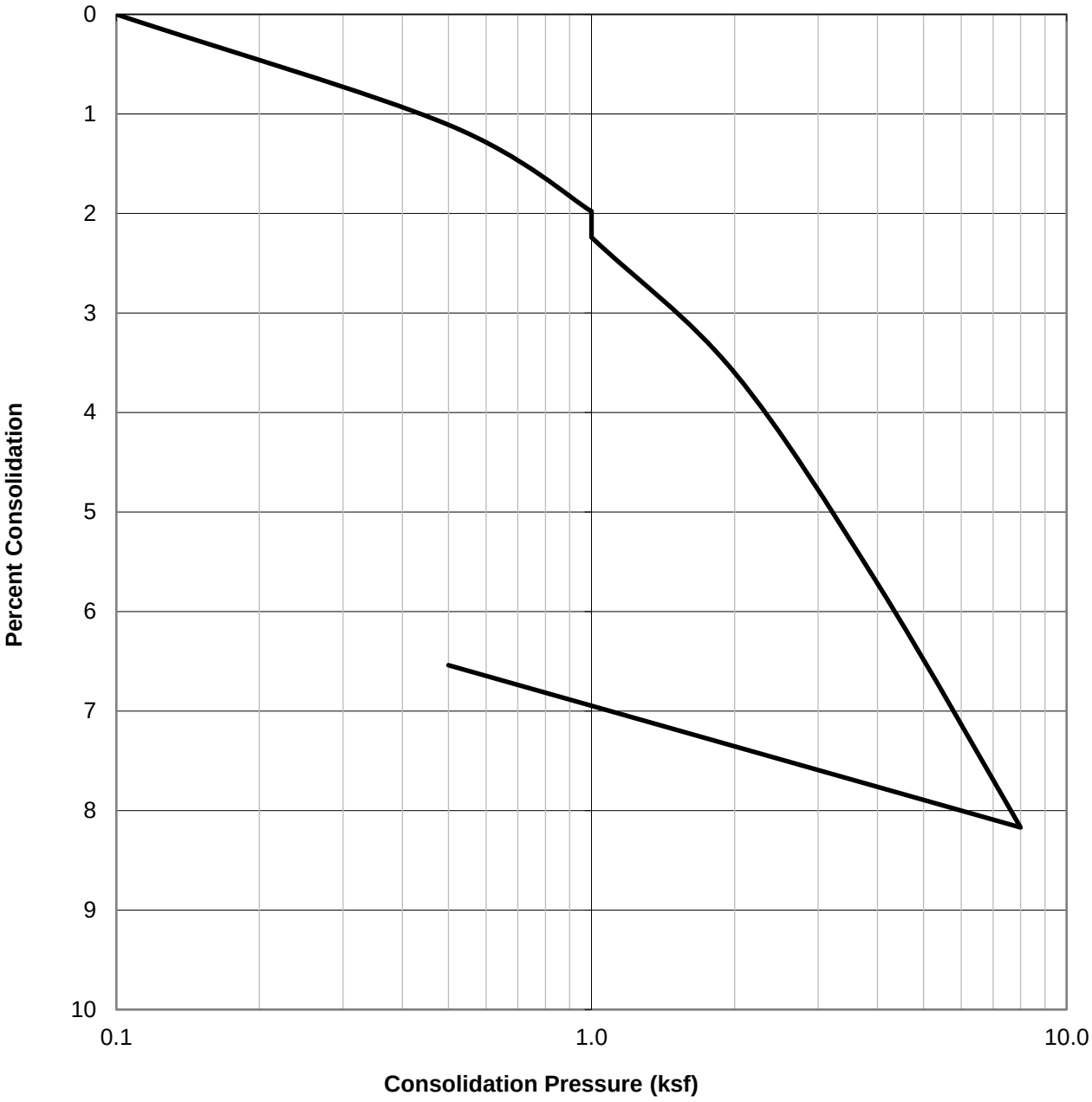
SWC 7TH ST, & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-8

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@5	SILT with Sand (ML), olive brown	95.2	24.2	24.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

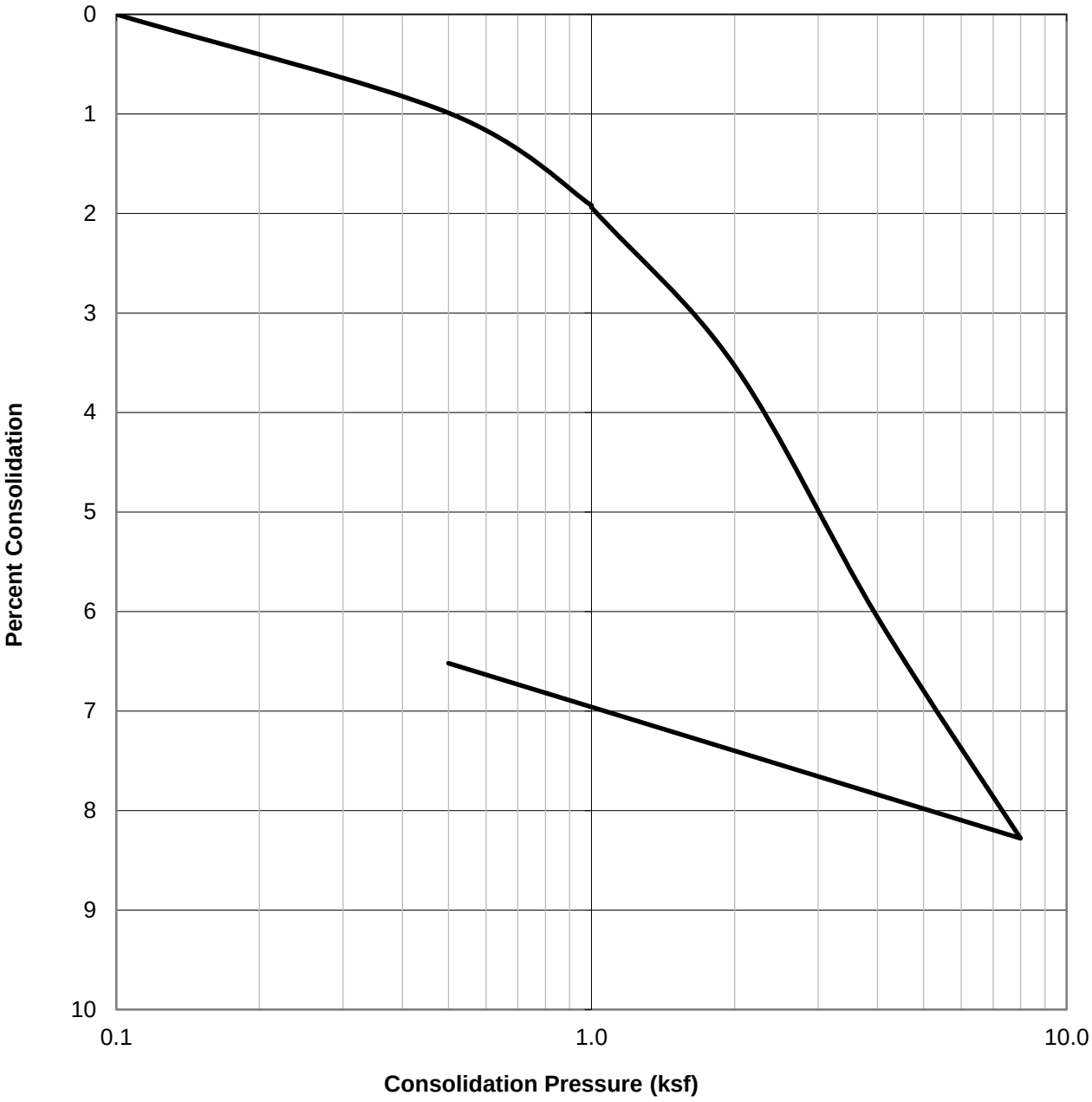
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-9

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@7.5	SILT with Sand (ML), olive brown	99.8	23.2	22.5

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

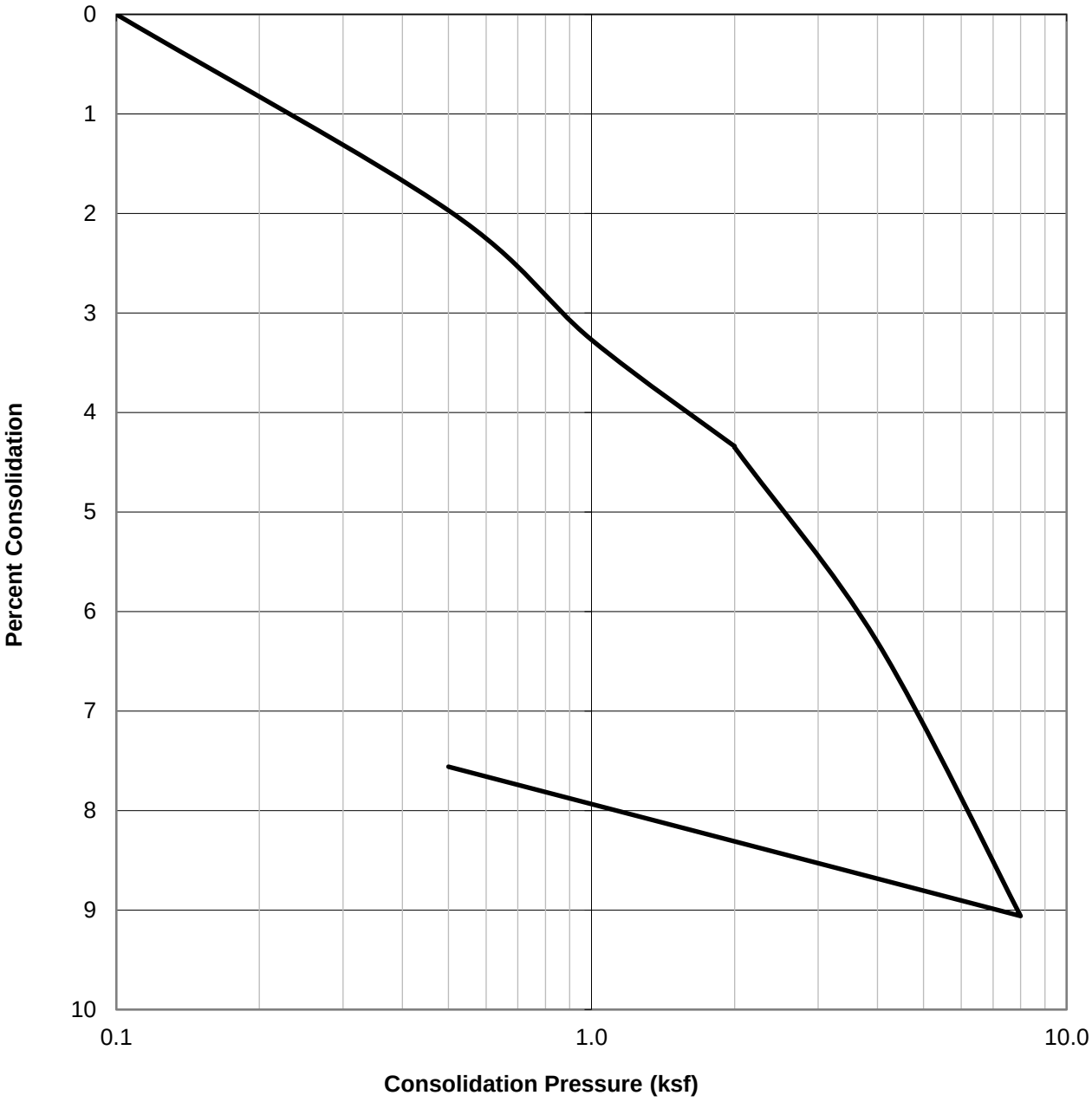
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-10

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@10	SILT with Sand (ML), olive brown	91.4	30.0	27.7

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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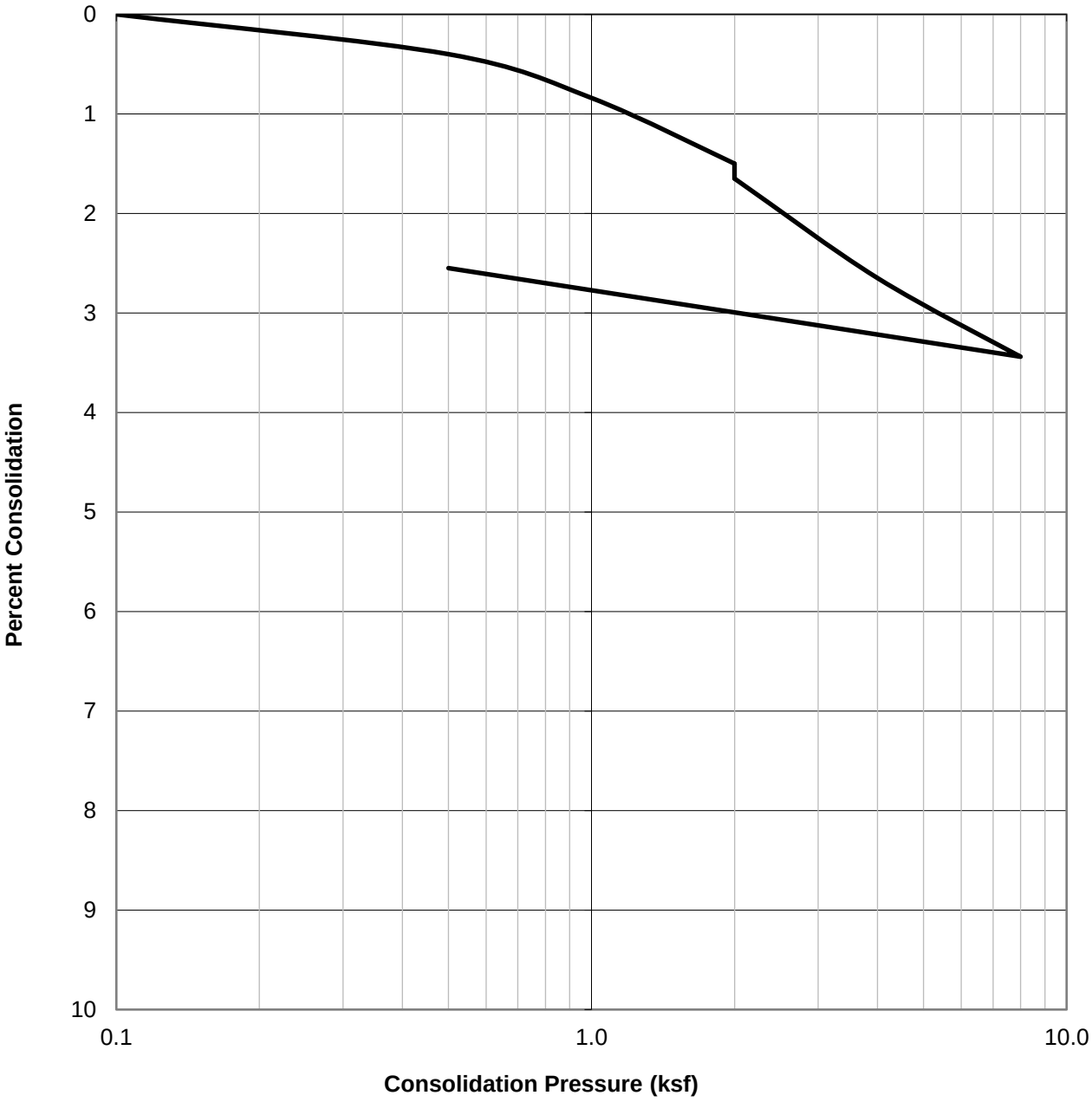
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-11

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@15	Poorly Graded SAND with Silt (SP-SM), light olive gray	92.3	21.0	27.1

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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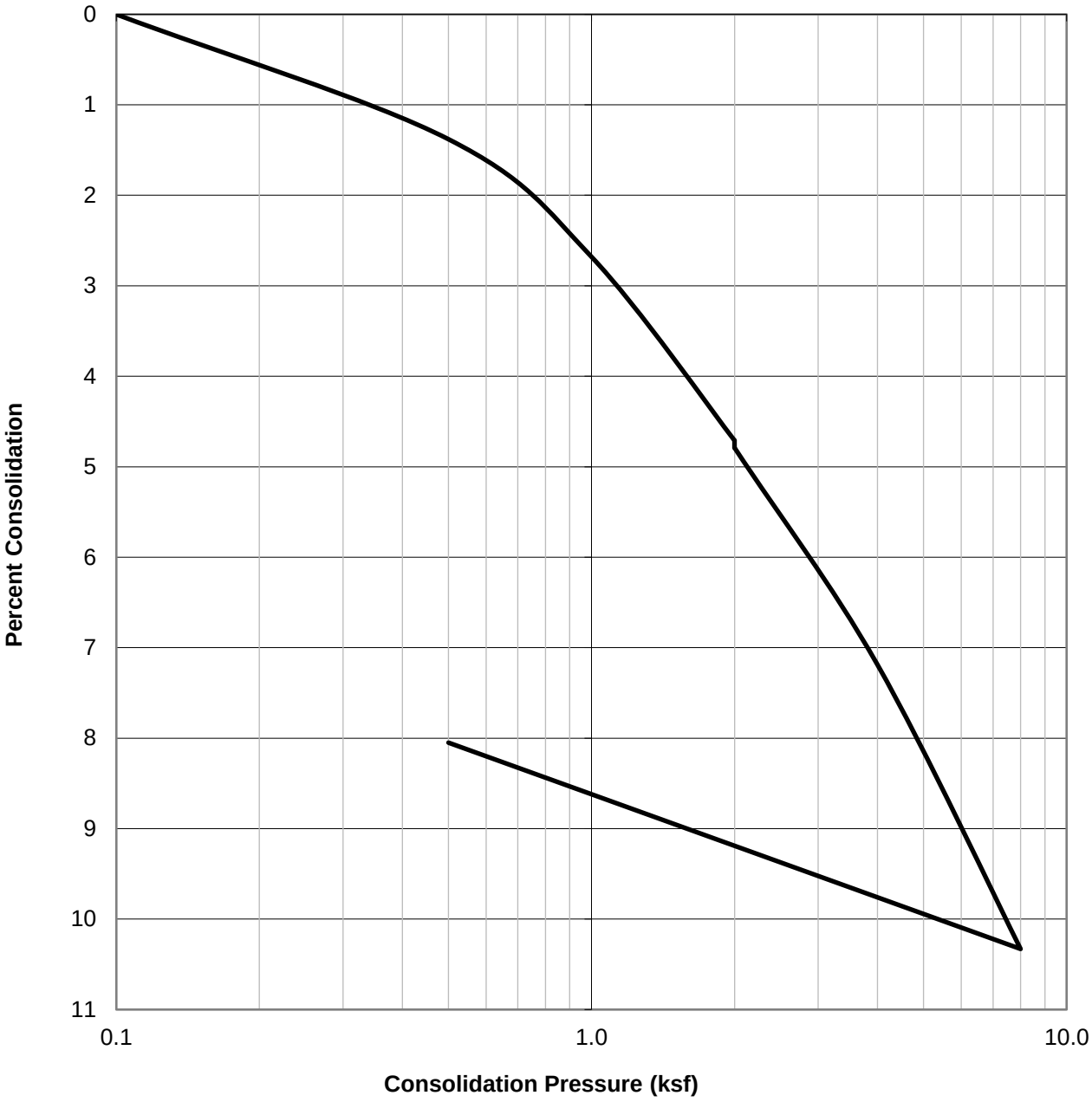
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-12

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@20	CLAY (CL), dark olive gray	90.0	28.7	29.4

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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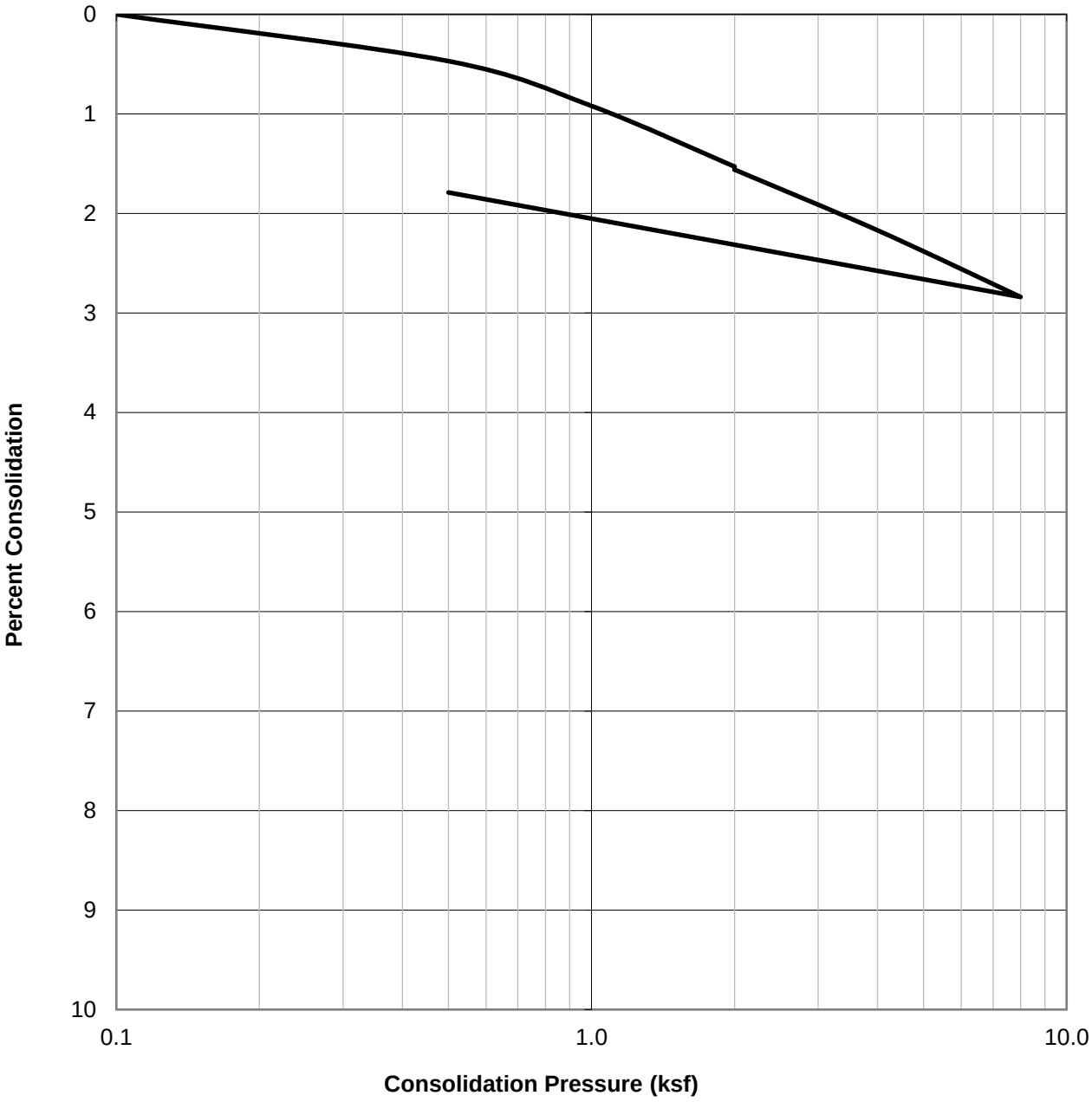
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-13

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@2-7	Silty SAND (SM), olive gray	109.3	11.1	19.0

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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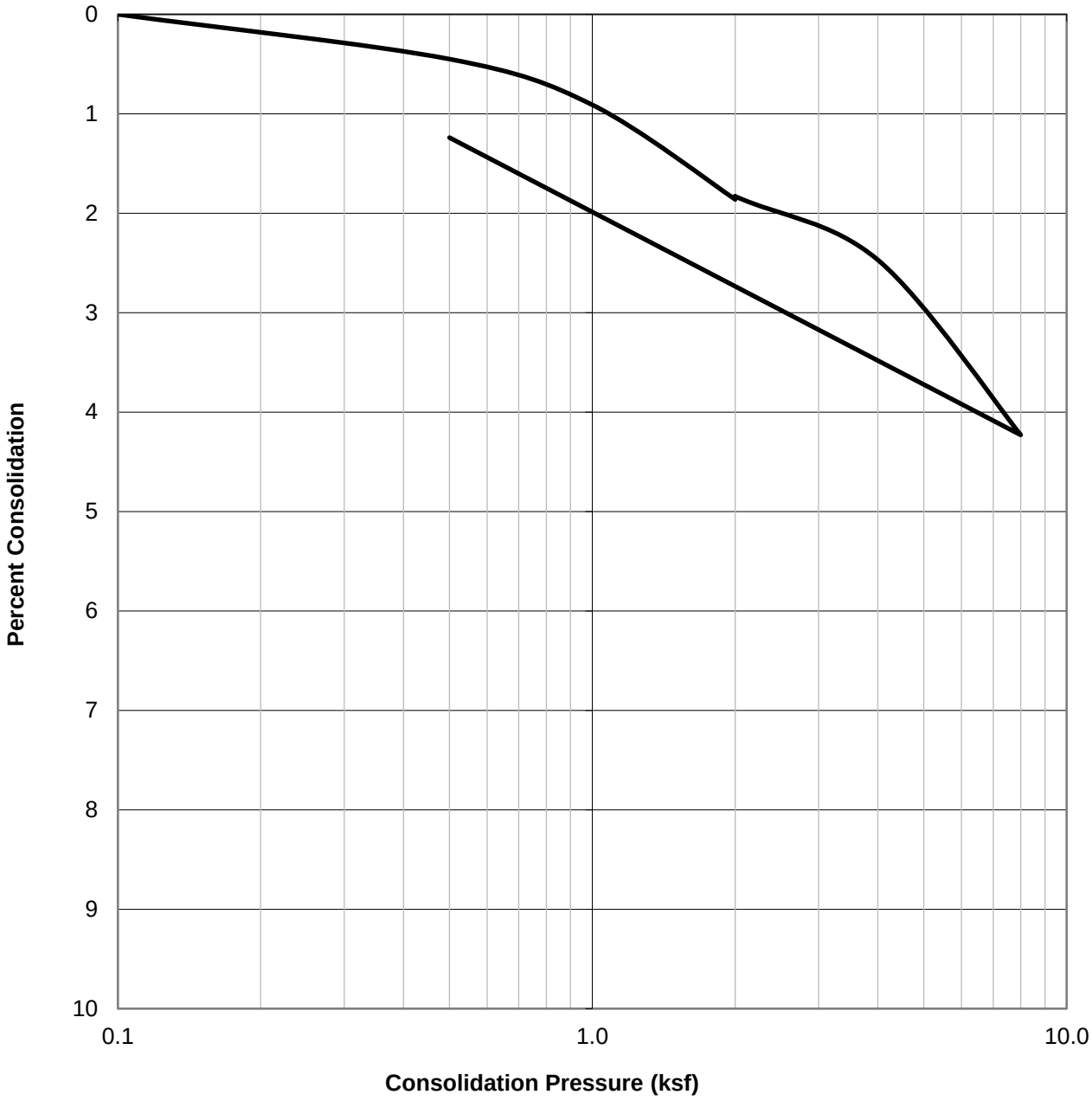
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-14

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@10	Silty SAND (SM), olive gray	98.3	22.3	33.0

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by:

Project No.: T2998-22-01

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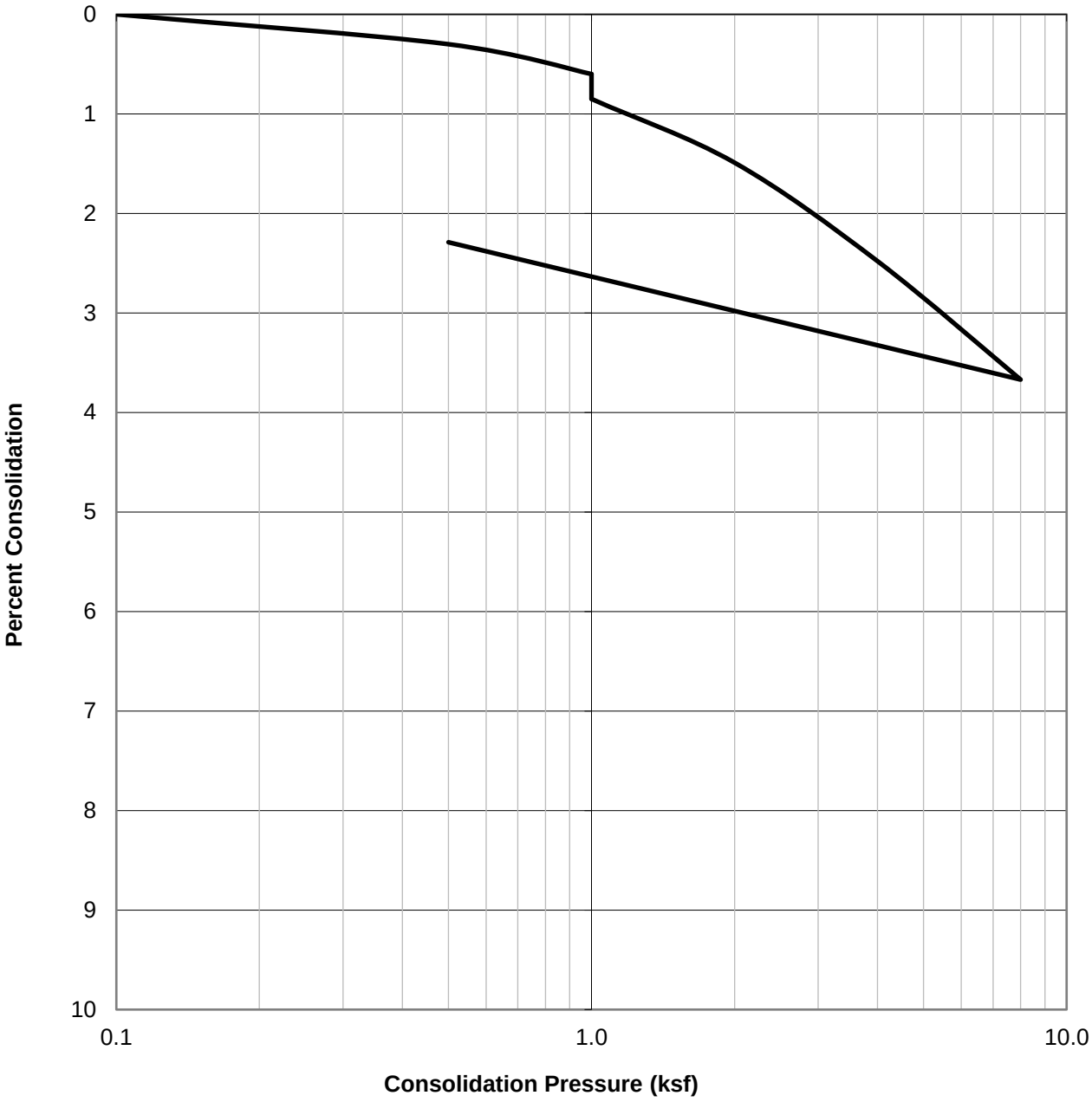
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-15

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@5	Silty SAND (SM), olive gray	105.9	15.1	18.7

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by:

Project No.: T2998-22-01

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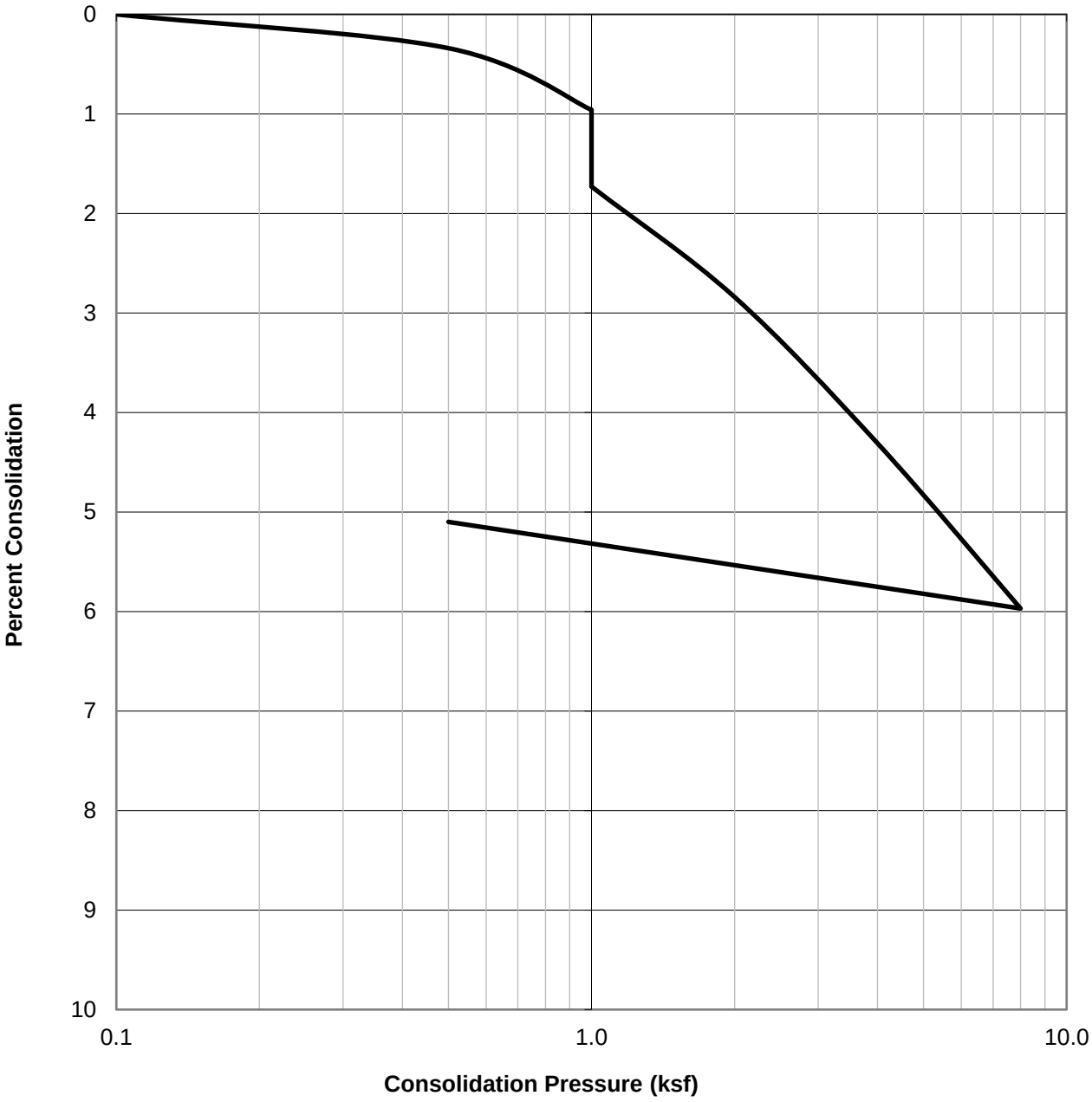
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-16

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@7.5	Silty SAND (SM), olive gray	101.5	9.6	18.9

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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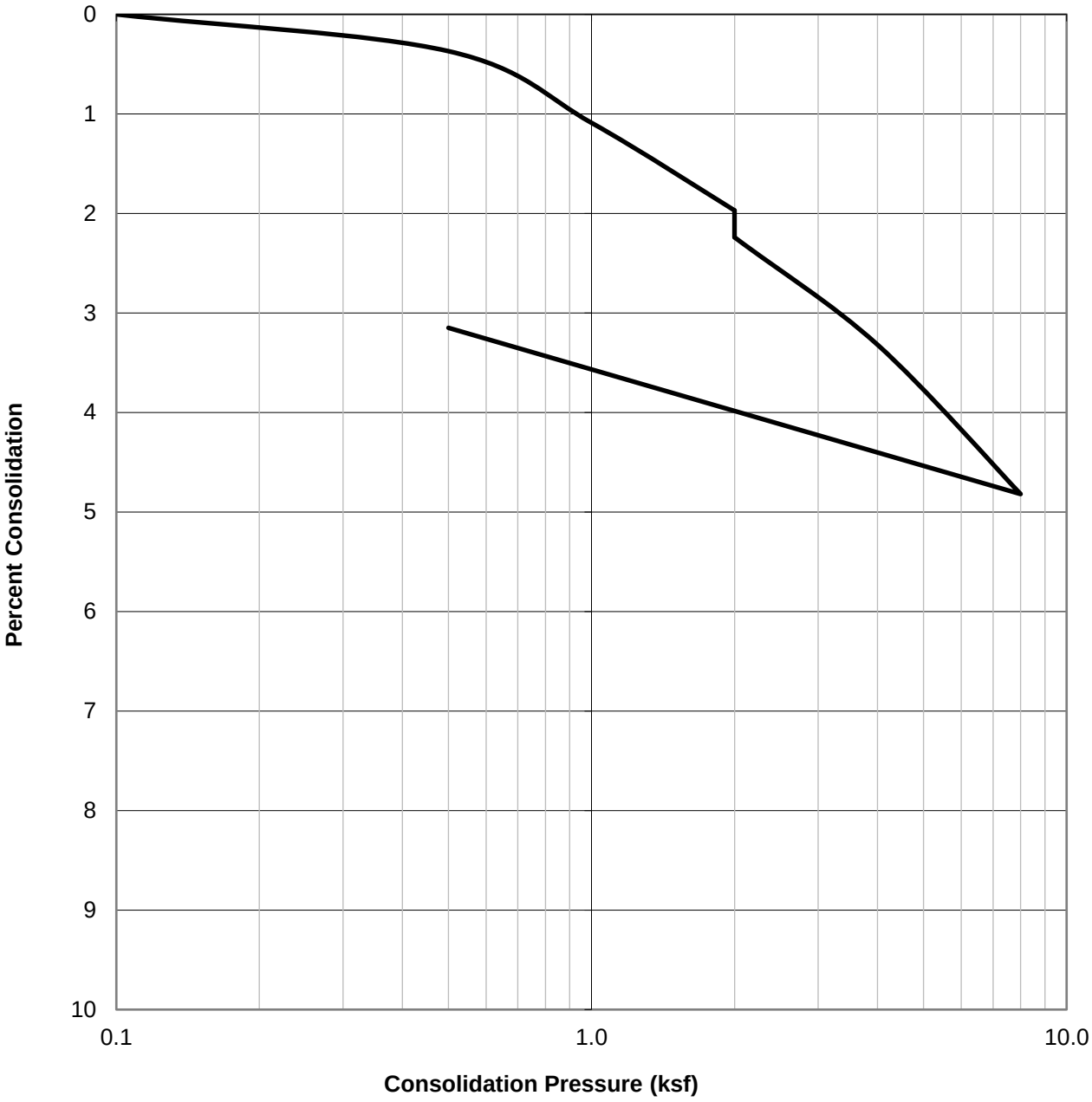
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-17

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@10	Silty SAND (SM), dark olive gray	92.9	19.3	28.3

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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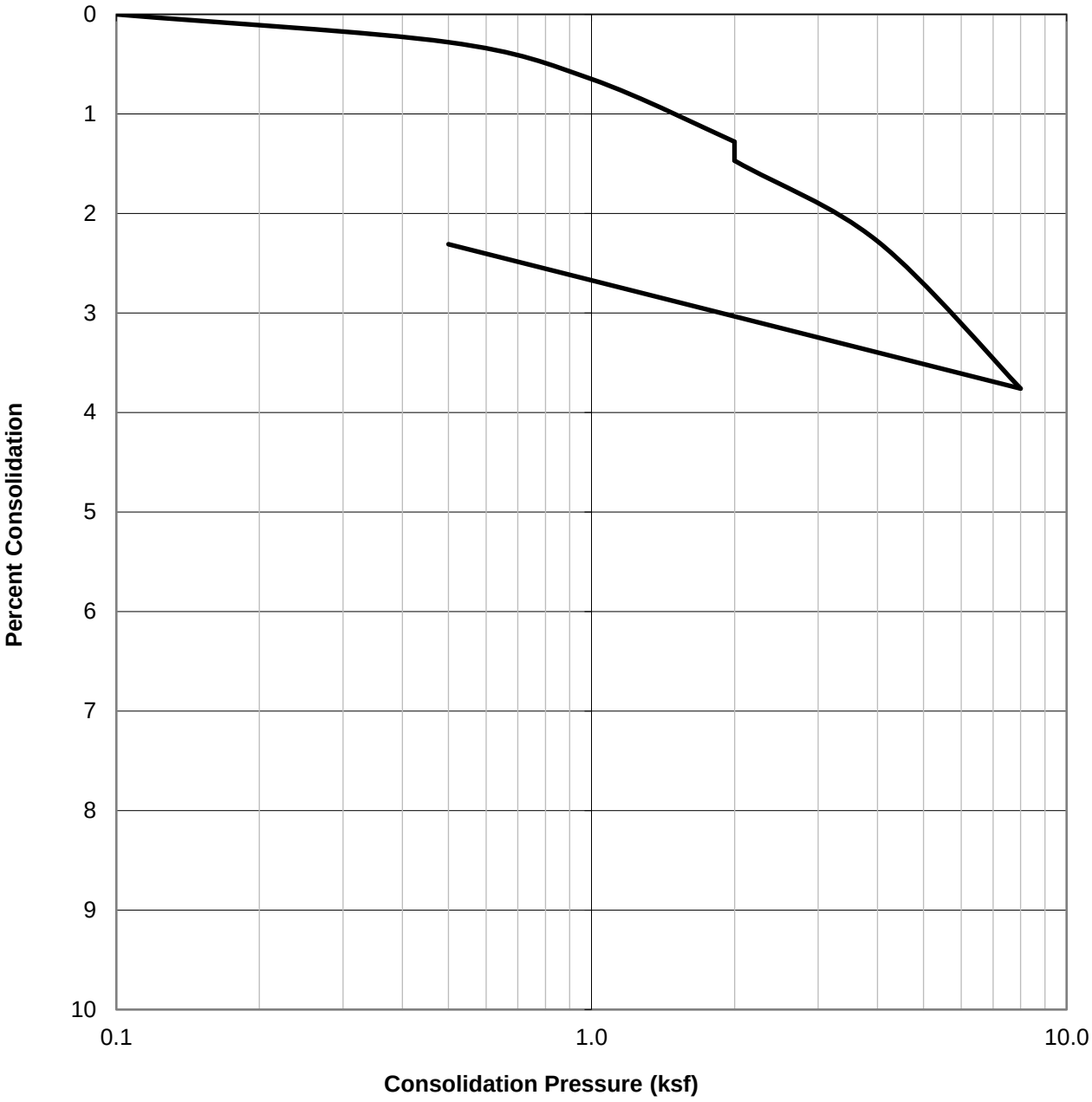
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-18

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@2-7	Silty SAND (SM), dark brown	109.0	9.5	20.9

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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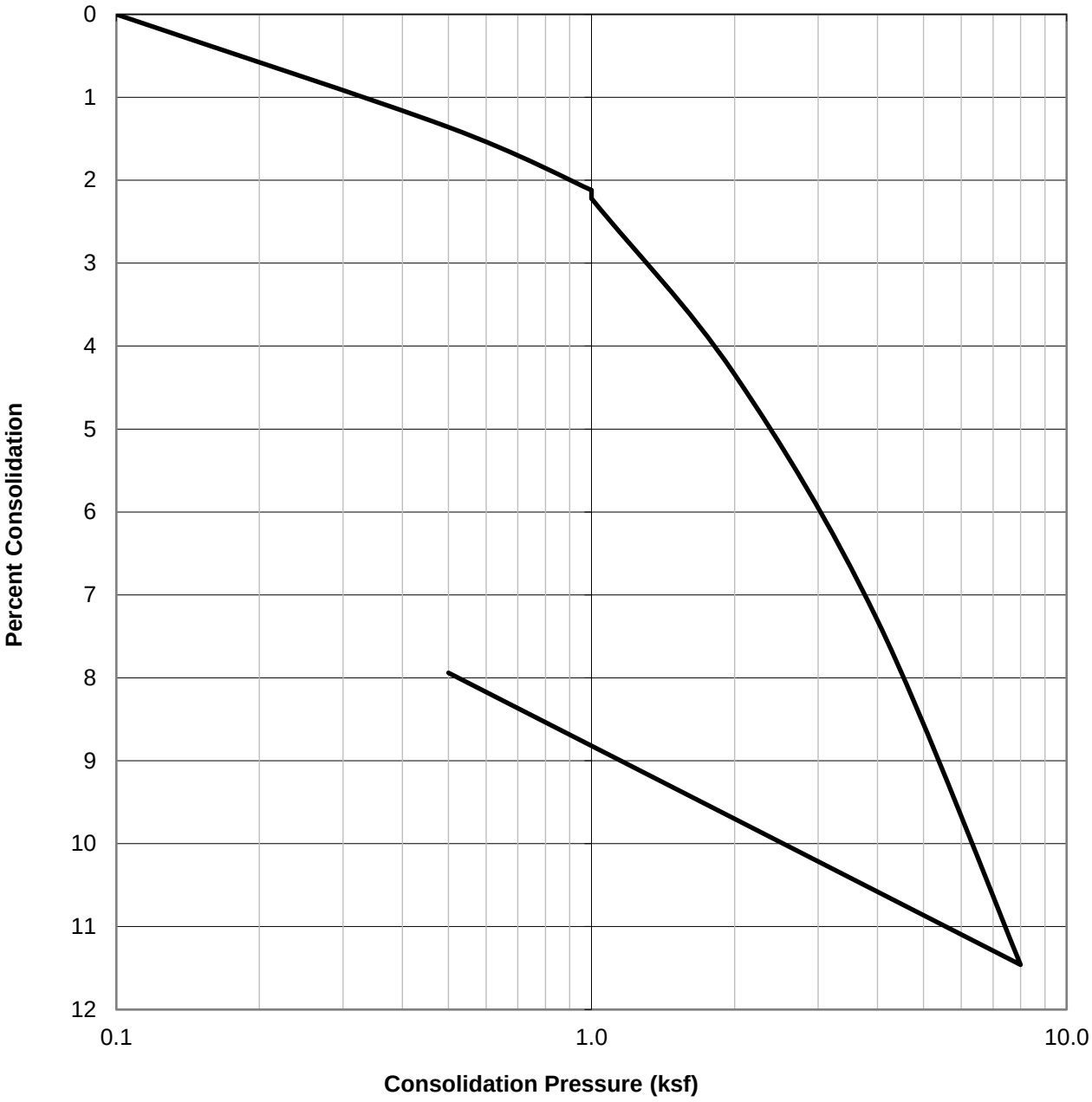
Nov 22 Figure B-19

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@5	Silty SAND (SM), dark olive gray	81.1	38.3	36.9

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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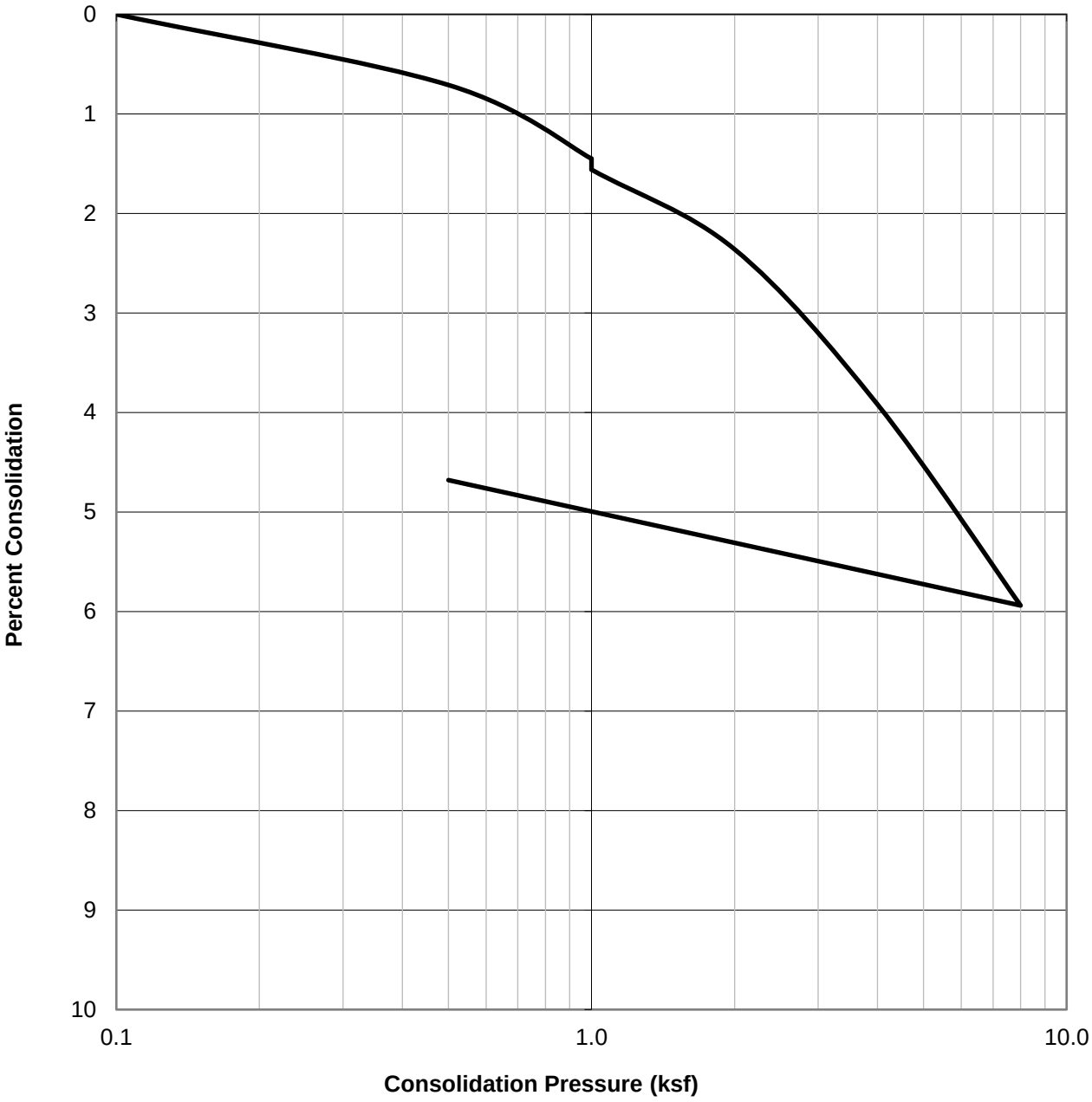
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-20

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@7.5	Silty SAND (SM), olive brown	102.9	19.1	21.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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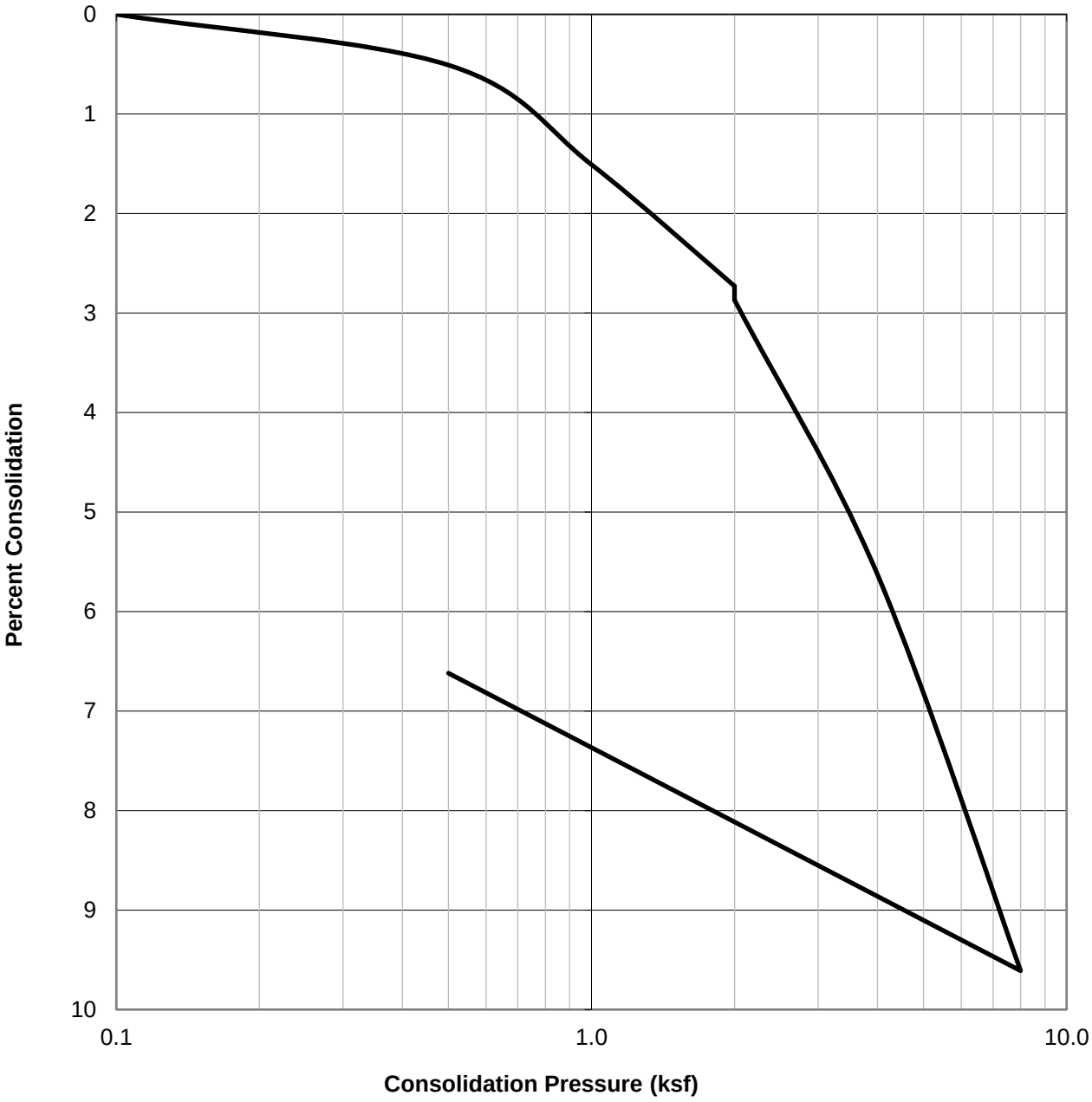
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-21

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@10	CLAY (CL), olive brown	90.5	31.6	29.9

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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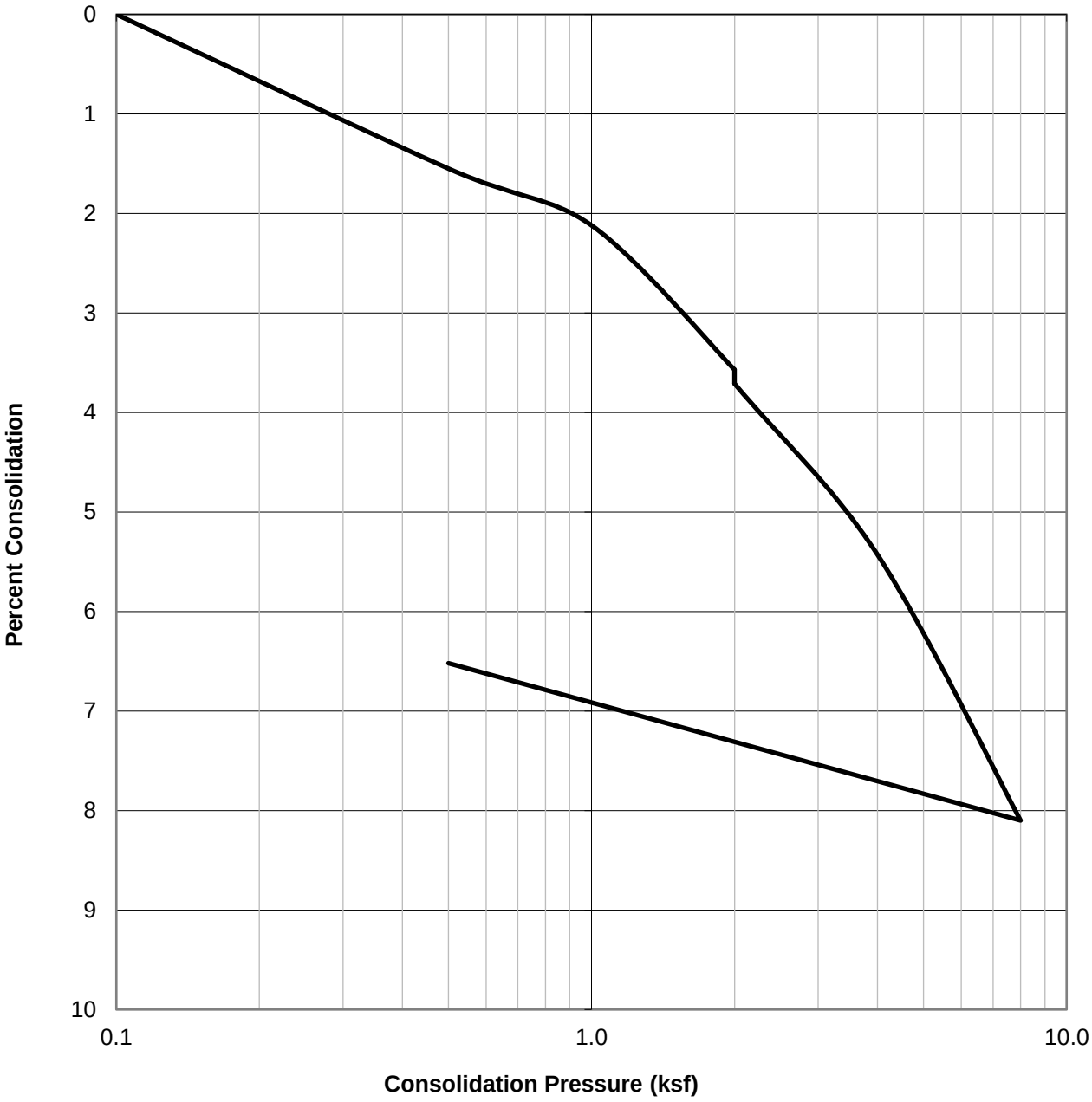
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-22

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@20	Silty SAND (SM), dark olive gray	103.6	21.5	20.6

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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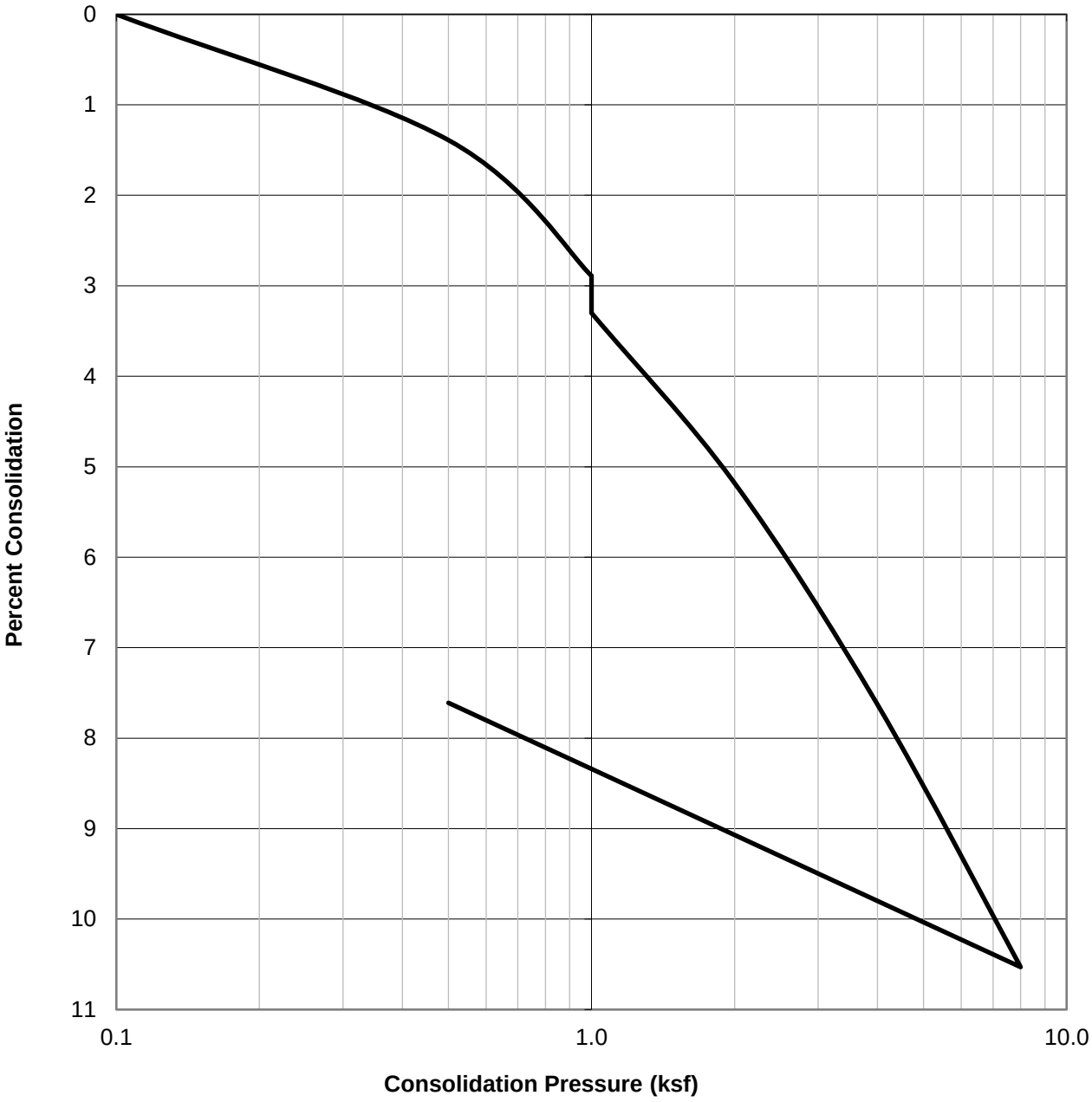
Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-23

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@5	Silty SAND (SM), olive brown	79.9	24.1	37.4

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
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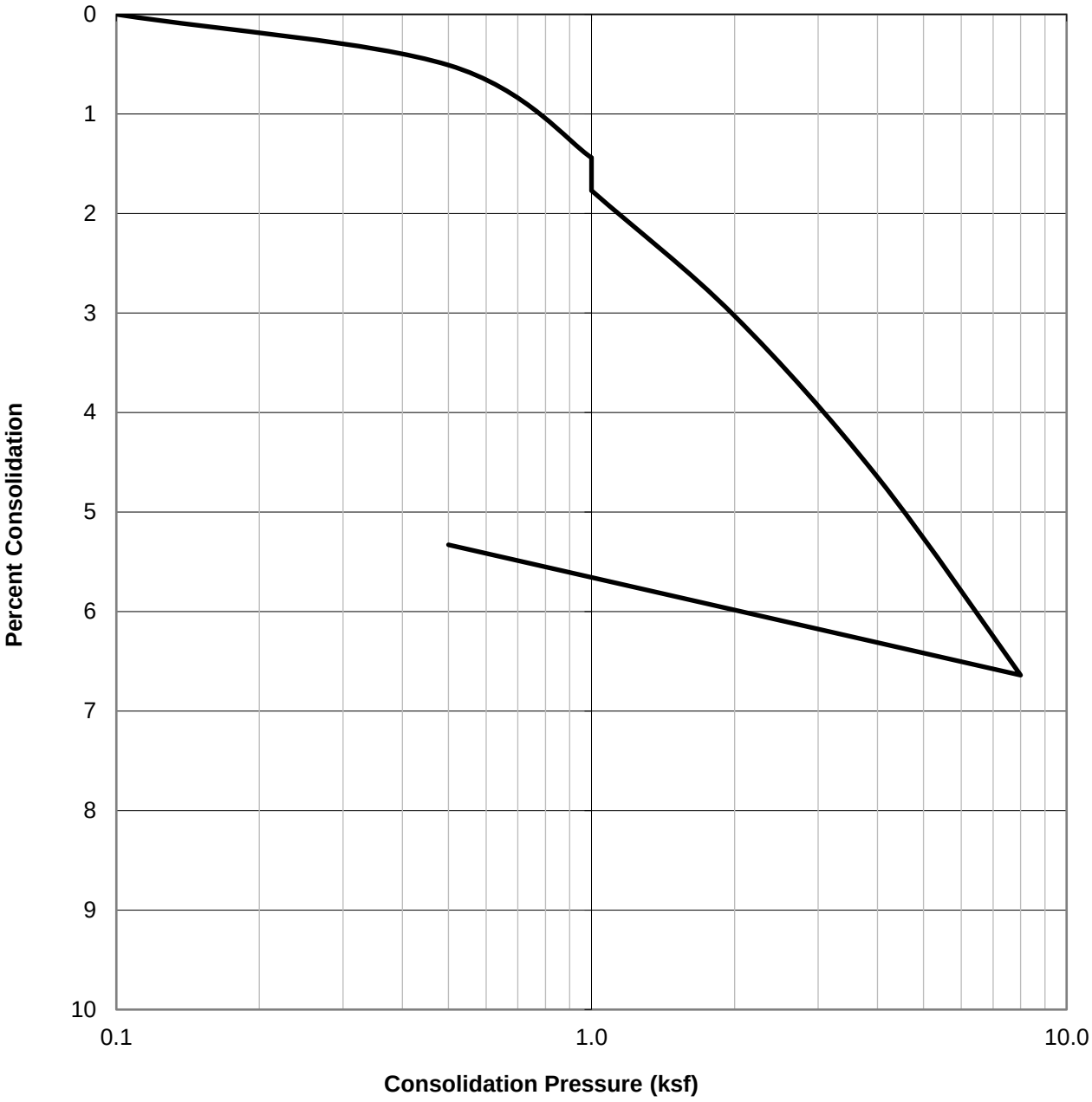
Nov 22

Figure B-24

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@7.5	Silty SAND (SM), dark brown	101.4	19.1	20.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

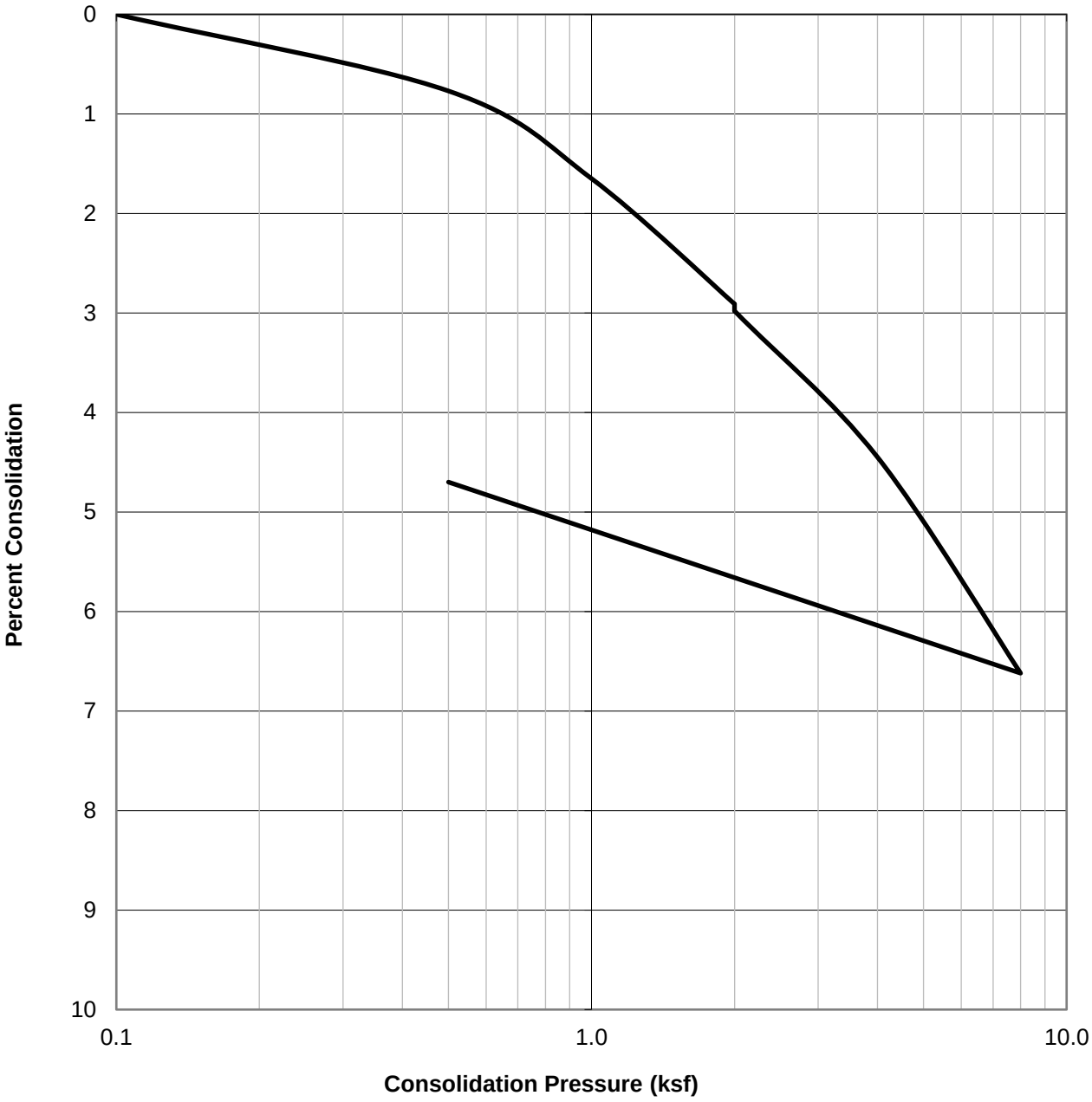
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-25

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@10	Clayey SAND (SC), dark olive brown	92.1	22.3	27.5

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

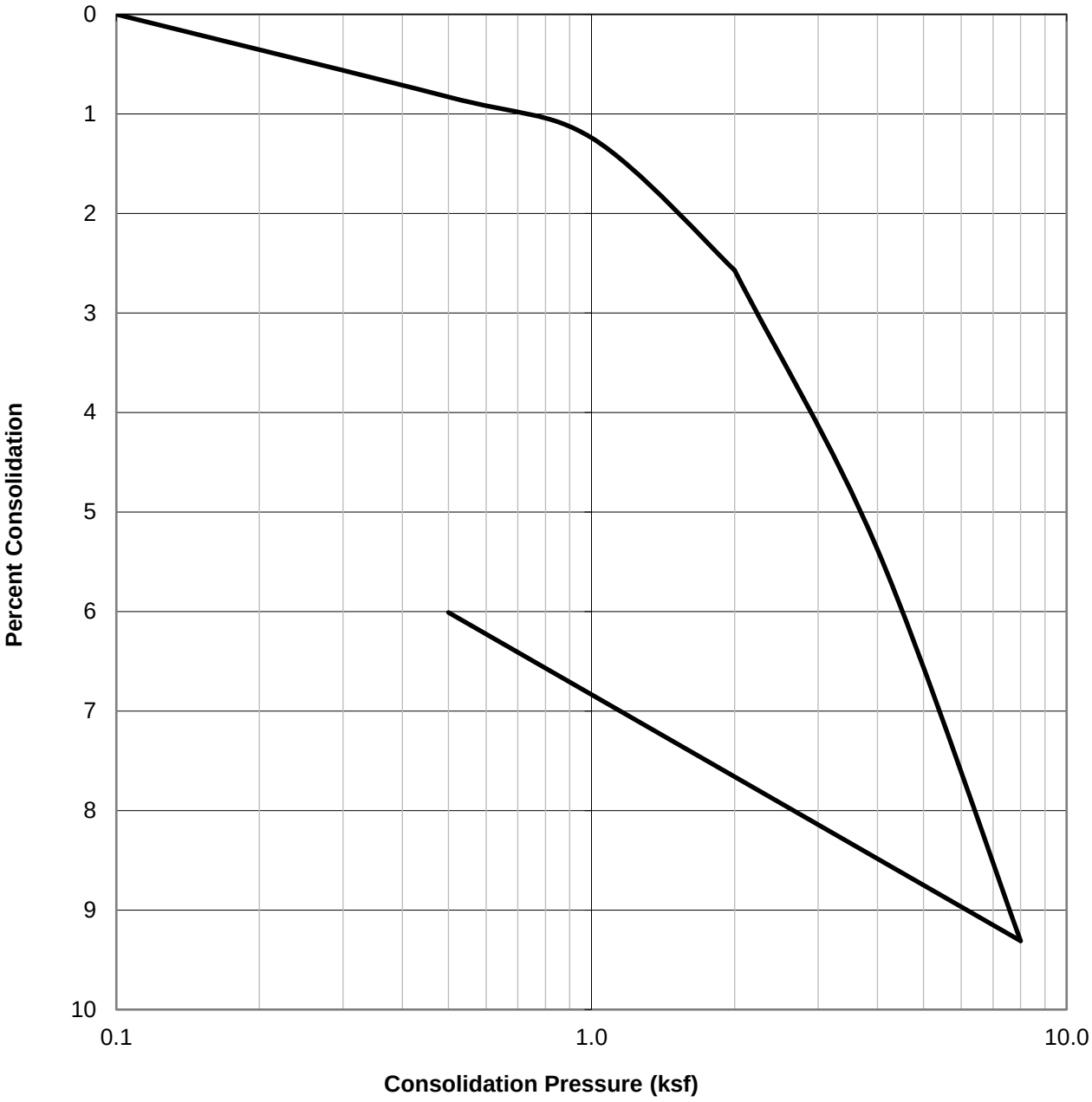
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-26

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@15	Lean CLAY (CL), olive gray	83.9	37.1	35.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

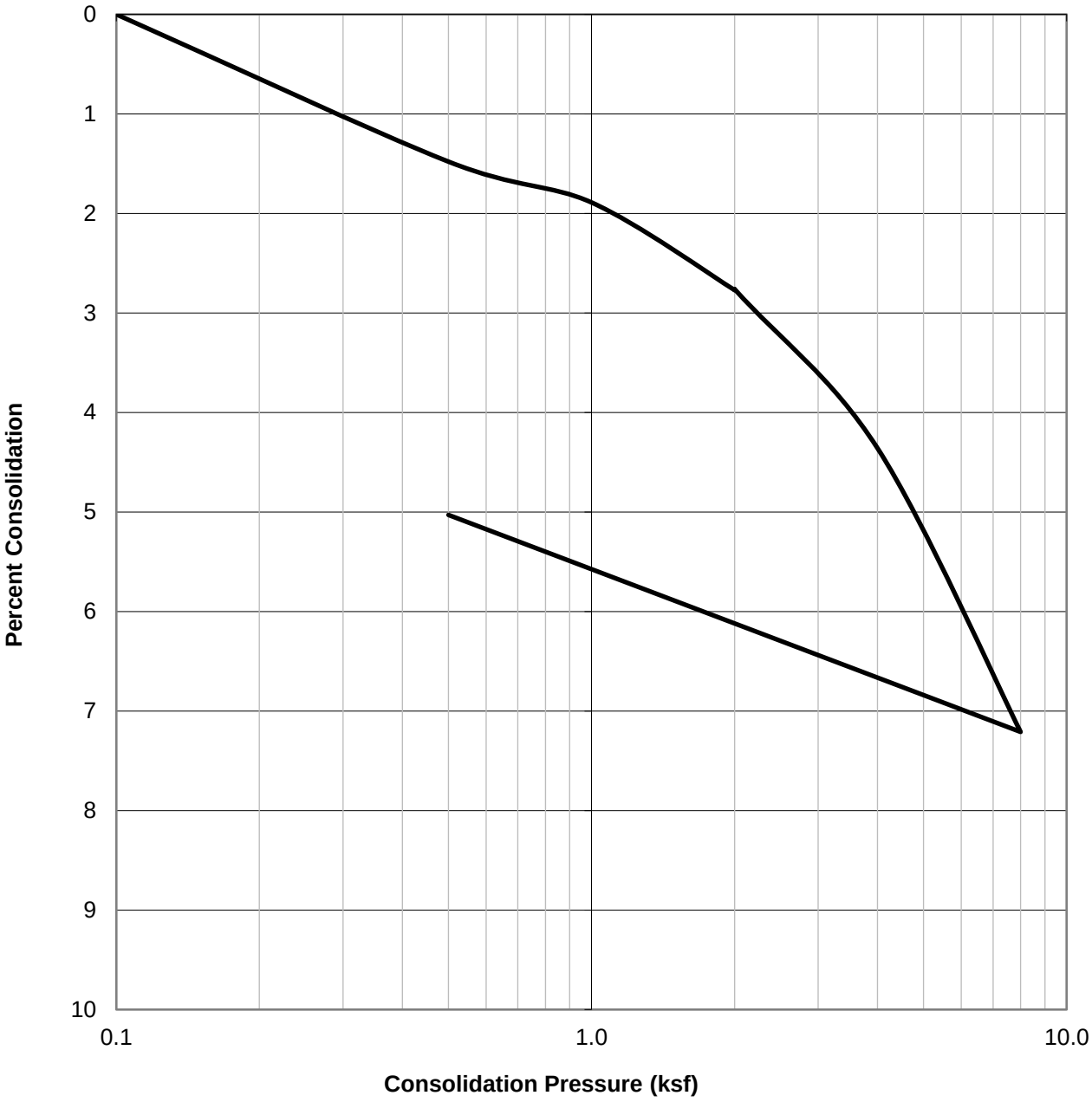
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-27

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@20	Lean CLAY (CL), dark brown	99.7	25.3	26.8

GEOCON

CONSOLIDATION TEST RESULTS

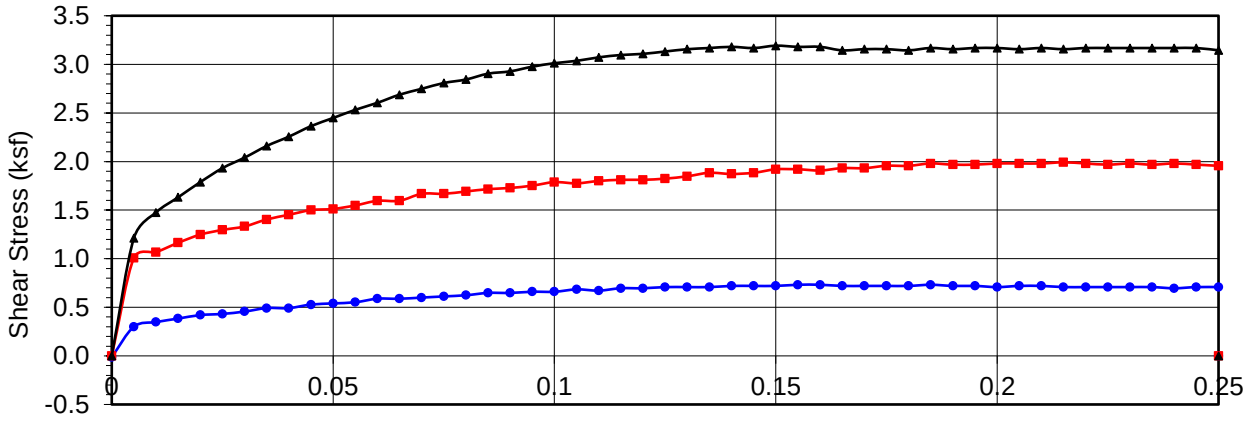
ASTM D-2435

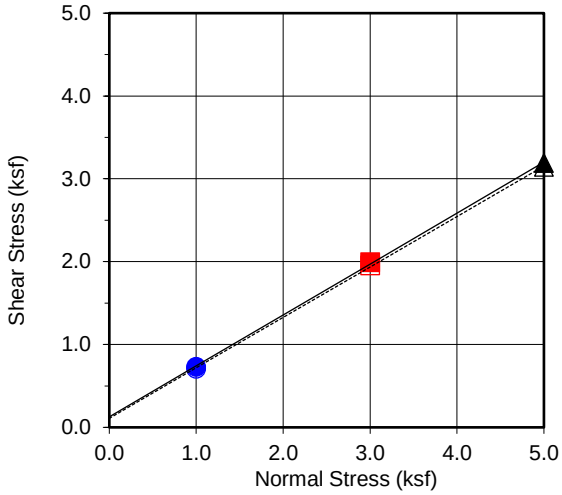
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-28





Boring No.	**B2**
Sample No.	**B2@2.5**
Depth (ft)	**2.5**
Sample Type:	Ring

Soil Identification:		
Silty SAND (SM), light brown		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	127	31.6
Ultimate	109	31.3

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.73	■ 1.99	▲ 3.19
Shear Stress @ End of Test (ksf)	○ 0.71	□ 1.96	△ 3.14
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	12.2	17.8	9.8
Initial Dry Density (pcf)	98.9	101.3	105.6
Initial Degree of Saturation (%)	46.8	72.2	44.5
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	24.2	14.2	21.9

GEOCON

DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
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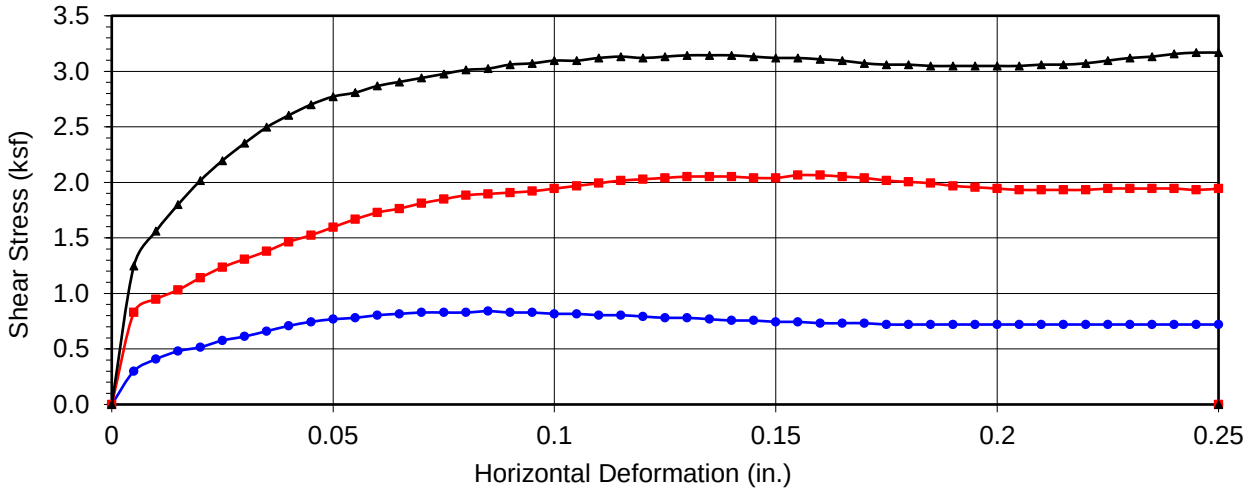
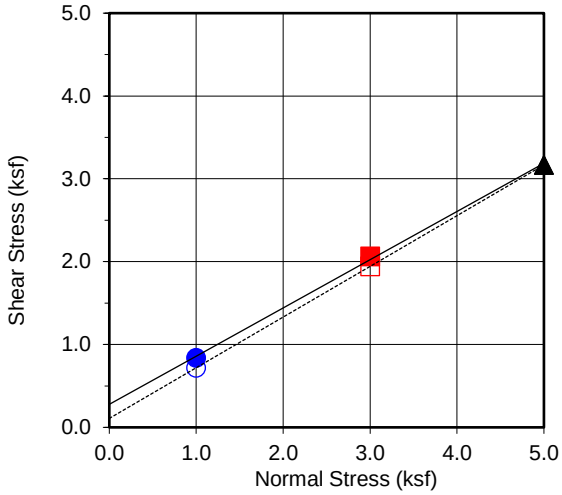
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-29





Boring No.	**B2**
Sample No.	**B2@2-7**
Depth (ft)	**2-7**
Sample Type:	Bulk

Soil Identification:

Silty SAND (SM), olive gray

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	278	30.2
Ultimate	108	31.5

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.84	■ 2.06	▲ 3.17
Shear Stress @ End of Test (ksf)	○ 0.72	□ 1.94	△ 3.17
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	10.1	10.1	10.1
Initial Dry Density (pcf)	110.1	110.1	110.1
Initial Degree of Saturation (%)	51.3	51.6	51.6
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	17.1	15.3	16.0

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DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
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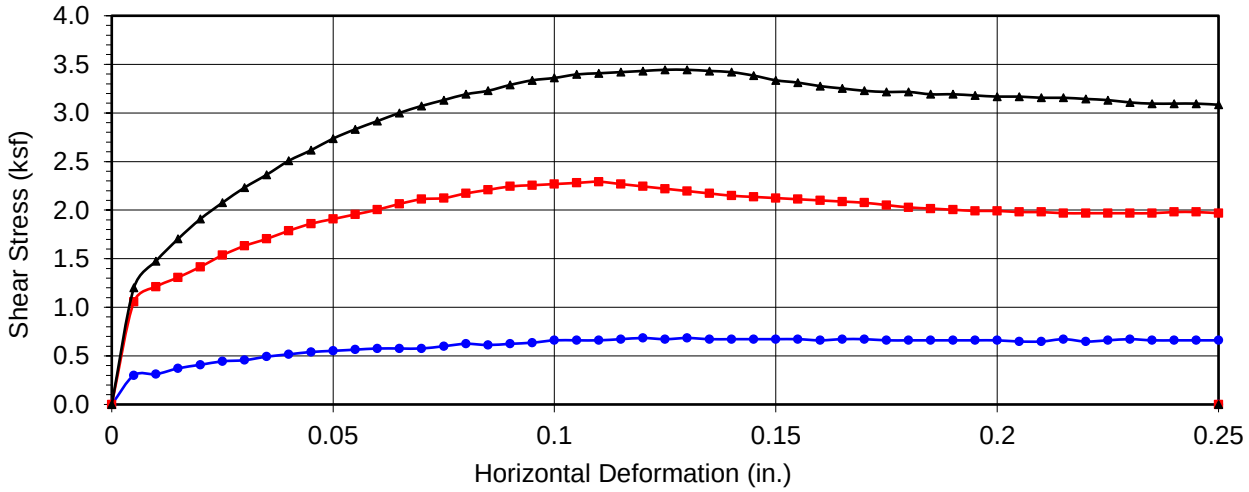
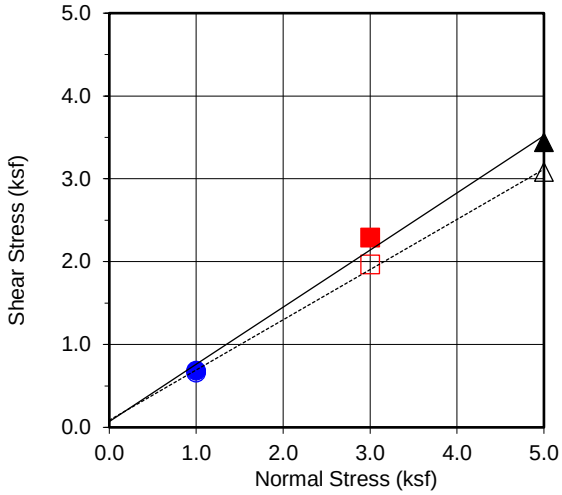
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-30





Boring No.	**B3**
Sample No.	**B3@2.5**
Depth (ft)	**2.5**
Sample Type:	ring

Soil Identification:		
Silty SAND (SM), brown		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	70	34.6
Ultimate	86	31.2

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.68	■ 2.29	▲ 3.44
Shear Stress @ End of Test (ksf)	○ 0.66	□ 1.97	△ 3.08
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	14.9	17.3	15.0
Initial Dry Density (pcf)	97.8	108.0	104.7
Initial Degree of Saturation (%)	55.8	83.1	66.2
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	21.8	19.6	16.8

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DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
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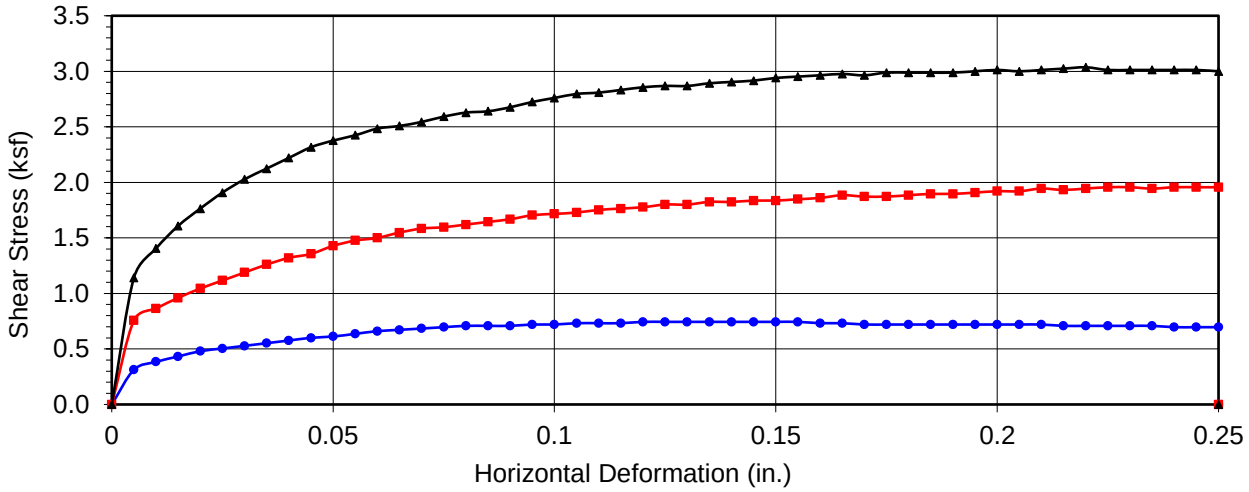
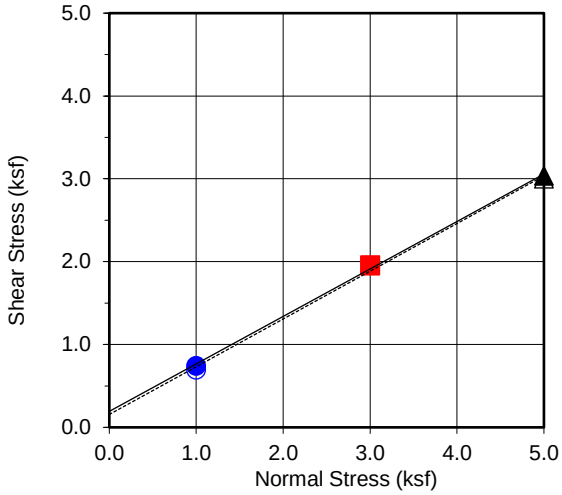
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-31





Boring No.	**B4**
Sample No.	**B4@2-7**
Depth (ft)	**2-7**
Sample Type:	Bulk

Soil Identification:

Silty SAND (SM), dark brown

Strength Parameters

	C (psf)	ϕ (°)
Peak	193	29.8
Ultimate	156	29.9

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.74	■ 1.96	▲ 3.04
Shear Stress @ End of Test (ksf)	○ 0.70	□ 1.96	△ 3.00
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	9.1	8.9	8.9
Initial Dry Density (pcf)	109.9	109.9	109.9
Initial Degree of Saturation (%)	45.9	45.1	45.0
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	16.4	15.2	14.9

GEOCON

DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-32

APPENDIX C

APPENDIX C

RECOMMENDED GRADING SPECIFICATIONS

FOR

SWC 7TH STREET AND CAWSTON AVENUE
SAN JACINTO, CALIFORNIA

PROJECT NO. T2998-22-01

RECOMMENDED GRADING SPECIFICATIONS

1. GENERAL

1.1 These Recommended Grading Specifications shall be used in conjunction with the Geotechnical Report for the project prepared by Geocon. The recommendations contained in the text of the Geotechnical Report are a part of the earthwork and grading specifications and shall supersede the provisions contained hereinafter in the case of conflict.

1.2 Prior to the commencement of grading, a geotechnical consultant (Consultant) shall be employed for the purpose of observing earthwork procedures and testing the fills for substantial conformance with the recommendations of the Geotechnical Report and these specifications. The Consultant should provide adequate testing and observation services so that they may assess whether, in their opinion, the work was performed in substantial conformance with these specifications. It shall be the responsibility of the Contractor to assist the Consultant and keep them apprised of work schedules and changes so that personnel may be scheduled accordingly.

1.3 It shall be the sole responsibility of the Contractor to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications and the approved grading plans. If, in the opinion of the Consultant, unsatisfactory conditions such as questionable soil materials, poor moisture condition, inadequate compaction, and/or adverse weather result in a quality of work not in conformance with these specifications, the Consultant will be empowered to reject the work and recommend to the Owner that grading be stopped until the unacceptable conditions are corrected.

2. DEFINITIONS

2.1 **Owner** shall refer to the owner of the property or the entity on whose behalf the grading work is being performed and who has contracted with the Contractor to have grading performed.

2.2 **Contractor** shall refer to the Contractor performing the site grading work.

2.3 **Civil Engineer** or **Engineer of Work** shall refer to the California licensed Civil Engineer or consulting firm responsible for preparation of the grading plans, surveying and verifying as-graded topography.

2.4 **Consultant** shall refer to the soil engineering and engineering geology consulting firm retained to provide geotechnical services for the project.

2.5 **Soil Engineer** shall refer to a California licensed Civil Engineer retained by the Owner, who is experienced in the practice of geotechnical engineering. The Soil Engineer shall be responsible for having qualified representatives on-site to observe and test the Contractor's work for conformance with these specifications.

2.6 **Engineering Geologist** shall refer to a California licensed Engineering Geologist retained by the Owner to provide geologic observations and recommendations during the site grading.

2.7 **Geotechnical Report** shall refer to a soil report (including all addenda) which may include a geologic reconnaissance or geologic investigation that was prepared specifically for the development of the project for which these Recommended Grading Specifications are intended to apply.

3. MATERIALS

3.1 Materials for compacted fill shall consist of any soil excavated from the cut areas or imported to the site that, in the opinion of the Consultant, is suitable for use in construction of fills. In general, fill materials can be classified as *soil* fills, *soil-rock* fills or *rock* fills, as defined below.

3.1.1 **Soil fills** are defined as fills containing no rocks or hard lumps greater than 12 inches in maximum dimension and containing at least 40 percent by weight of material smaller than ¾ inch in size.

3.1.2 **Soil-rock fills** are defined as fills containing no rocks or hard lumps larger than 4 feet in maximum dimension and containing a sufficient matrix of soil fill to allow for proper compaction of soil fill around the rock fragments or hard lumps as specified in Paragraph 6.2. **Oversize rock** is defined as material greater than 12 inches.

3.1.3 **Rock fills** are defined as fills containing no rocks or hard lumps larger than 3 feet in maximum dimension and containing little or no fines. Fines are defined as material smaller than ¾ inch in maximum dimension. The quantity of fines shall be less than approximately 20 percent of the rock fill quantity.

3.2 Material of a perishable, spongy, or otherwise unsuitable nature as determined by the Consultant shall not be used in fills.

3.3 Materials used for fill, either imported or on-site, shall not contain hazardous materials as defined by the California Code of Regulations, Title 22, Division 4, Chapter 30, Articles 9

and 10; 40CFR; and any other applicable local, state or federal laws. The Consultant shall not be responsible for the identification or analysis of the potential presence of hazardous materials. However, if observations, odors or soil discoloration cause Consultant to suspect the presence of hazardous materials, the Consultant may request from the Owner the termination of grading operations within the affected area. Prior to resuming grading operations, the Owner shall provide a written report to the Consultant indicating that the suspected materials are not hazardous as defined by applicable laws and regulations.

3.4 The outer 15 feet of *soil-rock* fill slopes, measured horizontally, should be composed of properly compacted *soil* fill materials approved by the Consultant. *Rock* fill may extend to the slope face, provided that the slope is not steeper than 2:1 (horizontal:vertical) and a soil layer no thicker than 12 inches is track-walked onto the face for landscaping purposes. This procedure may be utilized provided it is acceptable to the governing agency, Owner and Consultant.

3.5 Samples of soil materials to be used for fill should be tested in the laboratory by the Consultant to determine the maximum density, optimum moisture content, and, where appropriate, shear strength, expansion, and gradation characteristics of the soil.

3.6 During grading, soil or groundwater conditions other than those identified in the Geotechnical Report may be encountered by the Contractor. The Consultant shall be notified immediately to evaluate the significance of the unanticipated condition

4. CLEARING AND PREPARING AREAS TO BE FILLED

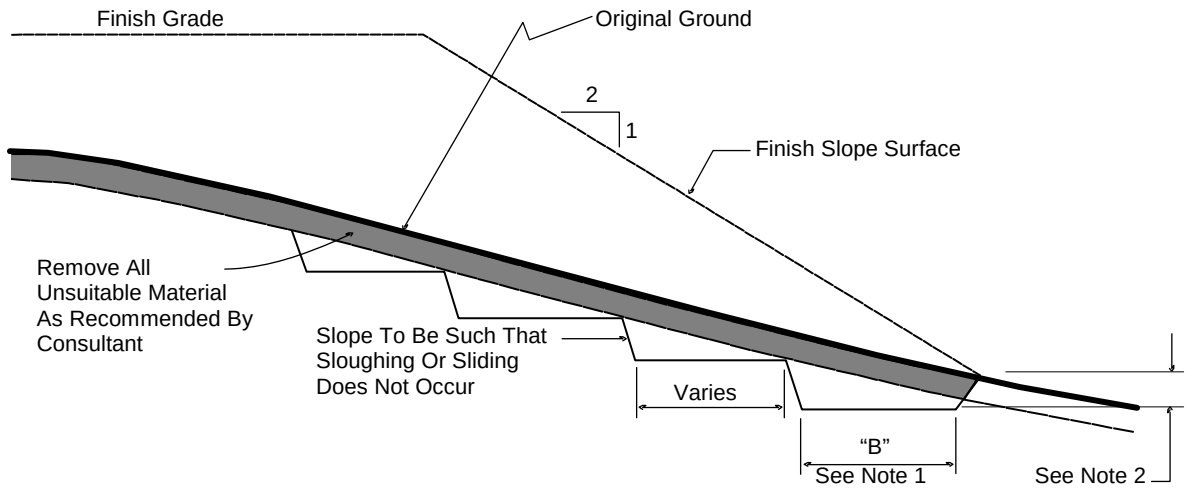
4.1 Areas to be excavated and filled shall be cleared and grubbed. Clearing shall consist of complete removal above the ground surface of trees, stumps, brush, vegetation, man-made structures, and similar debris. Grubbing shall consist of removal of stumps, roots, buried logs and other unsuitable material and shall be performed in areas to be graded. Roots and other projections exceeding 1½ inches in diameter shall be removed to a depth of 3 feet below the surface of the ground. Borrow areas shall be grubbed to the extent necessary to provide suitable fill materials.

4.2 Asphalt pavement material removed during clearing operations should be properly disposed at an approved off-site facility or in an acceptable area of the project evaluated by Geocon and the property owner. Concrete fragments that are free of reinforcing steel may be placed in fills, provided they are placed in accordance with Section 6.2 or 6.3 of this document.

4.3 After clearing and grubbing of organic matter and other unsuitable material, loose or porous soils shall be removed to the depth recommended in the Geotechnical Report. The depth of removal and compaction should be observed and approved by a representative of the Consultant. The exposed surface shall then be plowed or scarified to a minimum depth of 6 inches and until the surface is free from uneven features that would tend to prevent uniform compaction by the equipment to be used.

4.4 Where the slope ratio of the original ground is steeper than 5:1 (horizontal:vertical), or where recommended by the Consultant, the original ground should be benched in accordance with the following illustration.

TYPICAL BENCHING DETAIL



No Scale

DETAIL NOTES: (1) Key width "B" should be a minimum of 10 feet, or sufficiently wide to permit complete coverage with the compaction equipment used. The base of the key should be graded horizontal, or inclined slightly into the natural slope.

(2) The outside of the key should be below the topsoil or unsuitable surficial material and at least 2 feet into dense formational material. Where hard rock is exposed in the bottom of the key, the depth and configuration of the key may be modified as approved by the Consultant.

4.5 After areas to receive fill have been cleared and scarified, the surface should be moisture conditioned to achieve the proper moisture content, and compacted as recommended in Section 6 of these specifications.

5. COMPACTION EQUIPMENT

5.1 Compaction of *soil* or *soil-rock* fill shall be accomplished by sheepsfoot or segmented-steel wheeled rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers, or other types of acceptable compaction equipment. Equipment shall be of such a design that it will be capable of compacting the *soil* or *soil-rock* fill to the specified relative compaction at the specified moisture content.

5.2 Compaction of *rock* fills shall be performed in accordance with Section 6.3.

6. PLACING, SPREADING AND COMPACTION OF FILL MATERIAL

6.1 *Soil* fill, as defined in Paragraph 3.1.1, shall be placed by the Contractor in accordance with the following recommendations:

6.1.1 *Soil* fill shall be placed by the Contractor in layers that, when compacted, should generally not exceed 8 inches. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to obtain uniformity of material and moisture in each layer. The entire fill shall be constructed as a unit in nearly level lifts. Rock materials greater than 12 inches in maximum dimension shall be placed in accordance with Section 6.2 or 6.3 of these specifications.

6.1.2 In general, the *soil* fill shall be compacted at a moisture content at or above the optimum moisture content as determined by ASTM D 1557.

6.1.3 When the moisture content of *soil* fill is below that specified by the Consultant, water shall be added by the Contractor until the moisture content is in the range specified.

6.1.4 When the moisture content of the *soil* fill is above the range specified by the Consultant or too wet to achieve proper compaction, the *soil* fill shall be aerated by the Contractor by blading/mixing, or other satisfactory methods until the moisture content is within the range specified.

6.1.5 After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted by the Contractor to a relative compaction of at least 90 percent. Relative compaction is defined as the ratio (expressed in percent) of the in-place dry density of the compacted fill to the maximum laboratory dry density as determined in accordance with ASTM D 1557. Compaction shall be continuous over the entire area, and compaction equipment shall make sufficient passes so that the specified minimum relative compaction has been achieved throughout the entire fill.

6.1.6 Where practical, soils having an Expansion Index greater than 50 should be placed at least 3 feet below finish pad grade and should be compacted at a moisture content generally 2 to 4 percent greater than the optimum moisture content for the material.

6.1.7 Properly compacted *soil* fill shall extend to the design surface of fill slopes. To achieve proper compaction, it is recommended that fill slopes be over-built by at least 3 feet and then cut to the design grade. This procedure is considered preferable to track-walking of slopes, as described in the following paragraph.

6.1.8 As an alternative to over-building of slopes, slope faces may be back-rolled with a heavy-duty loaded sheepsfoot or vibratory roller at maximum 4-foot fill height intervals. Upon completion, slopes should then be track-walked with a D-8 dozer or similar equipment, such that a dozer track covers all slope surfaces at least twice.

6.2 *Soil-rock* fill, as defined in Paragraph 3.1.2, shall be placed by the Contractor in accordance with the following recommendations:

6.2.1 Rocks larger than 12 inches but less than 4 feet in maximum dimension may be incorporated into the compacted *soil* fill, but shall be limited to the area measured 15 feet minimum horizontally from the slope face and 5 feet below finish grade or 3 feet below the deepest utility, whichever is deeper.

6.2.2 Rocks or rock fragments up to 4 feet in maximum dimension may either be individually placed or placed in windrows. Under certain conditions, rocks or rock fragments up to 10 feet in maximum dimension may be placed using similar methods. The acceptability of placing rock materials greater than 4 feet in maximum dimension shall be evaluated during grading as specific cases arise and shall be approved by the Consultant prior to placement.

6.2.3 For individual placement, sufficient space shall be provided between rocks to allow for passage of compaction equipment.

6.2.4 For windrow placement, the rocks should be placed in trenches excavated in properly compacted *soil* fill. Trenches should be approximately 5 feet wide and 4 feet deep in maximum dimension. The voids around and beneath rocks should be filled with approved granular soil having a Sand Equivalent of 30 or greater and should be compacted by flooding. Windrows may also be placed utilizing an "open-face" method in lieu of the trench procedure, however, this method should first be approved by the Consultant.

6.2.5 Windrows should generally be parallel to each other and may be placed either parallel to or perpendicular to the face of the slope depending on the site geometry. The minimum horizontal spacing for windrows shall be 12 feet center-to-center with a 5-foot stagger or offset from lower courses to next overlying course. The minimum vertical spacing between windrow courses shall be 2 feet from the top of a lower windrow to the bottom of the next higher windrow.

6.2.6 Rock placement, fill placement and flooding of approved granular soil in the windrows should be continuously observed by the Consultant.

6.3 *Rock* fills, as defined in Section 3.1.3, shall be placed by the Contractor in accordance with the following recommendations:

6.3.1 The base of the *rock* fill shall be placed on a sloping surface (minimum slope of 2 percent). The surface shall slope toward suitable subdrainage outlet facilities. The *rock* fills shall be provided with subdrains during construction so that a hydrostatic pressure buildup does not develop. The subdrains shall be permanently connected to controlled drainage facilities to control post-construction infiltration of water.

6.3.2 *Rock* fills shall be placed in lifts not exceeding 3 feet. Placement shall be by rock trucks traversing previously placed lifts and dumping at the edge of the currently placed lift. Spreading of the *rock* fill shall be by dozer to facilitate *seating* of the rock. The *rock* fill shall be watered heavily during placement. Watering shall consist of water trucks traversing in front of the current rock lift face and spraying water continuously during rock placement. Compaction equipment with compactive energy comparable to or greater than that of a 20-ton steel vibratory roller or other compaction equipment providing suitable energy to achieve the required compaction or deflection as recommended in Paragraph 6.3.3 shall be utilized. The number of passes to be made should be determined as described in Paragraph 6.3.3. Once a *rock* fill lift has been covered with *soil* fill, no additional *rock* fill lifts will be permitted over the *soil* fill.

6.3.3 Plate bearing tests, in accordance with ASTM D 1196, may be performed in both the compacted *soil* fill and in the *rock* fill to aid in determining the required minimum number of passes of the compaction equipment. If performed, a minimum of three plate bearing tests should be performed in the properly compacted *soil* fill (minimum relative compaction of 90 percent). Plate bearing tests shall then be performed on areas of *rock* fill having two passes, four passes and six passes of the compaction equipment, respectively. The number of passes required for the *rock* fill shall be determined by comparing the results of the plate bearing tests for the *soil* fill and the *rock* fill and by evaluating the deflection

variation with number of passes. The required number of passes of the compaction equipment will be performed as necessary until the plate bearing deflections are equal to or less than that determined for the properly compacted *soil* fill. In no case will the required number of passes be less than two.

6.3.4 A representative of the Consultant should be present during *rock* fill operations to observe that the minimum number of "passes" have been obtained, that water is being properly applied and that specified procedures are being followed. The actual number of plate bearing tests will be determined by the Consultant during grading.

6.3.5 Test pits shall be excavated by the Contractor so that the Consultant can state that, in their opinion, sufficient water is present and that voids between large rocks are properly filled with smaller rock material. In-place density testing will not be required in the *rock* fills.

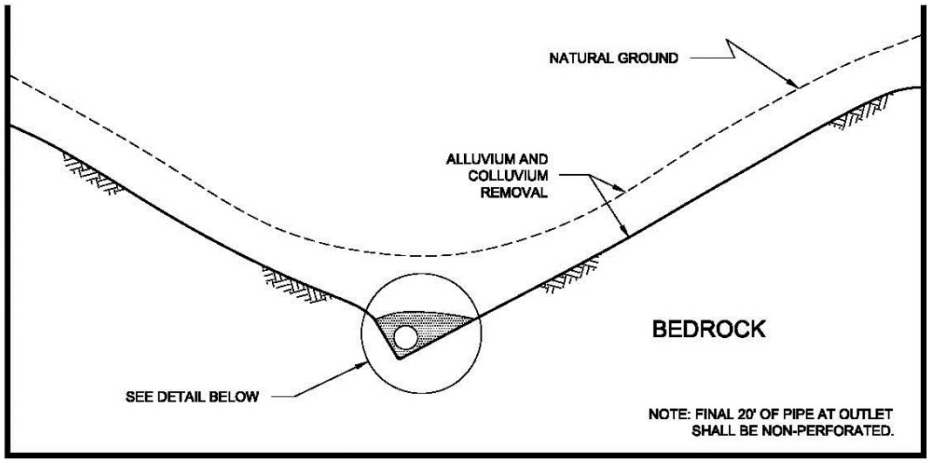
6.3.6 To reduce the potential for "piping" of fines into the *rock* fill from overlying *soil* fill material, a 2-foot layer of graded filter material shall be placed above the uppermost lift of *rock* fill. The need to place graded filter material below the *rock* should be determined by the Consultant prior to commencing grading. The gradation of the graded filter material will be determined at the time the *rock* fill is being excavated. Materials typical of the *rock* fill should be submitted to the Consultant in a timely manner, to allow design of the graded filter prior to the commencement of *rock* fill placement.

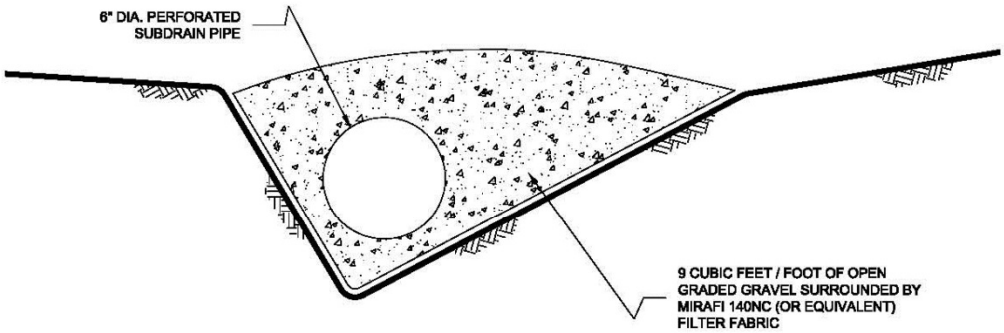
6.3.7 *Rock* fill placement should be continuously observed during placement by the Consultant.

7. SUBDRAINS

7.1 The geologic units on the site may have permeability characteristics and/or fracture systems that could be susceptible under certain conditions to seepage. The use of canyon subdrains may be necessary to mitigate the potential for adverse impacts associated with seepage conditions. Canyon subdrains with lengths in excess of 500 feet or extensions of existing offsite subdrains should use 8-inch-diameter pipes. Canyon subdrains less than 500 feet in length should use 6-inch-diameter pipes.

TYPICAL CANYON DRAIN DETAIL





NOTES:

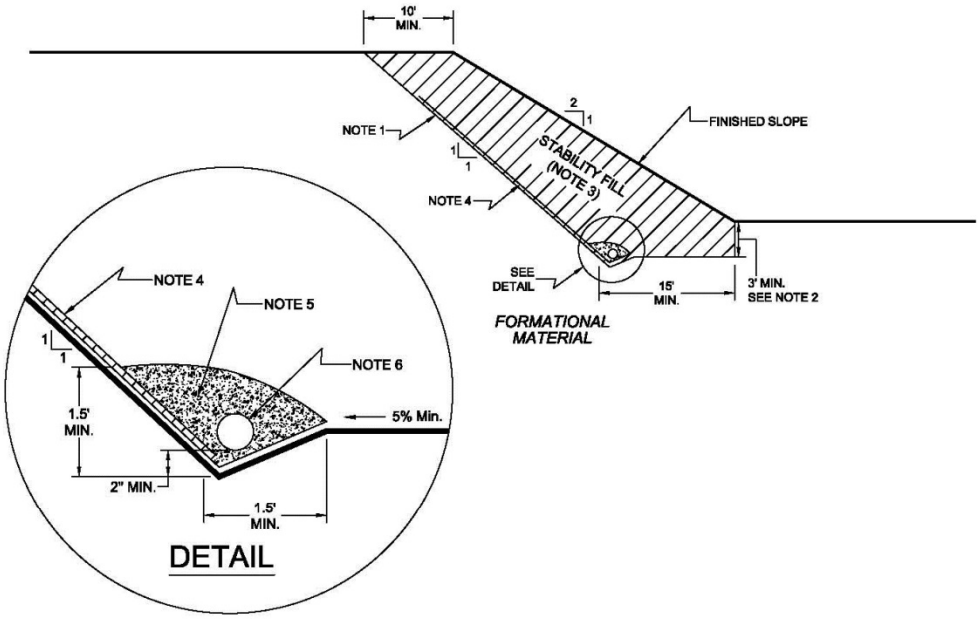
1.....6-INCH DIAMETER, SCHEDULE 80 PVC PERFORATED PIPE FOR FILLS
IN EXCESS OF 100-FEET IN DEPTH OR A PIPE LENGTH OF LONGER THAN 500 FEET.

2.....6-INCH DIAMETER, SCHEDULE 40 PVC PERFORATED PIPE FOR FILLS
LESS THAN 100-FEET IN DEPTH OR A PIPE LENGTH SHORTER THAN 500 FEET.

NO SCALE

7.2 Slope drains within stability fill keyways should use 4-inch-diameter (or lager) pipes.

TYPICAL STABILITY FILL DETAIL



NOTES:

1.....EXCAVATE BACKCUT AT 1:1 INCLINATION (UNLESS OTHERWISE NOTED).

2.....BASE OF STABILITY FILL TO BE 3 FEET INTO FORMATIONAL MATERIAL, SLOPING A MINIMUM 5% INTO SLOPE.

3.....STABILITY FILL TO BE COMPOSED OF PROPERLY COMPACTED GRANULAR SOIL.

4.....CHIMNEY DRAINS TO BE APPROVED PREFABRICATED CHIMNEY DRAIN PANELS (MIRADRAIN G200N OR EQUIVALENT) SPACED APPROXIMATELY 20 FEET CENTER TO CENTER AND 4 FEET WIDE. CLOSER SPACING MAY BE REQUIRED IF SEEPAGE IS ENCOUNTERED.

5.....FILTER MATERIAL TO BE 3/4-INCH, OPEN-GRADED CRUSHED ROCK ENCLOSED IN APPROVED FILTER FABRIC (MIRAFI 140NC).

6.....COLLECTOR PIPE TO BE 4-INCH MINIMUM DIAMETER, PERFORATED, THICK-WALLED PVC SCHEDULE 40 OR EQUIVALENT, AND SLOPED TO DRAIN AT 1 PERCENT MINIMUM TO APPROVED OUTLET.

NO SCALE

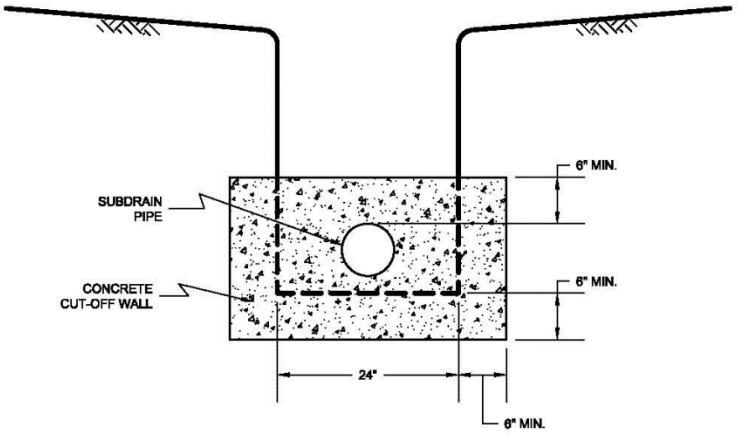
7.3 The actual subdrain locations will be evaluated in the field during the remedial grading operations. Additional drains may be necessary depending on the conditions observed and the requirements of the local regulatory agencies. Appropriate subdrain outlets should be evaluated prior to finalizing 40-scale grading plans.

7.4 *Rock* fill or *soil-rock* fill areas may require subdrains along their down-slope perimeters to mitigate the potential for buildup of water from construction or landscape irrigation. The subdrains should be at least 6-inch-diameter pipes encapsulated in gravel and filter fabric. *Rock* fill drains should be constructed using the same requirements as canyon subdrains.

7.5 Prior to outletting, the final 20-foot segment of a subdrain that will not be extended during future development should consist of non-perforated drainpipe. At the non-perforated/ perforated interface, a seepage cutoff wall should be constructed on the downslope side of the pipe.

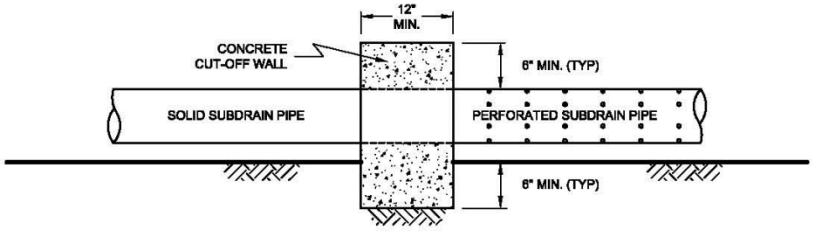
TYPICAL CUT OFF WALL DETAIL

FRONT VIEW



NO SCALE

SIDE VIEW

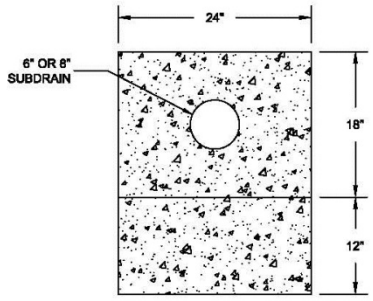


NO SCALE

7.6 Subdrains that discharge into a natural drainage course or open space area should be provided with a permanent headwall structure.

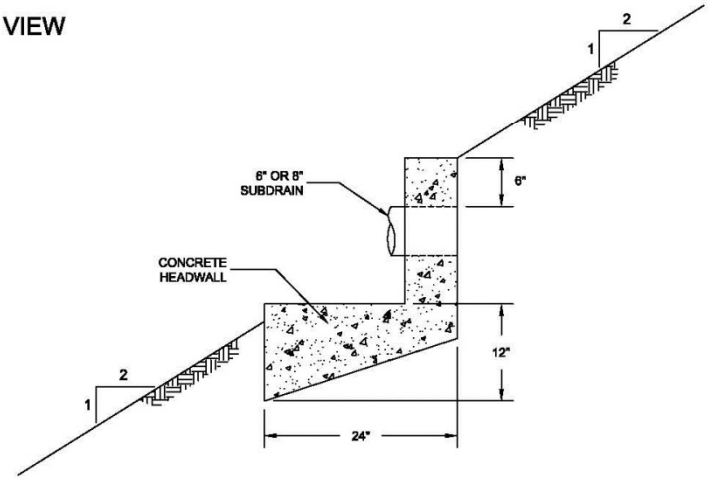
TYPICAL HEADWALL DETAIL

FRONT VIEW



NO SCALE

SIDE VIEW



NOTE: HEADWALL SHOULD OUTLET AT TOE OF FILL SLOPE
OR INTO CONTROLLED SURFACE DRAINAGE

NO SCALE

7.7 The final grading plans should show the location of the proposed subdrains. After completion of remedial excavations and subdrain installation, the project civil engineer should survey the drain locations and prepare an “as-built” map showing the drain locations. The final outlet and connection locations should be determined during grading operations. Subdrains that will be extended on adjacent projects after grading can be placed on formational material and a vertical riser should be placed at the end of the subdrain. The grading contractor should consider videoing the subdrains shortly after burial to check proper installation and functionality. The contractor is responsible for the performance of the drains.

8. OBSERVATION AND TESTING

8.1 The Consultant shall be the Owner's representative to observe and perform tests during clearing, grubbing, filling, and compaction operations. In general, no more than 2 feet in vertical elevation of *soil* or *soil-rock* fill should be placed without at least one field density test being performed within that interval. In addition, a minimum of one field density test should be performed for every 2,000 cubic yards of *soil* or *soil-rock* fill placed and compacted.

8.2 The Consultant should perform a sufficient distribution of field density tests of the compacted *soil* or *soil-rock* fill to provide a basis for expressing an opinion whether the fill material is compacted as specified. Density tests shall be performed in the compacted materials below any disturbed surface. When these tests indicate that the density of any layer of fill or portion thereof is below that specified, the particular layer or areas represented by the test shall be reworked until the specified density has been achieved.

8.3 During placement of *rock* fill, the Consultant should observe that the minimum number of passes have been obtained per the criteria discussed in Section 6.3.3. The Consultant should request the excavation of observation pits and may perform plate bearing tests on the placed *rock* fills. The observation pits will be excavated to provide a basis for expressing an opinion as to whether the *rock* fill is properly seated and sufficient moisture has been applied to the material. When observations indicate that a layer of *rock* fill or any portion thereof is below that specified, the affected layer or area shall be reworked until the *rock* fill has been adequately seated and sufficient moisture applied.

8.4 A settlement monitoring program designed by the Consultant may be conducted in areas of *rock* fill placement. The specific design of the monitoring program shall be as recommended in the Conclusions and Recommendations section of the project Geotechnical Report or in the final report of testing and observation services performed during grading.

8.5 We should observe the placement of subdrains, to check that the drainage devices have been placed and constructed in substantial conformance with project specifications.

8.6 Testing procedures shall conform to the following Standards as appropriate:

8.6.1 Soil and Soil-Rock Fills:

8.6.1.1 Field Density Test, ASTM D 1556, *Density of Soil In-Place By the Sand-Cone Method.*

8.6.1.2 Field Density Test, Nuclear Method, ASTM D 6938, *Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth).*

8.6.1.3 Laboratory Compaction Test, ASTM D 1557, *Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-Pound Hammer and 18-Inch Drop*.

8.6.1.4. Expansion Index Test, ASTM D 4829, *Expansion Index Test*.

9. PROTECTION OF WORK

9.1 During construction, the Contractor shall properly grade all excavated surfaces to provide positive drainage and prevent ponding of water. Drainage of surface water shall be controlled to avoid damage to adjoining properties or to finished work on the site. The Contractor shall take remedial measures to prevent erosion of freshly graded areas until such time as permanent drainage and erosion control features have been installed. Areas subjected to erosion or sedimentation shall be properly prepared in accordance with the Specifications prior to placing additional fill or structures.

9.2 After completion of grading as observed and tested by the Consultant, no further excavation or filling shall be conducted except in conjunction with the services of the Consultant.

10. CERTIFICATIONS AND FINAL REPORTS

10.1 Upon completion of the work, Contractor shall furnish Owner a certification by the Civil Engineer stating that the lots and/or building pads are graded to within 0.1 foot vertically of elevations shown on the grading plan and that all tops and toes of slopes are within 0.5 foot horizontally of the positions shown on the grading plans. After installation of a section of subdrain, the project Civil Engineer should survey its location and prepare an *as-built* plan of the subdrain location. The project Civil Engineer should verify the proper outlet for the subdrains and the Contractor should ensure that the drain system is free of obstructions.

10.2 The Owner is responsible for furnishing a final as-graded soil and geologic report satisfactory to the appropriate governing or accepting agencies. The as-graded report should be prepared and signed by a California licensed Civil Engineer experienced in geotechnical engineering and by a California Certified Engineering Geologist, indicating that the geotechnical aspects of the grading were performed in substantial conformance with the Specifications or approved changes to the Specifications.

Appendix E

Phase I Environmental Site Assessment Report
Chacon Farms

Partner Engineering Science, Inc

September 30, 2024

PARTNER
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PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Chacon Farms
710 Cawston Avenue North
San Jacinto, California 92582

Report Date
September 30, 2024

Site Inspection Date
September 25, 2024

Partner Project No.
24-461627.1

Prepared for:
Ramona Dairy, LLC
2451 Ramona Expressway
San Jacinto, California 92582

Building Science | Environmental Consulting | Construction & Development | Energy & Sustainability

PARTNER

September 30, 2024

Mr. Richard Michael
Ramona Dairy, LLC
2451 Ramona Expressway
San Jacinto, California 92582

Subject: Phase I Environmental Site Assessment
Chacon Farms
710 Cawston Avenue North
San Jacinto, California 92582
Partner Project No. 24-461627.1

Dear Mr. Michael:

Partner Engineering and Science, Inc. (Partner) is pleased to provide this Phase I Environmental Site Assessment (Phase I ESA) report of the abovementioned address (the "subject property"). This assessment was performed in conformance with the scope and limitations as detailed in the ASTM Practice E1527-21 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process and Client Agreement.

This assessment included a site reconnaissance as well as research and interviews with representatives of the public, property ownership, site manager, and regulatory agencies. An assessment was made, conclusions stated, and recommendations outlined.

We appreciate your trust in Partner and the opportunity to provide environmental services to you. If you have any questions concerning this report, or if we can assist you in any other matter, please contact me at (949) 481-9818.

Sincerely,



Robert Vaughn
National Client Manager

EXECUTIVE SUMMARY

Partner Engineering and Science, Inc. (Partner) has performed a Phase I Environmental Site Assessment (ESA) in accordance with the scope of work and limitations of ASTM Practice E1527-21, the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312) and set forth by Ramona Dairy, LLC for the property located at 710 Cawston Avenue North in San Jacinto, Riverside County, California (the "subject property"). The Phase I Environmental Site Assessment is designed to provide Ramona Dairy, LLC with an assessment concerning environmental conditions (limited to those issues identified in the report) as they exist at the subject property.

Property Description

The subject property is located on the southwest corner of West 7th Street and Cawston Avenue North, and northwest corner of West Esplanade Avenue and Cawson Avenue North within a/an Residential, agricultural, and commercial area of Riverside County. Please refer to the table below for a further description of the subject property:

SUBJECT PROPERTY DATA

Address:	710 Cawston Avenue North, San Jacinto, California
Historical Addresses:	23511 Cawston Avenue
Property Use:	Residential and Agricultural
Land Acreage (Ac):	76.41
Number of Buildings:	Seven
Number of Floors:	One
Gross Building Area (SF):	5,522
Date of Construction:	1946 (Residences) and 1969 (Barns and Shed)
Parcel Number:	4322-600-09 (Parcel A); 4322-600-26 (Parcel B); and 4322-600-27 (Parcel C)
Type of Construction:	Wood-framed and Concrete Masonry Unit
Current Tenants:	Private Residents, Chacon Farms and Bruno Ranches
Site Assessment Performed By:	Kody Klein of Partner
Site Assessment Conducted On:	September 25, 2024
Regulatory Radius Report Date:	September 16, 2024
Lien Search Date:	N/A
Report Date:	September 30, 2024
FOIAs Date:	September 2024
Groundwater Flow Direction (Inferred):	Northwest
Estimated Depth to Groundwater (Feet bgs):	Greater than 140

The subject property is currently occupied by Chacon Farms and Bruno Ranches for residential and agricultural use. Onsite operations consist of typical residential living activities, the cultivation of row crops, and routine facility maintenance. In addition to the current structures and alfalfa crops, the subject property is also improved with a capped irrigation well, cattle corrals, irrigation infrastructure, two septic systems, asphalt pavement beneath the storage barns, a grain storage vessel, concrete driveway, and unpaved roads that surround and bisect the property. Additionally, a drainage lagoon is located on the northwestern portion of the subject property.

According to historical sources and an interview with the subject property owner, the property has been used for agricultural purposes since the early 1930s. The subject property was initially developed with an ostrich farm and residence and operated as such until the 1940s. The subject property operated a cattle ranch between the 1940s until 1976 when Chacon Farms purchased the land. Operations at Chacon Farms included cattle farming; cultivation of onions, hay, banana squash, carrots, and potatoes; and onion processing and packaging. Formal operation of Chacon Farms concluded in circa 1995 and the agricultural portion of the subject property has been leased to various tenant farmers since then.

The adjoining properties are tabulated below:

ADJOINING PROPERTIES

Direction	Land Use/Occupant
North:	West 7th Street beyond which is "The Ranch" residential community
Northeast:	Intersection of West 7th Street and Cawston Avenue North beyond which is agricultural land
East:	Cawston Avenue North beyond which is residences
Southeast:	Intersection of West Esplanade Avenue and Cawston Avenue North beyond which is Ridgeley Farms
South:	West Esplanade Avenue beyond which is a ranch
West:	Agricultural land to the west southwest; a developing residential community to the west northwest
Northwest:	West 7th Street beyond which is a residential community

Findings and Opinions

Recognized Environmental Condition

A recognized environmental condition (REC) refers to the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

- Partner did not identify any RECs during the course of this assessment.

Controlled Recognized Environmental Condition

A controlled recognized environmental condition (CREC) refers to a REC affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, activity and use limitations or other property use limitations).

- Partner did not identify any CRECs during the course of this assessment.

Historical Recognized Environmental Condition

A historical recognized environmental condition (HREC) refers to a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations).

- Partner did not identify any HRECs during the course of this assessment.

Business Environmental Risk

A Business Environmental Risk (BER) is a risk which can have a material environmental or environmentally driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in this practice. The following was identified during the course of this assessment:

- Due to the age of the subject property buildings, there is a potential that asbestos-containing material (ACM) and/or lead-based paint (LBP) are present. Readily visible suspect ACMs and painted surfaces were observed in good condition. Should these materials be replaced, the identified suspect ACMs would need to be sampled to confirm the presence or absence of asbestos prior to any renovation or demolition activities to prevent potential exposure to workers and/or building occupants.

Significant Data Gaps

No significant data gaps affecting the ability of the Environmental Professional to identify a REC were encountered during this assessment.

Conclusions and Recommendations

Partner has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-21 of 710 Cawston Avenue North in San Jacinto, Riverside County, California (the “subject property”). Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

This assessment has revealed no evidence of RECs, CRECs, or HRECs in connection with the subject property; however, BERs were identified. Based on the conclusions of this assessment, Partner recommends the following:

- Prior to the disturbance of any suspect ACMs at the subject property, a comprehensive survey, designed to determine if the suspect materials are regulated, is recommended. If such materials are identified and need to be disturbed, repaired, or removed, a licensed abatement contractor should be consulted.

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Figure 3: Topographic Map

APPENDICES

Appendix A: Site Photographs
Appendix B: Historical/Regulatory Documentation
Appendix C: Regulatory Database Report
Appendix D: Qualifications

ACRONYM LIST

Ac	Acre
AAI	All Appropriate Inquiries
AMSD	Approximate Minimum Search Distance
AOC	Area of Concern
ACM	Asbestos Containing Material
APN	Assessor Parcel Number
AST	Aboveground Storage Tank
AUL	Activity and Use Limitation
AIRS	Aerometric Information Retrieval System
AFS	Air Facility System
ALT FUELS	Alternate Fueling Stations
ASTM	American Society for Testing and Materials
BGS	Below Ground Surface
BER	Business Environmental Risk
BRS	EPA Biennial Reporting System
COC	Chemical of Concern
CREC	Controlled Recognized Environmental Condition
CDL	Clandestine Drug Lab
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESQG	Conditionally Exempt Small Quantity Generator
CORRACTS	RCRA Corrective Action Sites
ERIS	Environmental Risk Information Services
ERNS	Emergency Response Notification System
ECHO	Enforcement and Compliance History Online
FRP	Fiberglass Reinforced Plastic
FIM	Fire Insurance Map
FOIA	Freedom of Information Action
FINDS	Facility Index Database System
FRS	Facility Registry Service
FRP	Facility Response Plan
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FUDS	Formally Used Defense Site
FTTS	FIFRA/TSCA Tracking System
FTTS INSP	Inspection Case Listing
FUSRAP	Formerly Utilized Sites Remedial Action Program
FEMA	Federal Emergency Management Agency
HUD	U.S. Department of Housing and Urban Development
HSWA	Hazardous and Solid Waste Amendments
HVAC	Heating, Ventilation and Air Conditioning
HREC	Historical Recognized Environmental Condition
IODI	Open Dumps on Indian Lands
IHW	Industrial Hazardous Waste
IC/EC or INST/ENG	Institutional Control/Engineering Control
ICIS	Integrated Compliance Information System
LUCIS	Land Use Control Information System U.S. Department of the Navy
LQG	Large Quantity Generator
LPST	Leaking Petroleum Storage Tank
LST	Leaking Storage Tank
LUST	Leaking Underground Storage Tank

LBP	Lead-Based Paint
MSL	Mean Sea Level
MMMP	Mold, Moisture, and Mitigation Plan
MGP	Manufactured Gas Plant
MINES	Mines Master Index File
MLTS	Material Licensing Tracking System
HMIRS	Hazardous Materials Information Reporting System
MRDS	Mineral Resource Data System
NPL	National Priorities List
NCDL	National Clandestine Drug Labs
NPDES	National Pollutant Discharge Elimination System
NFRAP	No Further Remedial Action Planned
NonGen	Non Generator
NonGen/NLR	Non Generator/No Longer Regulated
ND	None Detected
NESHAP	National Emission Standards for Hazardous Air Pollutants
NWI	National Wetlands Inventory
NFA	No Further Action
N/A	Not Applicable
NOV	Notice of Violation
NTC	Notice To Comply
NRC	Nuclear Regulatory Commission
ODI	Inventory of Open Dumps
OWS	Oil-Water Separator
OSHA	Occupational Safety and Health Administration
O&M	Operations and Maintenance
PTO	Permit to Operate
Phase I ESA	Phase I Environmental Site Assessment
pCi/L	picoCuries per Liter
PHMSA	Pipeline and Hazardous Materials Safety Administration
PCB	Polychlorinated Biphenyl
PACM	Presumed Asbestos Containing Material
PFAS	Perfluoroalkyl and Polyfluoroalkyl Substances
PFOA	perfluorooctanoic acid
PFOS	Perfluorooctane sulfonic acid
REFN	Petroleum Refineries
PRP	Potentially Responsible Party
PST	Petroleum Storage Tank
ROD	Record of Decision
RGA	Recovered Government Archive
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation Recovery Information System
REC	Recognized Environmental Condition
SF	Square Foot/Feet
SSA	Superfund Alternative Agreement
SSTS	Section Seven Tracking System
SQG	Small Quantity Generator
SMCRA	Office of Surface Mining Reclamation and Enforcement
SWF/LF	Solid Waste Facility/Landfill
SWRCY	Solid Waste Recycling Facility
SCRD	State Coalition for the Remediation of Drycleaners
SHWS	State Hazardous Waste Sites

SEMS	Superfund Enterprise Management Site
TANKS	Aboveground and Unregulated Tanks
TRIS	Toxic Chemicals Release Inventory System
TSCA	Toxic Substances Control Act
TSDF	Transfer, Storage and Disposal Facility
USDOE	United States Department of Energy
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
UIC	Underground Injection Control
VEC	Vapor Encroachment Condition
VSQG	Very Small Quantity Generator
VCP	Voluntary Cleanup Program

1.0 INTRODUCTION

Partner Engineering and Science, Inc. (Partner) has performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Practice E1527-21 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312) for the property located at 710 Cawston Avenue North in San Jacinto, Riverside County, California (the "subject property"). Any exceptions to, or deletions from, this scope of work are described in the report.

1.1 Purpose

The purpose of this ESA is to identify existing or potential Recognized Environmental Conditions (as defined by ASTM Standard E1527-21) affecting the subject property that: 1) constitute or result in a material violation or a potential material violation of any applicable environmental law; 2) impose any material constraints on the operation of the subject property or require a material change in the use thereof; 3) require clean-up, remedial action or other response with respect to Hazardous Substances or Petroleum Products on or affecting the subject property under any applicable environmental law; 4) may affect the value of the subject property; and 5) may require specific actions to be performed with regard to such conditions and circumstances. The information contained in the ESA Report will be used by Client to: 1) evaluate its legal and financial liabilities for transactions related to foreclosure, purchase, sale, loan origination, loan workout or seller financing; 2) evaluate the subject property's overall development potential, the associated market value and the impact of applicable laws that restrict financial and other types of assistance for the future development of the subject property; and/or 3) determine whether specific actions are required to be performed prior to the foreclosure, purchase, sale, loan origination, loan workout or seller financing of the subject property.

This ESA was performed to permit the User to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) liability (hereinafter, the "landowner liability protections," or "LLPs"). ASTM Standard E1527-21 constitutes "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35)(B).

1.2 Scope of Work

The scope of work for this ESA is in accordance with and to the extent necessary to achieve the goal of the requirements set forth in the ASTM Standard E1527-21. This assessment included: 1) a property and adjoining site reconnaissance; 2) interviews with key personnel; 3) a review of historical sources; 4) a review of regulatory agency records; and 5) a review of a regulatory database report provided by a third-party vendor. Partner contacted local agencies, such as environmental health departments, fire departments and building departments to obtain readily ascertainable information to determine any current and/or former hazardous substances usage, storage and/or releases of hazardous substances on the subject property. Additionally, Partner researched readily available information on the presence of activity and use limitations (AULs) at these agencies. As defined by ASTM E1527-21, AULs include both legal (that is, institutional) and physical (that is, engineering) controls that may include legal or physical restrictions or limitations on the use of, or access to, a site or facility: 1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, or surface water on the subject property; or 2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls (IC/ECs), are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil, soil vapor, groundwater, and/or surface water on a property.

If requested by Client, this report may also include the identification, discussion of, and/or limited sampling of asbestos-containing materials (ACMs), lead-based paint (LBP), mold, and/or radon.

1.3 Limitations

Partner warrants that the findings and conclusions contained herein were accomplished in accordance with the methodologies set forth in the Scope of Work. These methodologies are described as representing good commercial and customary practice for conducting an ESA of a property for the purpose of identifying recognized environmental conditions. There is a possibility that even with the proper application of these methodologies there may exist on the subject property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. Partner believes that the information obtained from the record review and the interviews concerning the subject property is reliable. However, Partner cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The conclusions and findings set forth in this report are strictly limited in time and scope to the date of the evaluations. The conclusions presented in the report are based solely on the services described therein, and not on scientific tasks or procedures beyond the scope of agreed-upon services or the time and budgeting restraints imposed by the Client. No other warranties are implied or expressed.

Some of the information provided in this report is based upon personal interviews, and research of available documents, records, and maps held by the appropriate government and private agencies. This report is subject to the limitations of historical documentation, availability, and accuracy of pertinent records, and the personal recollections of those persons contacted.

This practice does not address requirements of any state or local laws or of any federal laws other than the all appropriate inquiry provisions of the LLPs. Further, this report does not intend to address all of the compliance and safety concerns, if any, associated with the subject property.

Environmental concerns, which are beyond the scope of a Phase I ESA as defined by ASTM include the following: ACMs, LBP, radon, and lead in drinking water. These issues may affect environmental risk at the subject property and may warrant discussion and/or assessment; however, are considered non-scope issues. If specifically requested by the Client, these non-scope issues are discussed in Section 6.3.

1.4 User Reliance

Ramona Dairy, LLC (herein referred to as Client) engaged Partner to perform this assessment in accordance with an agreement governing the nature, scope and purpose of the work as well as other matters critical to the engagement. All reports, both verbal and written, are for the sole use and benefit of Client. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with Partner granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against Partner, its officers, employees, vendors, successors or assigns. Any such unauthorized user shall be responsible to protect, indemnify and hold Partner, Client and their respective officers, employees, vendors, successors and assigns harmless from any and all claims, damages, losses, liabilities, expenses (including reasonable attorneys' fees) and costs attributable to such Use. Unauthorized use of this report shall constitute acceptance of and commitment to these responsibilities, which shall be irrevocable and shall apply regardless of the cause of action or legal theory pled or asserted. Additional legal penalties may apply.

This report has been completed under specific Terms and Conditions relating to scope, relying parties, limitations of liability, indemnification, dispute resolution, and other factors relevant to any reliance on this report. Any parties relying on this report do so having accepted the Terms and Conditions for which this report was completed. A copy of Partner's standard Terms and Conditions can be found at http://www.partneresi.com/terms-and-conditions.php.

1.5 Limiting Conditions

The findings and conclusions contain all the limitations inherent in these methodologies that are referred to in ASTM Practice E1527-21.

Specific limitations and exceptions to this ESA are more specifically set forth below:

- Interviews with past or current owners, operators and occupants were not reasonably ascertainable and thus constitute a data gap. Based on information obtained from other historical sources, this data gap is not expected to alter the findings of this assessment.
- Partner did not observe any interior of the residential structures as permission was not given. Partner observed the interior of the barn structures from a distance due to onsite operations and personnel occupying the space. Based on the size and nature of use of these units, this limited method of observation is not expected to alter the overall findings of this assessment.
- Partner's view of the ground during the site assessment was obstructed due to ongoing site operations in which commercial dirt loaders were driving through and releasing large amounts of fertilizer across the ground, creating large dust clouds. Based on information obtained from other historical sources, this limitation is not expected to alter the overall findings of this assessment.
- Partner was unable to determine the property use at 5-year intervals, which constitutes a data gap. This data failure is not considered critical and does not change the conclusions of this report, as no significant changes in property use were identified during coverage gaps of greater than five years.

Due to time constraints associated with this report, the Client has requested the report despite the above-listed limitations.

2.0 SITE DESCRIPTION

2.1 Site Location and Legal Description

The subject property at 710 Cawston Avenue North in San Jacinto, California is located on the southwest corner of West 7th Street and Cawston Avenue North, and northwest corner of West Esplanade Avenue and Cawson Avenue North. According to the Riverside County Assessor-County Clerk-Recorder (ARC) GIS, the subject property is legally described as 38.20 ACRES M/L IN POR LOT 161 MB 008/357 SD SAN JACINTO RANCHO (Parcel A); Acres 19.16000000 AcreageQualCode ML Lot 161-P LotType L MapPlatB 008 MapPlatP 357 SubdivisionName SAN JACINTO RANCHO (Parcel B); and Acres 18.24000000 AcreageQualCode ML Lot 161-P LotType L MapPlatB 008 MapPlatP 357 SubdivisionName SAN JACINTO RANCHO.

Please refer to Figure 1: Site Location Map, Figure 2: Site Plan, Figure 3: Topographic Map, and Appendix A: Site Photographs for the location and site characteristics of the subject property.

2.2 Current Property Use

The subject property is currently occupied by Chacon Farms and Bruno Ranches for residential and agricultural use. Onsite operations consist of typical residential living activities, the cultivation of alfalfa, and routine facility maintenance. The subject property consists of two occupied single-family residences with detached garages, two storage barns, and tool shed. In addition to the current structures and alfalfa crops, the subject property is also improved with a capped irrigation well, cattle corrals, irrigation infrastructure, two septic systems, asphalt pavement beneath the storage barns, a grain storage vessel, concrete driveway, and unpaved roads that surround and bisect the property. Additionally, a drainage lagoon is located on the northwestern portion of the subject property.

The subject property is designated for residential development by the City of San Jacinto.

The subject property was not identified in the regulatory database report of Section 4.2

2.3 Current Use of Adjoining Properties

The subject property is located within a residential, agricultural, and commercial area of Riverside County. During the vicinity reconnaissance, Partner observed the land uses on adjoining properties as defined in ASTM Practice E1527-21 as any real property or properties the border of which is contiguous or partially contiguous with that of the property, or that would be contiguous or partially contiguous with that of the property but for a street, road, or other public thoroughfare separating them. The adjoining properties are tabulated below:

ADJOINING PROPERTIES

Direction	Land Use/Occupant
North:	West 7th Street beyond which is "The Ranch" residential community
Northeast:	Intersection of West 7th Street and Cawston Avenue North beyond which is agricultural land
East:	Cawston Avenue North beyond which is residences
Southeast:	Intersection of West Esplanade Avenue and Cawston Avenue North beyond which is Ridgeley Farms
South:	West Esplanade Avenue beyond which is a ranch
West:	Agricultural land to the west southwest; a developing residential community to

	the west northwest
Northwest:	West 7th Street beyond which is a residential community

2.4 Physical Setting Sources

2.4.1 Topography

TOPOGRAPHIC DATA SUMMARY

Quadrangle Year:	2023
Quadrangle Name:	Lakeview, California
Source:	USGS 7.5 Minute Topographic Map
Elevation (Feet):	1510
Slope Direction:	Northwest
Slope Degree:	Relatively flat

A copy of the most recent topographic map is included as Figure 3 of this report.

2.4.2 Hydrology

While under natural and undisturbed conditions shallow groundwater flow most frequently follows the topography of the land surface, natural or man-made features can affect flow direction, and the presumed flow may not match the actual flow directions at the subject property and vicinity.

HYDROLOGY DATA SUMMARY

Groundwater Flow Direction:	Northwest
Groundwater Flow Source:	A previous subsurface investigation conducted on a nearby property
Estimated Depth to Groundwater (Feet bgs):	Greater than 140
Estimated Depth Source:	A previous subsurface investigation conducted on a nearby property
Closest Body of Surface Water Name:	Reflection Lake
Closest Body of Surface Water Distance (Miles):	3,685 feet
Closest Body of Surface Water Direction:	Northwest
Water System Operator:	Eastern Municipal Water District
Source of Drinking Water:	Colorado River and State Water Project

2.4.3 *Geology/Soils*

GEOLOGY AND SOIL DATA SUMMARY

Physiographic Province:	The subject property is situated within the Peninsular Ranges geomorphic province of the State of California.
Geologic Unit Description:	According to the United State Geological Survey (USGS), the subject property is underlain by surficial sediments consisting of alluvial sand and clay of valley areas, covered by gray soils.
Geologic Data Source:	United States Department of Agriculture (USDA) Natural Resources Conservation Service Web Soil Survey
Soil Series Name:	Granville loamy fine sand and Traver loamy fine sand.
Soil Series Description:	The Grangeville series consists of very deep, somewhat poorly drained soils that formed in moderate coarse textured alluvium dominantly from granitic rock sources. Slopes ranges from 0 to 2 percent. The Traver series is a member of a coarse-loamy, mixed, thermic family of Natric Haploxeralfs which are considered eroded.

2.4.4 *Flood Zone Information*

FLOOD ZONE DATA SUMMARY

Source:	Federal Emergency Management Agency
Community Panel No.	06065C1470G
FIRM Date:	August 28, 2008
Zone Designation:	Zone X (unshaded); defined as minimal risk areas outside the 1-percent and 0.2-percent-annual-chance floodplains.

A copy of the reviewed flood map is included in Appendix B of this report.

3.0 HISTORICAL INFORMATION

Partner obtained historical use information about the subject property from a variety of sources. A chronological listing of the historical data found is summarized in the table below:

HISTORICAL USE INFORMATION

Years	Resource	Description/Use
1938-Present	Aerial Photographs, City Directories, Topographic Maps	Residential and Agricultural Land

According to historical sources and an interview with the subject property owner, the property has been used for agricultural purposes since the early 1930s. The subject property was initially developed with an ostrich farm and residence which operated as such until the 1940s. The subject property was occupied by a cattle ranch between the 1940s until 1976 when Chacon Farms purchased the subject property. Operations at Chacon Farms included cattle farming; cultivation of onions, hay, banana squash, carrots, and potatoes; and onion processing and packaging. Formal operation of Chacon Farms concluded in circa 1995 and the agricultural portion of the subject property has been leased to various tenant farmers since then and up to the present. Bruno Ranches is the current tenant farmer leasing the agricultural portion of the subject property, which cultivates a “Roundup ready” strain of alfalfa not requiring application of pesticides.

Agricultural chemicals such as pesticides and fertilizers have likely been applied to crops grown on the subject property. There is a potential that biosolids were utilized as fertilizer on the subject property. Biosolids are made with slurry from wastewater treatment plants, which may be impacted with polyfluoroalkyl substances (PFAS) from incoming waste streams. PFAS are considered environmentally stable, mobile, persistent, and bioaccumulative contaminants of emerging concern. However, Partner does not consider the legal application of agricultural chemicals an REC. Agricultural chemicals in use today are regulated and are commonly selected using a licensed pest control advisor. The chemicals used are typically reported to the State or local agricultural department. It is unknown if environmentally persistent pesticides and/or herbicides were historically applied to the crops grown on the subject property. However, Partner’s experience with surface soil sampling and analysis from properties with similar agricultural histories has typically revealed non-detectable or very low concentrations of environmentally persistent agricultural chemicals. Partner notes that no specific areas of concern (e.g. product mishandling, releases, spills, incidents, etc.) related to agricultural chemical storage and use at the subject property have been identified during the course of this assessment. Based on the continued use of the subject property for agricultural purposes and the absence of specific areas of concern associated with agricultural chemical storage and use, the current and historical agricultural use of the subject property is not expected to represent a significant environmental concern at this time.

3.1 Aerial Photograph Review

Partner obtained available aerial photographs of the subject property and surrounding area from Environmental Risk Information Services (ERIS) on September 16, 2024. The inferred uses of the subject property and adjoining properties as interpreted from the aerial photographs in Appendix B are tabulated below:

Date:	**1938**	Scale:	**1"=500'**
Subject Property:	Appears to be agricultural land with a residential dwelling and several outbuildings on the northeastern corner		

North:	Appears to be an unimproved road (present-day West 7th Street) followed by undeveloped land
Northeast:	Appears to be an unimproved road (present-day West 7th Street) followed by undeveloped land
East:	Appears to be an unimproved road (present-day Cawston Avenue) followed by agricultural land
Southeast:	Appears to be agricultural land beyond the intersection of unimproved roadways (present-day Cawston Avenue and West Esplanade Avenue)
South:	Appears to be an unimproved road (present-day West Esplanade Avenue) followed by agricultural land
Southwest:	Appears to be an unimproved road (present-day West Esplanade Avenue) followed by agricultural land
West:	Appears to be agricultural land
Northwest:	Appears to be an unimproved road (present-day West 7th Street) followed by undeveloped land

Date:	**1949, 1953, 1958**	Scale:	**1"=500'**
Subject Property:	Appears to be agricultural land with a new residential dwelling and several outbuildings on the northeastern corner. A barn-type structure appears to be constructed west of the newly constructed residence		
North:	Appears to be an unimproved road (present-day West 7th Street) followed by undeveloped land and a residence		
Northeast:	Appears to be an unimproved road (present-day West 7th Street) followed by agricultural land		
East:	No significant changes visible		
Southeast:	No significant changes visible		
South:	No significant changes visible		
Southwest:	No significant changes visible		
West:	Appears to be agricultural land and a residence		
Northwest:	No significant changes visible		

Date:	**1962**	Scale:	**1"=500'**
Subject Property:	No significant changes visible except what appears to be the addition of two barns west of the residence. The northwestern portion appears to be used for cattle farming		
North:	No significant changes visible		
Northeast:	No significant changes visible		
East:	No significant changes visible		

Southeast:	No significant changes visible
South:	No significant changes visible
Southwest:	No significant changes visible
West:	No significant changes visible except additional agricultural structures are visible
Northwest:	No significant changes visible

Date: **1966**	Scale: **1”=500’**
Subject Property:	No significant changes visible
North:	No significant changes visible
Northeast:	No significant changes visible
East:	Appears to be developed with partial agricultural land and residences beyond Cawston Avenue North
Southeast:	Appears to be developed with the current existing farm beyond the intersection of Cawston Avenue North and West Esplanade Avenue
South:	No significant changes visible
Southwest:	No significant changes visible
West:	Appears to be developed with multiple structures and agricultural land
Northwest:	No significant changes visible

Date: **1976, 1980**	Scale: **1”=500’**
Subject Property:	No significant changes visible
North:	No significant changes visible
Northeast:	No significant changes visible
East:	No significant changes visible with the exception of additional residential buildings
Southeast:	Appears to be developed with the current existing farm beyond the intersection of Cawston Avenue North and West Esplanade Avenue
South:	Appears to be developed with the ranch beyond West Esplanade Avenue
Southwest:	No significant changes visible
West:	Appears to be developed with multiple structures and agricultural land
Northwest:	No significant changes visible

Date:	**1985**	Scale:	**1”=500’**
Subject Property:	No significant changes visible		
North:	No significant changes visible with the exception that the residence is no longer present		
Northeast:	No significant changes visible		
East:	No significant changes visible		
Southeast:	No significant changes visible		
South:	No significant changes visible		
Southwest:	No significant changes visible		
West:	No significant changes visible		
Northwest:	No significant changes visible		

Date:	**1996**	Scale:	**1”=500’**
Subject Property:	No significant changes visible		
North:	No significant changes visible		
Northeast:	No significant changes visible		
East:	No significant changes visible		
Southeast:	No significant changes visible		
South:	No significant changes visible		
Southwest:	No significant changes visible		
West:	No significant changes visible with the exception that most of the small buildings have been removed		
Northwest:	No significant changes visible		

Date:	**2002, 2004**	Scale:	**1”=500’**
Subject Property:	No significant changes visible		
North:	No significant changes visible		
Northeast:	No significant changes visible		
East:	No significant changes visible		
Southeast:	No significant changes visible		
South:	No significant changes visible		
Southwest:	No significant changes visible		

West:	Appears to be agricultural land with all structures removed
Northwest:	No significant changes visible

Date: **2005**		Scale: **1"=500'**
Subject Property:	No significant changes visible	
North:	Appears to be developed with residential community beyond West 7th Street	
Northeast:	No significant changes visible	
East:	No significant changes visible	
Southeast:	No significant changes visible	
South:	No significant changes visible	
Southwest:	No significant changes visible	
West:	No significant changes visible	
Northwest:	Appears to be cleared land beyond West 7th Street	

Date: **2006, 2009, 2010, 2012, 2014, 2016, 2018, 2020, 2022**		Scale: **1"=500'**
Subject Property:	No significant changes visible	
North:	7No significant changes visible	
Northeast:	No significant changes visible	
East:	No significant changes visible	
Southeast:	No significant changes visible	
South:	No significant changes visible	
Southwest:	No significant changes visible	
West:	No significant changes visible	
Northwest:	Appears to be developed with residential community beyond West 7th Street	

Copies of select aerial photographs are included in Appendix B of this report.

3.2 Fire Insurance Maps

Partner reviewed the collection of Fire insurance maps (FIMS) from ERIS on September 15, 2024. FIM coverage was not available for the subject property.

A copy of the no coverage letter is included in Appendix B of this report.

3.3 City Directories

Partner reviewed historical city directories obtained from ERIS on September 25, 2024 for past names and businesses that were listed for the subject property and adjoining properties. The findings are tabulated below:

SUBJECT PROPERTY SUMMARY

City Directory Search for 710 Cawston Ave N (Subject Property)

Year(s)	Occupant Listed
2001	Chacon Farms, Chacon Gilbert P, Chacon Joe M
2003	Chacon Farms, Gilbert P Chacon, Joe M Chacon
2008	Chacon Farms, Gilbert P Chacon, Joe M Chacon
2012	Gilbert Chacon
2016	Gilbert Chacon, Annmarie Chacon
2020	Annmarie Chacon, Kathy Cervantes
2023	Gilbert Chacon, Kathy Cervantes, Annmarie Chacon

City Directory Search for 23511 Cawston Ave N (Subject Property)

Year(s)	Occupant Listed
1974	Hampton Joe
1977	Hampton Joe
1984	Chacon Joe M
1986	Chacon Farms, Chacon Joe M
1991	Chacon Farms, Chacon Joe M
1996	Chacon Farms, Chacon Joe M

Based on the city directory review, no environmentally sensitive listings were identified for the subject property addresses.

ADJOINING PROPERTY SUMMARY

City Directory Search for 865 Cawston Ave N (Adjoining Property)

Year(s)	Occupant Listed
2001	Howard Gary, Hideaway Farms
2003	Hideaway Farms
2012	Pedro Munoz, Veronica Moreno, Crystal Sowell
2016	Crystal Sowell, Nicholas Coffin
2020	Crystal Sowell, Nicholas Coffin
2023	Crystal Sowell, Nicholas Coffin

City Directory Search for 2720 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed
2012	Jose Arias, Shelley Estes, Erika Arias
2016	Lily Gauss
2020	Lily Gauss, Erika Arias
2023	Lily Gauss, Shelley Estes, Erika Arias

City Directory Search for 2730 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed
2012	Ernesto Palacios, Palacios Ernesto
2023	Ernesto Palacios

City Directory Search for 2740 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed
2016	Denisia Esparza

City Directory Search for 2750 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed
2016	Lupe Porras, Sammantha Martinez, Jaime Martinez
2020	Jaime Martinez
2023	Jaime Martinez

City Directory Search for 2760 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed
2012	Adolfo Guerrero, Guerrero Adolfo

City Directory Search for 2770 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed
2016	Sean Payne
2020	Sean Payne
2023	Sean Payne

City Directory Search for 2780 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed
2020	Marisela Kuan

2023	Marisela Kuan

City Directory Search for 2810 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed
2016	Octavia Cole, Tyrone Honorable
2020	Jim Stevens, Davon Sanders, Octavia Cole
2023	Jim Stevens, Tyrone Honorable, Davon Sanders, Octavia Cole

City Directory Search for 2820 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed
2012	Fidel Rivera, Maria Rivera
2016	Fidel Rivera, Andrea Rivera, Maria Rivera
2020	Andrea Rivera
2023	Fidel Rivera, Andrea Rivera

City Directory Search for 2830 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed
2016	Bruce Bennett
2020	Bruce Bennett, Darrell Babbitt
2023	Bruce Bennett, Darrell Babbitt

City Directory Search for 2840 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed
2012	Margaret Mcculley, Mcculley Margaret
2016	David Mcculley, Margaret Mcculley, Dorothy Mcculley
2020	David Mcculley
2023	David Mcculley

City Directory Search for 2850 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed
2023	Daniel Moody

City Directory Search for 2860 Newcastle Way (Adjoining Property)

Year(s)	Occupant Listed

2012	Sweeney Shawn

City Directory Search for 2870 Newcastle Way (Adjoining Property)	
Year(s)	**Occupant Listed**
2023	Ricardo Figueroa

City Directory Search for 2880 Newcastle Way (Adjoining Property)	
Year(s)	**Occupant Listed**
2012	Gladys Zamano, Gladys Meinhart
2016	Ellen Huerta, Fabian Huerta
2020	Ellen Huerta
2023	Ellen Huerta

Based on the city directory review, no environmentally sensitive listings were identified for the adjoining property addresses.

Copies of reviewed city directories are included in Appendix B of this report.

3.4 Historical Topographic Maps

Partner reviewed historical topographic maps obtained from ERIS on September 15, 2024. The following inferred uses of the subject property and adjoining properties interpreted from topographic maps in Appendix B and are tabulated below:

Date:	**1953, 1967**
Subject Property:	Depicted as developed with two residential-type buildings, a commercial type building and a water well
North:	Depicted developed with 7th Street followed by one commercial type building
Northeast:	Depicted as developed with the San Diego Aqueduct beyond the intersection of West 7th Street and Cawston Avenue North
East:	Depicted as developed with the San Diego Aqueduct beyond Cawston Avenue North
Southeast:	Depicted as developed with the San Diego Aqueduct beyond the intersection of Cawston Avenue North and West Esplanade Avenue
South:	Depicted as undeveloped land beyond West Esplanade Avenue
Southwest:	Depicted as undeveloped land beyond West Esplanade Avenue
West:	Depicted as developed with an unpaved road beyond which is a residential-type building and undeveloped land
Northwest:	Depicted developed with 7th Street followed by undeveloped land

Date:	**1967**
Subject Property:	No significant changes depicted
North:	No significant changes depicted
Northeast:	No significant changes depicted
East:	Depicted as developed with the San Diego Aqueduct and small structures beyond Cawston Avenue North
Southeast:	Depicted as developed with the San Diego Aqueduct beyond the intersection of Cawston Avenue North and West Esplanade Avenue
South:	Depicted as undeveloped land and buildings beyond West Esplanade Avenue
Southwest:	No significant changes depicted
West:	Depicted as developed with a dirt race track/athletic field, multiple residential type buildings, a commercial type building and a water reservoir
Northwest:	No significant changes depicted

Date:	**1979**
Subject Property:	Depicted as additionally developed with two commercial-type buildings
North:	No significant changes depicted
Northeast:	Depicted as developed with some small structures
East:	Depicted as developed with additional small structures
Southeast:	No significant changes depicted
South:	Depicted as developed with additional ranch canopies
Southwest:	No significant changes depicted
West:	No significant changes depicted
Northwest:	No significant changes depicted

Copies of reviewed topographic maps are included in Appendix B of this report.

4.0 REGULATORY RECORDS REVIEW

4.1 Regulatory Agencies

State Department

REGULATORY AGENCY DATA

Name of Agency:	California Environmental Protection Agency (CalEPA)
Point of Contact:	https://siteportal.calepa.ca.gov/nsite/
Agency Address:	1001 I Street, Sacramento, CA 95814
Agency Phone Number:	(916) 323-2514
Date of Contact:	September 16, 2024
Method of Communication:	Online Research

Summary of Communication:

No records regarding hazardous substance use, storage or releases, or the presence of USTs and AULs on the subject property were on file with the CalEPA.

Health Department

REGULATORY AGENCY DATA

Name of Agency:	Riverside County Department of Environmental Health (RCDEH)
Point of Contact:	https://rivco.org/agencies-and-departments
Agency Address:	4080 Lemon Street, Riverside, CA 92507
Agency Phone Number:	951-955-6200
Date of Contact:	September 16, 2024
Method of Communication:	Online Request Form

Summary of Communication:

No records regarding hazardous substance use, storage or releases, or the presence of USTs and AULs on the subject property were on file with the RCDEH.

Fire Department

REGULATORY AGENCY DATA

Name of Agency:	Riverside County Fire Department
Point of Contact:	https://rivco.org/agencies-and-departments
Agency Phone Number:	951-940-6900
Date of Contact:	September 16, 2024
Method of Communication:	Online Request Form

Summary of Communication:

According to records reviewed, the subject property has multiple reviewed submittal plans for the installation and/or correction of onsite sprinkler systems. Additional information was provided by the RCFD but these documents were associated with a different parcel number which has been identified as the west adjoining properties under development.

Building Department

REGULATORY AGENCY DATA

Name of Agency:	Riverside County Department of Building and Safety (RCDBS)
Agency Address:	4080 Lemon Street, Riverside, CA 92501
Agency Phone Number:	951-955-1800
Date of Contact:	September 16, 2024
Method of Communication:	Online Request Form

Summary of Communication:

Building Records Reviewed for 710 Cawston Avenue North (Subject Property)		
Year(s)	**Owner/Applicant**	**Description**
1983	Joe Chacon	Shade Structure
1983	Joe Chacon	Electric permit to barn
1983	Hemacinto Stables	Electric permit / service charge
1985	Joe Chacon	Electrical permit
1991	Ray Howell	Special Inspection Structural
1991	Joe Chacon	Electrical permit to well
1976	Cawston Ranch	Sewage disposal for septic system
1977	Joe Chacon	Electrical service for pump booster

Planning Department

REGULATORY AGENCY DATA

Name of Agency:	San Jacinto Planning Department (SJPD)
Point of Contact:	Online Zoning Map
Agency Phone Number:	595 South San Jacinto Avenue, San Jacinto, California 92583
Date of Contact:	September 16, 2024
Method of Communication:	Online

Summary of Communication:

According to records reviewed, the subject property is zoned R-L for residential development by the City of San Jacinto.

Oil & Gas Exploration

REGULATORY AGENCY DATA

Name of Agency:	California Geologic Energy Management Division (CalGEM)
Point of Contact:	https://maps.conservation.ca.gov/doggr/wellfinder/#close
Agency Address:	715 P Street, MS 1900, Sacramento, CA 95814
Agency Phone Number:	(916) 445-9686
Date of Contact:	September 16, 2024
Method of Communication:	Online Research

Summary of Communication:

According to CalGEM, no oil or gas wells are located on or adjoining to the subject property.

Assessor's Office

REGULATORY AGENCY DATA

Name of Agency:	Riverside County Assessor-County Clerk-Recorder (ARC) GIS
Point of Contact:	https://rivco.org/agencies-and-departments
Agency Address:	2724 Gateway Drive, Riverside, CA 92507
Agency Phone Number:	951-955-6200
Date of Contact:	September 16, 2024
Method of Communication:	Online Research

Summary of Communication:

According to records reviewed, the subject property is identified as Assessor Parcel Numbers (APNs) 432-260-009;-026; and -027. The current buildings were constructed in 1946 and 1969 on a 76.41 acre lot.

Air Pollution Control Agency

REGULATORY AGENCY DATA

Name of Agency:	South Coast Air Quality Management District (AQMD)
Point of Contact:	https://xappprod.aqmd.gov/find
Agency Address:	21865 Copley Drive, Diamond Bar, CA 91765
Agency Phone Number:	909-396-2000
Date of Contact:	September 16, 2024
Method of Communication:	Online Research

Summary of Communication:

No Permits to Operate (PTO), Notices of Violation (NOV), or Notices to Comply (NTC) or the presence of AULs, dry cleaning machines, or USTs were on file for the subject property with the

AQMD.

Regional Water Quality Agency

REGULATORY AGENCY DATA

Name of Agency:	State Water Resources Control Board (SWRCB)
Point of Contact:	http://geotracker.waterboards.ca.gov/
Agency Address:	1001 I Street, Sacramento, CA 95814
Agency Phone Number:	866-480-1028
Date of Contact:	September 16, 2024
Method of Communication:	Online Research

Summary of Communication:

No records regarding hazardous substance use, storage or releases, or the presence of USTs and AULs on the subject property were on file with the RWQCB.

Department of Toxic Substances Control

REGULATORY AGENCY DATA

Name of Agency:	Department of Toxic Substances Control (DTSC)-Hazardous Waste Tracking System
Point of Contact:	http://www.envirostor.dtsc.ca.gov/public/
Agency Address:	1001 I Street, Sacramento, CA 95814
Agency Phone Number:	916-551-1313
Date of Contact:	September 16, 2024
Method of Communication:	Online Research

Summary of Communication:

No records regarding hazardous substance use, storage or releases, or the presence of USTs and AULs on the subject property were on file with the DTSC.

Copies of pertinent documents are included in Appendix B of this report.

4.2 Mapped Database Records Search

The regulatory database report provided by ERIS documents the listing of sites identified on federal, state, county, city, and tribal (when applicable) standard source environmental databases within the approximate minimum search distance (AMSD) specified by ASTM Practice E1527-21. The data from these sources are updated as these data are released and integrated into one database. The information contained in this report was compiled from publicly available sources.

The environmental database information is used to identify environmental concerns in connection with the subject property. The listings also serve to identify the known indications of the storage, use, generation, disposal, or release of hazardous substance at the subject property and the potential for contaminants to migrate onto the subject property from off-site sources in groundwater or soil in the form of liquids or vapor.

Using the ASTM definition of migration, Partner considers the migration of hazardous substances or petroleum products in any form onto the subject property during the evaluation of each site listed on the radius report, which includes solid, liquid, and vapor.

4.2.1 Regulatory Database Summary

The following table lists the sites as categorized by the regulatory database within the prescribed AMSD. The locations of the sites are plotted utilizing a geographic information system, which geocodes the site addresses. The accuracy of the geocoded locations is approximately +/-300 feet.

DATABASE REPORT DATA

Database	AMSD Radius (mile)	Listings Identified		
		Subject Property	Adjoining Properties	Surrounding Area Sites of Concern
Federal NPL	1.00	N	N	N
Delisted NPL Site	0.50	N	N	N
Federal SEMS Site	0.50	N	N	N
Federal SEMS-ARCHIVE	0.50	N	N	N
Federal RCRA CORRACTS Facility	1.00	N	N	N
Federal RCRA TSDF Facility	0.50	N	N	N
Federal RCRA Generators Site (LQG, SQG, VSQG, CESQG)	Subject and Adjoining	N	N	N
Federal IC/EC Registries	Subject Property	N	N	N
Federal ERNS Site	Subject Property	N	N	N
Federal PFAS Facility	0.50	N	N	N
State/Tribal Equivalent NPL	1.00	N	N	N
State/Tribal Equivalent CERCLIS	1.00	N	N	N
State/Tribal Landfill/Solid Waste Disposal Site	0.50	N	N	N
State/Tribal Leaking Storage Tank Site (LUST/LPST)	0.50	N	N	N

State/Tribal Registered Storage Tank Sites (UST/AST)	Subject and Adjoining	N	N	N
State/Tribal IC/EC Registries	Subject and Adjoining	N	N	N
State/Tribal Voluntary Cleanup Sites (VCP)	0.50	N	N	N
State/Tribal Spills	0.25	N	N	N
Federal Brownfield Sites	0.50	N	N	N
State Brownfield Sites	0.50	N	N	N
State PFAS Facility	0.50	N	N	N
Facility Registry Service/Facility Index (FINDS/FRS)	Subject and Adjoining	N	**Y**	N
Delisted Environmental Reporting System Hazardous Waste Sites (DELISTED HAZ)	Subject and Adjoining	N	**Y**	N
Toxic Pollutant Emission Facilities (EMISSIONS)	Subject and Adjoining	N	**Y**	N
Handlers from Hazardous Waste Manifest Data (HAZNET)	Subject and Adjoining	N	**Y**	N

4.2.2 Subject Property Listings

The subject property was not identified in the regulatory database report.

4.2.3 Adjoining Property Listings

The adjoining property was identified as a FINDS/FRS, DELISTED HAZ, EMISSIONS, HAZNET site, as discussed below:

ADJOINING PROPERTY DATABASE LISTING

Property Name:	Esplanade Avenue Waterline
Address:	Esplanade
Direction:	South
Hydrological Gradient:	Up-Gradient
Database Listing:	FINDS/FRS
Discussion	The property is identified as Registry ID 110064904082 for permitting purposes.

:	The facility is a permitted waterline. Based on the nature of the facility, this property is not expected to represent a significant environmental concern.

ADJOINING PROPERTY DATABASE LISTING

Property Name:	Goyenetche Dairy #2
Address:	1455 North Cawston Avenue
Direction:	South
Hydrological Gradient:	Up-Gradient
Database Listing:	DELISTED HAZ
Discussion:	The property is identified as Site ID 46967 as delisted hazardous waste sites. No documented release was identified. Based on the lack of documented release, and delisted hazardous waste sites, this property is not expected to represent a significant environmental concern.

ADJOINING PROPERTY DATABASE LISTING

Property Name:	Pete Dotinga & Son Dairy
Address:	1455 North Cawston Avenue
Direction:	South
Hydrological Gradient:	Up-Gradient
Database Listing:	EMISSIONS
Discussion:	The property is identified as Facility ID 145178 and as Facility SIC Code 241 as a toxic pollutant emissions facility. The SIC Code 241 is associated with wood logging facilities. Based on the nature of the listing, and nature of the code associated with onsite operations, this property is not expected to represent a significant environmental concern.

ADJOINING PROPERTY DATABASE LISTING

Property Name:	Marvo Holsteins #2
Address:	1455 North Cawston Avenue
Direction:	South
Hydrological Gradient:	Up-Gradient
Database Listing:	HAZNET
Status:	Inactive
Discussion:	The property is identified as EPA ID CAL000371452, SIC Code 0291, and NAICS Code 11299. According to a review of the codes, the property is listed as "general farms, primarily livestock" associated with onsite operations. The property is a registered ranch/livestock facility. The facility is listed as inactive

	since 2014. Based on the lack of documented release, inactive listing, and nature of the property, this property is not expected to represent a significant environmental concern.

Based on the findings, vapor migration is not considered an environmental concern at this time.

4.2.4 Surrounding Area Listings of Sites of Concern

No sites of concern are identified in the regulatory database report.

Based on the findings, vapor migration is not considered an environmental concern at this time.

4.2.5 Unplottable Listings

No unplottable listings of concern are identified in the regulatory database report.

A copy of the regulatory database report is included in Appendix C of this report.

5.0 USER PROVIDED INFORMATION AND INTERVIEWS

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the *Brownfields Amendments*), the *User* must conduct the following inquiries required by 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31. The *User* should provide the following information to the *environmental professional*. Failure to provide this information could result in a determination that *all appropriate inquiries* is not complete. The *User* is asked to provide information or knowledge of the following:

- Review Title and Judicial Records for Environmental Liens and AULs
- Specialized Knowledge or Experience of the User
- Actual Knowledge of the User
- Reason for Significantly Lower Purchase Price
- Commonly Known or *Reasonably Ascertainable* information
- Degree of Obviousness
- Reason for Preparation of this Phase I ESA

Fulfillment of these user responsibilities is key to qualification for the identified defenses to CERCLA liability. Partner requested our Client to provide information to satisfy User Responsibilities as identified in Section 6 of the ASTM guidance.

Pursuant to ASTM Practice E1527-21, Partner requested the following site information from Ramona Dairy, LLC (User of this report).

USER RESPONSIBILITIES

Item	Provided By User
AAI User Questionnaire	No
Title Records, Environmental Liens, and AULs	No
Specialized Knowledge	No
Actual Knowledge	No
Valuation Reduction for Environmental Issues	No
Identification of Key Site Manager	No
Reason for Performing Phase 1 ESA	Yes
Prior Environmental Reports	Yes
Other	No

5.1 Interviews

5.1.1 Interview with Owner

The owner of the subject property was not available to be interviewed at the time of the assessment.

5.1.2 Interview with Report User

Please refer to Section 5.2 below for information requested from the Report User. The information requested was not received prior to the issuance of this report.

5.1.3 *Interview with Key Site Manager*

A key site manager was not provided to be interviewed at the time of this assessment.

5.1.4 *Interviews with Past Owners, Operators and Occupants*

Interviews with past owners, operators, and occupants were not conducted since information regarding the potential for contamination at the subject property was obtained from other sources.

5.2 User Provided Information

5.2.1 *Title Records, Environmental Liens, and AULs*

Partner was not provided with title records or environmental lien and AUL information for review as part of this assessment.

5.2.2 *Specialized Knowledge*

No specialized knowledge of environmental conditions associated with the subject property was provided by the User at the time of the assessment.

5.2.3 *Actual Knowledge of the User*

No actual knowledge of any environmental lien or AULs encumbering the subject property or in connection with the subject property was provided by the User at the time of the assessment.

5.2.4 *Valuation Reduction for Environmental Issues*

No knowledge of valuation reductions associated with the subject property was provided by the User at the time of the assessment.

5.2.5 *Commonly Known or Reasonably Ascertainable Information*

The User did not provide information that is commonly known or reasonably ascertainable within the local community about the subject property at the time of the assessment.

5.2.6 *Previous Reports and Other Provided Documentation*

The following information was provided to Partner for review during the course of this assessment:

Phase I Environmental Site Assessment Report, Partner Engineering and Science, Inc. (January 22, 2020)

Partner prepared this report on behalf of Chacon Farms. The assessment was reportedly performed in accordance with ASTM Standard E1527-13. The assessment consisted of a site reconnaissance, review of historical information, and a review of federal, state, and local regulatory databases. Pertinent information contained in this report is summarized below:

- At the time of the 2020 assessment, the subject property was occupied by Chacon Farms and Bruno Ranches for residential and agricultural purposes. During the assessment, the subject property was improved with seven structures including two single-family residences, two car garages, two storage barns, and a tool shed. One residence was noted to have a basement. The property was identified by APNs 432-260-009,-010, and -011 occupying a total 76.41-acre parcel where agricultural operations occurred.
- According to the previous Partner report, the subject property was historically used for agricultural purposes since the early 1930s, occupied by a cattle ranch between the 1940s until the mid-1970s where Chacon Farm purchased the land in 1976. Chacon Farms continued to use the property for agricultural purposes which included cattle farming, crop growing, and processing and packaging of vegetation. At the time of the assessment, Bruno Ranches was currently

leasing the grounds from Chacon Farms, and the property owner was identified as Gilbert P. Chacon since 2004.

- During site reconnaissance, Partner observed a 250-gallon diesel AST stored on a truck bed to the east of the barns which were not in use at the time. No evidence of staining or leaks were identified. The property was reportedly connected to an on-site septic system. Partner did not observe any drains or sinks within the barns or tool shed. One capped agricultural well was observed on the subject property for agricultural use. Some small surface stains from oil were observed on the asphalt-paved areas within the storage barns most likely from onsite maintenance of farm equipment. Based on the small quantity of oil observed, nature of the property, and use of the agricultural system and septic tanks, Partner does not expect any of these features to represent a significant environmental concern, but that the inground septic tank system and capped wells should be addressed within local regulatory guidelines prior to land redevelopment.
- Given the age of the structures present onsite, Partner identified potential asbestos-containing materials (ACMs) and lead-based paints (LBPs) as part of the subject property assessment.

Though Partner did not identify any RECs, CRECs, HRECs, Partner did recognize the age of the buildings as a possible Business Environmental Risk (BERs) and recommended the completion of a comprehensive survey to identify and regulate all suspected materials.

Copies of pertinent pages reviewed are included in Appendix B of this report.

6.0 SITE RECONNAISSANCE

The weather at the time of the site visit was sunny and clear. Refer to Section 1.5 for limitations encountered during the field reconnaissance and Sections 2.1 and 2.2 for subject property operations. The table below provides the site assessment details:

SITE ASSESSMENT DATA

Site Assessment Performed By:	Kody Klein
Site Assessment Conducted On:	September 25, 2024

Partner was unaccompanied during the site reconnaissance.

No potential environmental concerns were identified during the onsite reconnaissance.

6.1 General Site Characteristics

6.1.1 Solid Waste Disposal

Solid waste generated at the subject property is disposed of in trash cans located throughout the subject property. An independent solid waste disposal contractor, CR&R, removes solid waste from the subject property. No evidence of illegal dumping of solid waste was observed during the Partner site reconnaissance.

6.1.2 Sewage Discharge and Disposal

No wastewater treatment facilities were observed or reported on the subject property. Sanitary discharges from the subject property are directed to an onsite septic system.

6.1.3 Stormwater and Surface Water Drainage

Stormwater is removed from the property primarily due to ground infiltration. No drywells were identified on the subject property.

6.1.4 Source of Heating and Cooling

Heating and cooling systems as well as domestic hot water equipment are fueled by electricity and natural gas provided by Southern California Edison and Southern California Gas.

6.1.5 Wells and Cisterns

No aboveground evidence of wells or cisterns was observed during the site reconnaissance. However, one capped agricultural well was observed on the subject property in 2020.

6.1.6 Wastewater

Domestic wastewater generated at the subject property is disposed by means of the septic system. No industrial processes are currently performed at the subject property.

6.1.7 Septic Systems

The residences on the subject property are reported to be connected to on-site septic systems. No floor drains or sinks were observed within the barns or tool shed. Based on their presumed use for domestic purposes only, the septic systems are not expected to represent a significant environmental concern at this time.

6.1.8 Additional Site Observations

No additional general site characteristics were observed during the site reconnaissance.

6.2 Potential Environmental Hazards

6.2.1 Hazardous Substances and Petroleum Products Used or Stored at the Site

Partner observed empty containers and an unlabeled drum in the area of the barns. No signs of leaks, stains, or spills were observed. Based on the observed conditions, these materials are not expected to represent a significant environmental concern.

6.2.2 Aboveground & Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs/USTs)

No evidence of current or former ASTs or USTs was observed during the site reconnaissance.

6.2.3 Evidence of Releases

No spills, stains, or other indications that a surficial release has occurred at the subject property were observed.

6.2.4 Polychlorinated Biphenyls (PCBs)

No potential PCB-containing equipment (transformers, oil-filled switches, hoists, lifts, dock levelers, hydraulic elevators, etc.) was observed on the subject property during Partner's reconnaissance.

6.2.5 Strong, Pungent or Noxious Odors

No strong, pungent or noxious odors were evident during the site reconnaissance.

6.2.6 Pools of Liquid

No pools of liquid were observed on the subject property during the site reconnaissance.

6.2.7 Drains, Sumps and Clarifiers

No drains, sumps, or clarifiers, other than those associated with storm water removal, were observed on the subject property during the site reconnaissance.

6.2.8 Pits, Ponds and Lagoons

A natural catch basin was observed on the northwestern portion of the subject property. According to the prior report discussed in Section 5.2.6, the catch basin is located at the lowest elevation of the subject property and captures stormwater and excess irrigation water. No hazardous materials were observed stored within the vicinity of the catch basin and no evidence of illegal dumping into the catch basin was observed. Based on the absence of routine hazardous material use and/or generation of hazardous waste at the subject property and no evidence of illegal dumping, the presence of a natural catch basin is not expected to represent a significant environmental concern.

6.2.9 Stressed Vegetation

No stressed vegetation was observed on the subject property.

6.2.10 Additional Potential Environmental Hazards and Emerging Contaminants

Partner evaluated the current subject property use during the site reconnaissance for potential environmental hazards, including Per- and Polyfluoroalkyl Substances (PFAS) impacts to the subject property. Potential PFAs impacts associated with agricultural use is further discussed in Section 3.0.

No additional environmental hazards, including landfill activities or radiological hazards, were observed.

6.3 Non-ASTM Services

6.3.1 Asbestos-Containing Materials (ACMs)

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.1101 requires certain construction materials to be presumed to contain asbestos, for purposes of this regulation. All thermal system insulation (TSI), surfacing material, and asphalt/vinyl flooring that are present in a building that have not been appropriately tested are “presumed asbestos-containing material” (PACM).

The subject property residential building was constructed in 1946 and may have asbestos containing materials (ACMs: materials containing >1% asbestiform components determined by the EPA 600/R-93/116 Method using Polarized Light Microscopy) present. The table below outlines suspect ACM that is generally found in buildings of this age:

Suspect ACM
Drywall Systems
Floor Tiles
Floor Tile Mastic
Spray-Applied Acoustical Material
Stucco

Based on this building’s date of construction, prior to disturbance, Partner recommends a comprehensive asbestos survey of the property be completed to determine the presence, condition, friability and likely future condition of suspect or confirmed ACM. All suspect materials must be handled as ACM according to local, state and federal regulations until the results of sampling and analysis indicate the material is a non-ACM. According to the US EPA, ACM that is intact and in good condition can, in general, be managed safely in-place under an Operations and Maintenance (O&M) Program until removal is dictated by renovation, demolition, or deteriorating material condition.

6.3.2 Lead-Based Paint (LBP)

Lead is a highly toxic metal that affects virtually every system of the body. LBP is defined as any paint, varnish, stain, or other applied coating that has 1 mg/cm2 (or 5,000 µg/g or 0.5% by weight) or more of lead. Congress passed the Residential Lead-Based Paint Hazard Reduction Act of 1992, also known as “Title X,” to protect families from exposure to lead from paint, dust, and soil. Under Section 1017 of Title X, intact LBP on most walls and ceilings is not considered a “hazard,” although the condition of the paint should be monitored and maintained to ensure that it does not become deteriorated. Further, Section 1018 of this law directed the Housing and Urban Development (HUD) and the US EPA to require the disclosure of known information on LBP and LBP hazards before the sale or lease of most housing built before 1978.

Based on the age of the subject property buildings (pre-1978), there is a potential that LBP is present. Interior and exterior painted surfaces were observed in good condition and therefore not expected to represent a "hazard," although the condition of the paint should be monitored and maintained to ensure it does not become deteriorated.

Actual material samples would need to be collected in order to determine if LBP is present.

6.3.3 Radon

Radon is a colorless, odorless, naturally occurring, radioactive, inert, gaseous element formed by radioactive decay of radium (Ra) atoms. The US EPA has prepared a map to assist National, State, and

local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, according to the table below:

EPA RADON ZONES

EPA Zones	Average Predicted Radon Levels	Potential
Zone 1	Exceed 4.0 pCi/L	Highest
Zone 2	Between 2.0 and 4.0 pCi/L	Moderate
Zone 3	Less than 2.0 pCi/L	Low

It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the US EPA recommends site-specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures.

Review of the US EPA Map of Radon Zones places the subject property in Zone 2. Based upon the radon zone classification, radon is not considered an environmental concern.

6.3.4 Lead in Drinking Water

According to available information, a public water system operated by the Eastern Municipal Water District (EMWD) serves the subject property vicinity. According to the EMWD 2018 Annual Water Quality Report, water supplied to the subject property is in compliance with all State and Federal regulations pertaining to drinking water standards, including lead and copper. Water sampling was not conducted to verify water quality.

6.3.5 Mold

Molds are microscopic organisms found virtually everywhere, indoors and outdoors. Mold will grow and multiply under the right conditions, needing only sufficient moisture (e.g.in the form of very high humidity, condensation, or water from a leaking pipe, etc.) and organic material (e.g., ceiling tile, drywall, paper, or natural fiber carpet padding).

Partner observed accessible, interior areas of the subject property buildings for significant evidence of mold growth with the exceptions detailed in Section 1.5 of this report; however, this assessment should not be used as a mold survey or inspection. Additionally, this limited assessment was not designed to assess all areas of potential mold growth that may be affected by mold growth on the subject property. Rather, it is intended to give the client an indication as to whether or not conspicuous (based on observed areas) mold growth is present at the subject property. This evaluation did not include a review of pipe chases, mechanical systems, or areas behind enclosed walls and ceilings.

No obvious indications of water damage or mold growth were observed during Partner's visual assessment.

6.3.6 Wetlands

The subject property does not appear to be a designated wetland area based on information obtained from the United States Fish and Wildlife Service; however, a comprehensive wetlands survey would be required in order to formally determine actual wetlands on the subject property. Settling ponds were observed at the subject property during this assessment.

6.4 Adjoining Property Reconnaissance

The adjoining property reconnaissance consisted of observing the adjoining properties from the subject property premises.

6.4.1 Hazardous Substances and Petroleum Products Used or Stored at the Site

No hazardous substances or petroleum products were observed on adjoining properties during the limited adjoining property reconnaissance.

6.4.2 ASTs/USTs for Hazardous Substances or Petroleum Products

No ASTs or USTs for hazardous substances/petroleum products were observed on adjoining properties during the limited adjoining property reconnaissance.

6.4.3 Evidence of Releases

No evidence of a release was observed on adjoining properties during the limited adjoining property reconnaissance.

6.4.4 PCBs

No PCB containing materials were observed on adjoining properties during the limited adjoining property reconnaissance.

6.4.5 Strong, Pungent, or Noxious Odors

Methane or cow ranch smell

6.4.6 Pools of Liquid

No pools of liquid were observed on adjoining properties during the limited adjoining property reconnaissance.

6.4.7 Drains, Sumps, and Clarifiers

No drains, sumps, or clarifiers were observed on adjoining properties during the limited adjoining property reconnaissance.

6.4.8 Pits, Ponds, and Lagoons

No pits, ponds, or lagoons were observed on adjoining properties during the limited adjoining property reconnaissance.

6.4.9 Stressed Vegetation

No stressed vegetation was observed on adjoining properties during the limited adjoining property reconnaissance.

6.4.10 Additional Potential Environmental Hazards and Emerging Contaminants

Partner evaluated the current adjoining property use/uses during the site reconnaissance for potential environmental hazards, including PFAS impacts to the subject property. Based on observations made from the subject property borders, the adjoining properties have been used for agricultural purposes. There is a potential that biosolids were utilized as fertilizer. Biosolids are made with slurry from wastewater treatment plants, which may be impacted with polyfluoroalkyl substances (PFAS) from incoming waste streams. PFAS are considered environmentally stable, mobile, persistent, and bioaccumulative contaminants of emerging concern. However, it is unlikely that the owner of the subject property would be helf responsible for PFAs applied on an adjoining property.

No additional environmental hazards were observed on adjoining properties during the limited adjoining property reconnaissance.

7.0 VAPOR ENCROACHMENT CONDITIONS

Partner conducted a limited non-intrusive vapor screening on the subject property to identify, to the extent feasible, the potential for vapor encroachment conditions (VECs) in connection with the subject property. This included consideration of chemicals of concern (COC) that may migrate as vapors into the subsurface of the subject property as a result of contaminated soil and groundwater on or near the property.

This screening utilized readily available data sources previously discussed in this Phase I ESA that includes:

- the physical setting of the subject property (Section 2.4),
- standard historical sources for the subject property, adjoining, and surrounding area (Section 3.0),
- known or potentially contaminated sites as identified from information from regulatory agencies and sites on Federal, State, tribal and local databases (Section 4.0), and
- information from the site reconnaissance (Section 6.0) of the subject property and observations of the surrounding properties.

The results of our data collection, reconnaissance, and analysis are tabulated below:

POTENTIAL FOR VAPOR ENCROACHMENT TO IMPACT THE SUBJECT PROPERTY

Area of Concern	Likely or Known VEC to Subject Property
Subject Property Existing Operations or Conditions (Sections 2.0 and 6.0)	None identified that impact the subject property.
Historical Uses of the Subject Property (Section 3.0)	None identified that impact the subject property.
Adjoining Property Operations or Existing Conditions (Sections 2.3 and 6.4)	None identified that impact the subject property.
Historical Uses of Adjoining Properties or Nearby Properties (Section 3.0)	None identified that impact the subject property.
Regulatory Review of sites identified on Federal, State, tribal and Local Environmental Databases which were located in the AMSD (Section 4.0)	None identified that impact the subject property.

Based on the findings of the limited non-intrusive vapor screening, vapor intrusion is unlikely to be an issue of concern in connection with the existing structures on the subject property. As such, no further assessment is recommended.

8.0 FINDINGS AND CONCLUSIONS

Findings and Opinions

Recognized Environmental Condition

A recognized environmental condition (REC) refers to the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

- Partner did not identify any RECs during the course of this assessment.

Controlled Recognized Environmental Condition

A controlled recognized environmental condition (CREC) refers to a REC affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, activity and use limitations or other property use limitations).

- Partner did not identify any CRECs during the course of this assessment.

Historical Recognized Environmental Condition

A historical recognized environmental condition (HREC) refers to a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations).

- Partner did not identify any HRECs during the course of this assessment.

Business Environmental Risk

A Business Environmental Risk (BER) is a risk which can have a material environmental or environmentally driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in this practice. The following was identified during the course of this assessment:

- Due to the age of the subject property buildings, there is a potential that asbestos-containing material (ACM) and/or lead-based paint (LBP) are present. Readily visible suspect ACMs and painted surfaces were observed in good condition. Should these materials be replaced, the identified suspect ACMs would need to be sampled to confirm the presence or absence of asbestos prior to any renovation or demolition activities to prevent potential exposure to workers and/or building occupants.

Significant Data Gaps

No significant data gaps affecting the ability of the Environmental Professional to identify a REC were encountered during this assessment.

Conclusions and Recommendations

Partner has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-21 of 710 Cawston Avenue North in San Jacinto, Riverside County, California (the "subject property"). Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

This assessment has revealed no evidence of RECs, CRECs, or HRECs in connection with the subject property; however, BERs were identified. Based on the conclusions of this assessment, Partner recommends the following:

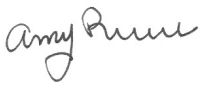
- Prior to the disturbance of any suspect ACMs at the subject property, a comprehensive survey, designed to determine if the suspect materials are regulated, is recommended. If such materials are identified and need to be disturbed, repaired, or removed, a licensed abatement contractor should be consulted.

9.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Partner has performed a Phase I Environmental Site Assessment of the property located at 710 Cawston Avenue North in San Jacinto, Riverside County, California in conformance with the scope and limitations of the protocol and the limitations stated earlier in this report. Exceptions to or deletions from this protocol are discussed earlier in this report.

By signing below, Partner declares that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR §312. Partner has the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. Partner has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Reviewed By:



Amy Rudegeair
Environmental Professional

10.0 REFERENCES

Reference Documents

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Environmental Risk Information Services (ERIS), Radius Report, September 2024.

Federal Emergency Management Agency, Federal Insurance Administration, National Flood Insurance Program, Flood Insurance Map, accessed via the internet, September 2024.

United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, accessed via the internet, September 2024.

United States Environmental Protection Agency, EPA Map of Radon Zones (Document EPA-402-R-93-071), accessed via the internet, September 2024.

United States Fish and Wildlife Service, National Wetlands Inventory, accessed via the internet, September 2024.

United States Geological Survey, accessed via the internet, September 2024.

United States Geological Survey Topographic Map Lakeview, California, 2023, 7.5-minute series, accessed via the internet, September 2024.

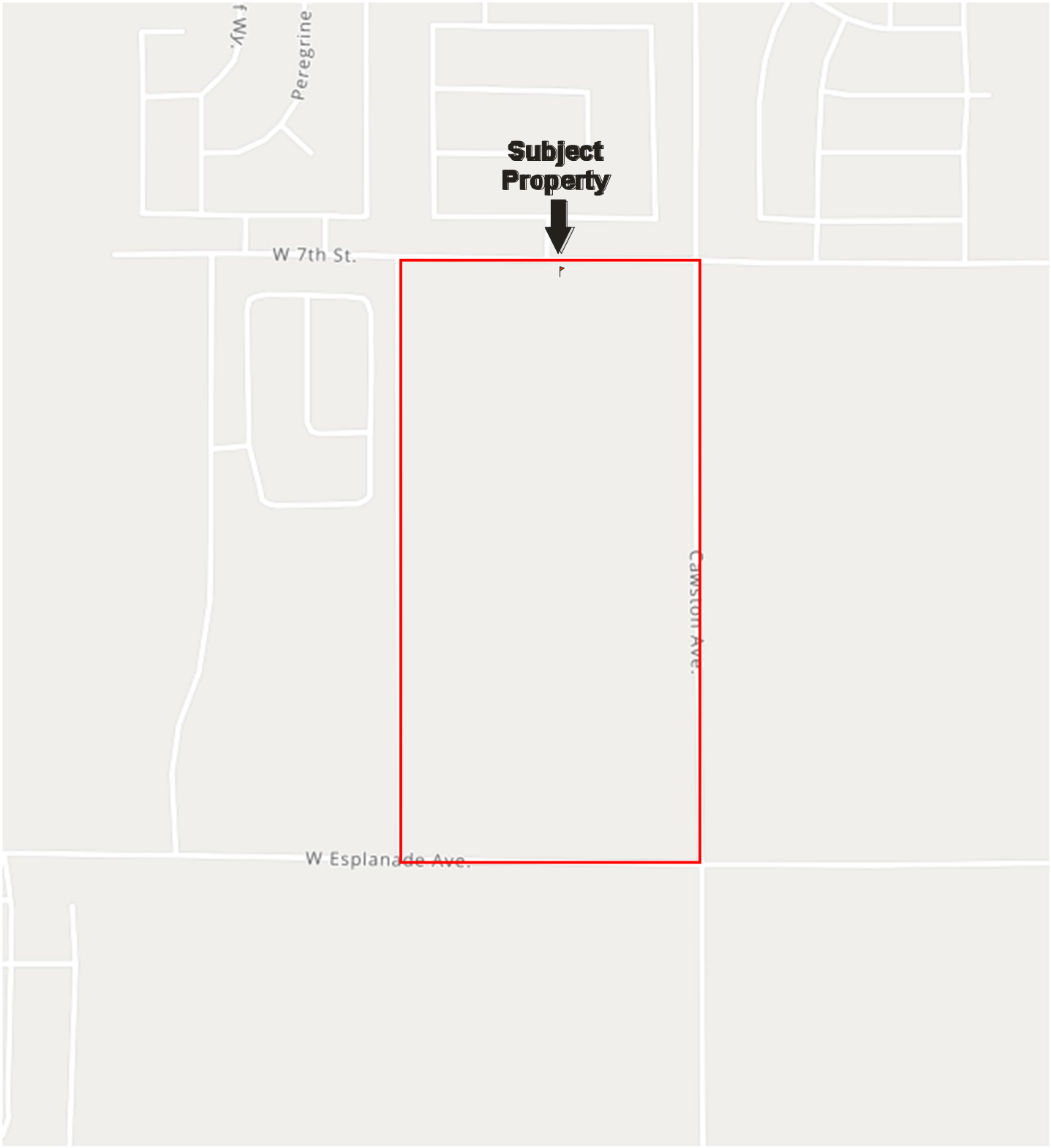
Phase I Environmental Site Assessment Report, Partner Engineering and Science, Inc. (Partner), January 22, 2020.

FIGURES

1: Site Location Map

2: Site Plan

3: Topographic Map



N

Drawing Not To Scale

KEY:
Subject Property

FIGURE 1: SITE LOCATION MAP
Project No. 24-461627.1

PARTNER



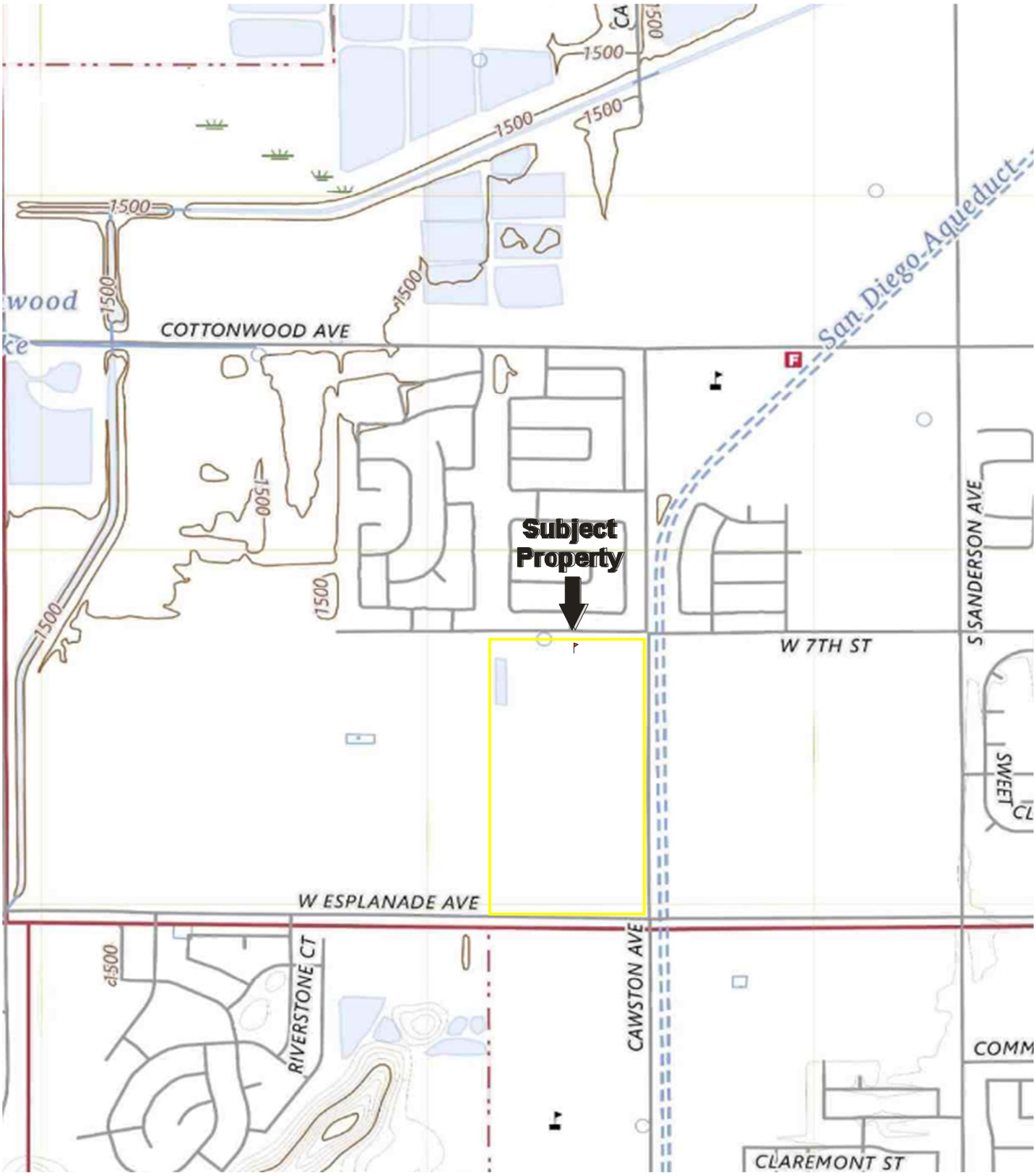
N

GROUNDWATER FLOW

KEY:
Subject Property

FIGURE 2: SITE PLAN
Project No. 24-461627.1

PARTNER



N

USGS 7.5-Minute *Lakeview, California* Quadrangle
Created: 2023

KEY:
Subject Property

FIGURE 3: TOPOGRAPHIC MAP
Project No. 24-461627.1

PARTNER

APPENDIX A: SITE PHOTOGRAPHS



1. Growing fields



2. Growing fields



3. Onsite residential



4. Subject property



5. Subject property field entrance



6. Site barn



7. Barn storage and tractors



8. Pile of empty containers and miscellaneous refuse



9. 55-gallon drum of unknown contents



10. Stockpiled metal poles



11. South adjoining West Esplanade Avenue and property



12. South adjoining West Esplanade Avenue and property



13. West adjoining



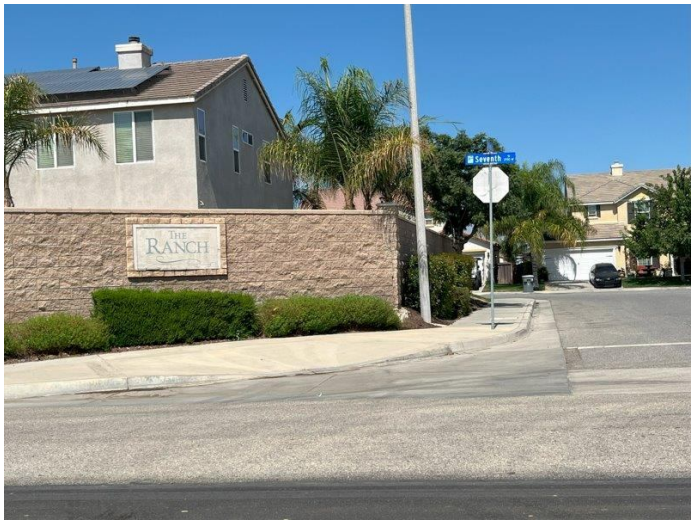
14. West 7th Street and north adjoining residential facing west



15. West 7th Street and north adjoining residential facing north



16. West 7th Street and north adjoining residential facing east



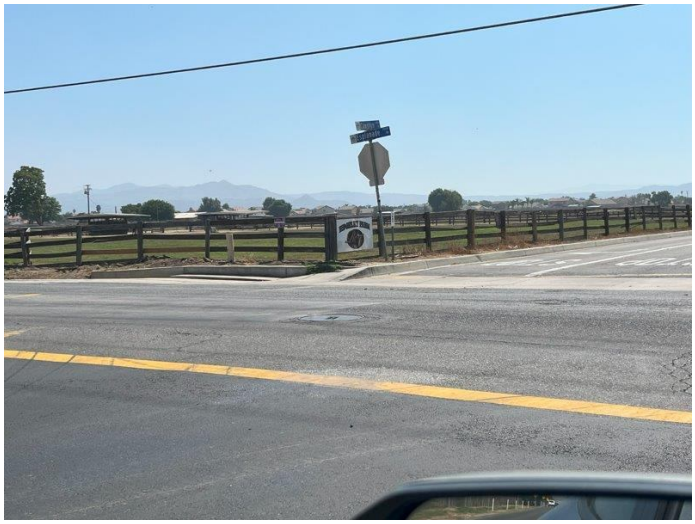
17. North adjoining residential community



18. East adjoining



19. Cawston Avenue North and east adjoining facing south



20. Intersection of Cawston Avenue North and West Esplanade Avenue, and southeast adjoining

APPENDIX B: HISTORICAL/REGULATORY DOCUMENTATION

TOPOGRAPHIC MAPS

Project Property:	Chacon Farms
	710 Cawston Avenue North
	SAN JACINTO CA 92582
Project No:	24-461627.1
Requested By:	Partner Engineering and Science, Inc.
Order No:	24091300947
Date Completed:	September 15, 2024

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We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

Year	Map Series
1942	15
1943	15
1953	7.5
1967	7.5
1979	7.5
2015	7.5
2018	7.5
2021	7.5

Topographic Map Symbology for the maps may be available in the following documents:

Pre-1947

Page 223 of 1918 Topographic Instructions

Page 130 of 1928 Topographic Instructions

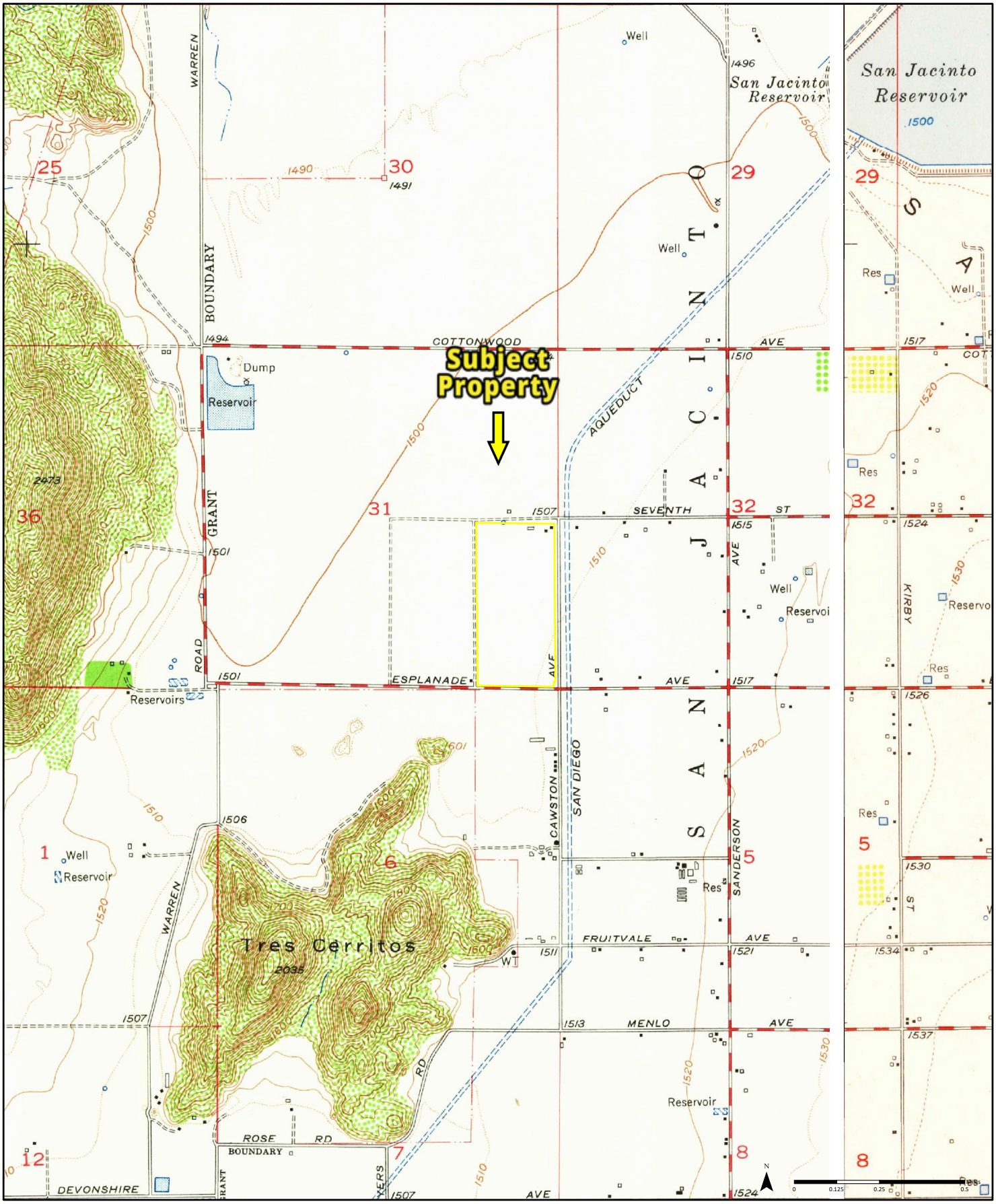
1947-2009

Topographic Map Symbols

2009-present

US Topo Map Symbols

Topographic Maps included in this report are produced by the USGS and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property.
No warranty of Accuracy or Liability for ERIS: The information contained in this report has been produced by ERIS Information Inc.(in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS', using Topographic Maps produced by the USGS. This maps contained herein does not purport to be and does not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present you with information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.



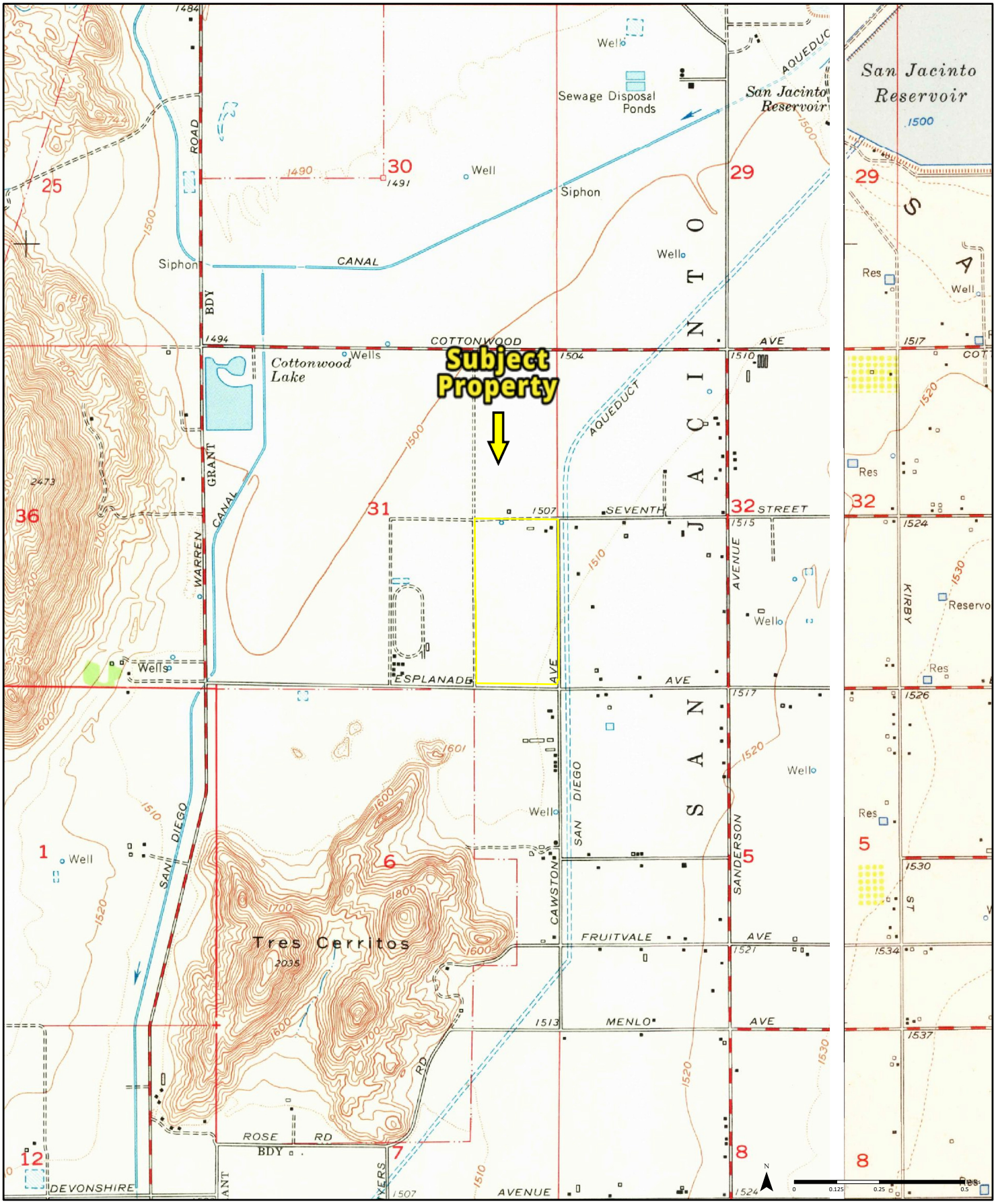
1953 (1-1953) *Aerial Photo Year: 1949* (2-1953) *Aerial Photo Year: 1951*

Quadrangle(s): Lakeview, CA(2-1953)
San Jacinto, CA(1-1953)

Order No. 24091300947

Source: USGS 7.5 Minute Topographic Map

PARTNER



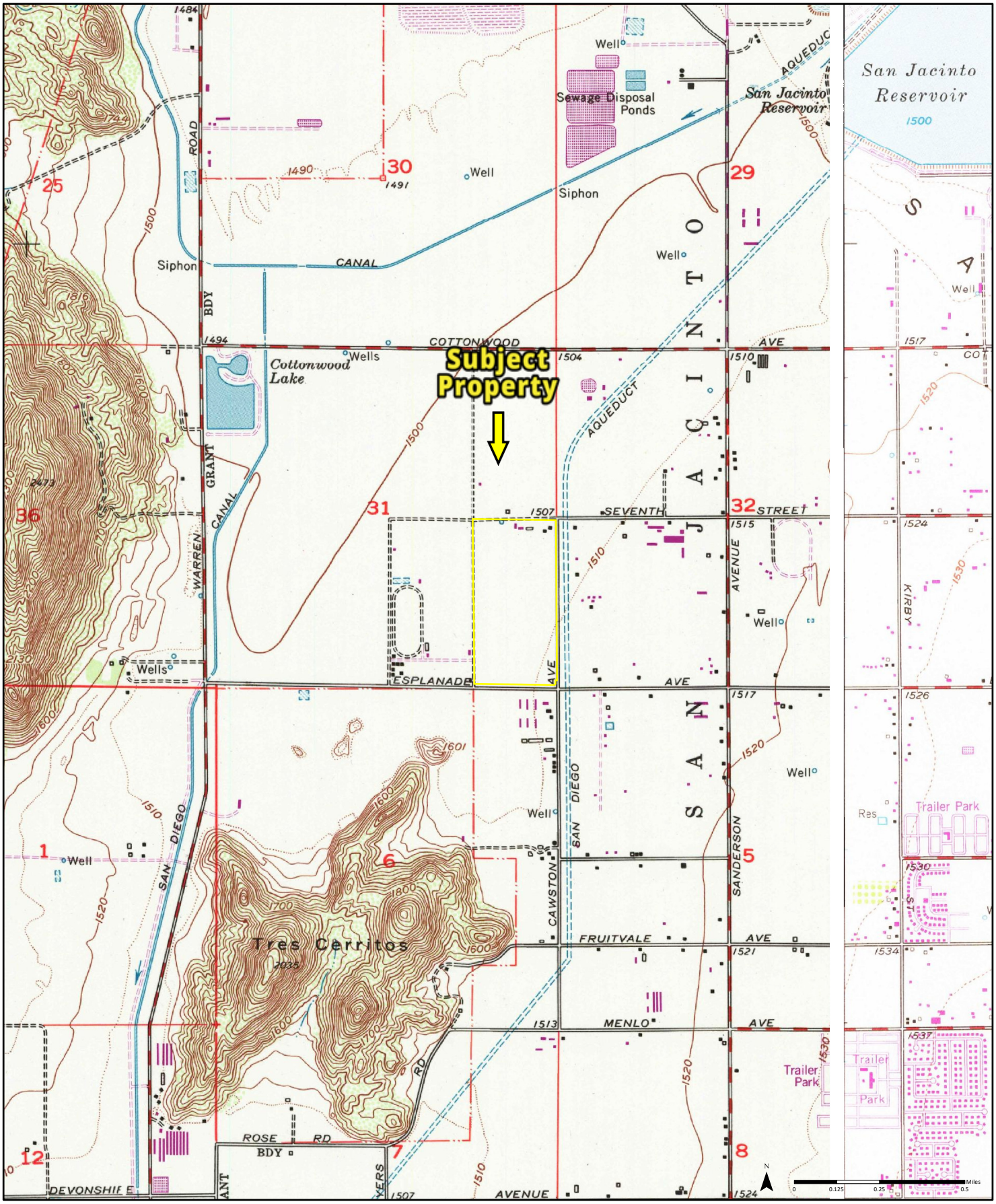
1967 *(1-1953)* *Aerial Photo Year: 1949* *(2-1967)* *Aerial Photo Year: 1966*

Quadrangle(s): Lakeview, CA(2-1967)
San Jacinto, CA(1-1953)

Order No. 24091300947

Source: USGS 7.5 Minute Topographic Map

PARTNER



1979

(1-1979) *Aerial Photo Year: 1978* *Photo Revision Year: 1979*

(2-1979) *Aerial Photo Year: 1976* *Photo Revision Year: 1979*

Quadrangle(s): Lakeview, CA(2-1979)
San Jacinto, CA(1-1979)

Order No. 24091300947

Source: USGS 7.5 Minute Topographic Map

PARTNER

HISTORICAL AERIALS

Project Property: Chacon Farms
710 Cawston Avenue North
SAN JACINTO CA 92582

Project No: 24-461627.1

Requested By: Partner Engineering and Science, Inc.

Order No: 24091300947

Date Completed: September 16,2024

Aerial Maps included in this report are produced by the sources listed above and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property. ERIS provides no warranty of accuracy or liability. The information contained in this report has been produced using aerial photos listed in above sources by ERIS Information Inc. (in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS'. The maps contained in this report do not purport to be and do not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

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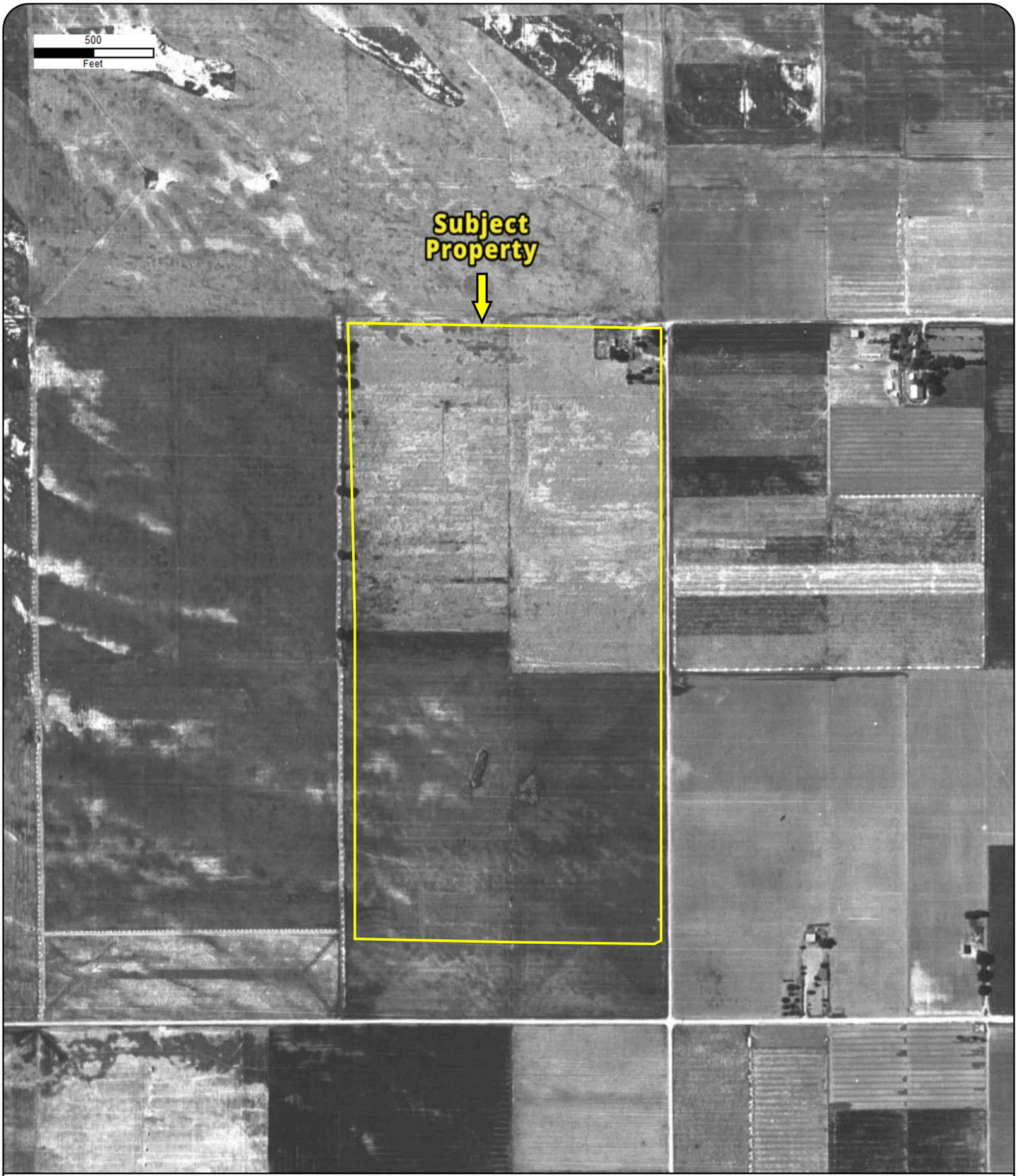
Date	Source	Scale	Comments
1938	Agricultural Stabilization & Conserv. Service	1" = 500'	
1949	Agricultural Stabilization & Conserv. Service	1" = 500'	
1953	Agricultural Stabilization & Conserv. Service	1" = 500'	
1958	Fairchild	1" = 500'	
1962	Fairchild	1" = 500'	
1966	United States Geological Survey	1" = 500'	
1976	Private	1" = 500'	
1980	United States Geological Survey	1" = 500'	
1985	United States Geological Survey	1" = 500'	
1996	United States Geological Survey	1" = 500'	
2002	United States Geological Survey	1" = 500'	
2004	United States Department of Agriculture	1" = 500'	
2005	United States Department of Agriculture	1" = 500'	
2006	United States Department of Agriculture	1" = 500'	
2009	United States Department of Agriculture	1" = 500'	
2010	United States Department of Agriculture	1" = 500'	
2012	United States Department of Agriculture	1" = 500'	
2014	United States Department of Agriculture	1" = 500'	
2016	United States Department of Agriculture	1" = 500'	
2018	United States Department of Agriculture	1" = 500'	
2020	United States Department of Agriculture	1" = 500'	
2022	Maxar Technologies	1" = 500'	

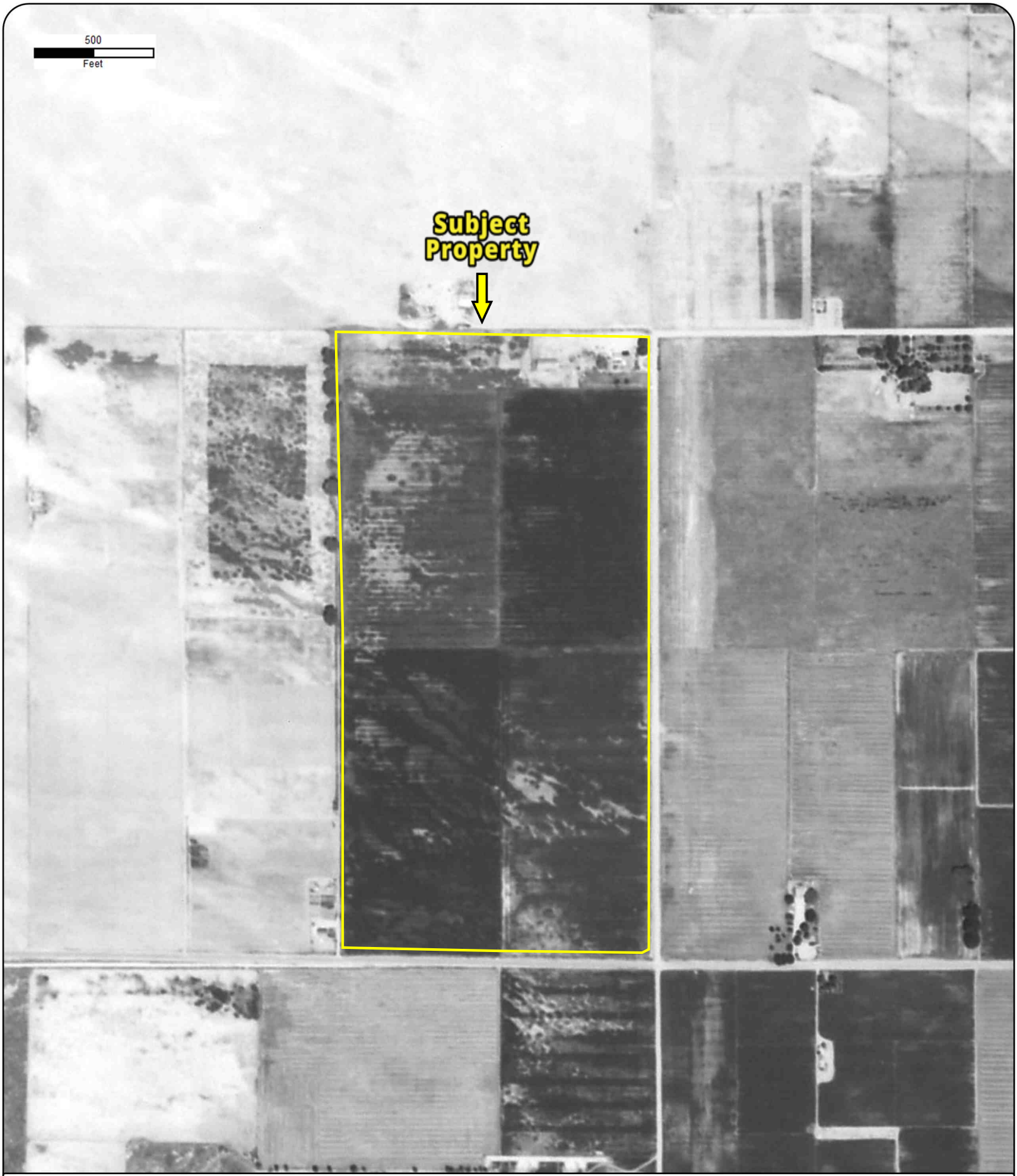


Year: 1938
Source: ASCS
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER



Year: 1949
Source: ASCS
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER

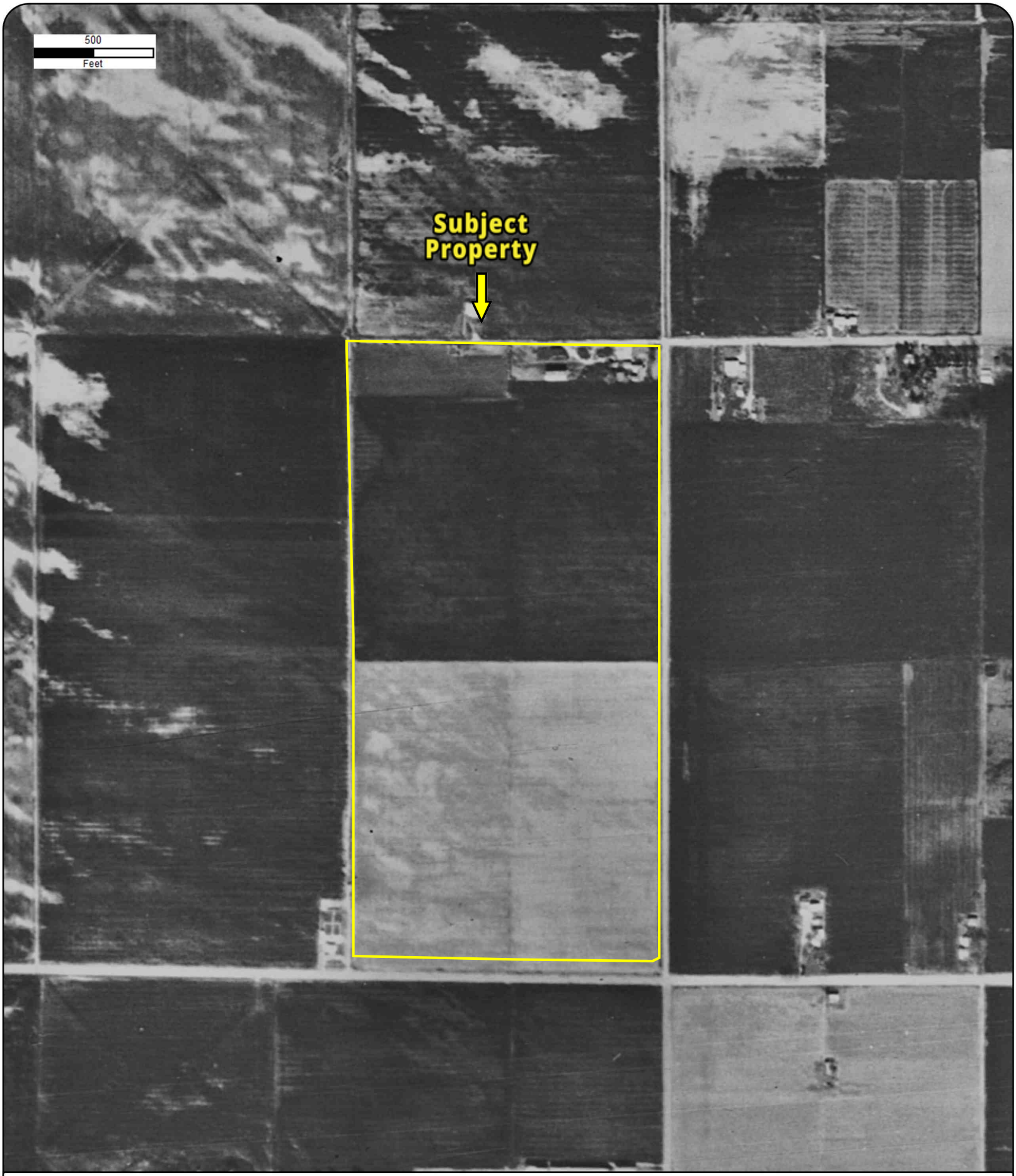


Year: 1953
Source: ASCS
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER

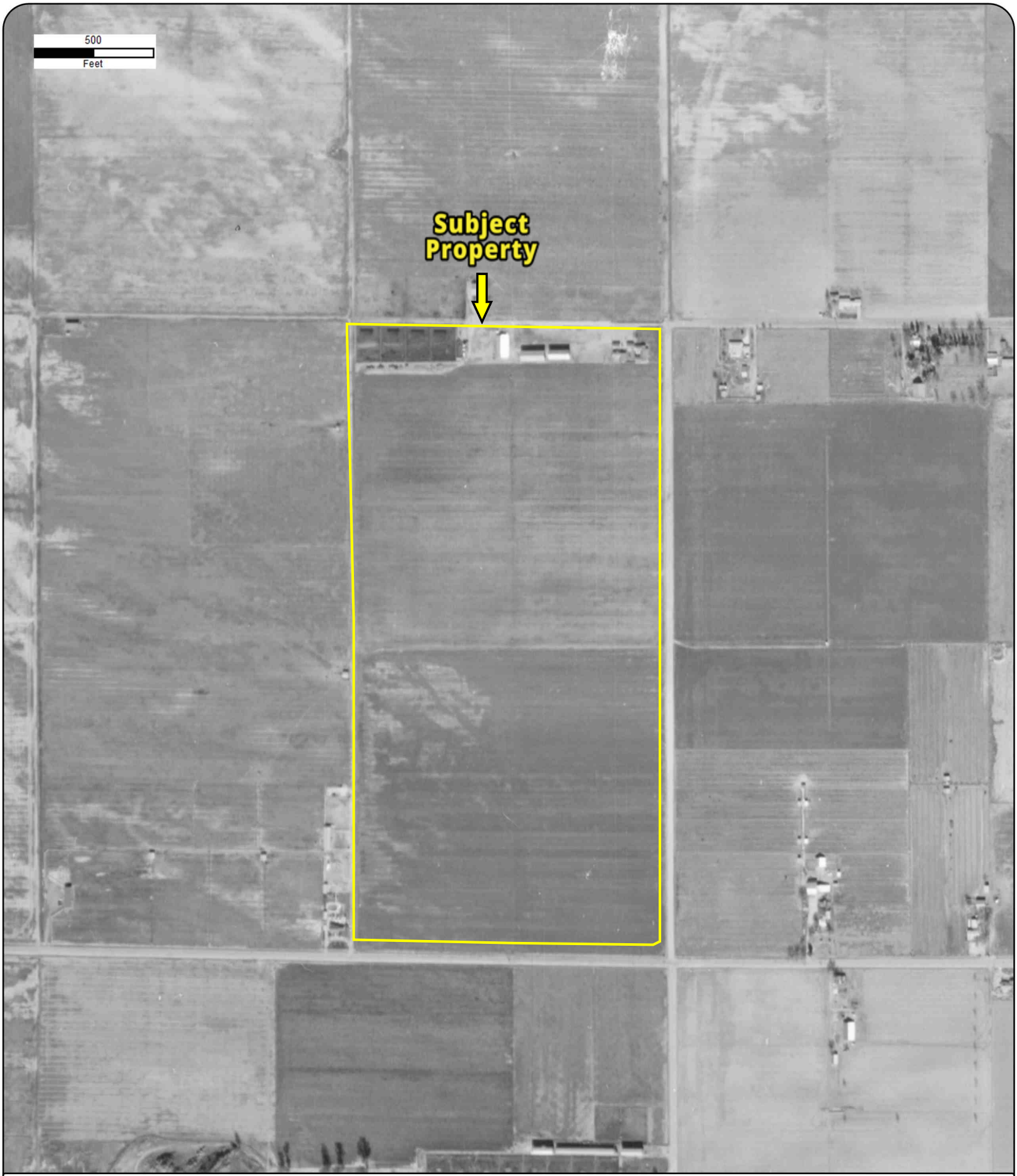


Year: 1958
Source: FAIRCHILD
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER

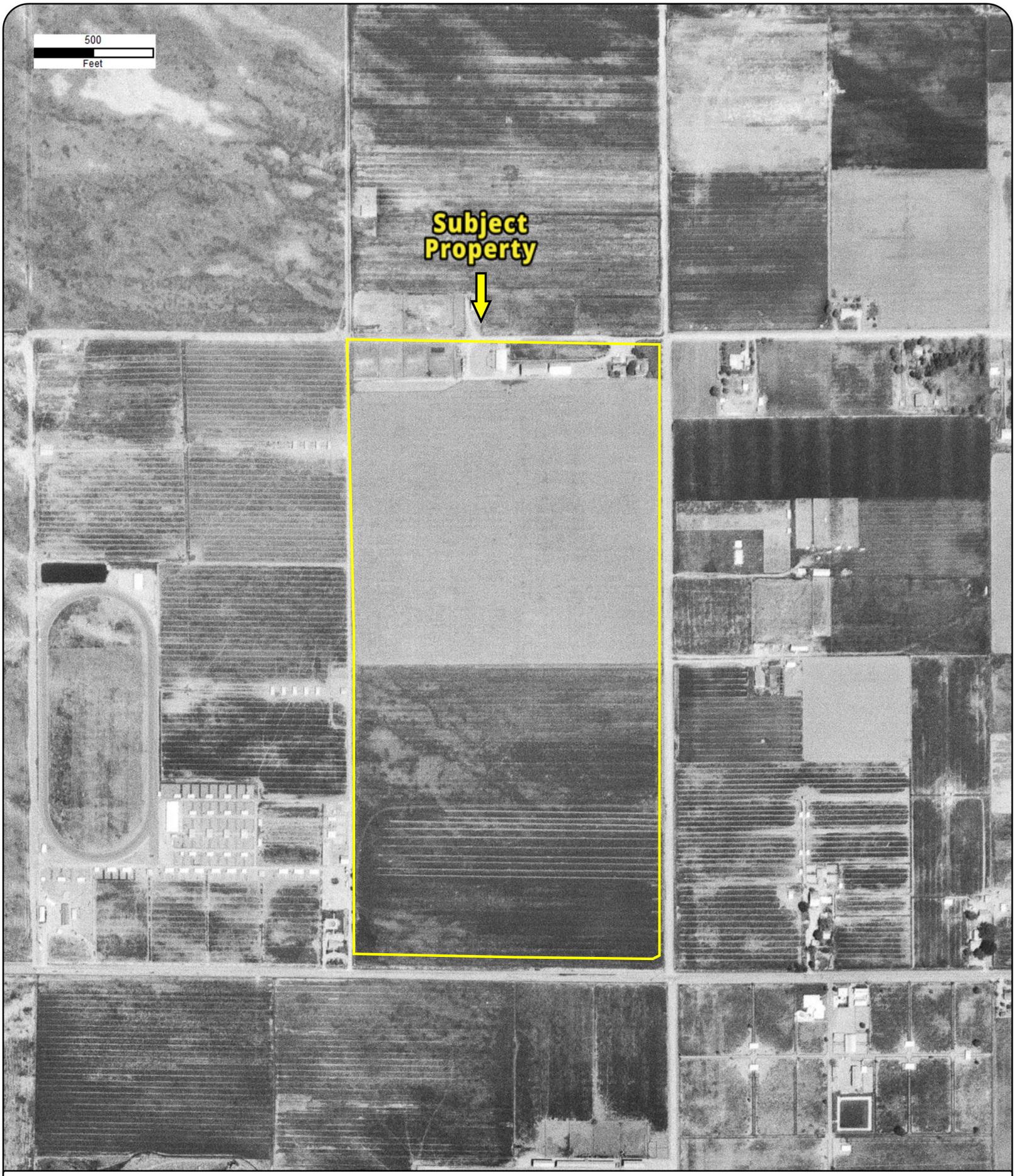


Year: 1962
Source: FAIRCHILD
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER



Year: 1966
Source: USGS
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER

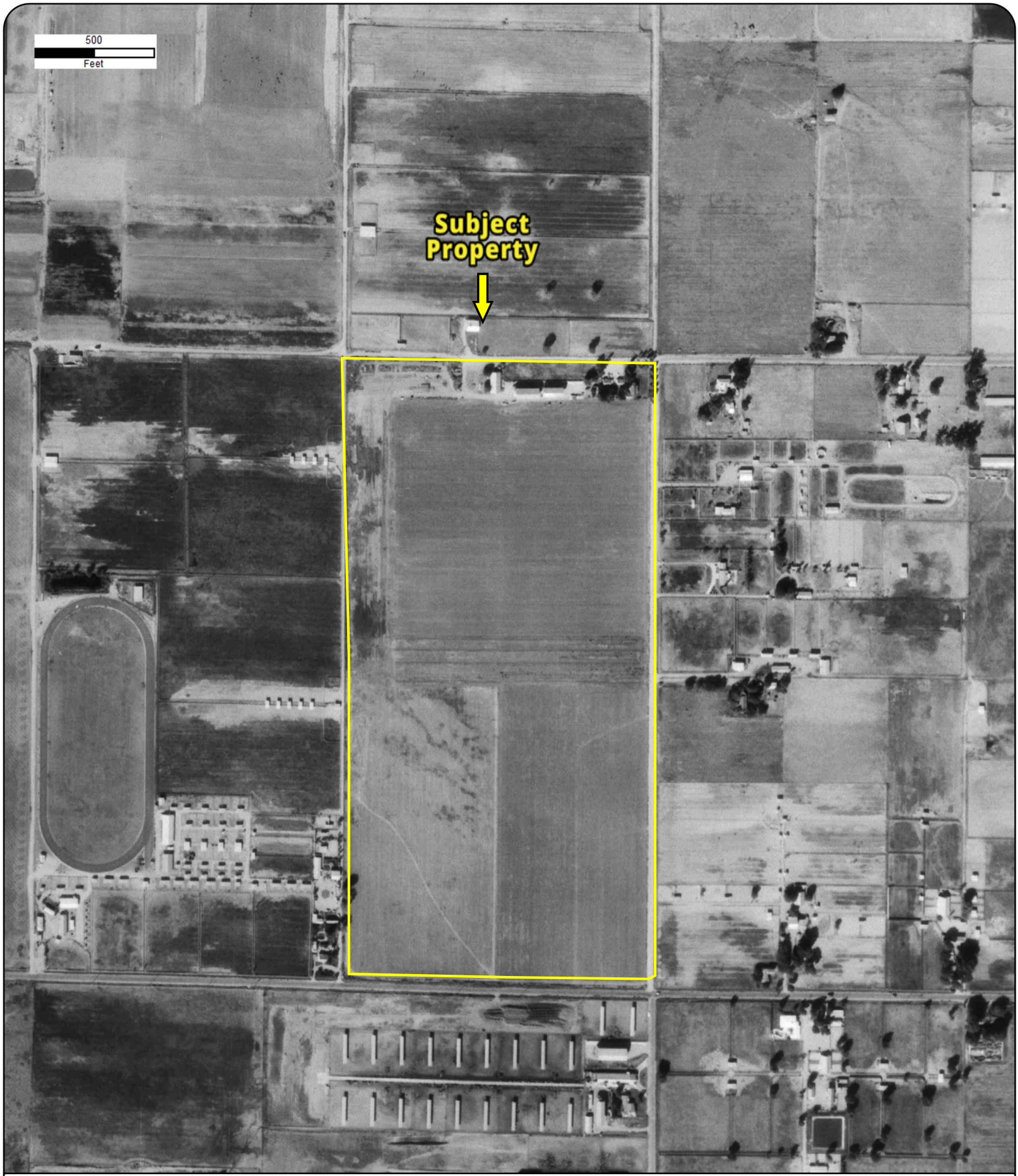


Year: 1976
Source: Private
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER



Year: 1980
Source: USGS
Scale: 1" = 500'
Comment:

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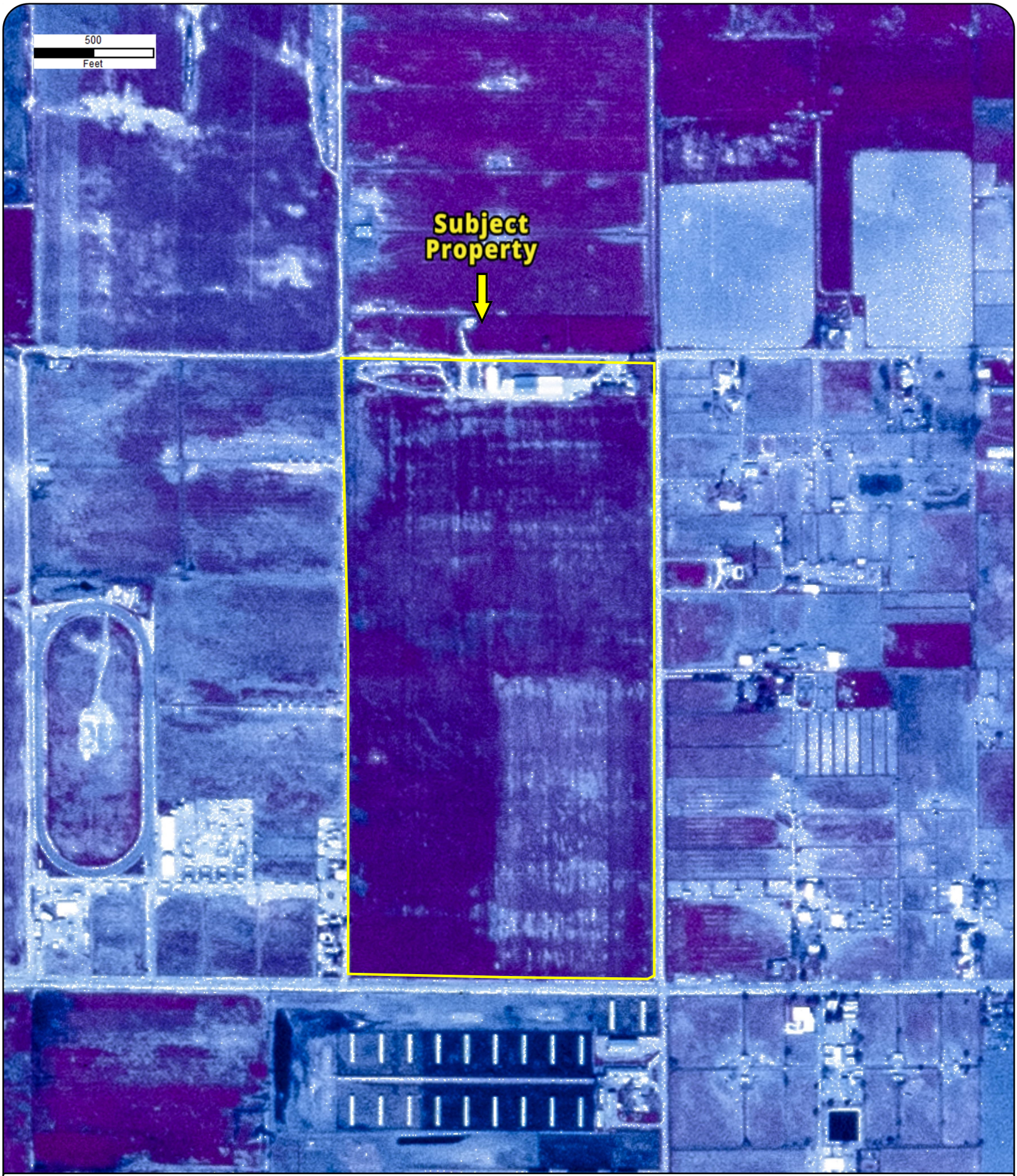
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER



Year: 1985
Source: USGS
Scale: 1" = 500'
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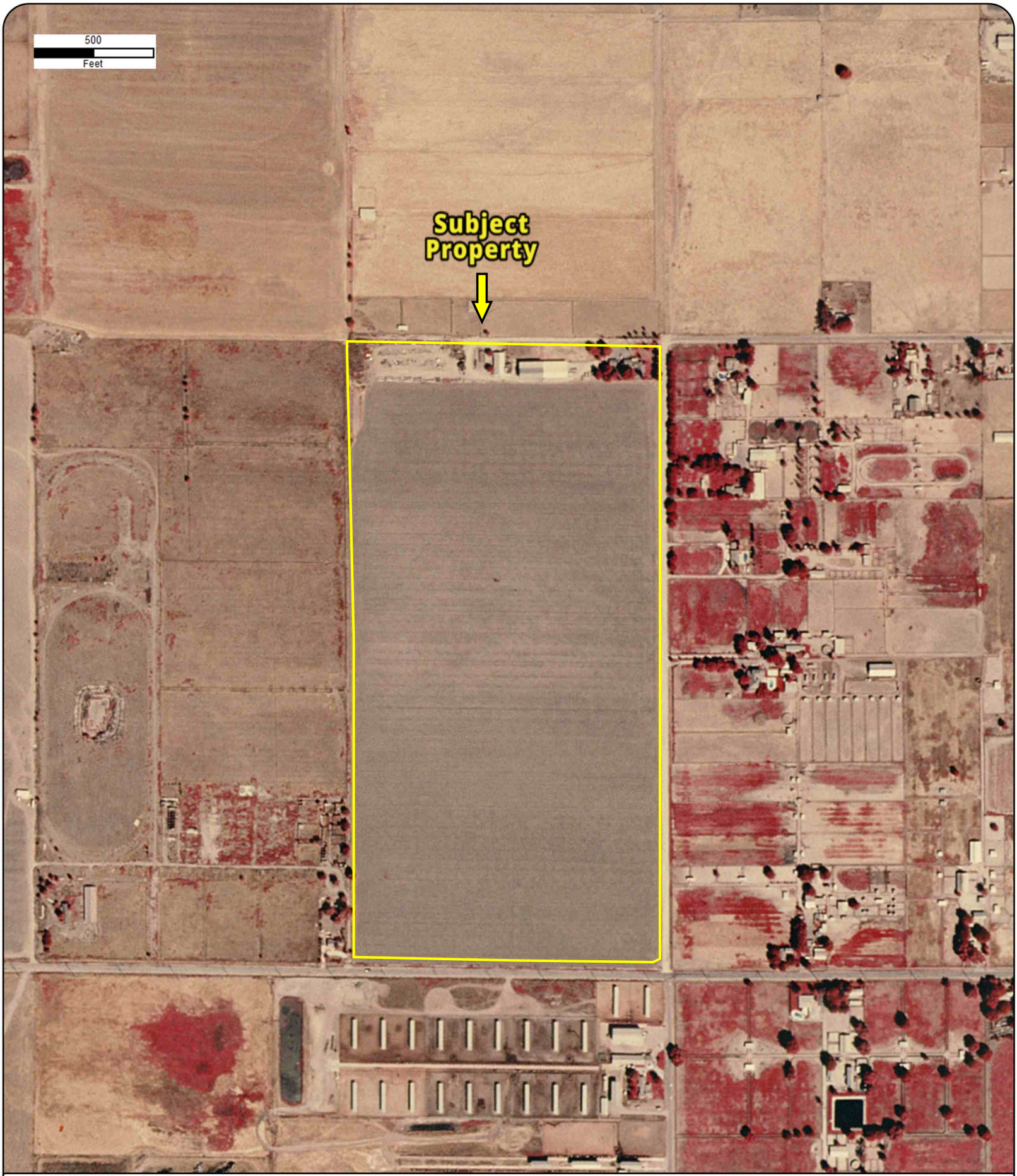
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER



Year: 1996
Source: USGS
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER



Year: 2002
Source: USGS
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER



Year: 2004
Source: USDA
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER



Year: 2005
Source: USDA
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER



Year: 2006
Source: USDA
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER

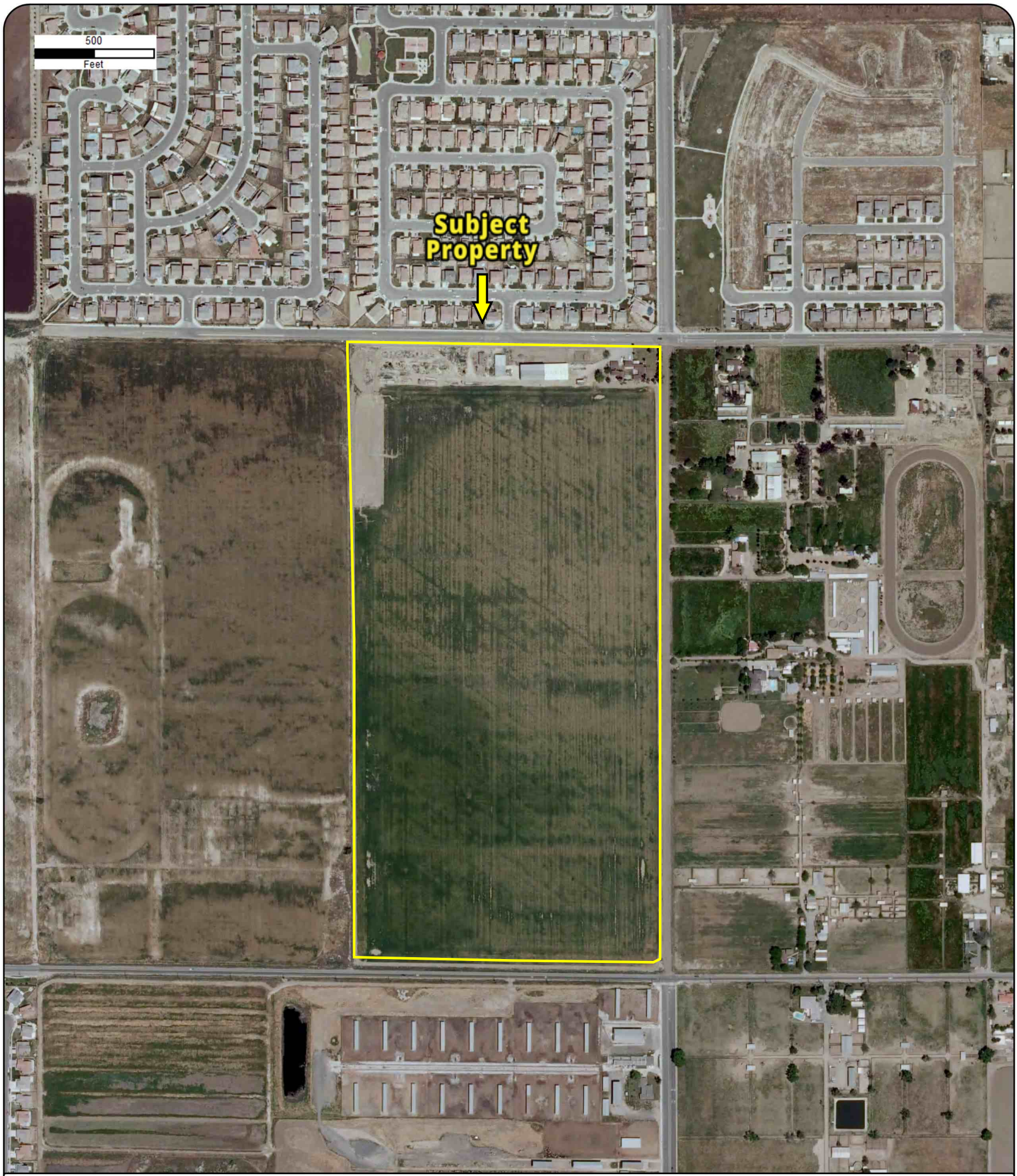


Year: 2009
Source: USDA
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER



Year: 2010
Source: USDA
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER

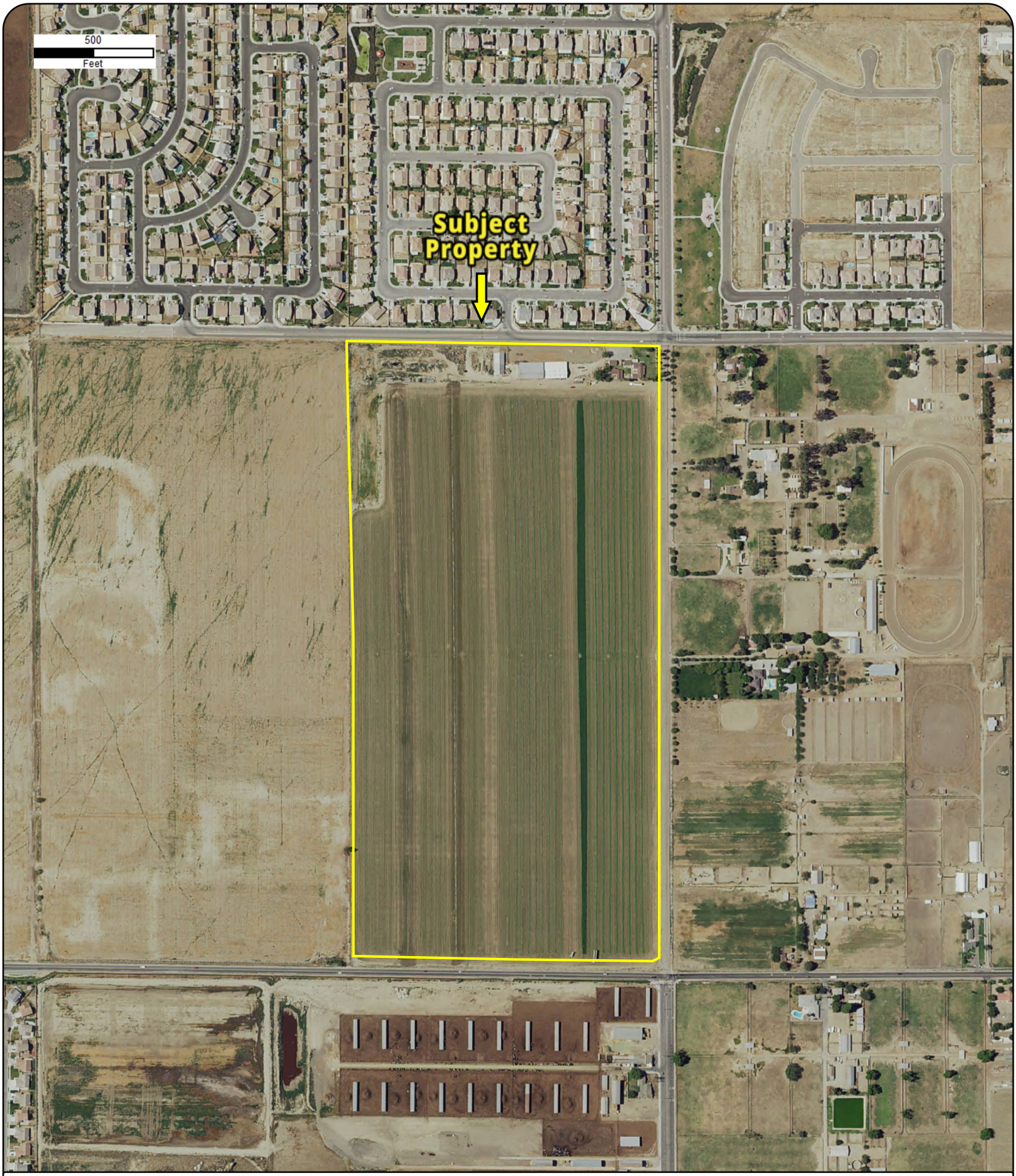


Year: 2012
Source: USDA
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER



Year: 2014
Source: USDA
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER

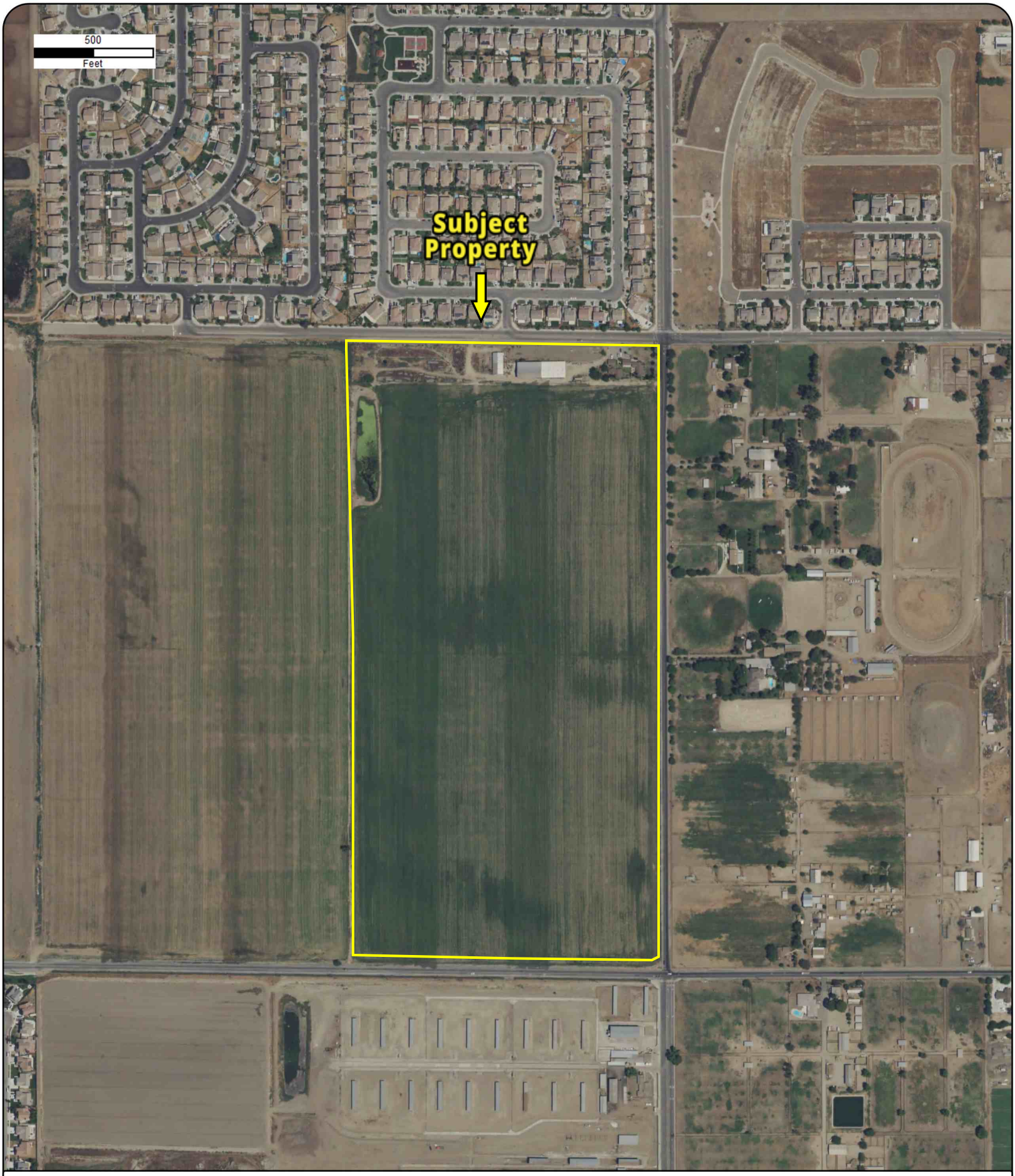


Year: 2016
Source: USDA
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER

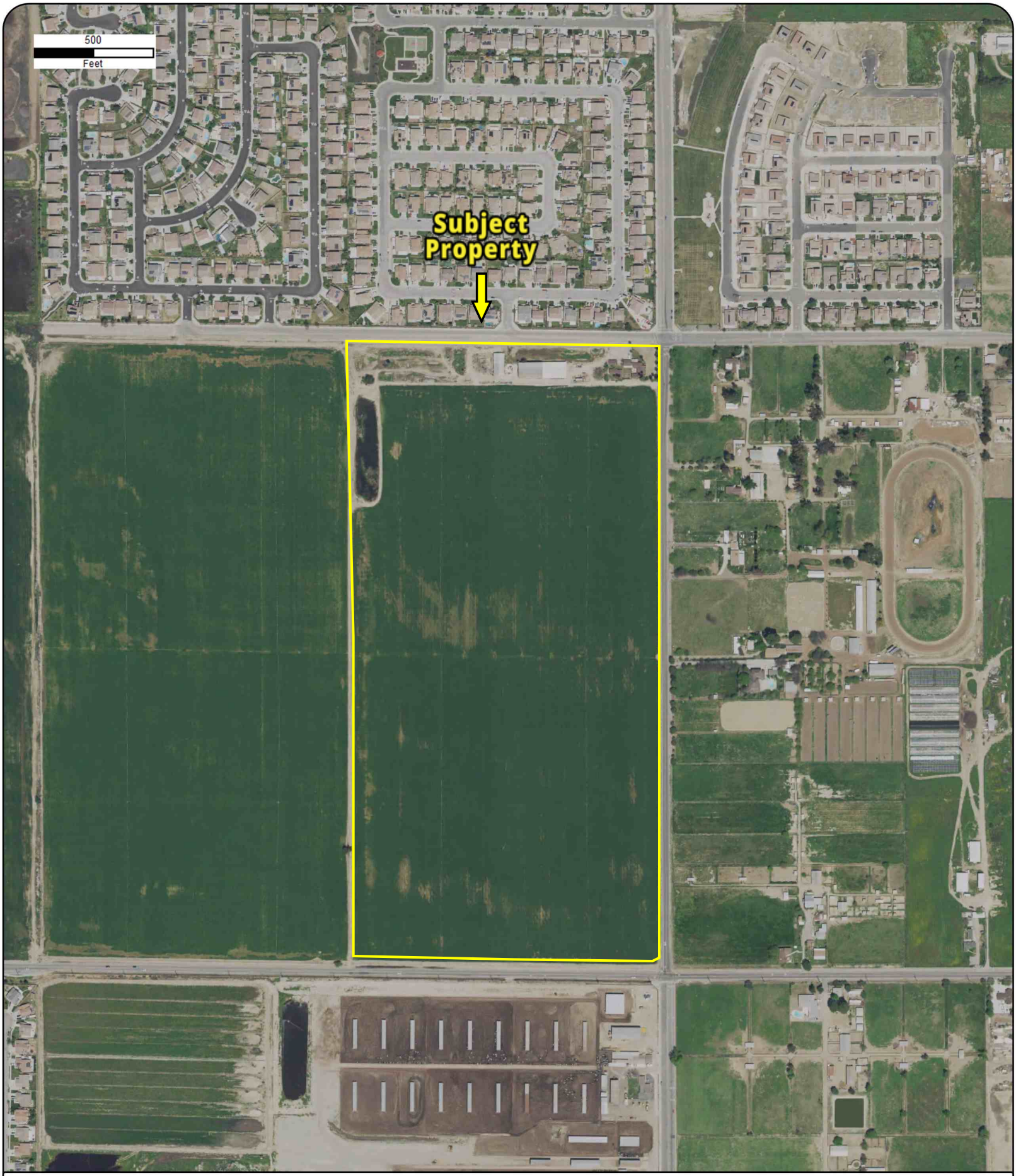


Year: 2018
Source: USDA
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER

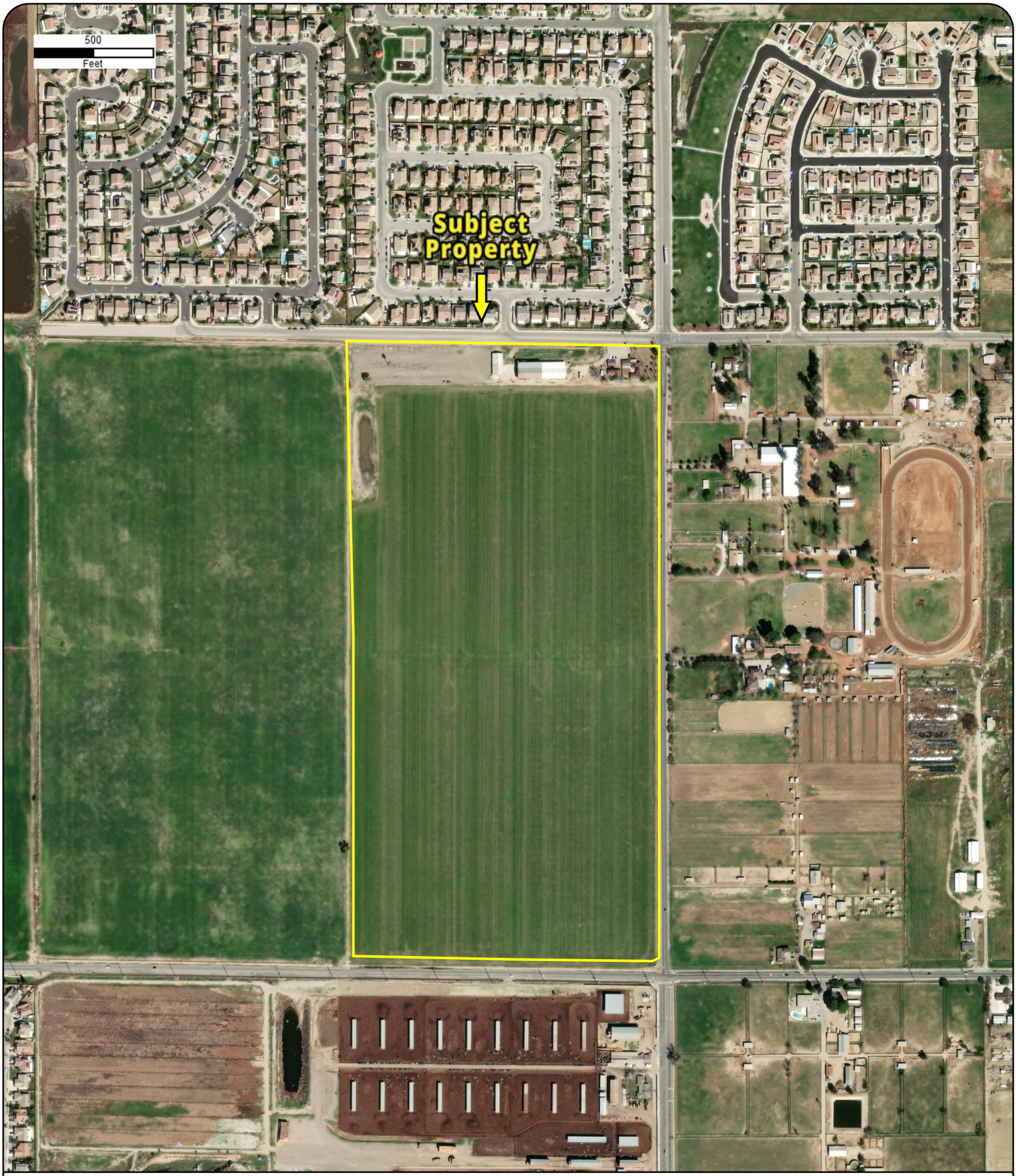


Year: 2020
Source: USDA
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER



Year: 2022
Source: MAXAR
Scale: 1" = 500'
Comment:

Address: 710 Cawston Avenue North, SAN JACINTO, CA
Approx Center: -117.01761584,33.77642895

Order No: 24091300947

PARTNER

FIRE INSURANCE MAPS

Project Property:	Chacon Farms 710 Cawston Avenue North SAN JACINTO CA 92582
Project No:	24-461627.1
Requested By:	Partner Engineering and Science, Inc.
Order No:	24091300947
Date Completed:	September 15, 2024

Please note that no information was found for your site or adjacent properties.

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CITY DIRECTORY

Project Property:	*Chacon Farms* *710 Cawston Avenue North* *SAN JACINTO,CA 92582*
Project No:	*24-461627.1*
Requested By:	*Partner Engineering and Science, Inc.*
Order No:	*24091300947*
Date Completed:	*September 25, 2024*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

September 25, 2024
RE: CITY DIRECTORY RESEARCH
710 Cawston Avenue North
SAN JACINTO,CA 92582

Thank you for contacting ERIS for an City Directory Search for the site described above. Our staff has conducted a reverse listing City Directory search to determine prior occupants of the subject site and adjacent properties. We have provided the nearest addresses(s) when adjacent addresses are not listed. If we have searched a range of addresses, all addresses in that range found in the Directory are included.

Note: Reverse Listing Directories generally are focused on more highly developed areas. Newly developed areas may be covered in the more recent years, but the older directories will tend to cover only the "central" parts of the city. To complete the search, we have either utilized the ACPL, Library of Congress, State Archives, and/or a regional library or history center as well as multiple digitized directories. These do not claim to be a complete collection of all reverse listing city directories produced.

ERIS has made every effort to provide accurate and complete information but shall not be held liable for missing, incomplete or inaccurate information. To complete this search we used the general range(s) below to search for relevant findings. If you believe there are additional addresses or streets that require searching please contact us at 866-517-5204.

Search Criteria:
700-1500 of Cawston Ave N
ALL of Newcastle Way
2600-2800 of W 7th St
2650-3915 of W Esplanade Ave
Search Notes:
W 7th St is also known as 2600-2800 W 7th St in SAN JACINTO.

Search Results Summary

Date	Source	Comment
2023	DIGITAL BUSINESS DIRECTORY	
2020	DIGITAL BUSINESS DIRECTORY	
2016	DIGITAL BUSINESS DIRECTORY	
2012	DIGITAL BUSINESS DIRECTORY	
2008	DIGITAL BUSINESS DIRECTORY	
2003	DIGITAL BUSINESS DIRECTORY	
2001	HAINES	
1996	HAINES	
1991	HAINES	
1986	HAINES	
1984	HAINES	
1977	HAINES	
1974	HAINES	
1971	HAINES	
1964-65	LUSKEYS	

2023 CAWSTON AVE N

SOURCE: DIGITAL BUSINESS DIRECTORY

710 **ANNMARIE CHACON**...*RESIDENTIAL*
710 **GILBERT CHACON**...*RESIDENTIAL*
710 **KATHY CERVANTES**...*RESIDENTIAL*
865 **CRYSTAL SOWELL**...*RESIDENTIAL*
865 **NICHOLAS COFFIN**...*RESIDENTIAL*
1085 **ANNA WILSON**...*RESIDENTIAL*
1085 **DIAZ REYES ALVAREZ**...*RESIDENTIAL*
1135 **CHRISTY TALLEY JR**...*RESIDENTIAL*
1135 **JAMIE MAPSTEAD**...*RESIDENTIAL*
1135 **MARY PROFFITT**...*RESIDENTIAL*

2023 NEWCASTLE WAY

SOURCE: DIGITAL BUSINESS DIRECTORY

2720 **ERIKA ARIAS**...*RESIDENTIAL*
2720 **LILY GAUSS**...*RESIDENTIAL*
2720 **SHELLEY ESTES**...*RESIDENTIAL*
2730 **ERNESTO PALACIOS**...*RESIDENTIAL*
2750 **JAIME MARTINEZ**...*RESIDENTIAL*
2755 **ADRIANA GONZALEZ**...*RESIDENTIAL*
2765 **HECTOR CORDERO**...*RESIDENTIAL*
2770 **SEAN PAYNE**...*RESIDENTIAL*
2775 **JESSICA OSEGUERA**...*RESIDENTIAL*
2780 **MARISELA KUAN**...*RESIDENTIAL*
2785 **BELINDA ADARLO**...*RESIDENTIAL*
2785 **ROGELIO ADARLO**...*RESIDENTIAL*
2805 **KARIBU NYAGGAH**...*RESIDENTIAL*
2805 **MAURICIO CORDOVA**...*RESIDENTIAL*
2810 **DAVON SANDERS**...*RESIDENTIAL*
2810 **JIM STEVENS**...*RESIDENTIAL*
2810 **OCTAVIA COLE**...*RESIDENTIAL*
2810 **TYRONE HONORABLE**...*RESIDENTIAL*
2820 **ANDREA RIVERA**...*RESIDENTIAL*
2820 **FIDEL RIVERA**...*RESIDENTIAL*
2825 **JONATHAN BANKS**...*RESIDENTIAL*
2830 **BRUCE BENNETT**...*RESIDENTIAL*
2830 **DARRELL BABBITT**...*RESIDENTIAL*
2835 **AMELIA GREATHOUSE**...*RESIDENTIAL*
2840 **DAVID MCCULLEY**...*RESIDENTIAL*
2845 **CAROLINA ROMERO**...*RESIDENTIAL*
2845 **OZVALDO ROMERO**...*RESIDENTIAL*
2850 **DANIEL MOODY**...*RESIDENTIAL*
2855 **JOSE GONZALEZ**...*RESIDENTIAL*
2865 **JOSE ZUL**...*RESIDENTIAL*
2870 **RICARDO FIGUEROA**...*RESIDENTIAL*
2875 **SHARON WALKER**...*RESIDENTIAL*
2880 **ELLEN HUERTA**...*RESIDENTIAL*

2023 W 7TH ST

SOURCE: DIGITAL BUSINESS DIRECTORY

2670 **HAILEY STRAHAN**...*RESIDENTIAL*

2023 W ESPLANADE AVE

SOURCE: DIGITAL BUSINESS DIRECTORY

2659 **DAVID ORTEGA**...*RESIDENTIAL*
2661 **HERE TIS RANCH**...*RANCHES*
2661 **MARIANNE MILLARD**...*RESIDENTIAL*

2020 CAWSTON AVE N

SOURCE: DIGITAL BUSINESS DIRECTORY

710 **ANNMARIE CHACON**...*RESIDENTIAL*
710 **KATHY CERVANTES**...*RESIDENTIAL*
865 **CRYSTAL SOWELL**...*RESIDENTIAL*
865 **NICHOLAS COFFIN**...*RESIDENTIAL*
1085 **ANNA WILSON**...*RESIDENTIAL*
1085 **DIAZ REYES ALVAREZ**...*RESIDENTIAL*
1135 **CHRISTY TALLEY JR**...*RESIDENTIAL*
1135 **JAMIE MAPSTEAD**...*RESIDENTIAL*

2020 NEWCASTLE WAY

SOURCE: DIGITAL BUSINESS DIRECTORY

2720 **ERIKA ARIAS**...*RESIDENTIAL*
2720 **LILY GAUSS**...*RESIDENTIAL*
2750 **JAIME MARTINEZ**...*RESIDENTIAL*
2755 **ADRIANA GONZALEZ**...*RESIDENTIAL*
2765 **HECTOR CORDERO**...*RESIDENTIAL*
2770 **SEAN PAYNE**...*RESIDENTIAL*
2775 **JESSICA OSEGUERA**...*RESIDENTIAL*
2780 **MARISELA KUAN**...*RESIDENTIAL*
2785 **BELINDA ADARLO**...*RESIDENTIAL*
2805 **KARIBU NYAGGAH**...*RESIDENTIAL*
2805 **MAURICIO CORDOVA**...*RESIDENTIAL*
2810 **DAVON SANDERS**...*RESIDENTIAL*
2810 **JIM STEVENS**...*RESIDENTIAL*
2810 **OCTAVIA COLE**...*RESIDENTIAL*
2820 **ANDREA RIVERA**...*RESIDENTIAL*
2830 **BRUCE BENNETT**...*RESIDENTIAL*
2830 **DARRELL BABBITT**...*RESIDENTIAL*
2835 **AMELIA GREATHOUSE**...*RESIDENTIAL*
2840 **DAVID MCCULLEY**...*RESIDENTIAL*
2845 **CAROLINA ROMERO**...*RESIDENTIAL*
2855 **JOSE GONZALEZ**...*RESIDENTIAL*
2875 **SHARON WALKER**...*RESIDENTIAL*
2880 **ELLEN HUERTA**...*RESIDENTIAL*

2020 W 7TH ST

SOURCE: DIGITAL BUSINESS DIRECTORY

2670 **HAILEY STRAHAN**...*RESIDENTIAL*

2020 W ESPLANADE AVE

SOURCE: DIGITAL BUSINESS DIRECTORY

2659 **DAVID ORTEGA**...*RESIDENTIAL*
2661 **HERE TIS RANCH**...*RANCHES*
2661 **MARIANNE MILLARD**...*RESIDENTIAL*

2016 CAWSTON AVE N

SOURCE: DIGITAL BUSINESS DIRECTORY

710 **ANNMARIE CHACON**...*RESIDENTIAL*
710 **GILBERT CHACON**...*RESIDENTIAL*
865 **CRYSTAL SOWELL**...*RESIDENTIAL*
865 **NICHOLAS COFFIN**...*RESIDENTIAL*
1085 **ANNA WILSON**...*RESIDENTIAL*
1085 **ANTHONY WILSON**...*RESIDENTIAL*
1085 **DIAZ REYES ALVAREZ**...*RESIDENTIAL*

2016 NEWCASTLE WAY

SOURCE: DIGITAL BUSINESS DIRECTORY

2720 **LILY GAUSS**...*RESIDENTIAL*
2740 **DENISIA ESPARZA**...*RESIDENTIAL*
2750 **JAIME MARTINEZ**...*RESIDENTIAL*
2750 **LUPE PORRAS**...*RESIDENTIAL*
2750 **SAMMANTHA MARTINEZ**...*RESIDENTIAL*
2755 **ADRIANA GONZALEZ**...*RESIDENTIAL*
2755 **NOLBERTO GONZALEZ**...*RESIDENTIAL*
2765 **HECTOR CORDERO**...*RESIDENTIAL*
2770 **SEAN PAYNE**...*RESIDENTIAL*
2775 **JESSICA OSEGUERA**...*RESIDENTIAL*
2775 **MARIA OSEGUERA**...*RESIDENTIAL*
2785 **BELINDA ADARLO**...*RESIDENTIAL*
2785 **ROGELIO ADARLO**...*RESIDENTIAL*
2805 **MAURICIO CORDOVA**...*RESIDENTIAL*
2805 **RAFAEL CORDOVA**...*RESIDENTIAL*
2810 **OCTAVIA COLE**...*RESIDENTIAL*
2810 **TYRONE HONORABLE**...*RESIDENTIAL*
2815 **BARRY PARKSON**...*RESIDENTIAL*
2815 **JARET MONTUORO**...*RESIDENTIAL*
2815 **RYAN MONTUORO**...*RESIDENTIAL*
2820 **ANDREA RIVERA**...*RESIDENTIAL*
2820 **FIDEL RIVERA**...*RESIDENTIAL*
2820 **MARIA RIVERA**...*RESIDENTIAL*
2830 **BRUCE BENNETT**...*RESIDENTIAL*
2835 **AMELIA GREATHOUSE**...*RESIDENTIAL*
2840 **DAVID MCCULLEY**...*RESIDENTIAL*
2840 **DOROTHY MCCULLEY**...*RESIDENTIAL*
2840 **MARGARET MCCULLEY**...*RESIDENTIAL*
2845 **CAROLINA ROMERO**...*RESIDENTIAL*
2845 **OZVALDO ROMERO**...*RESIDENTIAL*
2845 **ZARAGOZA ROMERO**...*RESIDENTIAL*
2855 **JOSE GONZALEZ**...*RESIDENTIAL*
2855 **TONIA GONZALEZ**...*RESIDENTIAL*
2875 **SHARON WALKER**...*RESIDENTIAL*
2880 **ELLEN HUERTA**...*RESIDENTIAL*
2880 **FABIAN HUERTA**...*RESIDENTIAL*

2016 W 7TH ST

SOURCE: DIGITAL BUSINESS DIRECTORY

2670 **HAILEY STRAHAN**...*RESIDENTIAL*

2016 W ESPLANADE AVE

SOURCE: DIGITAL BUSINESS DIRECTORY

2659 **DAVID ORTEGA**...*RESIDENTIAL*
2661 **HERE TIS RANCH**...*RANCHES*

2012 CAWSTON AVE N

SOURCE: DIGITAL BUSINESS DIRECTORY

710 **GILBERT CHACON**...*RESIDENTIAL*
865 **CRYSTAL SOWELL**...*RESIDENTIAL*
865 **PEDRO MUNOZ**...*RESIDENTIAL*
865 **VERONICA MORENO**...*RESIDENTIAL*
1085 **JESUS VASQUEZ**...*RESIDENTIAL*
1135 **JOE TALLEY**...*RESIDENTIAL*

2012 NEWCASTLE WAY

SOURCE: DIGITAL BUSINESS DIRECTORY

2720 **ERIKA ARIAS**...*RESIDENTIAL*
2720 **JOSE ARIAS**...*RESIDENTIAL*
2720 **SHELLEY ESTES**...*RESIDENTIAL*
2730 **ERNESTO PALACIOS**...*RESIDENTIAL*
2730 **PALACIOS ERNESTO**...*RESIDENTIAL*
2760 **ADOLFO GUERRERO**...*RESIDENTIAL*
2760 **GUERRERO ADOLFO**...*RESIDENTIAL*
2820 **FIDEL RIVERA**...*RESIDENTIAL*
2820 **MARIA RIVERA**...*RESIDENTIAL*
2840 **MARGARET MCCULLEY**...*RESIDENTIAL*
2840 **MCCULLEY MARGARET**...*RESIDENTIAL*
2845 **CAROLINA ROMERO**...*RESIDENTIAL*
2845 **ROMERO ZARAGOZA**...*RESIDENTIAL*
2860 **SWEENEY SHAWN**...*RESIDENTIAL*
2865 **LUCIO ZUL**...*RESIDENTIAL*
2875 **LUCIO ZUL**...*RESIDENTIAL*
2880 **GLADYS MEINHART**...*RESIDENTIAL*
2880 **GLADYS ZAMANO**...*RESIDENTIAL*

2012 W 7TH ST

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2012 W ESPLANADE AVE

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2008 CAWSTON AVE N

SOURCE: DIGITAL BUSINESS DIRECTORY

710 **CHACON FARMS**...*VEGETABLE/MELON FARM*
710 **GILBERT P CHACON**...*RESIDENTIAL*
710 **JOE M CHACON**...*RESIDENTIAL*
1085 **JAMES T LINDSEY**...*ANIMAL SERVICES*
1085 **PEDRO MUNOZ**...*RESIDENTIAL*

2008 NEWCASTLE WAY

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2008 W 7TH ST

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2008 W ESPLANADE AVE

SOURCE: DIGITAL BUSINESS DIRECTORY

2661 **BEA ROUS**...*RESIDENTIAL*
2661 **HERE TIS RANCH**...*ANIMAL SERVICES*

2003 CAWSTON AVE N

SOURCE: DIGITAL BUSINESS DIRECTORY

710 **CHACON FARMS**
710 **GILBERT P CHACON**...*RESIDENTIAL*
710 **JOE M CHACON**...*RESIDENTIAL*
865 **HIDEAWAY FARMS**
1085 **JAMES LINDSEY**...*RESIDENTIAL*

2003 NEWCASTLE WAY

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2003 W 7TH ST

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2003 W ESPLANADE AVE

SOURCE: DIGITAL BUSINESS DIRECTORY

2661 **BEA ROUS**...*RESIDENTIAL*
3001 **HANSON STOCK FARM**

2001 CAWSTON AVE N

SOURCE: HAINES

710	**CHACON FARMS**
710	**CHACON GILBERT P**
710	**CHACON JOE M**
859	**HOWARD GARY**
865	**HIDEAWAY FARMS**
865	**HOWARD GARY**
975	**HOWARD GARY**
1085	**HOWARD GARY**
1135	**HART HARRY**
24095	**DOTINGA PETER W JR**

2001 NEWCASTLE WAY

SOURCE: HAINES

STREET NOT LISTED

2001 W 7TH ST

SOURCE: HAINES

RANGE NOT LISTED

2001 W ESPLANADE AVE

SOURCE: HAINES

2621	**GREENMAN WALTER**
2621	**KACHINA FARM**
2661	**ROUS BEA**
3001	**ARROYO MIGUEL**

1996 CAWSTON AVE N

SOURCE: HAINES

23511	**CHACON FARMS**
23511	**CHACON JOE M**
23513	**CHACON GILBERT P**
23580	**HIDEAWAY FARMS**
23600	**CARBAJAL ENRIQUE**
23770	**LINDSEY JAS T**
23806	**XXXX**
24095	**DOTINGA PETER W JR**

1996 NEWCASTLE WAY

SOURCE: HAINES

STREET NOT LISTED

1996 W 7TH ST

SOURCE: HAINES

RANGE NOT LISTED

1996 W ESPLANADE AVE

SOURCE: HAINES

2621	**SHADE TREE FARM**
2661	**ROUS BEA**

1991 CAWSTON AVE N

SOURCE: HAINES

23511	**CHACON FARMS**
23511	**CHACON JOE M**
23513	**CHACON GILBERT P**
23580	**GRAYS THRGHBRD RNCH**
23580	**ROCHA MARTIN**
23580	**URENA JULIAN**
23600	**BRASWELL CANDACE**
23600	**LINDSEY JAS T**
23770	**HACKETT DALE**
23770	**MORA NOE**
23808	**XXXX**
24191	**DOTINGA PETER W JR**

1991 NEWCASTLE WAY

SOURCE: HAINES

STREET NOT LISTED

1991 W 7TH ST

SOURCE: HAINES

RANGE NOT LISTED

1991 W ESPLANADE AVE

SOURCE: HAINES

RANGE NOT LISTED

1986 CAWSTON AVE N

SOURCE: HAINES

23511	**CHACON FARMS**
23511	**CHACON JOE M**
23580	**BARNDOLLAR W**
23580	**GRAYS THRGRD RNCH**
23600	**PUTNAM AMY**
23600	**SARATOGA STUD**
23806	**LITTLE JANET**
24095	**DOTINGA PETER W JR**

1986 NEWCASTLE WAY

SOURCE: HAINES

STREET NOT LISTED

1986 W 7TH ST

SOURCE: HAINES

RANGE NOT LISTED

1986 W ESPLANADE AVE

SOURCE: HAINES

RANGE NOT LISTED

1984 CAWSTON AVE N

SOURCE: HAINES

23511	**CHACON JOE M**
23513	**XXXX**
23580	**FREDRICKSEN MARK D**
23580	**GRAYS THOROUGHBRED**
23600	**THREE L RANCH**
23600	**UNITED ATLNTC INVST**
23770	**XXXX**
23806	**PRIME TIME RANCH**
24095	**DOTINGA PETER W JR**

1984 NEWCASTLE WAY

SOURCE: HAINES

STREET NOT LISTED

1984 W 7TH ST

SOURCE: HAINES

RANGE NOT LISTED

1984 W ESPLANADE AVE

SOURCE: HAINES

RANGE NOT LISTED

1977 CAWSTON AVE N

SOURCE: HAINES

23511	**HAMPTON JOE**
23513	**WALKER E W**
23600	**NUTTER C ELWOOD**
23770	**WOLSTENHOLME H E**
23806	**SENS GEO**
24095	**DOTINGA PETER W JR**

1977 NEWCASTLE WAY

SOURCE: HAINES

STREET NOT LISTED

1977 W 7TH ST

SOURCE: HAINES

RANGE NOT LISTED

1977 W ESPLANADE AVE

SOURCE: HAINES

RANGE NOT LISTED

1974 CAWSTON AVE N

SOURCE: HAINES

23511	**HAMPTON JOE**
23513	**WALKER DENNIS E**
23600	**EL DORADO STOCK FRM**
23600	**NUTTER C ELWOOD**
23770	**WOLSTENHOLME H E**
23806	**SENS GEO**
24095	**DOTINGA PETER W JR**

1974 NEWCASTLE WAY

SOURCE: HAINES

STREET NOT LISTED

1974 W 7TH ST

SOURCE: HAINES

RANGE NOT LISTED

1974 W ESPLANADE AVE

SOURCE: HAINES

RANGE NOT LISTED

1971 CAWSTON AVE N

SOURCE: HAINES

STREET NOT LISTED

1971 NEWCASTLE WAY

SOURCE: HAINES

STREET NOT LISTED

1971 W 7TH ST

SOURCE: HAINES

STREET NOT LISTED

1971 W ESPLANADE AVE

SOURCE: HAINES

STREET NOT LISTED

1964-65 CAWSTON AVE N

SOURCE: LUSKEYS

RANGE NOT LISTED

1964-65 NEWCASTLE WAY

SOURCE: LUSKEYS

STREET NOT LISTED

1964-65 W 7TH ST

SOURCE: LUSKEYS

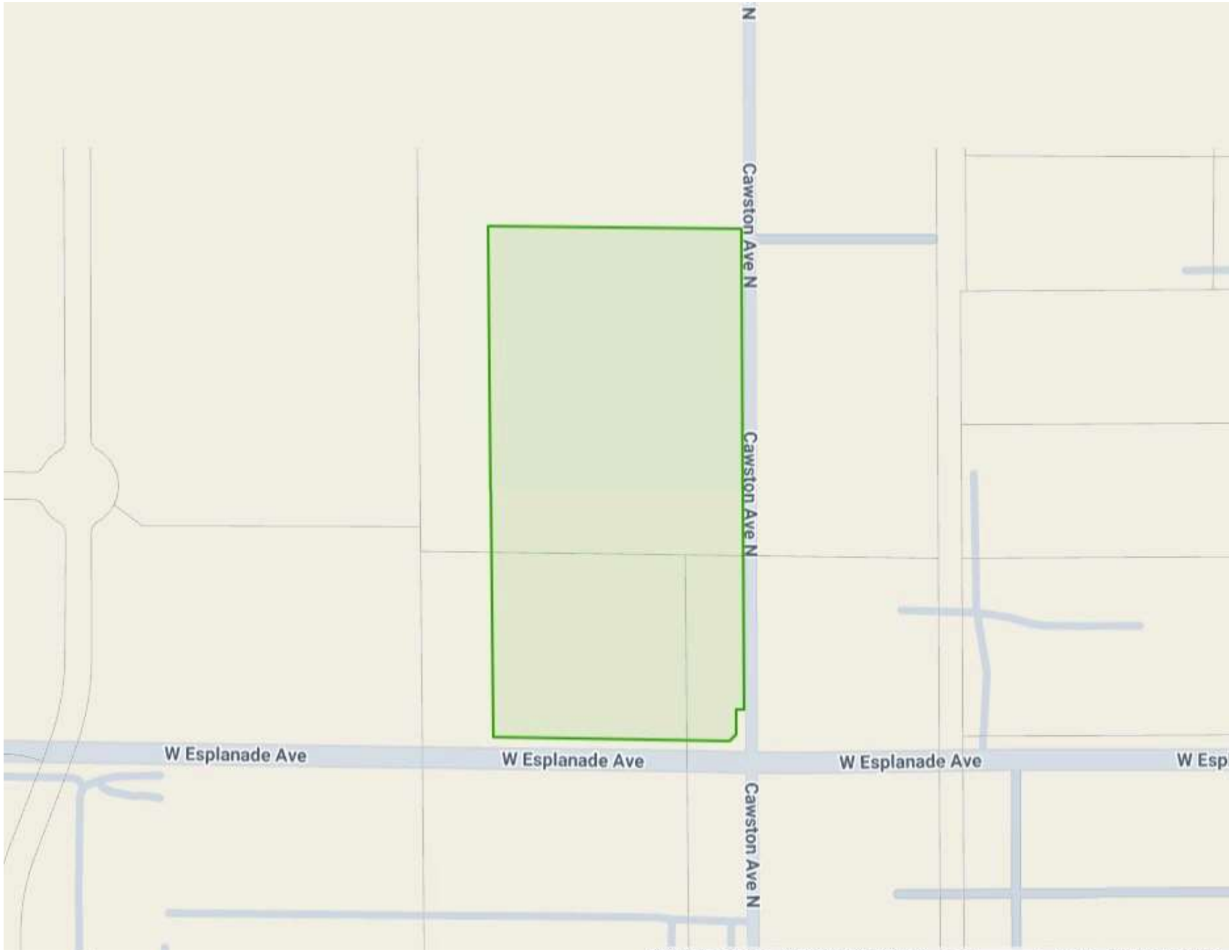
RANGE NOT LISTED

1964-65 W ESPLANADE AVE

SOURCE: LUSKEYS

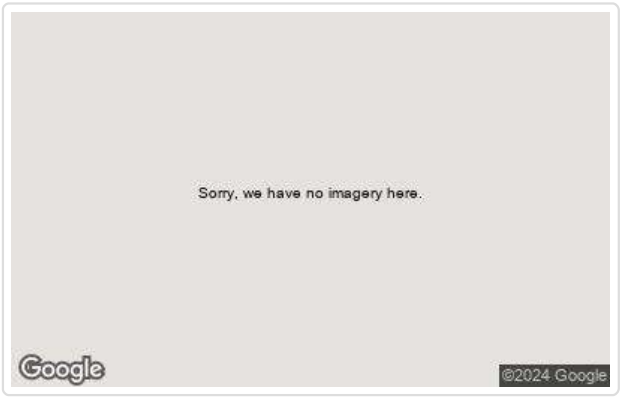
RANGE NOT LISTED

Riverside County, CA - Community: Property Search
Property ID Number (PIN/APN): 432260027


N
Cawston Ave N
Cawston Ave N
Cawston Ave N
W Esplanade Ave
W Esplanade Ave
W Esplanade Ave
W Esp



Property ID Number (PIN/APN): 432260027

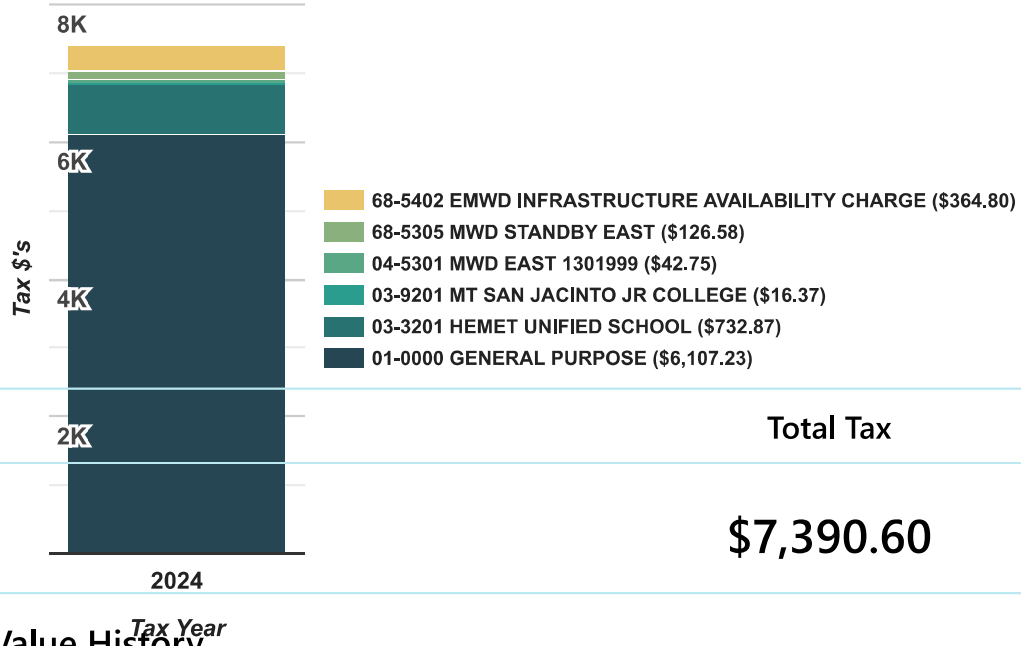


General Information

Property ID Number (PIN/APN)	**432260027**
Owner	More Information
Property Address	**- No Situs -**
Property Type	**Irrigated Farmland**
Tax Rate Area (TRA)	**010-143 SAN JACINTO**
Approximate Lot Size	**794,534 SqFt / 18.240 acres**
Legal Description	**Acres 18.24000000 AcreageQualCode ML Lot 161-P LotType L MapPlatB 008 MapPlatP 357 SubdivisionName SAN JACINTO RANCHO**

View Aerial Images | View Assessor Map | TLMA Survey Records

Tax Summary

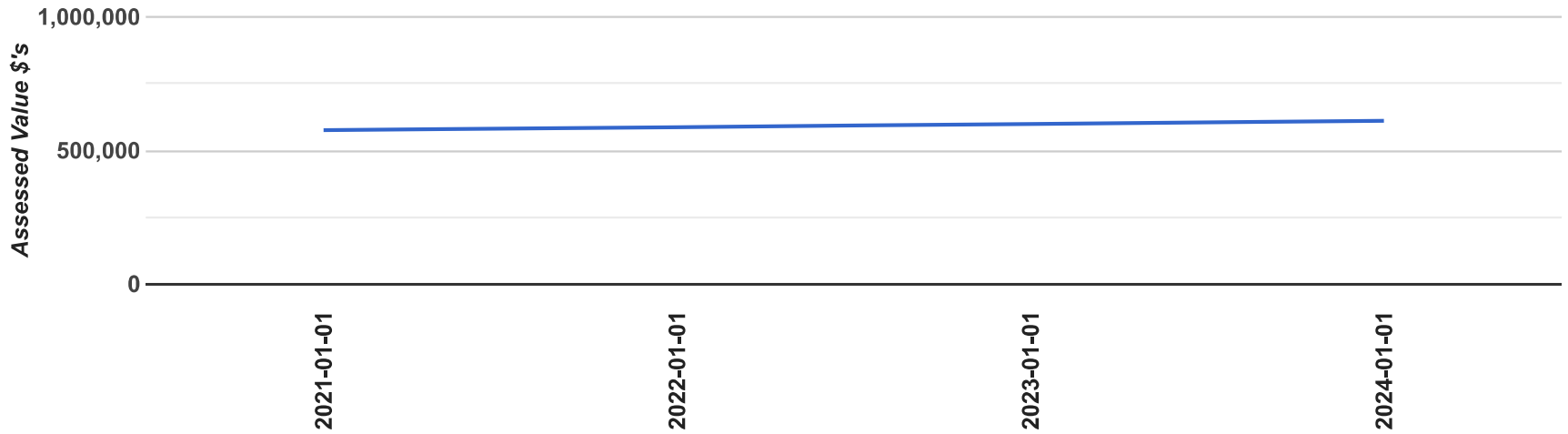


Total Tax

$7,390.60

Value History

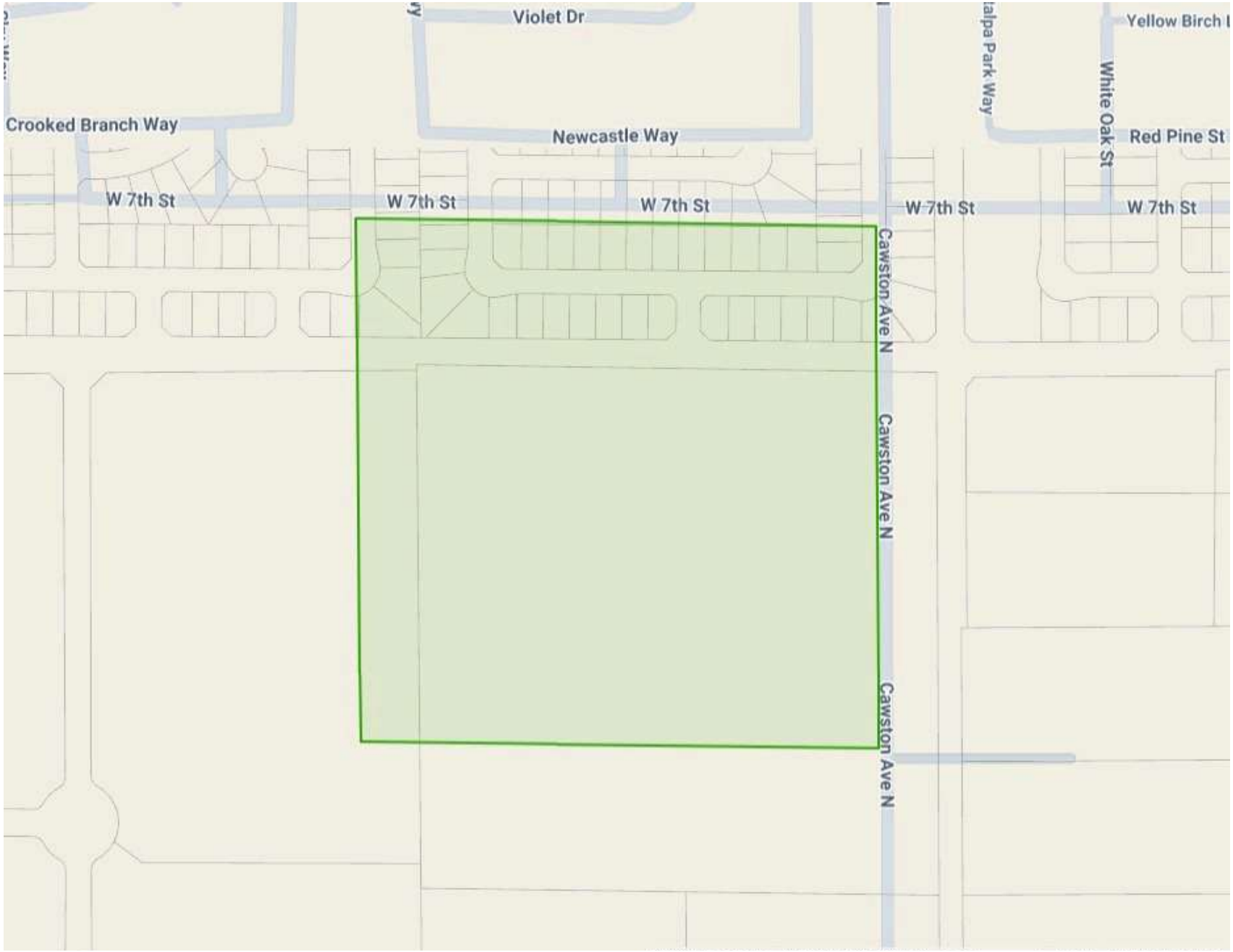
Year	Event Type	Roll Caste	Event Date	Assessment				Net Taxable Value
				Land	Improvement	Living Improvement	Total	
2021	Annual	Annual	2021-01-01	$547,600	$27,900	$0	$575,500	$575,500
2022	Annual	Annual	2022-01-01	$558,552	$28,458	$0	$587,010	$587,010
2023	Annual	Annual	2023-01-01	$569,723	$29,027	$0	$598,750	$598,750
2024	Annual	Annual	2024-01-01	$581,117	$29,607	$0	$610,724	$610,724



Sales History

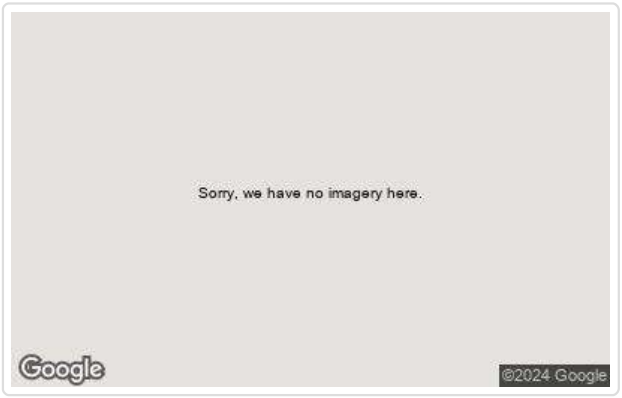
Date	Document #	Sale Price	Sale Type	Qualified
12-02-2020	2020-0607573	$2,722,000	Straight Transfer	Qualified

Riverside County, CA - Community: Property Search
Property ID Number (PIN/APN): 432260009


Violet Dr
Yellow Birch
Crooked Branch Way
Newcastle Way
Red Pine St
W 7th St
W 7th St
W 7th St
W 7th St
W 7th St
Cawston Ave N
Cawston Ave N
Cawston Ave N



Property ID Number (PIN/APN): 432260009

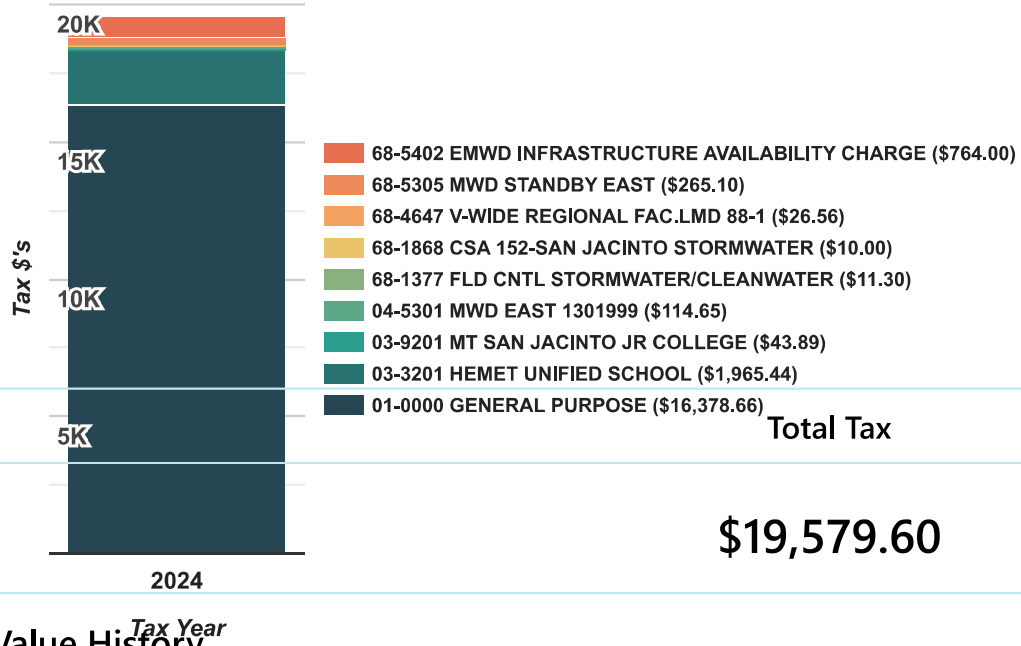


General Information

Property ID Number (PIN/APN)	**432260009**
Owner	More Information
Property Address	**710 CAWSTON AVE**
Property Type	**Agricultural Land with SFR**
Tax Rate Area (TRA)	**010-143 SAN JACINTO**
Approximate Lot Size	**1,663,992 SqFt / 38.200 acres**
Legal Description	**38.20 ACRES M/L IN POR LOT 161 MB 008/357 SD SAN JACINTO RANCHO**

View Aerial Images | View Assessor Map | TLMA Survey Records

Tax Summary

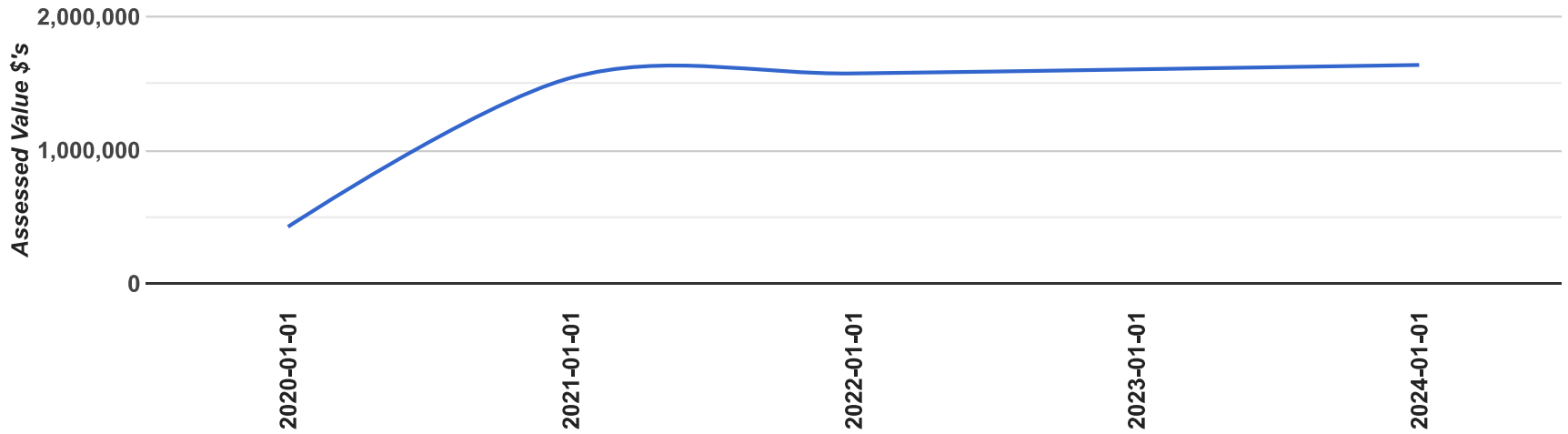


Total Tax

$19,579.60

Value History

Year	Event Type	Roll Caste	Event Date	Assessment				Net Taxable Value
				Land	Improvement	Living Improvement	Total	
2020	Annual	Annual	2020-01-01	$246,853	$178,955	$0	$425,808	$425,808
2021	Annual	Annual	2021-01-01	$1,146,800	$396,600	$0	$1,543,400	$1,543,400
2022	Annual	Annual	2022-01-01	$1,169,736	$404,532	$0	$1,574,268	$1,574,268
2023	Annual	Annual	2023-01-01	$1,193,130	$412,622	$0	$1,605,752	$1,605,752
2024	Annual	Annual	2024-01-01	$1,216,992	$420,874	$0	$1,637,866	$1,637,866



Sales History

Date	Document #	Sale Price	Sale Type	Qualified
12-02-2020	2020-0607573	$2,722,000	Straight Transfer	Qualified

Buildings

Detached Garage (20x30) | SFR #1 | SFR #2

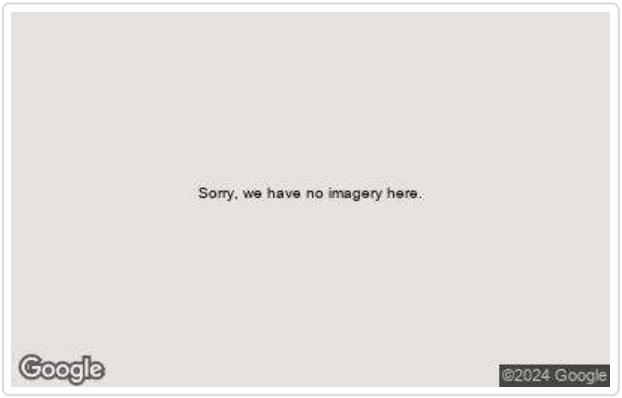
Building Type	Residential Garage
Effective Year Built	1960
Year Built	1946
Actual Area sqft	600
Quality	5.0
Cond	Average
Has Fireplace	No

Riverside County, CA - Community: Property Search
Property ID Number (PIN/APN): 432260026


Cawston Ave N
Cawston Ave N
Cawston Ave N
W Esplanade Ave
W Esplanade Ave
W Esplanade Ave
W Esplanade Av



Property ID Number (PIN/APN): 432260026

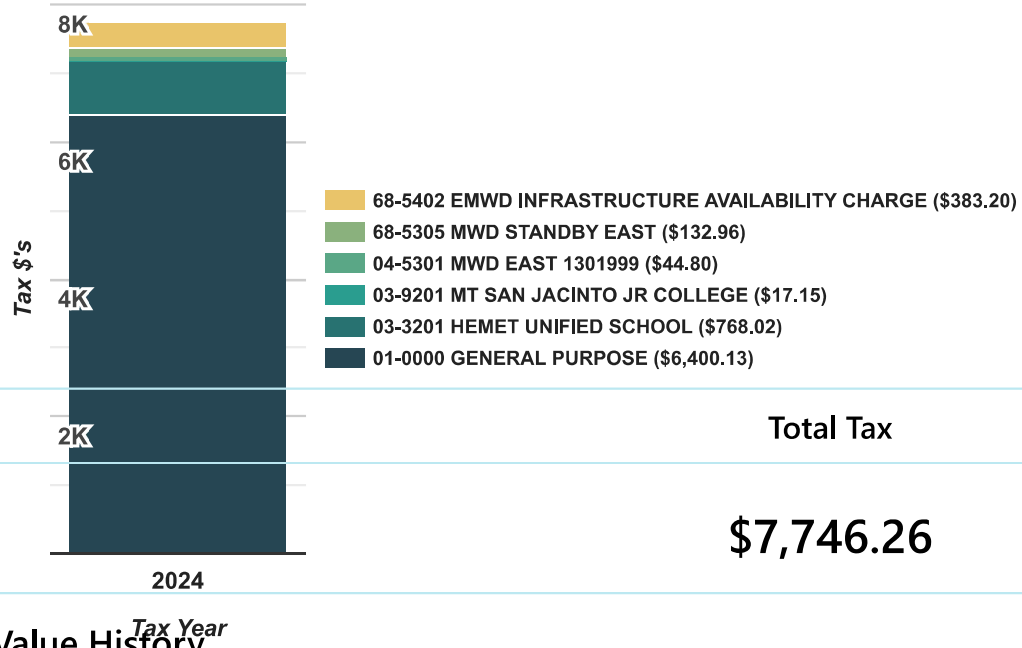


General Information

Property ID Number (PIN/APN)	**432260026**
Owner	More Information
Property Address	**- No Situs -**
Property Type	**Irrigated Farmland**
Tax Rate Area (TRA)	**010-143 SAN JACINTO**
Approximate Lot Size	**834,610 SqFt / 19.160 acres**
Legal Description	**Acres 19.16000000 AcreageQualCode ML Lot 161-P LotType L MapPlatB 008 MapPlatP 357 SubdivisionName SAN JACINTO RANCHO**

View Aerial Images | View Assessor Map | TLMA Survey Records

Tax Summary

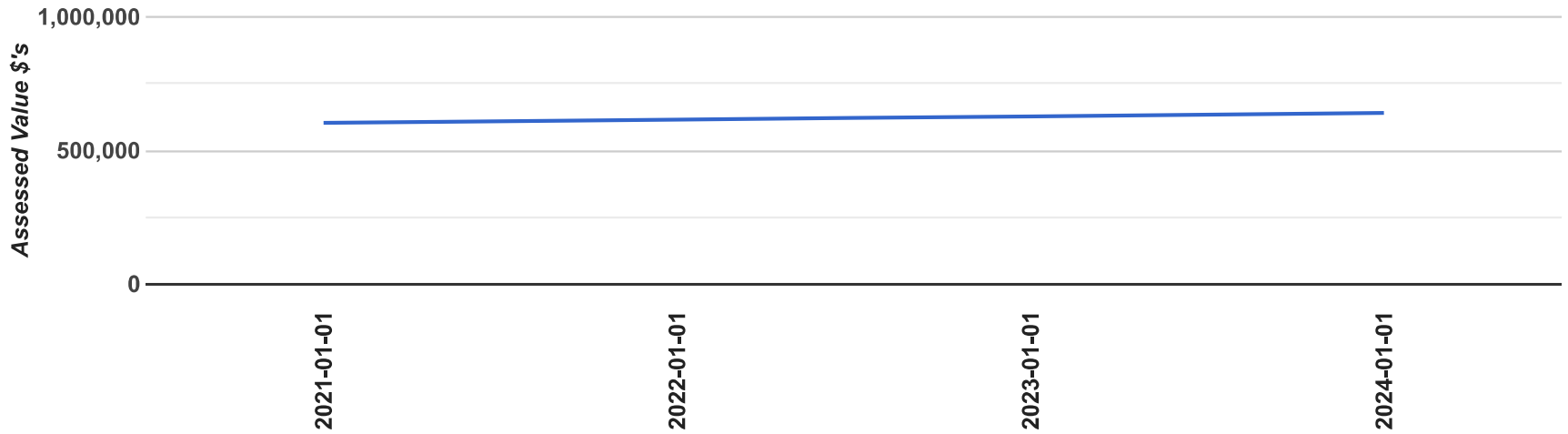


Total Tax

$7,746.26

Value History

Year	Event Type	Roll Caste	Event Date	Assessment				Net Taxable Value
				Land	Improvement	Living Improvement	Total	
2021	Annual	Annual	2021-01-01	$575,200	$27,900	$0	$603,100	$603,100
2022	Annual	Annual	2022-01-01	$586,704	$28,458	$0	$615,162	$615,162
2023	Annual	Annual	2023-01-01	$598,438	$29,027	$0	$627,465	$627,465
2024	Annual	Annual	2024-01-01	$610,406	$29,607	$0	$640,013	$640,013



Sales History

Date	Document #	Sale Price	Sale Type	Qualified
12-02-2020	2020-0607573	$2,722,000	Straight Transfer	Qualified

Klein, Kody

From: County of Riverside - California Public Records <messages@nextrequest.com>
Sent: Wednesday, September 25, 2024 3:36 PM
To: Klein, Kody
Subject: [External Message Added] County of Riverside - California public records request # 24-4523

CAUTION: This message originated from outside the Partner organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

-- Attach a non-image file and/or reply ABOVE THIS LINE with a message, and it will be sent to staff on this request. --

County of Riverside - California Public Reco

A message was sent to you regarding record request #24-452

The Environmental Cleanup Program (ECP) does not have files for the location listed.

View Request 24-4523

https://url.avanan.click/v2/r01/___https://riversidecountyca.nextrequest.com/requests/24-4523___.YXAzOnBhcnRuZXJlc2k6YTpvOjcwY2E0ZTQyMjBjMmEzOWI2ZmQyZTQ3M2JlMjY2NDliOjc6M2Y5NDpiYTFmZmM0NWM1NGFkZDQxMWZiNmE4OGNiN



Questions about your request? Reply to this email or sign in to contact staff at County of R

California.

Technical support: See our help page

APPENDIX C: REGULATORY DATABASE REPORT

DATABASE REPORT

Project Property:	*Chacon Farms* *710 Cawston Avenue North* *SAN JACINTO CA 92582*
Project No:	*24-461627.1*
Report Type:	*Database Report*
Order No:	*24091300947*
Requested by:	*Partner Engineering and Science, Inc.*
Date Completed:	*September 16, 2024*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

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Notice: IMPORTANT LIMITATIONS and YOUR LIABILITY

Reliance on information in Report: This report DOES NOT replace a full Phase I Environmental Site Assessment but is solely intended to be used as database review of environmental records.

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Executive Summary

Property Information:

Project Property:		*Chacon Farms* *710 Cawston Avenue North SAN JACINTO CA 92582*
Project No:		*24-461627.1*
Coordinates:		
	Latitude:	*33.7796518*
	Longitude:	*-117.0170871*
	UTM Northing:	*3,737,367.45*
	UTM Easting:	*498,368.97*
	UTM Zone:	*UTM Zone 11S*
Elevation:		*1,511 FT*

Order Information:

Order No:	*24091300947*
Date Requested:	*September 13, 2024*
Requested by:	*Partner Engineering and Science, Inc.*
Report Type:	*Database Report*

Historicals/Products:

Aerial Photographs	*Historical Aerials (with Project Boundaries)*
City Directory Search	*Smart CD Search*
ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*
Fire Insurance Maps	*US Fire Insurance Maps*
Physical Setting Report (PSR)	*Physical Setting Report (PSR)*
Topographic Map	*Topographic Maps*
Vapor Screening Tool	*Vapor Screening Tool*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	0	0	-	-	0
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
DOE FUSRAP	Y	1	0	0	0	0	0	0
State								
RESPONSE	Y	1	0	0	0	0	0	0
ENVIROSTOR	Y	1	0	0	0	0	**2**	**2**
DELISTED ENVS	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	0	0	0	-	0
SWRCB SWF	Y	0.5	0	0	0	0	-	0
WMUD	Y	0.5	0	0	0	0	-	0
HWP	Y	1	0	0	0	0	0	0
SWAT	Y	0.5	0	0	0	0	-	0
C&D DEBRIS RECY	Y	0.5	0	0	0	0	-	0
RECYCLING	Y	0.5	0	0	0	0	-	0
PROCESSORS	Y	0.5	0	0	0	0	-	0
CONTAINER RECY	Y	0.5	0	0	0	0	-	0
LDS	Y	0.5	0	0	0	0	-	0
LUST	Y	0.5	0	0	0	**1**	-	**1**
DELISTED LST	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	0	0	-	-	0
UST CLOSURE	Y	0.5	0	0	0	0	-	0
HHSS	Y	0.25	0	0	0	-	-	0
UST SWEEPS	Y	0.25	0	0	0	-	-	0
AST	Y	0.25	0	0	0	-	-	0
AST SWRCB	Y	0.25	0	0	0	-	-	0
TANK OIL GAS	Y	0.25	0	0	0	-	-	0
DELISTED TNK	Y	0.25	0	0	0	-	-	0
CERS TANK	Y	0.25	0	0	0	-	-	0
DELISTED CTNK	Y	0.25	0	0	0	-	-	0
HIST TANK	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
LUR	Y	0.5	0	0	0	0	-	0
CALSITES	Y	0.5	0	0	0	0	-	0
HLUR	Y	0.5	0	0	0	0	-	0
DEED	Y	0.5	0	0	0	0	-	0
VCP	Y	0.5	0	0	0	0	-	0
CLEANUP SITES	Y	0.5	0	0	0	0	-	0
DELISTED CLEANUP	Y	0.5	0	0	0	0	-	0
DELISTED COUNTY	Y	0.25	0	0	0	-	-	0
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0
County								
LOP RIVERSIDE	Y	0.5	0	0	0	**1**	-	**1**
UST RIVERSIDE	Y	0.25	0	0	0	-	-	0
Additional Environmental Records								
Federal								
PFAS GHG	Y	0.5	0	0	0	0	-	0
OSC RESPONSE	Y	0.125	0	0	-	-	-	0
FINDS/FRS	Y	PO	0	**1**	-	-	-	**1**
TRIS	Y	PO	0	-	-	-	-	0
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
ERNS PFAS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	0	0	0
LM SITES	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	0	-	-	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	0	0	0	-	0
State								
PFAS SAMPLING	Y	0.5	0	0	0	0	-	0
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DRYC GRANT	Y	0.25	0	0	0	-	-	0
PFAS GT CLEANUPS	Y	0.5	0	0	0	0	-	0
PFAS GW	Y	0.5	0	0	0	**1**	-	**1**
PFAS INVEST	Y	0.5	0	0	0	0	-	0
HWSS CLEANUP	Y	0.5	0	0	0	0	-	0
TOXIC PITS	Y	1	0	0	0	0	0	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DTSC HWF	Y	0.5	0	0	0	0	-	0
INSP COMP ENF	Y	1	0	0	0	0	0	0
SCH	Y	1	0	0	0	0	**2**	**2**
CHMIRS	Y	PO	0	-	-	-	-	0
HIST CHMIRS	Y	PO	0	-	-	-	-	0
HAZNET	Y	PO	0	**1**	-	-	-	**1**
HAZ GEN	Y	PO	0	-	-	-	-	0
HAZ TSD	Y	0.5	0	0	0	0	-	0
HIST MANIFEST	Y	PO	0	-	-	-	-	0
HW TRANSPORT	Y	0.125	0	0	-	-	-	0
WASTE TIRE	Y	PO	0	-	-	-	-	0
MEDICAL WASTE	Y	0.25	0	0	0	-	-	0
HIST CORTESE	Y	0.5	0	0	0	0	-	0
CDO/CAO	Y	0.5	0	0	0	0	-	0
CERS HAZ	Y	0.125	0	0	-	-	-	0
DELISTED HAZ	Y	0.5	0	**1**	0	0	-	**1**
GEOTRACKER	Y	0.125	0	0	-	-	-	0
MINE	Y	1	0	0	0	0	0	0
LIEN	Y	PO	0	-	-	-	-	0
WASTE DISCHG	Y	0.25	0	0	0	-	-	0
EMISSIONS	Y	0.25	0	**2**	0	-	-	**2**
CDL	Y	0.125	0	0	-	-	-	0
Tribal	***No Tribal additional environmental record sources available for this State.***							
County								
HWG RIVERSIDE	Y	0.125	0	0	-	-	-	0
HZH RIVERSIDE	Y	0.125	0	0	-	-	-	0
MED WST RIVERSIDE	Y	0.25	0	0	0	-	-	0
RMP RIVERSIDE	Y	PO	0	-	-	-	-	0
	Total:		0	**5**	0	**3**	**4**	**12**

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	FINDS/FRS	ESPLANADE AVENUE WATERLINE	ESPLANADE HEMET CA 92543 ***Registry ID:*** 110064904082	SSW	0.01 / 37.67	0	20
2	HAZNET	MARVO HOLSTEINS #2	1455 N CAWSTON AVE HEMET CA 92545	SSE	0.01 / 76.62	3	20
2	EMISSIONS	PETE DOTINGA & SON DAIRY	1455 N CAWSTON AVE HEMET CA 92545	SSE	0.01 / 76.62	3	21
2	DELISTED HAZ	Goyenetche Dairy #2	1455 N CAWSTON AVE HEMET CA 92545	SSE	0.01 / 76.62	3	23
3	EMISSIONS	GOYENETCHE DAIRY #2	1455 CAWSTON AVE HEMET CA 92545	S	0.07 / 379.69	1	23
4	LOP RIVERSIDE	Hemet-Ryan Airport	26951 Cawston Ave Hemet CA ***Site ID | Status Desc:*** 90446 | CLOSED/ACTION COMPLETED	SSE	0.27 / 1,428.82	3	24
4	LUST	HEMET-RYAN AIRPORT	26951 CAWSTON AVE HEMET CA 92343 ***Global ID | Status:*** T0606500186 |	SSE	0.27 / 1,428.82	3	24
5	PFAS GW		CA	WNW	0.49 / 2,608.82	-10	27
6	SCH	NEW HIGH SCHOOL NO. 1	ESPLANADE AVENUE/SANDERSON AVENUE SAN JACINTO CA 92582 ***Estor/EPA ID | Cleanup Status:*** 33010073 | INACTIVE - WITHDRAWN AS OF 2/20/2013	E	0.50 / 2,665.88	9	48
6	ENVIROSTOR	NEW HIGH SCHOOL NO. 1	ESPLANADE AVENUE/SANDERSON AVENUE SAN JACINTO CA 92582 ***Estor/EPA ID | Cleanup Status:*** 33010073 | INACTIVE - WITHDRAWN AS OF 2/20/2013	E	0.50 / 2,665.88	9	48
7	SCH	ESPLANADE ELEMENTARY SCHOOL NO. 11	ESPLANADE AVENUE/WARREN ROAD HEMET CA 92596 ***Estor/EPA ID | Cleanup Status:*** 60000288 | NO FURTHER ACTION AS OF 11/21/2006	W	0.56 / 2,936.84	-9	49
7	ENVIROSTOR	ESPLANADE ELEMENTARY SCHOOL NO. 11	ESPLANADE AVENUE/WARREN ROAD HEMET CA 92596	W	0.56 / 2,936.84	-9	50

Estor/EPA ID | Cleanup Status: 60000288 | NO FURTHER ACTION AS OF 11/21/2006

Executive Summary: Summary by Data Source

Standard

State

ENVIROSTOR - EnviroStor Database

A search of the ENVIROSTOR database, dated Jun 25, 2024 has found that there are 2 ENVIROSTOR site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
NEW HIGH SCHOOL NO. 1	ESPLANADE AVENUE/SANDERSON AVENUE SAN JACINTO CA 92582 ***Estor/EPA ID** | **Cleanup Status**: 33010073 | INACTIVE - WITHDRAWN AS OF 2/20/2013*	E	0.50 / 2,665.88	6

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
ESPLANADE ELEMENTARY SCHOOL NO. 11	ESPLANADE AVENUE/WARREN ROAD HEMET CA 92596 ***Estor/EPA ID** | **Cleanup Status**: 60000288 | NO FURTHER ACTION AS OF 11/21/2006*	W	0.56 / 2,936.84	7

LUST - Leaking Underground Fuel Tank Reports

A search of the LUST database, dated Jul 4, 2024 has found that there are 1 LUST site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
HEMET-RYAN AIRPORT	26951 CAWSTON AVE HEMET CA 92343 ***Global ID** | **Status**: T0606500186 |*	SSE	0.27 / 1,428.82	4

County

LOP RIVERSIDE - Riverside County - Local Oversight Program List

A search of the LOP RIVERSIDE database, dated Feb 6, 2024 has found that there are 1 LOP RIVERSIDE site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Hemet-Ryan Airport	26951 Cawston Ave Hemet CA ***Site ID** | **Status Desc**: 90446 | CLOSED/ACTION COMPLETED*	SSE	0.27 / 1,428.82	4

Non Standard

Federal

FINDS/FRS - Facility Registry Service/Facility Index

A search of the FINDS/FRS database, dated Apr 26, 2024 has found that there are 1 FINDS/FRS site(s) within approximately 0.02miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
ESPLANADE AVENUE WATERLINE	ESPLANADE HEMET CA 92543 ***Registry ID**: 110064904082*	SSW	0.01 / 37.67	1

State

PFAS GW - PFOA/PFOS Groundwater

A search of the PFAS GW database, dated Jun 23, 2024 has found that there are 1 PFAS GW site(s) within approximately 0.50miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
	CA	WNW	0.49 / 2,608.82	5

SCH - School Property Evaluation Program Sites

A search of the SCH database, dated Jun 25, 2024 has found that there are 2 SCH site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
NEW HIGH SCHOOL NO. 1	ESPLANADE AVENUE/SANDERSON AVENUE SAN JACINTO CA 92582 ***Estor/EPA ID	Cleanup Status**: 33010073 | INACTIVE - WITHDRAWN AS OF 2/20/2013*	E	0.50 / 2,665.88	6

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
ESPLANADE ELEMENTARY SCHOOL NO. 11	ESPLANADE AVENUE/WARREN ROAD HEMET CA 92596 ***Estor/EPA ID	Cleanup Status**: 60000288 | NO FURTHER ACTION AS OF 11/21/2006*	W	0.56 / 2,936.84	7

HAZNET - Handlers from Hazardous Waste Manifest Data

A search of the HAZNET database, dated Oct 24, 2016 has found that there are 1 HAZNET site(s) within approximately 0.02miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
MARVO HOLSTEINS #2	1455 N CAWSTON AVE HEMET CA 92545	SSE	0.01 / 76.62	2

DELISTED HAZ - Delisted Environmental Reporting System (CERS) Hazardous Waste Sites

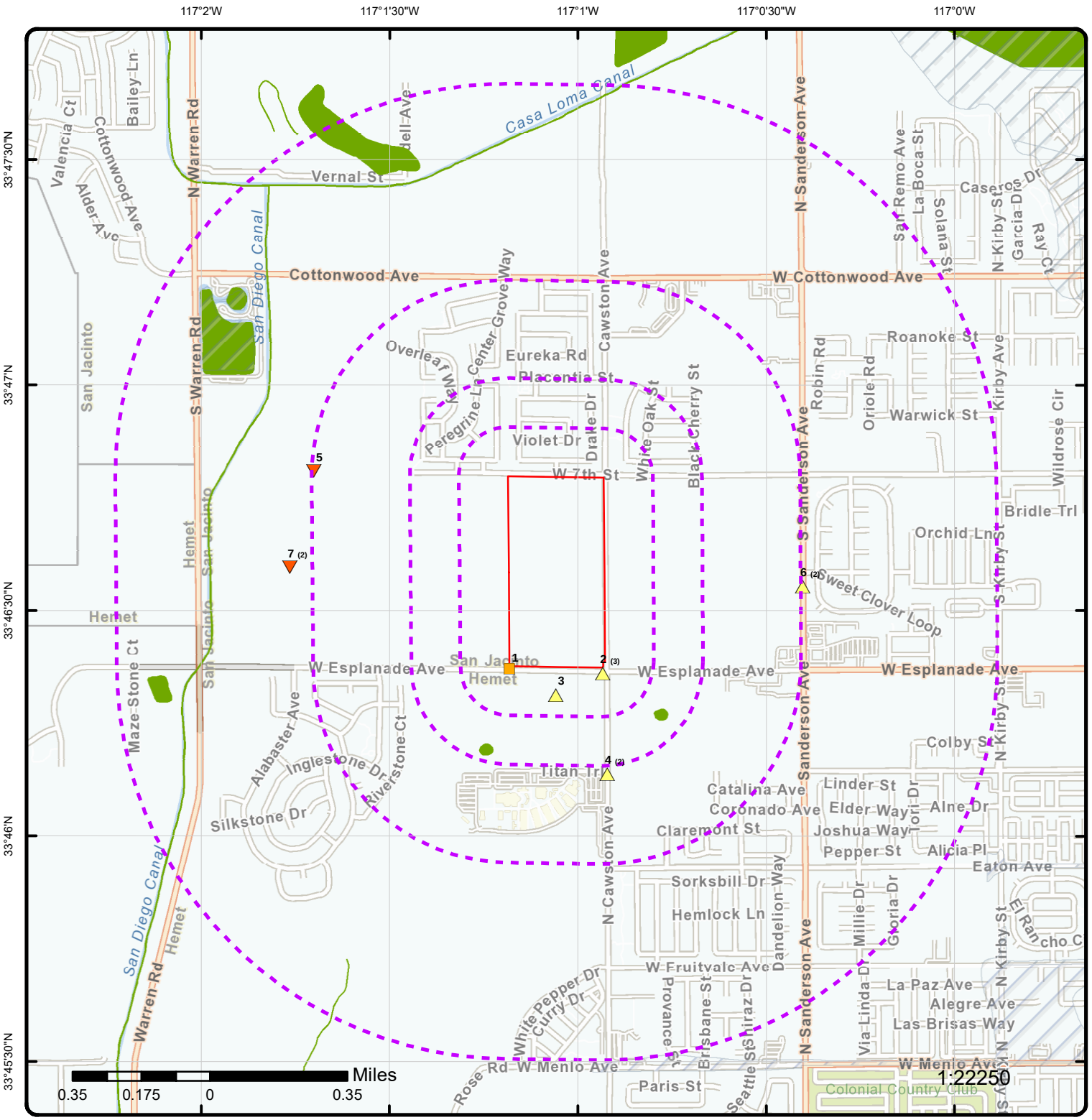
A search of the DELISTED HAZ database, dated Nov 29, 2018 has found that there are 1 DELISTED HAZ site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Goyenetche Dairy #2	1455 N CAWSTON AVE HEMET CA 92545	SSE	0.01 / 76.62	2

EMISSIONS - Toxic Pollutant Emissions Facilities

A search of the EMISSIONS database, dated Dec 31, 2021 has found that there are 2 EMISSIONS site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
PETE DOTINGA & SON DAIRY	1455 N CAWSTON AVE HEMET CA 92545	SSE	0.01 / 76.62	2
GOYENETCHE DAIRY #2	1455 CAWSTON AVE HEMET CA 92545	S	0.07 / 379.69	3



Map: 1.0 Mile Radius

Order Number: 24091300947

Address: 710 Cawston Avenue North, SAN JACINTO, CA

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

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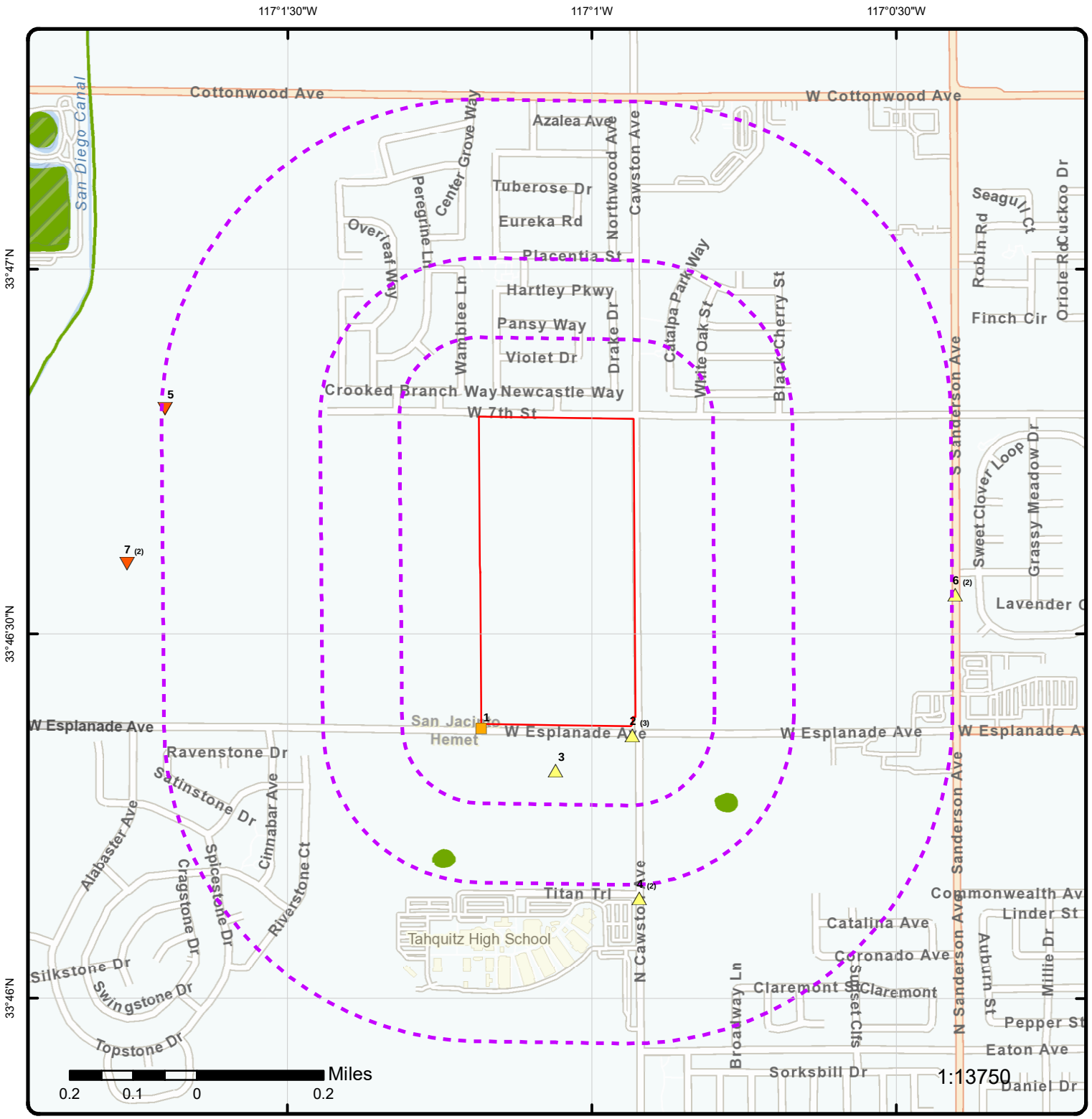

Map: 0.5 Mile Radius

Order Number: 24091300947

Address: 710 Cawston Avenue North, SAN JACINTO, CA

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

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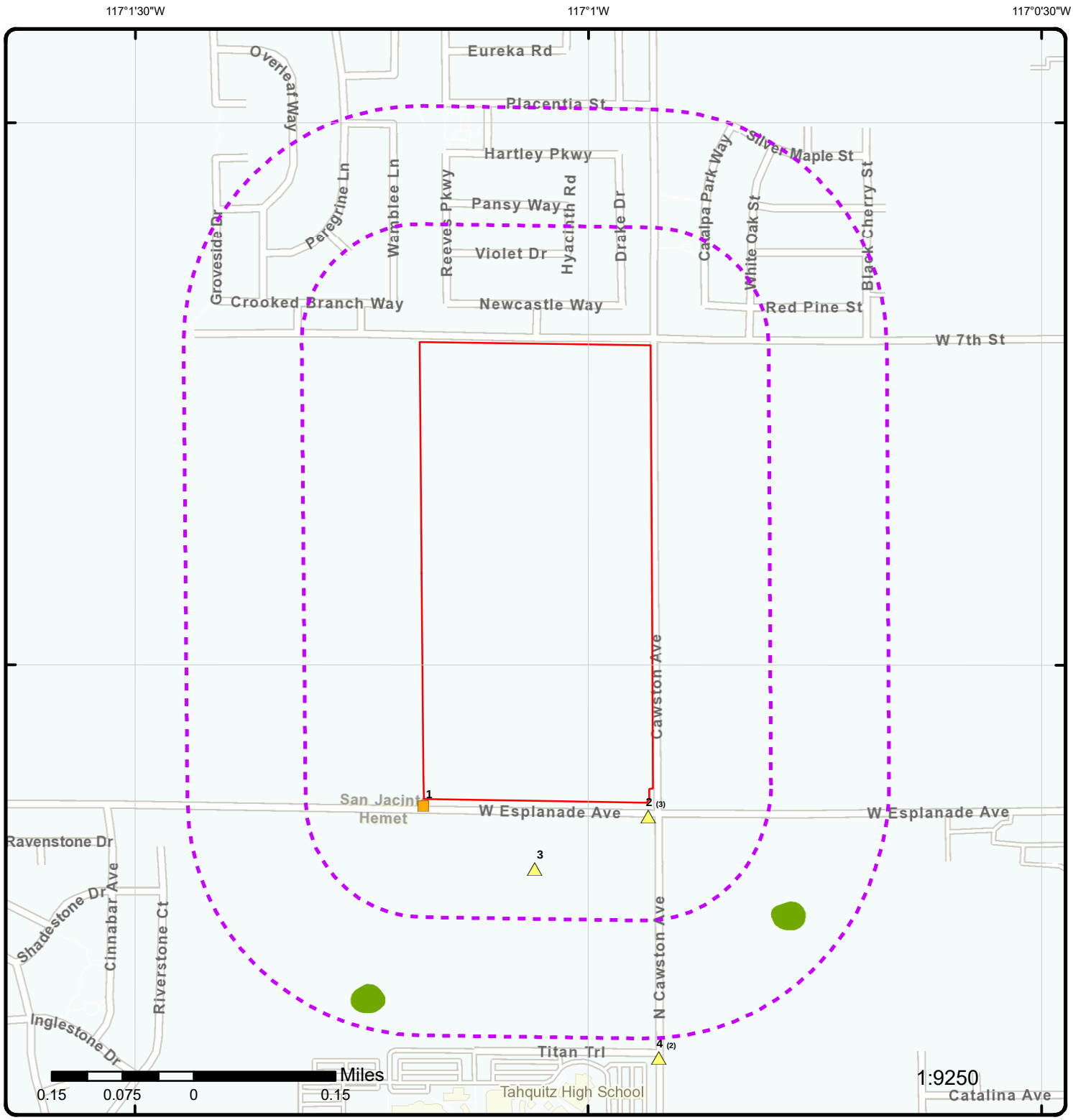

Map: 0.25 Mile Radius

Order Number: 24091300947

Address: 710 Cawston Avenue North, SAN JACINTO, CA

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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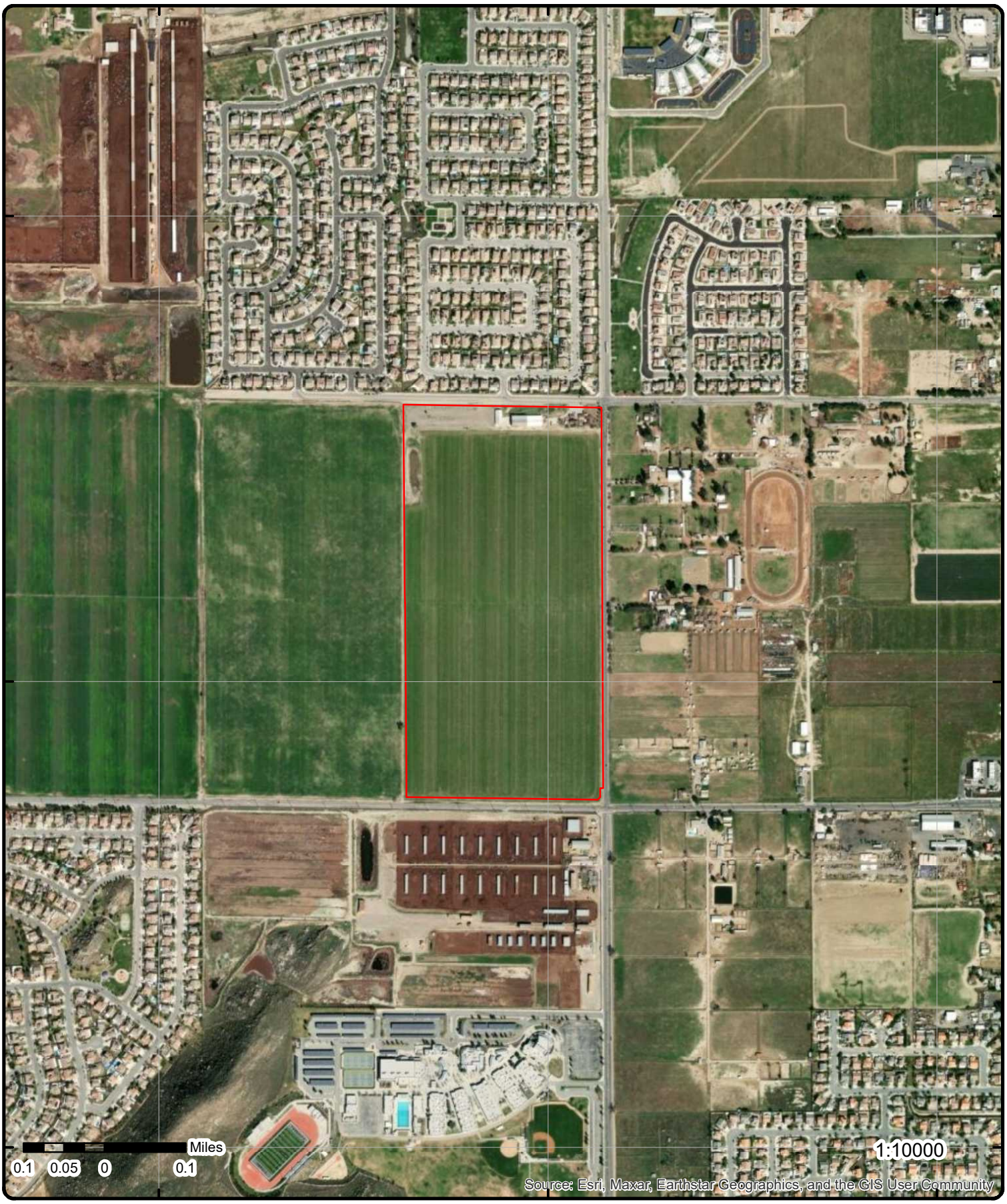


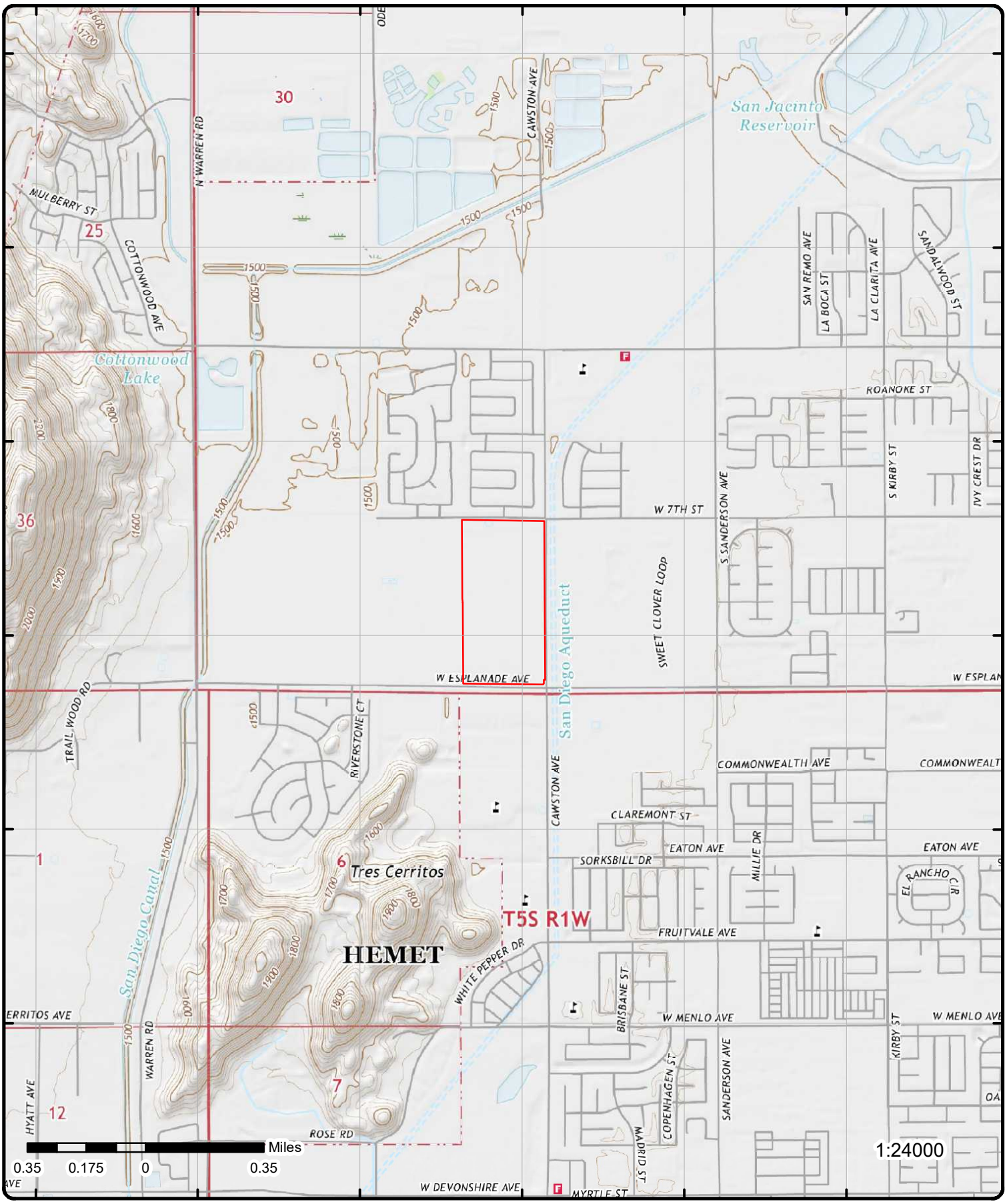
Aerial **Year: 2022**

Order Number: 24091300947

Address: 710 Cawston Avenue North, SAN JACINTO, CA

Source: ESRI World Imagery

© ERIS Information Inc.



Topographic Map

Year: 2021

Order Number: 24091300947

Address: 710 Cawston Avenue North, CA

Quadrangle(s): Winchester CA, Lakeview CA, Hemet CA, San Jacinto CA

Source: USGS Topographic Map

© ERIS Information Inc.

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of1	SSW	0.01 / 37.67	1,510.60 / 0	ESPLANADE AVENUE WATERLINE ESPLANADE HEMET CA 92543	FINDS/FRS

Registry ID: 110064904082
FIPS Code:
HUC Code: 18070202
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 10-OCT-15
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: CALEPA
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 45
Census Block Code: 060650435041002
EPA Region Code: 09
County Name: RIVERSIDE
US/Mexico Border Ind:
Latitude: 33.772833
Longitude: -117.019694
Reference Point:
Coord Collection Method: UNKNOWN
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110064904082
Data Source: Facility Registry Service - Single File
Program Acronyms:

CA-ENVIROVIEW:314211

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	1 of3	SSE	0.01 / 76.62	1,513.11 / 3	MARVO HOLSTEINS #2 1455 N CAWSTON AVE HEMET CA 92545	HAZNET

SIC Code: 0291
NAICS Code: 11299
EPA ID: CAL000371452
Create Date: 2/3/2012 9:01:15 AM
Fac Act Ind: No
Inact Date: 6/30/2014
County Code: 33
County Name: Riverside
Mail Name:
Mailing Addr 1: PO BOX 829
Mailing Addr 2:
Owner Fax: 9516544613
Mailing City: LAKEVIEW
Mailing State: CA
Mailing Zip: 925670000
Region Code: 4
Owner Name: MICHAEL OOSTEN
Owner Addr 1: PO BOX 829
Owner Addr 2:
Owner City: LAKEVIEW
Owner State: CA
Owner Zip: 925670000
Owner Phone: 9514870785

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Details DTSC HWTS: The Department of Toxic Substances Control (DTSC) makes available a Waste Code Matrix showing each Waste Code, its description, and annual amounts in its Hazardous Waste Tracking System: https://hwts.dtsc.ca.gov/search

DTSC Handler Profile url: https://hwts.dtsc.ca.gov/facility/CAL000371452

2	2 of3	SSE	0.01 / 76.62	1,513.11 / 3	PETE DOTINGA & SON DAIRY 1455 N CAWSTON AVE HEMET CA 92545	EMISSIONS

2005 Criteria Data

Facility ID:	145178	**CERR Code:**	
Facility SIC Code:	241	**TOGT:**	8.2751216719152590896077870025765817349
CO:	33	**ROGT:**	5.781
Air Basin:	SC	**COT:**	.001
District:	SC	**NOXT:**	.005
COID:	RIV	**SOXT:**	0
DISN:	SOUTH COAST AQMD	**PMT:**	2.485
CHAPIS:		**PM10T:**	1.2159105

2005 Toxic Data

Facility ID:	145178	**COID:**	RIV
Facility SIC Code:	241	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2006 Criteria Data

Facility ID:	145178	**CERR Code:**	
Facility SIC Code:	241	**TOGT:**	8.2751216719152590896077870025765817349
CO:	33	**ROGT:**	5.781
Air Basin:	SC	**COT:**	.001
District:	SC	**NOXT:**	.005
COID:	RIV	**SOXT:**	0
DISN:	SOUTH COAST AQMD	**PMT:**	2.485
CHAPIS:		**PM10T:**	1.2159105

2006 Toxic Data

Facility ID:	145178	**COID:**	RIV
Facility SIC Code:	241	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2007 Criteria Data

Facility ID:	145178	**CERR Code:**	

Facility SIC Code:	241	**TOGT:**	8.2751216719152590896077870025765817349
CO:	33	**ROGT:**	5.781
Air Basin:	SC	**COT:**	.001
District:	SC	**NOXT:**	.005
COID:	RIV	**SOXT:**	0
DISN:	SOUTH COAST AQMD	**PMT:**	2.485
CHAPIS:		**PM10T:**	1.2159105

2007 Toxic Data

Facility ID:	145178	**COID:**	RIV
Facility SIC Code:	241	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2008 Criteria Data

Facility ID:	145178	**CERR Code:**	
Facility SIC Code:	241	**TOGT:**	11.153592900085886057829945605496707701111
CO:	33	**ROGT:**	7.7919
Air Basin:	SC	**COT:**	
District:	SC	**NOXT:**	
COID:	RIV	**SOXT:**	
DISN:	SOUTH COAST AQMD	**PMT:**	2.59702
CHAPIS:		**PM10T:**	1.270721886

2008 Toxic Data

Facility ID:	145178	**COID:**	RIV
Facility SIC Code:	241	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2009 Criteria Data

Facility ID:	145178	**CERR Code:**	
Facility SIC Code:	241	**TOGT:**	8.3166332665330661322645290581162324649393
CO:	33	**ROGT:**	5.81
Air Basin:	SC	**COT:**	
District:	SC	**NOXT:**	
COID:	RIV	**SOXT:**	
DISN:	SOUTH COAST AQMD	**PMT:**	2.38
CHAPIS:		**PM10T:**	1.164534

2009 Toxic Data

Facility ID:	145178	**COID:**	RIV
Facility SIC Code:	241	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

District: SC
TS:
Health Risk Asmt:
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:

2010 Toxic Data

Facility ID: 145178
Facility SIC Code: 241
CO: 33
Air Basin: SC
District: SC
TS:
Health Risk Asmt:
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:
COID: RIV
DISN: SOUTH COAST AQMD
CHAPIS:
CERR Code:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	3 of3	SSE	0.01 / 76.62	1,513.11 / 3	Goyenetche Dairy #2 1455 N CAWSTON AVE HEMET CA 92545	DELISTED HAZ

Siteid: 46967
Latitude: 33.771870
Longitude: -117.017654
Original Source: CHAZ
Record Date: 22-MAR-2018

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	1 of1	S	0.07 / 379.69	1,511.60 / 1	GOYENETCHE DAIRY #2 1455 CAWSTON AVE HEMET CA 92545	EMISSIONS

2016 Criteria Data

Facility ID: 176937
Facility SIC Code: 241
CO: 33
Air Basin: SC
District: SC
COID: RIV
DISN: SOUTH COAST AQMD
CHAPIS:
CERR CODE:
TOGT: 63.625
ROGT: 5.09
COT:
NOXT:
SOXT:
PMT: 1.28
PM10T: .616704

2016 Toxic Data

Facility ID: 176937
Facility SIC Code: 241
CERR CODE:
COID: RIV
CO: 33
DISN: SOUTH COAST AQMD
CHAPIS:
TS:
HRA:
CH Index:
AH Index:
Air Basin: SC
District: SC

2017 Criteria Data

Facility ID: 176937
Facility SIC Code: 241
CO: 33
Air Basin: SC
District: SC
COID: RIV
CERR Code:
TOGT: 63.625
ROGT: 5.09
COT:
NOXT:
SOXT:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

DISN: SOUTH COAST AQMD
CHAPIS:
PMT: 1.28
PM10T: .616704

2017 Toxic Data

Facility ID: 176937
Facility SIC Code: 241
CO: 33
Air Basin: SC
District: SC
TS:
Health Risk Asmt:
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:
COID: RIV
DISN: SOUTH COAST AQMD
CHAPIS:
CERR Code:

---

4 | **1 of2** | **SSE** | **0.27 / 1,428.82** | **1,513.60 / 3** | **Hemet-Ryan Airport, 26951 Cawston Ave, Hemet CA** | **LOP RIVERSIDE**

Site ID: 90446
Status Code: 9
Status Desc: CLOSED/ACTION COMPLETED
Case Type Code: S
Case Type Desc: SOIL ONLY IS IMPACTED
Closed Code: Y
Closed Desc: CLOSED SITE
Employee: Rogers

---

4 | **2 of2** | **SSE** | **0.27 / 1,428.82** | **1,513.60 / 3** | **HEMET-RYAN AIRPORT, 26951 CAWSTON AVE, HEMET CA 92343** | **LUST**

Global ID: T0606500186
Site Facility Type: LUST CLEANUP SITE
Site Fac Type (SRCH): LUST CLEANUP SITE
Status:
Status (SRCH): COMPLETED - CASE CLOSED
Status (DL): Completed - Case Closed
Status Date (DL): 9/5/1990
Cleanup Status: COMPLETED - CASE CLOSED
Site Facility Name (SRCH): HEMET-RYAN AIRPORT
Address (SRCH): 26951 CAWSTON AVE
City (SRCH): HEMET
Zip (SRCH): 92343
County (SRCH): RIVERSIDE
Street No (DL): 26951
Street Name (DL): CAWSTON AVE
City (DL): HEMET
Zip (DL): 92343
County (DL): Riverside
State (DL): CA
Business Name (DL): HEMET-RYAN AIRPORT
Site Facility Name: HEMET-RYAN AIRPORT
Address : 26951 CAWSTON AVE
City : HEMET
Zip : 92343
County : RIVERSIDE
Report Source: GeoTracker Search Results (SRCH);GeoTracker Sites Data Download (DL);GeoTracker Search Results Report
Case Type (DL): LUST Cleanup Site
Oil Field (SRCH):
Oil Field Oper (SRCH):
Census Tract (SRCH): 6065043306
Latitude (DL): 33.7299636175849
Longitude (DL): -117.015677042992
RWQCB Region (DL): SANTA ANA RWQCB (REGION 8)

GeoTracker Sites Data Download - Site Details

CUF Case: NO
Lead Agency: RIVERSIDE COUNTY LOP
Case Worker: RIV
Local Agency: RIVERSIDE COUNTY LOP
RB Case No: 083301541T
Local Case No: 90446

File Location:	Local Agency Warehouse
Potential COC:	Gasoline
Potential Media of Concern:	Soil
Begin Date:	4/2/1990
How Discovered:	Tank Closure
How Discovered Description:	
Stop Method:	Close and Remove Tank, Remove Contents
Stop Description:	
Calwater Watershed Name:	San Jacinto Valley - Perris - Hemet (802.15)
DWR GW Subbasin Name:	San Jacinto (8-005)
Disadvantaged Community:	
CalEnvScreen Score:	
Coordinate Source:	Google Map Move
Discharge Cause:	Corrosion
Discharge Source:	Tank
EPA Region:	9
Leak Reported Dt:	1990-05-16 00:00:00
Military DoD Site:	No
No Further Action Dt:	1990-09-05 00:00:00
Qty Rlsd Gallons:	
Facility Project Sub Type:	
Calenviroscreen 3 Score:	61-65%
Calenviroscreen 4 Score:	45-50%
Site History:	

GeoTracker Sites Data Download - Regulatory Contacts

Contact Type:	Regional Board Caseworker
Contact Name:	PATRICIA HANNON
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	patricia.hannon@waterboards.ca.gov
Phone No:	

Contact Type:	Local Agency Caseworker - Primary Caseworker
Contact Name:	Riverside County LOP
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	
Phone No:	9519558980

GeoTracker Sites Data Download - Status History

Status:	Completed - Case Closed
Status Date:	9/5/1990

Status:	Open - Site Assessment
Status Date:	5/25/1990

Status:	Open - Case Begin Date
Status Date:	4/2/1990

GeoTracker Search - Regulatory Profile (as of June 5, 2024)

Site Facility Name:	HEMET-RYAN AIRPORT
Site Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Address:	26951 CAWSTON AVE
City:	HEMET
Zip:	92343
County:	RIVERSIDE
Report Link:	https://geotracker.waterboards.ca.gov/profile_report?global_id=T0606500186
Cleanup Status Detail:	COMPLETED - CASE CLOSED AS OF 9/5/1990

Project Status:
Cleanup History Link: https://geotracker.waterboards.ca.gov/profile_report_include?global_id=T0606500186&tabname=regulatoryhistory
Potential COC: GASOLINE
Potential Media of Concern: SOIL
File Location: LOCAL AGENCY WAREHOUSE
User Defined Beneficial Use:
Designated Beneficial Use: MUN, AGR, IND, PROC - Note: Also incl parts of 802.13 and 802.21.
DWR GW Sub Basin: San Jacinto (8-005)
Calwater Watershed Name: San Jacinto Valley - Perris - Hemet (802.15)
Post Closure Site Management: NOTIFY PRIOR TO CHANGE IN LAND USE
Future Land Use:
Cleanup Oversight Agencies: RIVERSIDE COUNTY LOP (LEAD) - CASE #: 90446
CASE MANAGER: Riverside County LOP
SANTA ANA RWQCB (REGION 8) - CASE #: 083301541T
CASE MANAGER: PATRICIA HANNON
CUF Claim No:
CUF Priority Assig:
CUF Amount Paid:
WDR Place Type:
WDR File No:
WDR Order No:
Project Oversight Agencies:
Facility Type:
Composting Method:
Grndwtr Monitoring Frequency:
Designated Beneficial Use Desc: Municipal and Domestic Supply, Agricultural Supply, Industrial Service Supply, Industrial Process Supply - Note: Also incl parts of 802.13 and 802.21.
Site History:

No site history available

GeoTracker Search - Cleanup Status History (as of June 5, 2024)

Status: Completed - Case Closed
Date : 9/5/1990

Status: Open - Site Assessment
Date : 5/25/1990

Status: Open - Case Begin Date
Date : 4/2/1990

GeoTracker Search - Regulatory Activities (as of June 5, 2024)

Action Type: Other Regulatory Actions
Action: Closure/No Further Action Letter - #Site Closure
Action Date: 3/25/2009
Received Issue Date: 3/25/2009
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606500186&enforcement_id=6007743&temptable=ENFORCEMENT
Title Description Comments:

RivCo Site Closure

Action Type: Other Regulatory Actions
Action: File review - #RCDEH Upload Site File 3/27/2015
Action Date: 3/24/2009
Received Issue Date: 3/24/2009
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606500186&enforcement_id=6052207&temptable=ENFORCEMENT
Title Description Comments:

RCDEH Upload Site File 3/27/2015

Action Type: Other Regulatory Actions

Action: Closure/No Further Action Letter
Action Date: 9/5/1990
Received Issue Date: 9/5/1990
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606500186&enforcement_id=5862402&temptable=ENFORCEMENT
Title Description Comments:

Action Type: Leak Action
Action: Leak Reported
Action Date: 5/16/1990
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Discovery
Action Date: 4/2/1990
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Stopped
Action Date: 4/2/1990
Received Issue Date:
Doc Link:
Title Description Comments:

GeoTracker Search - Documents (as of June 5, 2024)

Document Type: Site Documents ***Document Date:*** 3/25/2009
Type: CLOSURE/NO FURTHER ACTION LETTER ***Submitted:***
Submitted By: RIVERSIDE COUNTY LOP (REGULATOR)
Title: RIVCO SITE CLOSURE
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606500186&enforcement_id=6007743

Document Type: Site Documents ***Document Date:*** 3/24/2009
Type: FILE REVIEW ***Submitted:***
Submitted By: LINDA SHURLOW (REGULATOR)
Title: RCDEH UPLOAD SITE FILE 3/27/2015
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606500186&enforcement_id=6052207

Document Type: Site Documents ***Document Date:*** 9/5/1990
Type: CLOSURE/NO FURTHER ACTION LETTER ***Submitted:***
Submitted By: SANGAVI PARI (REGULATOR)
Title: CLOSURE/NO FURTHER ACTION LETTER
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606500186&enforcement_id=5862402

5	1 of1	WNW	0.49 / 2,608.82	1,500.60 / -10	CA	PFAS GW

Well ID: L10007546044-HE-05 ***SRS Latitude:*** 33.780139519999999
Gm Dataset Name: WB_CLEANUP ***SRS Longitude:*** -117.02835229999999
Gm Data Source: GeoTracker ***Latitude:*** 33.780139519999999
Gm Well Category: Monitoring ***Longitude:*** -117.02835229999999
SRS Datum: NAD83
Gm Altwell Id1: HE-05
Gm Altwell Id2:
Gm Altwell Id3:

Well Details

Gm Cas No:		**SRC Chemical:**	PFNA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFNA	**SRC Report Limit:**	1.5
Gm Reporting Limit:	1.5	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluorononanoic acid (PFNA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFOS
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFOS	**SRC Report Limit:**	1.5
Gm Reporting Limit:	1.5	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluorooctane sulfonate (PFOS)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	ETFOSA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	ETFOSA	**SRC Report Limit:**	3.9
Gm Reporting Limit:	3.9	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	N-Ethyl perfluorooctane sulfonamide (EtFOSA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFPES

Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFPES	**SRC Report Limit:**	1.6
Gm Reporting Limit:	1.6	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluoropentane sulfonoic acid (PFPeS)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/12/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFTEDA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFTEDA	**SRC Report Limit:**	1.5
Gm Reporting Limit:	1.5	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluorotetradecanoic acid (PFTeDA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFHXSA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFHXSA	**SRC Report Limit:**	1.5
Gm Reporting Limit:	1.5	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluorohexanesulfonic acid (PFHxS)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFDOA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND

Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFDOA	**SRC Report Limit:**	1.6
Gm Reporting Limit:	1.6	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluorododecanoic acid (PFDoDA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/12/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	11ClPF3OUDS
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	11ClPF3OUDS	**SRC Report Limit:**	1.6
Gm Reporting Limit:	1.6	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/12/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFUNDCA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFUNDCA	**SRC Report Limit:**	1.5
Gm Reporting Limit:	1.5	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluoroundecanoic acid (PFUnDA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	HFPA-DA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	HFPA-DA	**SRC Report Limit:**	2.3

Gm Reporting Limit:	2.3	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	
Gm Chemical Name:	2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy) propanoic acid (HFPO-DA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/12/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		***SRC Chemical:***	ADONA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	ADONA	***SRC Report Limit:***	1.6
Gm Reporting Limit:	1.6	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	
Gm Chemical Name:	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/12/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		***SRC Chemical:***	PFHA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	PFHA	***SRC Report Limit:***	1.5
Gm Reporting Limit:	1.5	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	
Gm Chemical Name:	Perfluorohexanoic acid (PFHxA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		***SRC Chemical:***	PFTEDA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	PFTEDA	***SRC Report Limit:***	1.6
Gm Reporting Limit:	1.6	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name:	Perfluorotetradecanoic acid (PFTeDA)
Gm Samp Collection Date:	01/05/2021
Gm Screen Top Depth Ft:	181.71
Gm Screen Bottom Depth Ft:	196.71
SRC Samp Collection Date:	01/05/2021
SRC Samp Collection Time:	1520
SRC Screen Top Depth Ft:	181.71
SRC Screen Bottom Depth Ft:	196.71
SRC Lab Note:	
SRC Analysis Date:	01/12/2021
SRC Well Category:	Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		**SRC Chemical:**	PFBTA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFBTA	**SRC Report Limit:**	3.9
Gm Reporting Limit:	3.9	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	

Gm Chemical Name:	Perfluorobutyric acid (PFBA)
Gm Samp Collection Date:	01/05/2021
Gm Screen Top Depth Ft:	181.71
Gm Screen Bottom Depth Ft:	196.71
SRC Samp Collection Date:	01/05/2021
SRC Samp Collection Time:	1520
SRC Screen Top Depth Ft:	181.71
SRC Screen Bottom Depth Ft:	196.71
SRC Lab Note:	
SRC Analysis Date:	01/15/2021
SRC Well Category:	Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		**SRC Chemical:**	PFPES
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFPES	**SRC Report Limit:**	1.5
Gm Reporting Limit:	1.5	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	

Gm Chemical Name:	Perfluoropentane sulfonoic acid (PFPeS)
Gm Samp Collection Date:	01/05/2021
Gm Screen Top Depth Ft:	181.71
Gm Screen Bottom Depth Ft:	196.71
SRC Samp Collection Date:	01/05/2021
SRC Samp Collection Time:	1520
SRC Screen Top Depth Ft:	181.71
SRC Screen Bottom Depth Ft:	196.71
SRC Lab Note:	
SRC Analysis Date:	01/15/2021
SRC Well Category:	Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		**SRC Chemical:**	ETFOSE
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	ETFOSE	**SRC Report Limit:**	2.3
Gm Reporting Limit:	2.3	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	

Gm Chemical Name:	N-Ethyl perfluorooctane sulfonamide ethanol (EtFOSE)
Gm Samp Collection Date:	01/05/2021

Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: PFHA
Gm Reporting Limit: 1.6
Gm Well Depth Ft:
SRC Chemical: PFHA
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 1.6
SRC Analytic Meth: E537
SRC Well Depth Ft:
Gm Chemical Name: Perfluorohexanoic acid (PFHxA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: MEFOSA
Gm Reporting Limit: 2.3
Gm Well Depth Ft:
SRC Chemical: MEFOSA
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 2.3
SRC Analytic Meth: E537
SRC Well Depth Ft:
Gm Chemical Name: N-Methyl perfluorooctane sulfonamide (MeFOSA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: ADONA
Gm Reporting Limit: 1.5
Gm Well Depth Ft:
SRC Chemical: ADONA
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 1.5
SRC Analytic Meth: E537
SRC Well Depth Ft:
Gm Chemical Name: 4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71

SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: 9ClPF3ONS
Gm Reporting Limit: 1.5
Gm Well Depth Ft:
SRC Chemical: 9ClPF3ONS
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 1.5
SRC Analytic Meth: E537
SRC Well Depth Ft:
Gm Chemical Name: 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: PFBTA
Gm Reporting Limit: 3.9
Gm Well Depth Ft:
SRC Chemical: PFBTA
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 3.9
SRC Analytic Meth: E537
SRC Well Depth Ft:
Gm Chemical Name: Perfluorobutyric acid (PFBA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: PFOSA
Gm Reporting Limit: 1.5
Gm Well Depth Ft:
SRC Chemical: PFOSA
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 1.5
SRC Analytic Meth: E537
SRC Well Depth Ft:
Gm Chemical Name: Perfluorooctane sulfonamide (PFOSAm)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520

SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: PFDSA
Gm Reporting Limit: 1.5
Gm Well Depth Ft:
Gm Chemical Name: Perfluorodecane sulfonic acid (PFDS)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well
SRC Chemical: PFDSA
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 1.5
SRC Analytic Meth: E537
SRC Well Depth Ft:

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: PFOA
Gm Reporting Limit: 1.5
Gm Well Depth Ft:
Gm Chemical Name: Perfluorooctanoic acid (PFOA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well
SRC Chemical: PFOA
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 1.5
SRC Analytic Meth: E537
SRC Well Depth Ft:

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: 6:2FTS
Gm Reporting Limit: 3.9
Gm Well Depth Ft:
Gm Chemical Name: 6:2 Fluorotelomer sulfonic acid (1H,1H,2H,2H-Perfluorooctanesulfonic acid) (6:2 FTS)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Chemical: 6:2FTS
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 3.9
SRC Analytic Meth: E537
SRC Well Depth Ft:

SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	4:2FTS
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	4:2FTS	***SRC Report Limit:***	1.5
Gm Reporting Limit:	1.5	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: 4:2 Fluorotelomer sulfonic acid (1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid) (4:2 FTS)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	PFHPSA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	PFHPSA	***SRC Report Limit:***	1.6
Gm Reporting Limit:	1.6	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: Perfluoroheptane sulfonic acid (PFHpS)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	PFHXSA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	PFHXSA	***SRC Report Limit:***	1.6
Gm Reporting Limit:	1.6	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: Perfluorohexanesulfonic acid (PFHxS)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021

SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	PFTRIDA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	PFTRIDA	***SRC Report Limit:***	1.5
Gm Reporting Limit:	1.5	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: Perfluorotridecanoic acid (PFTrDA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	NMEFOSAA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	NMEFOSAA	***SRC Report Limit:***	1.5
Gm Reporting Limit:	1.5	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: N-Methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	6:2FTS
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	6:2FTS	***SRC Report Limit:***	3.9
Gm Reporting Limit:	3.9	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: 6:2 Fluorotelomer sulfonic acid (1H,1H,2H,2H-Perfluorooctanesulfonic acid) (6:2 FTS)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	9ClPF3ONS
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	9ClPF3ONS	***SRC Report Limit:***	1.6
Gm Reporting Limit:	1.6	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	8:2FTS
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	8:2FTS	***SRC Report Limit:***	2.3
Gm Reporting Limit:	2.3	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: 8:2 Fluorotelomer sulfonic acid (1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid) (8:2 FTS)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	PFOS
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	PFOS	***SRC Report Limit:***	1.6
Gm Reporting Limit:	1.6	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: Perfluorooctane sulfonate (PFOS)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		**SRC Chemical:**	PFTRIDA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFTRIDA	**SRC Report Limit:**	1.6
Gm Reporting Limit:	1.6	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluorotridecanoic acid (PFTrDA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/12/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFBSA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFBSA	**SRC Report Limit:**	1.6
Gm Reporting Limit:	1.6	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluorobutane sulfonic acid (PFBS)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/12/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFHPA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFHPA	**SRC Report Limit:**	1.5
Gm Reporting Limit:	1.5	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluoroheptanoic acid (PFHpA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFUNDCA
Gm Result:	0	**SRC Result:**	0

Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFUNDCA	**SRC Report Limit:**	1.6
Gm Reporting Limit:	1.6	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluoroundecanoic acid (PFUnDA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/12/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	11ClPF3OUDS
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	11ClPF3OUDS	**SRC Report Limit:**	1.5
Gm Reporting Limit:	1.5	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFOA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFOA	**SRC Report Limit:**	1.6
Gm Reporting Limit:	1.6	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluorooctanoic acid (PFOA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/12/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFPA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L

Gm Chemical Vvl:	PFPA	**SRC Report Limit:**	1.6
Gm Reporting Limit:	1.6	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluoropentanoic acid (PFPeA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/12/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFHPSA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFHPSA	**SRC Report Limit:**	1.5
Gm Reporting Limit:	1.5	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluoroheptane sulfonic acid (PFHpS)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	MEFOSE
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	MEFOSE	**SRC Report Limit:**	2.3
Gm Reporting Limit:	2.3	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	N-Methyl perfluorooctane sulfonamide ethanol (MeFOSE)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	8:2FTS
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	8:2FTS	**SRC Report Limit:**	2.3
Gm Reporting Limit:	2.3	**SRC Analytic Meth:**	E537

Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	8:2 Fluorotelomer sulfonic acid (1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid) (8:2 FTS)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFDOA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFDOA	**SRC Report Limit:**	1.5
Gm Reporting Limit:	1.5	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluorododecanoic acid (PFDoDA)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/15/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	PFDSA
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	PFDSA	**SRC Report Limit:**	1.6
Gm Reporting Limit:	1.6	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	Perfluorodecane sulfonic acid (PFDS)		
Gm Samp Collection Date:	01/05/2021		
Gm Screen Top Depth Ft:	181.71		
Gm Screen Bottom Depth Ft:	196.71		
SRC Samp Collection Date:	01/05/2021		
SRC Samp Collection Time:	1520		
SRC Screen Top Depth Ft:	181.71		
SRC Screen Bottom Depth Ft:	196.71		
SRC Lab Note:			
SRC Analysis Date:	01/12/2021		
SRC Well Category:	Remediation/Groundwater Monitoring Well		

Well Details

Gm Cas No:		**SRC Chemical:**	ETFOSE
Gm Result:	0	**SRC Result:**	0
Gm Result Modifier:	ND	**SRC Result Modifie:**	ND
Gm Chemical Units:	NG/L	**Src Chemical Units:**	NG/L
Gm Chemical Vvl:	ETFOSE	**SRC Report Limit:**	2.3
Gm Reporting Limit:	2.3	**SRC Analytic Meth:**	E537
Gm Well Depth Ft:		**SRC Well Depth Ft:**	
Gm Chemical Name:	N-Ethyl perfluorooctane sulfonamide ethanol (EtFOSE)		

Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: NETFOSAA
Gm Reporting Limit: 2.3
Gm Well Depth Ft:
SRC Chemical: NETFOSAA
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 2.3
SRC Analytic Meth: E537
SRC Well Depth Ft:
Gm Chemical Name: N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: NETFOSAA
Gm Reporting Limit: 2.3
Gm Well Depth Ft:
SRC Chemical: NETFOSAA
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 2.3
SRC Analytic Meth: E537
SRC Well Depth Ft:
Gm Chemical Name: N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: PFNDCA
Gm Reporting Limit: 1.6
Gm Well Depth Ft:
SRC Chemical: PFNDCA
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 1.6
SRC Analytic Meth: E537
SRC Well Depth Ft:
Gm Chemical Name: Perfluorodecanoic acid (PFDA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71

Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: PFNA
Gm Reporting Limit: 1.6
Gm Well Depth Ft:
SRC Chemical: PFNA
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 1.6
SRC Analytic Meth: E537
SRC Well Depth Ft:
Gm Chemical Name: Perfluorononanoic acid (PFNA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: MEFOSE
Gm Reporting Limit: 2.3
Gm Well Depth Ft:
SRC Chemical: MEFOSE
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 2.3
SRC Analytic Meth: E537
SRC Well Depth Ft:
Gm Chemical Name: N-Methyl perfluorooctane sulfonamide ethanol (MeFOSE)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:
Gm Result: 0
Gm Result Modifier: ND
Gm Chemical Units: NG/L
Gm Chemical Vvl: MEFOSA
Gm Reporting Limit: 2.3
Gm Well Depth Ft:
SRC Chemical: MEFOSA
SRC Result: 0
SRC Result Modifie: ND
Src Chemical Units: NG/L
SRC Report Limit: 2.3
SRC Analytic Meth: E537
SRC Well Depth Ft:
Gm Chemical Name: N-Methyl perfluorooctane sulfonamide (MeFOSA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021

SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No: ***SRC Chemical:*** 4:2FTS
Gm Result: 0 ***SRC Result:*** 0
Gm Result Modifier: ND ***SRC Result Modifie:*** ND
Gm Chemical Units: NG/L ***Src Chemical Units:*** NG/L
Gm Chemical Vvl: 4:2FTS ***SRC Report Limit:*** 1.6
Gm Reporting Limit: 1.6 ***SRC Analytic Meth:*** E537
Gm Well Depth Ft: ***SRC Well Depth Ft:***
Gm Chemical Name: 4:2 Fluorotelomer sulfonic acid (1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid) (4:2 FTS)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No: ***SRC Chemical:*** PFOSA
Gm Result: 0 ***SRC Result:*** 0
Gm Result Modifier: ND ***SRC Result Modifie:*** ND
Gm Chemical Units: NG/L ***Src Chemical Units:*** NG/L
Gm Chemical Vvl: PFOSA ***SRC Report Limit:*** 1.6
Gm Reporting Limit: 1.6 ***SRC Analytic Meth:*** E537
Gm Well Depth Ft: ***SRC Well Depth Ft:***
Gm Chemical Name: Perfluorooctane sulfonamide (PFOSAm)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No: ***SRC Chemical:*** PFBSA
Gm Result: 0 ***SRC Result:*** 0
Gm Result Modifier: ND ***SRC Result Modifie:*** ND
Gm Chemical Units: NG/L ***Src Chemical Units:*** NG/L
Gm Chemical Vvl: PFBSA ***SRC Report Limit:*** 1.5
Gm Reporting Limit: 1.5 ***SRC Analytic Meth:*** E537
Gm Well Depth Ft: ***SRC Well Depth Ft:***
Gm Chemical Name: Perfluorobutane sulfonic acid (PFBS)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71

SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	ETFOSA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	ETFOSA	***SRC Report Limit:***	3.9
Gm Reporting Limit:	3.9	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: N-Ethyl perfluorooctane sulfonamide (EtFOSA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	PFHPA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	PFHPA	***SRC Report Limit:***	1.6
Gm Reporting Limit:	1.6	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: Perfluoroheptanoic acid (PFHpA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	HFPA-DA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	HFPA-DA	***SRC Report Limit:***	2.3
Gm Reporting Limit:	2.3	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy) propanoic acid (HFPO-DA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:

SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	PFPA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	PFPA	***SRC Report Limit:***	1.5
Gm Reporting Limit:	1.5	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: Perfluoropentanoic acid (PFPeA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	PFNDCA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	PFNDCA	***SRC Report Limit:***	1.5
Gm Reporting Limit:	1.5	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: Perfluorodecanoic acid (PFDA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/15/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Well Details

Gm Cas No:		***SRC Chemical:***	NMEFOSAA
Gm Result:	0	***SRC Result:***	0
Gm Result Modifier:	ND	***SRC Result Modifie:***	ND
Gm Chemical Units:	NG/L	***Src Chemical Units:***	NG/L
Gm Chemical Vvl:	NMEFOSAA	***SRC Report Limit:***	1.6
Gm Reporting Limit:	1.6	***SRC Analytic Meth:***	E537
Gm Well Depth Ft:		***SRC Well Depth Ft:***	

Gm Chemical Name: N-Methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)
Gm Samp Collection Date: 01/05/2021
Gm Screen Top Depth Ft: 181.71
Gm Screen Bottom Depth Ft: 196.71
SRC Samp Collection Date: 01/05/2021
SRC Samp Collection Time: 1520
SRC Screen Top Depth Ft: 181.71
SRC Screen Bottom Depth Ft: 196.71
SRC Lab Note:
SRC Analysis Date: 01/12/2021
SRC Well Category: Remediation/Groundwater Monitoring Well

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
6	1 of2	E	0.50 / 2,665.88	1,519.60 / 9	NEW HIGH SCHOOL NO. 1 ESPLANADE AVENUE/SANDERSON AVENUE SAN JACINTO CA 92582	SCH

Estor/EPA ID: 33010073
Nat Priority List: NO
Census Tract: 6065043504
Permit Renewl Lead:
Project Manager:
Acres: 59.9 ACRES
Supervisor: SHAHIR HADDAD
County: RIVERSIDE
Latitude: 33.7759
Longitude: -117.00672
Site Code: 404451
Cleanup Status: INACTIVE - WITHDRAWN AS OF 2/20/2013
Cleanup Oversight Agencies: DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY
Assembly District: 60
Senate District: 31
School District: HEMET UNIFIED SCHOOL DISTRICT
Office: SOUTHERN CALIFORNIA SCHOOLS & BROWNFIELDS OUTREACH
Public Participatn Spclst:
Special Program:
Funding: SCHOOL DISTRICT
Site Type: SCHOOL
APN: NONE SPECIFIED
Past Use that Caused Contam: AGRICULTURAL - ROW CROPS
Potential Media Affected: NO MEDIA AFFECTED
Potential Contamin of Concern:

NO CONTAMINANTS FOUND

SITE HISTORY:

The site consists of approximately 59.90-acres, occupied by three residences, surrounded by a horse ranch and agricultural properties. The site has been historically utilized for agricultural activities, indicating potential pesticide application.

Status: INACTIVE - WITHDRAWN
Program Type: SCHOOL EVALUATION
CalEnviroScreen Score: 60-65%
Summary Link: https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=33010073

Completed Activities

Title: Environmental Oversight Agreement
Title Link: https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=33010073&enforcement_id=6004002
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Environmental Oversight Agreement
Date Completed: 5/14/2003
Comments:

Title: Site Inspections/visit
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Inspections/Visit (Non LUR)
Date Completed: 6/2/2003
Comments:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
6	2 of2	E	0.50 / 2,665.88	1,519.60 / 9	NEW HIGH SCHOOL NO. 1 ESPLANADE AVENUE/SANDERSON AVENUE SAN JACINTO CA 92582	ENVIROSTOR

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Estor/EPA ID:	33010073	**Assembly District:**	60
Site Code:	404451	**Senate District:**	31
Nat Priority List:	NO	**Permit Renewal Lead:**	
APN:	NONE SPECIFIED	**Public Partici Spclst:**	
Census Tract:	6065043504	**Project Manager:**	
Site Type:	SCHOOL	**County:**	RIVERSIDE
Address Description:	ESPLANADE AVENUE/SANDERSON AVENUE	**Latitude:**	33.7759
Office:	SOUTHERN CALIFORNIA SCHOOLS & BROWNFIELDS OUTREACH	**Longitude:**	-117.00672
Special Program:		**Acres:**	59.9 ACRES
Funding:	SCHOOL DISTRICT	**Supervisor:**	SHAHIR HADDAD

Cleanup Status: INACTIVE - WITHDRAWN AS OF 2/20/2013
Cleanup Oversight Agencies: DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY
School District: HEMET UNIFIED SCHOOL DISTRICT
Past Use that Caused Contam: AGRICULTURAL - ROW CROPS
Potential Media Affected: NO MEDIA AFFECTED
Potential Contamin of Concern:

NO CONTAMINANTS FOUND

Site History:

The site consists of approximately 59.90-acres, occupied by three residences, surrounded by a horse ranch and agricultural properties. The site has been historically utilized for agricultural activities, indicating potential pesticide application.

Status: INACTIVE - WITHDRAWN
Program Type: SCHOOL EVALUATION
CalEnviroScreen Score: 60-65%
Summary Link: https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=33010073

Completed Activities

Title: Environmental Oversight Agreement
Title Link: https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=33010073&enforcement_id=6004002
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Environmental Oversight Agreement
Date Completed: 5/14/2003
Comments:

Title: Site Inspections/visit
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Inspections/Visit (Non LUR)
Date Completed: 6/2/2003
Comments:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	1 of2	W	0.56 / 2,936.84	1,501.60 / -9	ESPLANADE ELEMENTARY SCHOOL NO. 11 ESPLANADE AVENUE/WARREN ROAD HEMET CA 92596	SCH

Estor/EPA ID:	60000288	**Acres:**	12 ACRES
Nat Priority List:	NO	**Supervisor:**	YOLANDA GARZA
Census Tract:	6065043517	**County:**	RIVERSIDE
Permit Renewl Lead:		**Latitude:**	33.7766
Project Manager:		**Longitude:**	-117.0294
Site Code:	404705		

Cleanup Status: NO FURTHER ACTION AS OF 11/21/2006
Cleanup Oversight Agencies: DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Assembly District: 60
Senate District: 31
School District: HEMET UNIFIED SCHOOL DISTRICT
Office: SOUTHERN CALIFORNIA SCHOOLS & BROWNFIELDS OUTREACH
Public Participatn Spclst:
Special Program:
Funding: SCHOOL DISTRICT
Site Type: SCHOOL
APN: NONE SPECIFIED
Past Use that Caused Contam: AGRICULTURAL - ROW CROPS
Potential Media Affected: NO MEDIA AFFECTED
Potential Contamin of Concern:

METALS
ORGANOCHLORINE PESTICIDES (8081 OCPS)
OTHER

SITE HISTORY:

The site consists of 12 acres of land used for dryland farming of grass crops. The site has been developed for agricultural purposes since at least 1938. No structures on site. The PEA consisted of sampling for OCPs and metals associated with past ag. use. No contaminants were found. PEA approved with no further action 10/23/06.

Status: NO FURTHER ACTION
Program Type: SCHOOL EVALUATION
CalEnviroScreen Score: 65-70%
Summary Link: https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=60000288

Completed Activities

Title: EOA
Title Link: https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60000288&enforcement_id=6009256
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Environmental Oversight Agreement
Date Completed: 5/15/2006
Comments:

Title: PEA Report
Title Link: https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60000288&doc_id=6012367
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Preliminary Endangerment Assessment Report
Date Completed: 10/24/2006
Comments: PEA approved with no further action.

Title: PEA Tech Memo
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Preliminary Endangerment Assessment Workplan
Date Completed: 6/26/2006
Comments: Approved

7	2 of2	W	0.56 / 2,936.84	1,501.60 / -9	ESPLANADE ELEMENTARY SCHOOL NO. 11 ESPLANADE AVENUE/WARREN ROAD HEMET CA 92596	ENVIROSTOR

Estor/EPA ID:	60000288	***Assembly District:***	60
Site Code:	404705	***Senate District:***	31
Nat Priority List:	NO	***Permit Renewal Lead:***	
APN:	NONE SPECIFIED	***Public Partici Spclst:***	
Census Tract:	6065043517	***Project Manager:***	
Site Type:	SCHOOL	***County:***	RIVERSIDE
Address Description:	ESPLANADE AVENUE/WARREN ROAD	***Latitude:***	33.7766
Office:	SOUTHERN CALIFORNIA SCHOOLS & BROWNFIELDS OUTREACH	***Longitude:***	-117.0294
Special Program:		***Acres:***	12 ACRES
Funding:	SCHOOL DISTRICT	***Supervisor:***	YOLANDA GARZA

Cleanup Status: NO FURTHER ACTION AS OF 11/21/2006
Cleanup Oversight Agencies: DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY
School District: HEMET UNIFIED SCHOOL DISTRICT
Past Use that Caused Contam: AGRICULTURAL - ROW CROPS
Potential Media Affected: NO MEDIA AFFECTED
Potential Contamin of Concern:

METALS
ORGANOCHLORINE PESTICIDES (8081 OCPS)
OTHER

Site History:

The site consists of 12 acres of land used for dryland farming of grass crops. The site has been developed for agricultural purposes since at least 1938. No structures on site. The PEA consisted of sampling for OCPs and metals associated with past ag. use. No contaminants were found. PEA approved with no further action 10/23/06.

Status: NO FURTHER ACTION
Program Type: SCHOOL EVALUATION
CalEnviroScreen Score: 65-70%
Summary Link: https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=60000288

Completed Activities

Title: EOA
Title Link: https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60000288&enforcement_id=6009256
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Environmental Oversight Agreement
Date Completed: 5/15/2006
Comments:

Title: PEA Tech Memo
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Preliminary Endangerment Assessment Workplan
Date Completed: 6/26/2006
Comments: Approved

Title: PEA Report
Title Link: https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60000288&doc_id=6012367
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Preliminary Endangerment Assessment Report
Date Completed: 10/24/2006
Comments: PEA approved with no further action.

Unplottable Summary

Total: 25 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
EMISSIONS	EASTERN MUNICIPAL WATER DISTRI	26800 CAWSTON AVE	HEMET CA	92343	861239819
EMISSIONS	EASTERN MUNICIPAL WATER DISTRI	26800 CAWSTON AV	HEMET CA	92343	861261367
EMISSIONS	EASTERN MUNICIPAL WATER DISTRI	26800 CAWSTON AV	HEMET CA	92543	861196028
EMISSIONS	EASTERN MUNICIPAL WATER DISTRICT	26800 CAWSTON AVE	HEMET CA	92543	861200903
FINDS/FRS	CANYON MOTORHOME & TRAVEL TRAILER REPAIR	26900 CAWSTON AVE UNIT A ***Registry ID:*** 110070443847	HEMET CA	92545-0000	874927727
FINDS/FRS	EASTERN MUNICIPAL WATER DISTRICT	26800 CAWSTON AVE ***Registry ID:*** 110002415958	HEMET CA	92543-0000	815280372
FINDS/FRS	EMWD CAWSTON LIFT STATION	26800 CAWSTON AVE ***Registry ID:*** 110055689269	HEMET CA	92545	815281015
HAZ GEN	CANYON MOTORHOME & TRAVEL TRAILER REPAIR	26900 CAWSTON AVE UNIT A	HEMET CA	925450000	899896289
HAZ GEN	1X RIVERSIDE COUNTY EDA AVIATION UNIT	26951 CAWSTON	HEMET CA	923430003	900339918
HAZ TSD	RIVERSIDE CNTY DEPT OF AG	26951 CAWSTON AVE SOUTHEAST	HEMET CA	925459700	899865177
HAZNET	AIRPORT AUTOMOTIVE	26740 CAWSTON ST.	HEMET CA	925450000	826175587

HAZNET	CANYON MOTORS RV	26900 CAWSTON AVE #C	HEMET CA	923430000	826367373
HAZNET	GEOMETRICAL STRUCTURES INC	26670 CAWSTON_AVE	HEMET CA	925450000	826510957
HAZNET	GEOMETRICAL STRUCTURES INC	26670 CAWSTON AVE	HEMET CA	923830000	826835639
HAZNET	SGT KOZ'S AIRPORT AUTOMOTIVE	26740 CAWSTON AVE	HEMET CA	925450000	826955016
HAZNET	CAWSTON LIFT STATION	26800 CAWSTON	HEMET CA	92545	827027669
HAZNET	BARNEY CONRADS AUTO REPAIR	26740 CAWSTON AVE	HEMET CA	923430000	826117100
HHSS	CAWSTON LIFT STATION	26800 CAWSTON	HEMET CA	92343	822945688
HIST MANIFEST		26900 CAWSTON AVE UNIT A	HEMET CA	925450000	827540589
HIST TANK	CAWSTON LIFT STATION	26800 CAWSTON	HEMET CA		865074780
HZH RIVERSIDE	EMWD Cawston Lift Station	26800 Cawston Ave	Hemet CA	92545	820088276
RCRA NON GEN	EASTERN MUNICIPAL WATER DISTRICT	26800 CAWSTON AVE. ***EPA Handler ID:*** CAC003194003	HEMET CA	92545	912500412
RCRA NON GEN	CANYON MOTORHOME & TRAVEL TRAILER REPAIR	26900 CAWSTON AVE UNIT A ***EPA Handler ID:*** CAL000061041	HEMET CA	92545-0000	873952961
RMP RIVERSIDE	EMWD Cawston Lift Station	26800 Cawston Ave	Hemet CA	92545	922493064
UST SWEEPS	EMWD CAWSTON LIFT STATION	26800 CAWSTON ***C C | Status:*** A33-000-30919 | ACTIVE ***Tank ID:*** 000001, 000002	HEMET CA		888177671

Unplottable Report

Site: ***EASTERN MUNICIPAL WATER DISTRI***
26800 CAWSTON AVE HEMET CA 92343

EMISSIONS

1996 Criteria Data

Facility ID:	70281	***CERR Code:***	
Facility SIC Code:	4941	***TOGT:***	16.4
CO:	33	***ROGT:***	1.49896
Air Basin:	SC	***COT:***	3
District:	SC	***NOXT:***	1.9
COID:	RIV	***SOXT:***	
DISN:	SOUTH COAST AQMD	***PMT:***	
CHAPIS:		***PM10T:***	

1996 Toxic Data

Facility ID:	70281	***COID:***	RIV
Facility SIC Code:	4941	***DISN:***	SOUTH COAST AQMD
CO:	33	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

Site: ***EASTERN MUNICIPAL WATER DISTRI***
26800 CAWSTON AV HEMET CA 92343

EMISSIONS

1993 Criteria Data

Facility ID:	70281	***CERR Code:***	
Facility SIC Code:	4941	***TOGT:***	2
CO:	33	***ROGT:***	.1828
Air Basin:	SC	***COT:***	.6
District:	SC	***NOXT:***	5
COID:	RIV	***SOXT:***	0
DISN:	SOUTH COAST AQMD	***PMT:***	
CHAPIS:		***PM10T:***	

1993 Toxic Data

Facility ID:	70281	***COID:***	RIV
Facility SIC Code:	4941	***DISN:***	SOUTH COAST AQMD
CO:	33	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

1995 Criteria Data

Facility ID:	70281	***CERR Code:***	
Facility SIC Code:	4941	***TOGT:***	2
CO:	33	***ROGT:***	.1828
Air Basin:	SC	***COT:***	.6
District:	SC	***NOXT:***	5
COID:	RIV	***SOXT:***	0
DISN:	SOUTH COAST AQMD	***PMT:***	
CHAPIS:		***PM10T:***	

1995 Toxic Data

Facility ID:	70281	***COID:***	RIV
Facility SIC Code:	4941	***DISN:***	SOUTH COAST AQMD
CO:	33	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

Site: ***EASTERN MUNICIPAL WATER DISTRI***
26800 CAWSTON AV HEMET CA 92543

EMISSIONS

1997 Criteria Data

Facility ID:	70281	***CERR Code:***	
Facility SIC Code:	4941	***TOGT:***	3.2462162
CO:	33	***ROGT:***	.2968743317
Air Basin:	SC	***COT:***	.74251
District:	SC	***NOXT:***	.446
COID:	RIV	***SOXT:***	.000855
DISN:	SOUTH COAST AQMD	***PMT:***	.00017
CHAPIS:		***PM10T:***	.00016592

1997 Toxic Data

Facility ID:	70281	***COID:***	RIV
Facility SIC Code:	4941	***DISN:***	SOUTH COAST AQMD
CO:	33	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

1998 Criteria Data

Facility ID:	70281	***CERR Code:***	
Facility SIC Code:	4941	***TOGT:***	4.0082588
CO:	33	***ROGT:***	.3665585558
Air Basin:	SC	***COT:***	.74251
District:	SC	***NOXT:***	.446
COID:	RIV	***SOXT:***	.000855
DISN:	SOUTH COAST AQMD	***PMT:***	.00017
CHAPIS:		***PM10T:***	.00016592

1998 Toxic Data

Facility ID:	70281	***COID:***	RIV
Facility SIC Code:	4941	***DISN:***	SOUTH COAST AQMD
CO:	33	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		

TS:
Health Risk Asmt:
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:

1999 Criteria Data

Facility ID:	70281	***CERR Code:***	
Facility SIC Code:	4941	***TOGT:***	3.2462162
CO:	33	***ROGT:***	.2968743317
Air Basin:	SC	***COT:***	.74251
District:	SC	***NOXT:***	.446
COID:	RIV	***SOXT:***	.000855
DISN:	SOUTH COAST AQMD	***PMT:***	.00017
CHAPIS:		***PM10T:***	.00016592

1999 Toxic Data

Facility ID:	70281	***COID:***	RIV
Facility SIC Code:	4941	***DISN:***	SOUTH COAST AQMD
CO:	33	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		

TS:
Health Risk Asmt:
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:

2000 Criteria Data

Facility ID:	70281	***CERR Code:***	
Facility SIC Code:	4941	***TOGT:***	3.2462162
CO:	33	***ROGT:***	.3
Air Basin:	SC	***COT:***	.74251
District:	SC	***NOXT:***	.446
COID:	RIV	***SOXT:***	.000855
DISN:	SOUTH COAST AQMD	***PMT:***	.00017
CHAPIS:		***PM10T:***	0

2000 Toxic Data

Facility ID:	70281	***COID:***	RIV
Facility SIC Code:	4941	***DISN:***	SOUTH COAST AQMD
CO:	33	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		

TS:
Health Risk Asmt:
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:

2001 Criteria Data

Facility ID:	70281	***CERR Code:***	
Facility SIC Code:	4941	***TOGT:***	3.24
CO:	33	***ROGT:***	.3
Air Basin:	SC	***COT:***	.74
District:	SC	***NOXT:***	.44
COID:	RIV	***SOXT:***	0
DISN:	SOUTH COAST AQMD	***PMT:***	0
CHAPIS:		***PM10T:***	0

2001 Toxic Data

Facility ID:	70281	***COID:***	RIV
Facility SIC Code:	4941	***DISN:***	SOUTH COAST AQMD

CO:	33	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

Site: ***EASTERN MUNICIPAL WATER DISTRICT***
26800 CAWSTON AVE HEMET CA 92543

EMISSIONS

2004 Criteria Data

Facility ID:	70281	***CERR Code:***	
Facility SIC Code:	4952	***TOGT:***	.03236
CO:	33	***ROGT:***	.003375072
Air Basin:	SC	***COT:***	.12853
District:	SC	***NOXT:***	.03883
COID:	RIV	***SOXT:***	.00069
DISN:	SOUTH COAST AQMD	***PMT:***	.0103
CHAPIS:		***PM10T:***	.0102292

2004 Toxic Data

Facility ID:	70281	***COID:***	RIV
Facility SIC Code:	4952	***DISN:***	SOUTH COAST AQMD
CO:	33	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2005 Criteria Data

Facility ID:	70281	***CERR Code:***	
Facility SIC Code:	4952	***TOGT:***	. 3829321663019693654266958424507658643326
CO:	33	***ROGT:***	.035
Air Basin:	SC	***COT:***	.139
District:	SC	***NOXT:***	.035
COID:	RIV	***SOXT:***	.001
DISN:	SOUTH COAST AQMD	***PMT:***	.011
CHAPIS:		***PM10T:***	.010934

2005 Toxic Data

Facility ID:	70281	***COID:***	RIV
Facility SIC Code:	4952	***DISN:***	SOUTH COAST AQMD
CO:	33	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2006 Criteria Data

Facility ID:	70281	***CERR Code:***	
Facility SIC Code:	4952	***TOGT:***	. 2844638949671772428884026258205689277899

CO:	33	***ROGT:***	.026
Air Basin:	SC	***COT:***	.105
District:	SC	***NOXT:***	.026
COID:	RIV	***SOXT:***	0
DISN:	SOUTH COAST AQMD	***PMT:***	.008
CHAPIS:		***PM10T:***	.007952

2006 Toxic Data

Facility ID:	70281	***COID:***	RIV
Facility SIC Code:	4952	***DISN:***	SOUTH COAST AQMD
CO:	33	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2007 Criteria Data

Facility ID:	70281	***CERR Code:***	
Facility SIC Code:	4952	***TOGT:***	.28446389496717724288840262582056892778 99
CO:	33	***ROGT:***	.026
Air Basin:	SC	***COT:***	.105
District:	SC	***NOXT:***	.026
COID:	RIV	***SOXT:***	0
DISN:	SOUTH COAST AQMD	***PMT:***	.008
CHAPIS:		***PM10T:***	.007952

2007 Toxic Data

Facility ID:	70281	***COID:***	RIV
Facility SIC Code:	4952	***DISN:***	SOUTH COAST AQMD
CO:	33	***CHAPIS:***	
Air Basin:	SC	***CERR Code:***	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

Site: ***CANYON MOTORHOME & TRAVEL TRAILER REPAIR***
26900 CAWSTON AVE UNIT A HEMET CA 92545-0000

FINDS/FRS

Registry ID:	110070443847
FIPS Code:	06065
HUC Code:	18070202
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-JAN-19
Update Date:	
Interest Types:	OTHER HAZARDOUS WASTE ACTIVITIES
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	RCRAINFO
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	45
Census Block Code:	060650433171002
EPA Region Code:	09

County Name:	RIVERSIDE
US/Mexico Border Ind:	
Latitude:	33.724179
Longitude:	-117.015295
Reference Point:	ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method:	GDT-ADDRESS MATCHING (GEOCODING)
Accuracy Value:	
Datum:	NAD83
Source:	
Facility Detail Rprt URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110070443847
Data Source:	Facility Registry Service - Single File
Program Acronyms:	

RCRAINFO:CAL000061041

Site: ***EASTERN MUNICIPAL WATER DISTRICT***
26800 CAWSTON AVE HEMET CA 92543-0000

FINDS/FRS

Registry ID:	110002415958
FIPS Code:	06065
HUC Code:	18070202
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	01-MAR-00
Update Date:	01-JUN-17
Interest Types:	AIR EMISSIONS CLASSIFICATION UNKNOWN, UNSPECIFIED UNIVERSE
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	221310, 221320
NAICS Code Descriptions:	SEWAGE TREATMENT FACILITIES., WATER SUPPLY AND IRRIGATION SYSTEMS.
Conveyor:	EIS
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	45
Census Block Code:	060650433173015
EPA Region Code:	09
County Name:	RIVERSIDE
US/Mexico Border Ind:	
Latitude:	33.70994
Longitude:	-117.01089
Reference Point:	POINT WHERE SUBSTANCE IS RELEASED
Coord Collection Method:	UNKNOWN
Accuracy Value:	100
Datum:	NAD83
Source:	
Facility Detail Rprt URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110002415958
Data Source:	Facility Registry Service - Single File
Program Acronyms:	

EIS:3402611, RCRAINFO:CAC003194003

Site: ***EMWD CAWSTON LIFT STATION***
26800 CAWSTON AVE HEMET CA 92545

FINDS/FRS

Registry ID:	110055689269
FIPS Code:	33
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	15-SEP-13
Update Date:	14-OCT-15
Interest Types:	STATE MASTER

SIC Codes: 0000, 4952
SIC Code Descriptions: SEWERAGE SYSTEMS
NAICS Codes:
NAICS Code Descriptions:
Conveyor:
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No:
Census Block Code:
EPA Region Code: 09
County Name: RIVERSIDE
US/Mexico Border Ind:
Latitude:
Longitude:
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110055689269
Data Source: Facility Registry Service - Single File
Program Acronyms:

CA-CERS:10317070, CA-ENVIROVIEW:114498

Site: ***CANYON MOTORHOME & TRAVEL TRAILER REPAIR***
26900 CAWSTON AVE UNIT A HEMET CA 925450000

HAZ GEN

Epa ID: CAL000061041
Address 2:
Facility County: 33
County: Riverside
Details DTSC HWTS: The Department of Toxic Substances Control (DTSC) makes available a Waste Code Matrix showing each Waste Code, its description, and annual amounts in its Hazardous Waste Tracking System: https://hwts.dtsc.ca.gov/search
Handler Profile URL: https://hwts.dtsc.ca.gov/facility/CAL000061041

Site: ***1X RIVERSIDE COUNTY EDA AVIATION UNIT***
26951 CAWSTON HEMET CA 923430003

HAZ GEN

Epa ID: CAC000618424
Address 2:
Facility County: 33
County:
Details DTSC HWTS: The Department of Toxic Substances Control (DTSC) makes available a Waste Code Matrix showing each Waste Code, its description, and annual amounts in its Hazardous Waste Tracking System: https://hwts.dtsc.ca.gov/search
Handler Profile URL: https://hwts.dtsc.ca.gov/facility/CAC000618424

Site: ***RIVERSIDE CNTY DEPT OF AG***
26951 CAWSTON AVE SOUTHEAST HEMET CA 925459700

HAZ TSD

EPA ID: CAP400478493
Facility Street2:
Facility County: 33
County:
Details DTSC HWTS: The Department of Toxic Substances Control (DTSC) makes available a Waste Code Matrix showing each Waste Code, its description, and annual amounts in its Hazardous Waste Tracking System: https://hwts.dtsc.ca.gov/search
Handler Profile URL: https://hwts.dtsc.ca.gov/facility/CAP400478493

Site: ***AIRPORT AUTOMOTIVE***
26740 CAWSTON ST. HEMET CA 925450000

HAZNET

SIC Code:
NAICS Code:
EPA ID: CAL000143217
Create Date: 11/28/1995
Fac Act Ind: No
Inact Date: 12/31/1899
Mailing City: HEMET
Mailing State: CA
Mailing Zip: 925450000
Region Code: 4
Owner Name: ELLEN RYNIKER
Owner Addr 1: 26740 CAWSTON ST.

County Code:	33	***Owner Addr 2:***	
County Name:	Riverside	***Owner City:***	HEMET
Mail Name:		***Owner State:***	CA
Mailing Addr 1:	26740 CAWSTON ST.	***Owner Zip:***	925450000
Mailing Addr 2:		***Owner Phone:***	9096529435
Owner Fax:			

Details DTSC HWTS: The Department of Toxic Substances Control (DTSC) makes available a Waste Code Matrix showing each Waste Code, its description, and annual amounts in its Hazardous Waste Tracking System: https://hwts.dtsc.ca.gov/search

DTSC Handler Profile url: https://hwts.dtsc.ca.gov/facility/CAL000143217

Site: ***CANYON MOTORS RV***
26900 CAWSTON AVE #C HEMET CA 923430000

HAZNET

SIC Code:	8999	***Mailing City:***	HEMET
NAICS Code:	71151	***Mailing State:***	CA
EPA ID:	CAL000012490	***Mailing Zip:***	925459248
Create Date:	11/14/1989	***Region Code:***	4
Fac Act Ind:	No	***Owner Name:***	BARRY MIKE
Inact Date:	6/30/2009	***Owner Addr 1:***	
County Code:	33	***Owner Addr 2:***	
County Name:	Riverside	***Owner City:***	
Mail Name:		***Owner State:***	99
Mailing Addr 1:	1050 S CAWSTON AVE #A	***Owner Zip:***	000000000
Mailing Addr 2:		***Owner Phone:***	0000000000
Owner Fax:	0000000000		

Details DTSC HWTS: The Department of Toxic Substances Control (DTSC) makes available a Waste Code Matrix showing each Waste Code, its description, and annual amounts in its Hazardous Waste Tracking System: https://hwts.dtsc.ca.gov/search

DTSC Handler Profile url: https://hwts.dtsc.ca.gov/facility/CAL000012490

Site: ***GEOMETRICAL STRUCTURES INC***
26670 CAWSTON_AVE HEMET CA 925450000

HAZNET

SIC Code:		***Mailing City:***	HEMET
NAICS Code:		***Mailing State:***	CA
EPA ID:	CAL000014377	***Mailing Zip:***	925459740
Create Date:	11/14/1989	***Region Code:***	4
Fac Act Ind:	No	***Owner Name:***	RIGO DIAZ
Inact Date:	6/30/2001	***Owner Addr 1:***	820 S CAWSTON AVE
County Code:	33	***Owner Addr 2:***	
County Name:	Riverside	***Owner City:***	HEMET
Mail Name:		***Owner State:***	CA
Mailing Addr 1:	820 S CAWSTON AVENUE	***Owner Zip:***	925439740
Mailing Addr 2:		***Owner Phone:***	9096527177
Owner Fax:			

Details DTSC HWTS: The Department of Toxic Substances Control (DTSC) makes available a Waste Code Matrix showing each Waste Code, its description, and annual amounts in its Hazardous Waste Tracking System: https://hwts.dtsc.ca.gov/search

DTSC Handler Profile url: https://hwts.dtsc.ca.gov/facility/CAL000014377

Site: ***GEOMETRICAL STRUCTURES INC***
26670 CAWSTON AVE HEMET CA 923830000

HAZNET

SIC Code:		***Mailing City:***	HEMET
NAICS Code:		***Mailing State:***	CA
EPA ID:	CAL000111489	***Mailing Zip:***	925459740
Create Date:	8/24/1993	***Region Code:***	4
Fac Act Ind:	No	***Owner Name:***	JEREME DIAZ & TOM DIAZ
Inact Date:	6/30/1999	***Owner Addr 1:***	26670 CAWSTON AVE
County Code:	33	***Owner Addr 2:***	
County Name:	Riverside	***Owner City:***	HEMET
Mail Name:		***Owner State:***	CA
Mailing Addr 1:	820 S CAWSTON AVE	***Owner Zip:***	925459740
Mailing Addr 2:		***Owner Phone:***	0000000000
Owner Fax:			

Details DTSC HWTS: The Department of Toxic Substances Control (DTSC) makes available a Waste Code Matrix showing each Waste Code, its description, and annual amounts in its Hazardous Waste Tracking System: https://hwts.dtsc.ca.gov/search

DTSC Handler Profile url: https://hwts.dtsc.ca.gov/facility/CAL000111489

Site: ***SGT KOZ'S AIRPORT AUTOMOTIVE***
26740 CAWSTON AVE HEMET CA 925450000

HAZNET

SIC Code:		***Mailing City:***	HEMET
NAICS Code:		***Mailing State:***	CA
EPA ID:	CAL000125987	***Mailing Zip:***	925459746
Create Date:	9/3/1996	***Region Code:***	4
Fac Act Ind:	No	***Owner Name:***	SGT KOZ INC
Inact Date:	6/30/1997	***Owner Addr 1:***	26740 CAWSTON AVE
County Code:	33	***Owner Addr 2:***	
County Name:	Riverside	***Owner City:***	HEMET
Mail Name:		***Owner State:***	CA
Mailing Addr 1:	26740 CAWSTON AVE	***Owner Zip:***	925459746
Mailing Addr 2:		***Owner Phone:***	9096529435
Owner Fax:			

Details DTSC HWTS: The Department of Toxic Substances Control (DTSC) makes available a Waste Code Matrix showing each Waste Code, its description, and annual amounts in its Hazardous Waste Tracking System: https://hwts.dtsc.ca.gov/search

DTSC Handler Profile url: https://hwts.dtsc.ca.gov/facility/CAL000125987

Site: ***CAWSTON LIFT STATION***
26800 CAWSTON HEMET CA 92545

HAZNET

SIC Code:	4952	***Mailing City:***	PERRIS
NAICS Code:	22132	***Mailing State:***	CA
EPA ID:	CAL000325523	***Mailing Zip:***	927288300
Create Date:	10/5/2007 3:32:28 PM	***Region Code:***	4
Fac Act Ind:	No	***Owner Name:***	EASTERN MUNICIPAL WATER DISTRICT
Inact Date:	6/30/2012	***Owner Addr 1:***	2270 TRUMBLE ROAD
County Code:	33	***Owner Addr 2:***	
County Name:	Riverside	***Owner City:***	PERRIS
Mail Name:	DOUG EDWARDS	***Owner State:***	CA
Mailing Addr 1:	PO BOX 8300	***Owner Zip:***	925728300
Mailing Addr 2:		***Owner Phone:***	9519283777
Owner Fax:	9519286152		

Details DTSC HWTS: The Department of Toxic Substances Control (DTSC) makes available a Waste Code Matrix showing each Waste Code, its description, and annual amounts in its Hazardous Waste Tracking System: https://hwts.dtsc.ca.gov/search

DTSC Handler Profile url: https://hwts.dtsc.ca.gov/facility/CAL000325523

Site: ***BARNEY CONRADS AUTO REPAIR***
26740 CAWSTON AVE HEMET CA 923430000

HAZNET

SIC Code:		***Mailing City:***	HEMET
NAICS Code:		***Mailing State:***	CA
EPA ID:	CAL000014392	***Mailing Zip:***	923430000
Create Date:	11/14/1989	***Region Code:***	4
Fac Act Ind:	No	***Owner Name:***	CONRAD BARNEY
Inact Date:	1/1/1995	***Owner Addr 1:***	--
County Code:	33	***Owner Addr 2:***	
County Name:	Riverside	***Owner City:***	--
Mail Name:		***Owner State:***	99
Mailing Addr 1:	26740 CAWSTON AVE	***Owner Zip:***	--
Mailing Addr 2:		***Owner Phone:***	0000000000
Owner Fax:			

Details DTSC HWTS: The Department of Toxic Substances Control (DTSC) makes available a Waste Code Matrix showing each Waste Code, its description, and annual amounts in its Hazardous Waste Tracking System: https://hwts.dtsc.ca.gov/search

DTSC Handler Profile url: https://hwts.dtsc.ca.gov/facility/CAL000014392

Site: ***CAWSTON LIFT STATION***
26800 CAWSTON HEMET CA 92343

HHSS

County:
Tank Details Microfiche: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0001f62a.pdf

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Site:
26900 CAWSTON AVE UNIT A HEMET CA 925450000

HIST MANIFEST

Gen EPA ID: CAL000061041
Create Date: 2/24/1992 0:00:00
Inact Date:
Facility Mail Street: 1050 SO CAWSTON AVE STE A
Facility Mail City: HEMET
Facility Mail State: CA
Facility Mail Zip: 925450000
Contact Phone(s): 9519290880
File Year(s): 1992
Contact Name(s): J MIKE BARRY

Tanner Information

State Waste Code: 461
Year: 1992
Tons: 0.64
Method Code: R01
State Waste Code Desc: Paint sludge
Method Description:
Generator County: Riverside
Tsd Epa ID: CAD008302903
Tsd County: Los Angeles

Site: ***CAWSTON LIFT STATION***
26800 CAWSTON HEMET CA

HIST TANK

Owner Name: EASTERN MUNICIPAL WATER DIST.
Owner Street: 24500 SAN JACINTO STREET
Owner City: HEMET
Owner State: CA
Owner Zip: 92343
No of Containers: 2
County: RIVERSIDE
Facility State: CA
Facility Zip: 92343

Site: ***EMWD Cawston Lift Station***
26800 Cawston Ave Hemet CA 92545

HZH RIVERSIDE

Site: ***EASTERN MUNICIPAL WATER DISTRICT***
26800 CAWSTON AVE. HEMET CA 92545

RCRA NON GEN

EPA Handler ID: CAC003194003
Gen Status Universe: No Report
Contact Name: DOUG EDWARDS
Contact Address: PO BOX 8300 , , PERRIS , CA, 92572 ,
Contact Phone No and Ext: 951-928-3777
Contact Email: EDWARDSD@EMWD.ORG
Contact Country:
County Name: RIVERSIDE
EPA Region: 09
Land Type:
Receive Date: 20220909
Location Latitude:
Location Longitude:

Violation/Evaluation Summary

Note: NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records

associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20220909
Handler Name:	EASTERN MUNICIPAL WATER DISTRICT
Source Type:	Implementer
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Other	***Street 1:***	PO BOX 8300
Name:	EASTERN MUNICIPAL WATER DISTRICT	***Street 2:***	
Date Became Current:		***City:***	PERRIS
Date Ended Current:		***State:***	CA
Phone:	951-928-3777	***Country:***	
Source Type:	Implementer	***Zip Code:***	92572

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Other	***Street 1:***	PO BOX 8300
Name:	DOUG EDWARDS	***Street 2:***	
Date Became Current:		***City:***	PERRIS
Date Ended Current:		***State:***	CA
Phone:	951-928-3777	***Country:***	
Source Type:	Implementer	***Zip Code:***	92572

Site: ***CANYON MOTORHOME & TRAVEL TRAILER REPAIR***
26900 CAWSTON AVE UNIT A HEMET CA 92545-0000

RCRA NON GEN

EPA Handler ID:	CAL000061041
Gen Status Universe:	No Report
Contact Name:	J MIKE BARRY
Contact Address:	1050 S. CAWSTON AVE. , , HEMET , CA, 92545-0000 ,
Contact Phone No and Ext:	951-929-0880
Contact Email:	CANYONRV@VERIZON.NET
Contact Country:	
County Name:	RIVERSIDE
EPA Region:	09
Land Type:	
Receive Date:	19920224
Location Latitude:	33.724179
Location Longitude:	-117.015295

Violation/Evaluation Summary

Note: NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records

associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	19920224
Handler Name:	CANYON MOTORHOME & TRAVEL TRAILER REPAIR
Source Type:	Implementer
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Other	***Street 1:***	1050 S CAWSTON AVE #A
Name:	MIKE BARRY	***Street 2:***	
Date Became Current:		***City:***	HEMET
Date Ended Current:		***State:***	CA
Phone:	951-929-0880	***Country:***	
Source Type:	Implementer	***Zip Code:***	92545-9248
Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Other	***Street 1:***	1050 S. CAWSTON AVE.
Name:	J MIKE BARRY	***Street 2:***	
Date Became Current:		***City:***	HEMET
Date Ended Current:		***State:***	CA
Phone:	951-929-0880	***Country:***	
Source Type:	Implementer	***Zip Code:***	92545-0000

Site: ***EMWD Cawston Lift Station***
26800 Cawston Ave Hemet CA 92545

RMP RIVERSIDE

Facility ID: FA0015901

Site: ***EMWD CAWSTON LIFT STATION***
26800 CAWSTON HEMET CA

UST SWEEPS

C C:	A33-000-30919	***D Filename:***	SITE16A
BOE:	44-017849	***Page No:***	38
Comp:	30919	***County:***	RIVERSIDE
Status:	ACTIVE	***State :***	CA
No of Tanks:	2	***Zip:***	92343
Jurisdict:	RIVERSIDE COUNTY	***Latitude:***	33.719857
Agency:	ENVIRONMENTAL HEALTH - U.S.T.	***Longitude:***	-117.015241
Phone:		***Georesult:***	S5HPN-SC-A

Tank Details

Tank ID:	000001	***S Contain:***	
O Tank ID:	000427	***Stg:***	P
SWRCB No:	33-000-030919-000001	***Storage :***	
Removed:		***Storag Type:***	PRODUCT
Installed:		***P Contain:***	
A Date:	10-29-92	***Content:***	CONTENTS UNK
Capac:	250	***ONA:***	
Tank Use:	UNKNOWN	***D File Name:***	TANK16A

Tank Details

Tank ID:	000002	***S Contain:***	
O Tank ID:	000427	***Stg:***	W
SWRCB No:	33-000-030919-000002	***Storage :***	
Removed:		***Storag Type:***	WASTE
Installed:		***P Contain:***	
A Date:	10-29-92	***Content:***	WASTE OIL
Capac:	250	***ONA:***	
Tank Use:	OIL	***D File Name:***	TANK16A

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

Sites on the United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Apr 22, 2024

National Priority List - Proposed: PROPOSED NPL

Sites proposed by the United States Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Apr 22, 2024

Deleted NPL: DELETED NPL

Sites deleted from the United States Environmental Protection Agency (EPA)'s National Priorities List. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Apr 22, 2024

SEMS List 8R Active Site Inventory: SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the EPA's Facility Registry Service map tool.

Government Publication Date: May 22, 2024

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites: SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file.

Government Publication Date: May 22, 2024

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Apr 8, 2024

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

Government Publication Date: Apr 8, 2024

RCRA Generator List: RCRA LQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Apr 8, 2024

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Apr 8, 2024

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Apr 8, 2024

RCRA Non-Generators: RCRA NON GEN

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Apr 8, 2024

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Apr 8, 2024

Federal Engineering Controls-ECs: FED ENG

List of Engineering controls (ECs) made availabe by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Jun 26, 2024

Federal Institutional Controls- ICs: FED INST

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Jun 26, 2024

Land Use Control Information System: LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Institutional Control Boundaries at NPL sites: NPL IC

Boundaries of Institutional Control areas at sites on the United States Environmental Protection Agency (EPA)'s National Priorities List, or Proposed or Deleted, made available by the EPA's Shared Enterprise Geodata and Services (SEGS). United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy.

Government Publication Date: Apr 22, 2024

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Apr 28, 2024

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Feb 7, 2024

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. This listing includes FRP facilities from an applicable EPA FOIA file and Homeland Infrastructure Foundation-Level Data (HIFLD) data file.

Government Publication Date: Jan 9, 2024

Delisted Facility Response Plans: DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Jan 9, 2024

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

This list of petroleum refineries is sourced from the U.S. Energy Information Administration (EIA), Refinery Capacity Report. The listing includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year. The geographic area the report covers is the 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, and other U.S. possessions. Per the EIA, the facility location data represents the approximate location based on research of publicly available information from sources such as Federal agencies, company websites, and satellite images on public websites.

Government Publication Date: Jun 6, 2024

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from the Federal Communications Commission Data hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

Government Publication Date: Jun 6, 2024

LIEN on Property: SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: May 22, 2024

Superfund Decision Documents: SUPERFUND ROD

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Mar 27, 2024

Formerly Utilized Sites Remedial Action Program: DOE FUSRAP

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

State

State Response Sites: RESPONSE

A list of identified confirmed release sites where the Department of Toxic Substances Control (DTSC) is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk. This database is state equivalent NPL.

Government Publication Date: Jun 25, 2024

EnviroStor Database: ENVIROSTOR

The EnviroStor Data Management System is made available by the Department of Toxic Substances Control (DTSC). Includes Corrective Action sites, Tiered Permit sites, Historical Sites and Evaluation/Investigation sites. This database is state equivalent CERCLIS.

Government Publication Date: Jun 25, 2024

Delisted State Response Sites: DELISTED ENVS

Sites removed from the list of State Response Sites made available by the EnviroStor Data Management System, Department of Toxic Substances Control (DTSC).

Government Publication Date: Jun 25, 2024

Solid Waste Information System (SWIS): SWF/LF

The Solid Waste Information System (SWIS) database made available by the Department of Resources Recycling and Recovery (CalRecycle) contains information on solid waste facilities, operations, and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites.

Government Publication Date: Aug 8, 2024

Solid Waste Disposal Sites with Waste Constituents Above Hazardous Waste Levels: SWRCB SWF

This is a list of solid waste disposal sites identified by California State Water Resources Control Board with waste constituents above hazardous waste levels outside the waste management unit.

Government Publication Date: Sep 20, 2006

Waste Management Unit Database: WMUD

The Waste Management Unit Database System tracks and inventories waste management units. CCR Title 27 contains criteria stating that Waste Management Units are classified according to their ability to contain wastes. Containment shall be determined by geology, hydrology, topography, climatology, and other factors relating to the ability of the Unit to protect water quality. Water Code Section 13273.1 requires that operators submit a water quality solid waste assessment test (SWAT) report to address leak status. The WMUDS was last updated by the State Water Resources control board in 2000.

Government Publication Date: Jan 1, 2000

EnviroStor Hazardous Waste Facilities: HWP

A list of hazardous waste facilities including permitted, post-closure and historical facilities found in the Department of Toxic Substances Control (DTSC) EnviroStor database.

Government Publication Date: Jun 25, 2024

Sites Listed in the Solid Waste Assessment Test (SWAT) Program Report: SWAT

In a 1993 Memorandum of Understanding, the State Water Resources Control Board (SWRCB) agreed to submit a comprehensive report on the Solid Waste Assessment Test (SWAT) Program to the California Integrated Waste Management Board (CIWMB). This report summarizes the work completed to date on the SWAT Program, and addresses both the impacts that leakage from solid waste disposal sites (SWDS) may have upon waters of the State and the actions taken to address such leakage.

Government Publication Date: Dec 31, 1995

Construction and Demolition Debris Recyclers: C&D DEBRIS RECY

This listing of Construction and Demolition Debris Recyclers is maintained by the California Intergrated Waste Management Board-common C&D materials include lumber, drywall, metals, masonry (brick, concrete, etc.), carpet, plastic, pipe, rocks, dirt, paper, cardboard, or green waste related to land development.

Government Publication Date: Jun 20, 2018

Recycling Centers: RECYCLING

This list of Certified Recycling Centers that are operating under the state of California's Beverage Container Recycling Program is maintained by the California Department of Resources Recycling and Recovery.

Government Publication Date: Jul 15, 2024

Listing of Certified Processors: PROCESSORS

This list of Certified Processors that are operating under the state of California's Beverage Container Recycling Program is maintained by the California Department of Resources Recycling and Recovery.

Government Publication Date: Jul 9, 2024

Listing of Certified Dropoff, Collection, and Community Service Programs: CONTAINER RECY

This list of Certified Dropoff, Collection, and Community Service Programs (non-buyback) operating under the state of California's Beverage Container Recycling Program is maintained by the California Department of Resources Recycling and Recovery.

Government Publication Date: Jul 15, 2024

Land Disposal Sites: LDS

Land Disposal Sites in GeoTracker, the State Water Resources Control Board (SWRCB)'s data management system. The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units. Waste management units include waste piles, surface impoundments, and landfills.

Government Publication Date: Jul 4, 2024

Leaking Underground Fuel Tank Reports: LUST

List of Leaking Underground Storage Tanks within the Cleanup Sites data in GeoTracker database. GeoTracker is the State Water Resources Control Board's (SWRCB) data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (Underground Storage Tanks, Department of Defense and Site Cleanup Program) as well as permitted facilities such as operating Underground Storage Tanks. The Leak Prevention Program that overlooks LUST sites is the SWRCB in California's Environmental Protection Agency.

Government Publication Date: Jul 4, 2024

Delisted Leaking Storage Tanks: DELISTED LST

List of Leaking Underground Storage Tanks (LUST) cleanup sites removed from GeoTracker, the State Water Resources Control Board (SWRCB)'s database system, as well as sites removed from the SWRCB's list of UST Case closures.

Government Publication Date: Jul 22, 2024

Permitted Underground Storage Tank (UST) in GeoTracker: UST

List of Permitted Underground Storage Tank (UST) sites made available by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency (EPA).

Government Publication Date: Jun 11, 2024

Proposed Closure of Underground Storage Tank Cases: UST CLOSURE

This listing includes Proposed Closure of Underground Storage Tank (UST) Cases which are being considered for closure by either the State Water Resources Control Board at a Future Board Meeting or the Executive Director that have been posted for a 60-day public comment period, and Closure of UST Cases with Closure Denials and Approved Orders. The lists are provided by the California Water Boards.

Government Publication Date: Jul 22, 2024

Historical Hazardous Substance Storage Information Database: HHSS

The Historical Hazardous Substance Storage database contains information collected in the 1980s from facilities that stored hazardous substances. The information was originally collected on paper forms, was later transferred to microfiche, and recently indexed as a searchable database. When using this database, please be aware that it is based upon self-reported information submitted by facilities which has not been independently verified. It is unlikely that every facility responded to the survey and the database should not be expected to be a complete inventory of all facilities that were operating at that time. This database is maintained by the California State Water Resources Control Board's (SWRCB) Geotracker.

Government Publication Date: Aug 27, 2015

Statewide Environmental Evaluation and Planning System: UST SWEEPS

The Statewide Environmental Evaluation and Planning System (SWEEPS) is a historical listing of active and inactive underground storage tanks made available by the California State Water Resources Control Board (SWRCB).

Government Publication Date: Oct 1, 1994

Aboveground Storage Tanks: AST

A statewide list from 2009 of aboveground storage tanks (ASTs) made available by the Cal FIRE Office of the State Fire Marshal (OSFM). This list is no longer maintained or updated by the Cal FIRE OSFM.

Government Publication Date: Aug 31, 2009

SWRCB Historical Aboveground Storage Tanks: AST SWRCB

A list of aboveground storage tanks made available by the California State Water Resources Control Board (SWRCB). Effective January 1, 2008, the Certified Unified Program Agencies (CUPAs) are vested with the responsibility and authority to implement the Aboveground Petroleum Storage Act (APSA).

Government Publication Date: Dec 1, 2007

Oil and Gas Facility Tanks: TANK OIL GAS

Locations of oil and gas tanks that fall under the jurisdiction of the Geologic Energy Management Division of the California Department of Conservation (CalGEM) (CCR 1760). CalGEM was formerly the Division of Oil, Gas, and Geothermal Resources (DOGGR).

Government Publication Date: Aug 7, 2024

Delisted Storage Tanks: DELISTED TNK

This database contains a list of storage tank sites that were removed by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency (EPA) and the Cal FIRE Office of State Fire Marshal (OSFM).

Government Publication Date: Aug 7, 2024

California Environmental Reporting System (CERS) Tanks: CERS TANK

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs. The CalEPA oversees the statewide implementation of the Unified Program which applies regulatory standards to protect Californians from hazardous waste and materials.

Government Publication Date: Jul 25, 2024

Delisted California Environmental Reporting System (CERS) Tanks: DELISTED CTNK

This database contains a list of Aboveground Petroleum Storage and Underground Storage Tank sites that were removed from in the California Environmental Protection Agency (CalEPA) Regulated Site Portal.

Government Publication Date: Jul 25, 2024

Historical Hazardous Substance Storage Container Information - Facility Summary: HIST TANK

The State Water Resources Control Board maintained the Hazardous Substance Storage Containers listing and inventory in th 1980s. This facility summary lists historic tank sites where the following container types were present: farm motor vehicle fuel tanks; waste tanks; sumps; pits, ponds, lagoons, and others; and all other product tanks. This set, published in May 1988, lists facility and owner information, as well as the number of containers. This data is historic and will not be updated.

Government Publication Date: May 27, 1988

Site Mitigation and Brownfields Reuse Program Facility Sites with Land Use Restrictions: LUR

The Department of Toxic Substances Control (DTSC) Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents land use restrictions that are active. Some sites have multiple land use restrictions.

Government Publication Date: Jun 25, 2024

CALSITES Database: CALSITES

This historical database was maintained by the Department of Toxic Substance Control (DTSC) for more than a decade. CALSITES contains information on Brownfield properties with confirmed or potential hazardous contamination. In 2006, DTSC introduced EnviroStor as the latest Brownfields site database.

Government Publication Date: May 1, 2004

Hazardous Waste Management Program Facility Sites with Deed / Land Use Restrictions: HLUR

The Department of Toxic Substances Control (DTSC) Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Government Publication Date: Feb 18, 2021

Deed Restrictions and Land Use Restrictions: DEED

List of Deed Restrictions, Land Use Restrictions and Covenants in GeoTracker made available by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency. A deed restriction (land use covenant) may be required to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to residual hazardous materials.

Government Publication Date: Jul 4, 2024

Voluntary Cleanup Program: VCP

List of sites in the Voluntary Cleanup Program made available by the Department of Toxic Substances and Control (DTSC). The Voluntary Cleanup Program was designed to respond to lower priority sites. Under the Voluntary Cleanup Program, DTSC enters site-specific agreements with project proponents for DTSC oversight of site assessment, investigation, and/or removal or remediation activities, and the project proponents agree to pay DTSC's reasonable costs for those services.

Government Publication Date: Jun 25, 2024

GeoTracker Cleanup Program Sites: CLEANUP SITES

A list of Cleanup Program sites in the state of California made available by The State Water Resources Control Board (SWRCB) of the California Environmental Protection Agency (EPA). SWRCB tracks leaking underground storage tank cleanups as well as other water board cleanups.

Government Publication Date: Jul 4, 2024

Delisted Cleanup Program Sites: DELISTED CLEANUP

A list of Cleanup Program sites which were once included - and have since been removed from - the list of Cleanup Program Sites in GeoTracker. GeoTracker is the State Water Resource Control Boards' data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Government Publication Date: Jul 4, 2024

Delisted County Records: DELISTED COUNTY

Records removed from county or CUPA databases. Records may be removed from the county lists made available by the respective county departments because they are inactive, or because they have been deemed to be below reportable thresholds.

Government Publication Date: Jul 24, 2024

Tribal

Leaking Underground Storage Tanks on Tribal/Indian Lands: INDIAN LUST

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 9, which includes California, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 7, 2024

Underground Storage Tanks on Tribal/Indian Lands: INDIAN UST

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 9, which includes California, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 7, 2024

Delisted Tribal Leaking Storage Tanks: DELISTED INDIAN LST

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 7, 2024

Delisted Tribal Underground Storage Tanks: DELISTED INDIAN UST

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 7, 2024

County

Riverside County - Local Oversight Program List: LOP RIVERSIDE

A list of Leaking Underground Storage Tank (LUST) facilities in Riverside County. This list is made available by Riverside County Department of Environmental Health. Environmental Cleanup Program provides oversight of assessments and cleanups at properties that have been, or may have been, contaminated with hazardous substances from LUSTs or releases associated with other commercial/industrial use.

Government Publication Date: Feb 6, 2024

Riverside County - Underground Storage Tanks List: UST RIVERSIDE

A list of registered Underground Storage Tank (UST) sites in Riverside County. This list is made available by Riverside County Department of Environmental Health. The Hazardous Materials Management Branch (HMMB) regulates and oversees the inspections of constructions, repairs, upgrades, system operation and removal of UST systems.

Government Publication Date: Feb 6, 2024

Additional Environmental Record Sources

Federal

PFAS Greenhouse Gas Emissions Data: PFAS GHG

The U.S. Environmental Protection Agency's Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO2e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. Includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures by DSSTox. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time.
Government Publication Date: Aug 5, 2024

On-Scene Coordinator Response Sites: OSC RESPONSE

This list of On-Scene Coordinator (OSC) Response Sites is provided by the U.S. Environmental Protection Agency (EPA). OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. OSCs coordinate all federal efforts with, and provide support and information to local, state, and regional response communities. An OSC is an agent of either EPA or the U.S. Coast Guard (USCG), depending on where the incident occurs. EPA's OSCs have primary responsibility for spills and releases to inland areas and waters. USCG OSCs have responsibility for coastal waters and the Great Lakes. In general, an OSC has the following key responsibilities during and after a response: Assessment, Monitoring, Response Assistance, and Evaluation.
Government Publication Date: Apr 4, 2024

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).
Government Publication Date: Apr 26, 2024

Toxics Release Inventory (TRI) Program: TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. This database includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.
Government Publication Date: Sep 20, 2023

PFOA/PFOS Contaminated Sites: PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.
Government Publication Date: Jun 20, 2024

Federal Agency Locations with Known or Suspected PFAS Detections: PFAS FED SITES

List of Federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS), made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data. EPA outlines that these data are gathered from several federal entities, such as the Federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration, Department of Transportation, and Department of Energy. The dates this data was extracted for the PFAS Analytic Tools range from 2022 to 2024. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.
Government Publication Date: Apr 1, 2024

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the PFAS Project Lab, part of the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map by the PFAS-REACH team, credited to PFAS Project Lab, Silent Spring Institute, and PFAS Exchange. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: https://pfasproject.com/pfas-sites-and-community-resources/

Government Publication Date: Jun 27, 2024

National Response Center PFAS Spills: ERNS PFAS

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, is the designated federal point of contact for reporting all oil, chemical, and other discharges into the environment, for the United States and its territories. This dataset contains NRC spill information from 1990 to the present that is restricted to records associated with PFAS and PFAS-containing materials. Incidents are filtered to include only records with a "Material Involved" or "Incident Description" related to Aqueous Film Forming Foam (AFFF). The keywords used to filter the data included "AFFF," "Fire Fighting Foam," "Aqueous Film Forming Foam," "Fire Suppressant Foam, "PFAS," "PERFL," "PFOA," "PFOS," and "Genx." Limitations: The data from the NRC website contains initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Aug 5, 2024

PFAS NPDES Discharge Monitoring: PFAS NPDES

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: Jul 29, 2024

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment. This listing includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFAS Water Quality Portal Sampling Data: PFAS WATER

This Per- and Poly-Fluoroalkyl Substances (PFAS) Environmental Media Sampling Data is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The Water Quality Portal (WQP), as a cooperative service sponsored by the United States Geological Survey, the EPA, and the National Water Quality Monitoring Council, is part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations, and individuals submit project details and sampling results to this public repository. Limitations: EPA did not carry out the sampling or testing of a majority of the data in the WQP PFAS dataset. EPA can only speak to the accuracy and completeness of the data from projects like the National Aquatic Resource Surveys for which EPA is the data owner/organization. Data may exist within the file on Quality Assurance Project Plans (QAPPs) and the approving agency of the QAPP, if a QAPP is entered.

Government Publication Date: Jul 22, 2024

PFAS TSCA Manufacture and Import Facilities: PFAS TSCA

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest : PFAS E-MANIFEST

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Jul 23, 2024

PFAS Industry Sectors: PFAS IND

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The EPA developed the dataset from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile, but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Jul 1, 2024

Hazardous Materials Information Reporting System: HMIRS

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Government Publication Date: May 29, 2024

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Nov 30, 2023

Toxic Substances Control Act: TSCA

The U.S. Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule. The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI). EPA CDR collections occur approximately every four years and reporting requirements change per collection.

Government Publication Date: May 12, 2022

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.
Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN
An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.
Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP
An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.
Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP
Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).
Government Publication Date: Jul 24, 2024

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER
The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.
Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS
The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.
Government Publication Date: Apr 13, 2024

Drycleaner Facilities: FED DRYCLEANERS
A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. The EPA tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.
Government Publication Date: May 5, 2024

Delisted Drycleaner Facilities: DELISTED FED DRY
List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).
Government Publication Date: May 5, 2024

Formerly Used Defense Sites: FUDS
Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset which applies to the Fiscal Year 2021 FUDS Inventory.

Government Publication Date: May 15, 2023

FUDS Munitions Response Sites: FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: May 15, 2023

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.

Government Publication Date: May 6, 2024

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: Feb 5, 2024

Surface Mining Control and Reclamation Act Sites: SMCRA

This inventory of land and water impacted by past mining (primarily legacy coal mining operations) is maintained by the U.S. Department of the Interior's Office of Surface Mining Reclamation and Enforcement (OSMRE), as it provides information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) Problems, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into e-AMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: May 20, 2024

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites: LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Tile II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Dec 12, 2023

Alternative Fueling Stations: ALT FUELS

This list of alternative fueling stations is sourced from the Alternative Fuels Data Center (AFDC). The U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Aug 29, 2024

Superfunds Consent Decrees: CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Cases filed since 2010 limited to the following: Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS); and applicable ENRD's Environmental Defense Section (EDS) CERCLA Cases with "Consent" in History Note. CMS may not reflect the latest developments in a case, nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Jun 26, 2024

Air Facility System: AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments: SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Feb 29, 2024

Polychlorinated Biphenyl (PCB) Transformers: PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: May 23, 2024

State

PFAS Sampling Locations: PFAS SAMPLING

This data is sourced from the State Water Board's GeoTracker Per- and Polyfluoroalkyl Substances (PFAS) Map tool which contains individual sampling points (i.e., soil boring, groundwater monitoring well, drinking water well for municipal drinking water systems, etc.) or a site location with PFAS analytical data. Includes analytical results that are finalized and submitted electronically by the Responsible Parties via GeoTracker's Electronic Submittal of Information Portal, and after it's accepted by a Regional Water Quality Control Board.

Government Publication Date: Jun 28, 2024

Dry Cleaning Facilities: DRYCLEANERS

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial, linen supply, commercial laundry, dry cleaning and pressing machines - Coin Operated Laundry and Dry Cleaning. This is provided by the Department of Toxic Substance Control.

Government Publication Date: Dec 20, 2021

Delisted Drycleaners: DELISTED DRYCLEANERS

Sites removed from the list of drycleaner related facilities that have EPA ID numbers, made available by the California Department of Toxic Substance Control.

Government Publication Date: Jan 31, 2022

Non-Toxic Dry Cleaning Incentive Program: DRYC GRANT

A list of grant recipients of the Non-Toxic Dry Cleaning Incentive Program made available by the California Air Resources Board (CARB). The program provides grants to eligible dry cleaning businesses to assist them in transitioning away from PERC machines to alternative non-toxic and non-smog forming technologies.

Government Publication Date: Jan 31, 2022

PFAS GeoTracker Cleanup Sites: PFAS GT CLEANUPS

A list of applicable cleanup sites from the State Water Resources Control Board's (SWRCB) GeoTracker data management system where one or more of the potential contaminants of concern are identified in the PFAS Master List of PFAS Substances made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Jul 4, 2024

PFOA/PFOS Groundwater: PFAS GW

A list of water wells from the Groundwater Ambient Monitoring and Assessment Program (GAMA) Groundwater Information System with the groundwater chemical perfluorooctanoic acid (PFOA) (NL = 0.014 UG/L) or perfluorooctanoic sulfonate (PFOS) (NL = 0.013 UG/L). The GAMA Groundwater Information System search is made available by California Water Boards.

Government Publication Date: Jun 23, 2024

PFAS Investigations: PFAS INVEST

This list of potential Per- and Polyfluoroalkyl Substance (PFAS) sites is compiled from the California State Water Resources Control Board's (SWRCB) PFAS Investigations Map tool. The SWRCB issued investigative orders, per California Water Code (CWC) Section 13267 and/or 13383, to these sites. Orders were also issued to the public water systems to sample wells in the vicinity of these locations. Military facilities have been identified by the Department of Defense (DOD) as part of their efforts to investigate PFAS per the Defense Environmental Restoration Program (DERP) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The data includes locations for Airports, Chrome Plating Facilities, Landfills, Publicly Owned Treatment Works, Refineries and Bulk Terminals, DOD Facilities, and Monitored Drinking Water Wells being investigated for potential PFAS.

Government Publication Date: Jan 23, 2024

Hazardous Waste and Substances Site List - Site Cleanup: HWSS CLEANUP

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. This list is published by California Department of Toxic Substance Control.

Government Publication Date: Mar 15, 2023

Toxic Pit Cleanup Act Sites: TOXIC PITS

The Toxic Pits Cleanup Act (TPCA) list identifies sites suspected of containing hazardous substances where cleanup has not yet been completed. This list was maintained by the State Water Resources Control Board (SWRCB), is not longer maintained, and updates are not planned.

Government Publication Date: Jul 1, 1995

List of Hazardous Waste Facilities Subject to Corrective Action: DTSC HWF

This is a list of hazardous waste facilities identified in Health and Safety Code (HSC) § 25187.5. These facilities are those where Department of Toxic Substances Control (DTSC) has taken or contracted for corrective action because a facility owner/operator has failed to comply with a date for taking corrective action in an order issued under HSC § 25187, or because DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment.

Government Publication Date: Jul 18, 2016

EnviroStor Inspection, Compliance, and Enforcement: INSP COMP ENF

A list of permitted facilities with inspections and enforcements tracked by the California Department of Toxic Substance Control's (DTSC) EnviroStor data management system.

Government Publication Date: Nov 23, 2023

School Property Evaluation Program Sites: SCH

A list of sites registered with The Department of Toxic Substances Control (DTSC) School Property Evaluation and Cleanup (SPEC) Division. SPEC is responsible for assessing, investigating and cleaning up proposed school sites. The Division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy the new school.

Government Publication Date: Jun 25, 2024

California Hazardous Material Incident Report System (CHMIRS): CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS). This list has been made available by the California Office of Emergency Services (OES).

Government Publication Date: Apr 23, 2024

Historical California Hazardous Material Incident Report System (CHMIRS): HIST CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS) prior to 1993. This list has been made available by the California Office of Emergency Services (OES).

Government Publication Date: Jan 1, 1993

Handlers from Hazardous Waste Manifest Data: HAZNET

A list of handlers not otherwise classified as Treatment, Storage, Disposal facilities (TSDF) or generators from the facilities and manifests data made available by the California Department of Toxic Substances Control (DTSC) in their Hazardous Waste Tracking System (HWTS).

Government Publication Date: Oct 24, 2016

Generators from Hazardous Waste Manifest Data: HAZ GEN

List of handlers listed as having generated waste from the facilities and manifests data made available by the California Department of Toxic Substances Control (DTSC) in their Hazardous Waste Tracking System (HWTS).

Government Publication Date: Dec 31, 2017

TSDF from Hazardous Waste Manifest Data: HAZ TSD

List of Treatment, Storage, and Disposal Facilities (TSDFs) from the facilities and manifests data made available by the California Department of Toxic Substances Control (DTSC) in their Hazardous Waste Tracking System (HWTS).

Government Publication Date: Dec 31, 2017

Historical Hazardous Waste Manifest Data: HIST MANIFEST

A list of historic hazardous waste manifests received by the Department of Toxic Substances Control (DTSC) from year the 1980 to 1992. The volume of manifests is typically 900,000 - 1,000,000 annually, representing approximately 450,000 - 500,000 shipments.

Government Publication Date: Dec 31, 1992

DTSC Registered Hazardous Waste Transporters: HW TRANSPORT

The California Department of Toxic Substances Control (DTSC) maintains this list of Registered Hazardous Waste Transporters.

Government Publication Date: Jul 15, 2024

Registered Waste Tire Haulers: WASTE TIRE

This list of registered waste tire haulers is maintained by the California Department of Resources Recycling and Recovery.

Government Publication Date: Jul 22, 2024

California Medical Waste Management Program Facility List: MEDICAL WASTE

This list of Medical Waste Management Program Facilities is maintained by the California Department of Public Health. The Medical Waste Management Program (MWMP) regulates the generation, handling, storage, treatment, and disposal of medical waste by providing oversight for the implementation of the Medical Waste Management Act (MWMA). The MWMP permits and inspects all medical waste off-site treatment facilities, medical waste transporters, and medical waste transfer stations. This list contains transporters, treatment, and transfer facilities.

Government Publication Date: Apr 15, 2024

Historical Cortese List: HIST CORTESE

List of sites which were once included on the Cortese list. The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements for providing information about the location of hazardous sites.

Government Publication Date: Nov 13, 2008

Cease and Desist Orders and Cleanup and Abatement Orders: CDO/CAO

The California Environment Protection Agency "Cortese List" of active Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO). This list contains many CDOs and CAOs that do NOT concern the discharge of wastes that are hazardous materials. Many of the listed orders concern, as examples, discharges of domestic sewage, food processing wastes, or sediment that do not contain hazardous materials, but the Water Boards' database does not distinguish between these types of orders.

Government Publication Date: Dec 6, 2021

California Environmental Reporting System (CERS) Hazardous Waste Sites: CERS HAZ

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the following regulatory programs: Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, RCRA LQ HW Generator. The CalEPA oversees the statewide implementation of the Unified Program which applies regulatory standards to protect Californians from hazardous waste and materials.

Government Publication Date: Jul 25, 2024

Delisted Environmental Reporting System (CERS) Hazardous Waste Sites: DELISTED HAZ

This database contains a list of sites that were removed from the California Environmental Protection Agency (CalEPA) in the following regulatory programs: Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, RCRA LQ HW Generator.

Government Publication Date: Nov 29, 2018

Sites in GeoTracker: GEOTRACKER

GeoTracker is the State Water Resource Control Boards' data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. This is a list of sites in GeoTracker that aren't otherwise categorized as LUST, Land Disposal Sites (LDS), Cleanup Sites, or sites having Waste Discharge Requirements (WDR). This listing includes program types such as Underground Injection Control (UIC), Confined Animal Facilities (CAF), Irrigated Lands Regulatory Program, plans, and non-case information.

Government Publication Date: Jul 4, 2024

Mines Listing: MINE

This list includes mine site locations extracted from the Mines Online database, maintained by the California Department of Conservation. Mines Online (MOL) is an interactive web map designed with GIS features that provide information such as the mine name, mine status, commodity sold, location, and other mine specific data. Please note: Mine location information is provided to assist experts in determining the location of mine operators in accordance with California Civil Code section 1103.4 and reflects information reported by mine operators in annual reports provided under Public Resources Code section 2207. While the Division of Mine Reclamation (DMR) attempts to populate MOL with accurate location information, the DMR cannot guarantee the accuracy of operator reported location information.

Government Publication Date: Jun 16, 2023

Recorded Environmental Cleanup Liens: LIEN

The California Department of Toxic Substance Control (DTSC) maintains this list of liens placed upon real properties. A lien is utilized by the DTSC to obtain reimbursement from responsible parties for costs associated with the remediation of contaminated properties.

Government Publication Date: Dec 18, 2023

Waste Discharge Requirements: WASTE DISCHG

List of sites in California State Water Resources Control Board (SWRCB) Waste Discharge Requirements (WDRs) Program in California, made available by the SWRCB via GeoTracker. The WDR program regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Government Publication Date: Jul 4, 2024

Toxic Pollutant Emissions Facilities: EMISSIONS

A list of criteria and toxic pollutant emissions data for facilities in California made available by the California Environmental Protection Agency - Air Resources Board (ARB). Risk data may be based on previous inventory submittals. The toxics data are submitted to the ARB by the local air districts as requirement of the Air Toxics "Hot Spots" Program.

Government Publication Date: Dec 31, 2021

Clandestine Drug Lab Sites: CDL

The Department of Toxic Substances Control (DTSC) maintains a listing of drug lab sites. DTSC is responsible for removal and disposal of hazardous substances discovered by law enforcement officials while investigating illegal/clandestine drug laboratories.

Government Publication Date: Jan 19, 2021

Tribal

No Tribal additional environmental record sources available for this State.

County

Riverside County - Hazardous Waste Generator Sites List: HWG RIVERSIDE

A list of Hazardous Waste Generator Sites in the County of Riverside. This list is made available by Riverside County Department of Environmental Health which has been designated as the CUPA for the County.

Government Publication Date: Feb 6, 2024

Riverside County - Disclosure Facility List: HZH RIVERSIDE

A list of facilities disclosed to Riverside County Department of Environmental Health (DEH). This list is made available by Riverside County DEH which has been designated as the CUPA for the County. A business is required to establish and submit a Business Plan if the facility handles hazardous material equal to or greater than 55 gallons, 500 pounds or 200 cubic feet at any time during the year.

Government Publication Date: Feb 6, 2024

Riverside County - Medical Waste Facilities: MED WST RIVERSIDE

This list of active and inactive medical waste facilities is maintained by the County of Riverside Department of Environmental Health.

Government Publication Date: Jan 12, 2023

Riverside County - California Accidental Release Prevention Program Sites: RMP RIVERSIDE

This list of Riverside County California Accidental Release Prevention Program sites is maintained by the County of Riverside Department of Environmental Health. AB 3777 was enacted in 1986 to minimize potential emergencies involving acutely hazardous materials by requiring facilities which handle these materials to submit Risk Management Prevention Plans. The Riverside County Department of Environmental Health Hazardous Materials Branch began implementation of this Program County-wide in January 1991. All cities within Riverside County are included in this list.

Government Publication Date: Feb 6, 2024

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

PSR
PHYSICAL SETTING REPORT

Property Information

Order Number:		24091300947p
Date Completed:		September 15, 2024
Project Number:		24-461627.1
Project Property:		Chacon Farms 710 Cawston Avenue North SAN JACINTO CA 92582
Coordinates:		
	Latitude:	33.7796518
	Longitude:	-117.0170871
	UTM Northing:	3737367.45316 Meters
	UTM Easting:	498368.966255 Meters
	UTM Zone:	UTM Zone 11S
	Elevation:	1,510.60 ft
	Slope Direction:	E

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Geologic Information....15
Soil Information....17
Wells and Additional Sources....29
Summary....34
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Radon Information....68
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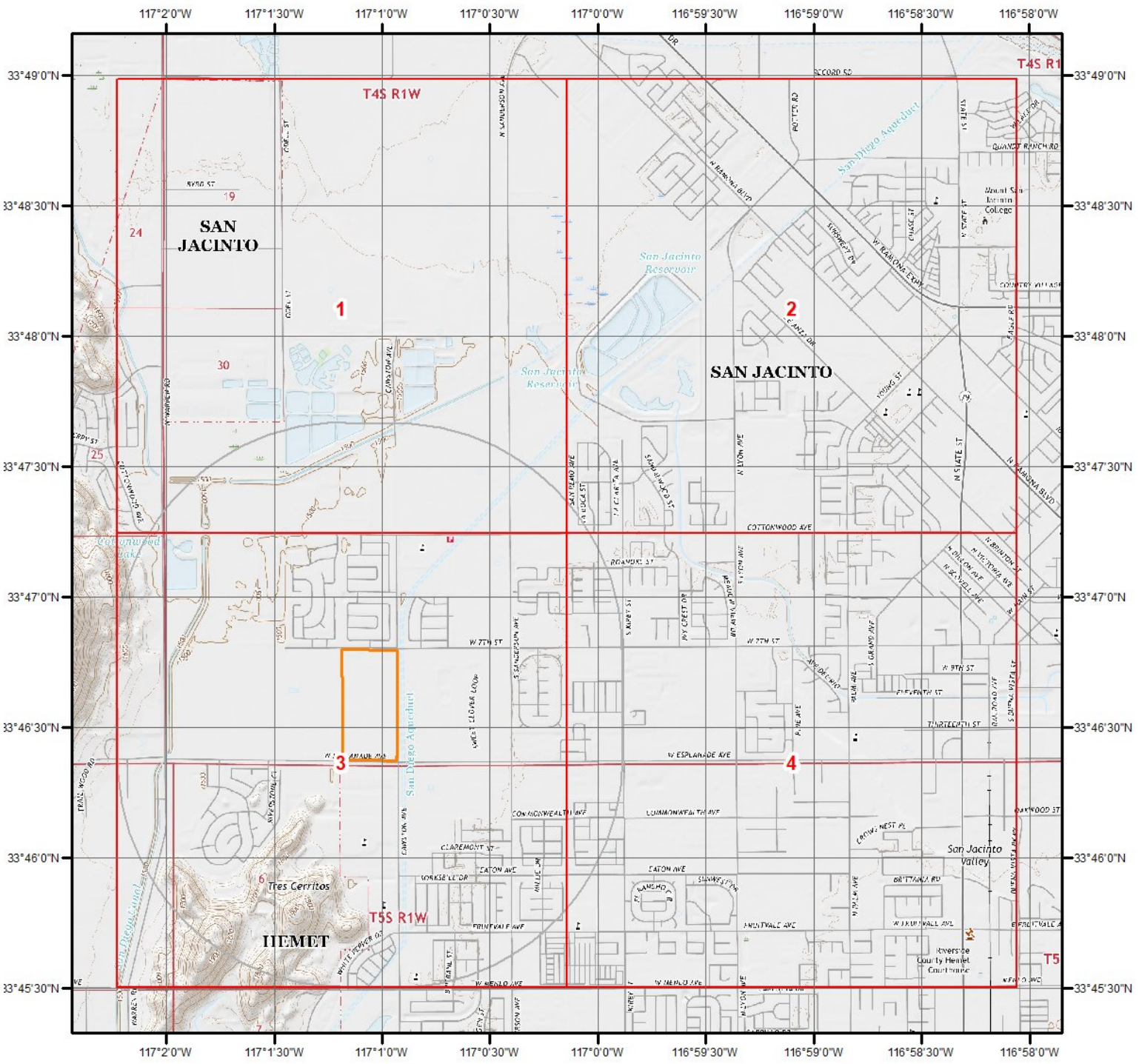
The ERIS ***Physical Setting Report - PSR*** provides comprehensive information about the physical setting around a site and includes a complete overview of topography and surface topology, in addition to hydrologic, geologic and soil characteristics. The location and detailed attributes of oil and gas wells, water wells, public water systems and radon are also included for review.

The compilation of both physical characteristics of a site and additional attribute data is useful in assessing the impact of migration of contaminants and subsequent impact on soils and groundwater.

Disclaimer

This Report does not provide a full environmental evaluation for the site or adjacent properties. Please see the terms and disclaimer at the end of the Report for greater detail.

Topographic Information



Current USGS Topo (2021)

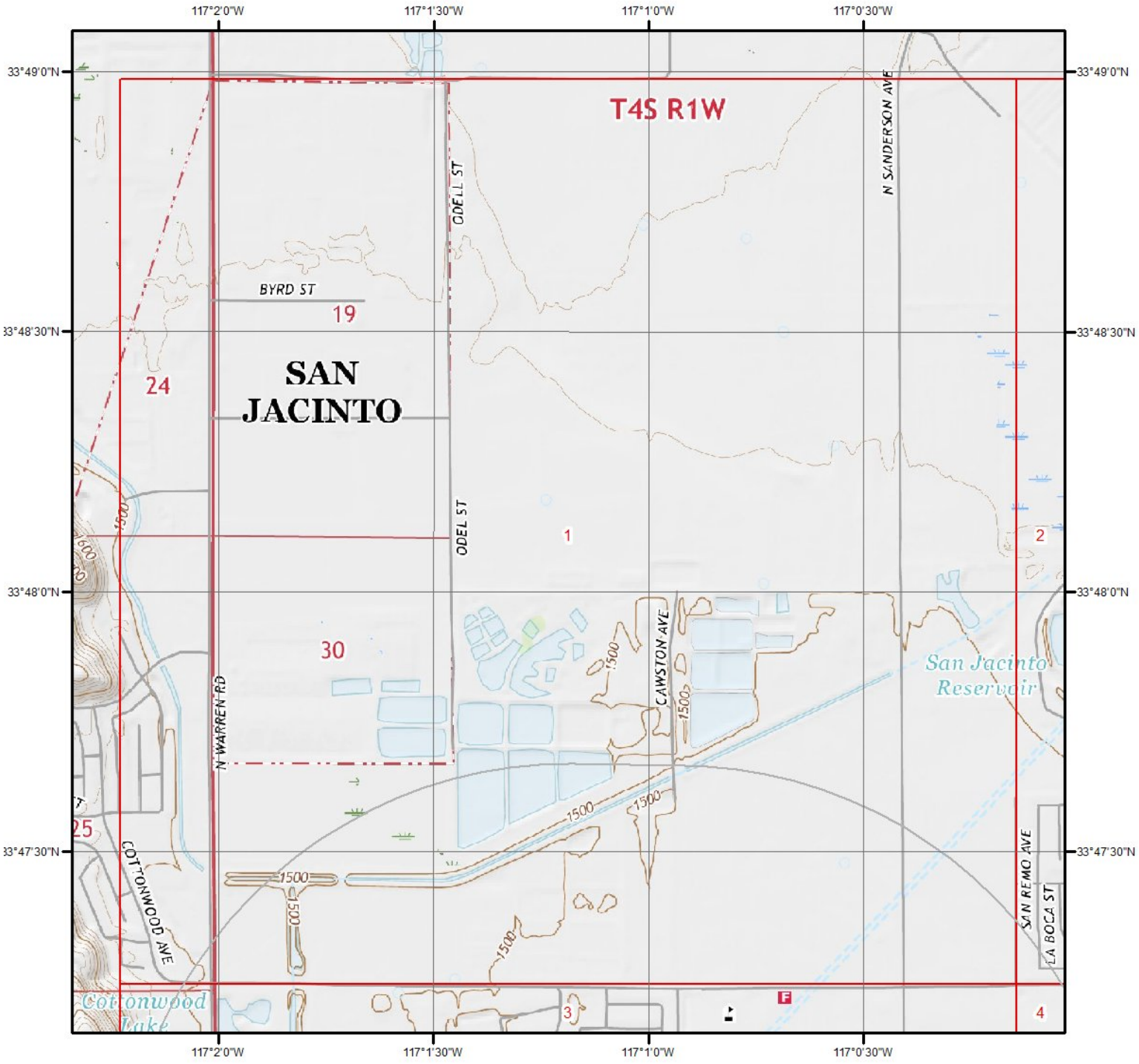
0 0.2 0.4 0.8 1.2 1.6 Miles

N

Quadrangle(s): Lakeview,CA; San Jacinto,CA; Winchester,CA; Hemet,CA

Source: USGS 7.5 Minute Topographic Map

Topographic Information



Current USGS Topo - Page 1

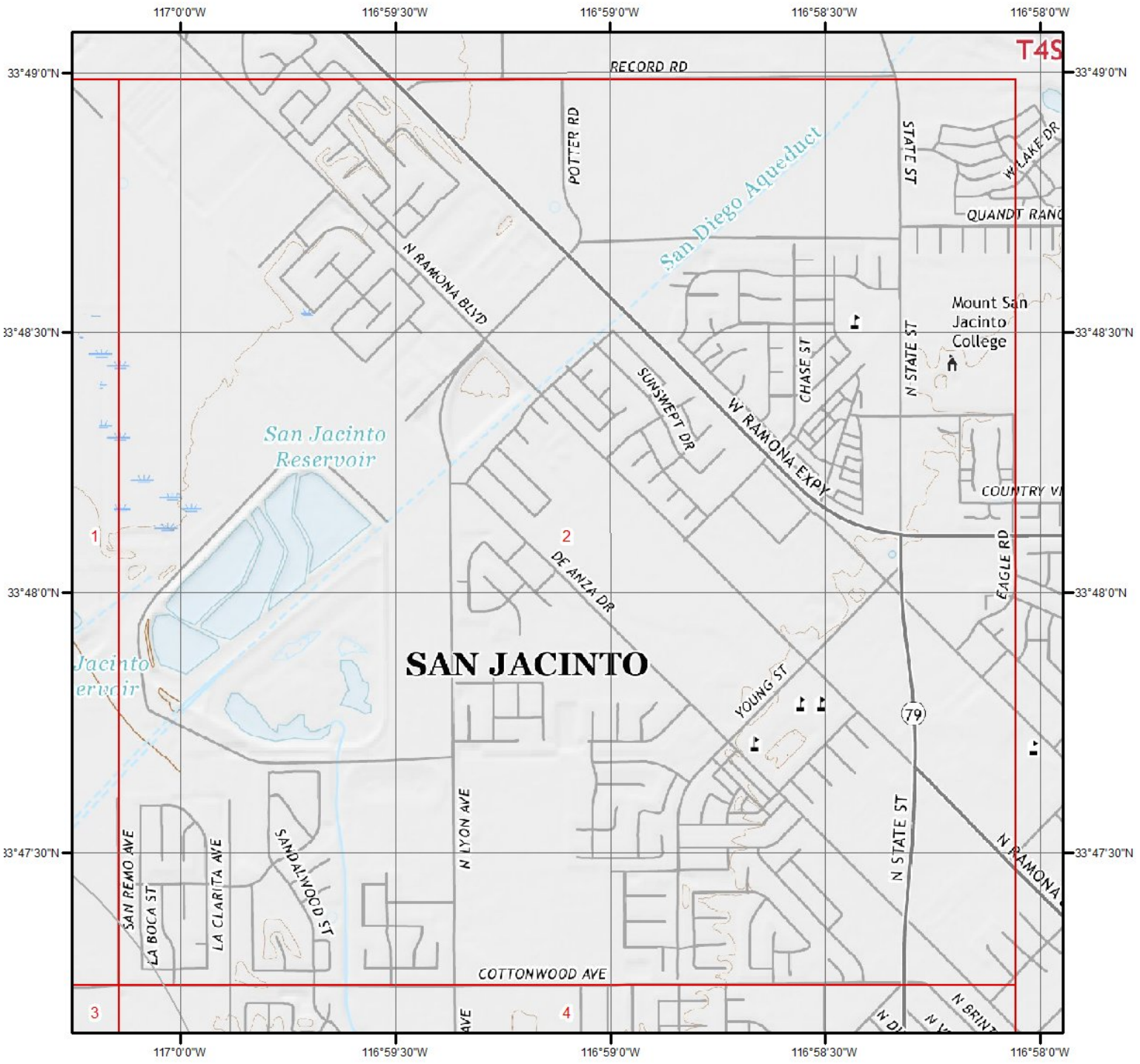
0 0.2 0.4 0.8 Miles

N

Quadrangle(s): Lakeview,CA

Source: USGS 7.5 Minute Topographic Map

Topographic Information



Current USGS Topo - Page 2

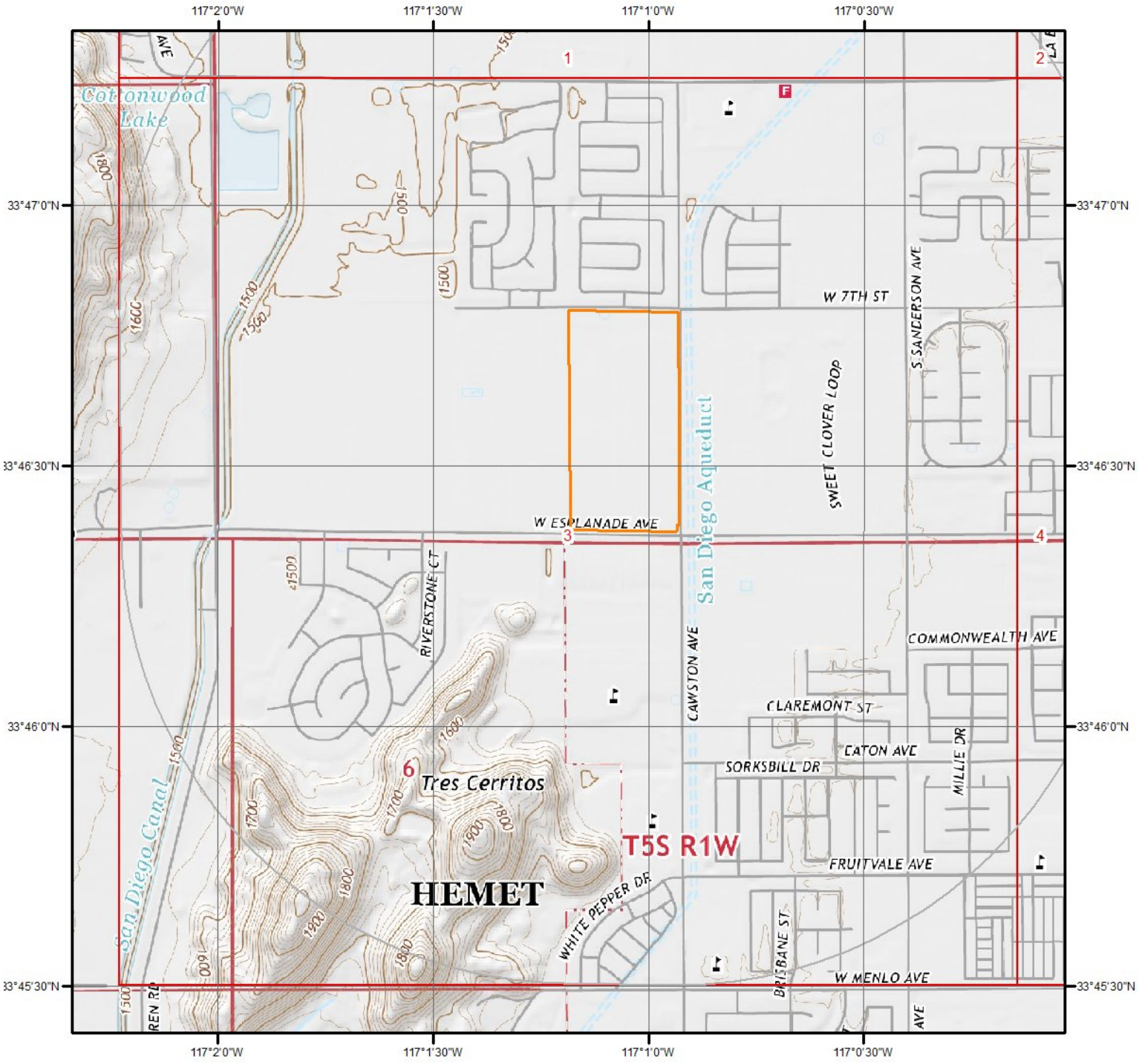
0 0.2 0.4 0.8 Miles

N

Quadrangle(s): Lakeview,CA; San Jacinto,CA

Source: USGS 7.5 Minute Topographic Map

Topographic Information



Current USGS Topo - Page 3

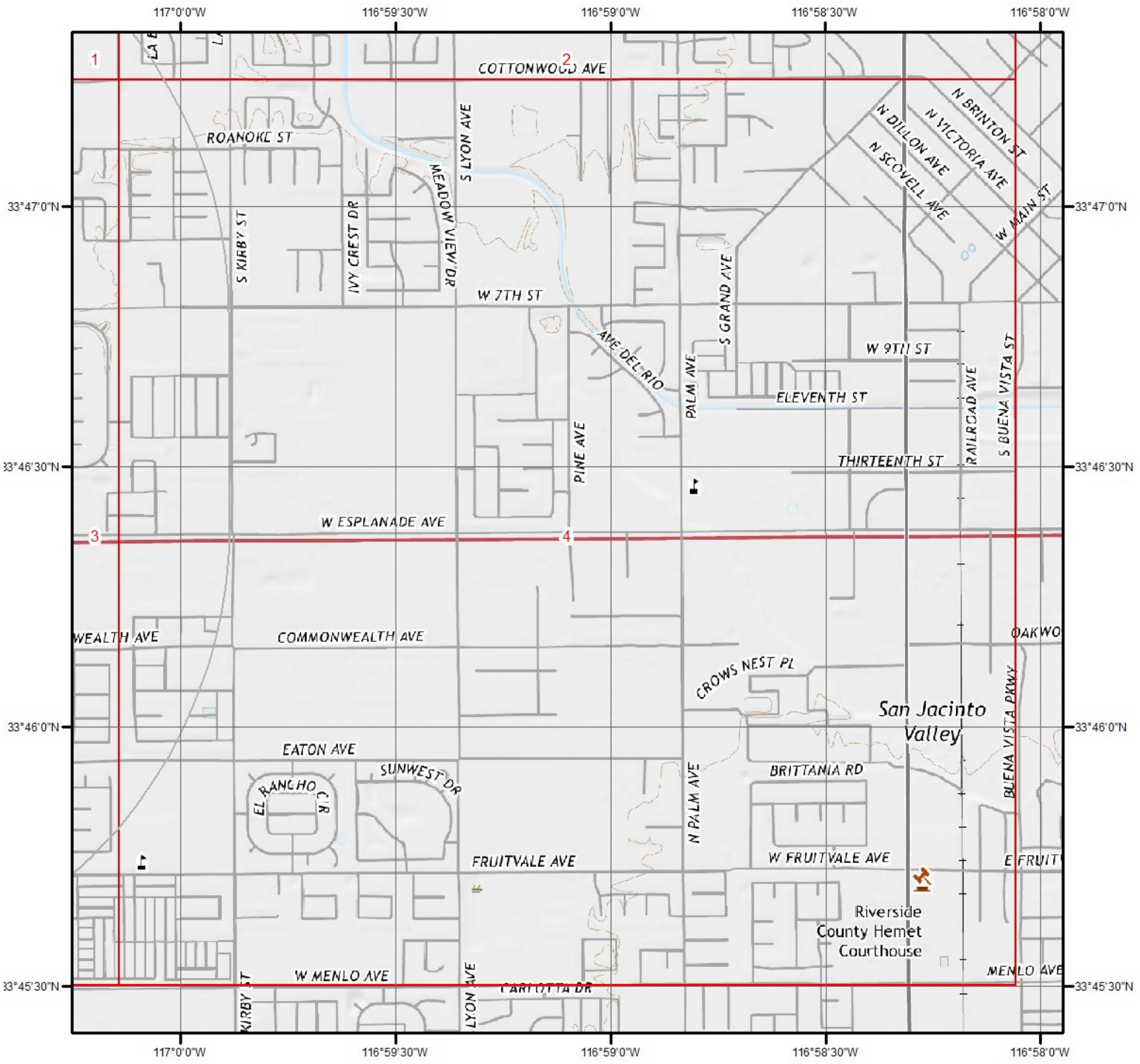
0 0.2 0.4 0.8 Miles

N

Quadrangle(s): Lakeview,CA

Source: USGS 7.5 Minute Topographic Map

Topographic Information



Current USGS Topo - Page 4

0 0.2 0.4 0.8 Miles

N

Quadrangle(s): Lakeview,CA; San Jacinto,CA

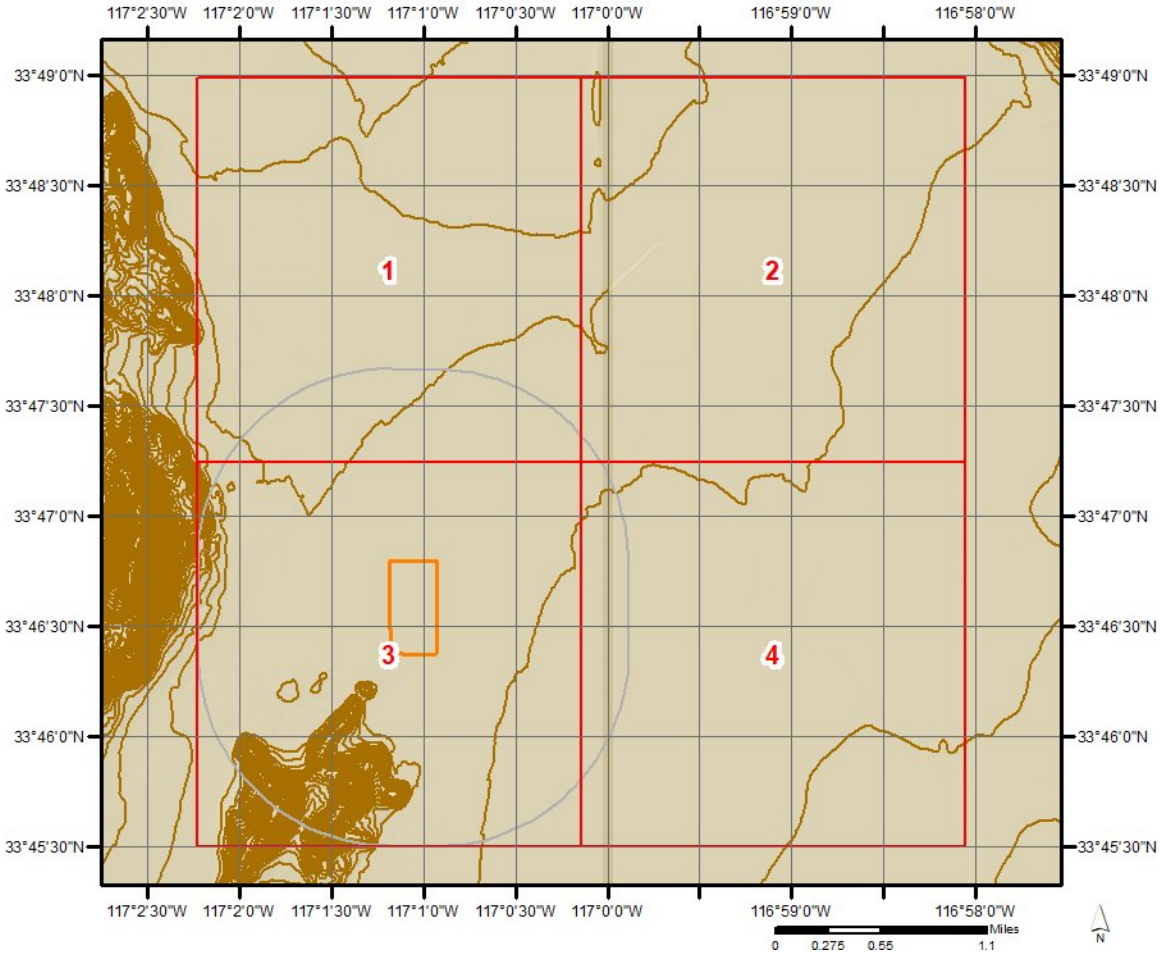
Source: USGS 7.5 Minute Topographic Map

Topographic Information

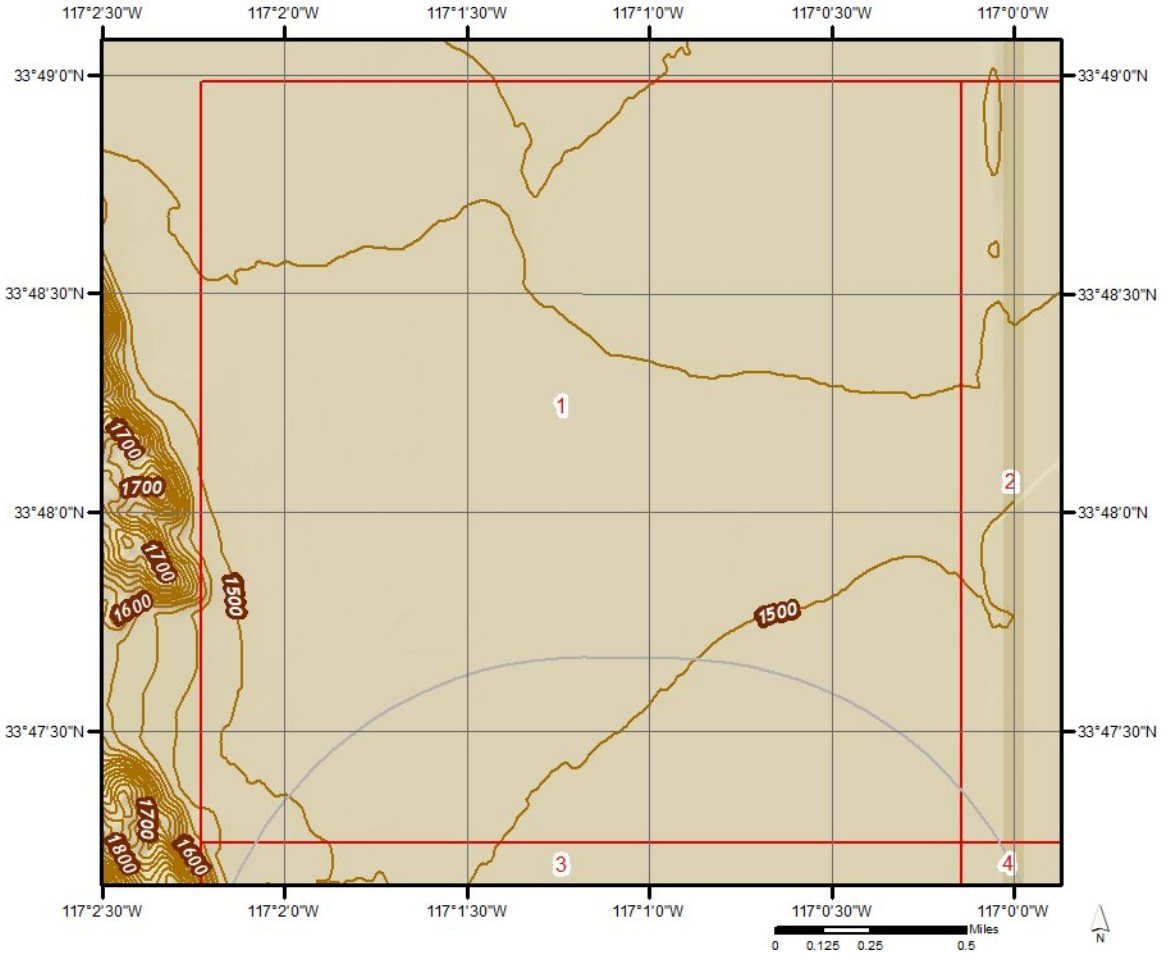
The previous topographic map(s) are created by seamlessly merging and cutting current USGS topographic data. Below are shaded relief map(s), derived from USGS elevation data to show surrounding topography in further detail.

Topographic information at project property:

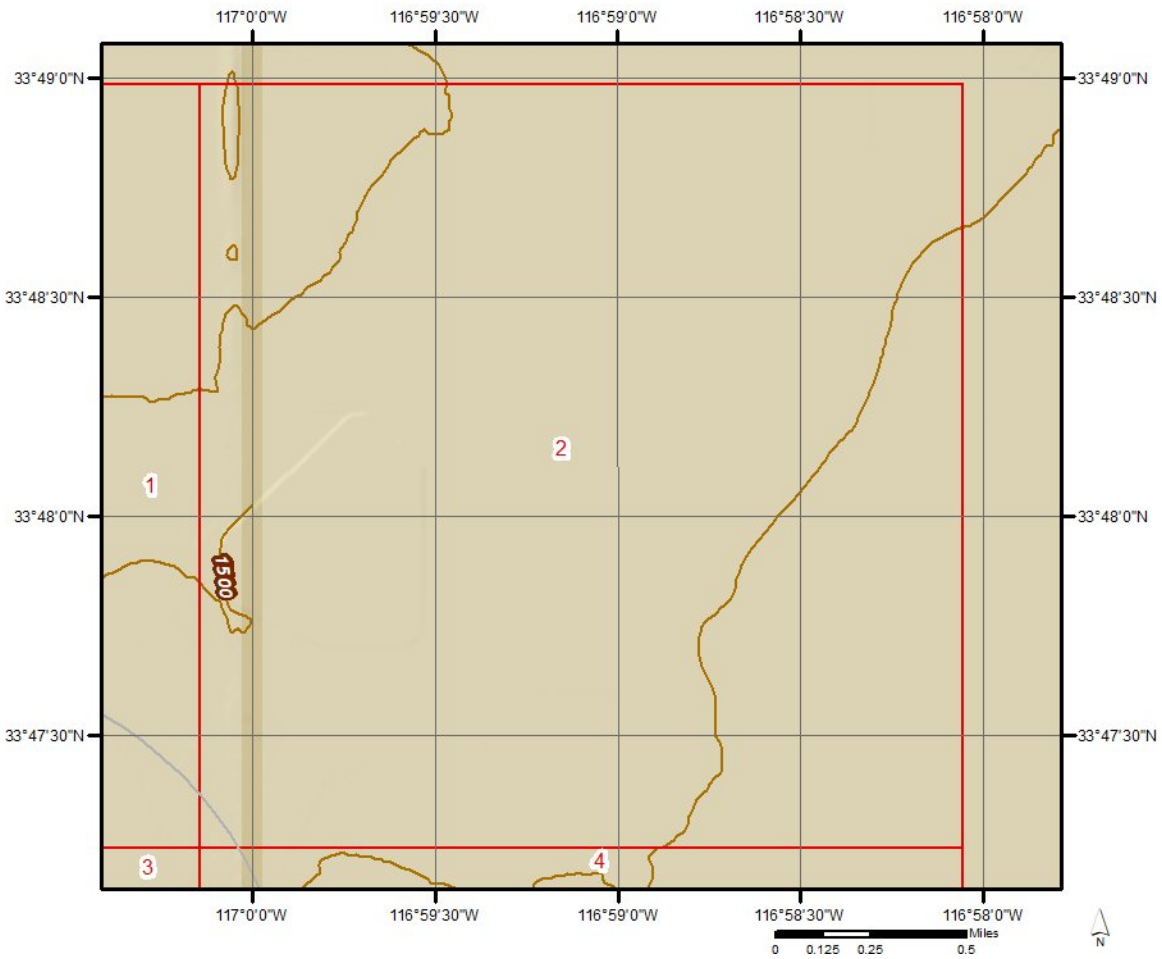
Elevation:	1,510.60 ft
Slope Direction:	E



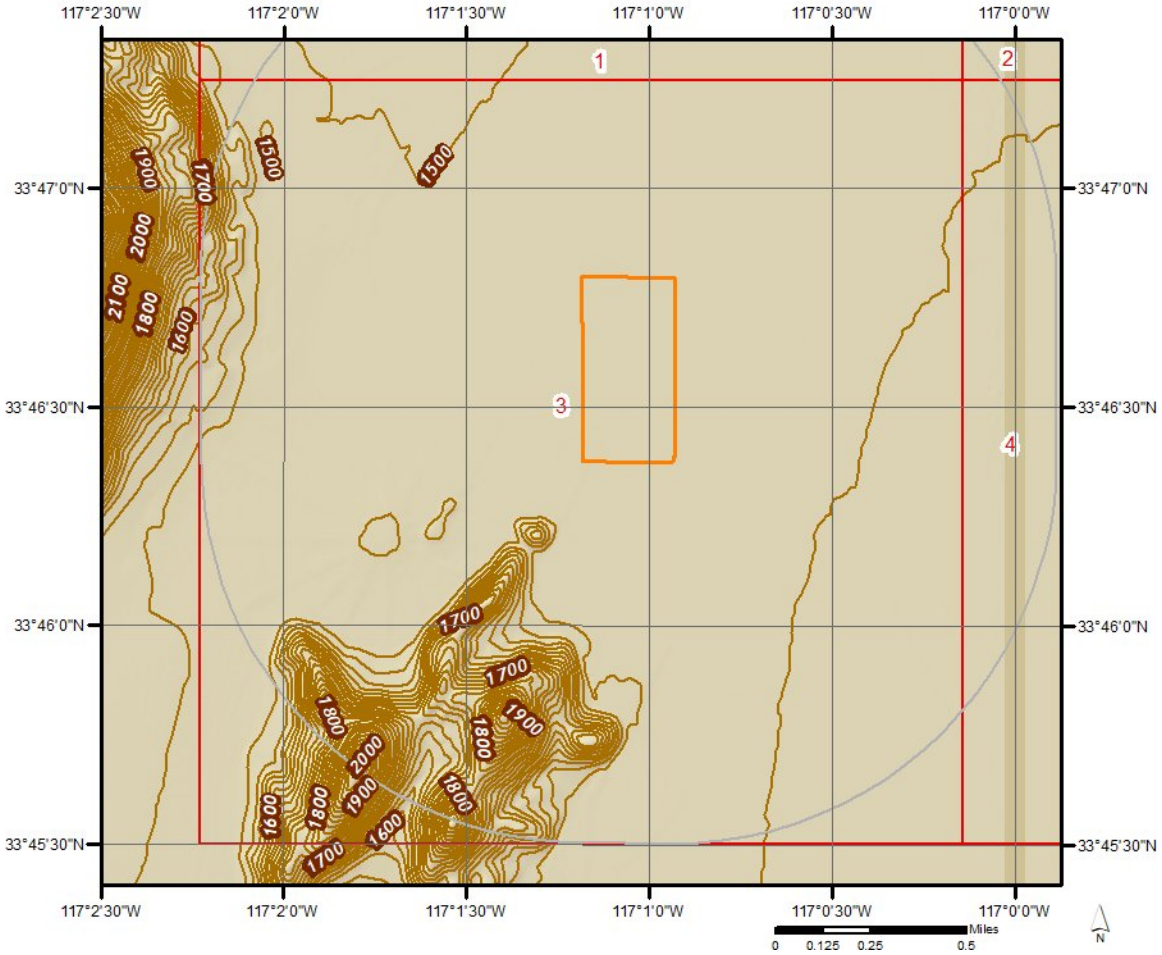
Topographic Information



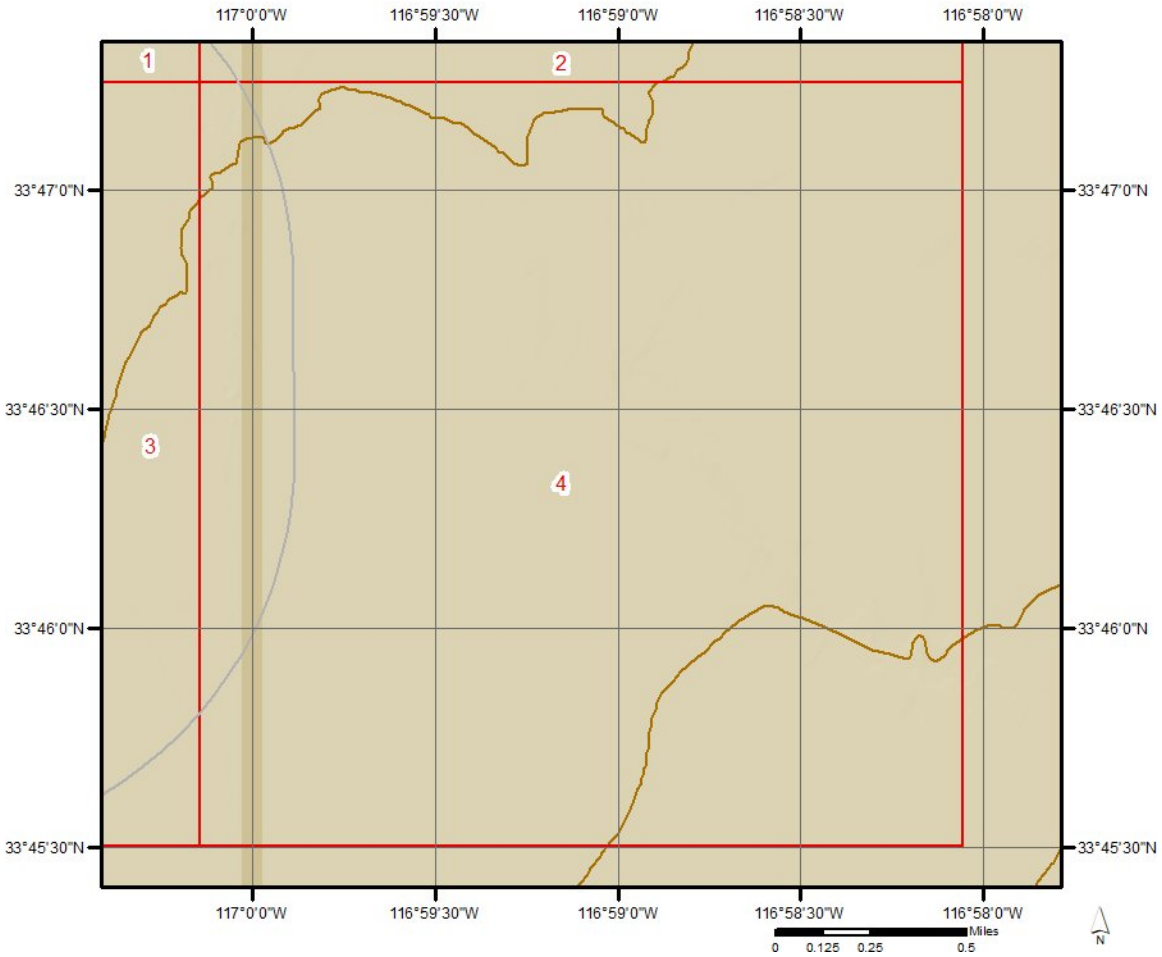
Topographic Information



Topographic Information



Topographic Information



Hydrologic Information



Wetland

0 0.1 0.2 0.4 Miles

N

This map shows wetland existence using data from US Fish & Wildlife.
Data coverage is shown to the right. Gray indicates no data available in the area.

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

ERIS

Hydrologic Information



Flood Hazard Zones

This map shows FEMA flood hazard zones based on FEMA's National Flood Hazard Layer. FIRM Panels are overlayed. An absent FIRM panel represents no data available.

Miles
0 0.125 0.25

N

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area with Risk Due to Levee
- Open Water

Quadrangle(s): Lakeview,CA; San Jacinto,CA; Winchester,CA; Hemet,CA

ERIS

Hydrologic Information

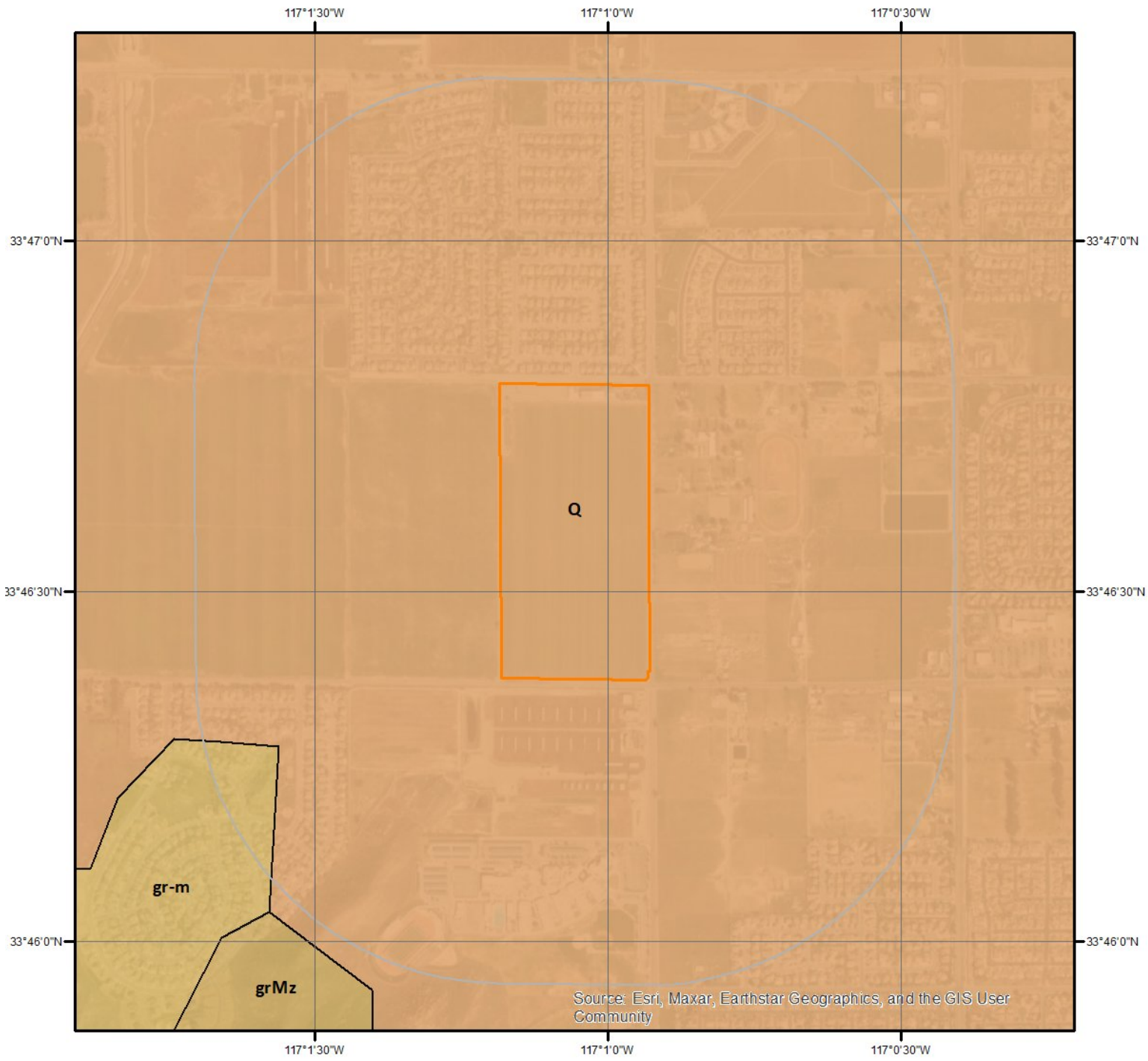
The Wetland Type map shows wetland existence overlaid on an aerial imagery. The Flood Hazard Zones map shows FEMA flood hazard zones overlaid on an aerial imagery. Relevant FIRM panels and detailed zone information is provided below.
For detailed Zone descriptions please click the link: https://floodadvocate.com/fema-zone-definitions

Available FIRM Panels in area:	06065C1470G(effective:2008-08-28)

Flood Zone X-12

Zone:	X
Zone subtype:	AREA OF MINIMAL FLOOD HAZARD

Geologic Information



Geologic Units

This maps shows geologic units in the area. Please refer to the report for detailed descriptions.

N

0 0.2 0.4 Miles

ERIS

Geologic Information

The previous page shows USGS geology information. Detailed information about each unit is provided below.

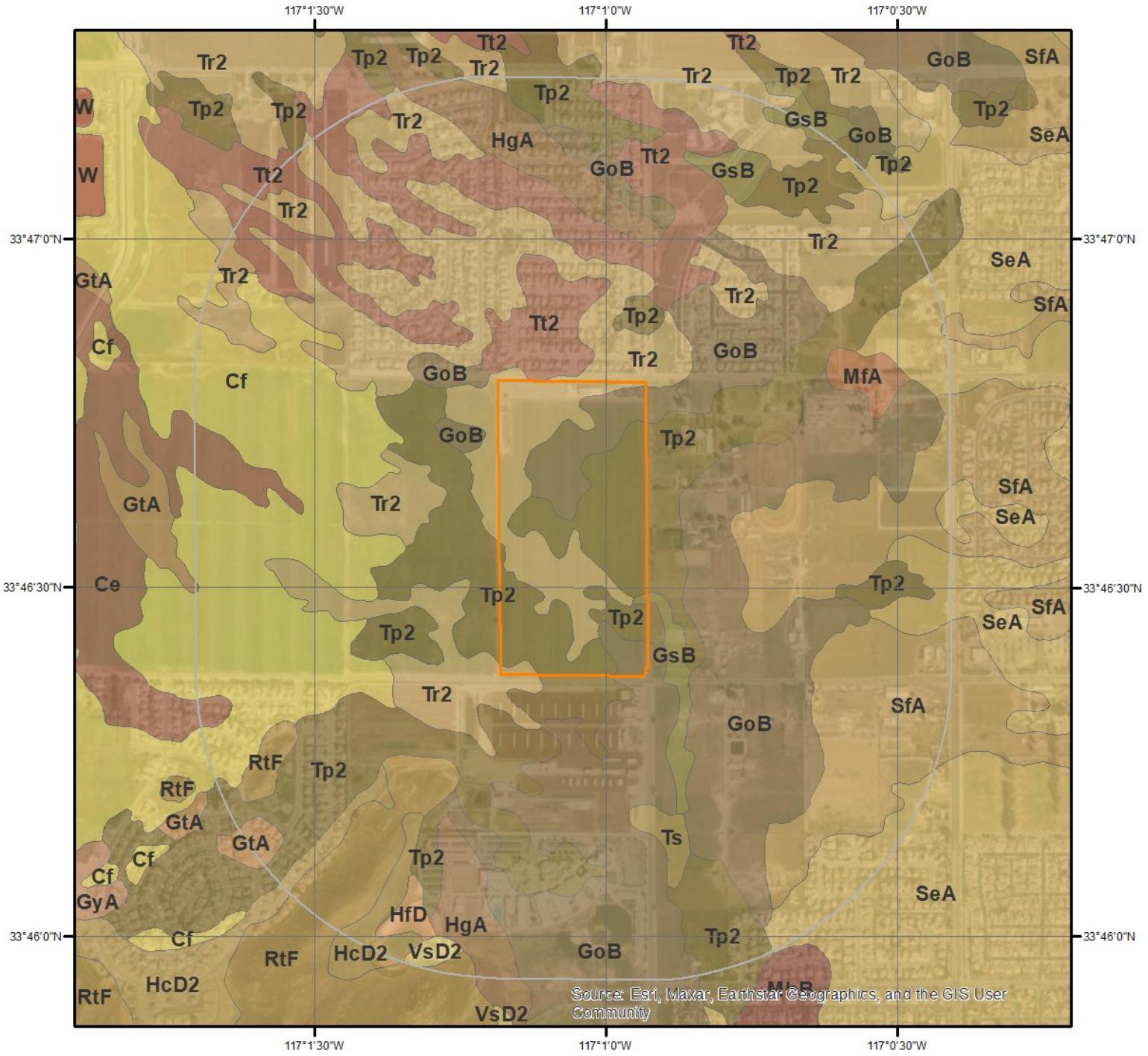
Geologic Unit gr-m

Unit Name:	pre-Cenozoic granitic and metamorphic rocks undivided
Unit Age:	Early Proterozoic to Late Cretaceous
Primary Rock Type:	Plutonic
Secondary Rock Type:	Gneiss
Unit Description:	Granitic and metamorphic rocks, mostly gneiss and other metamorphic rocks injected by granitic rocks. Mesozoic to Precambrian.

Geologic Unit Q

Unit Name:	Quaternary alluvium and marine deposits
Unit Age:	Pleistocene to Holocene
Primary Rock Type:	Coarse-detrital
Secondary Rock Type:	
Unit Description:	Alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated. Mostly nonmarine, but includes marine deposits near the coast.

Soil Information



SSURGO Soils

N

0 0.2 0.4 Miles

This maps shows SSURGO soil units around the target property. Please refer to the report for detailed soil descriptions.

ERIS

Soil Information

The previous page shows a soil map using SSURGO data from USDA Natural Resources Conservation Service. Detailed information about each unit is provided below.

Map Unit Ce (1.08%)

Map Unit Name:	Chino silt loam, drained
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	0cm
Drainage Class - Dominant:	Somewhat poorly drained
Hydrologic Group - Dominant:	C/D - These soils have moderately high runoff potential when drained and high runoff potential when undrained.

Major components are printed below

Chino(85%)

horizon H1(0cm to 36cm)	Silt loam
horizon H2(36cm to 69cm)	Silty clay loam
horizon H3(69cm to 152cm)	Silty clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: Ce - Chino silt loam, drained

Component: Chino (85%)
The Chino component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, February, March. Organic matter content in the surface horizon is about 2 percent. This component is in the R019XD068CA Silty Basin ecological site. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 1 This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Unnamed (3%)
Generated brief soil descriptions are created for major soil components. The Unnamed soil is a minor component.

Component: Domino (3%)
Generated brief soil descriptions are created for major soil components. The Domino soil is a minor component.

Component: Willows (3%)
Generated brief soil descriptions are created for major soil components. The Willows soil is a minor component.

Component: Unnamed (3%)
Generated brief soil descriptions are created for major soil components. The Unnamed soil is a minor component.

Component: Grangeville (3%)
Generated brief soil descriptions are created for major soil components. The Grangeville soil is a minor component.

Map Unit Cf (4.55%)

Map Unit Name:	Chino silt loam, drained, saline-alkali
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	0cm
Drainage Class - Dominant:	Somewhat poorly drained
Hydrologic Group - Dominant:	C/D - These soils have moderately high runoff potential when drained and high runoff potential when undrained.

Soil Information

Major components are printed below

Chino(85%)

horizon H1(0cm to 36cm)	Silt loam
horizon H2(36cm to 69cm)	Silty clay loam
horizon H3(69cm to 152cm)	Silty clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: Cf - Chino silt loam, drained, saline-alkali

Component: Chino (85%)
The Chino component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, February, March. Organic matter content in the surface horizon is about 2 percent. This component is in the R019XD068CA Silty Basin ecological site. Nonirrigated land capability classification is 4w. Irrigated land capability classification is 3w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. The soil has a moderately saline horizon within 30 inches of the soil surface.

Component: Unnamed (5%)
Generated brief soil descriptions are created for major soil components. The Unnamed soil is a minor component.

Component: Chino (5%)
Generated brief soil descriptions are created for major soil components. The Chino soil is a minor component.

Component: Unnamed (3%)
Generated brief soil descriptions are created for major soil components. The Unnamed soil is a minor component.

Component: Unnamed (2%)
Generated brief soil descriptions are created for major soil components. The Unnamed soil is a minor component.

Map Unit GoB (3.58%)

Map Unit Name:	Grangeville loamy fine sand, drained, 0 to 5 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	0cm
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	A/D - These soils have low runoff potential when drained and high runoff potential when undrained.

Major components are printed below

Grangeville(85%)

horizon H1(0cm to 43cm)	Loamy fine sand
horizon H2(43cm to 152cm)	Sandy loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: GoB - Grangeville loamy fine sand, drained, 0 to 5 percent slopes

Component: Grangeville (85%)
The Grangeville component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on alluvial fans. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, December. Organic matter content in the surface horizon is about 4 percent. This component is in the R019XD070CA Sandy Basin ecological site. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 2s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches,

typically, does not exceed 3 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Dello (5%)
Generated brief soil descriptions are created for major soil components. The Dello soil is a minor component.

Component: Traver (5%)
Generated brief soil descriptions are created for major soil components. The Traver soil is a minor component.

Component: Unnamed (3%)
Generated brief soil descriptions are created for major soil components. The Unnamed soil is a minor component.

Component: Unnamed (2%)
Generated brief soil descriptions are created for major soil components. The Unnamed soil is a minor component.

Map Unit GsB (0.22%)

Map Unit Name:	Grangeville sandy loam, sandy substratum, drained, saline-alkali , 0 to 5 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	0cm
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	A/D - These soils have low runoff potential when drained and high runoff potential when undrained.

Major components are printed below

Grangeville(85%)

horizon H1(0cm to 91cm)	Sandy loam
horizon H2(91cm to 152cm)	Sandy loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: GsB - Grangeville sandy loam, sandy substratum, drained, saline-alkali , 0 to 5 percent slopes

Component: Grangeville (85%)
The Grangeville component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on alluvial fans. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, December. Organic matter content in the surface horizon is about 4 percent. This component is in the R019XD070CA Sandy Basin ecological site. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. The soil has a slightly saline horizon within 30 inches of the soil surface.

Component: Dello (10%)
Generated brief soil descriptions are created for major soil components. The Dello soil is a minor component.

Component: Traver (5%)
Generated brief soil descriptions are created for major soil components. The Traver soil is a minor component.

Map Unit GtA (0.2%)

Map Unit Name:	Grangeville fine sandy loam, drained, 0 to 2 percent sl opes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	0cm
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	A/D - These soils have low runoff potential when drained and high runoff potential when undrained.

Major components are printed below

Grangeville(85%)

horizon H1(0cm to 91cm)	Fine sandy loam
horizon H2(91cm to 163cm)	Sandy loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: GtA - Grangeville fine sandy loam, drained, 0 to 2 percent sl opes

Component: Grangeville (85%)
The Grangeville component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on alluvial fans. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, December. Organic matter content in the surface horizon is about 4 percent. This component is in the R019XD070CA Sandy Basin ecological site. Nonirrigated land capability classification is 3c. Irrigated land capability classification is 1 This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Dello (10%)
Generated brief soil descriptions are created for major soil components. The Dello soil is a minor component.

Component: Traver (4%)
Generated brief soil descriptions are created for major soil components. The Traver soil is a minor component.

Component: Unnamed (1%)
Generated brief soil descriptions are created for major soil components. The Unnamed soil is a minor component.

Map Unit HcD2 (0.53%)

Map Unit Name:	Hanford coarse sandy loam, 8 to 15 percent slopes, eroded
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	A - Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil.

Major components are printed below

Hanford(85%)

horizon A(0cm to 20cm)	Coarse sandy loam
horizon C1(20cm to 102cm)	Fine sandy loam
horizon C2(102cm to 152cm)	Stratified loamy sand to coarse sandy loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: HcD2 - Hanford coarse sandy loam, 8 to 15 percent slopes, eroded

Component: Hanford (85%)
The Hanford component makes up 85 percent of the map unit. Slopes are 8 to 15 percent. This component is on alluvial plains, alluvial fans. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R020XD012CA Sandy ecological site. Nonirrigated land capability classification is 4e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria.

Component: Greenfield (5%)
Generated brief soil descriptions are created for major soil components. The Greenfield soil is a minor component.

Soil Information

Component: Ramona (5%)
Generated brief soil descriptions are created for major soil components. The Ramona soil is a minor component.

Component: Tujunga (5%)
Generated brief soil descriptions are created for major soil components. The Tujunga soil is a minor component.

Map Unit HfD (0.04%)

Map Unit Name:	Hanford sandy loam, 2 to 15 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	A - Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil.

Major components are printed below

Hanford(85%)

horizon A(0cm to 20cm)	Sandy loam
horizon C1(20cm to 102cm)	Fine sandy loam
horizon C2(102cm to 152cm)	Stratified loamy sand to coarse sandy loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: HfD - Hanford sandy loam, 2 to 15 percent slopes

Component: Hanford (85%)
The Hanford component makes up 85 percent of the map unit. Slopes are 2 to 15 percent. This component is on alluvial fans. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R019XD069CA Sandy Alluvial (1975) ecological site. Nonirrigated land capability classification is 7w. This soil does not meet hydric criteria.

Component: Greenfield (5%)
Generated brief soil descriptions are created for major soil components. The Greenfield soil is a minor component.

Component: Tujunga (5%)
Generated brief soil descriptions are created for major soil components. The Tujunga soil is a minor component.

Component: Ramona (4%)
Generated brief soil descriptions are created for major soil components. The Ramona soil is a minor component.

Component: Riverwash (1%)
Generated brief soil descriptions are created for major soil components. The Riverwash soil is a minor component.

Map Unit HgA (0.56%)

Map Unit Name:	Hanford fine sandy loam, 0 to 2 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	A - Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil.

Major components are printed below

Hanford(85%)

horizon A(0cm to 20cm)	Fine sandy loam

horizon C1(20cm to 102cm)	Fine sandy loam
horizon C2(102cm to 152cm)	Stratified loamy sand to coarse sandy loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: HgA - Hanford fine sandy loam, 0 to 2 percent slopes

Component: Hanford (85%)
The Hanford component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on alluvial fans. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R019XD029CA Loamy (1975) ecological site. Nonirrigated land capability classification is 3c. Irrigated land capability classification is 1 This soil does not meet hydric criteria.

Component: Ramona (5%)
Generated brief soil descriptions are created for major soil components. The Ramona soil is a minor component.

Component: Tujunga (5%)
Generated brief soil descriptions are created for major soil components. The Tujunga soil is a minor component.

Component: Greenfield (5%)
Generated brief soil descriptions are created for major soil components. The Greenfield soil is a minor component.

Map Unit MfA (0.08%)

Map Unit Name:	Metz loamy fine sand, 0 to 2 percent slopes, shorter FFS, MLRA 19
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Somewhat excessively drained
Hydrologic Group - Dominant:	A - Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil.

Major components are printed below

Metz(85%)

horizon C1(0cm to 71cm)	Loamy fine sand
horizon C2(71cm to 122cm)	Loamy coarse sand
horizon C3(122cm to 152cm)	Sand

Component Description:

Minor map unit components are excluded from this report.

Map Unit: MfA - Metz loamy fine sand, 0 to 2 percent slopes, shorter FFS, MLRA 19

Component: Metz (85%)
The Metz component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on alluvial fans, alluvial plains. The parent material consists of alluvium derived from sedimentary rock. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R019XD035CA Sandy (1975) ecological site. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 3s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 1 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Metz (5%)
Generated brief soil descriptions are created for major soil components. The Metz soil is a minor component.

Component: San Emigidio (5%)

Soil Information

Generated brief soil descriptions are created for major soil components. The San Emigidio soil is a minor component.

Component: Metz (5%)
Generated brief soil descriptions are created for major soil components. The Metz soil is a minor component.

Map Unit RtF (2.14%)

Map Unit Name:	Rockland

No more attributes available for this map unit

Component Description:

Minor map unit components are excluded from this report.

Map Unit: RtF - Rockland

Component: Rockland (100%)
Generated brief soil descriptions are created for major soil components. The Rockland is a miscellaneous area.

Map Unit SeA (71.1%)

Map Unit Name:	San Emigdio fine sandy loam, 0 to 2 percent slopes, occassional frost
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	A - Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil.

Major components are printed below

San Emigdio(85%)

horizon A(0cm to 20cm)	Fine sandy loam
horizon C1(20cm to 102cm)	Fine sandy loam
horizon C2(102cm to 152cm)	Stratified fine sandy loam to silt loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: SeA - San Emigdio fine sandy loam, 0 to 2 percent slopes, occassional frost

Component: San Emigdio (85%)
The San Emigdio component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on alluvial fans, alluvial plains. The parent material consists of residuum weathered from sedimentary rock. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R019XD029CA Loamy (1975) ecological site. Nonirrigated land capability classification is 3c. Irrigated land capability classification is 1 This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Metz (10%)
Generated brief soil descriptions are created for major soil components. The Metz soil is a minor component.

Component: San Timoteo (5%)
Generated brief soil descriptions are created for major soil components. The San Timoteo soil is a minor component.

Map Unit SfA (5.17%)

Map Unit Name:	San Emigdio fine sandy loam, deep, 0 to 2 percent slopes

Soil Information

Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	A - Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil.

Major components are printed below

San Emigdio(85%)

horizon H1(0cm to 20cm)	Fine sandy loam
horizon H2(20cm to 102cm)	Fine sandy loam
horizon H3(102cm to 152cm)	Loamy sand

Component Description:

Minor map unit components are excluded from this report.

Map Unit: SfA - San Emigdio fine sandy loam, deep, 0 to 2 percent slopes

Component: San Emigdio (85%)
The San Emigdio component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on alluvial fans. The parent material consists of residuum weathered from sedimentary rock. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R019XD029CA Loamy (1975) ecological site. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 2s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Metz (10%)
Generated brief soil descriptions are created for major soil components. The Metz soil is a minor component.

Component: San Timoteo (5%)
Generated brief soil descriptions are created for major soil components. The San Timoteo soil is a minor component.

Map Unit Tp2 (3.8%)

Map Unit Name:	Traver loamy fine sand, eroded
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	B - Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded.

Major components are printed below

Traver(85%)

horizon H1(0cm to 33cm)	Loamy fine sand
horizon H2(33cm to 97cm)	Fine sandy loam
horizon H3(97cm to 152cm)	Stratified fine sandy loam to silty clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: Tp2 - Traver loamy fine sand, eroded

Component: Traver (85%)
The Traver component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on valley floors, basins. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This

component is in the R019XD070CA Sandy Basin ecological site. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Dello (5%)
Generated brief soil descriptions are created for major soil components. The Dello soil is a minor component.

Component: Waukena (5%)
Generated brief soil descriptions are created for major soil components. The Waukena soil is a minor component.

Component: Grangeville (5%)
Generated brief soil descriptions are created for major soil components. The Grangeville soil is a minor component.

Map Unit Tr2 (5.35%)

Map Unit Name:	Traver loamy fine sand, saline-alkali, eroded
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	B - Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded.

Major components are printed below

Traver(85%)

horizon H1(0cm to 33cm)	Loamy fine sand
horizon H2(33cm to 97cm)	Fine sandy loam
horizon H3(97cm to 152cm)	Stratified fine sandy loam to silty clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: Tr2 - Traver loamy fine sand, saline-alkali, eroded

Component: Traver (85%)
The Traver component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on basins, valley floors. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R019XD070CA Sandy Basin ecological site. Nonirrigated land capability classification is 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Waukena (5%)
Generated brief soil descriptions are created for major soil components. The Waukena soil is a minor component.

Component: Grangeville (5%)
Generated brief soil descriptions are created for major soil components. The Grangeville soil is a minor component.

Component: Dello (5%)
Generated brief soil descriptions are created for major soil components. The Dello soil is a minor component.

Map Unit Ts (0.06%)

Map Unit Name:	Traver fine sandy loam, saline-alkali
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null

Soil Information

Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	B - Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded.

Major components are printed below

Traver(85%)

horizon H1(0cm to 51cm)	Fine sandy loam
horizon H2(51cm to 152cm)	Stratified fine sandy loam to silty clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: Ts - Traver fine sandy loam, saline-alkali

Component: Traver (85%)
The Traver component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on valley floors, basins. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R019XD070CA Sandy Basin ecological site. Nonirrigated land capability classification is 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Grangeville (5%)
Generated brief soil descriptions are created for major soil components. The Grangeville soil is a minor component.

Component: Waukena (5%)
Generated brief soil descriptions are created for major soil components. The Waukena soil is a minor component.

Component: Dello (5%)
Generated brief soil descriptions are created for major soil components. The Dello soil is a minor component.

Map Unit Tt2 (1.5%)

Map Unit Name:	Traver fine sandy loam, strongly saline-alkali, eroded
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	B - Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded.

Major components are printed below

Traver(85%)

horizon H1(0cm to 51cm)	Fine sandy loam
horizon H2(51cm to 152cm)	Stratified fine sandy loam to silty clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: Tt2 - Traver fine sandy loam, strongly saline-alkali, eroded

Component: Traver (85%)
The Traver component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on basins, valley floors. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R019XD070CA Sandy Basin ecological site. Nonirrigated land capability classification is 7s. Irrigated land

capability classification is 4s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Waukena (5%)
Generated brief soil descriptions are created for major soil components. The Waukena soil is a minor component.

Component: Grangeville (5%)
Generated brief soil descriptions are created for major soil components. The Grangeville soil is a minor component.

Component: Dello (5%)
Generated brief soil descriptions are created for major soil components. The Dello soil is a minor component.

Map Unit VsD2 (0.03%)

Map Unit Name:	Vista coarse sandy loam, 8 to 15 percent slopes, eroded
Bedrock Depth - Min:	61cm
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	B - Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded.

Major components are printed below

Vista(85%)

horizon H1(0cm to 38cm)	Coarse sandy loam
horizon H2(38cm to 61cm)	Coarse sandy loam
horizon H3(61cm to 71cm)	Weathered bedrock

Component Description:

Minor map unit components are excluded from this report.

Map Unit: VsD2 - Vista coarse sandy loam, 8 to 15 percent slopes, eroded

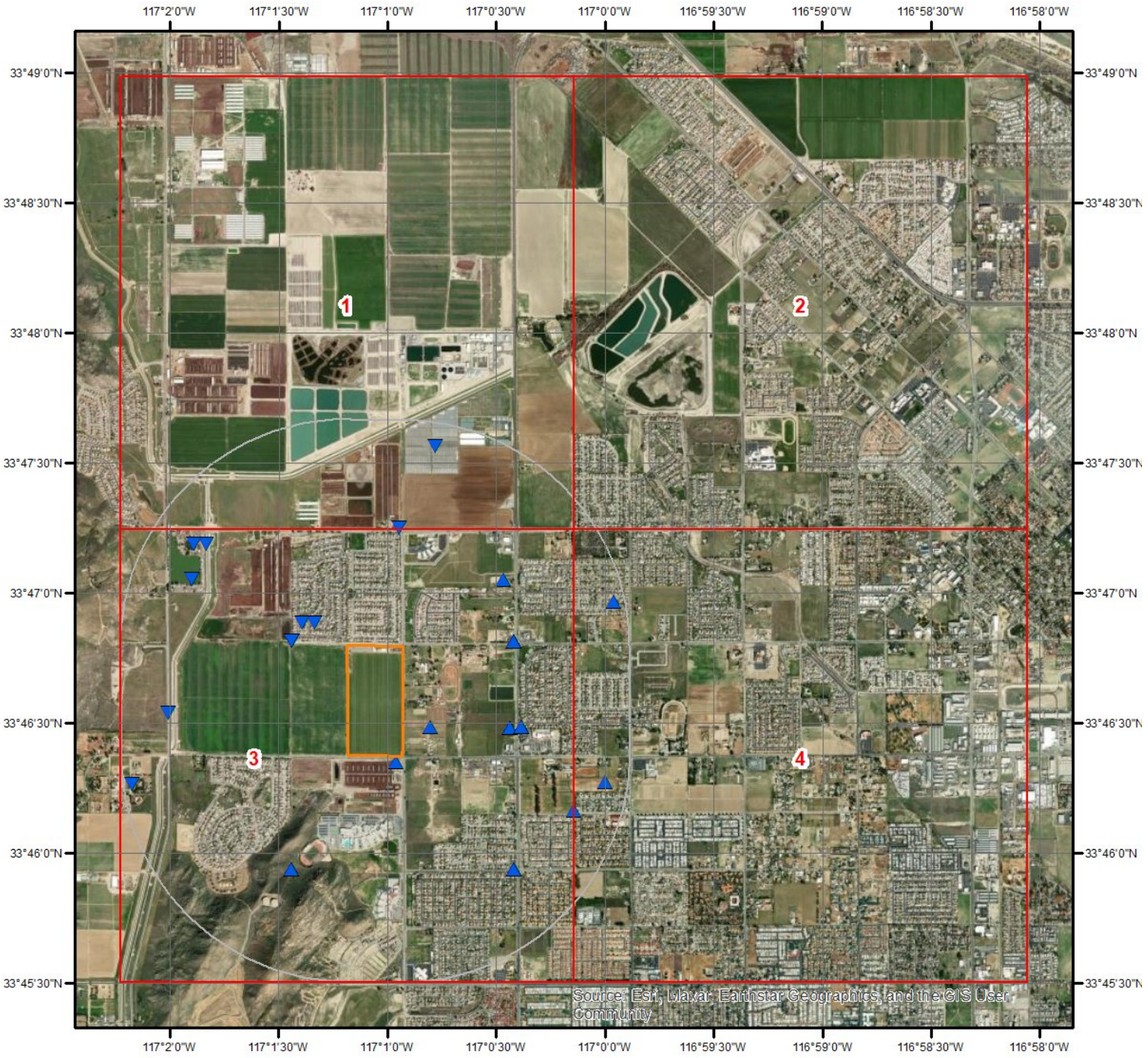
Component: Vista (85%)
The Vista component makes up 85 percent of the map unit. Slopes are 8 to 15 percent. This component is on hills, uplands. The parent material consists of residuum weathered from granite and/or residuum weathered from granodiorite. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R019XD029CA Loamy (1975) ecological site. Nonirrigated land capability classification is 4e. Irrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Fallbrook (5%)
Generated brief soil descriptions are created for major soil components. The Fallbrook soil is a minor component.

Component: Bonsall (5%)
Generated brief soil descriptions are created for major soil components. The Bonsall soil is a minor component.

Component: Cieneba (5%)
Generated brief soil descriptions are created for major soil components. The Cieneba soil is a minor component.

Wells and Additional Sources



Wells & Additional Sources

N

0 0.3 0.6 1.2 Miles

- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- OGW Sites with Higher Elevation
- OGW Sites with Same Elevation
- OGW Sites with Lower Elevation
- OGW Sites with Unknown Elevation

ERIS

Wells and Additional Sources



Wells & Additional Sources - Page 1

N

0 0.15 0.3 0.6 Miles

- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- OGW Sites with Higher Elevation
- OGW Sites with Same Elevation
- OGW Sites with Lower Elevation
- OGW Sites with Unknown Elevation

ERIS

Wells and Additional Sources



Wells & Additional Sources - Page 2

N

0 0.15 0.3 0.6 Miles

- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- OGW Sites with Higher Elevation
- OGW Sites with Same Elevation
- OGW Sites with Lower Elevation
- OGW Sites with Unknown Elevation

ERIS

Wells and Additional Sources



Wells & Additional Sources - Page 3

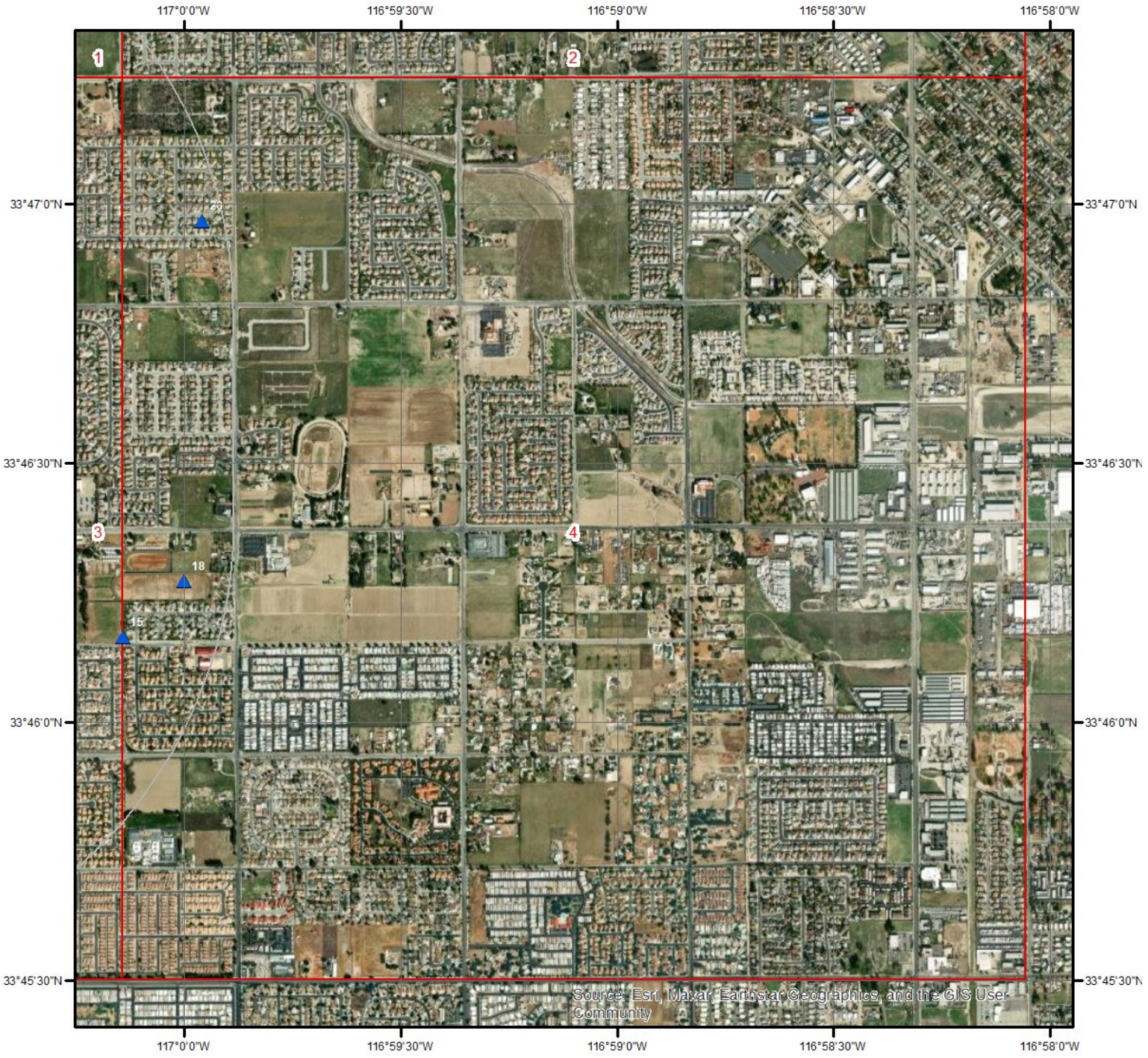
N

0 0.15 0.3 0.6 Miles

- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- OGW Sites with Higher Elevation
- OGW Sites with Same Elevation
- OGW Sites with Lower Elevation
- OGW Sites with Unknown Elevation

ERIS

Wells and Additional Sources



Wells & Additional Sources - Page 4

N

0 0.15 0.3 0.6 Miles

- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- OGW Sites with Higher Elevation
- OGW Sites with Same Elevation
- OGW Sites with Lower Elevation
- OGW Sites with Unknown Elevation

ERIS

Wells and Additional Sources Summary

Federal Sources

Public Water Systems Violations and Enforcement Data

Map Key	ID	Distance (ft)	Direction
	No records found		

Safe Drinking Water Information System (SDWIS)

Map Key	ID	Distance (ft)	Direction
	No records found		

USGS National Water Information System

Map Key	Site No	Distance (ft)	Direction
1	USGS-334629117004501	646.99	ESE
3	USGS-334651117011501	919.33	NW
7	USGS-334629117002009	2756.65	E
7	USGS-334629117002001	2756.65	E
7	USGS-334629117002003	2756.65	E
7	USGS-334629117002010	2756.65	E
7	USGS-334629117002002	2756.65	E
7	USGS-334629117002004	2756.65	E
7	USGS-334629117002007	2756.65	E
7	USGS-334629117002005	2756.65	E
7	USGS-334629117002008	2756.65	E
7	USGS-334629117002011	2756.65	E
7	USGS-334629117002006	2756.65	E
10	USGS-334703117002501	2813.72	NE
14	USGS-334703117015101	3935.16	WNW
16	USGS-334711117014701	4036.22	NW

State Sources

Oil and Gas Wells

Map Key	ID	Distance (ft)	Direction
	No records found		

Periodic Groundwater Level Measurement Locations

Map Key	Site Code	Distance (ft)	Direction
5	337814N1170232W001	1166.80	NW
6	337747N1170073W006	2487.43	ESE
6	337747N1170073W011	2487.43	ESE
6	337747N1170073W001	2487.43	ESE
6	337747N1170073W003	2487.43	ESE
6	337747N1170073W005	2487.43	ESE
6	337747N1170073W007	2487.43	ESE
6	337747N1170073W009	2487.43	ESE
6	337747N1170073W004	2487.43	ESE

6	337747N1170073W002	2487.43	ESE
6	337747N1170073W008	2487.43	ESE
6	337747N1170073W010	2487.43	ESE
9	337875N1170158W001	2748.90	N
15	337694N1170024W001	4206.15	ESE
17	337864N1170315W001	4264.60	NW
20	337828N1169993W001	5038.26	ENE

Well Completion Reports

Map Key	WCR No	Distance (ft)	Direction
2	WCR2019-015956	142.53	SSE
4	WCR1776-011314	1288.90	NW
4	WCR1977-011053	1288.90	NW
4	WCR1958-001364	1288.90	NW
4	WCR1990-018387	1288.90	NW
4	WCR1951-002152	1288.90	NW
4	WCR1958-001636	1288.90	NW
4	WCR2005-013526	1288.90	NW
4	WCR0147555	1288.90	NW
4	WCR0219099	1288.90	NW
4	WCR2005-012749	1288.90	NW
4	WCR1980-008186	1288.90	NW
4	WCR2004-011753	1288.90	NW
8	WCR1990-020382	2590.59	ENE
8	WCR1990-020380	2590.59	ENE
8	WCR2001-013305	2590.59	ENE
8	WCR1996-009201	2590.59	ENE
8	WCR1990-020387	2590.59	ENE
8	WCR1776-008757	2590.59	ENE
8	WCR1980-009600	2590.59	ENE
8	WCR1990-020384	2590.59	ENE
8	WCR1990-020386	2590.59	ENE
8	WCR1776-008758	2590.59	ENE
8	WCR1990-020381	2590.59	ENE
8	WCR1776-011315	2590.59	ENE
8	WCR1990-020383	2590.59	ENE
8	WCR2004-011977	2590.59	ENE
8	WCR1776-011316	2590.59	ENE
8	WCR1990-020379	2590.59	ENE
8	WCR1951-002153	2590.59	ENE
8	WCR1990-020389	2590.59	ENE
8	WCR0260679	2590.59	ENE
8	WCR1962-001781	2590.59	ENE
8	WCR1990-020385	2590.59	ENE
8	WCR1990-020388	2590.59	ENE
11	WCR1991-018523	2972.14	SSW
11	WCR1991-018524	2972.14	SSW
11	WCR1776-004437	2972.14	SSW
11	WCR1991-018521	2972.14	SSW
11	WCR0199865	2972.14	SSW
11	WCR1991-018522	2972.14	SSW
12	WCR1996-009439	4171.33	W
13	WCR0143009	3721.84	SE
13	WCR0308468	3721.84	SE
13	WCR2013-012986	3721.84	SE
13	WCR2004-015751	3721.84	SE
13	WCR2004-015753	3721.84	SE
13	WCR2004-016271	3721.84	SE
13	WCR2004-015752	3721.84	SE
18	WCR1989-019574	4752.58	ESE
19	WCR1994-011579	5082.46	WSW
21	WCR2021-006123	4715.45	NNE

USGS National Water Information System

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
1	ESE	0.12	646.99	1,514.60	FED USGS

Site No:	USGS-334629117004501
Site Type:	Well
Formation Type:	
Date Drilled:	
Well Depth:	
Well Depth Unit:	
Well Hole Depth:	
Well Hole Depth Unit:	
Reporting Agency:	USGS California Water Science Center
Station Name:	004S001W32N001S
Latitude:	33.77474190000000
Longitude:	-117.0133589000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
3	NW	0.17	919.33	1,504.60	FED USGS

Site No:	USGS-334651117011501
Site Type:	Well
Formation Type:	
Date Drilled:	1977
Well Depth:	240
Well Depth Unit:	ft
Well Hole Depth:	
Well Hole Depth Unit:	
Reporting Agency:	USGS California Water Science Center
Station Name:	004S001W31G002S
Latitude:	33.78140840000000
Longitude:	-117.0222483000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.52	2,756.65	1,520.15	FED USGS

Site No:	USGS-334629117002009
Site Type:	Well: Test hole not completed as a well
Formation Type:	
Date Drilled:	
Well Depth:	14.9
Well Depth Unit:	ft
Well Hole Depth:	26

Well Hole Depth Unit: ft
Reporting Agency: USGS California Water Science Center
Station Name: 004S001W32Q010SLYS
Latitude: 33.77474190000000
Longitude: -117.0064140000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.52	2,756.65	1,520.15	FED USGS

Site No: USGS-334629117002001
Site Type: Well
Formation Type:
Date Drilled: 19900806
Well Depth: 300
Well Depth Unit: ft
Well Hole Depth:
Well Hole Depth Unit:
Reporting Agency: USGS California Water Science Center
Station Name: 004S001W32Q002S
Latitude: 33.77474190000000
Longitude: -117.0064140000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.52	2,756.65	1,520.15	FED USGS

Site No: USGS-334629117002003
Site Type: Well
Formation Type:
Date Drilled: 19900806
Well Depth: 233
Well Depth Unit: ft
Well Hole Depth: 321
Well Hole Depth Unit: ft
Reporting Agency: USGS California Water Science Center
Station Name: 004S001W32Q004S
Latitude: 33.77474190000000
Longitude: -117.0064140000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.52	2,756.65	1,520.15	FED USGS

Site No: USGS-334629117002010
Site Type: Well: Test hole not completed as a well
Formation Type:
Date Drilled:

Well Depth: 10
Well Depth Unit: ft
Well Hole Depth: 26
Well Hole Depth Unit: ft
Reporting Agency: USGS California Water Science Center
Station Name: 004S001W32Q011SLYS
Latitude: 33.77474190000000
Longitude: -117.0064140000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.52	2,756.65	1,520.15	FED USGS

Site No: USGS-334629117002002
Site Type: Well
Formation Type:
Date Drilled: 19900806
Well Depth: 255
Well Depth Unit: ft
Well Hole Depth: 321
Well Hole Depth Unit: ft
Reporting Agency: USGS California Water Science Center
Station Name: 004S001W32Q003S
Latitude: 33.77474190000000
Longitude: -117.0064140000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.52	2,756.65	1,520.15	FED USGS

Site No: USGS-334629117002004
Site Type: Well
Formation Type:
Date Drilled: 19900806
Well Depth: 212
Well Depth Unit: ft
Well Hole Depth: 321
Well Hole Depth Unit: ft
Reporting Agency: USGS California Water Science Center
Station Name: 004S001W32Q005S
Latitude: 33.77474190000000
Longitude: -117.0064140000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.52	2,756.65	1,520.15	FED USGS

Site No: USGS-334629117002007

Site Type: Well: Test hole not completed as a well
Formation Type:
Date Drilled:
Well Depth: 50
Well Depth Unit: ft
Well Hole Depth: 112
Well Hole Depth Unit: ft
Reporting Agency: USGS California Water Science Center
Station Name: 004S001W32Q008SLYS
Latitude: 33.77474190000000
Longitude: -117.0064140000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.52	2,756.65	1,520.15	FED USGS

Site No: USGS-334629117002005
Site Type: Well: Test hole not completed as a well
Formation Type:
Date Drilled:
Well Depth: 98
Well Depth Unit: ft
Well Hole Depth: 112
Well Hole Depth Unit: ft
Reporting Agency: USGS California Water Science Center
Station Name: 004S001W32Q006SLYS
Latitude: 33.77474190000000
Longitude: -117.0064140000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.52	2,756.65	1,520.15	FED USGS

Site No: USGS-334629117002008
Site Type: Well: Test hole not completed as a well
Formation Type:
Date Drilled:
Well Depth: 25
Well Depth Unit: ft
Well Hole Depth: 26
Well Hole Depth Unit: ft
Reporting Agency: USGS California Water Science Center
Station Name: 004S001W32Q009SLYS
Latitude: 33.77474190000000
Longitude: -117.0064140000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.52	2,756.65	1,520.15	FED USGS

Site No: USGS-334629117002011
Site Type: Well: Test hole not completed as a well
Formation Type:
Date Drilled:
Well Depth: 5
Well Depth Unit: ft
Well Hole Depth: 26
Well Hole Depth Unit: ft
Reporting Agency: USGS California Water Science Center
Station Name: 004S001W32Q012SLYS
Latitude: 33.77474190000000
Longitude: -117.0064140000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.52	2,756.65	1,520.15	FED USGS

Site No: USGS-334629117002006
Site Type: Well: Test hole not completed as a well
Formation Type:
Date Drilled:
Well Depth: 75
Well Depth Unit: ft
Well Hole Depth: 112
Well Hole Depth Unit: ft
Reporting Agency: USGS California Water Science Center
Station Name: 004S001W32Q007SLYS
Latitude: 33.77474190000000
Longitude: -117.0064140000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
10	NE	0.53	2,813.72	1,510.85	FED USGS

Site No: USGS-334703117002501
Site Type: Well
Formation Type:
Date Drilled:
Well Depth:
Well Depth Unit:
Well Hole Depth:
Well Hole Depth Unit:
Reporting Agency: USGS California Water Science Center
Station Name: 004S001W32C003S
Latitude: 33.78418616000000
Longitude: -117.0078031000000

Wells and Additional Sources Detail Report

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
14	WNW	0.75	3,935.16	1,500.60	FED USGS

Site No:	USGS-334703117015101
Site Type:	Well
Formation Type:	
Date Drilled:	
Well Depth:	275
Well Depth Unit:	ft
Well Hole Depth:	275
Well Hole Depth Unit:	ft
Reporting Agency:	USGS California Water Science Center
Station Name:	004S001W31D001S
Latitude:	33.78418615000000
Longitude:	-117.0316932000000

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
16	NW	0.76	4,036.22	1,499.60	FED USGS

Site No:	USGS-334711117014701
Site Type:	Well
Formation Type:	
Date Drilled:	
Well Depth:	
Well Depth Unit:	
Well Hole Depth:	
Well Hole Depth Unit:	
Reporting Agency:	USGS California Water Science Center
Station Name:	004S001W31D002S
Latitude:	33.78640830000000
Longitude:	-117.0305820000000

Periodic Groundwater Level Measurement Locations

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
5	NW	0.22	1,166.80	1,503.60	MONITOR WELLS

Station ID:	6394	Basin Region Desc:	North Lahontan
Site Code:	337814N1170232W001	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W31G002S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1502.52000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1502.52000	GSE Accuracy:	Unknown

Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.78140
Basin Name:	San Jacinto	Longitude:	-117.02320
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W31G002S		
Well Type:	Unknown		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	ESE	0.47	2,487.43	1,519.60	MONITOR WELLS

Station ID:	6401	Basin Region Desc:	North Lahontan
Site Code:	337747N1170073W006	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W32Q007S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1522.49000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1522.49000	GSE Accuracy:	Unknown
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.77470
Basin Name:	San Jacinto	Longitude:	-117.00730
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W32Q007S		
Well Type:	Unknown		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	ESE	0.47	2,487.43	1,519.60	MONITOR WELLS

Station ID:	28909	Basin Region Desc:	North Lahontan
Site Code:	337747N1170073W011	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W32Q012S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1522.49000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1522.49000	GSE Accuracy:	Unknown
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.77470
Basin Name:	San Jacinto	Longitude:	-117.00730
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W32Q012S		

Well Type: Unknown

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	ESE	0.47	2,487.43	1,519.60	MONITOR WELLS

Station ID:	6396	Basin Region Desc:	North Lahontan
Site Code:	337747N1170073W001	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W32Q002S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1522.49000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1522.49000	GSE Accuracy:	Unknown
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.77470
Basin Name:	San Jacinto	Longitude:	-117.00730
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W32Q002S		
Well Type:	Unknown		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	ESE	0.47	2,487.43	1,519.60	MONITOR WELLS

Station ID:	6398	Basin Region Desc:	North Lahontan
Site Code:	337747N1170073W003	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W32Q004S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1522.49000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1522.49000	GSE Accuracy:	Unknown
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.77470
Basin Name:	San Jacinto	Longitude:	-117.00730
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W32Q004S		
Well Type:	Unknown		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	ESE	0.47	2,487.43	1,519.60	MONITOR WELLS

Station ID:	6400	Basin Region Desc:	North Lahontan

Wells and Additional Sources Detail Report

Site Code:	337747N1170073W005	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W32Q006S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1522.49000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1522.49000	GSE Accuracy:	Unknown
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.77470
Basin Name:	San Jacinto	Longitude:	-117.00730
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W32Q006S		
Well Type:	Unknown		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	ESE	0.47	2,487.43	1,519.60	MONITOR WELLS

Station ID:	28907	Basin Region Desc:	North Lahontan
Site Code:	337747N1170073W007	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W32Q008S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1522.49000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1522.49000	GSE Accuracy:	Unknown
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.77470
Basin Name:	San Jacinto	Longitude:	-117.00730
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W32Q008S		
Well Type:	Unknown		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	ESE	0.47	2,487.43	1,519.60	MONITOR WELLS

Station ID:	28908	Basin Region Desc:	North Lahontan
Site Code:	337747N1170073W009	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W32Q010S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1522.49000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1522.49000	GSE Accuracy:	Unknown

Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.77470
Basin Name:	San Jacinto	Longitude:	-117.00730
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W32Q010S		
Well Type:	Unknown		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	ESE	0.47	2,487.43	1,519.60	MONITOR WELLS

Station ID:	6399	Basin Region Desc:	North Lahontan
Site Code:	337747N1170073W004	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W32Q005S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1522.49000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1522.49000	GSE Accuracy:	Unknown
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.77470
Basin Name:	San Jacinto	Longitude:	-117.00730
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W32Q005S		
Well Type:	Unknown		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	ESE	0.47	2,487.43	1,519.60	MONITOR WELLS

Station ID:	6397	Basin Region Desc:	North Lahontan
Site Code:	337747N1170073W002	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W32Q003S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1522.49000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1522.49000	GSE Accuracy:	Unknown
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.77470
Basin Name:	San Jacinto	Longitude:	-117.00730
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W32Q003S		

Well Type: Unknown

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	ESE	0.47	2,487.43	1,519.60	MONITOR WELLS

Station ID:	6402	Basin Region Desc:	North Lahontan
Site Code:	337747N1170073W008	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W32Q009S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1522.49000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1522.49000	GSE Accuracy:	Unknown
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.77470
Basin Name:	San Jacinto	Longitude:	-117.00730
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W32Q009S		
Well Type:	Unknown		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	ESE	0.47	2,487.43	1,519.60	MONITOR WELLS

Station ID:	6403	Basin Region Desc:	North Lahontan
Site Code:	337747N1170073W010	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W32Q011S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1522.49000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1522.49000	GSE Accuracy:	Unknown
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.77470
Basin Name:	San Jacinto	Longitude:	-117.00730
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W32Q011S		
Well Type:	Unknown		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
9	N	0.52	2,748.90	1,504.60	MONITOR WELLS

Station ID:	48176	Basin Region Desc:	North Lahontan

Site Code:	337875N1170158W001	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:		WLM Method:	
Well Depth:	310.00000	WLM Accuracy:	
Well Use:	Irrigation	Ground Surf Elevtn:	1505.13000
Monitoring Program:	CASGEM	GSE Method:	Digital Elevation Model
RPE:	1505.93000	GSE Accuracy:	5 ft.
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.78747
Basin Name:	San Jacinto	Longitude:	-117.01578
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	EMWD10314		
Well Type:	Single Well		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
15	ESE	0.80	4,206.15	1,525.59	MONITOR WELLS

Station ID:	48300	Basin Region Desc:	North Lahontan
Site Code:	337694N1170024W001	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:		WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Irrigation	Ground Surf Elevtn:	1526.51000
Monitoring Program:	CASGEM	GSE Method:	Digital Elevation Model
RPE:	1525.00000	GSE Accuracy:	5 ft.
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.76940
Basin Name:	San Jacinto	Longitude:	-117.00236
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	EMWD25567		
Well Type:	Single Well		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
17	NW	0.81	4,264.60	1,500.44	MONITOR WELLS

Station ID:	6393	Basin Region Desc:	North Lahontan
Site Code:	337864N1170315W001	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W31D002S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1497.54000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1497.54000	GSE Accuracy:	Unknown

Wells and Additional Sources Detail Report

Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.78640
Basin Name:	San Jacinto	Longitude:	-117.03150
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W31D002S		
Well Type:	Unknown		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
20	ENE	0.95	5,038.26	1,522.65	MONITOR WELLS

Station ID:	6395	Basin Region Desc:	North Lahontan
Site Code:	337828N1169993W001	Basin Region Actv:	Y
WCR No:		Basin Region Order:	8
State Well No:	04S01W32H004S	WLM Method:	
Well Depth:		WLM Accuracy:	
Well Use:	Unknown	Ground Surf Elevtn:	1522.49000
Monitoring Program:	VOLUNTARY	GSE Method:	Unknown
RPE:	1522.49000	GSE Accuracy:	Unknown
Basin ID:		County Name:	Riverside
Basin Code:	8-005	Latitude:	33.78280
Basin Name:	San Jacinto	Longitude:	-116.99930
Basin Region Code:	8		
Continuous Data Station No:			
Well Name:	04S01W32H004S		
Well Type:	Unknown		

Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
2	SSE	0.03	142.53	1,512.60	WATER WELLS

WCR No:	WCR2019-015956
Location:	1455 CAWSTON AVE
City:	HEMET
County:	Riverside
Decimal Latitude:	33.7725
Decimal Longitude:	-117.016
Location(OSWCR):	1455 CAWSTON AVE
City(OSWCR):	HEMET
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.77251
Decim Long(OSWCR):	-117.01578
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.24	1,288.90	1,503.60	WATER WELLS

WCR No:	WCR1776-011314
Location:	COTTONWOOD RD, WARREN RD
City:	Lakeview
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.024
Location(OSWCR):	COTTONWOOD RD, WARREN RD
City(OSWCR):	Lakeview
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78016
Decim Long(OSWCR):	-117.02449
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.24	1,288.90	1,503.60	WATER WELLS

WCR No:	WCR1977-011053
Location:	COTTONWOOD RD, WARREN RD
City:	Lakeview
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.024
Location(OSWCR):	COTTONWOOD RD, WARREN RD
City(OSWCR):	Lakeview
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78016
Decim Long(OSWCR):	-117.02449
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.24	1,288.90	1,503.60	WATER WELLS

WCR No:	WCR1958-001364
Location:	COTTONWOOD, WARREN RD
City:	
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.024
Location(OSWCR):	COTTONWOOD, WARREN RD
City(OSWCR):	
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78016

Decim Long(OSWCR): -117.02449
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.24	1,288.90	1,503.60	WATER WELLS

WCR No: WCR1990-018387
Location: RAMONA EXP, WARREN RD, COTTONWOOD
City: San Jacinto
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.024
Location(OSWCR): RAMONA EXP, WARREN RD, COTTONWOOD
City(OSWCR): San Jacinto
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78016
Decim Long(OSWCR): -117.02449
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.24	1,288.90	1,503.60	WATER WELLS

WCR No: WCR1951-002152
Location: 7th Street
City: San Jacinto
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.024
Location(OSWCR): 7th Street
City(OSWCR): San Jacinto
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78016
Decim Long(OSWCR): -117.02449
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.24	1,288.90	1,503.60	WATER WELLS

WCR No: WCR1958-001636
Location: COTTONWOOD RD, WARREN RD
City: Lakeview
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.024

Wells and Additional Sources Detail Report

Location(OSWCR):	COTTONWOOD RD, WARREN RD
City(OSWCR):	Lakeview
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78016
Decim Long(OSWCR):	-117.02449
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.24	1,288.90	1,503.60	WATER WELLS

WCR No:	WCR2005-013526
Location:	Warren & Cottonwood
City:	San Jacinto
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.024
Location(OSWCR):	Warren & Cottonwood
City(OSWCR):	San Jacinto
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78016
Decim Long(OSWCR):	-117.02449
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.24	1,288.90	1,503.60	WATER WELLS

WCR No:	WCR0147555
Location:	
City:	
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.024
Location(OSWCR):	
City(OSWCR):	
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78016
Decim Long(OSWCR):	-117.02449
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.24	1,288.90	1,503.60	WATER WELLS

WCR No:	WCR0219099
Location:	

City:
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.024
Location(OSWCR):
City(OSWCR):
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78016
Decim Long(OSWCR): -117.02449
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.24	1,288.90	1,503.60	WATER WELLS

WCR No: WCR2005-012749
Location: Warren Road & Cotton Wood Avenue
City: San Jacinto
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.024
Location(OSWCR): Warren Road & Cotton Wood Avenue
City(OSWCR): San Jacinto
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78016
Decim Long(OSWCR): -117.02449
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.24	1,288.90	1,503.60	WATER WELLS

WCR No: WCR1980-008186
Location: COTTONWOOD ST
City: San Jacinto
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.024
Location(OSWCR): COTTONWOOD ST
City(OSWCR): San Jacinto
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78016
Decim Long(OSWCR): -117.02449
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	NW	0.24	1,288.90	1,503.60	WATER WELLS

WCR No:	WCR2004-011753
Location:	off Lyon St, Esplanade Ave, Cottonwood A
City:	San Jacinto
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.024
Location(OSWCR):	off Lyon St, Esplanade Ave, Cottonwood A
City(OSWCR):	San Jacinto
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78016
Decim Long(OSWCR):	-117.02449
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No:	WCR1990-020382
Location:	SANDERSON AVE, ESPLANADE AVE
City:	Lakeview
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.007
Location(OSWCR):	SANDERSON AVE, ESPLANADE AVE
City(OSWCR):	Lakeview
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78018
Decim Long(OSWCR):	-117.00694
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No:	WCR1990-020380
Location:	SANDERSON AVE, ESPLANADE AVE
City:	Lakeview
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.007
Location(OSWCR):	SANDERSON AVE, ESPLANADE AVE
City(OSWCR):	Lakeview
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78018

Decim Long(OSWCR):	-117.00694
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No:	WCR2001-013305
Location:	w/o Kirby St, s/o Cottonwood Ave
City:	San Jacinto
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.007
Location(OSWCR):	w/o Kirby St, s/o Cottonwood Ave
City(OSWCR):	San Jacinto
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78018
Decim Long(OSWCR):	-117.00694
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No:	WCR1996-009201
Location:	110 W Kirby Street
City:	San Jacinto
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.007
Location(OSWCR):	110 W Kirby Street
City(OSWCR):	San Jacinto
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78018
Decim Long(OSWCR):	-117.00694
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No:	WCR1990-020387
Location:	SANDERSON AVE, ESPLANADE AVE
City:	Lakeview
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.007

Location(OSWCR): SANDERSON AVE, ESPLANADE AVE
City(OSWCR): Lakeview
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78018
Decim Long(OSWCR): -117.00694
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No: WCR1776-008757
Location:
City:
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.007
Location(OSWCR):
City(OSWCR):
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78018
Decim Long(OSWCR): -117.00694
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No: WCR1980-009600
Location: SANDERSON RD, ESPLENADE
City: Lakeview
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.007
Location(OSWCR): SANDERSON RD, ESPLENADE
City(OSWCR): Lakeview
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78018
Decim Long(OSWCR): -117.00694
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No: WCR1990-020384
Location: SANDERSON AVE, ESPLANADE AVE

City:	Lakeview
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.007
Location(OSWCR):	SANDERSON AVE, ESPLANADE AVE
City(OSWCR):	Lakeview
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78018
Decim Long(OSWCR):	-117.00694
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No:	WCR1990-020386
Location:	SANDERSON AVE, ESPLANADE AVE
City:	Lakeview
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.007
Location(OSWCR):	SANDERSON AVE, ESPLANADE AVE
City(OSWCR):	Lakeview
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78018
Decim Long(OSWCR):	-117.00694
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No:	WCR1776-008758
Location:	SEVENTH ST, KIRBY ST
City:	San Jacinto
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.007
Location(OSWCR):	SEVENTH ST, KIRBY ST
City(OSWCR):	San Jacinto
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78018
Decim Long(OSWCR):	-117.00694
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB

8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No:	WCR1990-020381
Location:	SANDERSON AVE, ESPLANADE AVE
City:	Lakeview
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.007
Location(OSWCR):	SANDERSON AVE, ESPLANADE AVE
City(OSWCR):	Lakeview
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78018
Decim Long(OSWCR):	-117.00694
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No:	WCR1776-011315
Location:	COTTONWOOD RD, SANDERSON RD
City:	Lakeview
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.007
Location(OSWCR):	COTTONWOOD RD, SANDERSON RD
City(OSWCR):	Lakeview
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78018
Decim Long(OSWCR):	-117.00694
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No:	WCR1990-020383
Location:	SANDERSON AVE, ESPLANADE AVE
City:	Lakeview
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.007
Location(OSWCR):	SANDERSON AVE, ESPLANADE AVE
City(OSWCR):	Lakeview
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78018

Decim Long(OSWCR): -117.00694
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No: WCR2004-011977
Location: 2591 7th Street
City: San Jacinto
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.007
Location(OSWCR): 2591 7th Street
City(OSWCR): San Jacinto
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78018
Decim Long(OSWCR): -117.00694
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No: WCR1776-011316
Location: COTTONWOOD ST, KIRBY ST, SEVENTH ST
City: San Jacinto
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.007
Location(OSWCR): COTTONWOOD ST, KIRBY ST, SEVENTH ST
City(OSWCR): San Jacinto
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78018
Decim Long(OSWCR): -117.00694
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No: WCR1990-020379
Location: SANDERSON AVE, ESPLANADE AVE
City: Lakeview
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.007

Location(OSWCR): SANDERSON AVE, ESPLANADE AVE
City(OSWCR): Lakeview
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78018
Decim Long(OSWCR): -117.00694
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No: WCR1951-002153
Location: SANDERSON, SEVENTH ST, CAWSTON
City:
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.007
Location(OSWCR): SANDERSON, SEVENTH ST, CAWSTON
City(OSWCR):
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78018
Decim Long(OSWCR): -117.00694
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No: WCR1990-020389
Location: SANDERSON AVE, ESPLANADE AVE
City: Lakeview
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.007
Location(OSWCR): SANDERSON AVE, ESPLANADE AVE
City(OSWCR): Lakeview
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78018
Decim Long(OSWCR): -117.00694
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No: WCR0260679
Location:

City:
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.007
Location(OSWCR):
City(OSWCR):
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78018
Decim Long(OSWCR): -117.00694
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No: WCR1962-001781
Location:
City:
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.007
Location(OSWCR):
City(OSWCR):
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78018
Decim Long(OSWCR): -117.00694
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No: WCR1990-020385
Location: SANDERSON AVE, ESPLANADE AVE
City: Lakeview
County: Riverside
Decimal Latitude: 33.7802
Decimal Longitude: -117.007
Location(OSWCR): SANDERSON AVE, ESPLANADE AVE
City(OSWCR): Lakeview
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.78018
Decim Long(OSWCR): -117.00694
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.49	2,590.59	1,515.60	WATER WELLS

WCR No:	WCR1990-020388
Location:	SANDERSON AVE, ESPLANADE AVE
City:	Lakeview
County:	Riverside
Decimal Latitude:	33.7802
Decimal Longitude:	-117.007
Location(OSWCR):	SANDERSON AVE, ESPLANADE AVE
City(OSWCR):	Lakeview
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.78018
Decim Long(OSWCR):	-117.00694
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
11	SSW	0.56	2,972.14	1,591.25	WATER WELLS

WCR No:	WCR1991-018523
Location:	WASHINGTON AVE
City:	
County:	Riverside
Decimal Latitude:	33.7656
Decimal Longitude:	-117.024
Location(OSWCR):	WASHINGTON AVE
City(OSWCR):	
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.76557
Decim Long(OSWCR):	-117.02419
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
11	SSW	0.56	2,972.14	1,591.25	WATER WELLS

WCR No:	WCR1991-018524
Location:	WASHINGTON AVE
City:	
County:	Riverside
Decimal Latitude:	33.7656
Decimal Longitude:	-117.024
Location(OSWCR):	WASHINGTON AVE
City(OSWCR):	
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.76557

Decim Long(OSWCR): -117.02419
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
11	SSW	0.56	2,972.14	1,591.25	WATER WELLS

WCR No: WCR1776-004437
Location:
City:
County: Riverside
Decimal Latitude: 33.7656
Decimal Longitude: -117.024
Location(OSWCR):
City(OSWCR):
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.76557
Decim Long(OSWCR): -117.02419
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
11	SSW	0.56	2,972.14	1,591.25	WATER WELLS

WCR No: WCR1991-018521
Location: WASHINGTON
City: Hemet
County: Riverside
Decimal Latitude: 33.7656
Decimal Longitude: -117.024
Location(OSWCR): WASHINGTON
City(OSWCR): Hemet
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.76557
Decim Long(OSWCR): -117.02419
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
11	SSW	0.56	2,972.14	1,591.25	WATER WELLS

WCR No: WCR0199865
Location:
City:
County: Riverside
Decimal Latitude: 33.7656
Decimal Longitude: -117.024

Location(OSWCR):
City(OSWCR):
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.76557
Decim Long(OSWCR): -117.02419
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
11	SSW	0.56	2,972.14	1,591.25	WATER WELLS

WCR No: WCR1991-018522
Location: WASHINGTON AVE
City:
County: Riverside
Decimal Latitude: 33.7656
Decimal Longitude: -117.024
Location(OSWCR): WASHINGTON AVE
City(OSWCR):
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.76557
Decim Long(OSWCR): -117.02419
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
12	W	0.79	4,171.33	1,509.50	WATER WELLS

WCR No: WCR1996-009439
Location: 22150 WARREN RD
City: San Jacinto
County: Riverside
Decimal Latitude:
Decimal Longitude:
Location(OSWCR): 22150 WARREN RD
City(OSWCR): San Jacinto
County(OSWCR): Riverside
Decimal Lat(OSWCR):
Decim Long(OSWCR):
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
13	SE	0.70	3,721.84	1,523.60	WATER WELLS

WCR No: WCR0143009
Location:

City:
County: Riverside
Decimal Latitude: 33.7656
Decimal Longitude: -117.007
Location(OSWCR):
City(OSWCR):
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.76562
Decim Long(OSWCR): -117.00684
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
13	SE	0.70	3,721.84	1,523.60	WATER WELLS

WCR No: WCR0308468
Location:
City:
County: Riverside
Decimal Latitude: 33.7656
Decimal Longitude: -117.007
Location(OSWCR):
City(OSWCR):
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.76562
Decim Long(OSWCR): -117.00684
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
13	SE	0.70	3,721.84	1,523.60	WATER WELLS

WCR No: WCR2013-012986
Location: 13511 Euclid Street
City: Garden Grove
County: Orange
Decimal Latitude: 33.7656
Decimal Longitude: -117.007
Location(OSWCR): 13511 Euclid Street
City(OSWCR): Garden Grove
County(OSWCR): Orange
Decimal Lat(OSWCR): 33.76562
Decim Long(OSWCR): -117.00684
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB

13	SE	0.70	3,721.84	1,523.60	WATER WELLS

WCR No:	WCR2004-015751
Location:	Fruitvale Avenue & Cawston Avenue
City:	Hemet
County:	Riverside
Decimal Latitude:	33.7656
Decimal Longitude:	-117.007
Location(OSWCR):	Fruitvale Avenue & Cawston Avenue
City(OSWCR):	Hemet
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.76562
Decim Long(OSWCR):	-117.00684
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
13	SE	0.70	3,721.84	1,523.60	WATER WELLS

WCR No:	WCR2004-015753
Location:	Fruitvale Avenue & Cawston Avenue
City:	Hemet
County:	Riverside
Decimal Latitude:	33.7656
Decimal Longitude:	-117.007
Location(OSWCR):	Fruitvale Avenue & Cawston Avenue
City(OSWCR):	Hemet
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.76562
Decim Long(OSWCR):	-117.00684
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
13	SE	0.70	3,721.84	1,523.60	WATER WELLS

WCR No:	WCR2004-016271
Location:	Eaton Avenue & Cawston
City:	Hemet
County:	Riverside
Decimal Latitude:	33.7656
Decimal Longitude:	-117.007
Location(OSWCR):	Eaton Avenue & Cawston
City(OSWCR):	Hemet
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.76562

Decim Long(OSWCR): -117.00684
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
13	SE	0.70	3,721.84	1,523.60	WATER WELLS

WCR No: WCR2004-015752
Location: Fruitvale Avenue & Cawston Avenue
City: Hemet
County: Riverside
Decimal Latitude: 33.7656
Decimal Longitude: -117.007
Location(OSWCR): Fruitvale Avenue & Cawston Avenue
City(OSWCR): Hemet
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.76562
Decim Long(OSWCR): -117.00684
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
18	ESE	0.90	4,752.58	1,527.86	WATER WELLS

WCR No: WCR1989-019574
Location: S Kirby Street and W Esplanade Avenue
City: San Jacinto
County: Riverside
Decimal Latitude: 33.7712
Decimal Longitude: -117
Location(OSWCR): S Kirby Street and W Esplanade Avenue
City(OSWCR): San Jacinto
County(OSWCR): Riverside
Decimal Lat(OSWCR): 33.771241
Decim Long(OSWCR): -117.000185
Data Source: California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
19	WSW	0.96	5,082.46	1,510.27	WATER WELLS

WCR No: WCR1994-011579
Location: 24150 MAZE STONE CRT
City: Hemet
County: Riverside
Decimal Latitude:
Decimal Longitude:

Wells and Additional Sources Detail Report

Location(OSWCR):	24150 MAZE STONE CRT
City(OSWCR):	Hemet
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	
Decim Long(OSWCR):	
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
21	NNE	0.89	4,715.45	1,502.60	WATER WELLS

WCR No:	WCR2021-006123
Location:	
City:	
County:	Riverside
Decimal Latitude:	33.7927
Decimal Longitude:	-117.013
Location(OSWCR):	
City(OSWCR):	
County(OSWCR):	Riverside
Decimal Lat(OSWCR):	33.79269
Decim Long(OSWCR):	-117.01337
Data Source:	California Department of Water Resources - OSWCR(Well Numbers); California Department of Water Resources - Well Completion Reports

Radon Information

This section lists any relevant radon information found for the target property.

Federal EPA Radon Zone for *RIVERSIDE* County: **2**

Zone 1: Counties with predicted average indoor radon screening levels greater than 4 pCi/L
Zone 2: Counties with predicted average indoor radon screening levels from 2 to 4 pCi/L
Zone 3: Counties with predicted average indoor radon screening levels less than 2 pCi/L

Federal Area Radon Information for *RIVERSIDE* County

No Measures/Homes:	24
Geometric Mean:	0.3
Arithmetic Mean:	0.3
Median:	0.5
Standard Deviation:	0.8
Maximum:	1.7
% >4 pCi/L:	0
% >20 pCi/L:	0
Notes on Data Table:	TABLE 1. Screening indoor radon data from the EPA/State Residential Radon Survey of California conducted during 1989-90. Data represent 2-7 day charcoal canister measurements from the lowest level of each home tested.

Appendix

Federal Sources

FEMA National Flood Hazard Layer — **FEMA FLOOD**

The National Flood Hazard Layer (NFHL) data incorporates Flood Insurance Rate Map (FIRM) databases published by the Federal Emergency Management Agency (FEMA), and any Letters Of Map Revision (LOMRs) that have been issued against those databases since their publication date. The FIRM Database is the digital, geospatial version of the flood hazard information shown on the published paper FIRMs. The FIRM Database depicts flood risk information and supporting data used to develop the risk data. The FIRM Database is derived from Flood Insurance Studies (FISs), previously published FIRMs, flood hazard analyses performed in support of the FISs and FIRMs, and new mapping data, where available.

Indoor Radon Data — **INDOOR RADON**

Indoor radon measurements tracked by the Environmental Protection Agency(EPA) and the State Residential Radon Survey.

Public Water Systems Violations and Enforcement Data — **PWSV**

This list of drinking water violations and enforcement actions is sourced from the U.S Environmental Protection Agency's (EPA) Enforcement and Compliance History Online (ECHO) system that incorporates Public Water Systems data from EPA's Safe Drinking Water Information System (SDWIS) database, as part of the national download of Safe Drinking Water Act (SDWA) data. SDWIS contains information on public water systems from the Public Water System Supervision (PWSS) Program, including monitoring, enforcement, and violation data related to requirements established by the SWDA. Address information provided in SWDIS may correspond either with the physical location of the water system, or with a contact address.

Radon Zone Level — **RADON ZONE**

Areas showing the level of Radon Zones (level 1, 2 or 3) by county. This data is maintained by the Environmental Protection Agency (EPA).

Safe Drinking Water Information System (SDWIS) — **SDWIS**

This national download of Safe Drinking Water Act (SDWA) data is sourced from the U.S Environmental Protection Agency's (EPA) Enforcement and Compliance History Online (ECHO) system that incorporates Public Water Systems data from EPA's Safe Drinking Water Information System (SDWIS) database. SDWIS contains information on public water systems from the Public Water System Supervision (PWSS) Program related to requirements established by the Safe Drinking Water Act (SDWA). Address information provided in SWDIS may correspond either with the physical location of the water system, or with a contact address.

Soil Survey Geographic database — **SSURGO**

The Soil Survey Geographic database (SSURGO) contains information about soil as collected by the National Cooperative Soil Survey at the Natural Resources Conservation Service (NRCS). Soil maps outline areas called map units. The map units are linked to soil properties in a database. Each map unit may contain one to three major components and some minor components.

U.S. Fish & Wildlife Service Wetland Data — **US WETLAND**

The U.S. Fish & Wildlife Service Wetland layer represents the approximate location and type of wetlands and deepwater habitats in the United States.

USGS Current Topo — **US TOPO**

US Topo topographic maps are produced by the National Geospatial Program of the U.S. Geological Survey (USGS). The project was launched in late 2009, and the term "US Topo" refers specifically to quadrangle topographic maps published in 2009 and later.

USGS Geology — **US GEOLOGY**

Seamless maps depicting geological information provided by the United States Geological Survey (USGS).

USGS National Water Information System — **FED USGS**

The U.S. Geological Survey's (USGS) National Water Information System (NWIS) is the nation's principal repository of water resources data. The data includes comprehensive information of well-construction details, time-series data for gage height, streamflow, groundwater level, and precipitation and water use data. This NWIS database information is obtained through the Water Quality Data Portal (WQP). The WQP

is a cooperative service sponsored by the USGS, the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC).

State Sources

Oil and Gas Wells **OGW**

The California Department of Conservation, Geologic Energy Management Division (CalGEM) provides this oil and gas wells dataset. CalGEM makes no warranties, whether expressed or implied, and the data is for informational purposes.

Periodic Groundwater Level Measurement Locations **MONITOR WELLS**

Locations of groundwater level monitoring wells in the Department of Water Resources (DWR)'s Periodic Groundwater Levels dataset. The DWR Periodic Groundwater Levels dataset contains seasonal and long-term groundwater level measurements collected by the Department of Water Resources and cooperating agencies.

Well Completion Reports **WATER WELLS**

List of wells from the Well Completion Reports data made available by the California Department of Water Resources' (DWR) Online System for Well Completion Reports (OSWCR). Please note that the majority of well completion reports have been spatially registered to the center of the 1x1 mile Public Land Survey System section that the well is located in.

Liability Notice

Reliance on information in Report: The Physical Setting Report (PSR) DOES NOT replace a full Phase I Environmental Site Assessment but is solely intended to be used as a review of environmental databases and physical characteristics for the site or adjacent properties.

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APPENDIX D: QUALIFICATIONS/INSURANCE

PARTNER

Amy Rudegeair
Senior Project Manager

Education

Bachelor of Science, Environmental Studies – Science Concentration, Elon University, *cum laude*

Highlights

15 years' experience in the environmental industry

8 years' experience completing in-house environmental risk determinations for major national lending institutions

8 years' experience in real estate due diligence including performing and/or overseeing Phase I Environmental Assessments, Phase II Environmental Assessments, Environmental Transaction Screens

Experience Summary

As a Senior Project Manager at Partner Engineering and Science, Inc. (Partner), Ms. Rudegeair effectively manages the completion of single and multi-site environmental due diligence projects encompassing a broad range of property types including retail, office, industrial, hospitality, assisted living and special use. She interfaces directly with bank loan officers, regulatory agencies, attorneys, environmental analysts and numerous borrowers on subjects including environmental compliance and liability as well as contracting and scope of work issues. Ms. Rudegeair's banking experience gives her a unique understanding of client's needs and goals.

Environmental Risk Policy

Prior to joining Partner, she served as an Environmental Risk Officer with a major regional retail bank. Her background in environmental science and direct experience in environmental risk management at lending institutions, allows her to effectively develop due diligence solutions. During this time, Ms. Rudegeair worked on due diligence projects throughout the continental United States. However, she specialized in procurement and review Phase I Environmental Site Assessments, Environmental Transaction Screens, Phase II and III Subsurface Investigations, Remediation projects, Asbestos Surveys, Lead-based Paint Surveys, Radon Studies, and Mold Assessments in the Southeast.

Her direct involvement in thousands of real estate transactions qualifies her to differentiate between potential concerns and material risks. Ms. Rudegeair has experience working as a team with business lenders, retail lenders, capital markets groups, problems loan administrators and owned real estate managers. She has proven her ability to translate complex environmental issues into language that can keep real estate transactions moving forward.

Ms. Rudegeair collaborated in the development of overall environmental risk policy and has prepared educational materials regarding environmental risk and policy for lenders and third party vendors. Specifically, she prepared guidance documentation for SBA lending and a scope of work addendum for loan work out (foreclosure) situations for a national lender.

Project Management

Ms. Rudegeair joined the Partner team in May 2010 continues to successfully manage environmental due diligence projects. Ms. Rudegeair has managed staff members through the completion of thousands of

environmental due diligence projects. Furthermore, Ms. Rudegeair specializes in technically complex property types.

Project Experience

Transatlantic Cable Landing Stations, Nationwide. Successfully managed and performed quality control oversight for the completion of a portfolio of Phase I Environmental Site Assessments in accordance client specific scope of work on Transatlantic Cable Landing Stations in the United States, Canada, Great Britain and Ireland. While many international localities are not required to respond to information requests, Ms. Rudegeair oversaw thorough local and regulatory research to comply with the client's scope of work.

Former IBM Manufacturing Facility, Northern California. Successfully managed and performed quality control oversight for the completion of a Phase I Environmental Site Assessment on an approximate 2-acre portion of a 350-acre manufacturing campus planned for redevelopment. In order to determine subject property specific conditions, Ms. Rudegeair oversaw the review of numerous release case files for information relevant to investigation and remediation activities conducted on or near the subject property portion of the larger campus.

Various Apartment Complexes, Nationwide. Successfully managed and performed quality control oversight for the completion of numerous Phase I Environmental Site Assessments in accordance with the Fannie Mae scope of work for various apartment complexes throughout the United States.

Industrial Landfill, Allen Park, Michigan. Successfully managed and performed quality control oversight for the completion of a Phase I Environmental Site Assessment, inclusive of an extensive regulatory file review, on a former industrial landfill. The assessment was complicated by a three-dimensional legal description to separate the former landfill from the surface development and a condominium association inclusive of the former landfill.

Historical Trucking Terminal, Kingsport, Tennessee. Successfully managed and performed quality control oversight for the completion of a Phase I Environmental Site Assessment on a historical trucking terminal. Due to limited historical coverage, Ms. Rudegeair oversaw thorough local and regulatory research to identify the historical occupant which led to the identification of historical release cases.

Metal Galvanizing Facility, Seattle, Washington. Successfully managed and performed quality control oversight for the completion of a Phase I Environmental Site Assessment on a Comprehensive Environmental Response, Compensation and Liability Information System No Further Remedial Action Planned (NFRAP) site that was also identified as a contributor to the Lower Duwamish Waterway National Priority List (NPL) site. The complex regulatory issues required a thorough evaluation and understanding of risk associated with environmental liabilities.

Gasoline service stations, Nationwide. Conducted, managed, and/or reviewed Phase I Environmental Site Assessments on operating and closed gasoline service stations throughout the continental United States, Alaska, and Hawaii. Conducted extensive reviews of subsurface investigations to evaluate the potential for the presence of residual contamination or undiscovered contamination to remain in place.

Affiliations

Member, Environmental Bankers Association

Speaking

Branch Banking & Trust (BB&T) Environmental Roundtable, 2006-2009 – Ms. Rudegeair presented information regarding BB&T's environmental policy, report requirements, and technical issues to third party vendors, colleagues, and peers.

Accolades

1st Place – Risk Management Association, 2010 Annual Paper Writing Contest: Guidance for Environmental Due Diligence in Loan Work Out Situation

Contact

arudegeair@partneresi.com

Education

BA Earth Sciences

Training

HAZWOPER 40Hr.

Highlights

(Present) Staff Assessor
1 year/ 7 mo. Environmental Consultation
7 mo. Sanitation Surveyor / Water Quality Assessor

Phase I Environmental Site Assessments
Phase II Site Characterization
Soil Remediation
Various Media Sampling
Environmental Desktop Reports
Water Sanitation Surveyor

Experience Summary

Mr. Kody Klein is a Staff Assessor for Partner ESI performing Environmental Site Assessments and equity assessments for commercial, industrial, retail, office and residential properties. His tasks include collecting information, investigating site history, performing site visits, and providing detailed reports.

Mr. Klein is an experienced Environmental Consultant with work experience related to Phase I ESA such as site reconnaissance, research and review of regulatory and historical land use records, and identification of potential environmental concerns and/or impacts to a property. Mr. Klein also has work in Phase II Site Characterization, such as soil borings, direct-push drill rigging, and hand auguring; Soil Remediation, such as implementation and monitoring of soils, and soil gas emissions; and Various Media Sampling for profiling purposes involving collecting and analyzing various media (i.e., concrete, asphalt, water, groundwater, waste oils, etc.), and screening limit comparisons.

Project Experience

Jewel, Vernon, Los Angeles, CA – Site Monitoring / Remediation
Profile: Former Tank Bottom Storage Facility / Industrial Manufacturing Warehouse, 1.5 Acres
Challenges: Former tank bottom storage turned industrial manufacturing warehouse with four sumps consisting of mixed waste oils, hazardous materials, and animal byproduct. Due to the long-term property use, the sumps extended approximately 150 to 225 feet in diameter and extended approximately 25 feet below ground surface. Two clarifiers and one waste catch-basin were still present on site. Job site was undergoing removal/remediation for redevelopment as a parking lot. Soils were monitored with scrutiny due to documented contamination while trucks were loaded for off-site disposal. Demolition crew removed and destroyed a clarifier whilst monitoring excavation crew removing contaminated soils, prompting

immediate shut down of the site and contacting county inspectors for documenting. Samples were collected and the incident was documented with the clarifier being closed.

Ball Bearing Manufacturer, City of Los Angeles, CA – Phase I ESA

Profile: Major ball bearing manufacturer requested a Phase I ESA
Challenges: Part of the property had been burned down before acquisition. Over 500 5-to-55-gallon containers consisting of various machinery liquids, old paints, waste oils, and hydro-electrical fluids present and stored throughout the subject property. Buildings had lead-based paint and mostly asbestos-containing materials (built sometime around 1915). On-site operations were still in progress. Property had an undisclosed UST buried on-site along with several in-ground machinery pits and possible hoists that were backfilled with concrete and built upon. Extensive phase II subsurface investigation was encouraged to the client.

Industrial Metal Stamping and Paint Manufacturing, Commerce, CA – Site Monitoring / Remediation

Profile: Former multi-building, multi-tenant property site monitoring for contaminated soils
Challenges: Grading of the property revealed extremely volatile levels of contaminated soils present at the subject property. Per soil management plan, AQMD was contacted, and permits were issued to the site. All contaminated soils were to be excavated and removed under AQMD guidelines and disposed off-site at a soil disposal/remediation facility. Client unfortunately, decided that removal of all soils was too expensive and ordered to only excavated to extent of OX-grade. Client breached signed SMP and contracts, and high contaminated soils were left below OX-grade. Documents stating that the Environmental Consultants could not go against client's wishes and followed as instructed.

Santa Fe Springs, CA – Air Gas Emission Monitoring

Profile: O & M System for soil gas extraction and remediation
Challenges: During weekly monitoring of soil gas emissions, groundwater and in-ground gas monitoring wells were to be evaluated for additional information. All wells were submerged beneath water due to recent heavy rains. O & M system had malfunctioned due to weather related conditions. Project manager was informed, and technical staff was called in for maintenance and restarting the system. Groundwater levels had to be measured within all wells across the site.

Orange County, CA – Water Quality Survey

Profile: Sanitation survey of recreational waters, stream, estuaries
Challenges: During a weekly survey, high concentrations of chlorine and TDS were observed in water samples taken. Determined that an illegal waste dump was occurring into the boating/swimming lake and authorities had to be informed. A different waterway consists of dead animals, possible human fecal matter, and what was identified as a human toe. Authorities were informed and a hazmat was called in to clean the area. Photographs and documents were logged.

Contact

kklein@partneresi.com

PARTNER

Robert Vaughn
Principal

Education

B.A., Environmental Health & Planning and Criminal Justice, University of California, Irvine

Registrations/Training

OSHA 40-Hour Hazwoper Health and Safety Training
EPA Accredited Asbestos Inspector
EPA Accredited Asbestos Management Planner
EPA Accredited Asbestos Abatement/Contractor Supervisor
HUD Map Underwriter Certification – 2004

Highlights

31 Years of Experience in National Environmental Due Diligence Consulting
Phase I Environmental Site Assessments
Phase II Subsurface Soil/Soil Gas Investigations
Property Condition Assessments
Asbestos/Lead-Based Paint Inspections

Experience Summary

Mr. Vaughn currently serves as a National Client Manager with significant environmental and due diligence engineering experience nationwide. Mr. Vaughn's experience includes two former Engineering News-Record Top 500 Design firms and a Fortune 500 firm. His responsibilities include full-phase environmental consulting, national client management, multi-scope contract negotiation/execution, portfolio project management, and technical report quality control. Mr. Vaughn's regional and national expertise compliments the wide variety of Partner projects and client types including prominent fast-food retail chains, attorneys, commercial developers, mortgage bankers, real estate brokers, individual investors, equity/institutional investment groups, and financial lending institutions, including CMBS lenders, SBA lenders, and GSA (Fannie and Freddie) lenders.

Mr. Vaughn has served as an environmental scientist, project manager, or executive senior author on over 20,000 real estate transactions. Mr. Vaughn's due diligence resume includes experience at all levels, advising lenders and real estate investors through the following product types:

- Phase I Environmental Site Assessments
- Phase II Subsurface Investigations
- Phase III Site Characterizations
- Remedial Cost Estimates
- Remediation Design and Implementation
- Facility Condition Assessments
- Property Condition Assessments
- Probable Maximum Loss Assessments
- Property Condition Evaluations
- Asbestos Surveys
- Lead-Based Surveys

Real estate investors, redevelopment agencies, financial institutions, insurance lenders, and real estate equity funds have come to rely on his advice and judgment to help them with their real estate business decisions. Mr. Vaughn is a dedicated professional who takes pride and pleasure in meeting his client's needs and spearheading and assembling the team with the expertise to handle any issue that may come up during the transaction.

Project Experience

Multi-Site Portfolio, Nationwide - Managed performance and delivery of summary matrix and completed Phase I reports for a 300+-site portfolio of apartments for a large stakeholder group.

Multi-Site Portfolio, Nationwide - Managed a 350+-site portfolio of bank branches for one of the largest bank mergers the mid-1990s.

High Rise Office Building, San Francisco - Worked on one of the largest high-rise acquisitions in San Francisco in 2015 to manage pre-acquisition due diligence for equity investor of a high rise office building in downtown San Francisco. Included a Phase I ESA, equity PCA with specialty evaluations of facade, MEP, Fire and Life Safety, Roof, and ADA.

Multi-Site Gas Station Portfolio, California - Managed performance and delivery of complete reports for a 25-site portfolio of gas stations for national lender.

Multi-Site Fast-Food Portfolio, Midwest - Managed the completion of 25 Phase I ESAs located in the Midwest in a 10-business day turnaround.

Affiliations

Environmental Banks Association
National Retail Tenants Association

Speaking

Due Diligence 101, National Retail Tenants Association, Orlando, FL.
Environmental Due Diligence: What You Don't Know Can Hurt You, National Retail Tenants Association, Reno NV.

Contact

rvaughn@partneresi.com

PRELIMINARY
HYDROLOGY STUDY

FOR

TENTATIVE TRACT NO. 39076

Prepared by:

BLAINE A. WOMER CIVIL ENGINEERING
41555 East Florida Avenue, Suite G
Hemet, CA 92544

October 27, 2024
Revised July 14, 2025

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Appendix D: Preliminary Basin Sizing Hydrology for Mitigating Incremental Increase

- 100-Year, 24 Hour Unit Hydrograph, Undeveloped Condition
- 100-Year, 24 Hour Unit Hydrograph, Developed Condition
- Resource Data

TENTATIVE TRACT NO. 39076

PRELILMINARY HYDROLOGY STUDY

NARRATIVE:

Tentative Tract No. 39076 is a 419-lot subdivision on 75.7 acres located west of Cawston Avenue between Esplanade Avenue and Seventh Street. The site naturally drains to the west/northwest and the project has been conceptually designed to honor that drainage pattern. Natural condition stormwater flows sheet flow to the northwest corner of the property and ultimately drain into Seventh Street. Rational hydrology calculations for the 10-year and 100-year flows are included in Appendix D of this report.

Site soils are BC, per the Riverside County Flood Control and Water Conservation District Hydrology Manual.

The stormwater basin referenced above has been sized to mitigate the incremental difference in volume between the developed and undeveloped condition for the 100-year, 24-hour storm. Runoff volume in excess of the mitigation volume will discharge to Seventh Street through a curb outlet structure. To mitigate standing water in the basin, a pump station will be installed to drain the basin over an extended period of time. Pumped flows will discharge to an existing catch basin in Seventh Street located approximately 1,786 feet west of the northwest corner of Tentative Tract 39706. The need for pump storm routing will be addressed through additional hydrograph analysis during final engineering design. Preliminary unit hydrograph calculations for the preliminary basin sizing are included in Appendix D.

The site is not subject to offsite flows due to the perimeter street improvements.

The following report includes rational hydrology calculations for the 10-year and 100-year recurrence interval for the undeveloped and developed site conditions. Stormwater flows

discharge via surface flow to onsite bioretention basins dispersed throughout the site for water quality mitigation. Excess bioretention flows are intercepted via onsite storm drain systems throughout the tract and discharged to the stormwater mitigation basin discussed above. Peak runoff flows within the subdivision are summarized as follows:

Rational Hydrology Runoff Summary

Drainage Area Designation*	Area (Ac)	Q_{10}(cfs)	Q_{100} (cfs)
Undeveloped Site	75.7	45.1	75.1
Area A	7.8	8.5	13.3
Area B	5.1	5.8	9.0
Area C	5.8	6.7	10.4
Area D	4.4	5.2	8.1
Area E	8.5	9.7	15.1
Area F	3.7	4.5	7.0
Area G	5.7	6.9	10.8
Area H	9.4	10.3	16.1
Area I	8.3	8.9	13.8
Area J	10.0	11.2	17.4

* See Rational Hydrology Exhibits in Appendix B and C

Retention Basin Volume Mitigation

Developed Volume, 100-year, 24-hour hydrograph = 817,436 cf

Undeveloped Volume, 100-year, 24-hour hydrograph = 652,923 cf

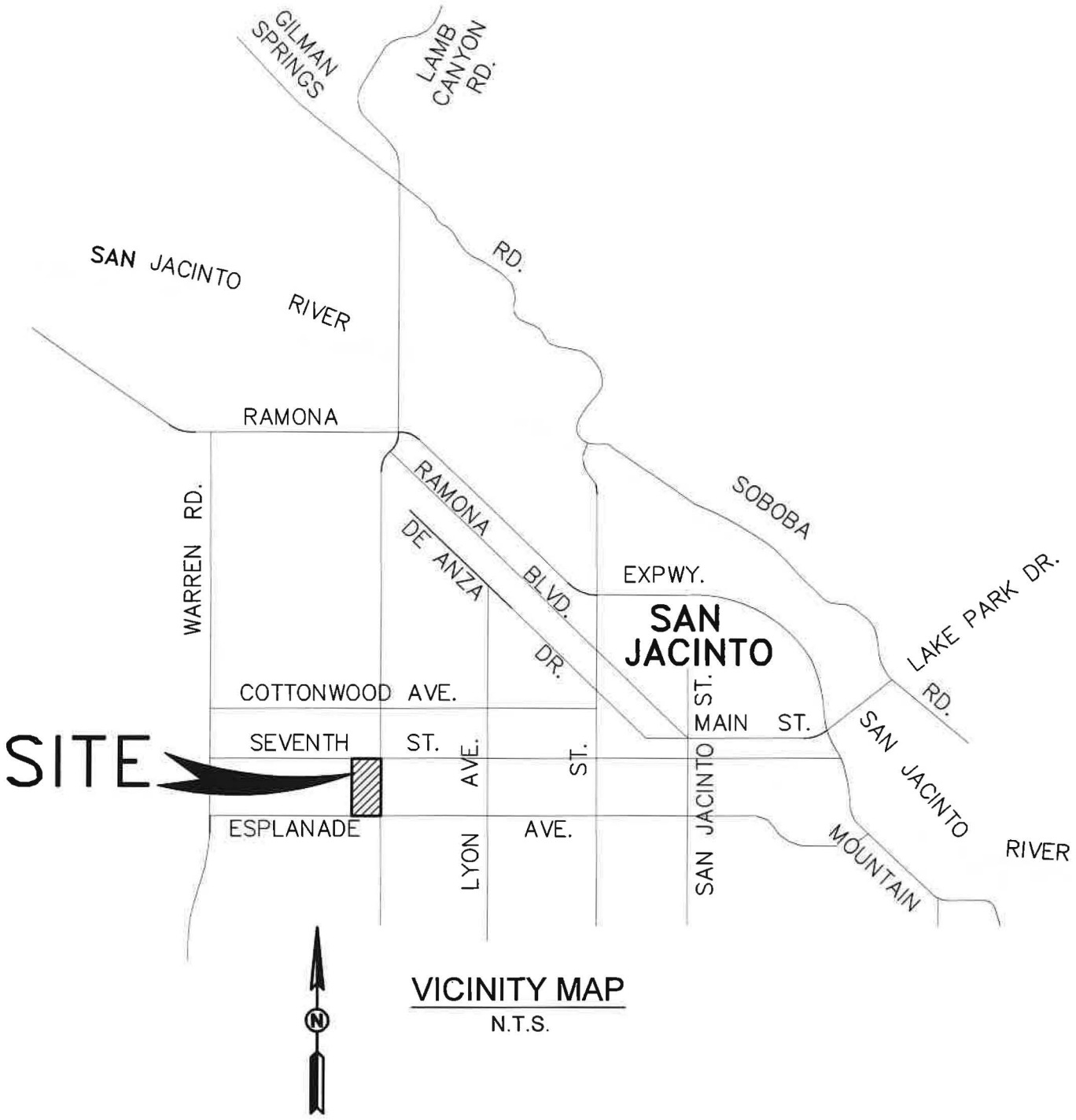
Volume Difference = 164,513 cf

Basin Volume vs Depth Summary

Depth (ft)	Area (sf)	Volume (cf)	Accum. Volume (cf)
0	36,163	0	0
1	39,246	37,704	37,704
2	42,385	40,815	78,519
3	45,582	43,983	122,502
4	48,834	47,208	169,710
5	52,144	50,489	220,199

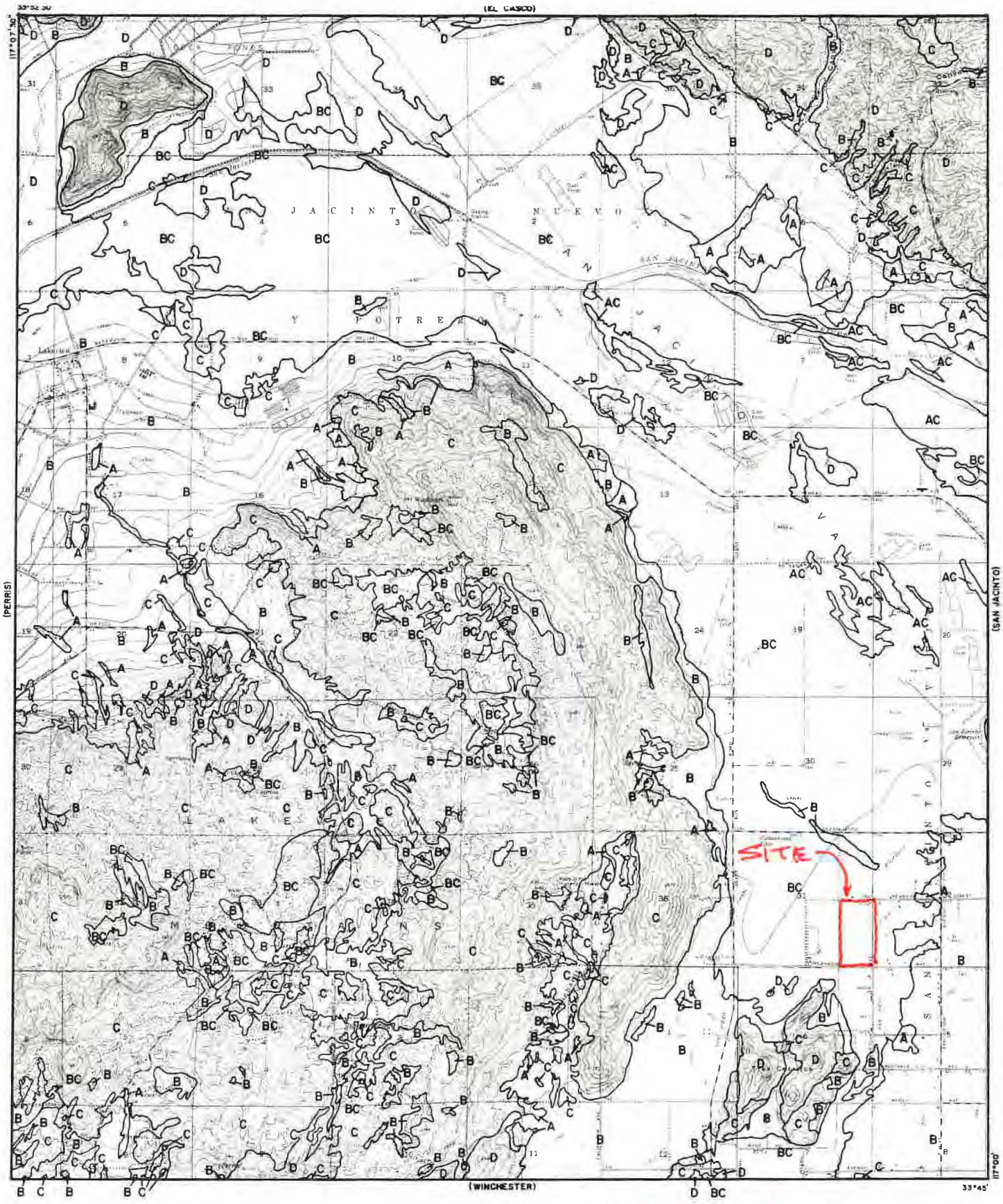
Basin Depth = 6.0' Total

APPENDIX 'A'



VICINITY MAP

N.T.S.



LEGEND

——— SOILS GROUP BOUNDARY

A SOILS GROUP DESIGNATION

RCFC&WCD

HYDROLOGY MANUAL

0 FEET 5000

HYDROLOGIC SOILS GROUP MAP FOR LAKEVIEW

PLATE C-1.31

RCFC & WCD

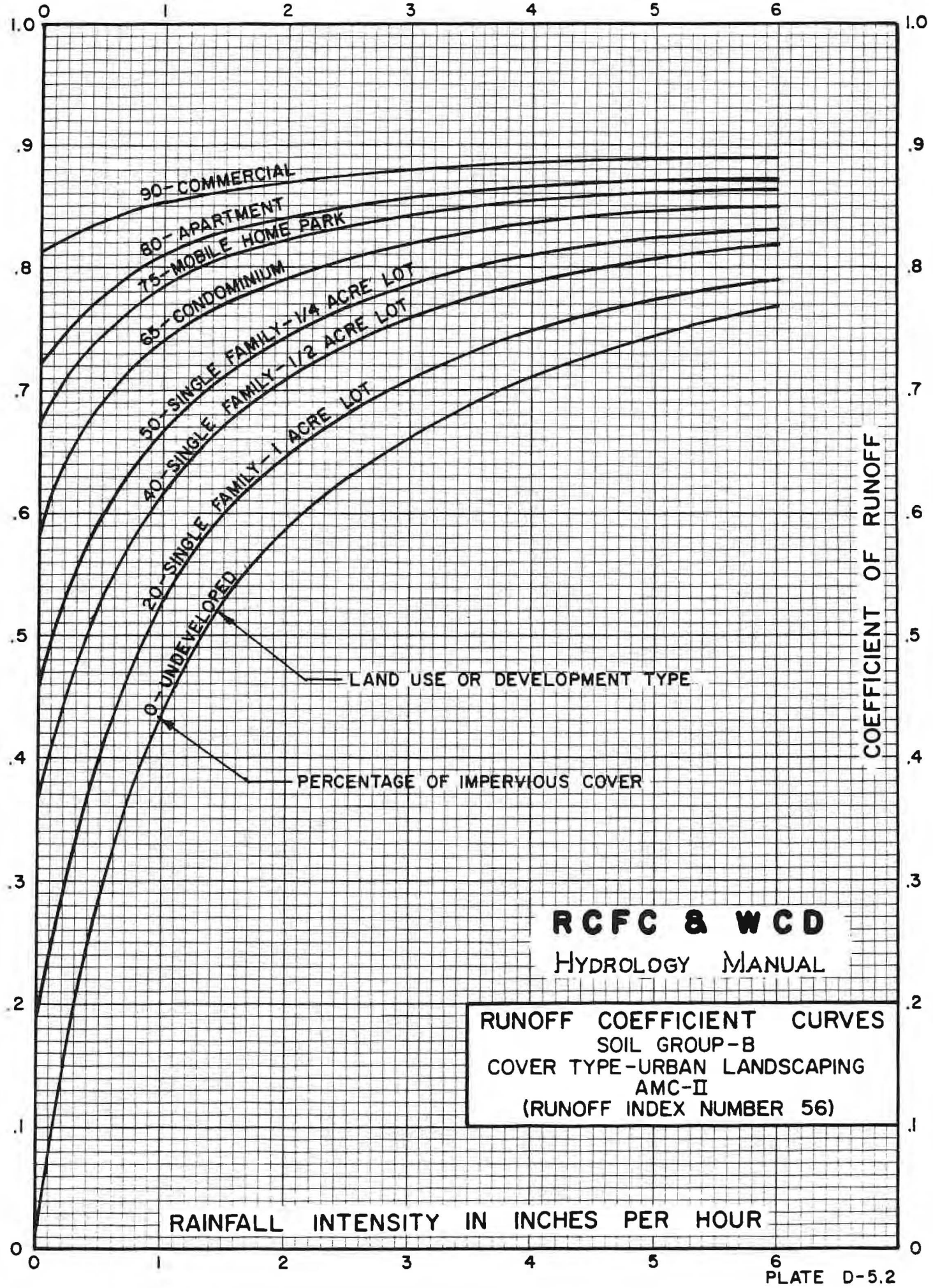
HYDROLOGY MANUAL

RAINFALL INTENSITY–INCHES PER HOUR

RIVERSIDE			RIVERSIDE (FOOTHILL AREAS)			RUBIDOUX			SAN JACINTO			SUN CITY		
DURATION MINUTES	FREQUENCY		DURATION MINUTES	FREQUENCY		DURATION MINUTES	FREQUENCY		DURATION MINUTES	FREQUENCY		DURATION MINUTES	FREQUENCY	
	10 YEAR	100 YEAR		10 YEAR	100 YEAR		10 YEAR	100 YEAR		10 YEAR	100 YEAR		10 YEAR	100 YEAR
5	2.75	3.92	5	3.14	4.71	5	3.18	4.71	5	2.81	4.16	5	3.25	4.85
6	2.48	3.55	6	2.84	4.26	6	2.87	4.26	6	2.56	3.79	6	2.95	4.40
7	2.28	3.26	7	2.61	3.91	7	2.64	3.91	7	2.37	3.51	7	2.72	4.06
8	2.12	3.03	8	2.42	3.63	8	2.45	3.63	8	2.22	3.29	8	2.53	3.78
9	1.99	2.84	9	2.27	3.41	9	2.30	3.41	9	2.09	3.10	9	2.38	3.55
10	1.88	2.68	10	2.14	3.21	10	2.17	3.21	10	1.98	2.94	10	2.25	3.36
11	1.78	2.54	11	2.03	3.05	11	2.06	3.05	11	1.89	2.80	11	2.14	3.19
12	1.70	2.42	12	1.94	2.91	12	1.96	2.91	12	1.81	2.68	12	2.04	3.05
13	1.62	2.32	13	1.86	2.78	13	1.88	2.78	13	1.74	2.58	13	1.96	2.92
14	1.56	2.23	14	1.78	2.67	14	1.80	2.67	14	1.68	2.48	14	1.88	2.81
15	1.50	2.14	15	1.71	2.57	15	1.74	2.57	15	1.62	2.40	15	1.81	2.71
16	1.45	2.07	16	1.66	2.48	16	1.68	2.48	16	1.57	2.32	16	1.75	2.62
17	1.40	2.00	17	1.60	2.40	17	1.62	2.40	17	1.52	2.25	17	1.70	2.54
18	1.36	1.94	18	1.55	2.33	18	1.57	2.33	18	1.48	2.19	18	1.65	2.46
19	1.32	1.88	19	1.51	2.26	19	1.52	2.26	19	1.44	2.13	19	1.60	2.39
20	1.28	1.83	20	1.46	2.20	20	1.48	2.20	20	1.40	2.08	20	1.56	2.33
22	1.22	1.74	22	1.39	2.08	22	1.41	2.08	22	1.34	1.98	22	1.48	2.21
24	1.16	1.66	24	1.32	1.99	24	1.34	1.99	24	1.28	1.90	24	1.41	2.11
26	1.11	1.58	26	1.27	1.90	26	1.28	1.90	26	1.23	1.82	26	1.36	2.03
28	1.06	1.52	28	1.22	1.82	28	1.23	1.82	28	1.19	1.76	28	1.30	1.95
30	1.02	1.46	30	1.17	1.76	30	1.19	1.76	30	1.15	1.70	30	1.26	1.88
32	.99	1.41	32	1.13	1.70	32	1.14	1.70	32	1.11	1.64	32	1.21	1.81
34	.96	1.37	34	1.09	1.64	34	1.11	1.64	34	1.08	1.59	34	1.18	1.76
36	.93	1.32	36	1.06	1.59	36	1.07	1.59	36	1.05	1.55	36	1.14	1.70
38	.90	1.29	38	1.03	1.54	38	1.04	1.54	38	1.02	1.51	38	1.11	1.66
40	.87	1.25	40	1.00	1.50	40	1.01	1.50	40	.99	1.47	40	1.08	1.61
45	.82	1.17	45	.94	1.41	45	.95	1.41	45	.94	1.39	45	1.01	1.51
50	.77	1.11	50	.88	1.33	50	.90	1.33	50	.89	1.31	50	.96	1.43
55	.73	1.05	55	.84	1.26	55	.85	1.26	55	.85	1.25	55	.91	1.36
60	.70	1.00	60	.80	1.20	60	.81	1.20	60	.81	1.20	60	.87	1.30
65	.67	.96	65	.77	1.15	65	.78	1.15	65	.78	1.15	65	.83	1.25
70	.64	.92	70	.73	1.10	70	.74	1.10	70	.75	1.11	70	.80	1.20
75	.62	.88	75	.71	1.06	75	.72	1.06	75	.72	1.07	75	.77	1.15
80	.60	.85	80	.68	1.02	80	.69	1.02	80	.70	1.04	80	.75	1.12
85	.58	.83	85	.66	.99	85	.67	.99	85	.68	1.01	85	.72	1.08
SLOPE = .550			SLOPE = .550			SLOPE = .550			SLOPE = .500			SLOPE = .530		

STANDARD INTENSITY–DURATION CURVES DATA

PLATE D-4.1 (5 of 6)



RCFC & WCD

HYDROLOGY MANUAL

RUNOFF COEFFICIENT CURVES
SOIL GROUP-B
COVER TYPE-URBAN LANDSCAPING
AMC-II
(RUNOFF INDEX NUMBER 56)

PLATE D-5.2

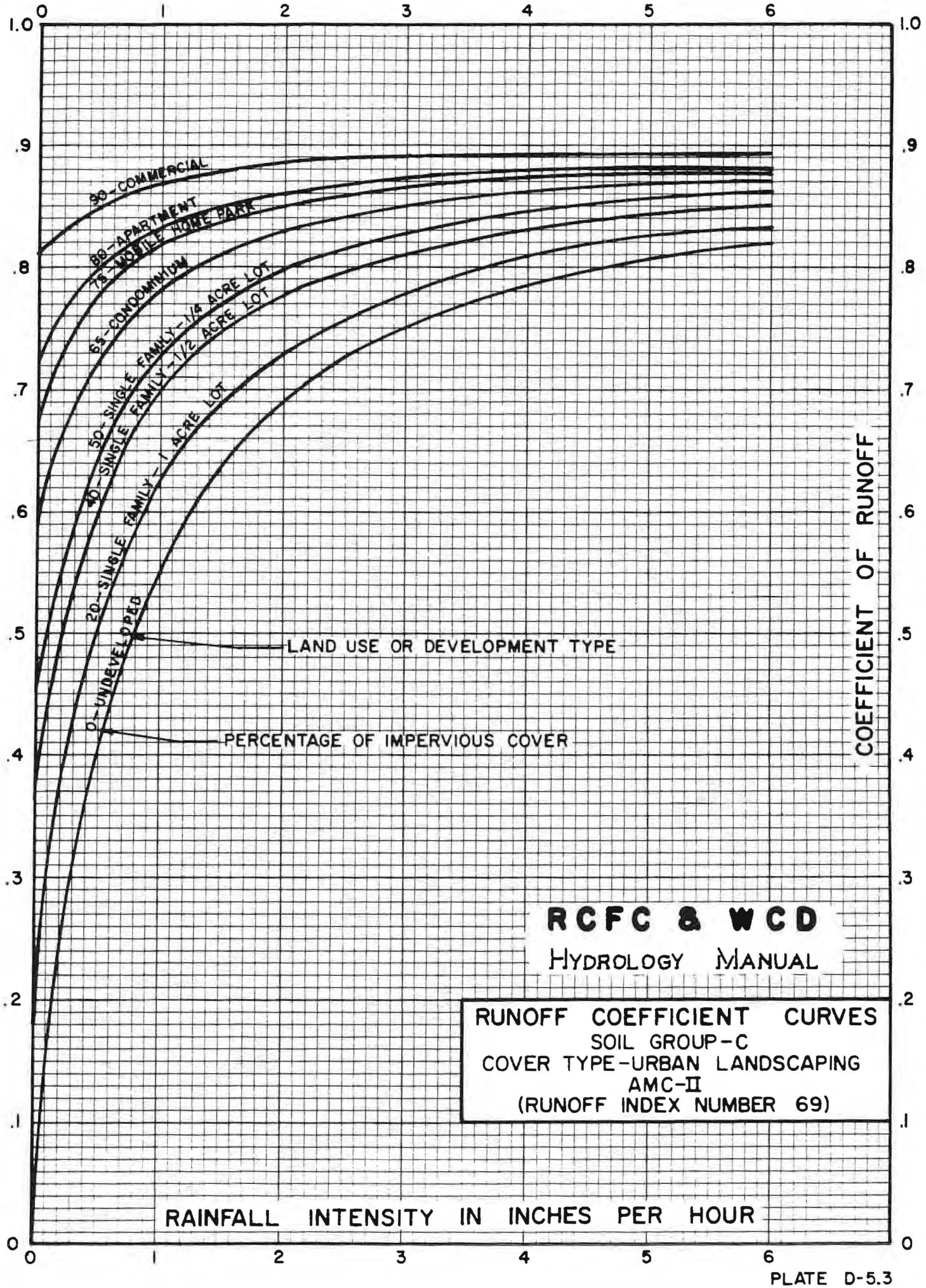

0
1
2
3
4
5
6
1.0
.9
.8
.7
.6
.5
.4
.3
.2
.1
0
90 - COMMERCIAL
80 - APARTMENT
75 - MOBILE HOME PARK
65 - CONDOMINIUM
50 - SINGLE FAMILY - 1/4 ACRE LOT
40 - SINGLE FAMILY - 1/2 ACRE LOT
20 - SINGLE FAMILY - 1 ACRE LOT
0 - UNDEVELOPED
LAND USE OR DEVELOPMENT TYPE
PERCENTAGE OF IMPERVIOUS COVER
COEFFICIENT OF RUNOFF
RAINFALL INTENSITY IN INCHES PER HOUR
RCFC & WCD
HYDROLOGY MANUAL
RUNOFF COEFFICIENT CURVES
SOIL GROUP - C
COVER TYPE - URBAN LANDSCAPING
AMC - II
(RUNOFF INDEX NUMBER 69)

PLATE D-5.3

APPENDIX 'B'

RATIONAL HYDROLOGY CALCULATIONS
UNDEVELOPED CONDITION

10-Year Storm
100-Year Storm

Hydrology Exhibit – Undeveloped Condition

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM3907610YRUNDEV.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY STUDY
UNDEVELOPED CONDITION
10-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =   10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.810(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.000 to Point/Station        2.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   880.000(Ft.)
Top (of initial area) elevation =    11.200(Ft.)
Bottom (of initial area) elevation =     9.200(Ft.)
Difference in elevation =     2.000(Ft.)
Slope =    0.00227  s(percent)=       0.23
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   26.962 min.
Rainfall intensity =      1.208(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.725
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  82.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      8.667(CFS)
Total initial stream area =        9.900(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.000 to Point/Station        3.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
----------------------------------------------------------------------
Top of natural channel elevation =      9.200(Ft.)
End of natural channel elevation =      5.400(Ft.)
Length of natural channel  =  2492.000(Ft.)
Estimated mean flow rate at midpoint of channel =     37.469(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   1.39(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
      Normal channel slope =  0.0015
Corrected/adjusted channel slope =  0.0015
Travel time =   29.84 min.     TC =   56.80  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.666
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  82.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      0.832(In/Hr) for a    10.0 year storm
Subarea runoff =     36.476(CFS) for     65.800(Ac.)
Total runoff =     45.142(CFS)      Total area =      75.700(Ac.)
End of computations, total study area =           75.70 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  82.0
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076100YRUNDEV.out
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TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY STUDY
UNDEVELOPED CONDITION
100-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =  100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.200(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.000 to Point/Station        2.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   880.000(Ft.)
Top (of initial area) elevation =    11.200(Ft.)
Bottom (of initial area) elevation =     9.200(Ft.)
Difference in elevation =     2.000(Ft.)
Slope =    0.00227  s(percent)=       0.23
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   26.962 min.
Rainfall intensity =      1.790(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.774
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```
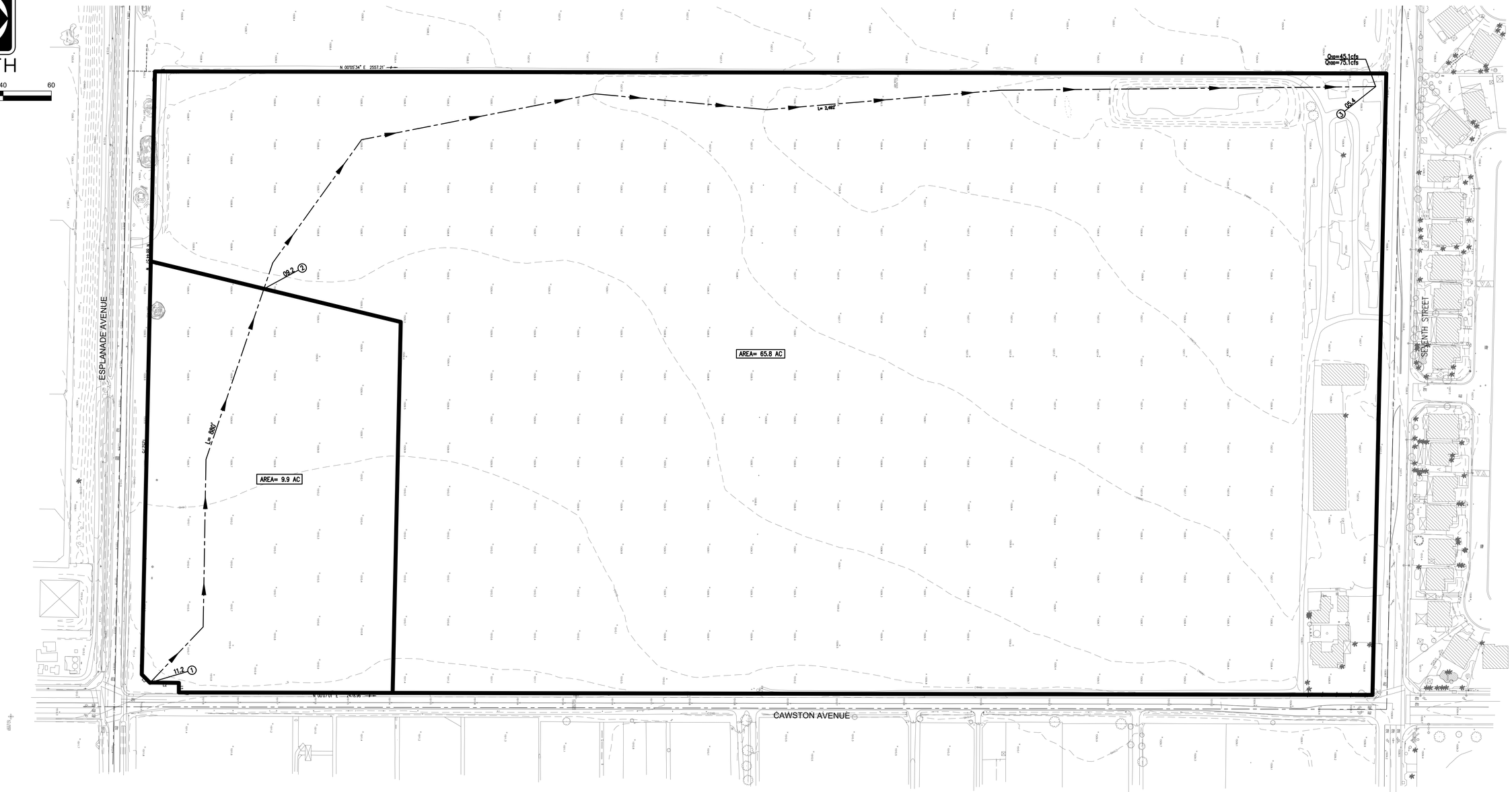

```
RI index for soil(AMC 2)  =  82.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     13.708(CFS)
Total initial stream area =        9.900(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.000 to Point/Station        3.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------
Top of natural channel elevation =      9.200(Ft.)
End of natural channel elevation =      5.400(Ft.)
Length of natural channel  =  2492.000(Ft.)
Estimated mean flow rate at midpoint of channel =     59.265(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   1.59(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
      Normal channel slope =  0.0015
Corrected/adjusted channel slope =  0.0015
Travel time =   26.16 min.     TC =   53.12  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.732
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  82.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.275(In/Hr) for a   100.0 year storm
Subarea runoff =     61.428(CFS) for     65.800(Ac.)
Total runoff =     75.136(CFS)      Total area =      75.700(Ac.)
End of computations, total study area =          75.70 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  82.0
```



LEGEND

- DRAINAGE BOUNDARY
- FLOW PATH
- (1) NODE NUMBER

DIG ALERT

DIAL TOLL FREE
1-800-227-2600

AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE

ENGINEER | CITY

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL

REGISTERED PROFESSIONAL ENGINEER
BLAINE A WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE _____

CONTRACT CITY ENGINEER

PREPARED BY: DATE _____

R.C.E. NO. _____

BLAINE A. WOMER
CIVIL ENGINEERING

- PLANNING
- SURVEYING
- CIVIL ENGINEERING
- PUBLIC WORKS

Hemet, CA. 92544, 41550 E Florida Ave., Suite G, Phone (951)658-1727 Fax (951)658-9347
Park City, UT 84098, 5133 Cove Carryon Dr. #302
Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'

DATE SEPT. 18, 2024

BENCHMARK:

CITY OF SAN JACINTO

TENTATIVE TRACT 39076
HYDROLOGY EXHIBIT

UNDEVELOPED CONDITION

FOR RAMONA DAIRY

W.O.

SHEET NO. 1 OF 1 SHEETS

FILE NO.

APPENDIX 'C'

RATIONAL HYDROLOGY CALCULATIONS
DEVELOPED CONDITION

10-Year Storm
100-Year Storm

Hydrology Exhibit – Developed Condition

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAA10YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA A, 10-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =   10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.810(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.000 to Point/Station        2.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   920.000(Ft.)
Top (of initial area) elevation =    12.000(Ft.)
Bottom (of initial area) elevation =     8.400(Ft.)
Difference in elevation =     3.600(Ft.)
Slope =    0.00391  s(percent)=       0.39
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   18.117 min.
Rainfall intensity =      1.474(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.742
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      8.528(CFS)
Total initial stream area =       7.800(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =           7.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAA100YR.out
--------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA A, 100-YEAR STORM
--------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

--------------------------------------------------------------------------


Program License Serial Number 4061

--------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =  100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.200(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.000 to Point/Station        2.000
**** INITIAL AREA EVALUATION ****
--------------------------------------------------------------------------
Initial area flow distance =   920.000(Ft.)
Top (of initial area) elevation =    12.000(Ft.)
Bottom (of initial area) elevation =     8.400(Ft.)
Difference in elevation =     3.600(Ft.)
Slope =    0.00391  s(percent)=       0.39
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   18.117 min.
Rainfall intensity =      2.184(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.779
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =     13.275(CFS)
Total initial stream area =        7.800(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =            7.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAB10YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA B, 10-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =   10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.810(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.000 to Point/Station        4.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   785.000(Ft.)
Top (of initial area) elevation =    11.400(Ft.)
Bottom (of initial area) elevation =     8.400(Ft.)
Difference in elevation =     3.000(Ft.)
Slope =    0.00382  s(percent)=       0.38
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   17.083 min.
Rainfall intensity =      1.518(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.745
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

RI index for soil(AMC 2) = 62.50
Pervious area fraction = 0.500; Impervious fraction = 0.500
Initial subarea runoff = 5.765(CFS)
Total initial stream area = 5.100(Ac.)
Pervious area fraction = 0.500
End of computations, total study area = 5.10 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number = 62.5

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAB100YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA B, 100-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =  100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.200(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        3.000 to Point/Station        4.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   785.000(Ft.)
Top (of initial area) elevation =    11.400(Ft.)
Bottom (of initial area) elevation =     8.400(Ft.)
Difference in elevation =     3.000(Ft.)
Slope =    0.00382  s(percent)=       0.38
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   17.083 min.
Rainfall intensity =      2.249(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.782
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)   =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      8.968(CFS)
Total initial stream area =       5.100(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =           5.10 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAC10YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA C, 10-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =   10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.810(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        5.000 to Point/Station        6.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   750.000(Ft.)
Top (of initial area) elevation =    11.400(Ft.)
Bottom (of initial area) elevation =     8.400(Ft.)
Difference in elevation =     3.000(Ft.)
Slope =    0.00400  s(percent)=       0.40
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   16.622 min.
Rainfall intensity =      1.539(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.746
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

RI index for soil(AMC 2) = 62.50
Pervious area fraction = 0.500; Impervious fraction = 0.500
Initial subarea runoff = 6.659(CFS)
Total initial stream area = 5.800(Ac.)
Pervious area fraction = 0.500
End of computations, total study area = 5.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number = 62.5

```
          Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAC100YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA C, 100-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =  100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.200(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        5.000 to Point/Station        6.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   750.000(Ft.)
Top (of initial area) elevation =    11.400(Ft.)
Bottom (of initial area) elevation =     8.400(Ft.)
Difference in elevation =     3.000(Ft.)
Slope =    0.00400  s(percent)=       0.40
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   16.622 min.
Rainfall intensity =      2.280(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.783
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =     10.355(CFS)
Total initial stream area =        5.800(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =            5.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAD10YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA D, 10-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =   10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.810(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        7.000 to Point/Station        8.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   640.000(Ft.)
Top (of initial area) elevation =    10.900(Ft.)
Bottom (of initial area) elevation =     8.400(Ft.)
Difference in elevation =     2.500(Ft.)
Slope =    0.00391  s(percent)=       0.39
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.674 min.
Rainfall intensity =      1.585(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.749
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

RI index for soil(AMC 2) = 62.50
Pervious area fraction = 0.500; Impervious fraction = 0.500
Initial subarea runoff = 5.223(CFS)
Total initial stream area = 4.400(Ac.)
Pervious area fraction = 0.500
End of computations, total study area = 4.40 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number = 62.5

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAD100YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOED CONDITION
AREA D, 100-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =  100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.200(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        7.000 to Point/Station        8.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   640.000(Ft.)
Top (of initial area) elevation =    10.900(Ft.)
Bottom (of initial area) elevation =     8.400(Ft.)
Difference in elevation =     2.500(Ft.)
Slope =    0.00391  s(percent)=       0.39
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.674 min.
Rainfall intensity =      2.348(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.786
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      8.116(CFS)
Total initial stream area =        4.400(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =            4.40 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
Rational Hydrology Study Date: 10/30/24 File:TTM39076AREAE10YR.out

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TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA E, 10-YEAR STORM

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 4061

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [San Jacinto] area used.
10 year storm 10 minute intensity = 1.980(In/Hr)
10 year storm 60 minute intensity = 0.810(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.810(In/Hr)
Slope of intensity duration curve = 0.5000

++
Process from Point/Station 9.000 to Point/Station 10.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 790.000(Ft.)
Top (of initial area) elevation = 11.400(Ft.)
Bottom (of initial area) elevation = 8.000(Ft.)
Difference in elevation = 3.400(Ft.)
Slope = 0.00430 s(percent)= 0.43
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 16.724 min.
Rainfall intensity = 1.534(In/Hr) for a 10.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.746
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000

RI index for soil(AMC 2) = 62.50
Pervious area fraction = 0.500; Impervious fraction = 0.500
Initial subarea runoff = 9.726(CFS)
Total initial stream area = 8.500(Ac.)
Pervious area fraction = 0.500
End of computations, total study area = 8.50 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number = 62.5

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAE100YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA E, 100-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =  100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.200(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        9.000 to Point/Station       10.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   790.000(Ft.)
Top (of initial area) elevation =    11.400(Ft.)
Bottom (of initial area) elevation =     8.000(Ft.)
Difference in elevation =     3.400(Ft.)
Slope =    0.00430  s(percent)=       0.43
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   16.724 min.
Rainfall intensity =      2.273(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.783
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =     15.124(CFS)
Total initial stream area =        8.500(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =            8.50 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAF10YR.out
--------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA F, 10-YEAR STORM
--------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

--------------------------------------------------------------------------


Program License Serial Number 4061

--------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =   10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.810(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       11.000 to Point/Station       12.000
**** INITIAL AREA EVALUATION ****
--------------------------------------------------------------------------
Initial area flow distance =   640.000(Ft.)
Top (of initial area) elevation =    11.100(Ft.)
Bottom (of initial area) elevation =     8.000(Ft.)
Difference in elevation =     3.100(Ft.)
Slope =    0.00484  s(percent)=       0.48
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.014 min.
Rainfall intensity =      1.619(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.751
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      4.501(CFS)
Total initial stream area =        3.700(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =            3.70 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAF100YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA F, 100-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =  100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.200(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       11.000 to Point/Station       12.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   640.000(Ft.)
Top (of initial area) elevation =    11.100(Ft.)
Bottom (of initial area) elevation =     8.000(Ft.)
Difference in elevation =     3.100(Ft.)
Slope =    0.00484  s(percent)=       0.48
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.014 min.
Rainfall intensity =      2.399(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.787
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      6.989(CFS)
Total initial stream area =       3.700(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =           3.70 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAG10YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA G, 10-YR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =   10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.810(In/Hr)
Slope of intensity duration curve = 0.5000



++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       13.000 to Point/Station       14.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   590.000(Ft.)
Top (of initial area) elevation =    10.400(Ft.)
Bottom (of initial area) elevation =     8.000(Ft.)
Difference in elevation =     2.400(Ft.)
Slope =    0.00407  s(percent)=       0.41
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.050 min.
Rainfall intensity =      1.617(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.751
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      6.924(CFS)
Total initial stream area =        5.700(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =            5.70 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAG100YR.out
--------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA G, 100-YEAR STORM
--------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

--------------------------------------------------------------------------


Program License Serial Number 4061

--------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =  100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.200(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       13.000 to Point/Station       14.000
**** INITIAL AREA EVALUATION ****
--------------------------------------------------------------------------
Initial area flow distance =   590.000(Ft.)
Top (of initial area) elevation =    10.400(Ft.)
Bottom (of initial area) elevation =     8.000(Ft.)
Difference in elevation =     2.400(Ft.)
Slope =    0.00407  s(percent)=       0.41
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.050 min.
Rainfall intensity =      2.396(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.787
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =     10.753(CFS)
Total initial stream area =        5.700(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =            5.70 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAH10YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA H, 10-YEAR
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =   10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.810(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       15.000 to Point/Station       16.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =    10.900(Ft.)
Bottom (of initial area) elevation =     6.000(Ft.)
Difference in elevation =     4.900(Ft.)
Slope =    0.00490  s(percent)=       0.49
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   17.907 min.
Rainfall intensity =      1.483(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.742
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =     10.345(CFS)
Total initial stream area =        9.400(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =            9.40 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAH100YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA H, 100-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =  100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.200(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       15.000 to Point/Station       16.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =    10.900(Ft.)
Bottom (of initial area) elevation =     6.000(Ft.)
Difference in elevation =     4.900(Ft.)
Slope =    0.00490  s(percent)=       0.49
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   17.907 min.
Rainfall intensity =      2.197(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.780
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =     16.102(CFS)
Total initial stream area =        9.400(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =            9.40 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAI10YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA I, 10-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =   10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.810(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       17.000 to Point/Station       18.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   990.000(Ft.)
Top (of initial area) elevation =     9.100(Ft.)
Bottom (of initial area) elevation =     5.500(Ft.)
Difference in elevation =     3.600(Ft.)
Slope =    0.00364  s(percent)=       0.36
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   18.932 min.
Rainfall intensity =      1.442(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.739
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      8.850(CFS)
Total initial stream area =        8.300(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =           8.30 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAI100YR.out
--------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA I, 100-YEAR STORM
--------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

--------------------------------------------------------------------------


Program License Serial Number 4061

--------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =  100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.200(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       17.000 to Point/Station       18.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   990.000(Ft.)
Top (of initial area) elevation =     9.100(Ft.)
Bottom (of initial area) elevation =     5.500(Ft.)
Difference in elevation =     3.600(Ft.)
Slope =    0.00364  s(percent)=       0.36
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   18.932 min.
Rainfall intensity =      2.136(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.777
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

RI index for soil(AMC 2) = 62.50
Pervious area fraction = 0.500; Impervious fraction = 0.500
Initial subarea runoff = 13.784(CFS)
Total initial stream area = 8.300(Ac.)
Pervious area fraction = 0.500
End of computations, total study area = 8.30 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number = 62.5

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAJ10YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA J, 10-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =   10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.810(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       19.000 to Point/Station       20.000
**** INITIAL AREA EVALUATION ****

------------------------------------------------------------------------
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =    11.100(Ft.)
Bottom (of initial area) elevation =     5.500(Ft.)
Difference in elevation =     5.600(Ft.)
Slope =    0.00560  s(percent)=       0.56
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   17.435 min.
Rainfall intensity =      1.503(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.744
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)   =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      11.174(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =           10.00 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 10/30/24  File:TTM39076AREAJ100YR.out
------------------------------------------------------------------------
TENTATIVE TRACT 39076
PRELIMINARY HYDROLOGY
DEVELOPED CONDITION
AREA J, 100-YEAR STORM
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4061

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =  100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ San Jacinto ] area used.
10 year storm 10 minute intensity =  1.980(In/Hr)
10 year storm 60 minute intensity =  0.810(In/Hr)
100 year storm 10 minute intensity =  2.940(In/Hr)
100 year storm 60 minute intensity =  1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.200(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       19.000 to Point/Station       20.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =    11.100(Ft.)
Bottom (of initial area) elevation =     5.500(Ft.)
Difference in elevation =     5.600(Ft.)
Slope =    0.00560  s(percent)=       0.56
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   17.435 min.
Rainfall intensity =      2.226(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.781
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
```

```
RI index for soil(AMC 2)  =  62.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =     17.387(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =           10.00 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  62.5
```

NORTH

0 60 120 180

1"=60'



SEE SHEET NO. 2

LEGEND

- DRAINAGE BOUNDARY
- NODE NUMBER
- DRAINAGE ARROW
- A / 7.8 – AREA DESIGNATION / AREA IN ACRES

DIG ALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE
				CITY	

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER

PREPARED BY: DATE
R.C.E. NO.

BLAINE A. WOMER
CIVIL ENGINEERING
• PLANNING
• SURVEYING
• CIVIL ENGINEERING
• PUBLIC WORKS
Hemet, CA. 92546, 41005 E Florida Ave., Suite G, Phone (951)658-1727 Fax (951)658-9347
Park City, UT 84098, 5130 Cove Canyon Dr. #302
Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076
HYDROLOGY EXHIBIT
DEVELOPED CONDITION
FOR RAMONA DAIRY
W.O.

SHEET NO. 1 OF 3 SHEETS
FILE NO.

NORTH

0 60 120 180

1"=60'

SEE SHEET NO. 1

LEGEND

- DRAINAGE BOUNDARY
- NODE NUMBER
- DRAINAGE ARROW
- A / 7.8 – AREA DESIGNATION / AREA IN ACRES

ESPLANADE SPECIFIC PLAN SP 01-02
TRACT 32955-1
APN 432-260-014

ESPLANADE SPECIFIC PLAN SP 01-02
TRACTS 32955-1 & 32955-5
APN 432-260-017

CAWSTON AVENUE
LAND USE: VARY LOW DENSITY RESIDENTIAL
ZONE: RURAL RESIDENTIAL

BIORETENTION BASIN NO. 2
BOTTOM ELEV= 07.0

LOT 'B'
F.G.= 08.0

Q100=6.9cfs
Q500=10.8cfs

Q100=4.5cfs
Q500=7.0cfs

Q100=9.7cfs
Q500=15.1cfs

L= 1000'
L=640'
L=590'
L=790'

EXIST. BLOCK WALL

PROP. 6' BLOCK WALL ON RETAINING WALL.

PROP. 6' BLOCK WALL

SEE SHEET NO. 4

SEE SHEET NO. 3

DIG ALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE
				CITY	

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER

PREPARED BY: DATE
R.C.E. NO.

BLAINE A. WOMER
CIVIL ENGINEERING
• PLANNING
• SURVEYING
• CIVIL ENGINEERING
• PUBLIC WORKS
Hemet, CA. 92544, 41000 E Florida Ave., Suite G, Phone (951)658-1727 Fax (951)658-9347
Park City, UT 84098, 5130 Cove Canyon Dr. #302
Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076
HYDROLOGY EXHIBIT
DEVELOPED CONDITION
FOR RAMONA DAIRY
W.O.

SHEET NO. 2 OF 3 SHEETS
FILE NO.



DIG ALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK		APPR.	DATE
ENGINEER			REVISIONS	CITY	

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A. WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER
PREPARED BY: DATE
R.C.E. NO.

BLAINE A. WOMER
CIVIL ENGINEERING
• PLANNING • SURVEYING • CIVIL ENGINEERING • PUBLIC WORKS
Hemet, CA, 92544, 41555 E Florida Ave., Suite G, Phone (951)658-1727 Fax (951)658-9347
Park City, UT 84098, 5133 Cove Canyon Dr. #302
Boise, ID, 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO
TENTATIVE TRACT MAP
NO. 39076
HYDROLOGY EXHIBIT
DEVELOPED CONDITION
FOR RAMONA DAIRY
W.O.

SHEET NO. 3 OF 3 SHEETS
FILE NO.

APPENDIX 'D'

U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 10/30/24 File: TTM39076100YR24HRUNDEV24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 4061

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

TENTATIVE TRACT 39076
PRELIMINARY BASIN SIZING HYDROLOGY
100 YEAR, 24 HOUR STORM
UNDEVELOPED CONDITION

Drainage Area = 75.70(Ac.) = 0.118 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 75.70(Ac.) = 0.118 Sq. Mi.
Length along longest watercourse = 3372.00(Ft.)
Length along longest watercourse measured to centroid = 1680.00(Ft.)
Length along longest watercourse = 0.639 Mi.
Length along longest watercourse measured to centroid = 0.318 Mi.
Difference in elevation = 5.80(Ft.)
Slope along watercourse = 9.0819 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.215 Hr.
Lag time = 12.92 Min.
25% of lag time = 3.23 Min.
40% of lag time = 5.17 Min.
Unit time = 15.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
75.70	1.80	136.26

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
75.70	4.50	340.65

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.800(In)

Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 4.500(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 4.499(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
75.700	79.00	0.000

Total Area Entered = 75.70(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
79.0	90.4	0.125	0.000	0.125	1.000	0.125
					Sum (F) =	0.125

Area averaged mean soil loss (F) (In/Hr) = 0.125
Minimum soil loss rate ((In/Hr)) = 0.062
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.250	116.099	24.058	18.354
2	0.500	232.198	48.813	37.240
3	0.750	348.297	13.664	10.424
4	1.000	464.396	6.228	4.752
5	1.250	580.496	3.471	2.648
6	1.500	696.595	2.062	1.573
7	1.750	812.694	1.704	1.300
			Sum = 100.000 Sum=	76.291

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.25	0.20	0.036	(0.220)	0.032	0.004
2	0.50	0.30	0.054	(0.218)	0.049	0.005
3	0.75	0.30	0.054	(0.215)	0.049	0.005
4	1.00	0.40	0.072	(0.213)	0.065	0.007
5	1.25	0.30	0.054	(0.210)	0.049	0.005
6	1.50	0.30	0.054	(0.208)	0.049	0.005
7	1.75	0.30	0.054	(0.205)	0.049	0.005
8	2.00	0.40	0.072	(0.203)	0.065	0.007
9	2.25	0.40	0.072	(0.200)	0.065	0.007
10	2.50	0.40	0.072	(0.198)	0.065	0.007
11	2.75	0.50	0.090	(0.195)	0.081	0.009
12	3.00	0.50	0.090	(0.193)	0.081	0.009
13	3.25	0.50	0.090	(0.191)	0.081	0.009
14	3.50	0.50	0.090	(0.188)	0.081	0.009
15	3.75	0.50	0.090	(0.186)	0.081	0.009

16	4.00	0.60	0.108	(	0.184)	0.097		0.011
17	4.25	0.60	0.108	(	0.181)	0.097		0.011
18	4.50	0.70	0.126	(	0.179)	0.113		0.013
19	4.75	0.70	0.126	(	0.177)	0.113		0.013
20	5.00	0.80	0.144	(	0.174)	0.130		0.014
21	5.25	0.60	0.108	(	0.172)	0.097		0.011
22	5.50	0.70	0.126	(	0.170)	0.113		0.013
23	5.75	0.80	0.144	(	0.168)	0.130		0.014
24	6.00	0.80	0.144	(	0.165)	0.130		0.014
25	6.25	0.90	0.162	(	0.163)	0.146		0.016
26	6.50	0.90	0.162	(	0.161)	0.146		0.016
27	6.75	1.00	0.180		0.159	(0.162)		0.021
28	7.00	1.00	0.180		0.157	(0.162)		0.023
29	7.25	1.00	0.180		0.155	(0.162)		0.025
30	7.50	1.10	0.198		0.153	(0.178)		0.045
31	7.75	1.20	0.216		0.150	(0.194)		0.066
32	8.00	1.30	0.234		0.148	(0.211)		0.086
33	8.25	1.50	0.270		0.146	(0.243)		0.124
34	8.50	1.50	0.270		0.144	(0.243)		0.126
35	8.75	1.60	0.288		0.142	(0.259)		0.146
36	9.00	1.70	0.306		0.140	(0.275)		0.166
37	9.25	1.90	0.342		0.138	(0.308)		0.204
38	9.50	2.00	0.360		0.136	(0.324)		0.224
39	9.75	2.10	0.378		0.134	(0.340)		0.244
40	10.00	2.20	0.396		0.132	(0.356)		0.264
41	10.25	1.50	0.270		0.131	(0.243)		0.139
42	10.50	1.50	0.270		0.129	(0.243)		0.141
43	10.75	2.00	0.360		0.127	(0.324)		0.233
44	11.00	2.00	0.360		0.125	(0.324)		0.235
45	11.25	1.90	0.342		0.123	(0.308)		0.219
46	11.50	1.90	0.342		0.121	(0.308)		0.221
47	11.75	1.70	0.306		0.119	(0.275)		0.187
48	12.00	1.80	0.324		0.118	(0.292)		0.206
49	12.25	2.50	0.450		0.116	(0.405)		0.334
50	12.50	2.60	0.468		0.114	(0.421)		0.354
51	12.75	2.80	0.504		0.112	(0.454)		0.391
52	13.00	2.90	0.522		0.111	(0.470)		0.411
53	13.25	3.40	0.612		0.109	(0.551)		0.503
54	13.50	3.40	0.612		0.107	(0.551)		0.504
55	13.75	2.30	0.414		0.106	(0.373)		0.308
56	14.00	2.30	0.414		0.104	(0.373)		0.310
57	14.25	2.70	0.486		0.103	(0.437)		0.383
58	14.50	2.60	0.468		0.101	(0.421)		0.367
59	14.75	2.60	0.468		0.099	(0.421)		0.368
60	15.00	2.50	0.450		0.098	(0.405)		0.352
61	15.25	2.40	0.432		0.096	(0.389)		0.335
62	15.50	2.30	0.414		0.095	(0.373)		0.319
63	15.75	1.90	0.342		0.094	(0.308)		0.248
64	16.00	1.90	0.342		0.092	(0.308)		0.250
65	16.25	0.40	0.072	(	0.091)	0.065		0.007
66	16.50	0.40	0.072	(	0.089)	0.065		0.007
67	16.75	0.30	0.054	(	0.088)	0.049		0.005
68	17.00	0.30	0.054	(	0.087)	0.049		0.005
69	17.25	0.50	0.090	(	0.085)	0.081		0.009
70	17.50	0.50	0.090	(	0.084)	0.081		0.009
71	17.75	0.50	0.090	(	0.083)	0.081		0.009
72	18.00	0.40	0.072	(	0.082)	0.065		0.007
73	18.25	0.40	0.072	(	0.080)	0.065		0.007
74	18.50	0.40	0.072	(	0.079)	0.065		0.007
75	18.75	0.30	0.054	(	0.078)	0.049		0.005
76	19.00	0.20	0.036	(	0.077)	0.032		0.004

77	19.25	0.30	0.054	(0.076)	0.049	0.005
78	19.50	0.40	0.072	(0.075)	0.065	0.007
79	19.75	0.30	0.054	(0.074)	0.049	0.005
80	20.00	0.20	0.036	(0.073)	0.032	0.004
81	20.25	0.30	0.054	(0.072)	0.049	0.005
82	20.50	0.30	0.054	(0.071)	0.049	0.005
83	20.75	0.30	0.054	(0.070)	0.049	0.005
84	21.00	0.20	0.036	(0.069)	0.032	0.004
85	21.25	0.30	0.054	(0.068)	0.049	0.005
86	21.50	0.20	0.036	(0.068)	0.032	0.004
87	21.75	0.30	0.054	(0.067)	0.049	0.005
88	22.00	0.20	0.036	(0.066)	0.032	0.004
89	22.25	0.30	0.054	(0.065)	0.049	0.005
90	22.50	0.20	0.036	(0.065)	0.032	0.004
91	22.75	0.20	0.036	(0.064)	0.032	0.004
92	23.00	0.20	0.036	(0.064)	0.032	0.004
93	23.25	0.20	0.036	(0.063)	0.032	0.004
94	23.50	0.20	0.036	(0.063)	0.032	0.004
95	23.75	0.20	0.036	(0.063)	0.032	0.004
96	24.00	0.20	0.036	(0.062)	0.032	0.004

(Loss Rate Not Used)

Sum = 100.0 Sum = 9.5

Flood volume = Effective rainfall 2.38(In)
times area 75.7(Ac.)/[(In)/(Ft.)] = 15.0(Ac.Ft)
Total soil loss = 2.12(In)
Total soil loss = 13.394(Ac.Ft)
Total rainfall = 4.50(In)
Flood volume = 652922.9 Cubic Feet
Total soil loss = 583453.8 Cubic Feet

Peak flow rate of this hydrograph = 35.879(CFS)

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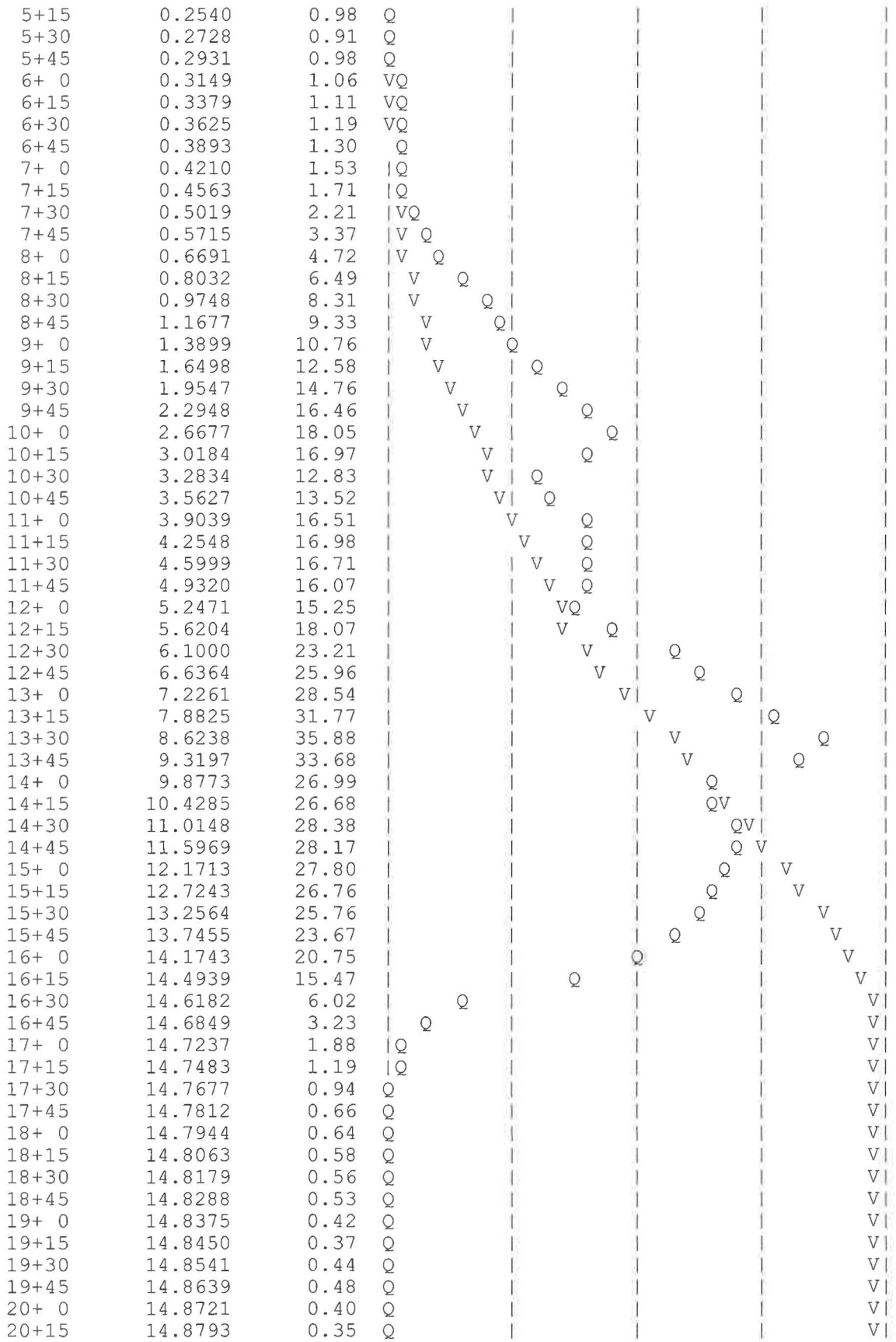
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 15 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	10.0	20.0	30.0	40.0
0+15	0.0014	0.07	Q	|	|	|	|
0+30	0.0062	0.23	Q	|	|	|	|
0+45	0.0132	0.34	Q	|	|	|	|
1+ 0	0.0216	0.41	Q	|	|	|	|
1+15	0.0311	0.46	Q	|	|	|	|
1+30	0.0398	0.42	Q	|	|	|	|
1+45	0.0484	0.42	Q	|	|	|	|
2+ 0	0.0577	0.45	Q	|	|	|	|
2+15	0.0683	0.52	Q	|	|	|	|
2+30	0.0794	0.53	Q	|	|	|	|
2+45	0.0912	0.57	Q	|	|	|	|
3+ 0	0.1045	0.64	Q	|	|	|	|
3+15	0.1183	0.67	Q	|	|	|	|
3+30	0.1322	0.68	Q	|	|	|	|
3+45	0.1463	0.68	Q	|	|	|	|
4+ 0	0.1612	0.72	Q	|	|	|	|
4+15	0.1774	0.79	Q	|	|	|	|
4+30	0.1947	0.84	Q	|	|	|	|
4+45	0.2136	0.91	Q	|	|	|	|
5+ 0	0.2337	0.97	Q	|	|	|	|



20+30	14.8875	0.40	Q	|	|	|	V|
20+45	14.8959	0.41	Q	|	|	|	V|
21+ 0	14.9037	0.38	Q	|	|	|	V|
21+15	14.9107	0.34	Q	|	|	|	V|
21+30	14.9181	0.36	Q	|	|	|	V|
21+45	14.9251	0.34	Q	|	|	|	V|
22+ 0	14.9324	0.36	Q	|	|	|	V|
22+15	14.9393	0.33	Q	|	|	|	V|
22+30	14.9466	0.35	Q	|	|	|	V|
22+45	14.9528	0.30	Q	|	|	|	V|
23+ 0	14.9587	0.29	Q	|	|	|	V|
23+15	14.9646	0.28	Q	|	|	|	V|
23+30	14.9703	0.28	Q	|	|	|	V|
23+45	14.9760	0.28	Q	|	|	|	V|
24+ 0	14.9817	0.27	Q	|	|	|	V|
24+15	14.9860	0.21	Q	|	|	|	V|
24+30	14.9876	0.07	Q	|	|	|	V|
24+45	14.9883	0.04	Q	|	|	|	V|
25+ 0	14.9887	0.02	Q	|	|	|	V|
25+15	14.9890	0.01	Q	|	|	|	V|
25+30	14.9890	0.00	Q	|	|	|	V

P-4524-004

U n i t H y d r o g r a p h A n a l y s i s

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Study date 09/19/24 File: TTM39706100YR24HRDEV24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 4061

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

TENTATIVE TRACT 39076
PRELIMINRY BASIN SIZING HYDROLOGY
100 YEAR, 24 HOUR STORM
DEVELOPED CONDITION

Drainage Area = 75.70(Ac.) = 0.118 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 75.70(Ac.) = 0.118 Sq. Mi.
Length along longest watercourse = 2310.00(Ft.)
Length along longest watercourse measured to centroid = 1035.00(Ft.)
Length along longest watercourse = 0.438 Mi.
Length along longest watercourse measured to centroid = 0.196 Mi.
Difference in elevation = 5.50(Ft.)
Slope along watercourse = 12.5714 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.088 Hr.
Lag time = 5.25 Min.
25% of lag time = 1.31 Min.
40% of lag time = 2.10 Min.
Unit time = 15.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
75.70	1.80	136.26

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
75.70	4.50	340.65

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.800(In)

Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 4.500(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 4.499(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
75.700	63.00	0.550

Total Area Entered = 75.70(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
63.0	80.4	0.239	0.550	0.121	1.000	0.121
					Sum (F) =	0.121

Area averaged mean soil loss (F) (In/Hr) = 0.121
Minimum soil loss rate ((In/Hr)) = 0.060
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.460

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.250	285.675	55.160	42.083
2	0.500	571.350	37.931	28.938
3	0.750	857.025	6.908	5.270
			Sum = 100.000 Sum=	76.291

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.25	0.20	0.036	(0.214)	0.017	0.019
2	0.50	0.30	0.054	(0.211)	0.025	0.029
3	0.75	0.30	0.054	(0.209)	0.025	0.029
4	1.00	0.40	0.072	(0.206)	0.033	0.039
5	1.25	0.30	0.054	(0.204)	0.025	0.029
6	1.50	0.30	0.054	(0.201)	0.025	0.029
7	1.75	0.30	0.054	(0.199)	0.025	0.029
8	2.00	0.40	0.072	(0.196)	0.033	0.039
9	2.25	0.40	0.072	(0.194)	0.033	0.039
10	2.50	0.40	0.072	(0.192)	0.033	0.039
11	2.75	0.50	0.090	(0.189)	0.041	0.049
12	3.00	0.50	0.090	(0.187)	0.041	0.049
13	3.25	0.50	0.090	(0.185)	0.041	0.049
14	3.50	0.50	0.090	(0.182)	0.041	0.049
15	3.75	0.50	0.090	(0.180)	0.041	0.049
16	4.00	0.60	0.108	(0.178)	0.050	0.058
17	4.25	0.60	0.108	(0.176)	0.050	0.058
18	4.50	0.70	0.126	(0.173)	0.058	0.068
19	4.75	0.70	0.126	(0.171)	0.058	0.068

20	5.00	0.80	0.144	(0.169)	0.066	0.078
21	5.25	0.60	0.108	(0.167)	0.050	0.058
22	5.50	0.70	0.126	(0.165)	0.058	0.068
23	5.75	0.80	0.144	(0.162)	0.066	0.078
24	6.00	0.80	0.144	(0.160)	0.066	0.078
25	6.25	0.90	0.162	(0.158)	0.075	0.087
26	6.50	0.90	0.162	(0.156)	0.075	0.087
27	6.75	1.00	0.180	(0.154)	0.083	0.097
28	7.00	1.00	0.180	(0.152)	0.083	0.097
29	7.25	1.00	0.180	(0.150)	0.083	0.097
30	7.50	1.10	0.198	(0.148)	0.091	0.107
31	7.75	1.20	0.216	(0.146)	0.099	0.117
32	8.00	1.30	0.234	(0.144)	0.108	0.126
33	8.25	1.50	0.270	(0.142)	0.124	0.146
34	8.50	1.50	0.270	(0.140)	0.124	0.146
35	8.75	1.60	0.288	(0.138)	0.132	0.155
36	9.00	1.70	0.306	0.136	(0.141)	0.170
37	9.25	1.90	0.342	0.134	(0.157)	0.208
38	9.50	2.00	0.360	0.132	(0.166)	0.228
39	9.75	2.10	0.378	0.130	(0.174)	0.248
40	10.00	2.20	0.396	0.128	(0.182)	0.268
41	10.25	1.50	0.270	(0.126)	0.124	0.146
42	10.50	1.50	0.270	(0.125)	0.124	0.146
43	10.75	2.00	0.360	0.123	(0.166)	0.237
44	11.00	2.00	0.360	0.121	(0.166)	0.239
45	11.25	1.90	0.342	0.119	(0.157)	0.223
46	11.50	1.90	0.342	0.117	(0.157)	0.224
47	11.75	1.70	0.306	0.116	(0.141)	0.190
48	12.00	1.80	0.324	0.114	(0.149)	0.210
49	12.25	2.50	0.450	0.112	(0.207)	0.338
50	12.50	2.60	0.468	0.111	(0.215)	0.357
51	12.75	2.80	0.504	0.109	(0.232)	0.395
52	13.00	2.90	0.522	0.107	(0.240)	0.415
53	13.25	3.40	0.612	0.106	(0.281)	0.506
54	13.50	3.40	0.612	0.104	(0.281)	0.508
55	13.75	2.30	0.414	0.103	(0.190)	0.311
56	14.00	2.30	0.414	0.101	(0.190)	0.313
57	14.25	2.70	0.486	0.099	(0.224)	0.387
58	14.50	2.60	0.468	0.098	(0.215)	0.370
59	14.75	2.60	0.468	0.096	(0.215)	0.372
60	15.00	2.50	0.450	0.095	(0.207)	0.355
61	15.25	2.40	0.432	0.093	(0.199)	0.338
62	15.50	2.30	0.414	0.092	(0.190)	0.322
63	15.75	1.90	0.342	0.091	(0.157)	0.251
64	16.00	1.90	0.342	0.089	(0.157)	0.253
65	16.25	0.40	0.072	(0.088)	0.033	0.039
66	16.50	0.40	0.072	(0.087)	0.033	0.039
67	16.75	0.30	0.054	(0.085)	0.025	0.029
68	17.00	0.30	0.054	(0.084)	0.025	0.029
69	17.25	0.50	0.090	(0.083)	0.041	0.049
70	17.50	0.50	0.090	(0.081)	0.041	0.049
71	17.75	0.50	0.090	(0.080)	0.041	0.049
72	18.00	0.40	0.072	(0.079)	0.033	0.039
73	18.25	0.40	0.072	(0.078)	0.033	0.039
74	18.50	0.40	0.072	(0.077)	0.033	0.039
75	18.75	0.30	0.054	(0.076)	0.025	0.029
76	19.00	0.20	0.036	(0.075)	0.017	0.019
77	19.25	0.30	0.054	(0.074)	0.025	0.029
78	19.50	0.40	0.072	(0.072)	0.033	0.039
79	19.75	0.30	0.054	(0.071)	0.025	0.029
80	20.00	0.20	0.036	(0.071)	0.017	0.019

81	20.25	0.30	0.054	(0.070)	0.025	0.029
82	20.50	0.30	0.054	(0.069)	0.025	0.029
83	20.75	0.30	0.054	(0.068)	0.025	0.029
84	21.00	0.20	0.036	(0.067)	0.017	0.019
85	21.25	0.30	0.054	(0.066)	0.025	0.029
86	21.50	0.20	0.036	(0.065)	0.017	0.019
87	21.75	0.30	0.054	(0.065)	0.025	0.029
88	22.00	0.20	0.036	(0.064)	0.017	0.019
89	22.25	0.30	0.054	(0.063)	0.025	0.029
90	22.50	0.20	0.036	(0.063)	0.017	0.019
91	22.75	0.20	0.036	(0.062)	0.017	0.019
92	23.00	0.20	0.036	(0.062)	0.017	0.019
93	23.25	0.20	0.036	(0.061)	0.017	0.019
94	23.50	0.20	0.036	(0.061)	0.017	0.019
95	23.75	0.20	0.036	(0.061)	0.017	0.019
96	24.00	0.20	0.036	(0.061)	0.017	0.019

(Loss Rate Not Used)

Sum = 100.0 Sum = 11.9

Flood volume = Effective rainfall 2.97(In)
times area 75.7(Ac.)/[(In)/(Ft.)] = 18.8(Ac.Ft)
Total soil loss = 1.52(In)
Total soil loss = 9.618(Ac.Ft)
Total rainfall = 4.50(In)
Flood volume = 817435.7 Cubic Feet
Total soil loss = 418941.0 Cubic Feet

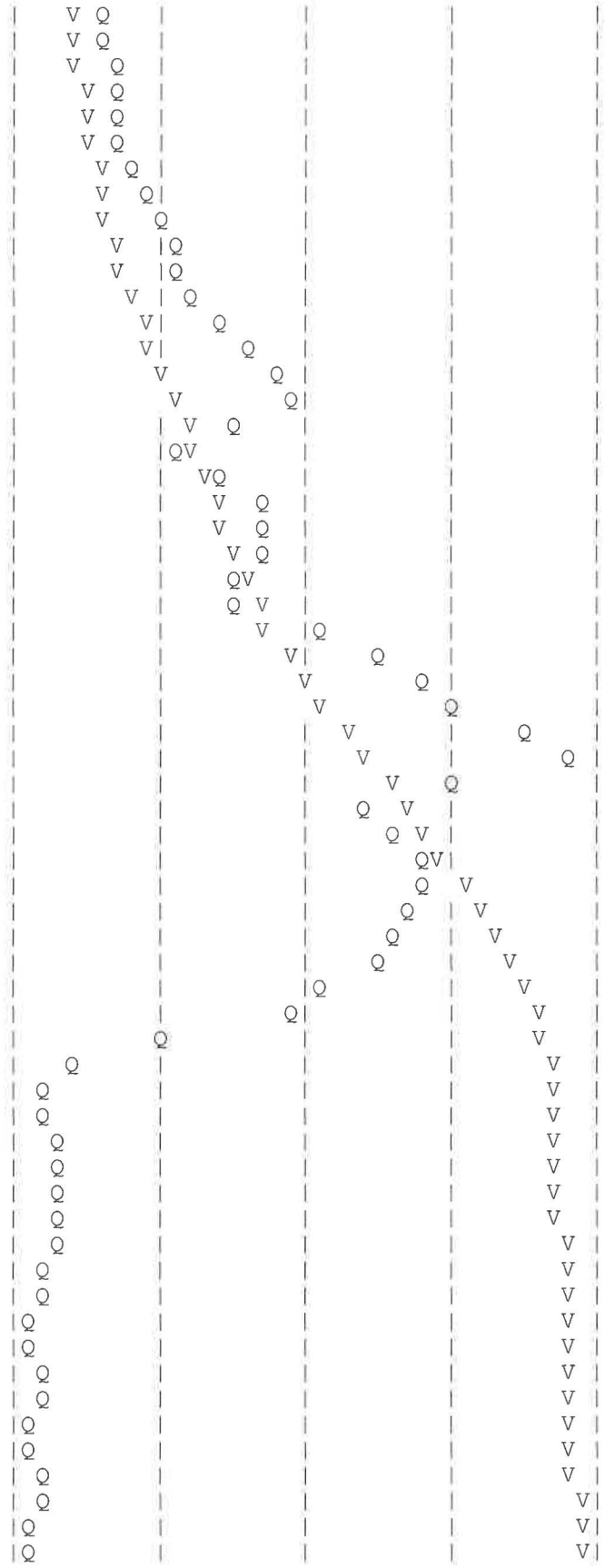
Peak flow rate of this hydrograph = 38.224(CFS)

++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 15 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	10.0	20.0	30.0	40.0
0+15	0.0169	0.82	Q				
0+30	0.0539	1.79	VQ				
0+45	0.0988	2.17	V Q				
1+ 0	0.1533	2.63	V Q				
1+15	0.2051	2.51	V Q				
1+30	0.2521	2.28	V Q				
1+45	0.2981	2.23	V Q				
2+ 0	0.3525	2.63	V Q				
2+15	0.4128	2.92	V Q				
2+30	0.4741	2.97	VQ				
2+45	0.5438	3.38	|V Q				
3+ 0	0.6194	3.66	|V Q				
3+15	0.6960	3.71	|V Q				
3+30	0.7727	3.71	|V Q				
3+45	0.8493	3.71	|V Q				
4+ 0	0.9344	4.12	|V Q				
4+15	1.0253	4.40	| V Q				
4+30	1.1257	4.86	| V Q				
4+45	1.2319	5.14	| V Q				
5+ 0	1.3477	5.60	| V Q				
5+15	1.4523	5.06	| V Q				
5+30	1.5549	4.96	| VQ				
5+45	1.6696	5.55	| V Q				
6+ 0	1.7911	5.88	| V Q				

6+15	1.9222	6.34	
6+30	2.0591	6.63	
6+45	2.2055	7.09	
7+ 0	2.3577	7.37	
7+15	2.5109	7.42	
7+30	2.6727	7.83	
7+45	2.8487	8.52	
8+ 0	3.0400	9.26	
8+15	3.2551	10.41	
8+30	3.4829	11.02	
8+45	3.7212	11.54	
9+ 0	3.9781	12.43	
9+15	4.2777	14.50	
9+30	4.6188	16.51	
9+45	4.9934	18.13	
10+ 0	5.3992	19.64	
10+15	5.7131	15.19	
10+30	5.9563	11.77	
10+45	6.2657	14.97	
11+ 0	6.6313	17.70	
11+15	6.9938	17.55	
11+30	7.3484	17.16	
11+45	7.6724	15.68	
12+ 0	7.9933	15.53	
12+15	8.4333	21.30	
12+30	8.9690	25.93	
12+45	9.5631	28.76	
13+ 0	10.1990	30.78	
13+15	10.9304	35.40	
13+30	11.7201	38.22	
13+45	12.3500	30.48	
14+ 0	12.8639	24.87	
14+15	13.4212	26.98	
14+30	14.0085	28.42	
14+45	14.5951	28.39	
15+ 0	15.1665	27.66	
15+15	15.7138	26.49	
15+30	16.2350	25.22	
15+45	16.6830	21.69	
16+ 0	17.0883	19.61	
16+15	17.3006	10.28	
16+30	17.3852	4.09	
16+45	17.4381	2.56	
17+ 0	17.4851	2.28	
17+15	17.5480	3.04	
17+30	17.6225	3.61	
17+45	17.6992	3.71	
18+ 0	17.7674	3.30	
18+15	17.8297	3.02	
18+30	17.8910	2.97	
18+45	17.9439	2.56	
19+ 0	17.9825	1.87	
19+15	18.0226	1.94	
19+30	18.0760	2.58	
19+45	18.1278	2.51	
20+ 0	18.1664	1.87	
20+15	18.2066	1.94	
20+30	18.2515	2.17	
20+45	18.2975	2.23	
21+ 0	18.3350	1.82	
21+15	18.3752	1.94	

21+30	18.4116	1.77	|Q	|	|	|	V|
21+45	18.4518	1.94	|Q	|	|	|	V|
22+ 0	18.4883	1.77	|Q	|	|	|	V|
22+15	18.5284	1.94	|Q	|	|	|	V|
22+30	18.5649	1.77	|Q	|	|	|	V|
22+45	18.5966	1.53	|Q	|	|	|	V|
23+ 0	18.6273	1.48	|Q	|	|	|	V|
23+15	18.6579	1.48	|Q	|	|	|	V|
23+30	18.6886	1.48	|Q	|	|	|	V|
23+45	18.7192	1.48	|Q	|	|	|	V|
24+ 0	18.7499	1.48	|Q	|	|	|	V|
24+15	18.7636	0.67	Q	|	|	|	V|
24+30	18.7657	0.10	Q	|	|	|	V

RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
NATURAL COVERS -					
Barren (Rockland, eroded and graded land)		78	86	91	93
Chaparrel, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparrel, Narrowleaf (Chamise and redshank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	72	78
Open Brush (Soft wood shrubs - buckwheat, sage, etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	28	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
URBAN COVERS -					
Residential or Commercial Landscaping (Lawn, shrubs, etc.)	Good	32	56	69	75
Turf (Irrigated and mowed grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
AGRICULTURAL COVERS -					
Fallow (Land plowed but not tilled or seeded)		76	85	90	92

RCFC & WCD
HYDROLOGY MANUAL

RUNOFF INDEX NUMBERS FOR PERVIOUS AREA

ACTUAL IMPERVIOUS COVER

Land Use (1)	Range-Percent	Recommended Value For Average Conditions-Percent(2)
Natural or Agriculture	0 - 10	0
Single Family Residential: (3)		
40,000 S. F. (1 Acre) Lots	10 - 25	20
20,000 S. F. (½ Acre) Lots	30 - 45	40
7,200 - 10,000 S. F. Lots	45 - 55	50
Multiple Family Residential:		
Condominiums	45 - 70	65
Apartments	65 - 90	80
Mobile Home Park	60 - 85	75
Commercial, Downtown Business or Industrial	80 -100	90

Notes:

1. Land use should be based on ultimate development of the watershed. Long range master plans for the County and incorporated cities should be reviewed to insure reasonable land use assumptions.

2. Recommended values are based on average conditions which may not apply to a particular study area. The percentage impervious may vary greatly even on comparable sized lots due to differences in dwelling size, improvements, etc. Landscape practices should also be considered as it is common in some areas to use ornamental gravels underlain by impervious plastic materials in place of lawns and shrubs. A field investigation of a study area should always be made, and a review of aerial photos, where available may assist in estimating the percentage of impervious cover in developed areas.

3. For typical horse ranch subdivisions increase impervious area 5 percent over the values recommended in the table above.

RCFC & WCD
HYDROLOGY MANUAL

IMPERVIOUS COVER FOR DEVELOPED AREAS

PLATE D-5.6

RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
AGRICULTURAL COVERS (cont.) -					
Legumes, Close Seeded (Alfalfa, sweetclover, timothy, etc.)	Poor	66	77	85	89
	Good	58	72	81	85
Orchards, Deciduous (Apples, apricots, pears, walnuts, etc.)		See Note 4			
Orchards, Evergreen (Citrus, avocados, etc.)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
Pasture, Dryland (Annual grasses)	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Pasture, Irrigated (Legumes and perennial grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
Row Crops (Field crops - tomatoes, sugar beets, etc.)	Poor	72	81	88	91
	Good	67	78	85	89
Small Grain (Wheat, oats, barley, etc.)	Poor	65	76	84	88
	Good	63	75	83	87
Vineyard		See Note 4			

Notes:

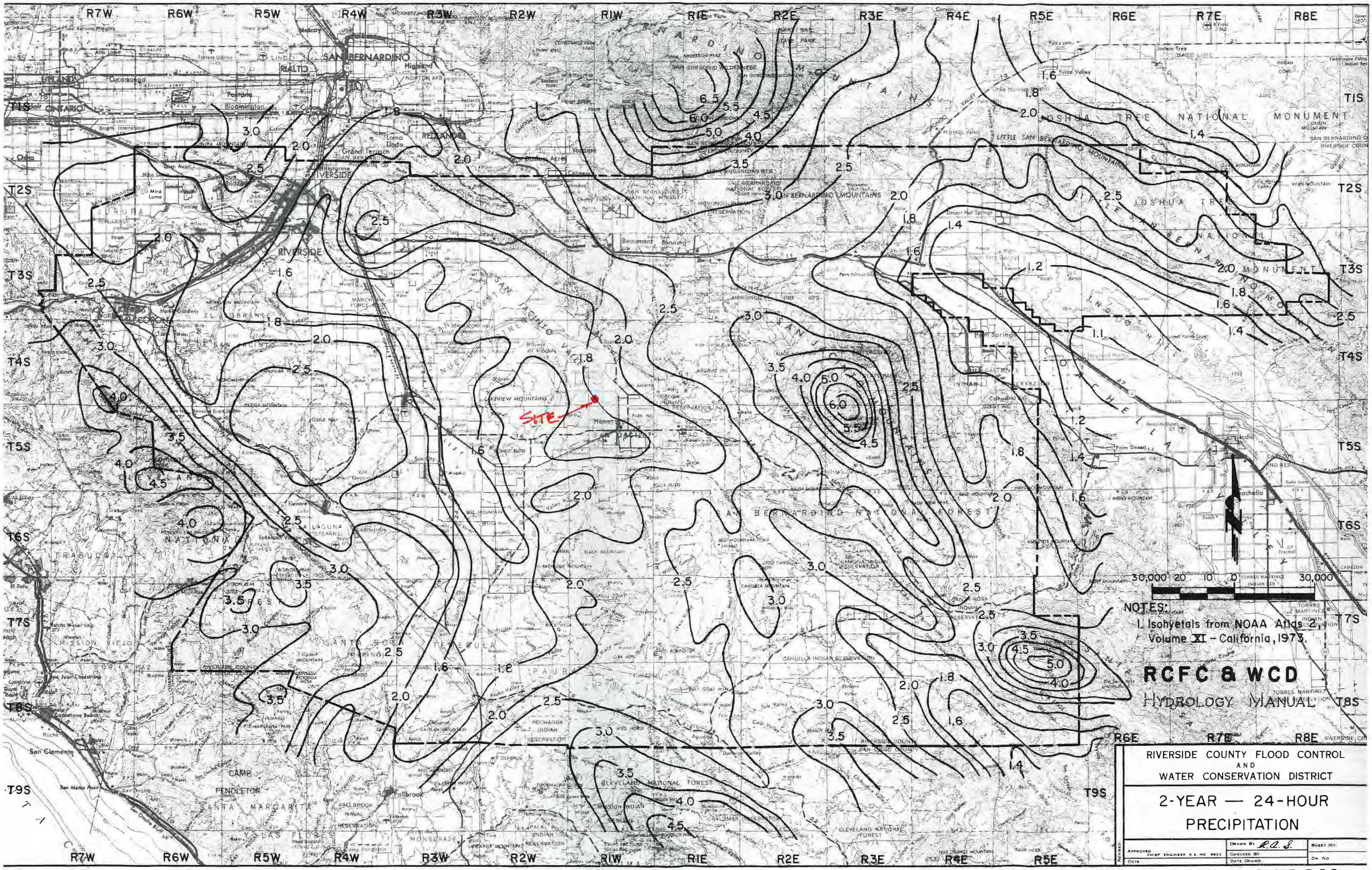
1. All runoff index (RI) numbers are for Antecedent Moisture Condition (AMC) II.

2. Quality of cover definitions:
   Poor-Heavily grazed or regularly burned areas. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.
   Fair-Moderate cover with 50 percent to 75 percent of the ground surface protected.
   Good-Heavy or dense cover with more than 75 percent of the ground surface protected.

3. See Plate C-2 for a detailed description of cover types.

4. Use runoff index numbers based on ground cover type. See discussion under "Cover Type Descriptions" on Plate C-2.

5. Reference Bibliography item 17.



NOTES:
1. Isohyetals from NOAA Atlas 2, Volume XI – California, 1973.

RCFC & WCD

HYDROLOGY MANUAL

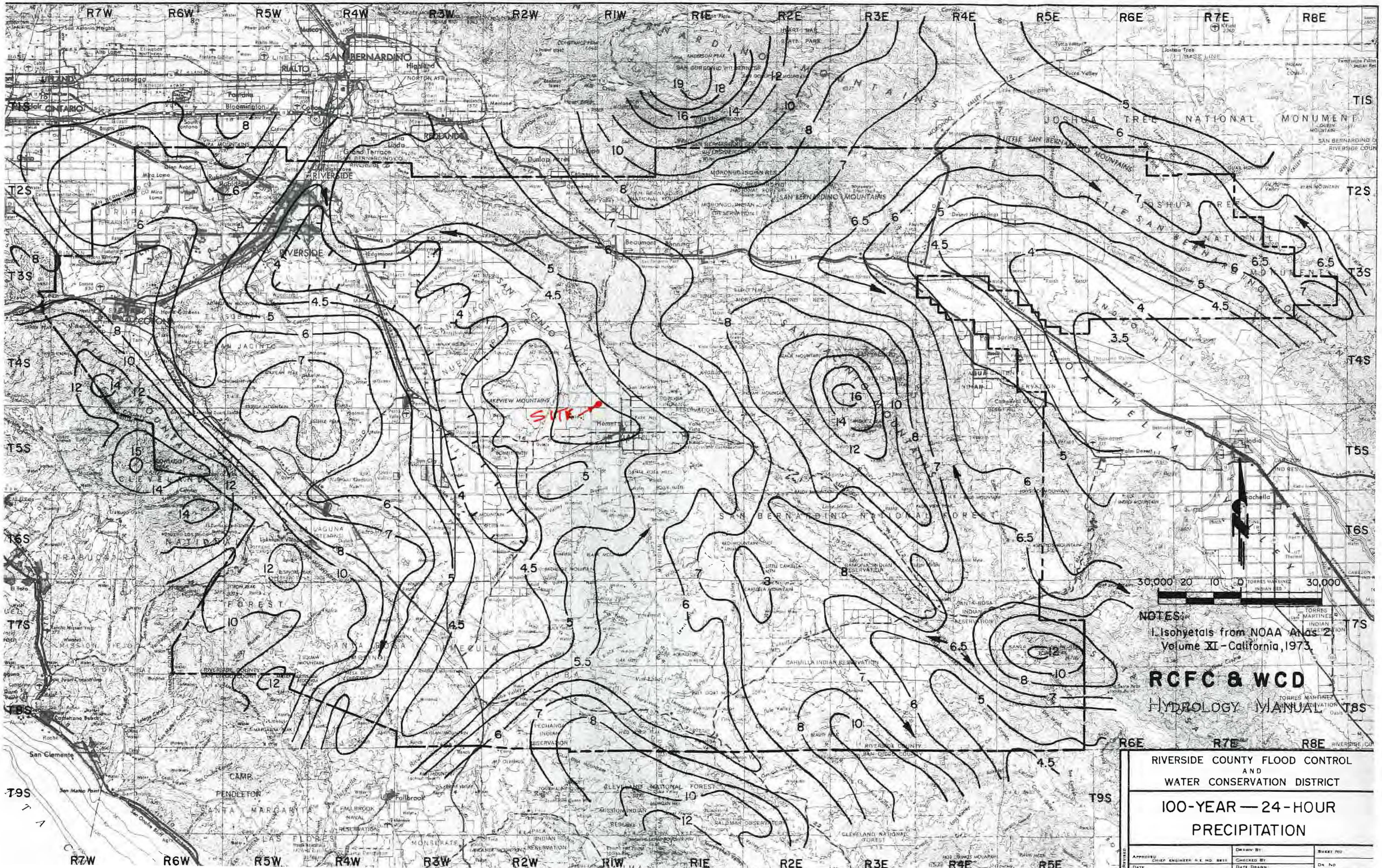
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

2-YEAR — 24-HOUR PRECIPITATION

APPROVED CHIEF ENGINEER R.E. NO. 9822	DRAWN BY R.A.S.	SHEET NO.
DATE	CHECKED BY	DR. NO.
	DATE DRAWN	

REVISED

PLATE E-5.5



R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E
R3E
R4E
R5E
R6E
R7E
R8E
T1S
T2S
T3S
T4S
T5S
T6S
T7S
T8S
T9S
SAN BERNARDINO
RIALTO
ONTARIO
RIVERSIDE
REDLANDS
Beaumont
Hemet
Palm Springs
Indio
Coachella
Fallbrook
San Clemente
SITE
JOSHUA TREE NATIONAL MONUMENT
SAN BERNARDINO NATIONAL FOREST
CLEVELAND NATIONAL FOREST
30,000 20 10 0 30,000
NOTES:
1. Isohyetals from NOAA Atlas 2, Volume XI - California, 1973.
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
100-YEAR — 24-HOUR PRECIPITATION

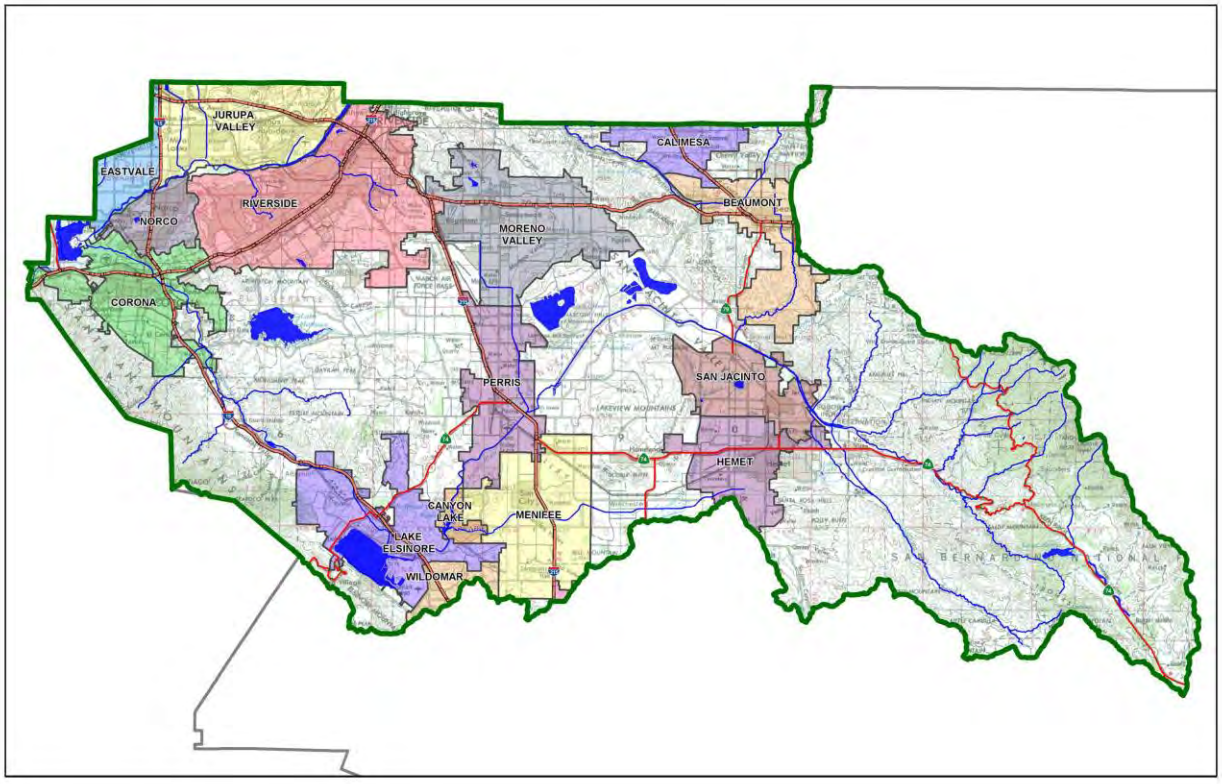
Project Specific Water Quality Management Plan

*A Template for Projects located within the **Santa Ana Watershed** Region of Riverside County*

Project Title: Chacon Farms

Development No: Tentative Tract 39076

Design Review/Case No: PWQMP23-00002, PROJ23-0029



☒ **Preliminary**
☐ **Final**

Original Date Prepared: October 30, 2024

Revision Date(s): July 21, 2025

Prepared for Compliance with
Regional Board Order No. **R8-2010-0033**
Template revised June 30, 2016

Contact Information:

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Blaine Womer Civil Engineering
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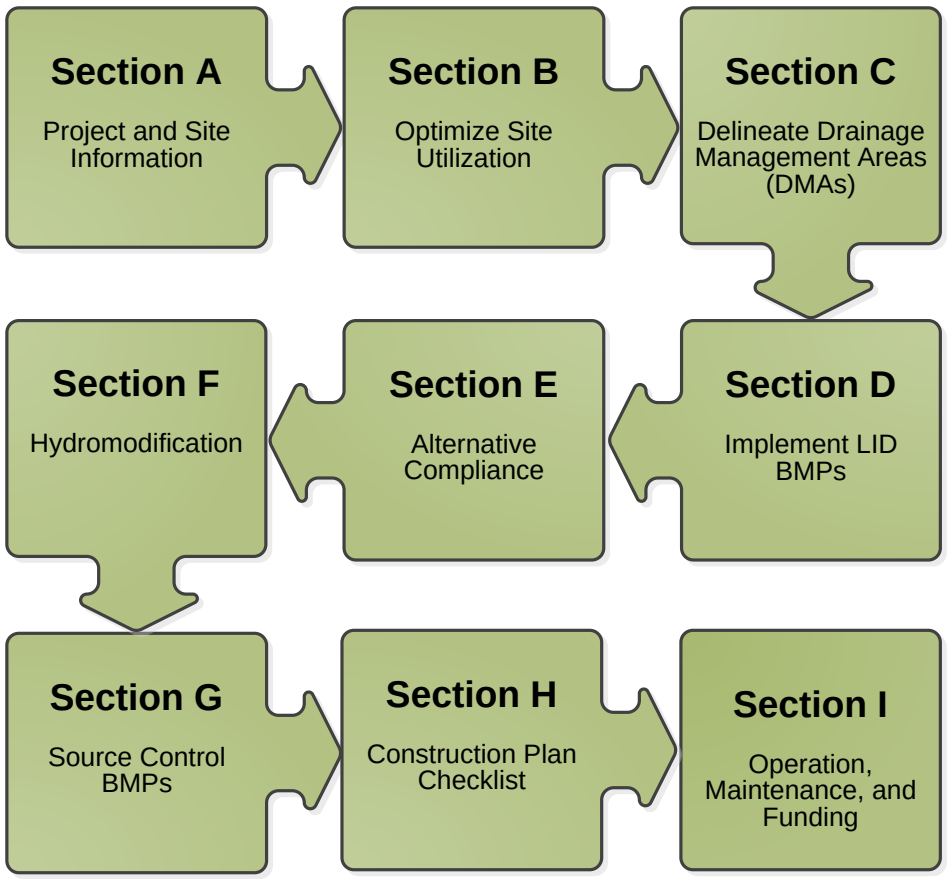
Hemet, CA 92544
(951) 658-1727

A Brief Introduction

This Project-Specific WQMP Template for the **Santa Ana Region** has been prepared to help guide you in documenting compliance for your project. Because this document has been designed to specifically document compliance, you will need to utilize the WQMP Guidance Document as your "how-to" manual to help guide you through this process. Both the Template and Guidance Document go hand-in-hand, and will help facilitate a well prepared Project-Specific WQMP. Below is a flowchart for the layout of this Template that will provide the steps required to document compliance.



OWNER'S CERTIFICATION

This Project-Specific Water Quality Management Plan (WQMP) has been prepared for Ramona Dairy LLC by Blaine Womer Civil Engineering for the Chacon Farms project, Tentative Tract Map 39076 (PROJ23-0029).

This WQMP is intended to comply with the requirements of City of San Jacinto Ordinance No. 13.44 which includes the requirement for the preparation and implementation of a Project-Specific WQMP.

The undersigned, while owning the property/project described in the preceding paragraph, shall be responsible for the implementation and funding of this WQMP and will ensure that this WQMP is amended as appropriate to reflect up-to-date conditions on the site. In addition, the property owner accepts responsibility for interim operation and maintenance of Stormwater BMPs until such time as this responsibility is formally transferred to a subsequent owner. This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party (or parties) having responsibility for implementing portions of this WQMP. At least one copy of this WQMP will be maintained at the project site or project office in perpetuity. The undersigned is authorized to certify and to approve implementation of this WQMP. The undersigned is aware that implementation of this WQMP is enforceable under City of San Jacinto Water Quality Ordinance (Municipal Code Section 13.44).

"I, the undersigned, certify under penalty of law that the provisions of this WQMP have been reviewed and accepted and that the WQMP will be transferred to future successors in interest."

Pending Approval
Owner's Signature

Date

Owner's Printed Name

Owner's Title/Position

PREPARER'S CERTIFICATION

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan meet the requirements of Regional Water Quality Control Board Order No. **R8-2010-0033** and any subsequent amendments thereto."

Blaine Womer
Preparer's Signature

July 21, 2025
Date

Blaine Womer
Preparer's Printed Name

President
Preparer's Title/Position

Preparer's Licensure: RCE 46354
Expiration: 12/31/2026

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Section A: Project and Site Information

PROJECT INFORMATION	
Type of Project:	Residential
Planning Area:	N/A
Community Name:	San Jacinto
Development Name:	Tentative Tract 39076
PROJECT LOCATION	
Latitude & Longitude (DMS): 33◦46'35N, -117◦01'03"W	
Project Watershed and Sub-Watershed: Watershed: San Ana River	
Sub-Watershed: San Jacinto Valley	
Gross Acres: 75.70	
APN(s): 432-260-009, 026, 027	
Map Book and Page No.: East ½ Farm Lot 161, MB 8/357	
PROJECT CHARACTERISTICS	
Proposed or Potential Land Use(s)	Single Family Residential
Proposed or Potential SIC Code(s)	N/A
Area of Impervious Project Footprint (SF)	1,719,665
Total Area of proposed Impervious Surfaces within the Project Footprint (SF)/or Replacement	1,719,665
Does the project consist of offsite road improvements?	☐ Y ☒ N
Does the project propose to construct unpaved roads?	☐ Y ☒ N
Is the project part of a larger common plan of development (phased project)?	☐ Y ☒ N
EXISTING SITE CHARACTERISTICS	
Total area of existing Impervious Surfaces within the Project limits Footprint (SF)	41,407
Is the project located within any MSHCP Criteria Cell?	☐ Y ☒ N
If so, identify the Cell number:	N/A
Are there any natural hydrologic features on the project site?	☐ Y ☒ N
Is a Geotechnical Report attached?	☒ Y ☐ N
If no Geotech. Report, list the NRCS soils type(s) present on the site (A, B, C and/or D)	N/A
What is the Water Quality Design Storm Depth for the project?	0.70

Narrative: Tentative Tract 39076 is a 417-lot single family subdivision on 75.7 acres, located at the northwest corner of Cawston Avenue and Esplanade Avenue in the City of San Jacinto. Lot sizes within the subdivision range from a minimum of 4,500 sf to 6,700 sf. The proposed impervious area, post development will be 1,719,665 sf. The impervious area consists of roofs, asphalt, concrete, concrete sidewalks and driveways. The natural drainage pattern for the property is northwest. Project grading has been primarily designed to honor the natural drainage pattern. Individual lots will drain via vegetated swales to the transferring streets. Street drainage is directed to onsite bioretention basins for treatment. Stormwater flow in excess of the bioretention basin capacities will be intercepted by an onsite storm drain and diverted to an onsite retention basin. The basin has been sized to retain in excess of the volumetric difference between the developed and undeveloped condition for the 100-year, 24-hour storm event. The project proposes private streets and will establish a HOA for perpetual maintenance.

A.1 Maps and Site Plans

When completing your Project-Specific WQMP, include a map of the local vicinity and existing site. In addition, include all grading, drainage, landscape/plant palette and other pertinent construction plans in Appendix 2. At a **minimum**, your WQMP Site Plan should include the following:

- Drainage Management Areas
- Proposed Structural BMPs
- Drainage Path
- Drainage Infrastructure, Inlets, Overflows
- Source Control BMPs
- Buildings, Roof Lines, Downspouts
- Impervious Surfaces
- Standard Labeling
- BMP Locations (Lat/Long)

Use your discretion on whether or not you may need to create multiple sheets or can appropriately accommodate these features on one or two sheets. Keep in mind that the Co-Permittee plan reviewer must be able to easily analyze your project utilizing this template and its associated site plans and maps.

Appendix 1 includes the following:

- Vicinity Map, A-1
- Regional Waters Map, A-2
- Drainage Area Map, A-3
- Post Construction BMP Site Plan, A-4

A.2 Identify Receiving Waters

Using Table A.1 below, list in order of upstream to downstream, the receiving waters that the project site is tributary to. Continue to fill each row with the Receiving Water's 303(d) listed impairments (if any), designated beneficial uses, and proximity, if any, to a RARE beneficial use. Include a map of the receiving waters in Appendix 1.

Table A.1 Identification of Receiving Waters

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
San Jacinto River Reach 5	None	AGR-GWR-REC1-REC2-WARM-WILD	Not designated as RARE
San Jacinto River Reach 4	None	AGR-GWR-REC1-REC2-WARM-WILD	Not designated as RARE
Canyon Lake	Pathogens, Nutrients	MUN-AGR-GWR-REC1-REC2-WARM-WILD	Not designated as RARE
Lake Elsinore	Nutrients, PCB's, Organic Enrichment/ Dissolved Oxygen, Sediment Toxicity, Unknown Toxicity	REC-1-REC2-WARM-WILD	Not designated as RARE

A.3 Additional Permits/Approvals required for the Project:

Table A.2 Other Applicable Permits

Agency	Permit Required	
State Department of Fish and Game, 1602 Streambed Alteration Agreement	☐ Y	☒ N
State Water Resources Control Board, Clean Water Act (CWA) Section 401 Water Quality Cert.	☐ Y	☒ N
US Army Corps of Engineers, CWA Section 404 Permit	☐ Y	☒ N
US Fish and Wildlife, Endangered Species Act Section 7 Biological Opinion	☐ Y	☒ N
Statewide Construction General Permit Coverage	☒ Y	☐ N
Statewide Industrial General Permit Coverage	☐ Y	☒ N
Western Riverside MSHCP Consistency Approval (e.g., JPR, DBESP)	☐ Y	☒ N
Other *(please list in the space below as required)*	☐ Y	☐ N

If yes is answered to any of the questions above, the Co-Permittee may require proof of approval/coverage from those agencies as applicable including documentation of any associated requirements that may affect this Project-Specific WQMP.

Section B: Optimize Site Utilization (LID Principles)

Review of the information collected in Section 'A' will aid in identifying the principal constraints on site design and selection of LID BMPs as well as opportunities to reduce imperviousness and incorporate LID Principles into the site and landscape design. For example, constraints might include impermeable soils, high groundwater, groundwater pollution or contaminated soils, steep slopes, geotechnical instability, high-intensity land use, heavy pedestrian or vehicular traffic, utility locations or safety concerns. Opportunities might include existing natural areas, low areas, oddly configured or otherwise unbuildable parcels, easements and landscape amenities including open space and buffers (which can double as locations for bioretention BMPs), and differences in elevation (which can provide hydraulic head). Prepare a brief narrative for each of the site optimization strategies described below. This narrative will help you as you proceed with your LID design and explain your design decisions to others.

The 2010 Santa Ana MS4 Permit further requires that LID Retention BMPs (Infiltration Only or Harvest and Use) be used unless it can be shown that those BMPs are infeasible. Therefore, it is important that your narrative identify and justify if there are any constraints that would prevent the use of those categories of LID BMPs. Similarly, you should also note opportunities that exist which will be utilized during project design. Upon completion of identifying Constraints and Opportunities, include these on your WQMP Site plan in Appendix 1.

Consideration of "highest and best use" of the discharge should also be considered. For example, Lake Elsinore is evaporating faster than runoff from natural precipitation can recharge it. Requiring infiltration of 85% of runoff events for projects tributary to Lake Elsinore would only exacerbate current water quality problems associated with Pollutant concentration due to lake water evaporation. In cases where rainfall events have low potential to recharge Lake Elsinore (i.e. no hydraulic connection between groundwater to Lake Elsinore, or other factors), requiring infiltration of Urban Runoff from projects is counterproductive to the overall watershed goals. Project proponents, in these cases, would be allowed to discharge Urban Runoff, provided they used equally effective filtration-based BMPs.

Site Optimization

The following questions are based upon Section 3.2 of the WQMP Guidance Document. Review of the WQMP Guidance Document will help you determine how best to optimize your site and subsequently identify opportunities and/or constraints, and document compliance.

Did you identify and preserve existing drainage patterns? If so, how? If not, why?

Yes, existing drainage patterns have been honored through site grading.

Did you identify and protect existing vegetation? If so, how? If not, why?

Previous active agriculture use. No existing vegetation to protect.

Did you identify and preserve natural infiltration capacity? If so, how? If not, why?

Through site specific testing, it was determined that the site does not have natural infiltration capacity. Infiltration rates varied between 0.1 to 0.6 inches per hour.

Did you identify and minimize impervious area? If so, how? If not, why?

To the greatest extent possible for the type of development.

Did you identify and disperse runoff to adjacent pervious areas? If so, how? If not, why?

Stormwater runoff is directed to onsite bioretention basins for treatment.

Section C: Delineate Drainage Management Areas (DMAs)

Utilizing the procedure in Section 3.3 of the WQMP Guidance Document which discusses the methods of delineating and mapping your project site into individual DMAs, complete Table C.1 below to appropriately categorize the types of classification (e.g., Type A, Type B, etc.) per DMA for your project site. Upon completion of this table, this information will then be used to populate and tabulate the corresponding tables for their respective DMA classifications.

Table C.1 DMA Classifications

DMA Name or ID	Surface Type(s)[1][2]	Area (Sq. Ft.)	DMA Type
D/1	Roof	336,831	Drains to BMP
D/2	Asphalt	260,534	Drains to BMP
D/3	Concrete	135,765	Drains to BMP
D/4	Landscape	495,034	Drains to BMP
D/5	Roof	190,300	Drains to BMP
D/6	Asphalt	151,067	Drains to BMP
D/7	Concrete	73,905	Drains to BMP
D/8	Landscape	367,017	Drains to BMP
D/9	Roof	270,226	Drains to BMP
D/10	Asphalt	201,412	Drains to BMP
D/11	Concrete	99,625	Drains to BMP
D/12	Landscape	440,645	Drains to BMP
A/1	Landscape	95,730	Self-Treating

[1]Reference Table 2-1 in the WQMP Guidance Document to populate this column
[2]If multi-surface provide back-up

Table C.2 Type 'A', Self-Treating Areas

DMA Name or ID	Area (Sq. Ft.)	Stabilization Type	Irrigation Type (if any)
A-1	95,730	Drought Tolerant Landscape	Drip

Table C.3 Type 'B', Self-Retaining Areas

Self-Retaining Area				**Type 'C' DMAs that are draining to the Self-Retaining Area**		
DMA Name/ ID	Post-project surface type	Area (square feet) [A]	Storm Depth (inches) [B]	DMA Name / ID	[C] from Table C.4 = [C]	Required Retention Depth (inches) [D]
N/A						

$$[D] = [B] + \frac{[B] \cdot [C]}{[A]}$$

Table C.4 Type 'C', Areas that Drain to Self-Retaining Areas

DMA					**Receiving Self-Retaining DMA**		
DMA Name/ ID	Area (square feet) [A]	Post-project surface type	Impervious fraction [B]	Product [C] = [A] x [B]	DMA name /ID	Area (square feet) [D]	Ratio [C]/[D]
N/A							

Table C.5 Type 'D', Areas Draining to BMPs

DMA Name or ID	BMP Name or ID
D/1	Bioretention Basin No. 1
D/2	Bioretention Basin No. 1
D/3	Bioretention Basin No. 1
D/4	Bioretention Basin No. 1
D/5	Bioretention Basin No. 2
D/6	Bioretention Basin No. 2
D/7	Bioretention Basin No. 2
D/8	Bioretention Basin No. 2
D/9	Bioretention Basin No. 3
D/10	Bioretention Basin No. 3
D/11	Bioretention Basin No. 3
D/12	Bioretention Basin No. 3

Note: More than one drainage management area can drain to a single LID BMP, however, one drainage management area may not drain to more than one BMP.

Section D: Implement LID BMPs

D.1 Infiltration Applicability

Is there an approved downstream 'Highest and Best Use' for stormwater runoff (see discussion in Chapter 2.4.4 of the WQMP Guidance Document for further details)? ☐ Y ☒ N

If yes has been checked, Infiltration BMPs shall not be used for the site; proceed to section D.3

If no, continue working through this section to implement your LID BMPs. It is recommended that you contact your Co-Permittee to verify whether or not your project discharges to an approved downstream 'Highest and Best Use' feature.

Geotechnical Report

A Geotechnical Report or Phase I Environmental Site Assessment may be required by the Copermittee to confirm present and past site characteristics that may affect the use of Infiltration BMPs. In addition, the Co-Permittee, at their discretion, may not require a geotechnical report for small projects as described in Chapter 2 of the WQMP Guidance Document. If a geotechnical report has been prepared, include it in Appendix 3. In addition, if a Phase I Environmental Site Assessment has been prepared, include it in Appendix 4.

Is this project classified as a small project consistent with the requirements of Chapter 2 of the WQMP Guidance Document? ☐ Y ☒ N

Infiltration Feasibility

Table D.1 below is meant to provide a simple means of assessing which DMAs on your site support Infiltration BMPs and is discussed in the WQMP Guidance Document in Chapter 2.4.5. Check the appropriate box for each question and then list affected DMAs as applicable. If additional space is needed, add a row below the corresponding answer.

Table D.1 Infiltration Feasibility

Does the project site…	YES	NO
…have any DMAs with a seasonal high groundwater mark shallower than 10 feet?		X
If Yes, list affected DMAs:		
…have any DMAs located within 100 feet of a water supply well?		X
If Yes, list affected DMAs:		
…have any areas identified by the geotechnical report as posing a public safety risk where infiltration of stormwater could have a negative impact?		X
If Yes, list affected DMAs:		
…have measured in-situ infiltration rates of less than 1.6 inches / hour?	X	
If Yes, list affected DMAs: All		
…have significant cut and/or fill conditions that would preclude in-situ testing of infiltration rates at the final infiltration surface?		X
If Yes, list affected DMAs:		
…geotechnical report identify other site-specific factors that would preclude effective and safe infiltration?		X
Describe here:		

If you answered "Yes" to any of the questions above for any DMA, Infiltration BMPs should not be used for those DMAs and you should proceed to the assessment for Harvest and Use below.

D.2 Harvest and Use Assessment

Please check what applies*:*

☒ Reclaimed water will be used for the non-potable water demands for the project.

☐Downstream water rights may be impacted by Harvest and Use as approved by the Regional Board (verify with the Copermittee).

☐The Design Capture Volume will be addressed using Infiltration Only BMPs. In such a case, Harvest and Use BMPs are still encouraged, but it would not be required if the Design Capture Volume will be infiltrated or evapotranspired.

If any of the above boxes have been checked, Harvest and Use BMPs need not be assessed for the site. If none of the above criteria applies, follow the steps below to assess the feasibility of irrigation use, toilet use and other non-potable uses (e.g., industrial use).

Irrigation Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for Irrigation Use BMPs on your site:

Step 1: Identify the total area of irrigated landscape on the site, and the type of landscaping used.

Total Area of Irrigated Landscape: Insert Area (Acres)

Type of Landscaping (Conservation Design or Active Turf): List Landscaping Type

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for irrigation use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: Insert Area (Acres)

Step 3: Cross reference the Design Storm depth for the project site (see Exhibit A of the WQMP Guidance Document) with the left column of Table 2-3 in Chapter 2 to determine the minimum area of Effective Irrigated Area per Tributary Impervious Area (EIATIA).

Enter your EIATIA factor: EIATIA Factor

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum irrigated area that would be required.

Minimum required irrigated area: Insert Area (Acres)

Step 5: Determine if harvesting stormwater runoff for irrigation use is feasible for the project by comparing the total area of irrigated landscape (Step 1) to the minimum required irrigated area (Step 4).

Minimum required irrigated area (Step 4)	Available Irrigated Landscape (Step 1)
Insert Area (Acres)	Insert Area (Acres)

Toilet Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for toilet flushing uses on your site:

Step 1: Identify the projected total number of daily toilet users during the wet season, and account for any periodic shut downs or other lapses in occupancy:

Projected Number of Daily Toilet Users: Number of daily Toilet Users

Project Type: Enter 'Residential', 'Commercial', 'Industrial' or 'Schools'

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for toilet use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: Insert Area (Acres)

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-2 in Chapter 2 to determine the minimum number or toilet users per tributary impervious acre (TUTIA).

Enter your TUTIA factor: TUTIA Factor

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of toilet users that would be required.

Minimum number of toilet users: Required number of toilet users

Step 5: Determine if harvesting stormwater runoff for toilet flushing use is feasible for the project by comparing the Number of Daily Toilet Users (Step 1) to the minimum required number of toilet users (Step 4).

Minimum required Toilet Users (Step 4)	**Projected number of toilet users (Step 1)**
Insert Area (Acres)	Insert Area (Acres)

Other Non-Potable Use Feasibility

Are there other non-potable uses for stormwater runoff on the site (e.g. industrial use)? See Chapter 2 of the Guidance for further information. If yes, describe below. If no, write N/A.

Insert narrative description here.

Step 1: Identify the projected average daily non-potable demand, in gallons per day, during the wet season and accounting for any periodic shut downs or other lapses in occupancy or operation.

Average Daily Demand: Projected Average Daily Use (gpd)

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for the identified non-potable use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: Insert Area (Acres)

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-4 in Chapter 2 to determine the minimum demand for non-potable uses per tributary impervious acre.

Enter the factor from Table 2-4: Enter Value

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of gallons per day of non-potable use that would be required.

Minimum required use: Minimum use required (gpd)

Step 5: Determine if harvesting stormwater runoff for other non-potable use is feasible for the project by comparing the projected average daily use (Step 1) to the minimum required non-potable use (Step 4).

Minimum required non-potable use (Step 4)	**Projected average daily use (Step 1)**
Minimum use required (gpd)	Projected Average Daily Use (gpd)

If Irrigation, Toilet and Other Use feasibility anticipated demands are less than the applicable minimum values, Harvest and Use BMPs are not required and you should proceed to utilize LID Bioretention and Biotreatment per Section 3.4.2 of the WQMP Guidance Document.

D.3 Bioretention and Biotreatment Assessment

Other LID Bioretention and Biotreatment BMPs as described in Chapter 2.4.7 of the WQMP Guidance Document are feasible on nearly all development sites with sufficient advance planning.

Select one of the following:

☒ LID Bioretention/Biotreatment BMPs will be used for some or all DMAs of the project as noted below in Section D.4 (note the requirements of Section 3.4.2 in the WQMP Guidance Document).

☐ A site-specific analysis demonstrating the technical infeasibility of all LID BMPs has been performed and is included in Appendix 5. If you plan to submit an analysis demonstrating the technical infeasibility of LID BMPs, request a pre-submittal meeting with the Copermittee to discuss this option. Proceed to Section E to document your alternative compliance measures.

D.4 Feasibility Assessment Summaries

From the Infiltration, Harvest and Use, Bioretention and Biotreatment Sections above, complete Table D.2 below to summarize which LID BMPs are technically feasible, and which are not, based upon the established hierarchy.

Table D.2 LID Prioritization Summary Matrix

DMA Name/ID	LID BMP Hierarchy				No LID (Alternative Compliance)
	1. Infiltration	2. Harvest and use	3. Bioretention	4. Biotreatment	
D/1	☐	☐	☒	☐	☐
D/2	☐	☐	☒	☐	☐
D/3	☐	☐	☒	☐	☐
D/4	☐	☐	☒	☐	☐
D/5	☐	☐	☒	☐	☐
D/6	☐	☐	☒	☐	☐
D/7	☐	☐	☒	☐	☐
D/8	☐	☐	☒	☐	☐
D/9	☐	☐	☒	☐	☐
D/10	☐	☐	☒	☐	☐
D/11	☐	☐	☒	☐	☐
D/12	☐	☐	☒	☐	☐

For those DMAs where LID BMPs are not feasible, provide a brief narrative below summarizing why they are not feasible, include your technical infeasibility criteria in Appendix 5, and proceed to Section E below to document Alternative Compliance measures for those DMAs. Recall that each proposed DMA must pass through the LID BMP hierarchy before alternative compliance measures may be considered.

Insert narrative description here. N/A

D.5 LID BMP Sizing

Each LID BMP must be designed to ensure that the Design Capture Volume will be addressed by the selected BMPs. First**,** calculate the Design Capture Volume for each LID BMP using the V_{BMP} worksheet in Appendix F of the LID BMP Design Handbook. Second**,** design the LID BMP to meet the required V_{BMP} using a method approved by the Copermittee. Utilize the worksheets found in the LID BMP Design Handbook or consult with your Copermittee to assist you in correctly sizing your LID BMPs. Complete Table D.3 below to document the Design Capture Volume and the Proposed Volume for each LID BMP. Provide the completed design procedure sheets for each LID BMP in Appendix 6. You may add additional rows to the table below as needed.

Table D.3 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Bioretention Basin No. 1*		
	[A]		[B]	[C]	[A] x [C]			
D/1	*336,831*	*Roof*	*1.0*	*0.89*	*300,453.3*	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
D/2	*260,534*	*Asphalt*	*1.0*	*0.89*	*232,396.3*			
D/3	*135,765*	*Concrete*	*1.0*	*0.89*	*121,102.4*			
D/4	*495,034*	*Landscape*	*0.1*	*0.11*	*54,680.5*			
	1,228,164				708,632.5	0.70	41,336.9	***41400***

[B], [C] is obtained as described in Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A in the WQMP Guidance Document

[G] is obtained from a design procedure sheet, such as in LID BMP Design Handbook and placed in Appendix 6

Table D.4 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Bioretention Basin No. 2*		
	[A]		[B]	[C]	[A] x [C]			
D/5	*190,300*	*Roof*	*1.0*	*0.89*	*169,747.6*	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
D/6	*151,067*	*Asphalt*	*1.0*	*0.89*	*134,751.8*			
D/7	*73,905*	*Concrete*	*1.0*	*0.89*	*65,923.3*			
D/8	*367,017*	*Landscape*	*0.1*	*0.11*	*40,540*			
	782,289				410,962.7	0.70	23,972.8	***24000***

[B], [C] is obtained as described in Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A in the WQMP Guidance Document

[G] is obtained from a design procedure sheet, such as in LID BMP Design Handbook and placed in Appendix 6

Table D.5 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Bioretention Basin No. 3*		
	[A]		[B]	[C]	[A] x [C]			
D/9	*270,226*	*Roof*	*1.0*	*0.89*	*241,041.6*			
D/10	*201,412*	*Asphalt*	*1.0*	*0.89*	*179,659.5*			
D/11	*99,625*	*Concrete*	*1.0*	*0.89*	*88,865.5*			
D/12	*440,645*	*Landscape*	*0.1*	*0.11*	*48,672.8*	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
	1,011,908				558,239.4	0.70	32,564	***32600***

[B], [C] is obtained as described in Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A in the WQMP Guidance Document

[G] is obtained from a design procedure sheet, such as in LID BMP Design Handbook and placed in Appendix 6

Section E: Alternative Compliance (LID Waiver Program)

LID BMPs are expected to be feasible on virtually all projects. Where LID BMPs have been demonstrated to be infeasible as documented in Section D, other Treatment Control BMPs must be used (subject to LID waiver approval by the Copermittee). Check one of the following Boxes:

☒ LID Principles and LID BMPs have been incorporated into the site design to fully address all Drainage Management Areas. No alternative compliance measures are required for this project and thus this Section is not required to be completed.

- *Or* -

☐ The following Drainage Management Areas are unable to be addressed using LID BMPs. A site-specific analysis demonstrating technical infeasibility of LID BMPs has been approved by the Co-Permittee and included in Appendix 5. Additionally, no downstream regional and/or sub-regional LID BMPs exist or are available for use by the project. The following alternative compliance measures on the following pages are being implemented to ensure that any pollutant loads expected to be discharged by not incorporating LID BMPs, are fully mitigated.

List DMAs here.

E.1 Identify Pollutants of Concern

Utilizing Table A.1 from Section A above which noted your project's receiving waters and their associated EPA approved 303(d) listed impairments, cross reference this information with that of your selected Priority Development Project Category in Table E.1 below. If the identified General Pollutant Categories are the same as those listed for your receiving waters, then these will be your Pollutants of Concern and the appropriate box or boxes will be checked on the last row. The purpose of this is to document compliance and to help you appropriately plan for mitigating your Pollutants of Concern in lieu of implementing LID BMPs.

Table E.1 Potential Pollutants by Land Use Type

Priority Development Project Categories and/or Project Features (check those that apply)	General Pollutant Categories							
	Bacterial Indicators	Metals	Nutrients	Pesticides	Toxic Organic Compounds	Sediments	Trash & Debris	Oil & Grease
☒ Detached Residential Development	P	N	P	P	N	P	P	P
☐ Attached Residential Development	P	N	P	P	N	P	P	P(2)
☐ Commercial/Industrial Development	P(3)	P	P(1)	P(1)	P(5)	P(1)	P	P
☐ Automotive Repair Shops	N	P	N	N	P(4, 5)	N	P	P
☐ Restaurants (>5,000 ft^2)	P	N	N	N	N	N	P	P
☐ Hillside Development (>5,000 ft^2)	P	N	P	P	N	P	P	P
☐ Parking Lots (>5,000 ft^2)	P(6)	P	P(1)	P(1)	P(4)	P(1)	P	P
☐ Retail Gasoline Outlets	N	P	N	N	P	N	P	P
Project Priority Pollutant(s) of Concern	☒	☐	☒	☐	☒	☒	☐	☐

P = Potential

N = Not Potential

(1) A potential Pollutant if non-native landscaping exists or is proposed onsite; otherwise not expected

(2) A potential Pollutant if the project includes uncovered parking areas; otherwise not expected

(3) A potential Pollutant is land use involving animal waste

(4) Specifically petroleum hydrocarbons

(5) Specifically solvents

(6) Bacterial indicators are routinely detected in pavement runoff

E.2 Stormwater Credits

Projects that cannot implement LID BMPs but nevertheless implement smart growth principles are potentially eligible for Stormwater Credits. Utilize Table 3-8 within the WQMP Guidance Document to identify your Project Category and its associated Water Quality Credit. If not applicable, write N/A.

Table E.2 Water Quality Credits

Qualifying Project Categories	Credit Percentage[2]
N/A	
Total Credit Percentage[1]	

[1]*Cannot Exceed 50%*

[2]*Obtain corresponding data from Table 3-8 in the WQMP Guidance Document*

E.3 Sizing Criteria

After you appropriately considered Stormwater Credits for your project, utilize Table E.3 below to appropriately size them to the DCV, or Design Flow Rate, as applicable. Please reference Chapter 3.5.2 of the WQMP Guidance Document for further information.

Table E.3 Treatment Control BMP Sizing

DMA Type/ID	**DMA Area (square feet)**	**Post-Project Surface Type**	**Effective Impervious Fraction, I_f**	**DMA Runoff Factor**	**DMA Area x Runoff Factor**		***Enter BMP Name / Identifier Here***		
	[A]		[B]	[C]	[A] x [C]				
N/A						*Design Storm Depth (in)*	*Minimum Design Capture Volume or Design Flow Rate (cubic feet or cfs)*	*Total Storm Water Credit % Reduction*	*Proposed Volume or Flow on Plans (cubic feet or cfs)*
	A_T = Σ[A]				Σ= [D]	[E]	$[F] = \frac{[D]x[E]}{[G]}$	[F] X (1-[H])	[I]

[B], [C] is obtained as described in Section 2.3.1 from the WQMP Guidance Document

[E] is for Flow-Based Treatment Control BMPs [E] = .2, for Volume-Based Control Treatment BMPs, [E] obtained from Exhibit A in the WQMP Guidance Document

[G] is for Flow-Based Treatment Control BMPs [G] = 43,560, for Volume-Based Control Treatment BMPs, [G] = 12

[H] is from the Total Credit Percentage as Calculated from Table E.2 above

[I] as obtained from a design procedure sheet from the BMP manufacturer and should be included in Appendix 6

E.4 Treatment Control BMP Selection

Treatment Control BMPs typically provide proprietary treatment mechanisms to treat potential pollutants in runoff, but do not sustain significant biological processes. Treatment Control BMPs must have a removal efficiency of a medium or high effectiveness as quantified below:

- **High**: equal to or greater than 80% removal efficiency
- **Medium**: between 40% and 80% removal efficiency

Such removal efficiency documentation (e.g., studies, reports, etc.) as further discussed in Chapter 3.5.2 of the WQMP Guidance Document, must be included in Appendix 6. In addition, ensure that proposed Treatment Control BMPs are properly identified on the WQMP Site Plan in Appendix 1.

Table E.4 Treatment Control BMP Selection

Selected Treatment Control BMP Name or ID[1]	Priority Pollutant(s) of Concern to Mitigate[2]	Removal Efficiency Percentage[3]
N/A		

[1] Treatment Control BMPs must not be constructed within Receiving Waters. In addition, a proposed Treatment Control BMP may be listed more than once if they possess more than one qualifying pollutant removal efficiency.
[2] Cross Reference Table E.1 above to populate this column.
[3] As documented in a Co-Permittee Approved Study and provided in Appendix 6.

Section F: Hydromodification

F.1 Hydrologic Conditions of Concern (HCOC) Analysis

Once you have determined that the LID design is adequate to address water quality requirements, you will need to assess if the proposed LID Design may still create a HCOC. Review Chapters 2 and 3 (including Figure 3-7) of the WQMP Guidance Document to determine if your project must mitigate for Hydromodification impacts. If your project meets one of the following criteria which will be indicated by the check boxes below, you do not need to address Hydromodification at this time. However, if the project does not qualify for Exemptions 1, 2 or 3, then additional measures must be added to the design to comply with HCOC criteria. This is discussed in further detail below in Section F.2.

HCOC EXEMPTION 1: The Priority Development Project disturbs less than one acre. The Copermittee has the discretion to require a Project-Specific WQMP to address HCOCs on projects less than one acre on a case by case basis. The disturbed area calculation should include all disturbances associated with larger common plans of development.

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, HCOC criteria do not apply.

HCOC EXEMPTION 2: The volume and time of concentration[1] of storm water runoff for the post-development condition is not significantly different from the pre-development condition for a 2-year return frequency storm (a difference of 5% or less is considered insignificant) using one of the following methods to calculate:

- Riverside County Hydrology Manual
- Technical Release 55 (TR-55): Urban Hydrology for Small Watersheds (NRCS 1986), or derivatives thereof, such as the Santa Barbara Urban Hydrograph Method
- Other methods acceptable to the Co-Permittee

Does the project qualify for this HCOC Exemption? ☒ Y ☐ N

If Yes, report results in Table F.1 below and provide your substantiated hydrologic analysis in Appendix 7.

Table F.1 Hydrologic Conditions of Concern Summary

	2 year – 24 hour		
	Pre-condition	**Post-condition**	**% Difference**
Time of Concentration	INSERT VALUE	INSERT VALUE	INSERT VALUE
Volume (Cubic Feet)	INSERT VALUE	INSERT VALUE	INSERT VALUE

[1] Time of concentration is defined as the time after the beginning of the rainfall when all portions of the drainage basin are contributing to flow at the outlet.

HCOC EXEMPTION 3: All downstream conveyance channels to an adequate sump (for example, Prado Dam, Lake Elsinore, Canyon Lake, Santa Ana River, or other lake, reservoir or naturally erosion resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity; no sensitive stream habitat areas will be adversely affected; or are not identified on the Co-Permittees Hydromodification Susceptibility Maps.

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, HCOC criteria do not apply and note below which adequate sump applies to this HCOC qualifier:

INSERT TEXT HERE

F.2 HCOC Mitigation

If none of the above HCOC Exemption Criteria are applicable, HCOC criteria is considered mitigated if they meet one of the following conditions:

a. Additional LID BMPS are implemented onsite or offsite to mitigate potential erosion or habitat impacts as a result of HCOCs. This can be conducted by an evaluation of site-specific conditions utilizing accepted professional methodologies published by entities such as the California Stormwater Quality Association (CASQA), the Southern California Coastal Water Research Project (SCCRWP), or other Co-Permittee approved methodologies for site-specific HCOC analysis.

b. The project is developed consistent with an approved Watershed Action Plan that addresses HCOC in Receiving Waters.

c. Mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

Be sure to include all pertinent documentation used in your analysis of the items a, b or c in Appendix 7.

The project is outside of the HCOC exempt area as shown on the HCOC Applicability Map on the Riverside County Flood Control and Water Conservation District website.

*The subject project will retain on-site the 2-year, 24-hour developed condition runoff volume to mitigate HCOC. See hydrograph calculations and HCOC Applicability Map in Appendix 7.

Section G: Source Control BMPs

Source control BMPs include permanent, structural features that may be required in your project plans — such as roofs over and berms around trash and recycling areas — and Operational BMPs, such as regular sweeping and "housekeeping", that must be implemented by the site's occupant or user. The MEP standard typically requires both types of BMPs. In general, Operational BMPs cannot be substituted for a feasible and effective permanent BMP. Using the Pollutant Sources/Source Control Checklist in Appendix 8, review the following procedure to specify Source Control BMPs for your site:

1. ***Identify Pollutant Sources*:** Review Column 1 in the Pollutant Sources/Source Control Checklist. Check off the potential sources of Pollutants that apply to your site.

2. ***Note Locations on Project-Specific WQMP Exhibit*:** Note the corresponding requirements listed in Column 2 of the Pollutant Sources/Source Control Checklist. Show the location of each Pollutant source and each permanent Source Control BMP in your Project-Specific WQMP Exhibit located in Appendix 1.

3. ***Prepare a Table and Narrative*:** Check off the corresponding requirements listed in Column 3 in the Pollutant Sources/Source Control Checklist. In the left column of Table G.1 below, list each potential source of runoff Pollutants on your site (from those that you checked in the Pollutant Sources/Source Control Checklist). In the middle column, list the corresponding permanent, Structural Source Control BMPs (from Columns 2 and 3 of the Pollutant Sources/Source Control Checklist) used to prevent Pollutants from entering runoff. **Add additional narrative** in this column that explains any special features, materials or methods of construction that will be used to implement these permanent, Structural Source Control BMPs.

4. ***Identify Operational Source Control BMPs:*** To complete your table, refer once again to the Pollutant Sources/Source Control Checklist. List in the right column of your table the Operational BMPs that should be implemented as long as the anticipated activities continue at the site. Copermittee stormwater ordinances require that applicable Source Control BMPs be implemented; the same BMPs may also be required as a condition of a use permit or other revocable Discretionary Approval for use of the site.

Table G.1 Permanent and Operational Source Control Measures

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
On-site Storm Drain Inlets	Mark all inlets with the words "only rain down the storm drain"	Maintain and periodically repaint or replace inlet markings. Provide stormwater pollution prevention information to new site owners, lessees, or operators.
Landscape/Outdoor Pesticide Use	Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate and to minimize the use of fertilizers and pesticides	Maintain landscaping using minimum or no pesticides. Provide IPM information to new owners, lessees and operators.

	that can contribute to stormwater pollution. Consider using pest-resistant plants, especially adjacent to hardscape. To ensure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency and plant interactions.	
Rooftop Equipment	Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system. Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment. Avoid roofing, gutters and trim made of copper or other unprotected metals that may leach into runoff.	

Section H: Construction Plan Checklist

Populate Table H.1 below to assist the plan checker in an expeditious review of your project. The first two columns will contain information that was prepared in previous steps, while the last column will be populated with the corresponding plan sheets. This table is to be completed with the submittal of your final Project-Specific WQMP.

Table H.1 Construction Plan Cross-reference

BMP No. or ID	BMP Identifier and Description	Corresponding Plan Sheet(s)	BMP Location (Lat/Long)
1	Bioretention Basin No. 1	Tentative Tract Map Sheet 2	33◦46’45”N/117◦01’07”W
2	Bioretention Basin No. 2	Tentative Tract Map Sheet 3	33◦46’35”N/117◦01’05”W
3	Bioretention Basin No. 3	Tentative Tract Map Sheet 4	33◦46’27”N/117◦01’05”W

Note that the updated table — or Construction Plan WQMP Checklist — is **only a reference tool** to facilitate an easy comparison of the construction plans to your Project-Specific WQMP. Co-Permittee staff can advise you regarding the process required to propose changes to the approved Project-Specific WQMP.

Section I: Operation, Maintenance and Funding

The Copermittee will periodically verify that Stormwater BMPs on your site are maintained and continue to operate as designed. To make this possible, your Copermittee will require that you include in Appendix 9 of this Project-Specific WQMP:

1. A means to finance and implement facility maintenance in perpetuity, including replacement cost.
2. Acceptance of responsibility for maintenance from the time the BMPs are constructed until responsibility for operation and maintenance is legally transferred. A warranty covering a period following construction may also be required.
3. An outline of general maintenance requirements for the Stormwater BMPs you have selected.
4. Figures delineating and designating pervious and impervious areas, location, and type of Stormwater BMP, and tables of pervious and impervious areas served by each facility. Geo-locating the BMPs using a coordinate system of latitude and longitude is recommended to help facilitate a future statewide database system.
5. A separate list and location of self-retaining areas or areas addressed by LID Principles that do not require specialized O&M or inspections but will require typical landscape maintenance as noted in Chapter 5, pages 85-86, in the WQMP Guidance. Include a brief description of typical landscape maintenance for these areas.

Your local Co-Permittee will also require that you prepare and submit a detailed Stormwater BMP Operation and Maintenance Plan that sets forth a maintenance schedule for each of the Stormwater BMPs built on your site. An agreement assigning responsibility for maintenance and providing for inspections and certification may also be required.

Details of these requirements and instructions for preparing a Stormwater BMP Operation and Maintenance Plan are in Chapter 5 of the WQMP Guidance Document.

Maintenance Mechanism: City CFD

Will the proposed BMPs be maintained by a Home Owners' Association (HOA) or Property Owners Association (POA)?

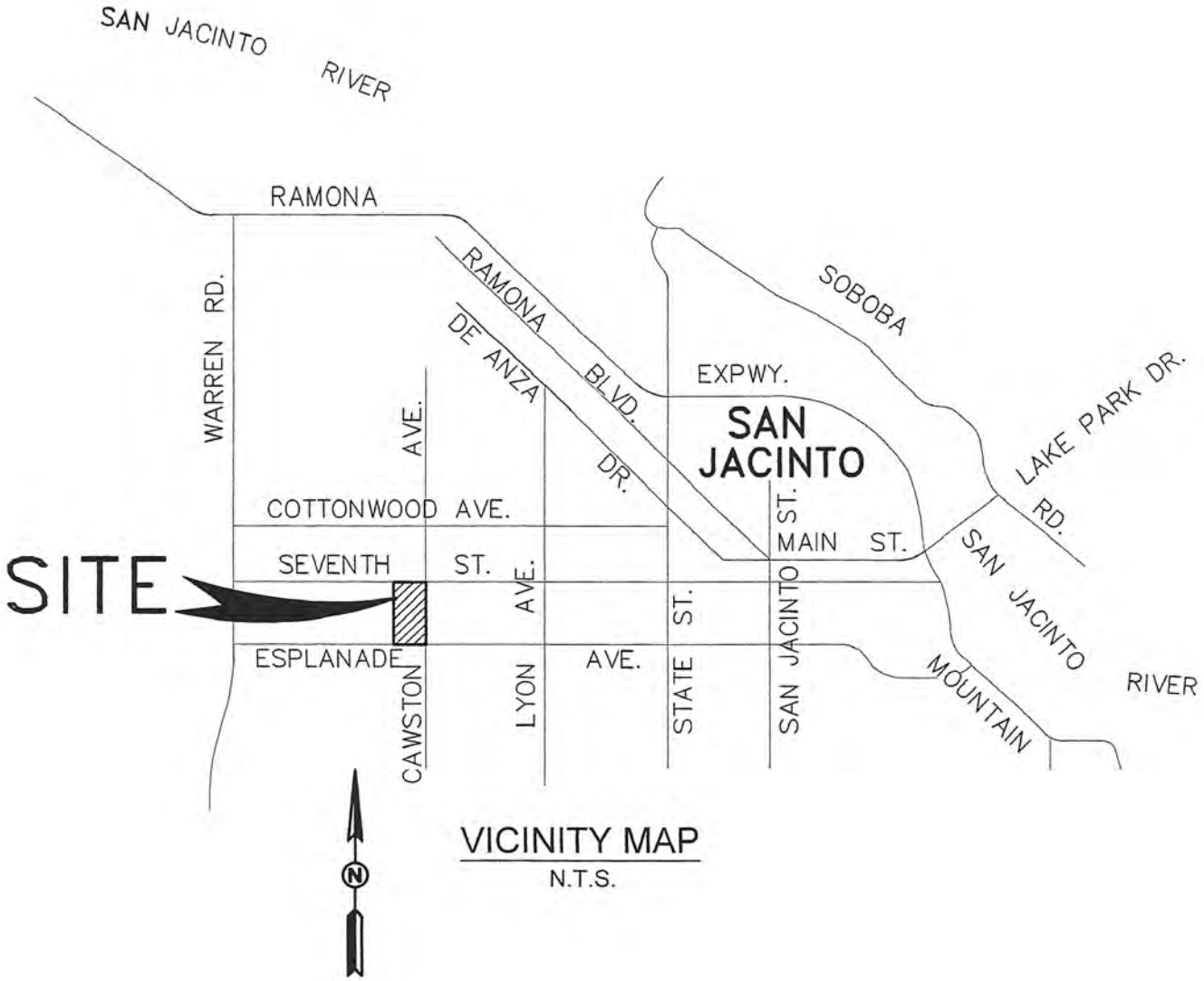
☐ Y ☒ N

Include your Operation and Maintenance Plan and Maintenance Mechanism in Appendix 9. Additionally, include all pertinent forms of educational materials for those personnel that will be maintaining the proposed BMPs within this Project-Specific WQMP in Appendix 10.

To be included in the Final WQMP.

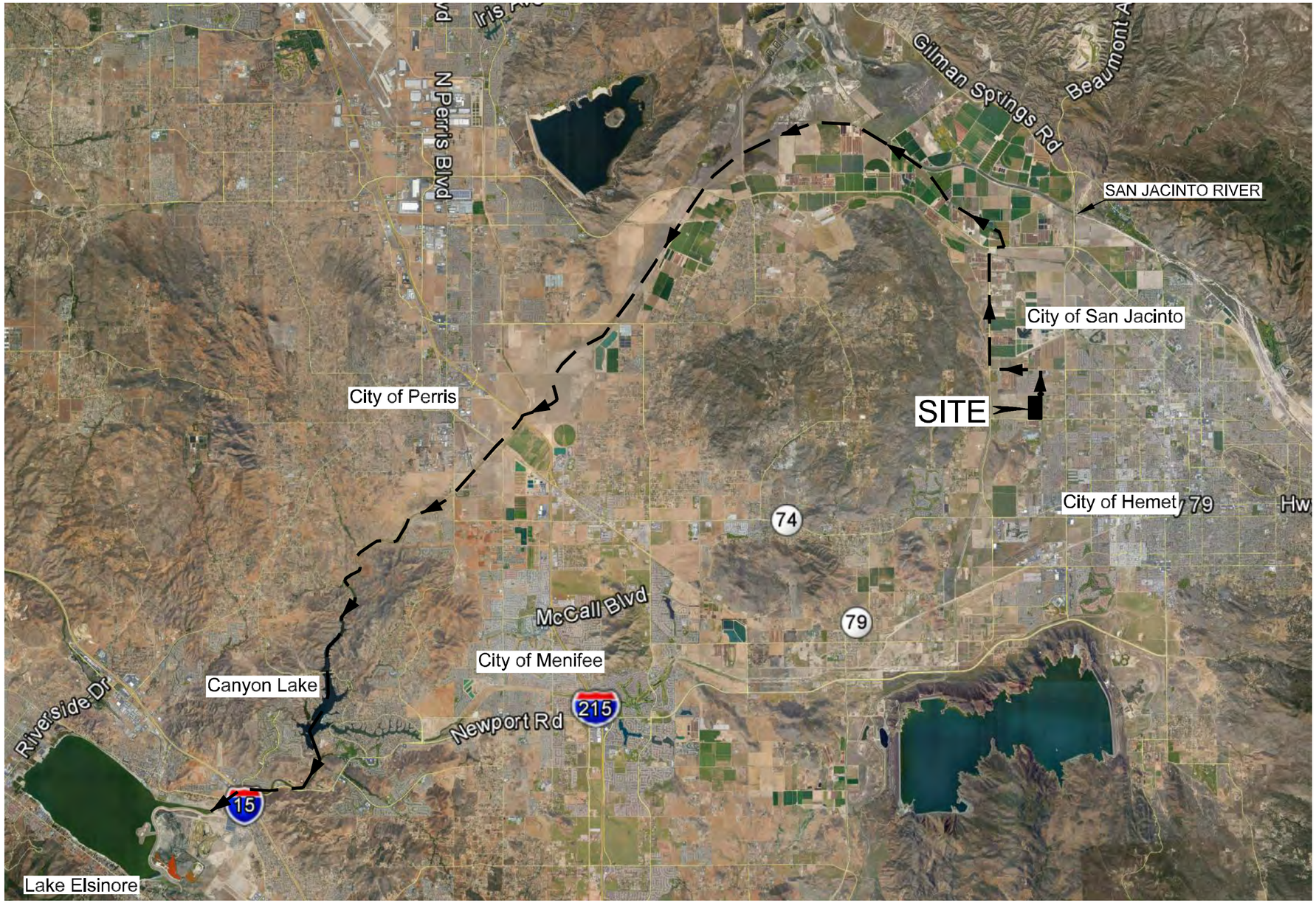
Appendix 1: Maps and Site Plans

Vicinity Map, Regional Water Map and WQMP Site Plan



VICINITY MAP

N.T.S.



WQMP EXHIBIT A-2

REGIONAL WATERS MAP

TRACT MAP NO. 39076

CITY OF SAN JACINTO, CA

R45-24-004
11/12/2024

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Heber, UT 84032, 1758 S. 2340 E.
Boise, ID, 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

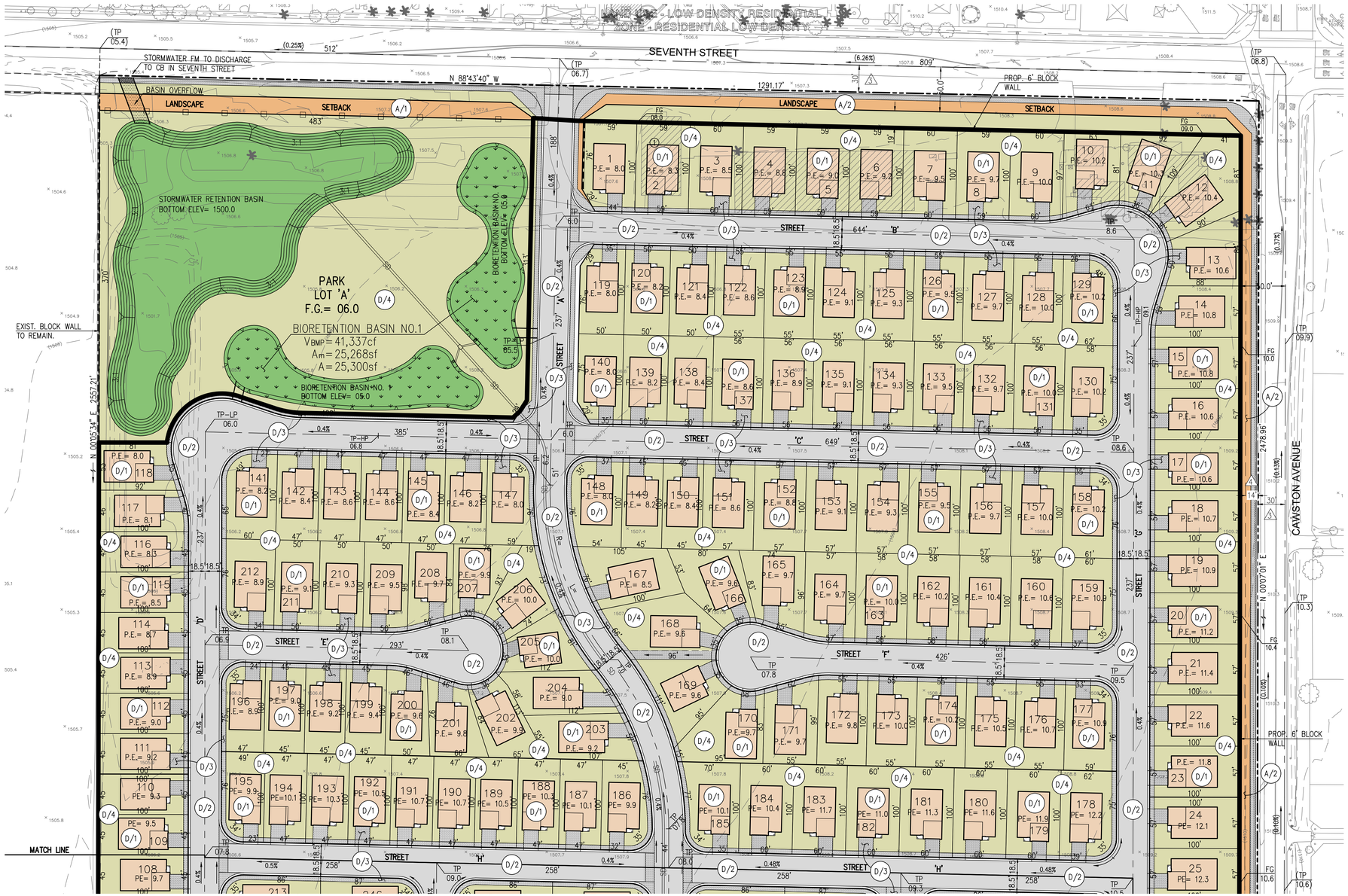
NORTH

0 60 120 180

1"=60'

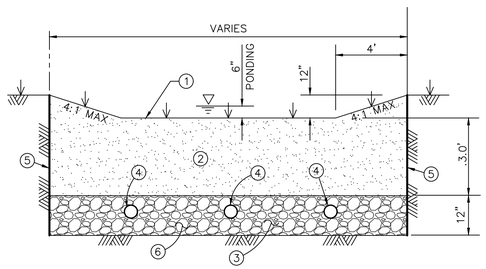
LEGEND

- —1508— INDICATES EXISTING CONTOUR
- SD INDICATES EXISTING STORM DRAIN
- INDICATES DMA BOUNDARY
- INDICATES CONCRETE SURFACE – DRAINS TO BMP
- INDICATES ROOF – DRAINS TO BMP
- INDICATES LANDSCAPE SURFACE – DRAINS TO BMP
- INDICATES ASPHALT SURFACE – DRAINS TO BMP
- INDICATES INFILTRATION BASIN
- INDICATES LANDSCAPE SURFACE – SELF TREATING



DMA SUMMARY

IDENTIFIER	AREA (SF)	SURFACE TYPE	TREATMENT
A/1	14,693	LANDSCAPE	SELF-TREATING
A/2	31,235	LANDSCAPE	SELF-TREATING
A/3	31,471	LANDSCAPE	SELF-TREATING
A/4	12,082	LANDSCAPE	SELF-TREATING
D/1	336,831	ROOF	BIORETENTION BASIN 1
D/2	260,534	ASPHALT	BIORETENTION BASIN 1
D/3	135,765	CONCRETE	BIORETENTION BASIN 1
D/4	495,034	LANDSCAPE	BIORETENTION BASIN 1
D/5	190,300	ROOF	BIORETENTION BASIN 2
D/6	151,067	ASPHALT	BIORETENTION BASIN 2
D/7	73,905	CONCRETE	BIORETENTION BASIN 2
D/8	367,017	LANDSCAPE	BIORETENTION BASIN 2
D/9	270,226	ROOF	BIORETENTION BASIN 3
D/10	201,412	ASPHALT	BIORETENTION BASIN 3
D/11	99,625	CONCRETE	BIORETENTION BASIN 3
D/12	440,645	LANDSCAPE	BIORETENTION BASIN 3



SECTION - BIORETENTION BASIN NO.1

N.T.S

NOTES

1. VEGETATIVE COVER-SPECIFICATION PER BIORETENTION FACT SHEET-WQMP.
2. ENGINEERED SOIL MEDIA-SPECIFICATION BELOW.
3. 12" GRAVEL LAYER-SPECIFICATION PER BIORETENTION FACT SHEET-WQMP.
4. 6" PERFORATED PIPE @ 5' O.C.
5. ROOT BARRIER PANELS FROM SURFACE TO BASE OF ROCK PER NDS RP SERIES OR EQUAL.
6. FILTER FABRIC, MIRAFI 140N OR EQUAL.

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MINERAL COMPONENT RANGE REQUIRMENTS

PERCENT RANGE	COMPONENT
70-80	SAND
15-20	SILT
5-10	CLAY

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DATE	BY	MARK	REVISIONS	APPR.	DATE

ENGINEER CITY

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL

REGISTERED PROFESSIONAL ENGINEER BLAINE A WOMER No. 46354 CIVIL STATE OF CALIFORNIA

PREPARED BY: DATE

R.C.E. NO.

BLAINE A. WOMER CIVIL ENGINEERING
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Park City, UT 84098, 5133 Cove Canyon Dr. #302
Boise, ID. 83706, 4305 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'

DATE SEPT. 18, 2024

BENCHMARK:

CITY OF SAN JACINTO

TENTATIVE TRACT No. 39076
DRAINAGE AREA MAP
EXHIBIT A-3

FOR RAMONA DAIRY

W.O.

SHEET NO. 1 OF 3 SHEETS

FILE NO.

SEE SHEET NO. 1

NORTH

0 60 120 180

1"=60'

LEGEND

- —1508— INDICATES EXISTING CONTOUR
- SD INDICATES EXISTING STORM DRAIN
- INDICATES DMA BOUNDARY
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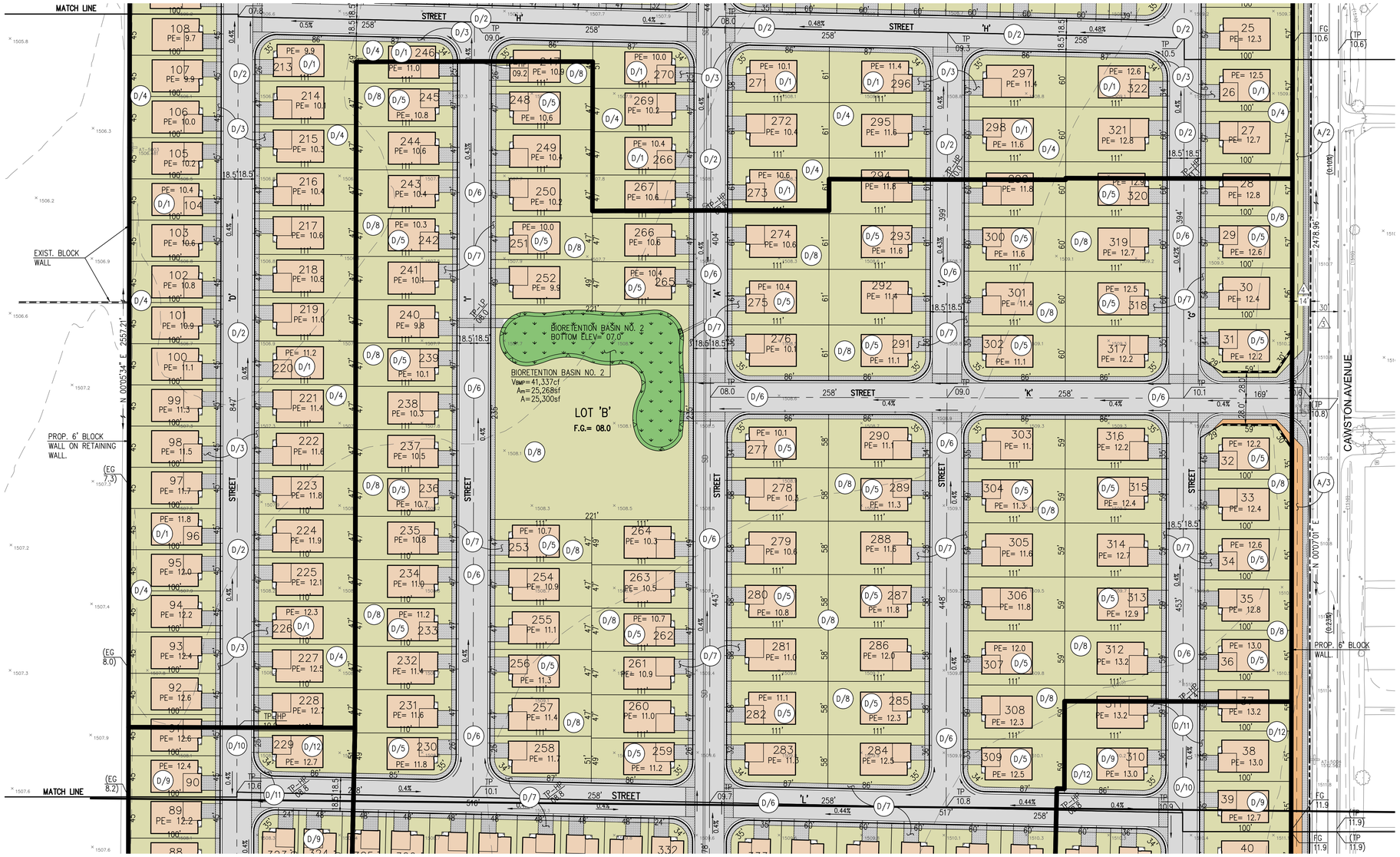
D/7	73,905	CONCRETE	BIORETENTION BASIN 2
D/8	367,017	LANDSCAPE	BIORETENTION BASIN 2
D/9	270,226	ROOF	BIORETENTION BASIN 3
D/10	201,412	ASPHALT	BIORETENTION BASIN 3
D/11	99,625	CONCRETE	BIORETENTION BASIN 3
D/12	440,645	LANDSCAPE	BIORETENTION BASIN 3



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STATE OF CALIFORNIA

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SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO
TENTATIVE TRACT 39076
DRAINAGE AREA MAP
EXHIBIT A-3

FOR RAMONA DAIRY
W.O.

SHEET NO. 2
OF 3 SHEETS
FILE NO.

NORTH

0 60 120 180

1"=60'

LEGEND

—1508— INDICATES EXISTING CONTOUR

SD INDICATES EXISTING STORM DRAIN

INDICATES DMA BOUNDARY

INDICATES CONCRETE SURFACE – DRAINS TO BMP

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INDICATES ASPHALT SURFACE – DRAINS TO BMP

INDICATES INFILTRATION BASIN

INDICATES LANDSCAPE SURFACE – SELF TREATING

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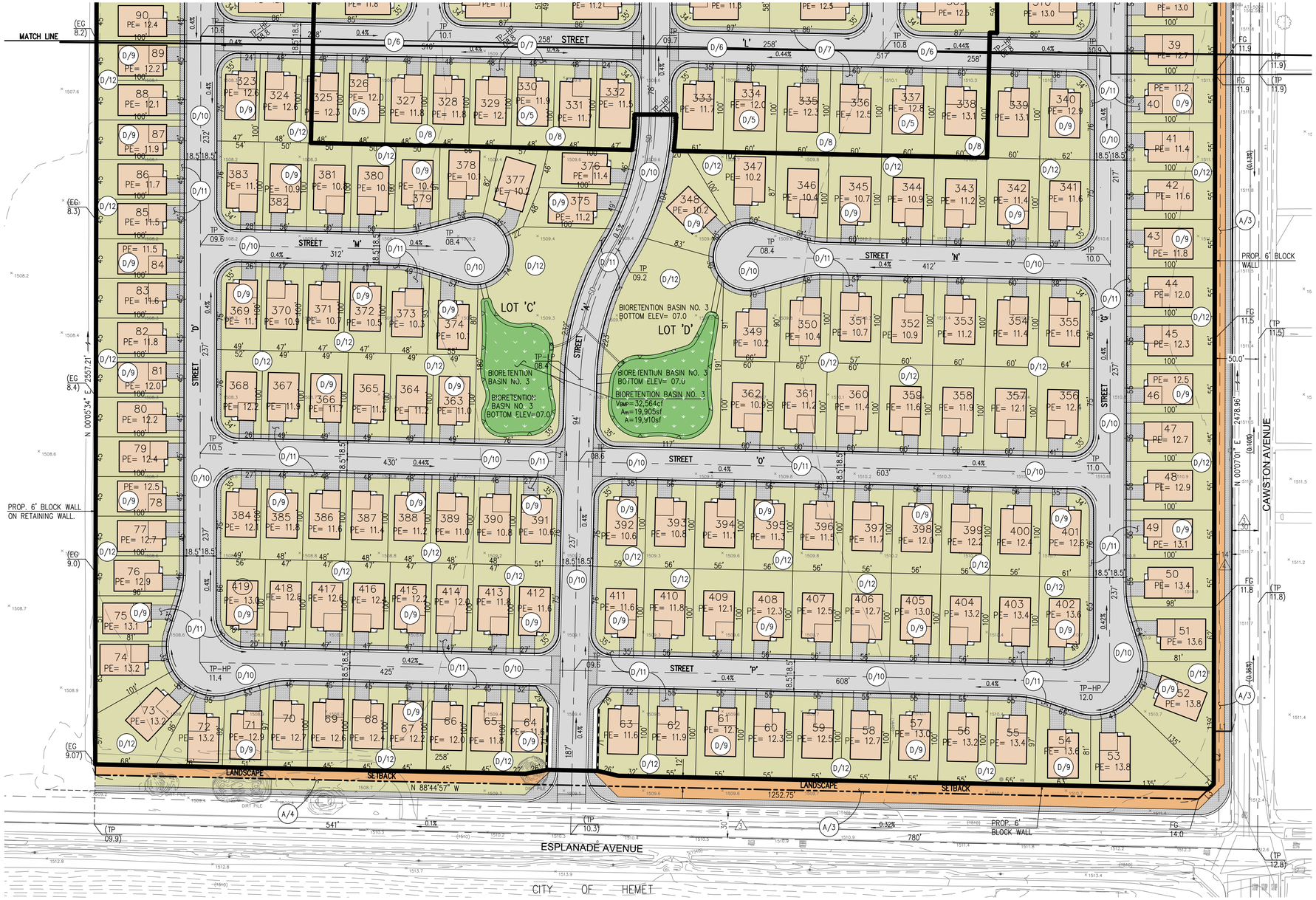

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DATE	BY	MARK	APPR.	DATE
ENGINEER		REVISIONS	CITY	

DESIGNED BY: DRAWN BY: CHECKED BY:

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Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'

DATE SEPT. 18, 2024

BENCHMARK:

CITY OF SAN JACINTO

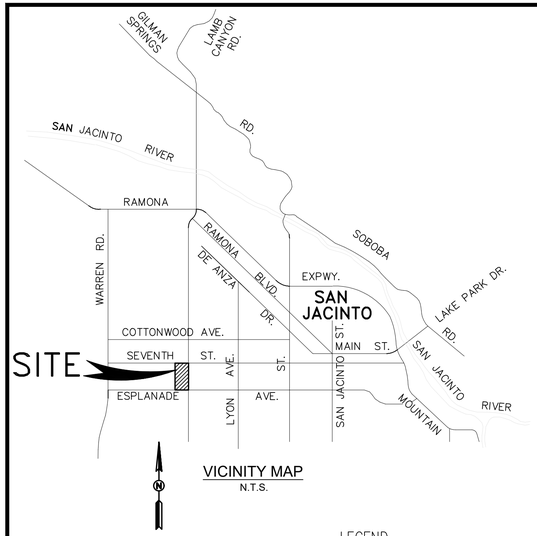
TENTATIVE TRACT 39076 DRAINAGE AREA MAP EXHIBIT A-3

FOR RAMONA DAIRY

W.O.

SHEET NO. 3 OF 3 SHEETS

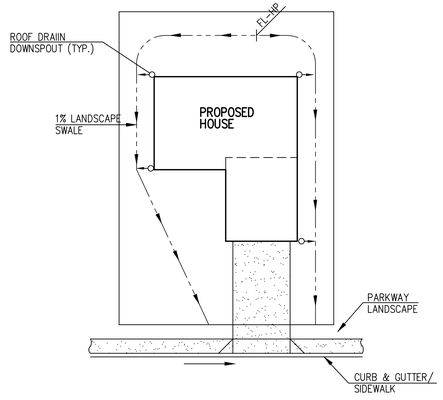
FILE NO.



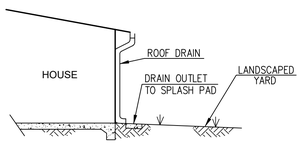
VICINITY MAP
N.T.S.

LEGEND

- INDICATES PROPOSED STORM DRAIN
- INDICATES ASPHALT SURFACE
- INDICATES BIORETENTION BASIN



TYPICAL LOT DRAINAGE / SELF-RETAINING LID
NTS



ROOF DRAIN DETAIL
NTS

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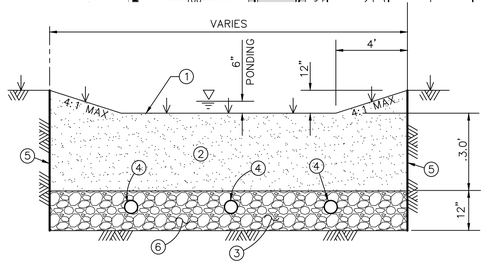

SECTION - BIORETENTION BASIN NO.1
N.T.S

NOTES

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4. 6" PERFORATED PIPE @ 5' O.C.
5. ROOT BARRIER PANELS FROM SURFACE TO BASE OF ROCK PER NDS RP SERIES OR EQUAL.
6. FILTER FABRIC, MIRAFI 140N OR EQUAL.

NOTE: UNDER DRAIN TO DISCHARGE TO STORM DRAIN SYSTEM.

NOTE:
SITE IS NOT SUBJECT TO OFF-SITE RUN-ON.

NORTH

0 60 120 180

1"=60'

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UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

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SCALE 1" = 60'
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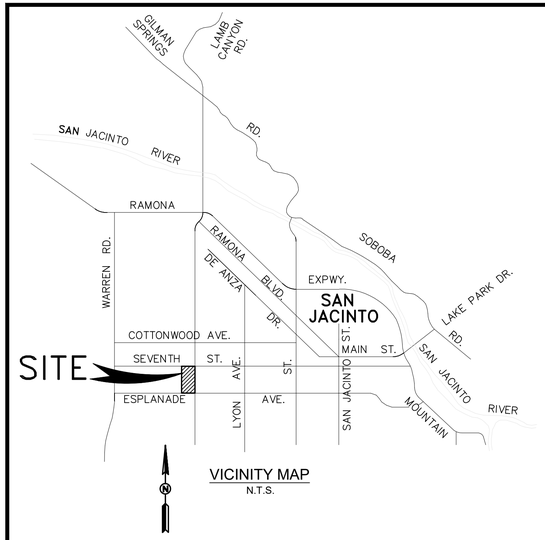
BENCHMARK:

CITY OF SAN JACINTO
POST CONSTRUCTION BMP SITE PLAN FOR CHACON FARMS-TRACT 39076
CAWSTON AVENUE, SAN JACINTO
PWQMP23-0002, PROJ23-0029
EXHIBIT A-4

FOR RAMONA DAIRY | W.O.

SHEET NO. 1 OF 3 SHEETS
FILE NO.



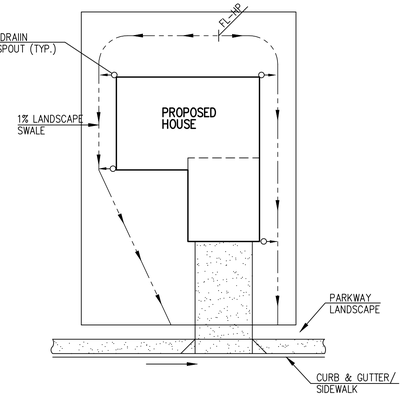
VICINITY MAP
N.T.S.

LEGEND

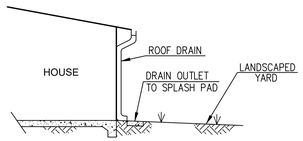
INDICATES PROPOSED STORM DRAIN

INDICATES ASPHALT SURFACE

INDICATES INFILTRATION BASIN



TYPICAL LOT DRAINAGE / SELF-RETAINING LID
NTS



ROOF DRAIN DETAIL
NTS

SEE SHEET NO. 1



NORTH

0 60 120 180

1"=60'

DIG ALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE

ENGINEER | CITY
DESIGNED BY: | DRAWN BY: | CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

PREPARED BY: DATE

R.C.E. NO.

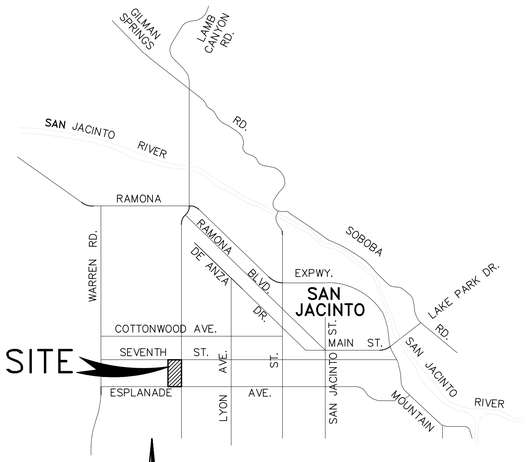
BLAINE A. WOMER
CIVIL ENGINEERING
• PLANNING
• SURVEYING
• CIVIL ENGINEERING
• PUBLIC WORKS

Homer, CA. 92544, 41555 E Florida Ave., Suite G, Phone (951)658-7727 Fax (951)658-9347
Park City, UT 84098, 5133 Cove Canyon Dr. #302
Boise, ID, 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO
POST CONSTRUCTION BMP SITE PLAN
FOR CHACON FARMS-TRACT 39076
CAWSTON AVENUE, SAN JACINTO
PWQMP23-0002, PROJ23-0029
EXHIBIT A-4
FOR RAMONA DAIRY
W.O.

SHEET NO. 2 OF 3 SHEETS
FILE NO.



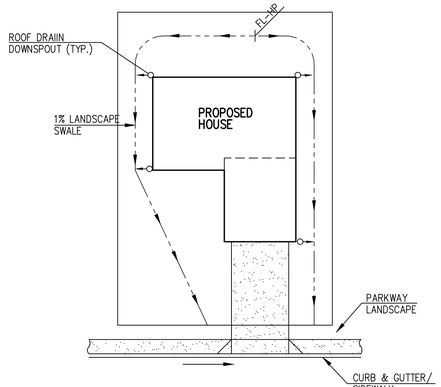
VICINITY MAP
N.T.S.

LEGEND

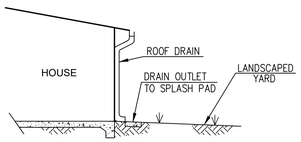
INDICATES PROPOSED STORM DRAIN

INDICATES ASPHALT SURFACE

INDICATES INFILTRATION BASIN



TYPICAL LOT DRAINAGE / SELF-RETAINING LID
NTS



ROOF DRAIN DETAIL
NTS



NORTH

0 60 120 180

1"=60'

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DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE
				CITY	

DESIGNED BY: DRAWN BY: CHECKED BY:

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STATE OF CALIFORNIA

PREPARED BY: DATE

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SCALE 1" = 60'

DATE SEPT. 18, 2024

BENCHMARK:

CITY OF SAN JACINTO

POST CONSTRUCTION BMP SITE PLAN FOR CHACON FARMS-TRACT 39076

CAWSTON AVENUE, SAN JACINTO
PWQMP23-0002, PROJ23-0029

EXHIBIT A-4

FOR RAMONA DAIRY

W.O.

SHEET NO. 3 OF 3 SHEETS

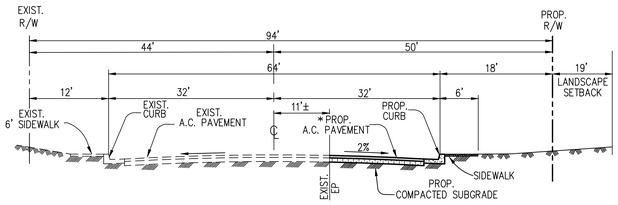
FILE NO.

Appendix 2: Construction Plans

Grading and Drainage Plans

IN THE CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076

PORTION SECTION 31, TOWNSHIP 4 SOUTH, RANGE 1 WEST, S.B.M.

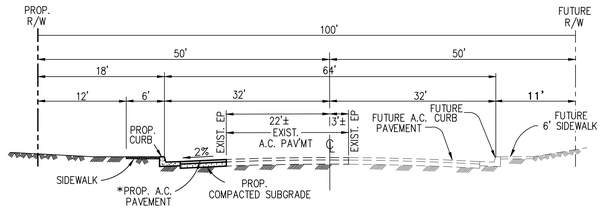


TYPICAL STREET SECTION
SEVENTH STREET - MAJOR
PUBLIC STREET

NOT TO SCALE

T.I. = 9.0

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.

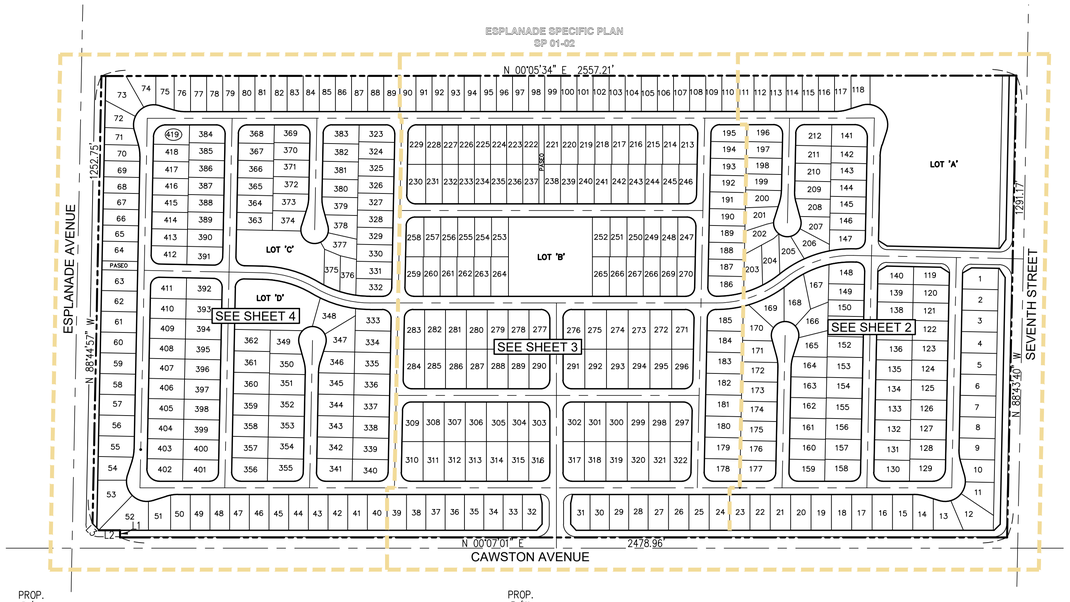


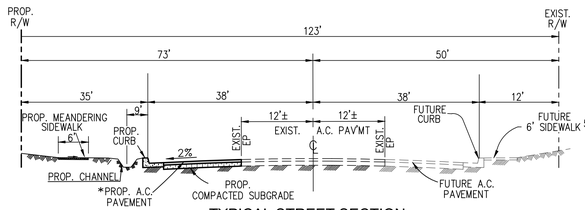
TYPICAL STREET SECTION
CAWSTON AVENUE - MAJOR
PUBLIC STREET

NOT TO SCALE

T.I. = 9.0

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.



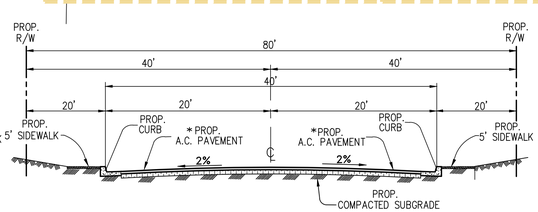


TYPICAL STREET SECTION
ESPLANADE AVENUE - ARTERIAL
PUBLIC STREET

NOT TO SCALE

T.I. = 9.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.



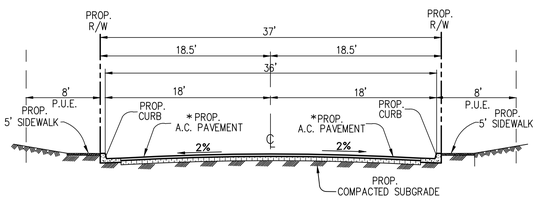
TYPICAL STREET SECTION
ENTRANCE ROADS - STREET 'K'/MODIFIED LOCAL
PRIVATE STREETS

NOT TO SCALE

T.I. = 5.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.

PARKING RESTRICTED TO ONE SIDE ONLY



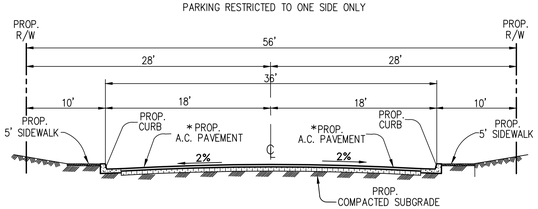
TYPICAL STREET SECTION
ROADS - MODIFIED LOCAL
PRIVATE STREETS

NOT TO SCALE

T.I. = 5.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.

PARKING RESTRICTED TO ONE SIDE ONLY



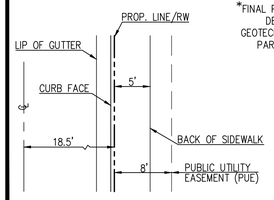
TYPICAL STREET SECTION
ENTRANCE ROADS - STREET 'A'/MODIFIED LOCAL
PRIVATE STREETS

NOT TO SCALE

T.I. = 5.5

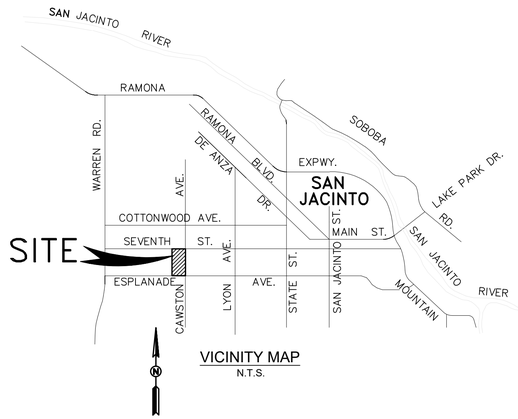
*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.

PARKING RESTRICTED TO ONE SIDE ONLY



PRIVATE STREET LEGEND

NTS



VICINITY MAP

N.T.S.

OWNER

TEUNIS J. DE JONG, TRUSTEE OF THE TEUNIS J. JONG TRUST.
2451 RAMONA EXPRESSWAY
SAN JACINTO, CA. 92582
907-229-2072

APPLICANT

RICHARD MICHAEL
RAMONA DAIRY
2451 RAMONA EXPRESSWAY
SAN JACINTO, CA 92582
907-229-2072
richard@homealaska.net

ASSESSOR'S PARCEL NO(S).

432-260-009, 026 AND 027

ADJACENT LAND USE

WEST – ESPLANADE SP/ESPLANADE SP
NORTH – LDR/RL
EAST – VLDR/RR
SOUTH – CITY OF HEMET/CITY OF HEMET

ZONING

RL
RL/PI
RL
RM

EXISTING LAND USE

VLDR – VERY LOW DENSITY RESIDENTIAL

PROPOSED LAND USE

LDR – LOW DENSITY RESIDENTIAL

EXISTING ZONING

RR – RURAL RESIDENTIAL

PROPOSED ZONING

RL – RESIDENTIAL LOW DENSITY

UTILITIES

SEWER	CITY OF SAN JACINTO
WATER	EASTERN MUNICIPAL WATER DISTRICT
GAS	SOUTHERN CALIFORNIA GAS COMPANY
ELECTRIC	SOUTHERN CALIFORNIA EDISON COMPANY
TELEPHONE	FRONTIER
CABLE	FRONTIER

NUMBER OF LOTS

419 SINGLE FAMILY RESIDENTIAL
4 OPEN SPACE LOTS

DENSITY

5.53 DU/AC GROSS

ACREAGE

75.70 GROSS ACRES WITHIN BOLD BOUNDARY
73.97 ACRES NET

OPEN SPACE AREA

LOT 'A': 1.77 AC
LOT 'B': 0.84 AC
LOT 'C': 0.34 AC
LOT 'D': 0.41 AC

SCHOOL DISTRICT

SAN JACINTO UNIFIED

SOURCE OF TOPOGRAPHY

AN AERIAL SURVEY BY PSOMAS DATED 10/22

FLOOD PLAIN

ZONE X PER COMMUNITY PANEL NO. 06065C1470G, DATED 8/28/2008.

EARTHWORK CALCULATIONS

CUT VOLUME: 42,809 C.Y.
FILL VOLUME: 169,944 C.Y.

EASEMENT NOTES

1. A RIGHT OF WAY FOR ONE DITCH, FLUME OR OTHER AQUEDUCT, ACROSS THE LAND OF ANY OTHER OWNER LYING BETWEEN THE LANDS OF SAID OWNER AND THE SAN JACINTO VIEJO, BY DECREE OF PARTITION OF SAID RANCHO RECORDED IN BOOK 43, PAGE 161 OF DEEDS, RECORDS OF SAN DIEGO COUNTY, CALIFORNIA. ROUTE NOT DEFINED OF RECORD.

2. THE RIGHT TO DEVELOP, TAKE, EXPORT AND APPROPRIATE TO ITS OWN USE IN ANY MANNER AND BY AN AGENCY, ALL WATER THAT MAY BE DISCOVERED IN OR THAT MAY BE DEPOSITED IN OR UNDERLIE THE PROPERTY HEREIN DESCRIBED, AND ALL RIPARIAN AND OTHER WATER RIGHTS THAT MAY BE AND APPURTENANT TO OR BELONG TO THE SAID LAND; PROVIDED, HOWEVER, THAT NO WORKS FOR THE DEVELOPMENT OF SAID WATER SHALL BE LOCATED ON THE LANDS HEREIN DESCRIBED; AND PROVIDED, HOWEVER, FURTHER, THAT THE OWNERS SHALL HAVE THE RIGHT TO DEVELOP WATER FOR DOMESTIC USE ON SAID LAND, CONVEYED BY DEED FROM THE SAN JACINTO LAND COMPANY TO CITIZENS WATER COMPANY OF SAN JACINTO, RECORDED DECEMBER 4, 1911 IN BOOK 341, PAGE 195 OF DEEDS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA AND IS BLANKET IN NATURE.

3. A RIGHT OF WAY OVER A STRIP OF LAND 30 FEET WIDE ON EACH SIDE OF THE SECTION AND QUARTER SECTION LINES FOR ROAD OR FOR DITCHES OR PIPES FOR CONDUCTING AND DISTRIBUTING WATER, AS DESCRIBED IN BOOK 341, PAGE 195 DEEDS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA AND IS SHOWN HEREON.

4. AN EASEMENT GRANTED TO EASTERN MUNICIPAL WATER DISTRICT, A PUBLIC AGENCY TO CONSTRUCT, ENLARGE, RECONSTRUCT, REMOVE AND REPLACE, OPERATE, INSPECT, MAINTAIN, REPAIR, IMPROVE AND RELOCATE, SEWAGE TRANSMISSION AND COLLECTION FACILITIES, INCLUDING, BUT NOT LIMITED TO, GRAVITY PIPELINES, PRESSURE PIPELINES, MANHOLES, CONNECTIONS, AND APPURTENANT EQUIPMENT FOR THE COLLECTION AND TRANSMISSION OF SEWAGE, TOGETHER WITH REASONABLE RIGHT OF ACCESS TO AND FROM SAID EASEMENT FOR THE PURPOSE OF EXERCISING THE RIGHTS GRANTED IN SAID EASEMENT, RECORDED SEPTEMBER 14, 2010 AS INSTRUMENT NO. 2010-0439200 OF OFFICIAL RECORDS, AND IS SHOWN HEREON.

LINE DATA

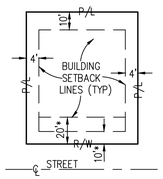
LINE	BEARING	DISTANCE
L1	N 89°52'59" W	20.00'
L2	N 00°07'01" E	60.00'
L3	N 45°40'13" E	24.28'

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF SAN JACINTO, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE EAST ½ OF FARM LOT 161 OF THE LANDS OF SAN JACINTO LAND ASSOCIATION, AS SHOWN BY MAP ON FILE IN BOOK 8, PAGE 357 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

EXCEPTING THEREFROM THAT PORTION OF LAND CONVEYED TO THE CITY OF SAN JACINTO, A CALIFORNIA MUNICIPAL CORPORATION, IN GRANT DEED RECORDED OCTOBER 2, 2019 AS INSTRUMENT NO. 2019-394879 OFFICIAL RECORDS.



TYPICAL BUILDING SETBACKS

NTS

20'* FROM R/W TO GARAGE,
10'* FROM R/W TO HOUSE FEATURE.
CORNER LOT: STREET SIDE SETBACK
10' FROM R/W.

SHEET INDEX

SHEET 1 . . . . . TITLE SHEET
SHEET 2 . . . . . TENTATIVE TRACT MAP
SHEET 3 . . . . . TENTATIVE TRACT MAP
SHEET 4 . . . . . TENTATIVE TRACT MAP
SHEET 5 . . . . . LOT AREA SUMMARY TABLE

PHASING NOTE

THIS TENTATIVE MAP IS BEING FILED IN ACCORDANCE WITH SUBDIVISION MAP ACT SECTION 66456.1 ALLOWING FOR THE FILING OF MULTIPLE FINAL MAPS. FOUR (4) PHASED FINAL MAPS ARE ANTICIPATED TO BE FILED BASED ON THIS TENTATIVE TRACT MAP.

DIG ALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE
				CITY ENGINEER	

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL

REGISTERED PROFESSIONAL ENGINEER — BLAINE A. WOMER — No. 46354 — CIVIL — STATE OF CALIFORNIA

APPROVED BY: DATE

CONTRACT CITY ENGINEER

PREPARED BY: DATE

R.C.E. NO.

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Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'

DATE SEPT. 18, 2024

BENCHMARK:

CITY OF SAN JACINTO

TENTATIVE TRACT MAP NO. 39076

FOR RAMONA DAIRY

W.O.

SHEET NO. 1 OF 5 SHEETS

FILE NO.

NORTH

0 60 120 180

1"=60'

LAND USE - LOW DENSITY RESIDENTIAL
ZONE - RESIDENTIAL LOW DENSITY

SEVENTH STREET

CAWSTON AVENUE

LAND USE - VERY LOW DENSITY RES.
ZONE - RURAL RESIDENTIAL

ESPLANADE SPECIFIC PLAN SP 01-02
TRACTS 32955 & 32956-5
APN 433-260-017

LOT 'A'
F.G.= 06.0
(CITY CFD MAINTAINED)

STORMWATER RETENTION BASIN
BOTTOM ELEV= 1500.0

BIORETENTION BASIN NO. 1
BOTTOM ELEV= 05.0

BIORETENTION BASIN NO. 1
BOTTOM ELEV= 05.0

STORMWATER FM TO DISCHARGE TO CB IN SEVENTH STREET

BASIN OVERFLOW

LANDSCAPE SETBACK

PROP. TUBULAR STEEL FENCE

PROP. 6' BLOCK WALL

EXIST. PAD ELEV. (TYP.)

EXIST. BLOCK WALL TO REMAIN.

10' DRAINAGE EASEMENT

STREET 'A'
STREET 'B'
STREET 'C'
STREET 'D'
STREET 'E'
STREET 'F'

SEE SHEET NO. 3

DRAINAGE EASEMENT SECTION
NTS

SECTION 'A' – 'A'
NTS

SECTION 'B' – 'B'
NTS

SECTION 'C' – 'C'
NTS

TYPICAL REAR YARD SECTION
NTS

KEY NOTES

1. EXISTING STRUCTURES TO BE REMOVED.
2. PARKING TO BE RESTRICTED IN CUL-DE-SAC.

NOTE: ALL CURB RETURNS HAVE A 25' RADIUS.

SEE SHEET 1 FOR EASEMENT AND LINE DATA INFORMATION.

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DATE	BY	MARK	REVISIONS	APPR.	DATE
				CITY	

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SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO

TENTATIVE TRACT MAP NO. 39076

FOR RAMONA DAIRY
W.O.

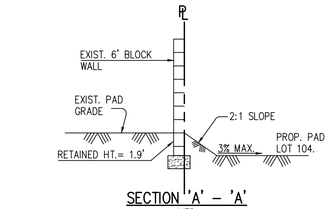
SHEET NO. 2 OF 5 SHEETS
FILE NO.

SEE SHEET NO. 2

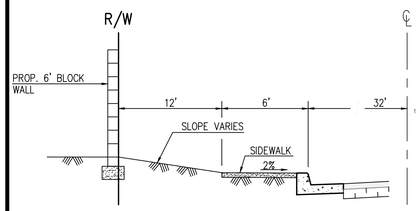
NORTH

0 60 120 180

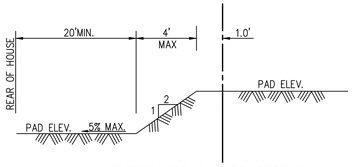
1"=60'



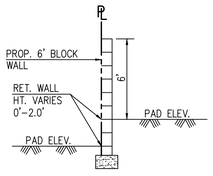
SECTION 'A' – 'A'
NTS



SECTION 'C' – 'C'
NTS



TYPICAL REAR YARD SECTION
NTS



SECTION 'E' – 'E'
NTS

ESPLANADE SPECIFIC PLAN SP 01-02
TRACT 32825-1
APN 432-260-014

EXIST. BLOCK WALL

PROP. 6' BLOCK WALL ON RETAINING WALL.

BIORETENTION BASIN NO. 2
BOTTOM ELEV= 07.0
Q10=6.9cfs Q100=10.8cfs
Q10=4.5cfs Q100=7.0cfs

LOT 'B'
F.G.= 08.0
(CITY CFD MAINTAINED)

Q10=9.7cfs Q100=15.1cfs

STREET 'H' STREET 'I' STREET 'J' STREET 'K' STREET 'L'

PASEO

CAWSTON AVENUE

LAND USE: VERY LOW DENSITY RESIDENTIAL
ZONE: RURAL RESIDENTIAL

SEE SHEET NO. 4

SEE SHEET 1 FOR EASEMENT AND LINE DATA INFORMATION.

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DATE	BY	MARK	REVISIONS	APPR.	DATE

ENGINEER | CITY

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
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• CIVIL ENGINEERING
• PUBLIC WORKS
Hemet, CA. 92544, 41555 E Florida Ave., Suite G. Phone (951)658-1727 Fax (951)658-9347
Park City, UT 84098, 3133 Cove Canyon Dr. #302
Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'

DATE SEPT. 18, 2024

BENCHMARK:

CITY OF SAN JACINTO

TENTATIVE TRACT MAP NO. 39076

FOR RAMONA DAIRY

W.O.

SHEET NO. 3 OF 5 SHEETS

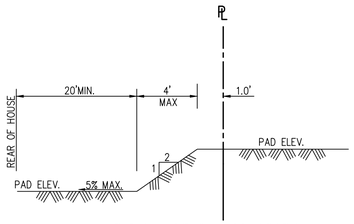
FILE NO.

NORTH

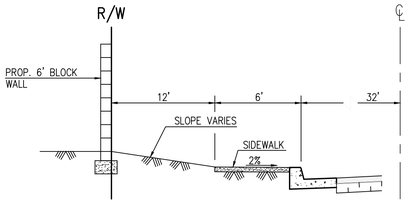
0 60 120 180

1"=60'

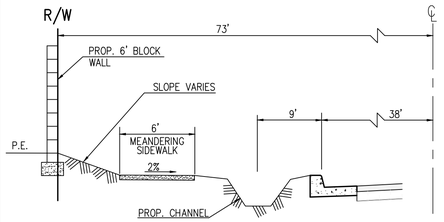
SEE SHEET NO. 3



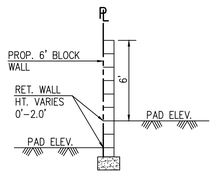
TYPICAL REAR YARD SECTION
NTS



SECTION 'C' – 'C'
NTS



SECTION 'D' – 'D'
NTS



SECTION 'E' – 'E'
NTS



NOTE: ALL CURB RETURNS HAVE A 25' RADIUS.

SEE SHEET 1 FOR EASEMENT AND LINE DATA INFORMATION.

KEY NOTES

1. EXISTING STRUCTURES TO BE REMOVED.
2. PARKING TO BE RESTRICTED IN CUL-DE-SAC.

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DATE	BY	MARK	REVISIONS	APPR.	DATE

ENGINEER
DESIGNED BY: DRAWN BY: CHECKED BY:
CITY

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER

PREPARED BY: DATE
R.C.E. NO.

BLAINE A. WOMER
CIVIL ENGINEERING
• PLANNING
• SURVEYING
• CIVIL ENGINEERING
• PUBLIC WORKS
Hemet, CA. 92544, 41550 E Florida Ave., Suite G, Phone (951)658-1727 Fax (951)658-9347
Park City, UT 84098, 5133 Cove Canyon Dr. #302
Boise, ID. 83706, 4305 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE SEPT. 18, 2024

BENCHMARK:

CITY OF SAN JACINTO

TENTATIVE TRACT MAP NO. 39076

FOR RAMONA DAIRY

W.O.

SHEET NO. 4 OF 5 SHEETS

FILE NO.

LOT AREA TABLE	
LOT #	AREA SQFT.
1	5,763
2	5,950
3	5,950
4	5,950
5	5,950
6	5,950
7	5,950
8	5,950
9	5,924
10	5,523
11	5,500
12	7,645
13	5,500
14	5,500
15	5,685
16	5,690
17	5,690
18	5,690
19	5,690
20	5,690
21	5,690
22	5,690
23	5,690
24	5,690
25	5,690
26	5,690
27	5,690
28	5,690
29	5,690
30	5,690
31	5,500
32	5,500
33	5,500
34	5,500
35	5,500
36	5,500
37	5,500
38	5,500
39	5,500
40	5,500
41	5,500
42	5,500
43	5,500
44	5,500
45	5,500
46	5,500
47	5,500
48	5,500
49	5,500
50	5,500

LOT AREA TABLE	
LOT #	AREA SQFT.
51	5,501
52	8,426
53	8,622
54	5,500
55	5,500
56	5,500
57	5,500
58	5,500
59	5,500
60	5,500
61	5,500
62	5,500
63	5,500
64	4,500
65	4,500
66	4,500
67	4,500
68	4,500
69	4,500
70	4,500
71	4,500
72	4,576
73	7,716
74	4,963
75	5,690
76	4,500
77	4,500
78	4,500
79	4,500
80	4,500
81	4,500
82	4,500
83	4,500
84	4,500
85	4,500
86	4,500
87	4,500
88	4,500
89	4,500
90	4,500
91	4,500
92	4,500
93	4,500
94	4,500
95	4,500
96	4,500
97	4,500
98	4,500
99	4,500
100	4,500

LOT AREA TABLE	
LOT #	AREA SQFT.
101	4,500
102	4,500
103	4,500
104	4,500
105	4,500
106	4,500
107	4,500
108	4,500
109	4,500
110	4,500
111	4,500
112	4,500
113	4,500
114	4,500
115	4,500
116	4,500
117	4,500
118	4,502
119	4,831
120	5,013
121	5,013
122	5,535
123	5,535
124	5,534
125	5,534
126	5,535
127	5,535
128	5,535
129	5,534
130	5,592
131	5,592
132	5,592
133	5,592
134	5,592
135	5,592
136	5,592
137	5,592
138	5,014
139	5,013
140	4,831
141	5,483
142	4,679
143	4,679
144	4,679
145	4,679
146	4,679
147	5,041
148	5,705
149	4,500
150	4,500

LOT AREA TABLE	
LOT #	AREA SQFT.
151	5,700
152	5,734
153	5,734
154	5,734
155	5,734
156	5,734
157	5,734
158	5,733
159	5,756
160	5,756
161	5,756
162	5,756
163	5,756
164	5,625
165	5,525
166	5,683
167	6,440
168	7,576
169	5,818
170	6,116
171	5,500
172	5,500
173	5,500
174	5,500
175	5,500
176	5,500
177	5,500
178	5,952
179	5,952
180	5,952
181	5,952
182	5,952
183	5,952
184	5,952
185	5,952
186	5,065
187	4,695
188	4,695
189	4,695
190	4,695
191	4,695
192	4,695
193	4,695
194	4,691
195	4,500
196	4,500
197	4,500
198	4,500
199	4,500
200	4,599

LOT AREA TABLE	
LOT #	AREA SQFT.
201	4,570
202	4,715
203	5,604
204	5,441
205	4,584
206	4,884
207	4,516
208	4,523
209	4,947
210	4,961
211	4,959
212	5,609
213	5,229
214	5,239
215	5,232
216	5,231
217	5,231
218	5,230
219	5,230
220	5,229
221	5,229
222	5,228
223	5,228
224	5,227
225	5,227
226	5,226
227	5,226
228	5,226
229	5,229
230	5,228
231	5,226
232	5,226
233	5,226
234	5,227
235	5,227
236	5,228
237	5,228
238	5,229
239	5,229
240	5,230
241	5,230
242	5,231
243	5,231
244	5,232
245	5,236
246	5,228
247	5,238
248	5,235
249	5,238
250	5,238

LOT AREA TABLE	
LOT #	AREA SQFT.
251	5,238
252	5,461
253	5,238
254	5,238
255	5,238
256	5,238
257	5,238
258	5,238
259	5,238
260	5,238
261	5,238
262	5,238
263	5,238
264	5,459
265	5,238
266	5,238
267	5,238
268	5,238
269	5,238
270	5,238
271	6,537
272	6,724
273	6,724
274	6,724
275	6,724
276	6,424
277	6,155
278	6,456
279	6,456
280	6,456
281	6,456
282	6,456
283	6,046
284	6,265
285	6,456
286	6,456
287	6,456
288	6,456
289	6,456
290	6,155
291	6,424
292	6,724
293	6,724
294	6,724
295	6,724
296	6,314
297	6,441
298	6,628
299	6,628
300	6,628

LOT AREA TABLE	
LOT #	AREA SQFT.
301	6,628
302	6,328
303	6,236
304	6,537
305	6,537
306	6,537
307	6,537
308	6,537
309	6,127
310	6,346
311	6,537
312	6,537
313	6,537
314	6,537
315	6,537
316	6,236
317	6,328
318	6,628
319	6,628
320	6,628
321	6,628
322	6,218
323	4,500
324	4,778
325	4,778
326	4,778
327	4,778
328	4,778
329	4,778
330	4,778
331	4,778
332	4,574
333	5,657
334	6,046
335	5,983
336	5,983
337	5,983
338	5,983
339	5,983
340	5,815
341	5,989
342	5,983
343	5,983
344	5,983
345	5,983
346	5,694
347	6,241
348	6,807
349	5,500
350	5,500

LOT AREA TABLE	
LOT #	AREA SQFT.
351	5,724
352	5,975
353	5,975
354	5,975
355	5,985
356	6,160
357	5,975
358	5,975
359	5,975
360	5,975
361	5,975
362	6,020
363	4,853
364	4,853
365	4,853
366	4,853
367	4,853
368	4,858
369	4,736
370	4,736
371	4,736
372	4,736
373	4,736
374	4,734
375	4,533
376	4,529
377	4,937
378	4,865
379	4,833
380	4,989
381	4,989
382	4,989
383	4,987
384	4,738
385	4,833
386	4,833
387	4,833
388	4,833
389	4,833
390	4,835
391	4,801
392	5,604
393	5,604
394	5,604
395	5,604
396	5,604
397	5,604
398	5,604
399	5,604
400	5,607

LOT AREA TABLE	
LOT #	AREA SQFT.
401	5,737
402	5,604
403	5,607
404	5,604
405	5,604
406	5,604
407	5,604
408	5,604
409	5,604
410	5,604
411	5,604
412	4,801
413	4,728
414	4,728
415	4,728
416	4,728
417	4,728
418	4,726
419	4,911
LOT 'A'	3.73 AC
LOT 'B'	1.19 AC
LOT 'C'	0.58 AC
LOT 'D'	0.67 AC
LOT 'E'	9,868 SF
LOT 'F'	22,523 SF
LOT 'G'	39,134 SF
LOT 'H'	23,349 SF

MINIMUM LOT SIZE: 4,275 S.F.
AVERAGE LOT SIZE: 5,419 S.F.
MINIMUM LOT WIDTH: 45 FT.
MINIMUM LOT WIDTH CORNER: 51 FT.
MINIMUM LOT DEPTH: 95 FT.
MAXIMUM FRONT YARD IMPERVIOUS COVER: 35%,
OR AS OTHERWISE ALLOWED PER CODE SEC.17.215.035 A.

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AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				CITY	
DESIGNED BY:		DRAWN BY:	CHECKED BY:		

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER

PREPARED BY: DATE

R.C.E. NO.

BLAINE A. WOMER
CIVIL ENGINEERING
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• PUBLIC WORKS

Hemet, CA. 92544, 41555 E Florida Ave., Suite G, Phone (951)658-1727 Fax (951)658-9347
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Boise, ID. 83706, 4355 W Emerald Street, St. 145, Phone (208)593-7555

SCALE 1" = 60'
DATE
BENCHMARK:

CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076
LOT AREAS

FOR
W.O.

SHEET NO. 5 OF 5 SHEETS
FILE NO.

Appendix 3: Soils Information

Geotechnical Study and Other Infiltration Testing Data

UPDATED GEOTECHNICAL INVESTIGATION

SWC OF 7TH STREET AND CAWSTON AVENUE SAN JACINTO, CALIFORNIA

GEOCON
WEST, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

RAMONA DAIRY, LLC.
2451 RAMONA EXPRESSWAY
SAN JACINTO, CALIFORNIA 92582

JANUARY 2, 2024
PROJECT NO. T2998-22-01

Project No. T2998-22-01
January 2, 2024

Ramona Dairy, LLC.
2451 Ramona Expressway
San Jacinto, California 92582

Attention: Mr. Richard Michael

Subject: UPDATED GEOTECHNICAL INVESTIGATION
SWC OF 7TH STREET AND CAWSTON AVENUE
SAN JACINTO, CALIFORNIA

Dear Mr. Michael:

In accordance with your authorization of our Work Order Authorization dated December 20, 2023, Geocon West, Inc. (Geocon) herein submits the results of our update to the preliminary geotechnical investigation dated November 4, 2022. The accompanying report presents an update to our preliminary findings, conclusions and recommendations pertaining to the geotechnical aspects of developing the property as presently proposed. Based on the results of this study, it is our opinion that the site is considered suitable for the proposed development provided the recommendations of this report are followed. The conclusions and recommendations provided in the 2022 report remain applicable unless superseded herein.

The primary intent of this report is to address the potential geologic hazards and geotechnical conditions that could impact site development and to provide an update to the preliminary geotechnical recommendations. Five geotechnical borings and four percolation tests were performed within the 76+ acre site for the preliminary geotechnical investigation. The northern portion of the site was occupied with a residence and basin at the time of the field work. Therefore, a supplemental geotechnical investigation should be performed with percolation testing performed at the BMP locations and elevations once grading plans have been developed. Additional analyses will be required in order to provide comprehensive geotechnical recommendations for design and construction when the scope of the proposed development has been established.

Should you have any questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON WEST, INC.

Lisa Battiato
CEG 2316

PROFESSIONAL GEOLOGIST
LISA A. BATTIATO
No. 2316
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Ashleigh D. Love
PE 79019

LICENSED PROFESSIONAL ENGINEER
ASHLEIGH LOVE
C 79019
EXP. 03/31/24
CIVIL
STATE OF CALIFORNIA

LAB:ADL:hd
(email) Addressee

TABLE OF CONTENTS

1. PURPOSE AND SCOPE 1

2. SITE AND PROJECT DESCRIPTION 1

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LIMITATIONS AND UNIFORMITY OF CONDITIONS

LIST OF REFERENCES

MAPS AND ILLUSTRATIONS
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APPENDIX A
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   Figures A-6 through A-9, Logs of Percolation Test Borings
   Figures A-10 through A-13, Percolation Test Data Sheets

UPDATED GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of our updated geotechnical investigation for the proposed development of approximately 76 acres located southwest of 7th Street and Cawston Avenue in San Jacinto, California, as depicted on the *Vicinity Map*, Figure 1.

The purpose of our investigation in 2022 was to perform a preliminary evaluation of subsurface soil and geologic conditions underlying the site and based on the conditions encountered, provide preliminary recommendations pertaining to the geotechnical aspects of developing the property as proposed. Due to the preliminary nature of the project at this time, the primary intent of this updated report is to address the potential geologic hazards and geotechnical conditions that could impact site development and to provide preliminary recommendations with respect to the 2022 California Building Code. The information provided in the 2022 report remains applicable to the site unless superseded herein. Additional analyses will be required in order to provide comprehensive geotechnical recommendations for design and construction when the scope of the proposed development has been established.

2. SITE AND PROJECT DESCRIPTION

The *Vesting Tentative Tract Map No. 38787* prepared by Psomas indicates site development will include single-family homes, and townhomes with a community park and open space areas for storm water infiltration or retention.

The site grading plans, structural plans, and building loads were not available. Based on the site elevations and surrounding roadway elevations, we expect rough grading will entail cuts and fills of less than 5 feet, exclusive of remedial grading.

We understand that the site will likely be used for the construction of single- or townhouse residential structures, which are expected to have spread footing foundations with slab-on-grade floors. Single-family and townhouse structures will likely be two or three stories. We have assumed that column loads will be up to 300 kips, and wall loads will be up to 4 kips per linear foot for the heaviest loaded structure.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location, or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC HAZARDS

3.1 Subsidence

Regional subsidence has occurred in several valley areas in California due to withdrawal of groundwater or oil, and in some cases peat loss. The site is located in the San Jacinto Valley which is a deep northwest trending alluvial valley created along the San Jacinto fault. The valley is bounded on the northeast and southwest by granitic bedrock hills which extend along the valley margins to depths of several hundred feet. The site is not located in an Area of Land Subsidence in California according to the United States Geological Survey (USGS). The San Jacinto Valley is not included in an area currently undergoing a USGS subsidence study. Riverside County does include the site in an area of active subsidence. California Geological Survey does not address subsidence risk on its website. A search of the city of San Jacinto website GIS system did not yield results when the term "subsidence" was searched. Based on this information, ground subsidence could occur. However, the settlement is expected to occur over a relatively large geographic area and is not expected to cause differential settlement over a relatively short horizontal distance which would be addressed as a design concern as part of the site development.

4. SITE INFILTRATION

Percolation testing was performed at four locations within the site to provide preliminary information for project design. Additional percolation testing will be necessary at the proposed BMP locations and planned infiltration elevations once they are known. The testing was performed in general accordance with the procedures outlined in *Riverside County Flood Control and Water Conservation District LID BMP, Appendix A* (Handbook) to determine preliminary infiltration potential. The percolation test locations are depicted on the *Geologic Map*, Figure 2.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 General

5.1.1 Additional subsurface exploration and percolation testing will be required before site grading to provide adequate subsurface information for earthwork operations and provide the necessary percolation test data required by Riverside County BMP LID Handbook.

5.2 Soil and Excavation Characteristics

5.2.1 The upper 5 feet of existing site soils encountered during the investigation are considered to have a "very low" expansive potential (EI = 11) and are classified as "non-expansive" in accordance with the 2022 California Building Code (CBC) Section 1803.5.3. The recommendations presented herein assume that the building foundations and slabs will derive support in these materials.

5.2.2 As a minimum, it is recommended that the upper 8 feet of existing earth materials within the proposed building footprint areas be excavated and properly compacted for post-tensioned foundation system support. Deeper excavations should be conducted as necessary to remove deeper artificial fill or soft alluvial soil at the direction of the Geotechnical Engineer (a representative of Geocon). Proposed foundations should be underlain by at least 5 feet of newly placed engineered fill. The excavation should extend laterally a minimum distance of 6 feet beyond the building footprint area, including building appurtenances, or a distance equal to the depth of fill below the foundation, whichever is greater. The limits of existing fill and/or soft alluvial soils removal will be verified by the Geocon representative during site grading activities.

5.3 Soil and Minimum Resistivity, pH, and Water-Soluble Sulfate

5.3.1 Laboratory tests were performed on representative samples of the site materials to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B-4) and indicate that the on-site materials possess a sulfate exposure class of "S0" to concrete structures as defined by 2022 CBC Section 1904 and ACI 318-19 Chapter 19.

5.4 Seismic Design Criteria

5.4.1 The following table summarizes the site-specific design criteria obtained from the 2022 California Building Code (CBC; Based on the 2021 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the online application *U.S. Seismic Design Maps*, provided by the Structural Engineers Association of California (SEAOC). The short spectral response uses a period of

0.2 second. We evaluated the Site Class based on the discussion in Section 1613.2.2 of the 2022 CBC and Table 20.3-1 of ASCE 7-16. The values presented below are for the risk-targeted maximum considered earthquake (MCE_R).

5.4.2 Although there are soils susceptible to seismic settlement underlying the site, we expect the building possesses a fundamental period of less than 0.5 seconds; therefore, a site response analysis is not anticipated to be required in accordance with ASCE 7-16, Section 20.3.1.

2022 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2022 CBC Reference
Site Class	D	Section 1613.2.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	1.984g	Figure 1613.2.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.785g	Figure 1613.2.1(3)
Site Coefficient, F_A	1.009	Table 1613.2.3(1)
Site Coefficient, F_V	1.7*	Table 1613.2.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	1.984g	Section 1613.2.3 (Eqn 16-20)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	1.334g*	Section 1613.2.3 (Eqn 16-21)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.323g	Section 1613.2.4 (Eqn 16-22)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.889g*	Section 1613.2.4 (Eqn 16-23)

*Per Supplement 3 of ASCE 7-16, a ground motion hazard analysis (GMHA) shall be performed for projects on Site Class "D" sites with 1-second spectral acceleration (S_1) greater than or equal to 0.2g, which is true for this site. However, Supplement 3 of ASCE 7-16 provides an exception stating that that the GMHA may be waived provided that the parameter S_{M1} is increased by 50% for all applications of S_{M1}. The values for parameters S_{M1} and S_{D1} presented above have **not** been increased in accordance with Supplement 3 of ASCE 7-16.

5.4.3 Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

5.5 Post Tensioned Foundation Recommendations

5.5.1 The proposed residential structures may be supported on a post-tensioned concrete slab and foundation system deriving support in newly placed engineered fill subsequent to the recommended grading. Proposed foundations should be underlain by at least 5 feet of newly placed engineered fill. Foundation excavations must be observed and approved in writing by the Geotechnical Engineer, prior to placing reinforcing steel or concrete.

5.5.2 The post-tensioned system should be designed by a structural engineer experienced in post-tensioned slab design and design criteria of the Post-Tensioning Institute (PTI) DC 10.5-12 *Standard Requirements for Design and Analysis of Shallow Post-Tensioned Concrete Foundations on Expansive Soils* or *WRI/CRSI Design of Slab-on-Ground Foundations*, as required by the 2022 California Building Code (CBC Section 1808.6.2). Although this procedure was developed for expansive soil conditions, we understand it can also be used to reduce the potential for foundation distress due to differential settlement. The post-tensioned design should incorporate the geotechnical parameters presented in Table 5.5.2 below, which are based on the guidelines presented in the PTI, Third Edition design manual.

TABLE 5.5.2
POST-TENSIONED FOUNDATION SYSTEM DESIGN PARAMETERS

Post-Tensioning Institute (PTI) Third Edition Design Parameters	Value
Thornthwaite Index	-20
Equilibrium Suction	3.9
Edge Lift Moisture Variation Distance, e_M (feet)	4.9
Edge Lift, y_M (inches)	1.58
Center Lift Moisture Variation Distance, e_M (feet)	9.0
Center Lift, y_M (inches)	66

5.6 Foundation Settlement

5.6.1 The enclosed seismically induced settlement analysis indicates that the site soils could be susceptible to approximately 0.79 inch of total settlement as a result of the Design Earthquake peak ground acceleration (⅔PGA_M). The differential settlement at the foundation level is anticipated to be approximately 0.4 inch over a distance of 50 feet. These settlements are in addition to the static settlements indicated below and must be considered in the structural design.

5.6.2 The maximum expected static settlement for the proposed structures supported on a post-tensioned foundation system designed with a maximum bearing pressure of 3,000 psf and deriving support in newly placed engineered fill is estimated to be less than 1.25 inch and occur below the heaviest loaded structural element. A majority of the settlement of the foundation system is expected to occur on initial application of loading; however, minor additional settlements are expected within the first 12 months. Differential settlement is not expected to exceed 5/8 inch over a distance of 20 feet.

5.6.3 Based on seismic considerations, the proposed structures should be designed for a combined static and seismically induced differential settlement of 1 inch over a distance of 20 feet.

5.6.4 Once the design and foundation loading configurations for the proposed structures proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

5.7 Surface Drainage

5.7.1 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2022 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within 5 feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.

5.8 Plan Review

5.8.1 Grading, foundation, and, if applicable, shoring plans should be reviewed by the Geotechnical Engineer (a representative of Geocon), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations. Additional subsurface exploration and percolation are highly recommended to provide adequate coverage of the site prior to earthwork operations and to satisfy Riverside County requirements.

5.9 Testing and Observation Services During Construction

5.9.1 Geocon should provide geotechnical testing and observation services during the grading operations, foundation construction, utility installation, retaining wall backfill and pavement installation. Table 5.9.1 presents the typical geotechnical observations we would expect for the proposed improvements.

TABLE 5.9.1
EXPECTED GEOTECHNICAL TESTING AND OBSERVATION SERVICES

Construction Phase	Observations	Expected Time Frame
Ground Modification	Ground Modification Installation	Full Time
	Confirmation Testing	Part Time to Full Time
Grading	Base of Removal	Part Time During Removals
	Geologic Logging	Part Time to Full Time
	Fill Placement and Soil Compaction	Full Time
Soldier Piles	Solder Pile Drilling Depth	Part Time
Tieback Anchors	Tieback Drilling and Installation	Full Time
	Tieback Testing	Full Time
Soil Nail Walls	Soil Nail Drilling and Installation	Full Time
	Soil Nail Testing	Full Time
Foundations	Foundation Excavation Observations	Full Time
	Drilling Operations for Piles	Part Time
Utility Backfill	Fill Placement and Soil Compaction	Part Time to Full Time
Retaining Wall Backfill	Fill Placement and Soil Compaction	Part Time to Full Time
Subgrade for Sidewalks, Curb/Gutter and Pavement	Soil Compaction	Part Time
Pavement Construction	Base Placement and Compaction	Part Time
	Asphalt Concrete Placement and Compaction	Full Time

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.

2. This report is issued with the understanding that it is the responsibility of the owner, or of their representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

LIST OF REFERENCES

1. American Society of Civil Engineers (ASCE), *ASCE 7-16, Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, 2017.

2. California Building Standards Commission, 2022, *California Building Code (CBC)*, California Code of Regulations Title 24, Part 2.

3. California Geological Survey (CGS), *Earthquake Shaking Potential for California*, from USGS/CGS Seismic Hazards Model, CSSC No. 03-02, 2003.

4. California Geological Survey (CGS), *Probabilistic Seismic Hazards Mapping-Ground Motion Page*, 2003, CGS Website: www.conserv.ca.gov/cgs/rghm/pshamap.

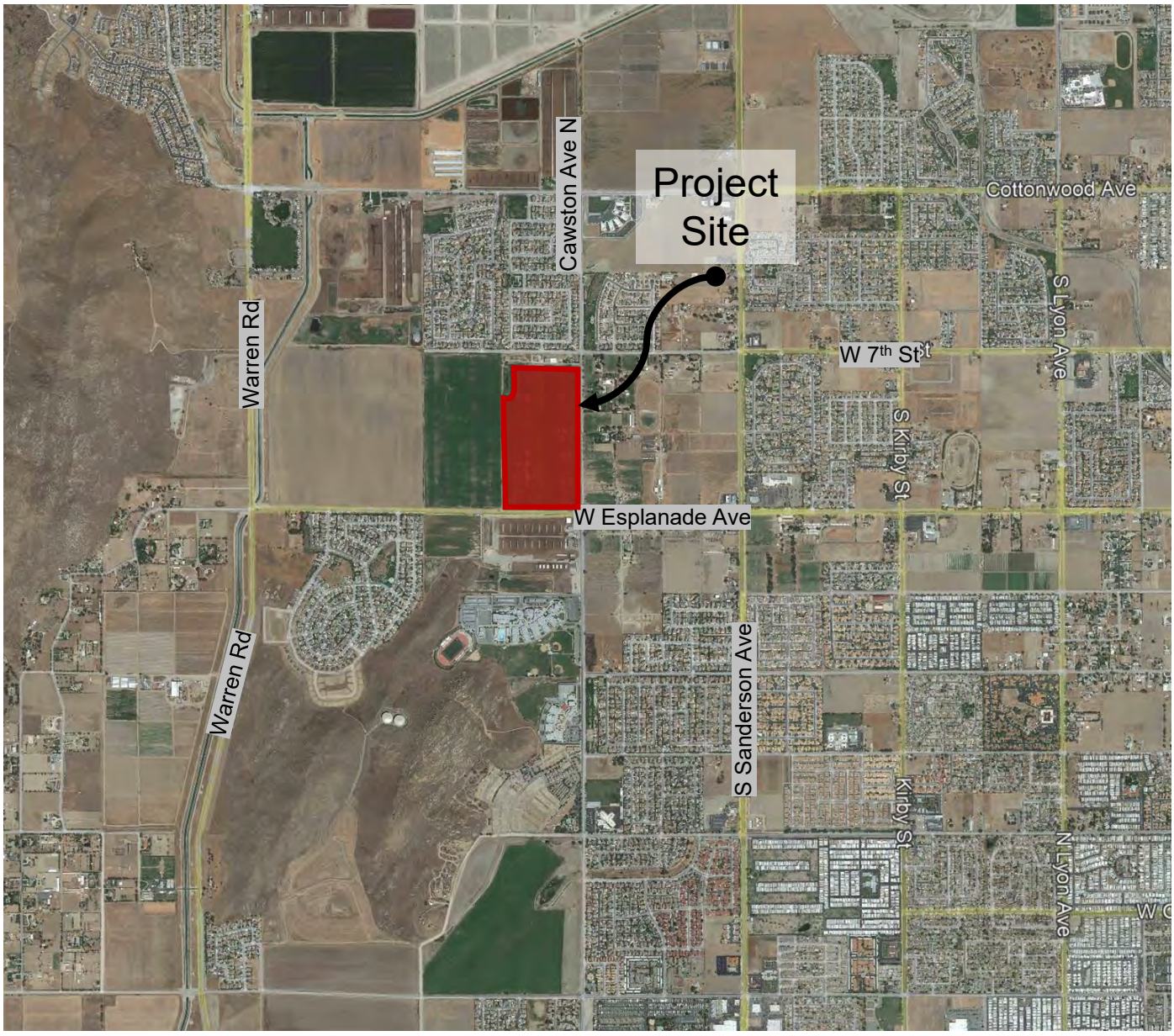
5. Geocon West, Inc., 2022*, Preliminary Geotechnical Investigation, SWC of 7th Street and Cawston Avenue, San Jacinto, California,* Project T2998-2-01, dated November 4.

6. OSHPD, *Seismic Design Maps*, seismicdesignmaps.org, accessed December 2023.

7. Riverside County GIS (RC GIS), *Map My County* website, http://mmc.rivcoit.org/MMC_Public/Custom/disclaimer/Default.htm; accessed December 2023.

8. USGS, *Areas of Land Subsidence in California*, ca.water.usgs.gov/land_subsidence/California-subsidence+areas.html, accessed December 2023.

9. USGS, *Unified Hazard Tool*, earthquake.usgs.gov/hazards/interactive, accessed December 2023.



N

0’ 2,700’ 5,400’

SCALE: 1” = 1,400’

SOURCE: Google Maps, 2022

VICINITY MAP

GEOCON WEST, INC.
GEOTECHNICAL ENVIRONMENTAL MATERIALS
41571 CORNING PLACE, SUITE 101, MURRIETA, CA 92562-7065
PHONE 951-304-2300 www.geoconinc.com

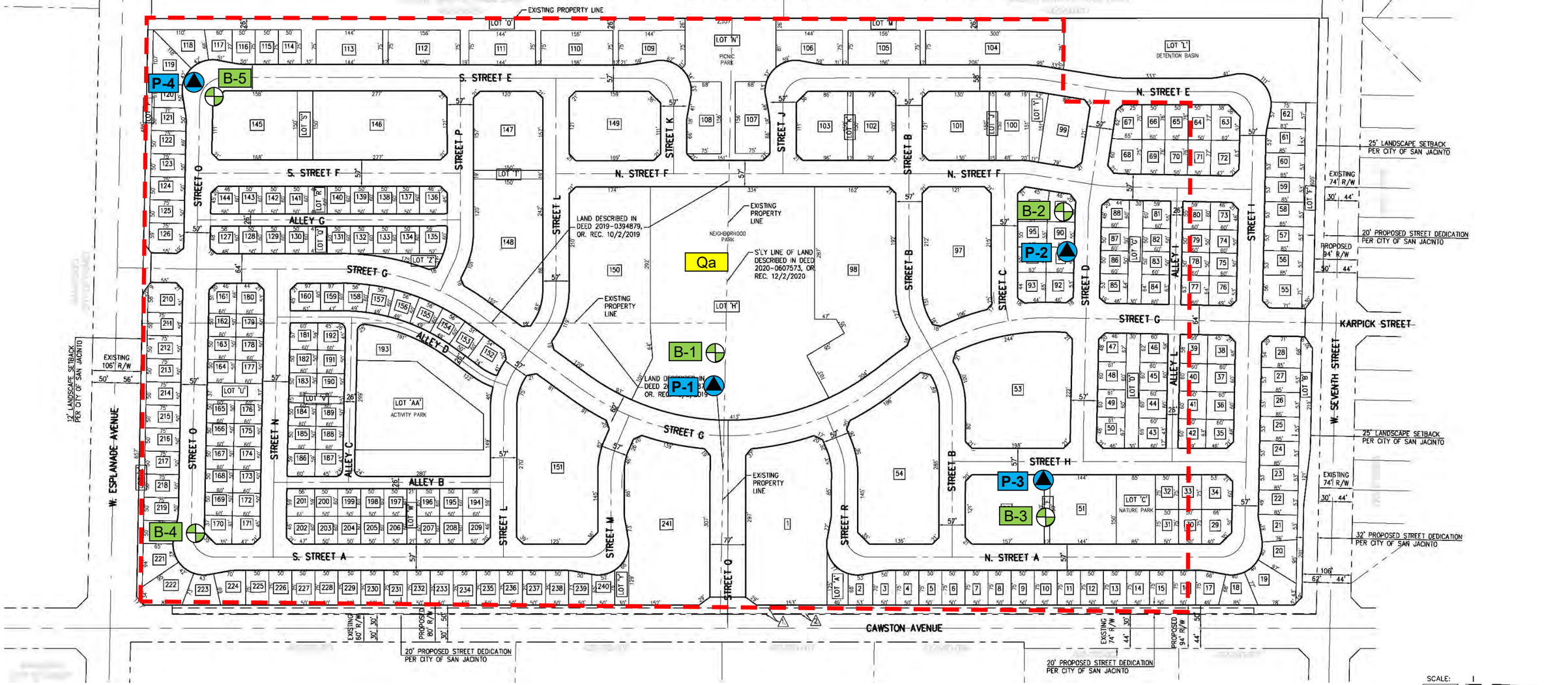
ARK		

SWC 7TH STREET & CAWSTON AVENUE
SAN JACINTO, CALIFORNIA

JANUARY 2024	PROJECT NO. T2998-22-01	FIG. 1

VESTING TENTATIVE TRACT MAP NO. 38787

IN THE CITY OF SAN JACINTO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA FOR SUBDIVISION AND CONDOMINIUM PURPOSES



GEOCON LEGEND

Locations are approximate

B-5 ..... BORING LOCATION

P-4 ..... PERCOLATION TEST LOCATION

..... PROJECT LIMITS

Qa ..... ALLUVIUM

Source: Vesting Tentative Tract Map No. 38787, Prepared by PSOMAS, dated 10/27/2023

GEOCON WEST, INC.

GEOTECHNICAL, ENVIRONMENTAL, MATERIALS
41571 CORNING PLACE #101, MURRIETA, CALIFORNIA 92562
PHONE 951-304-2300 www.geoconinc.com

HD			JANUARY 2024	PROJECT NO. T2998-22-01	FIG. 2

GEOLOGIC MAP

SWC 7TH STREET & CAWSTON AVENUE
SAN JACINTO, CALIFORNIA

APPENDIX A

APPENDIX A

FIELD EXPLORATION

Geocon performed the field investigation on September 26 and 27, 2022, which included the drilling of five geotechnical borings (B-1 through B-5) and four percolation borings (P-1 through P-4) to depths between approximately 2 to 51½ feet, to observe the subsurface geological conditions, perform percolation testing at the site, collect relatively undisturbed in-situ and disturbed bulk samples for laboratory testing, and evaluate the depth to groundwater. Borings were drilled with a truck mounted CME-75 drill rig with 8-inch-diameter hollow stem augers.

We collected relatively undisturbed and bulk samples from the borings. The undisturbed samples were obtained by driving a 3-inch O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 140-pound hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2$^{3}/_{8}$-inch inside diameter brass sampler rings to facilitate removal and testing. Relatively undisturbed samples and bulk samples of disturbed soils were transported to our laboratory for testing. The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS).

Logs of the geotechnical borings are presented on Figures A-1 through A-5, percolation borings on A-6 through A-9, and percolation test data sheets on A-10 through A-13. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the logs were revised based on subsequent laboratory testing. The approximate locations of the borings are depicted on the *Geologic Map*, Figure 2.

PROJECT NO. T2998-22-01

BORING B-1

ELEV. (MSL.) **1512** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	B-1@0-5	SM	**TOPSOIL** Silty SAND, loose, moist, very dark brown; fine to medium sand; very silty			
2		SP	**ALLUVIUM (Qa)**			
	B-1@2.5		Poorly-graded SAND, loose, moist, strong brown; medium sand; some fine sand; little mica	7		
4						
6	B-1@5 B-1@5-10	ML	SILT with sand, soft to firm, very moist, olive brown; fine to medium sand; little mica	12	95.3	23.7
8	B-1@7.5		-Some mica	9	101.4	22.6
10	B-1@10		-Becomes micaceous; trace rootlets	11	96.4	27.2
12						
14						
16	B-1@15	SP-SM	Poorly-graded SAND with silt, medium dense, moist, olive gray; fine to medium sand; micaceous	40	102.9	19.1
18						
20	B-1@20	CL	CLAY, soft, wet, very dark olive; fine sand; micaceous	9	93.6	28.7
22						
24		SM	Silty SAND, medium dense, moist to wet, grayish brown; fine to medium sand; some coarse sand; trace gravel			
26	B-1@25			38		
28						

Figure 1,
Log of Boring B-1, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. T2998-22-01

BORING B-1

ELEV. (MSL.) **1512** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B-1@30						-Becomes very dense, pale yellow to yellow brown; fine to coarse sand; few gravel	80		
32										
34						SP	Poorly-graded SAND, very dense, moist, pale yellow to white; medium to coarse sand; trace fine sand; few mica; oxidation staining			
36	B-1@35							71		
38										
40	B-1@40					SM	Silty SAND, very dense, moist, dark gray brown; fine to medium sand; trace coarse sand; little mica	60		
42										
44										
46	B-1@45						-Becomes fine to coarse sand; trace gravel; mottle coloring	65		
48										
50	B-1@50						-Becomes dark brown; slightly oxidized	63		
							Total Depth = 51.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 1,
Log of Boring B-1, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING B-2

ELEV. (MSL.) **1509** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**ALLUVIUM (Qa)** SILT with sand, stiff, slightly moist, olive gray; fine sand; little mica; AC chunks and gravel at surface			
2	B-2@2-7 B-2@2.5						-Becomes light brown; little mica	38		
4						SM	Silty SAND, slightly moist, brown; fine to medium sand; little mica; very silty			
6	B-2@5							45		
8	B-2@7.5						-Becomes fine to medium sand; no coarse sand; few silt	30		
10	B-2@10					SM	Silty SAND, loose, slightly moist, olive gray; fine to medium sand; trace coarse sand; little mica	15	104.6	9.8
12										
14						ML	SILT, stiff, moist, brown; fine sand; little clay seams; mica			
16	B-2@15							21		
18										
20	B-2@20					SM	Silty SAND, medium dense, moist, dark brown; fine to medium sand; mica	31		
22										
24										
26	B-2@25						-Little coarse sand	44		
28										

Figure 2,
Log of Boring B-2, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING B-2** ELEV. (MSL.)**1509** DATE COMPLETED **9/26/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
							MATERIAL DESCRIPTION			
30	B-2@30						-Becomes strong brown; fine to coarse sand; micaceous	39		
32										
34										
36	B-2@35						-Becomes dark brown; fine to medium sand; trace coarse sand; little mica	45		
							Total Depth = 36.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 2,
Log of Boring B-2, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING B-3

ELEV. (MSL.) **1511** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**TOPSOIL** SILT, soft, slightly moist, olive gray; fine to medium sand			
2	B-3@2.5					SM	**ALLUVIUM (Qa)** Silty SAND, loose, moist, strong brown; fine to medium sand; little coarse sand; little mica	13		
4										
6	B-3@5						-Little silt; some mica	15	107.8	12.4
8	B-3@7.5						-Few silt; micaceous	15	106.7	9.6
10	B-3@10						-Becomes less silty; moisture increases	16	97.8	19.3
12										
14										
16	B-3@15					SM	Silty SAND, medium dense, moist, strong brown to dark brown; fine to medium sand; some mica; laminated	26		
18										
20	B-3@20						-Becomes dense; inbedded with thin poorly-graded sand layers	44		
22										
24										
26	B-3@25						-Becomes wet, very dark brown; fine to coarse sand	15		
28										

Figure 3,
Log of Boring B-3, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING B-3** ELEV. (MSL.)**1511** DATE COMPLETED **9/26/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
							MATERIAL DESCRIPTION			
30	B-3@30						-Becomes micaceous; massive	30		
32										
34										
36	B-3@35						-Becomes fine to medium sand; slightly oxidized	37		
							Total Depth = 36.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 3,
Log of Boring B-3, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING B-4

ELEV. (MSL.) **1513** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**TOPSOIL** SILT, hard, slightly moist, very dark brown; fine to medium sand			
						SM	**ALLUVIUM (Qa)**			
2	B-4@2-7						Silty SAND, medium dense, slightly moist to moist, dark brown; fine to medium sand; little coarse sand; little mica			
	B-4@2.5							20		
4							-Little mica			
6	B-4@5						-Becomes very moist, dark olive gray; Interbedded SM, ML, & SP	18	80.5	38.3
						SM	Silty SAND, loose to medium dense, moist, olive; fine to medium sand; micaceous			
8	B-4@7.5							11	105.2	19.1
10	B-4@10					CL	CLAY, firm, very moist, olive brown	16	95.8	31.6
12										
14						SC	Clayey SAND with Gravel, medium dense, very moist, gray and pale brown; fine sand			
16	B-4@15							40	104.8	21.5
18						SM	Silty SAND, medium dense, very moist, olive gray; fine to medium sand; micaceous			
20	B-4@20							18	103.6	21.5
22										
24										
26	B-4@25						-Becomes medium dense; less silt	40		
28										

Figure 4,
Log of Boring B-4, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING B-4** ELEV. (MSL.)**1513** DATE COMPLETED **9/26/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
							MATERIAL DESCRIPTION			
30	B-4@30						-Becomes gray brown; oxidation staining and on peds	30		
32										
34										
36	B-4@35						-Becomes dense; Poorly-graded SAND lens 3-4" thick	54		
							Total Depth = 36.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 4,
Log of Boring B-4, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. T2998-22-01

BORING B-5

ELEV. (MSL.) **1511** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0		ML	**TOPSOIL** SILT, loose, slightly moist, dark brown; fine to medium sand			
2		SM	**ALLUVIUM (Qa)**			
	B-5@2.5		Silty SAND, soft, slightly moist to moist, olive brown; fine to medium sand; very silty	9		
4						
6	B-5@5		-Becomes micaceous	5	92.4	24.1
8	B-5@7.5		-Becomes dark brown; very sandy; less silt	11	106.4	19.1
10	B-5@10	SC	Clayey SAND, loose, moist, dark olive brown; fine to medium sand; micaceous	15	92.9	22.3
12						
14		CL	CLAY, firm, very moist, olive gray			
16	B-5@15			26	89.0	37.1
18						
20	B-5@20		-Becomes dark brown	18	107.8	25.3
22		SM	Silty SAND, medium dense, moist, very dark brown; fine to medium sand; micaceous			
24						
26	B-5@25		-Becomes dark brown; less silt; little coarse sand	36		
28						

Figure 5,
Log of Boring B-5, Page 1 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING B-5

ELEV. (MSL.) **1511** DATE COMPLETED **9/26/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B-5@30		■				-Becomes very dense; more silt; Poorly-graded SAND lens (3")	74		
32										
34						SP	Poorly-graded SAND, medium dense, slightly moist, pale brown; fine to medium sand; trace coarse sand; few oxidation staining			
36	B-5@35		■					34		
							Total Depth = 36.5' Groundwater not encountered Penetration resistance for 140-lb hammer falling 30 inches by auto hammer Backfilled with cuttings 9/26/2022			

Figure 5,
Log of Boring B-5, Page 2 of 2

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

BORING P-1

ELEV. (MSL.) **1513** DATE COMPLETED **9/27/2022**

EQUIPMENT **CME75** BY: **L. WEIDMAN**

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						SM	**TOPSOIL** Silty SAND, loose, moist, very dark brown; fine to medium sand; very silty			
2	P-1@1.5-2		■			SM	**ALLUVIUM (Qa)** Silty SAND, loose, moist, dark grayish brown; medium sand; some fine sand; some mica			

Total Depth = 2'
No groundwater encountered
Percolation Test Equipment set
Presaturated with 5 gallons of water
Backfilled with cuttings 9/27/2022

T2998-22-01 BORING LOGS.GPJ

Figure 6,
Log of Boring P-1, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING P-2** ELEV. (MSL.) **1505** DATE COMPLETED **9/27/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN** MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0						ML	**ALLUVIUM (Qa)** SILT, stiff, slightly moist, dark brown; fine sand; little mica; AC chunks and gravel at surface			
2										
4						SM	Silty SAND, slightly moist, light grayish brown; fine to medium sand; few coarse sand; little mica			
6										
8										
10	P-2@9-10		■				Total Depth = 10' No groundwater encountered Percolation Test Equipment set Presaturated with 5 gallons of water Backfilled with cuttings 9/27/2022			

Figure 7,
Log of Boring P-2, Page 1 of 1

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	BULK	DR/SPT	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING P-3** ELEV. (MSL.) **1511** DATE COMPLETED **9/27/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
							MATERIAL DESCRIPTION			
0						ML	**TOPSOIL** SILT, soft, slightly moist, very dark brown; fine to medium sand			
						SM	**ALLUVIUM (Qa)**			
2	P-3@1.5-2		■				Silty SAND, loose, slightly moist, dark grayish brown; fine to medium sand; little mica			
							Total Depth = 2' No groundwater encountered Percolation Test Equipment set Presaturated with 5 gallons of water Backfilled with cuttings 9/27/2022			

Figure 8,
Log of Boring P-3, Page 1 of 1

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL ◧ ... STANDARD PENETRATION TEST ■ ... DRIVE SAMPLE (UNDISTURBED)

⊠ ... DISTURBED OR BAG SAMPLE ◪ ... CHUNK SAMPLE ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2998-22-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING P-4** ELEV. (MSL.)**1511** DATE COMPLETED **9/27/2022** EQUIPMENT **CME75** BY: **L. WEIDMAN**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
	BULK / DR/SPT				MATERIAL DESCRIPTION			
0				ML	**TOPSOIL** SILT, soft, slightly moist, dark brown; fine to medium sand			
				ML	**ALLUVIUM (Qa)**			
2	P-4@1.5-2				Sandy SILT, soft, slightly moist, dark gray brown; fine to medium sand			
					Total Depth = 2' No groundwater encountered Percolation Test Equipment set Presaturated with 5 gallons of water Backfilled with cuttings 9/27/2022			

Figure 9,
Log of Boring P-4, Page 1 of 1

T2998-22-01 BORING LOGS.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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GEOCON

PERCOLATION TEST REPORT							
Project Name:		Ramona San Jacinto			**Project No.:**		T2998-22-01
Test Hole No.:		P-1			**Date Excavated:**		9/26/2022
Length of Test Pipe:			24.0	inches	**Soil Classification:**		SM
Height of Pipe above Ground:			0.0	inches	**Presoak Date:**		9/26/2022
Depth of Test Hole:			24.0	inches	**Perc Test Date:**		9/27/2022
Check for Sandy Soil Criteria Tested by:				Weidman	**Percolation Tested by:**		Weidman
Water level measured from BOTTOM of hole							
Sandy Soil Criteria Test							
Trial No.	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
		Interval	**Elapsed**	**Level**	**Level**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	8:30 AM 8:55 AM	25	25	24.0	20.3	3.7	6.7
2	8:55 AM 9:20 AM	25	50	24.0	22.4	1.6	16.0
			Soil Criteria: Normal				
			Percolation Test				
Reading	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
No.		**Interval**	**Elapsed**	**Head**	**Head**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	9:20 AM 9:50 AM	30	30	24.0	22.0	2.0	14.7
2	9:50 AM 10:20 AM	30	60	24.0	22.8	1.2	25.0
3	10:20 AM 10:50 AM	30	90	24.0	22.7	1.3	22.7
4	10:50 AM 11:20 AM	30	120	24.0	22.6	1.4	20.8
5	11:20 AM 11:50 AM	30	150	24.0	22.8	1.2	25.0
6	11:50 AM 12:20 PM	30	180	24.0	22.6	1.4	20.8
7	12:20 PM 12:50 PM	30	210	24.0	22.8	1.2	25.0
8	12:50 PM 1:20 PM	30	240	24.0	23.0	1.0	31.3
9	1:20 PM 1:50 PM	30	270	24.0	23.3	0.7	41.7
10	1:50 PM 2:20 PM	30	300	24.0	23.3	0.7	41.7
11	2:20 PM 2:50 PM	30	330	24.0	23.4	0.6	50.0
12	2:50 PM 3:20 PM	30	360	24.0	23.4	0.6	50.0
Infiltration Rate (in/hr):			0.1				
Radius of test hole (in):			4				**Figure A-10**
Average Head (in):			23.7				

PERCOLATION TEST REPORT							
Project Name:		Ramona San Jacinto			**Project No.:**		T2998-22-01
Test Hole No.:		P-2			**Date Excavated:**		9/26/2022
Length of Test Pipe:			120.0	inches	**Soil Classification:**		SM
Height of Pipe above Ground:			0.0	inches	**Presoak Date:**		9/26/2022
Depth of Test Hole:			120.0	inches	**Perc Test Date:**		9/27/2022
Check for Sandy Soil Criteria Tested by:				Weidman	**Percolation Tested by:**		Weidman
Water level measured from BOTTOM of hole							
Sandy Soil Criteria Test							
Trial No.	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
		Interval	**Elapsed**	**Level**	**Level**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	8:33 AM 8:58 AM	25	25	48.0	13.6	34.4	0.7
2	8:58 AM 9:23 AM	25	50	48.0	19.2	28.8	0.9
			Soil Criteria: Sandy				
			Percolation Test				
Reading	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
No.		**Interval**	**Elapsed**	**Head**	**Head**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	9:23 AM 9:33 AM	10	10	48.0	38.4	9.6	1.0
2	9:33 AM 9:43 AM	10	20	48.0	39.6	8.4	1.2
3	9:43 AM 9:53 AM	10	30	48.0	40.2	7.8	1.3
4	9:53 AM 10:03 AM	10	40	48.0	43.2	4.8	2.1
5	10:03 AM 10:13 AM	10	50	48.0	45.0	3.0	3.3
6	10:13 AM 10:23 AM	10	60	48.0	45.6	2.4	4.2
Infiltration Rate (in/hr):			0.6				
Radius of test hole (in):			4				**Figure A-11**
Average Head (in):			46.8				

PERCOLATION TEST REPORT							
Project Name:		Ramona San Jacinto			**Project No.:**		T2998-22-01
Test Hole No.:		P-3			**Date Excavated:**		9/26/2022
Length of Test Pipe:			24.0	inches	**Soil Classification:**		SM
Height of Pipe above Ground:			0.0	inches	**Presoak Date:**		9/26/2022
Depth of Test Hole:			24.0	inches	**Perc Test Date:**		9/27/2022
Check for Sandy Soil Criteria Tested by:				Weidman	**Percolation Tested by:**		Weidman
Water level measured from BOTTOM of hole							
Sandy Soil Criteria Test							
Trial No.	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
		Interval	**Elapsed**	**Level**	**Level**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	8:38 AM 9:03 AM	25	25	24.0	17.8	6.2	4.0
2	9:03 AM 9:28 AM	25	50	24.0	21.6	2.4	10.4
			Soil Criteria: Normal				
			Percolation Test				
Reading	**Time**	**Time**	**Total**	**Initial Water**	**Final Water**	**Δ in Water**	**Percolation**
No.		**Interval**	**Elapsed**	**Head**	**Head**	**Level**	**Rate**
		(min)	**Time (min)**	**(in)**	**(in)**	**(in)**	**(min/inch)**
1	9:28 AM 9:58 AM	30	30	24.0	21.6	2.4	12.5
2	9:58 AM 10:28 AM	30	60	24.0	22.4	1.6	19.2
3	10:28 AM 10:58 AM	30	90	24.0	22.6	1.4	20.8
4	10:58 AM 11:28 AM	30	120	24.0	22.6	1.4	20.8
5	11:28 AM 11:58 AM	30	150	24.0	22.6	1.4	20.8
6	11:58 AM 12:28 PM	30	180	24.0	22.2	1.8	16.7
7	12:28 PM 12:58 PM	30	210	24.0	22.8	1.2	25.0
8	12:58 PM 1:28 PM	30	240	24.0	23.0	1.0	31.3
9	1:28 PM 1:58 PM	30	270	24.0	23.3	0.7	41.7
10	1:58 PM 2:28 PM	30	300	24.0	23.3	0.7	41.7
11	2:28 PM 2:58 PM	30	330	24.0	23.3	0.7	41.7
12	2:58 PM 3:28 PM	30	360	24.0	23.3	0.7	41.7
Infiltration Rate (in/hr):			0.1				
Radius of test hole (in):			4				**Figure A-12**
Average Head (in):			23.6				

PERCOLATION TEST REPORT							
Project Name:		Ramona San Jacinto			**Project No.:**		T2998-22-01
Test Hole No.:		P-4			**Date Excavated:**		9/26/2022
Length of Test Pipe:			24.0	inches	**Soil Classification:**		ML
Height of Pipe above Ground:			0.0	inches	**Presoak Date:**		9/26/2022
Depth of Test Hole:			24.0	inches	**Perc Test Date:**		9/27/2022
Check for Sandy Soil Criteria Tested by:				Weidman	**Percolation Tested by:**		Weidman
Water level measured from BOTTOM of hole							
Sandy Soil Criteria Test							
Trial No.	**Time**	**Time Interval (min)**	**Total Elapsed Time (min)**	**Initial Water Level (in)**	**Final Water Level (in)**	**Δ in Water Level (in)**	**Percolation Rate (min/inch)**
1	8:30 AM 8:55 AM	25	25	24.0	17.9	6.1	4.1
2	8:55 AM 9:20 AM	25	50	24.0	20.4	3.6	6.9
			Soil Criteria: Normal				
			Percolation Test				
Reading No.	**Time**	**Time Interval (min)**	**Total Elapsed Time (min)**	**Initial Water Head (in)**	**Final Water Head (in)**	**Δ in Water Level (in)**	**Percolation Rate (min/inch)**
1	9:20 AM 9:50 AM	30	30	24.0	20.6	3.4	8.9
2	9:50 AM 10:20 AM	30	60	24.0	21.1	2.9	10.4
3	10:20 AM 10:50 AM	30	90	24.0	21.6	2.4	12.5
4	10:50 AM 11:20 AM	30	120	24.0	21.8	2.2	13.9
5	11:20 AM 11:50 AM	30	150	24.0	22.2	1.8	16.7
6	11:50 AM 12:20 PM	30	180	24.0	23.0	1.0	31.3
7	12:20 PM 12:50 PM	30	210	24.0	22.8	1.2	25.0
8	12:50 PM 1:20 PM	30	240	24.0	22.7	1.3	22.7
9	1:20 PM 1:50 PM	30	270	24.0	22.8	1.2	25.0
10	1:50 PM 2:20 PM	30	300	24.0	22.7	1.3	22.7
11	2:20 PM 2:50 PM	30	330	24.0	22.8	1.2	25.0
12	2:50 PM 3:20 PM	30	360	24.0	22.8	1.2	25.0
Infiltration Rate (in/hr):			0.2				
Radius of test hole (in):			4				**Figure A-13**
Average Head (in):			23.4				

APPENDIX B

APPENDIX B

LABORATORY TESTING

We performed laboratory tests in accordance with current, generally accepted test methods of ASTM International (ASTM) or other suggested procedures. We analyzed selected soil samples for in-situ density and moisture content, maximum dry density and optimum moisture content, corrosivity, grain size distribution, expansion potential, consolidation, and direct shear strength. The results of the laboratory tests are presented on Figures B-1 through B-32. The in-place dry density and moisture content of the samples tested are presented on the boring logs in *Appendix A*.

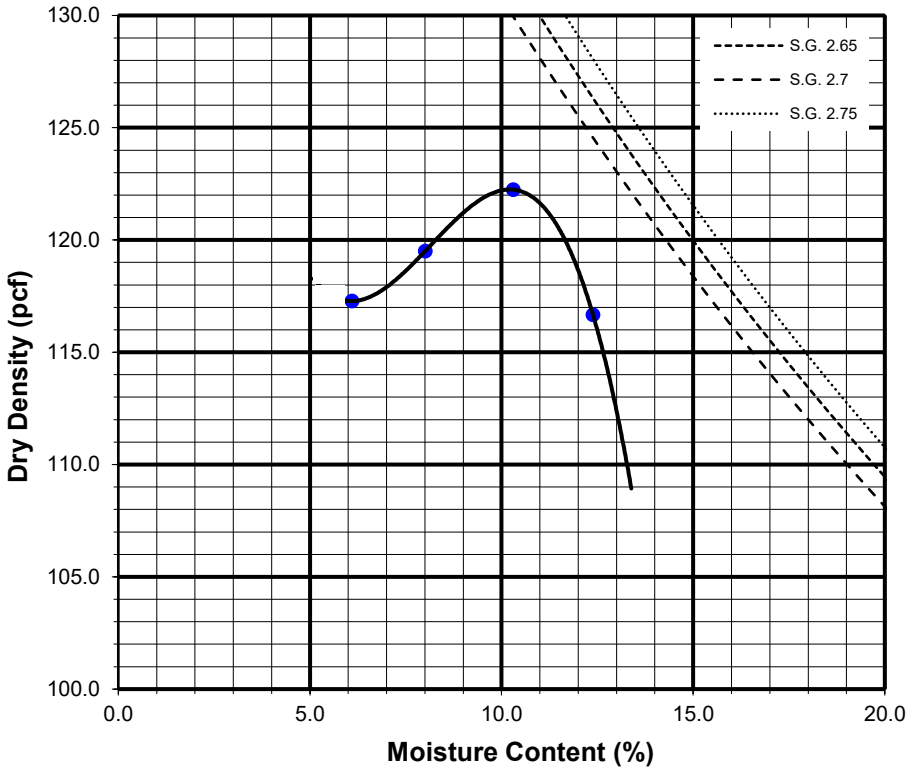
Sample No:

B-2@2-7	Silty SAND (SM), olive gray

TEST NO.		1	2	3	4	5	6
Wt. Compacted Soil + Mold	(g)	6139	6209	6296	6240		
Weight of Mold	(g)	4259	4259	4259	4259		
Net Weight of Soil	(g)	1880	1950	2037	1981		
Wet Weight of Soil + Cont.	(g)	690.7	655.9	818.6	810.9		
Dry Weight of Soil + Cont.	(g)	665.8	626.0	766.3	750.0		
Weight of Container	(g)	257.3	252.6	259.0	258.3		
Moisture Content	(%)	6.1	8.0	10.3	12.4		
Wet Density	(pcf)	124.4	129.1	134.8	131.1		
Dry Density	(pcf)	117.3	119.5	122.2	116.7		

Maximum Dry Density (pcf)	122.0

Optimum Moisture Content (%)	10.0



Preparation Method: A

GEOCON

COMPACTION CHARACTERISTICS USING MODIFIED EFFORT TEST RESULTS

ASTM D-1557

Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST, & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

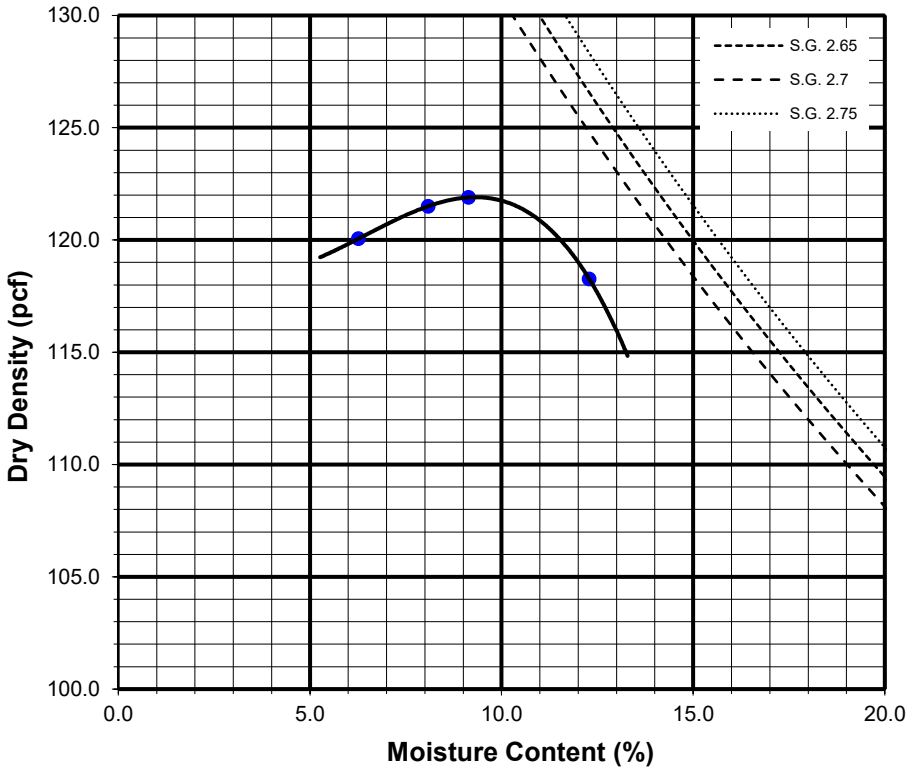
Nov 22 Figure B-1

Sample No:

B-4@2-7	Silty SAND (SM), dark brown

TEST NO.		1	2	3	4	5	6
Wt. Compacted Soil + Mold	(g)	6243	6269	6265	6187		
Weight of Mold	(g)	4259	4259	4259	4259		
Net Weight of Soil	(g)	1984	2009	2006	1927		
Wet Weight of Soil + Cont.	(g)	705.9	575.6	679.6	653.9		
Dry Weight of Soil + Cont.	(g)	672.5	548.7	633.4	630.4		
Weight of Container	(g)	259.2	254.2	257.4	255.4		
Moisture Content	(%)	8.1	9.1	12.3	6.3		
Wet Density	(pcf)	131.3	133.0	132.8	127.6		
Dry Density	(pcf)	121.5	121.9	118.3	120.1		

Maximum Dry Density (pcf)	122.0	Optimum Moisture Content (%)	9.0



Preparation Method: A

GEOCON

COMPACTION CHARACTERISTICS USING MODIFIED EFFORT TEST RESULTS

ASTM D-1557

Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST, & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-2

B1@0-5

MOLDED SPECIMEN		BEFORE TEST	AFTER TEST
Specimen Diameter	(in.)	4.0	4.0
Specimen Height	(in.)	1.0	1.0
Wt. Comp. Soil + Mold	(gm)	606.5	632.2
Wt. of Mold	(gm)	200.4	200.4
Specific Gravity	(Assumed)	2.7	2.7
Wet Wt. of Soil + Cont.	(gm)	473.2	632.2
Dry Wt. of Soil + Cont.	(gm)	447.9	371.9
Wt. of Container	(gm)	173.2	200.4
Moisture Content	(%)	9.2	16.1
Wet Density	(pcf)	122.5	130.1
Dry Density	(pcf)	112.2	112.0
Void Ratio		0.5	0.5
Total Porosity		0.3	0.3
Pore Volume	(cc)	69.3	71.5
Degree of Saturation	(%) [S_{meas}]	49.8	83.8

Date	Time	Pressure (psi)	Elapsed Time (min)	Dial Readings (in.)
9/30/2022	10:00	1.0	0	0.3267
9/30/2022	10:10	1.0	10	0.3266
Add Distilled Water to the Specimen				
10/1/2022	10:00	1.0	1430	0.3376
10/1/2022	11:00	1.0	1490	0.3376

Expansion Index (EI meas) =	11
Expansion Index (Report) =	11

Expansion Index, EI_{50}	CBC CLASSIFICATION *	UBC CLASSIFICATION **
0-20	Non-Expansive	Very Low
21-50	Expansive	Low
51-90	Expansive	Medium
91-130	Expansive	High
>130	Expansive	Very High

* Reference: 2019 California Building Code, Section 1803.5.3

** Reference: 1997 Uniform Building Code, Table 18-I-B.

GEOCON

EXPANSION INDEX TEST RESULTS

ASTM D-4829

Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST, & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-3

SUMMARY OF LABORATORY
POTENTIAL OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS
AASHTO T289 ASTM D4972 and AASHTO T288 ASTM G187

Sample No.	pH	Resistivity (ohm centimeters)
B1@0-5	9.3	2300

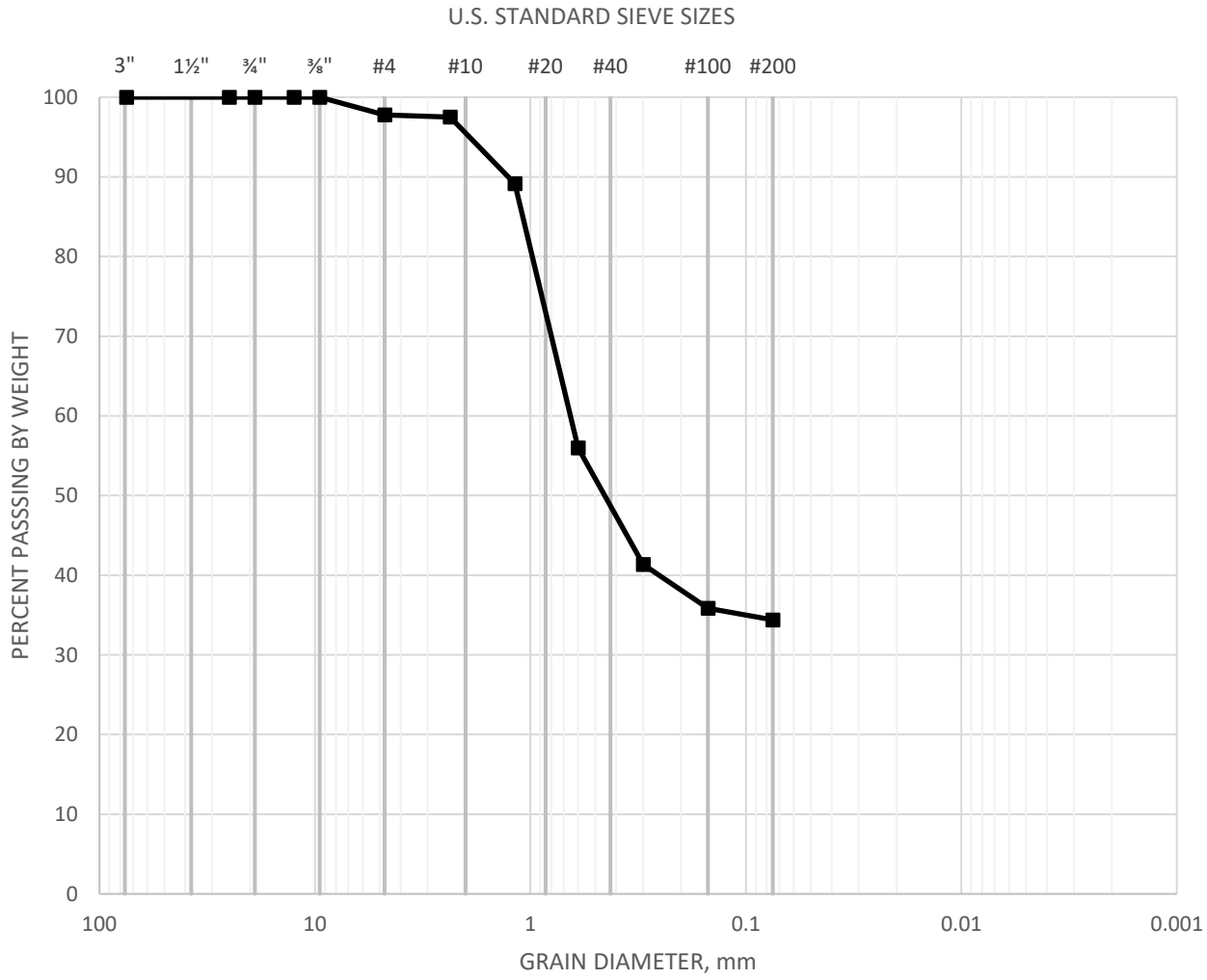
SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS
AASHTO T291 ASTM C1218

Sample No.	Chloride Ion Content (%)
B1@0-5	0.015

SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
AASHTO T290 ASTM C1580

Sample No.	Water Soluble Sulfate (% SO_4)	Sulfate Exposure
B1@0-5	0.001	S0

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P1@1.5-2.0	Silty SAND (SM), dark grayish brown	0.63	0.073	0.073

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D 6913

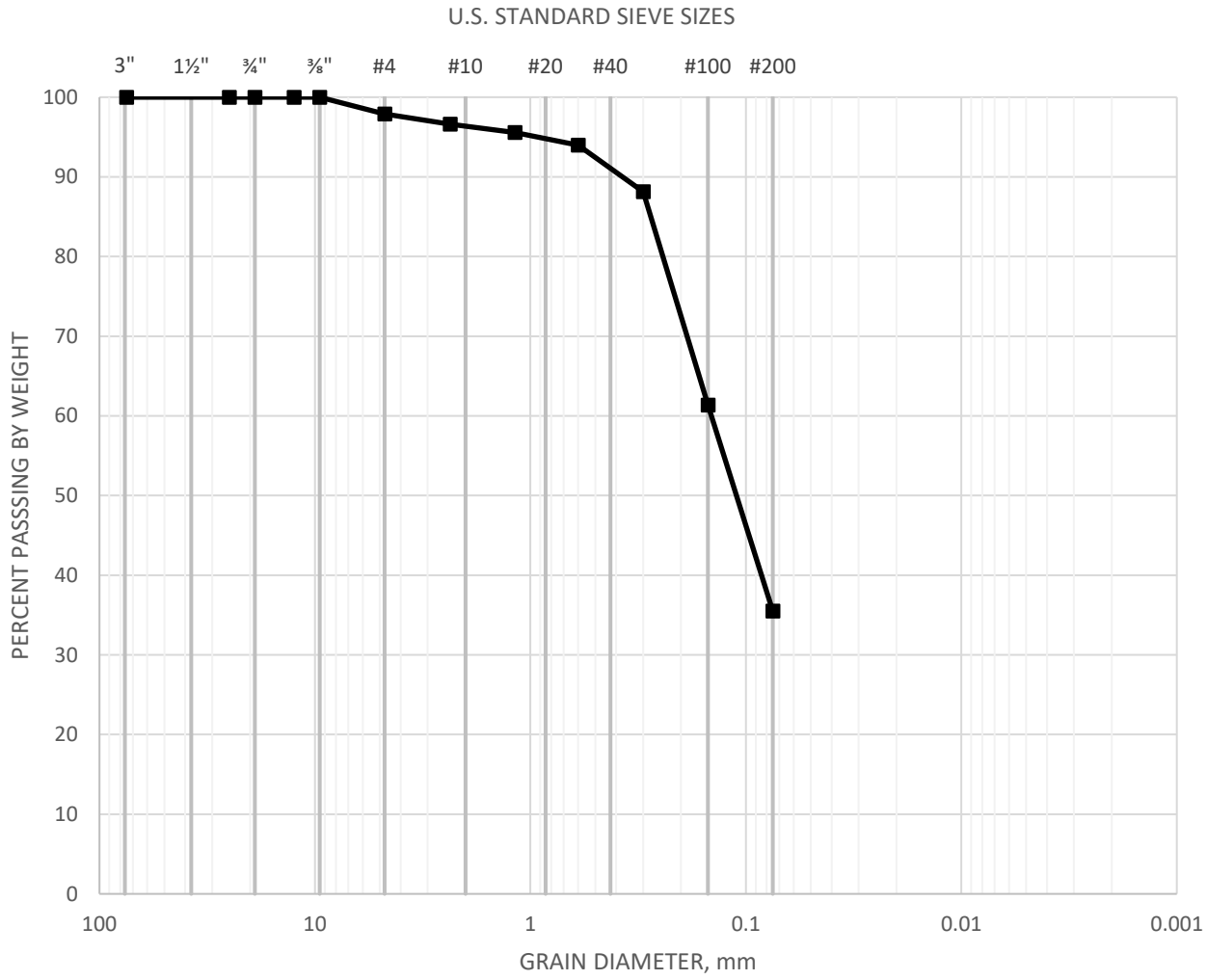
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST, & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-5

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P2@9-10	Silty SAND (SM), light grayish brown	0.14	0.073	0.073

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D 6913

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Project No.: T2998-22-01

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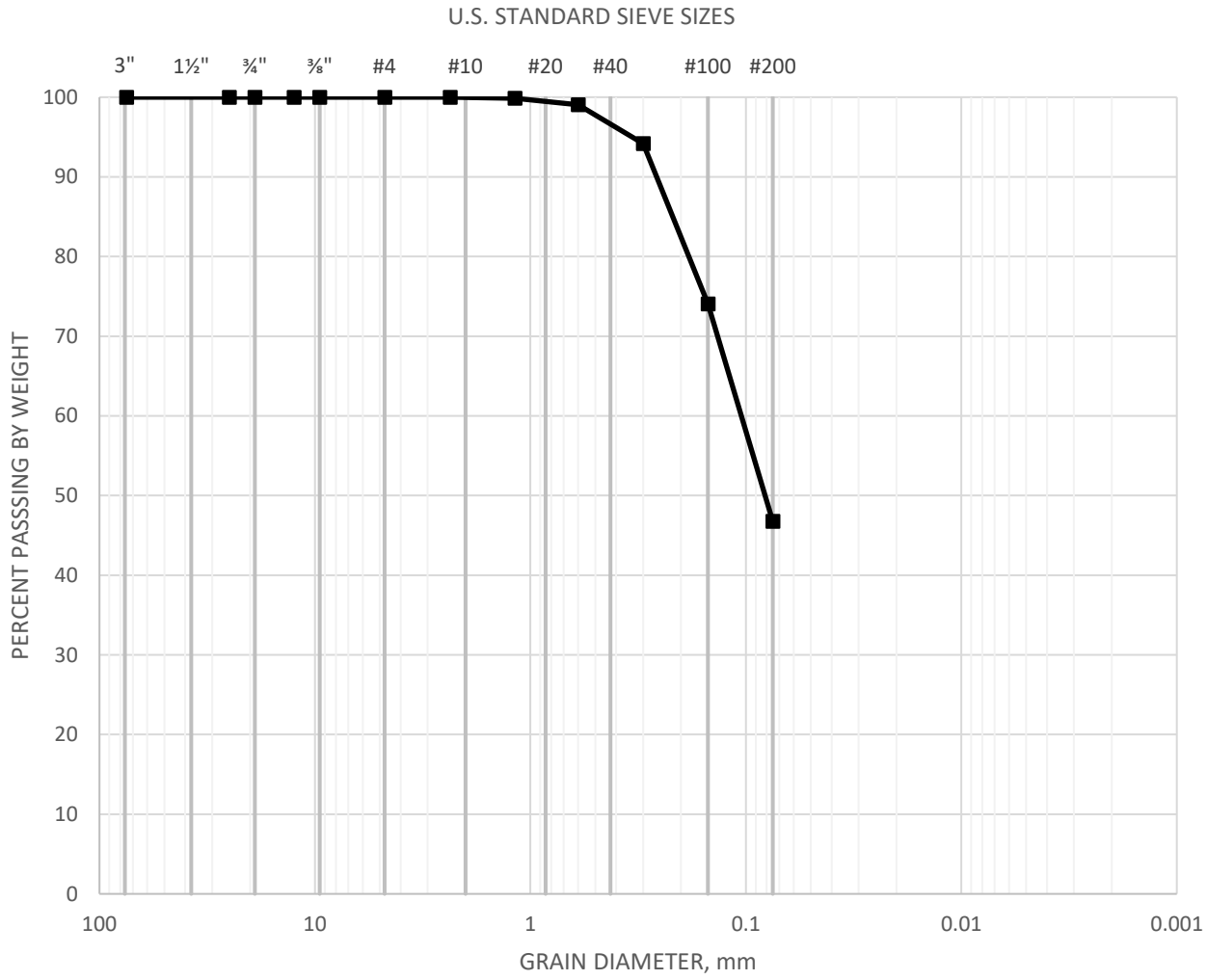
Nov 22 Figure B-6

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P3@1.5-2.0	Silty SAND (SM), dark grayish brown	0.1	0.073	0.073

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D 6913

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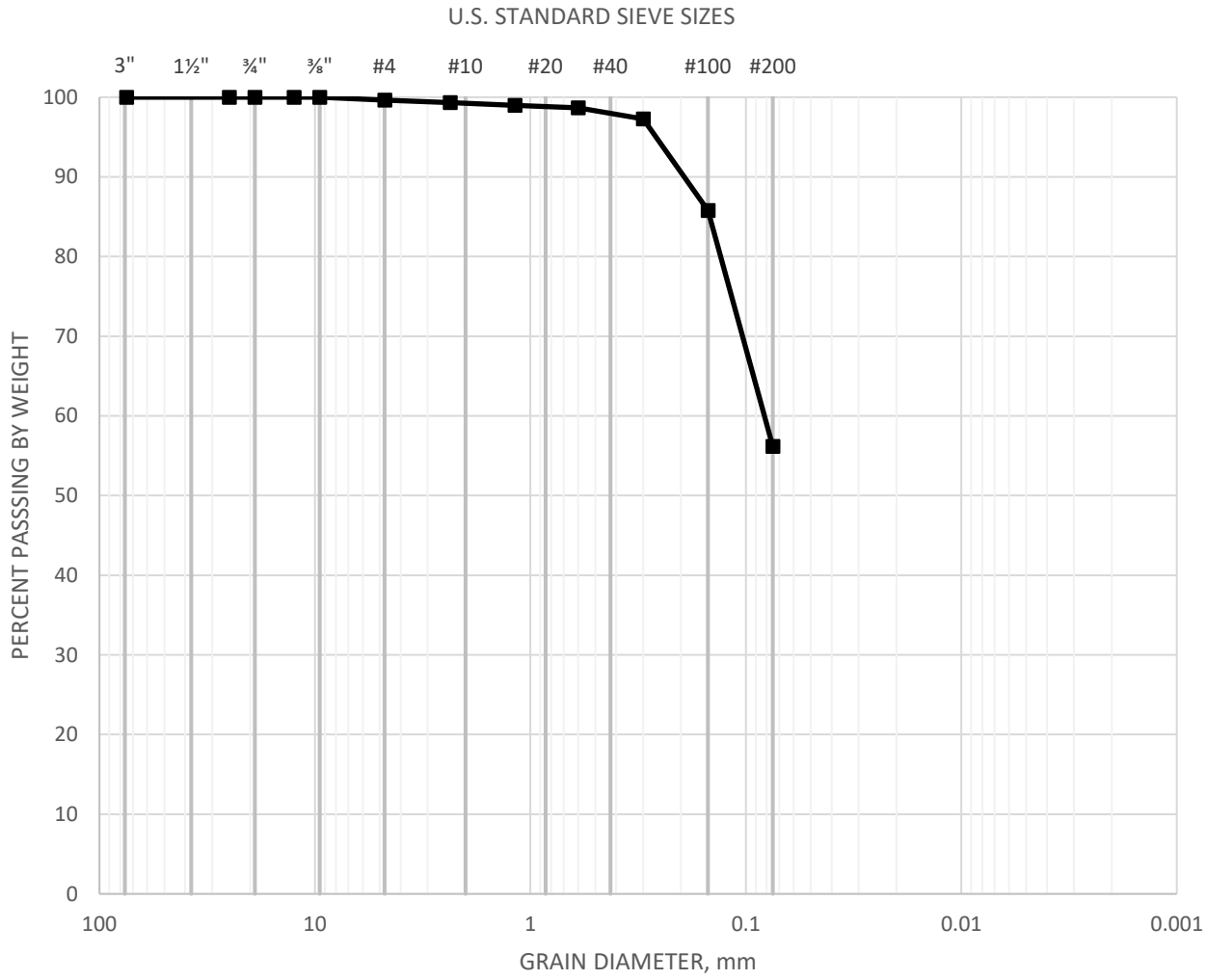
Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST, & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-7

GRAVEL		SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



SAMPLE	CLASSIFICATION	D60	D30	D10
P4@1.5-2.0	SILT with Sand (ML), dark grayish brown	0.08	0.073	0.073

GEOCON

GRAIN SIZE DISTRIBUTION

ASTM D 6913

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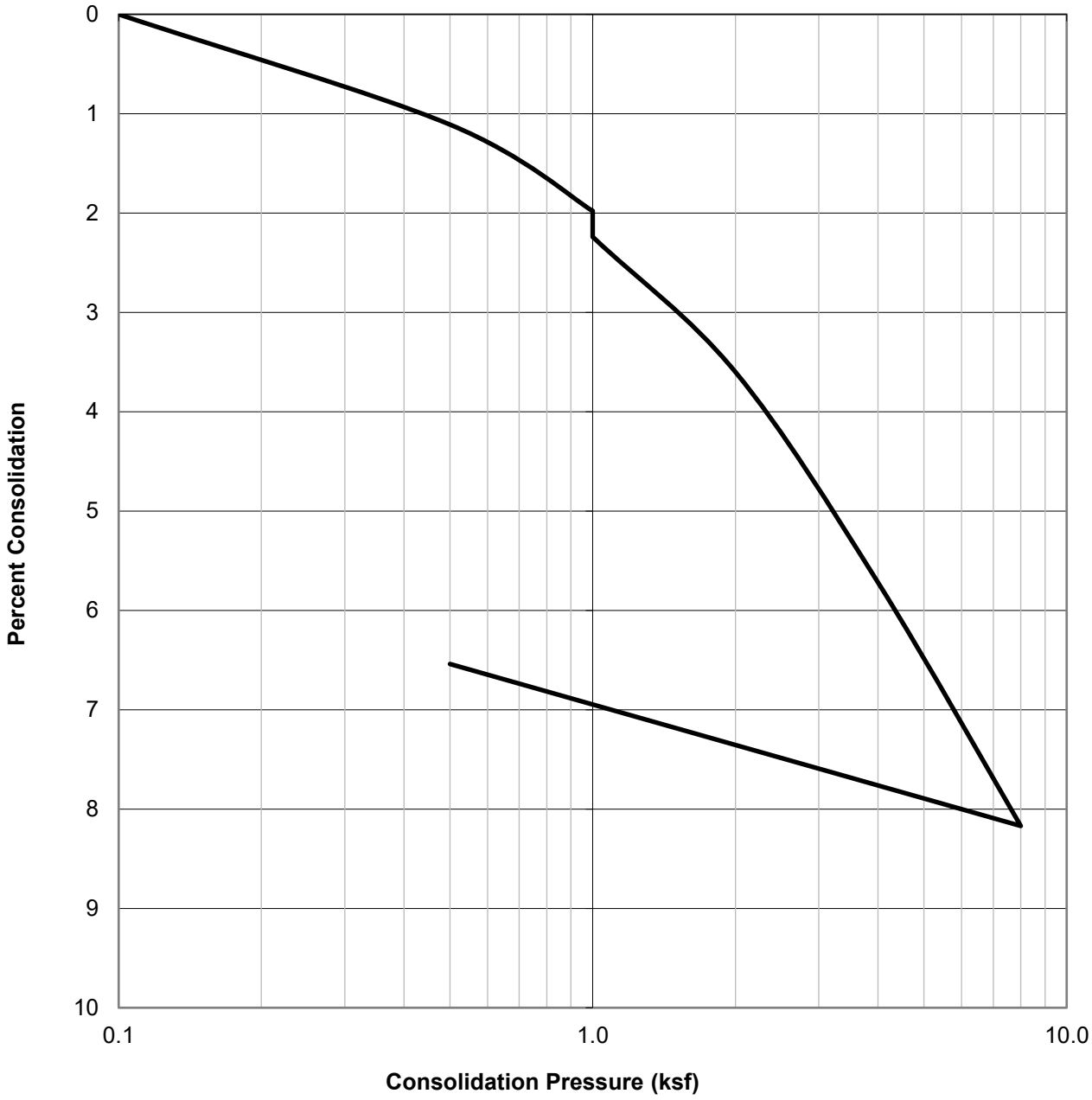
SWC 7TH ST, & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-8

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@5	SILT with Sand (ML), olive brown	95.2	24.2	24.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

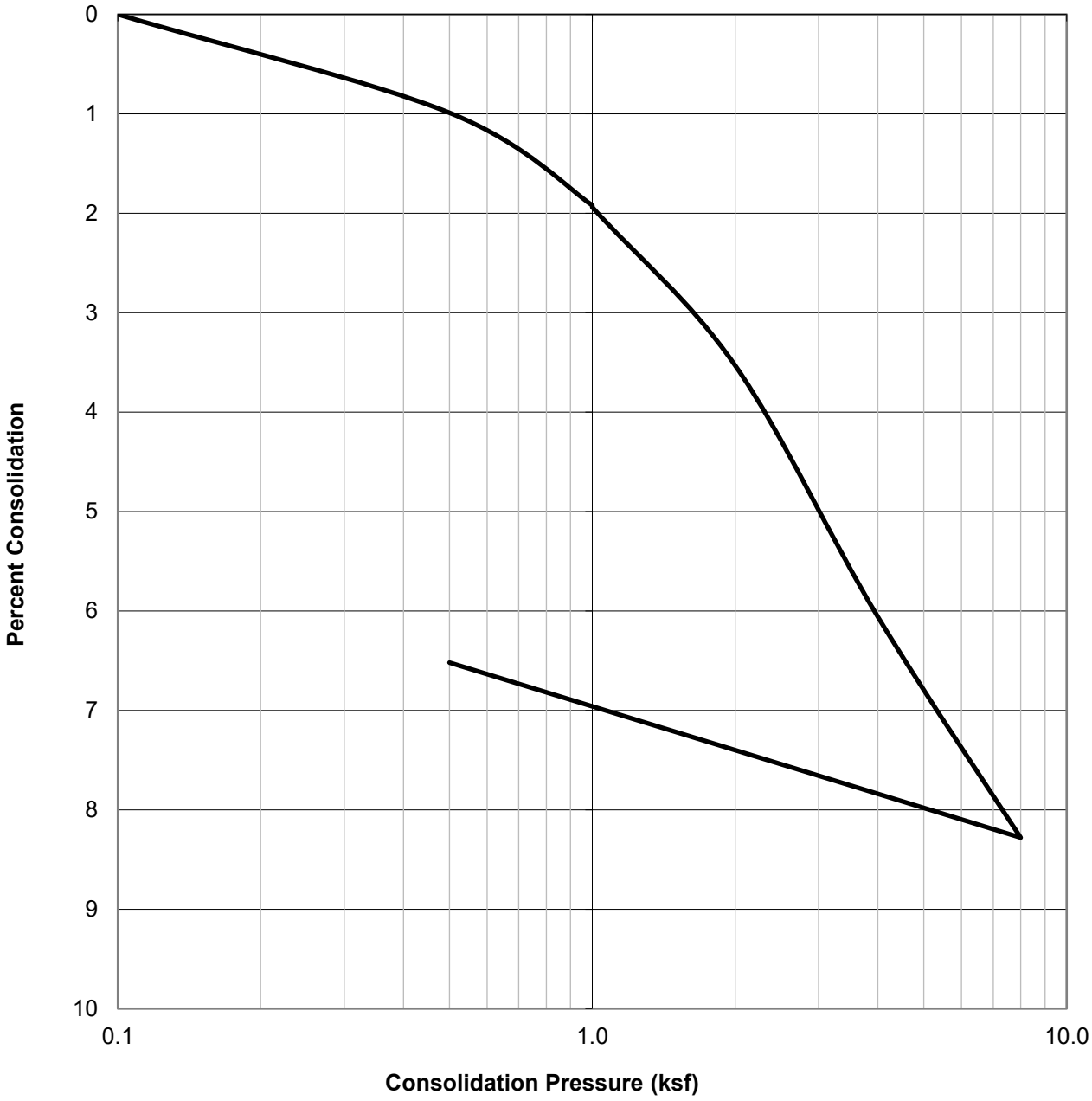
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-9

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@7.5	SILT with Sand (ML), olive brown	99.8	23.2	22.5

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

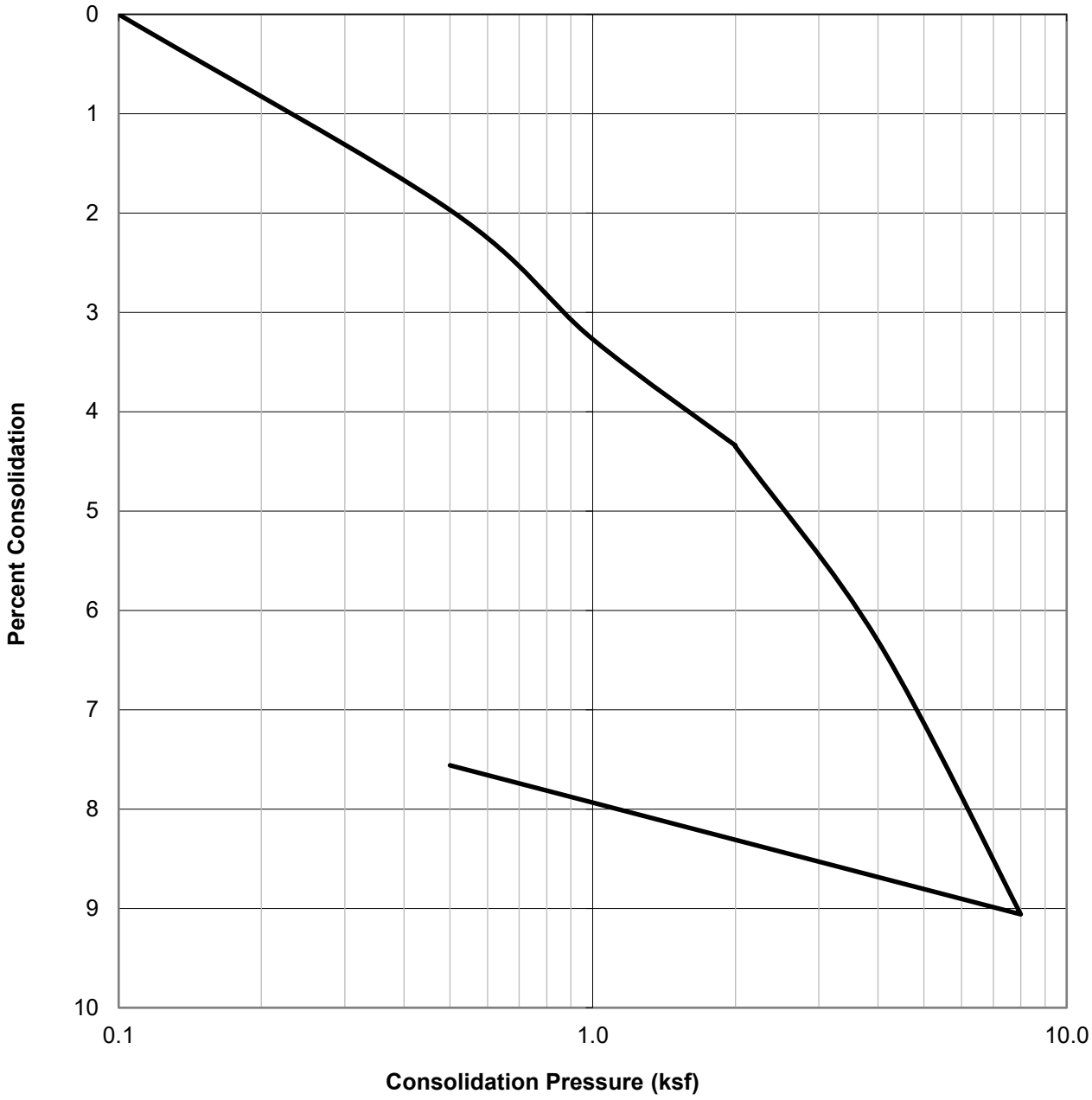
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-10

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@10	SILT with Sand (ML), olive brown	91.4	30.0	27.7

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

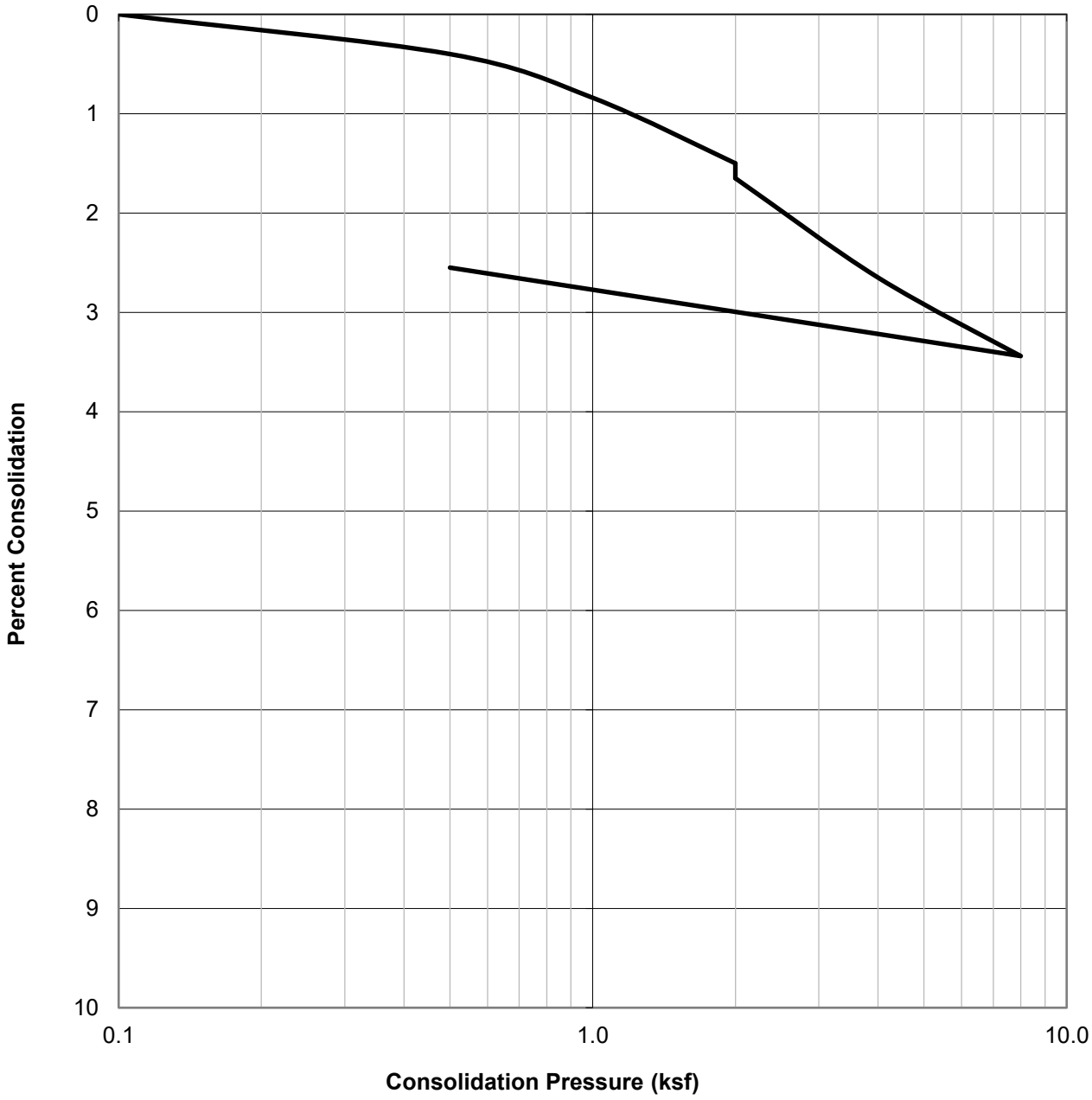
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-11

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@15	Poorly Graded SAND with Silt (SP-SM), light olive gray	92.3	21.0	27.1

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

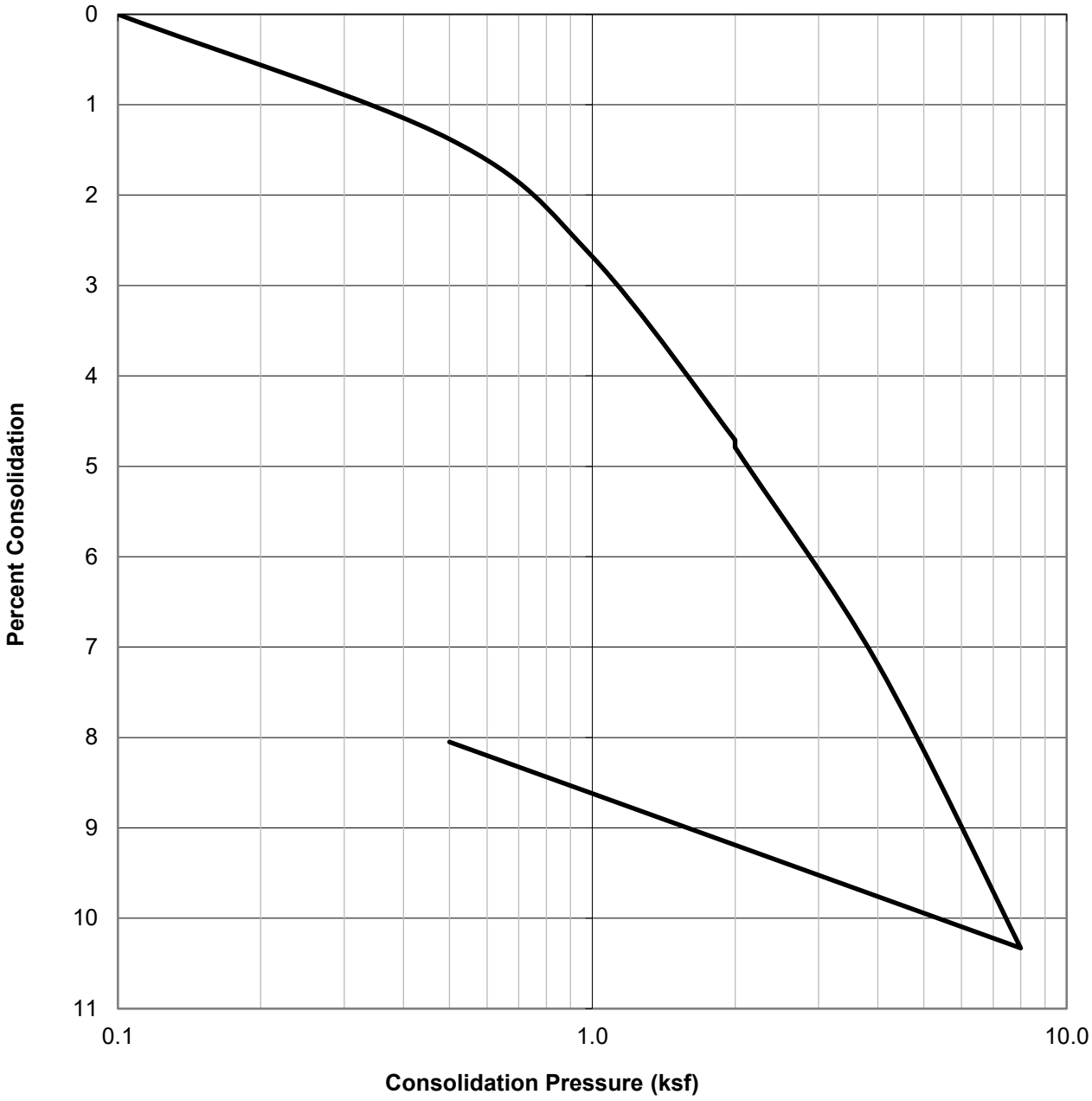
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-12

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B1@20	CLAY (CL), dark olive gray	90.0	28.7	29.4

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

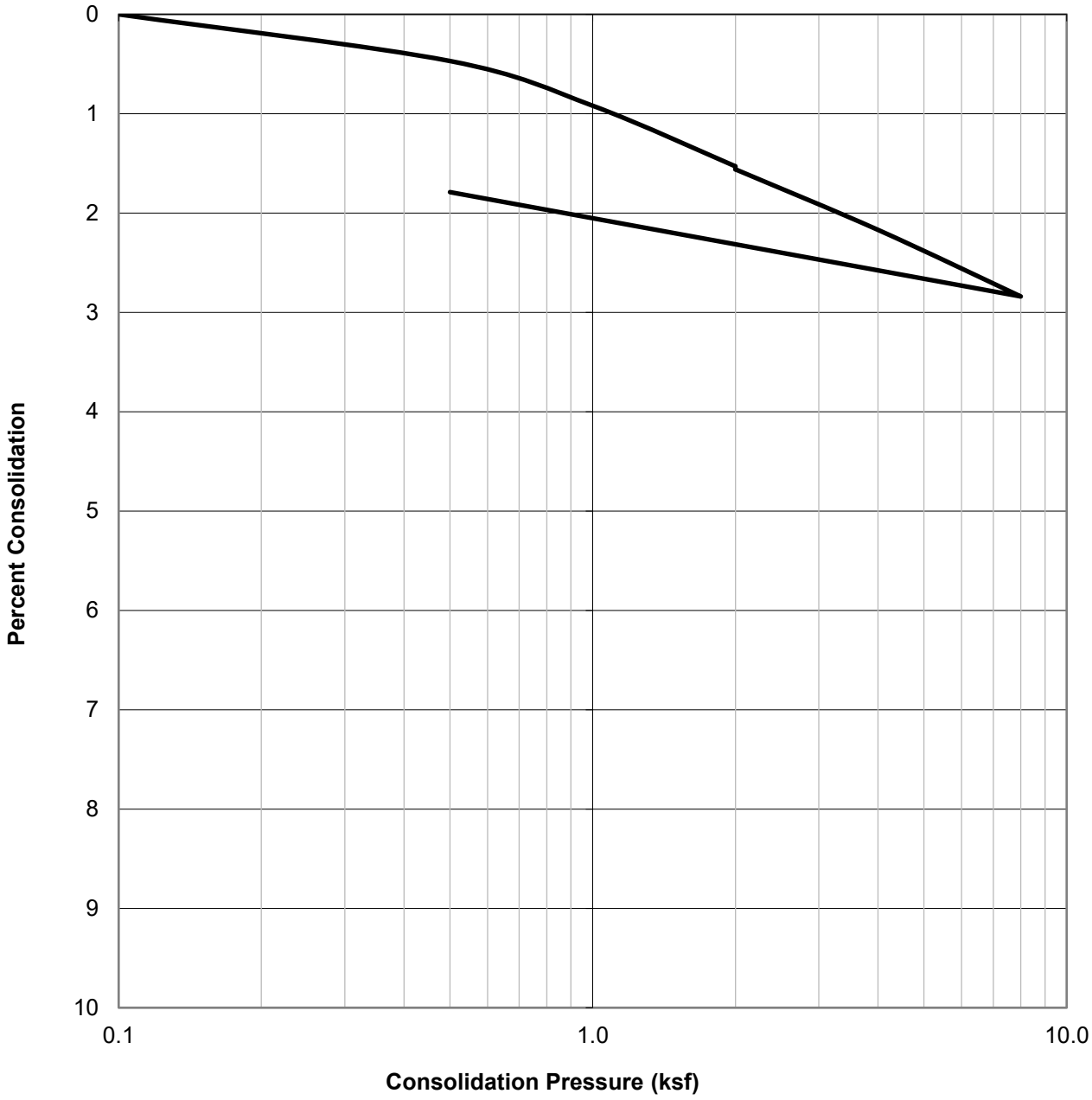
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-13

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@2-7	Silty SAND (SM), olive gray	109.3	11.1	19.0

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by:

Project No.: T2998-22-01

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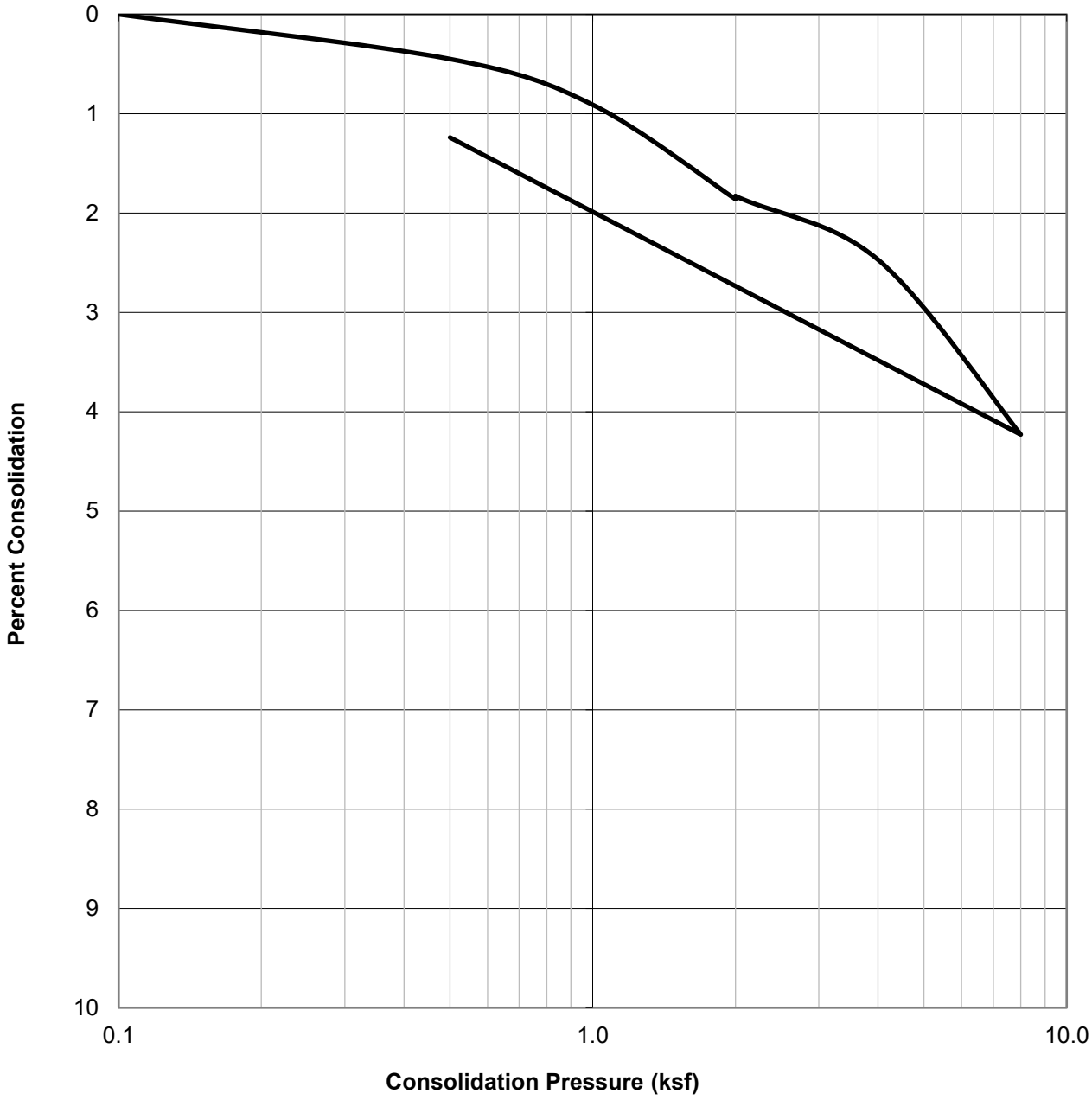
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-14

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@10	Silty SAND (SM), olive gray	98.3	22.3	33.0

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by:

Project No.: T2998-22-01

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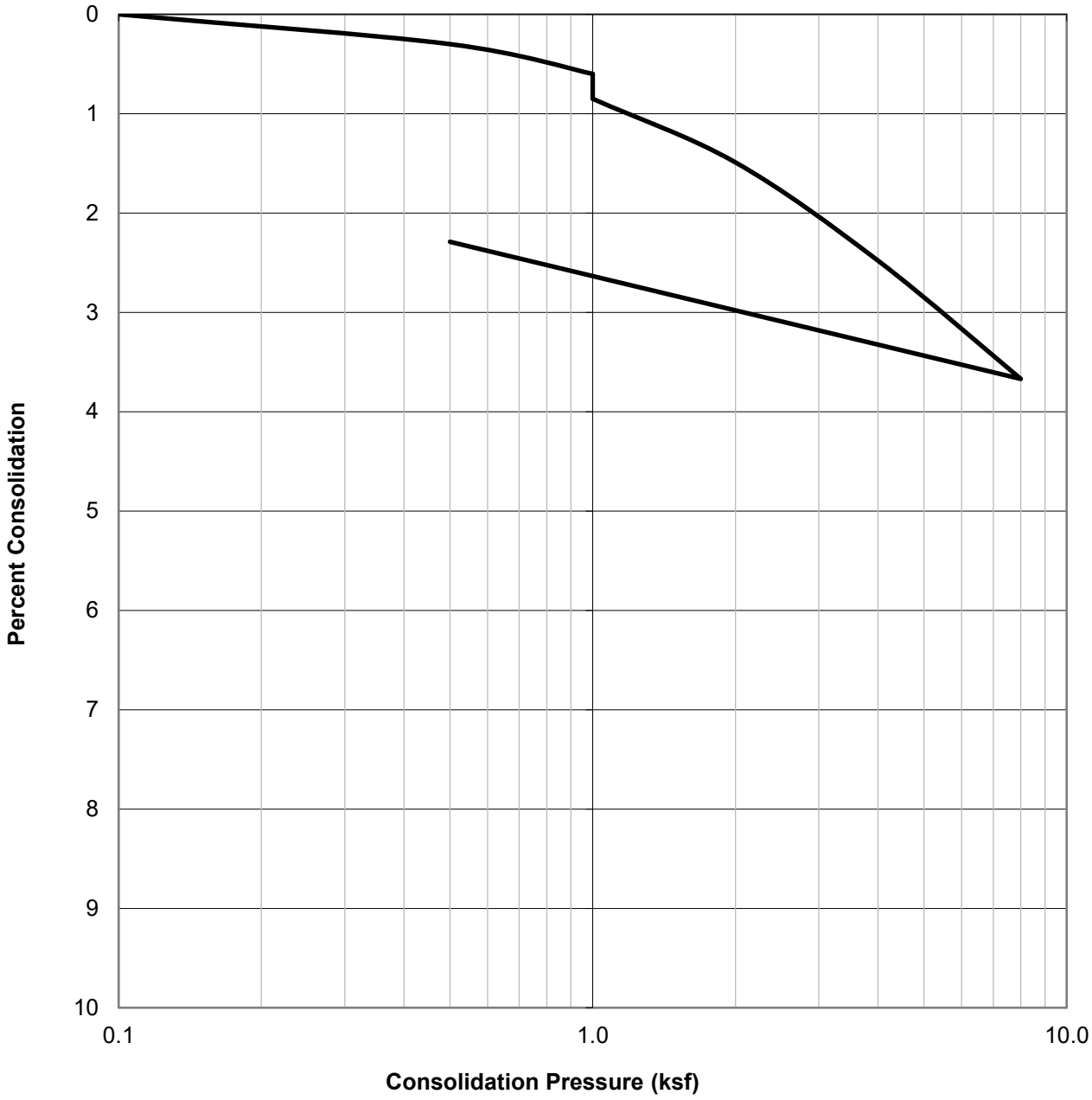
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-15

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@5	Silty SAND (SM), olive gray	105.9	15.1	18.7

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

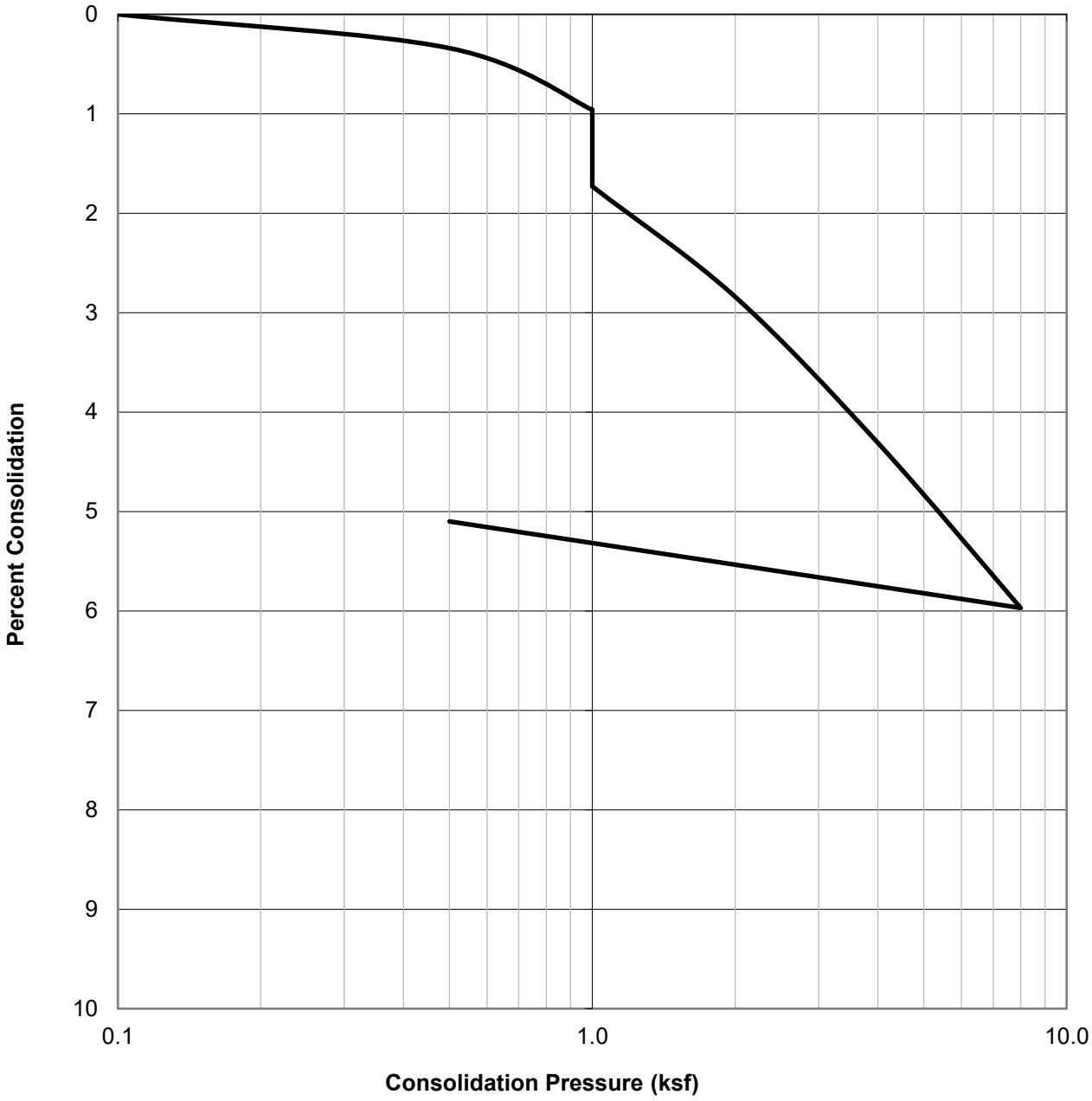
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-16

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@7.5	Silty SAND (SM), olive gray	101.5	9.6	18.9

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

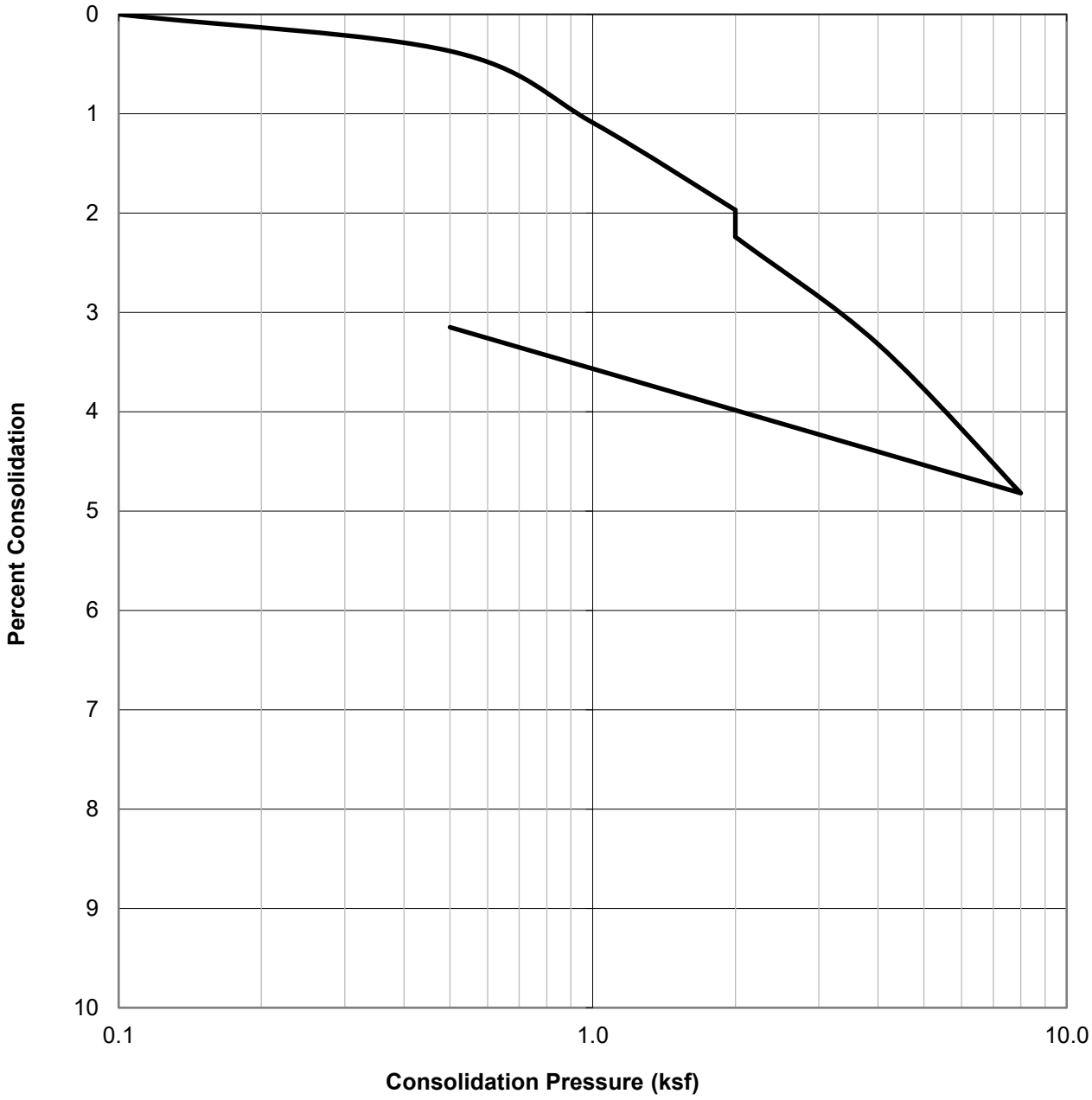
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-17

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@10	Silty SAND (SM), dark olive gray	92.9	19.3	28.3

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

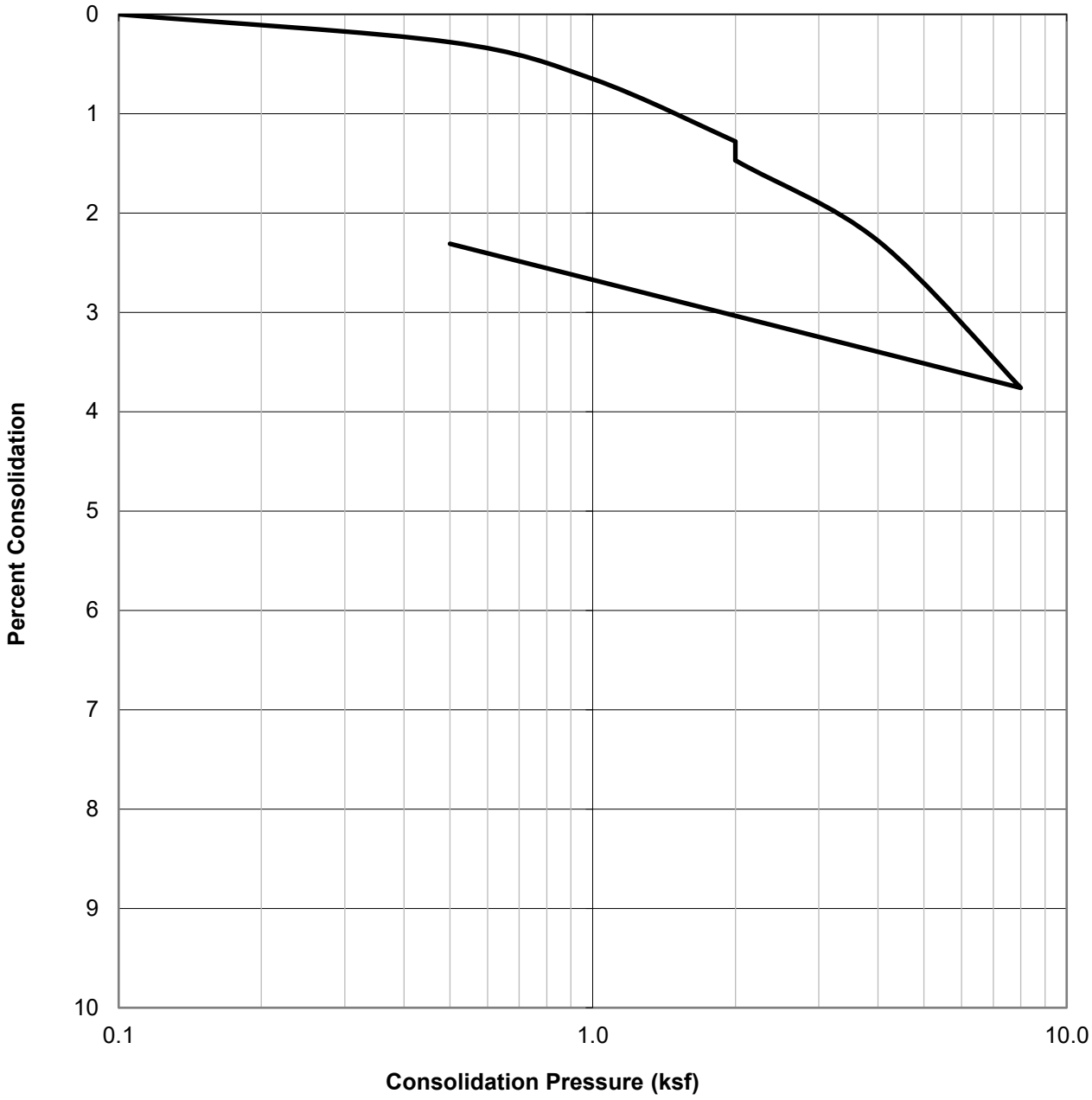
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-18

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@2-7	Silty SAND (SM), dark brown	109.0	9.5	20.9

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

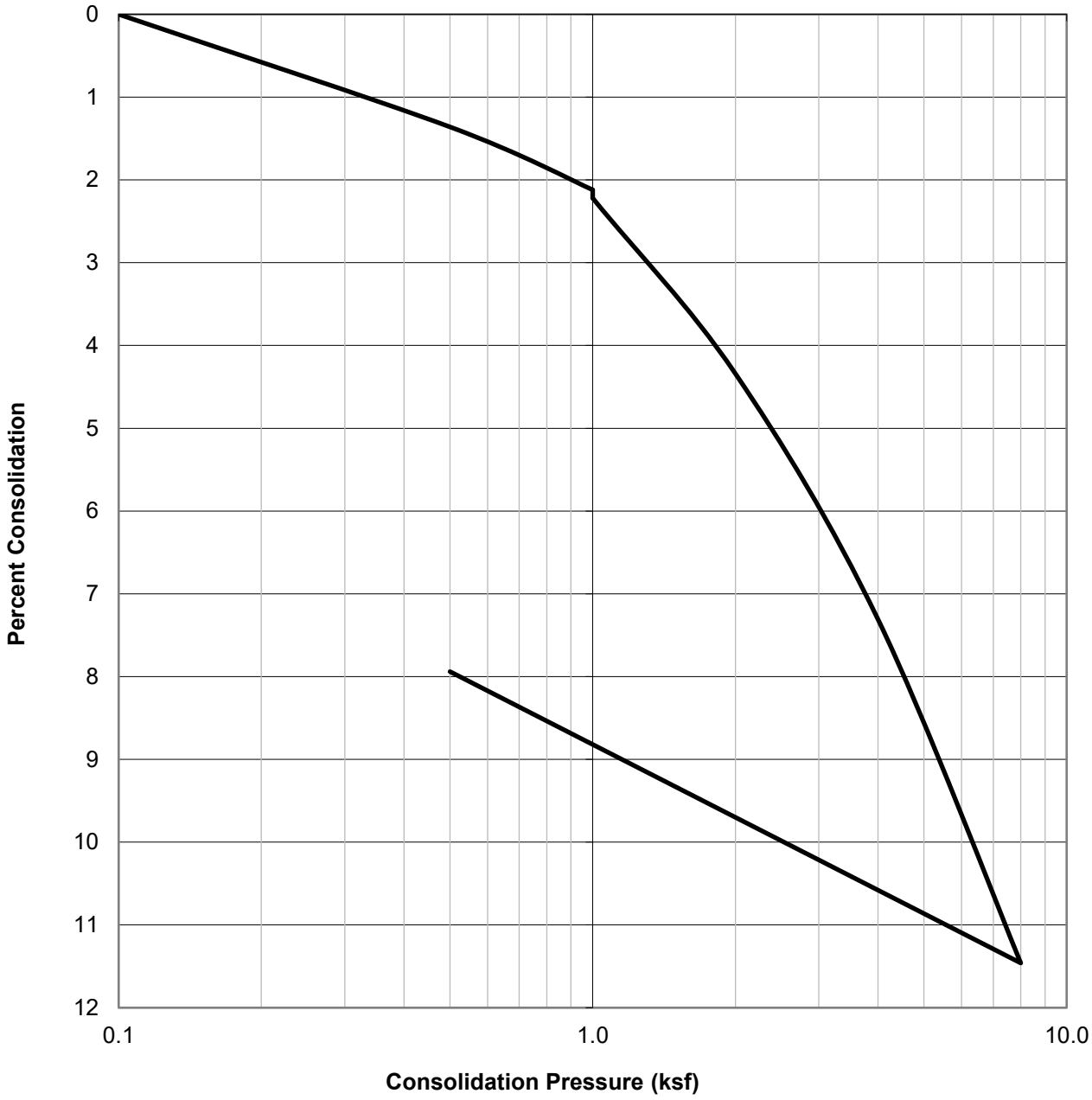
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-19

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@5	Silty SAND (SM), dark olive gray	81.1	38.3	36.9

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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SWC 7TH ST. & CAWSTON AVE.
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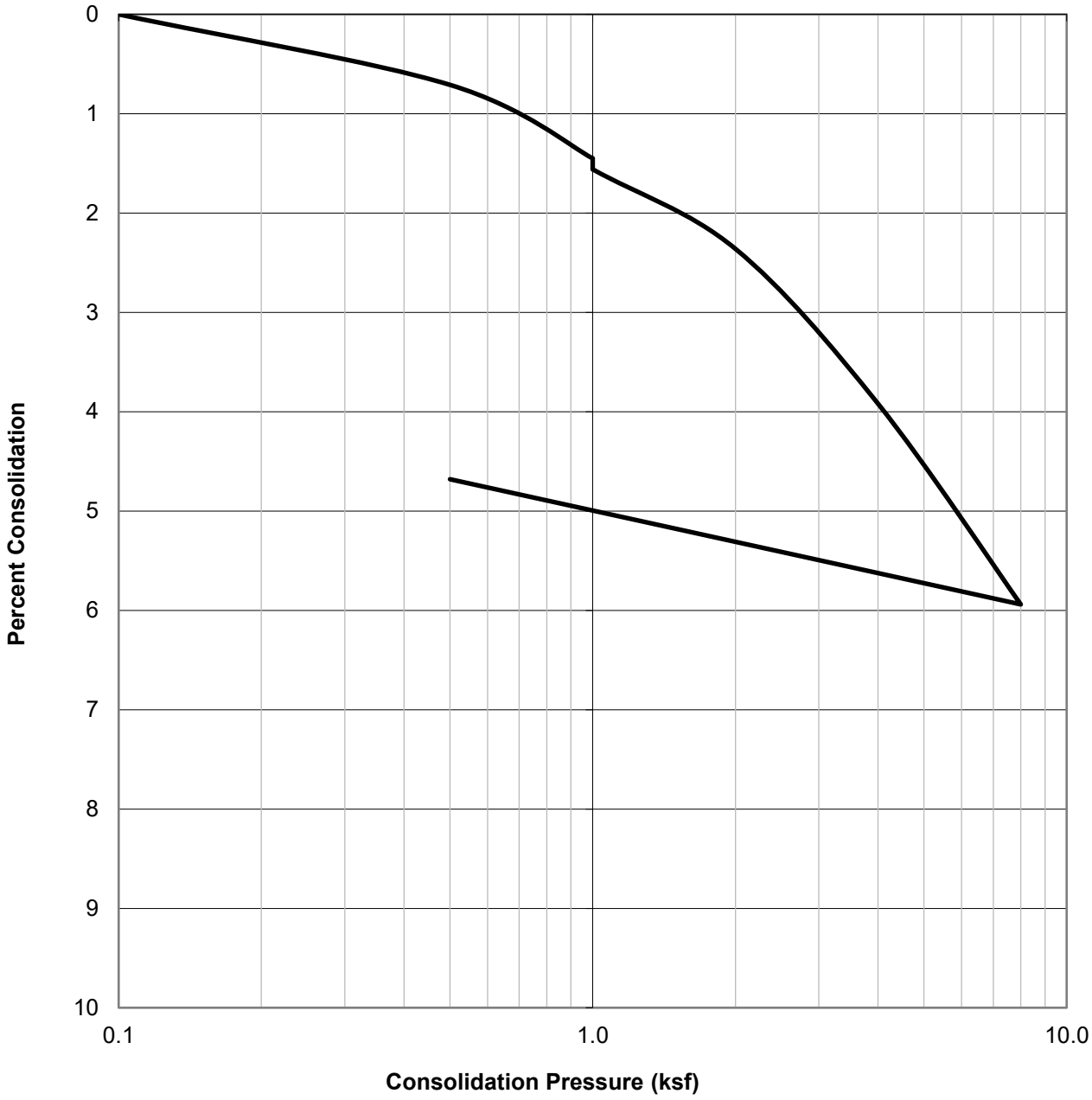
Nov 22 Figure B-20

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@7.5	Silty SAND (SM), olive brown	102.9	19.1	21.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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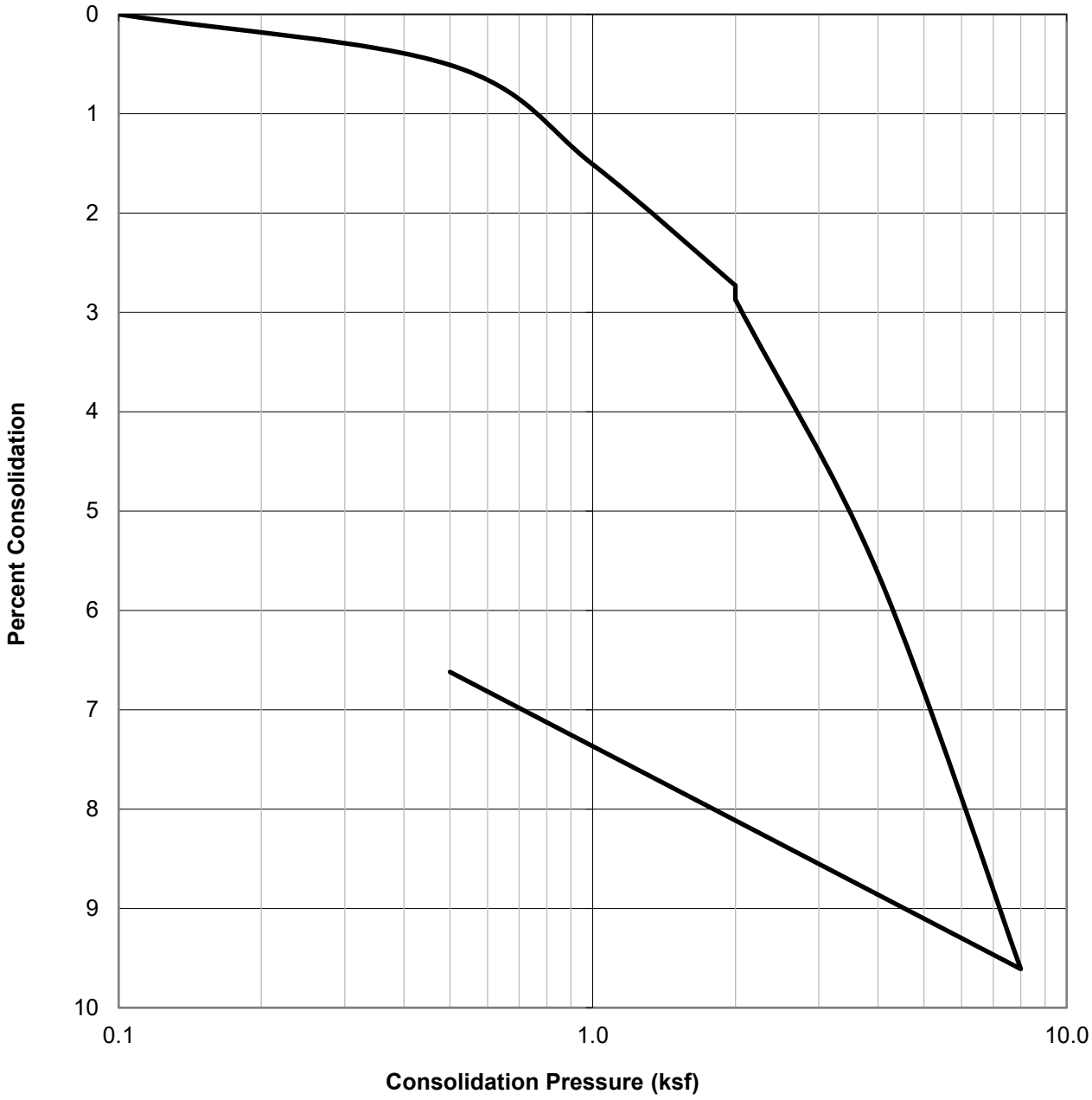
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-21

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@10	CLAY (CL), olive brown	90.5	31.6	29.9

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by:

Project No.: T2998-22-01

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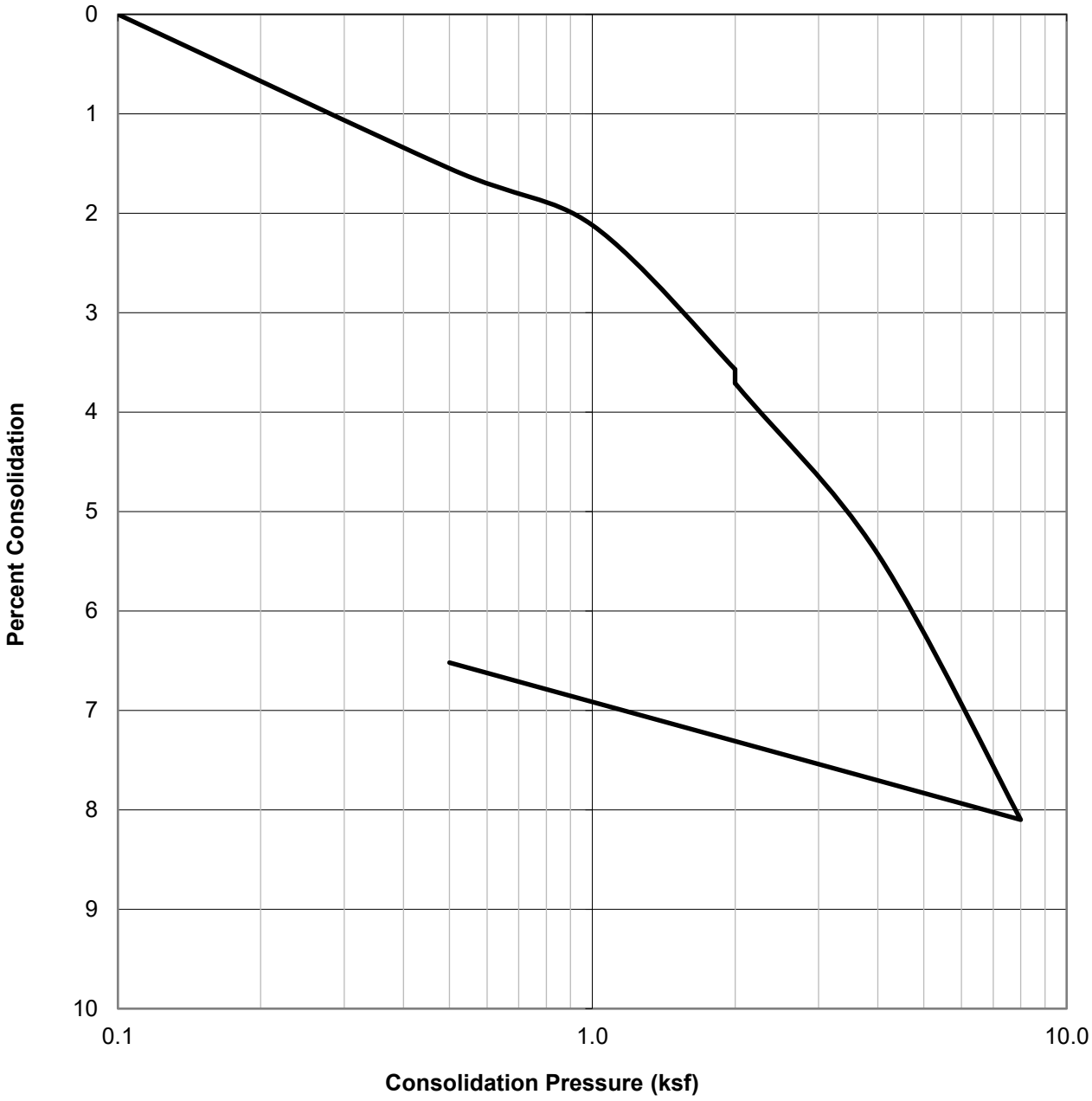
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-22

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@20	Silty SAND (SM), dark olive gray	103.6	21.5	20.6

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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Project No.: T2998-22-01

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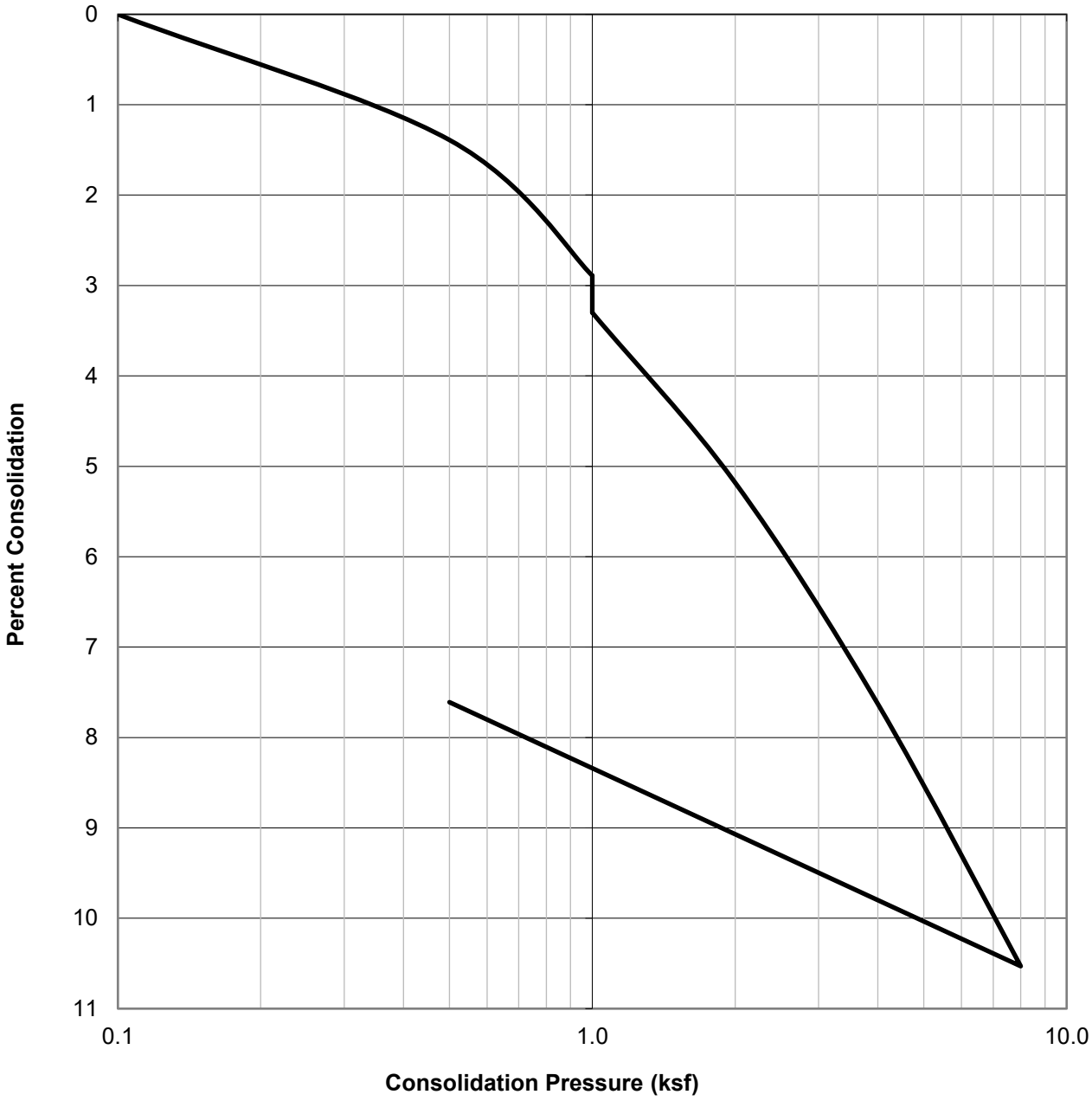
Nov 22 Figure B-23

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@5	Silty SAND (SM), olive brown	79.9	24.1	37.4

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

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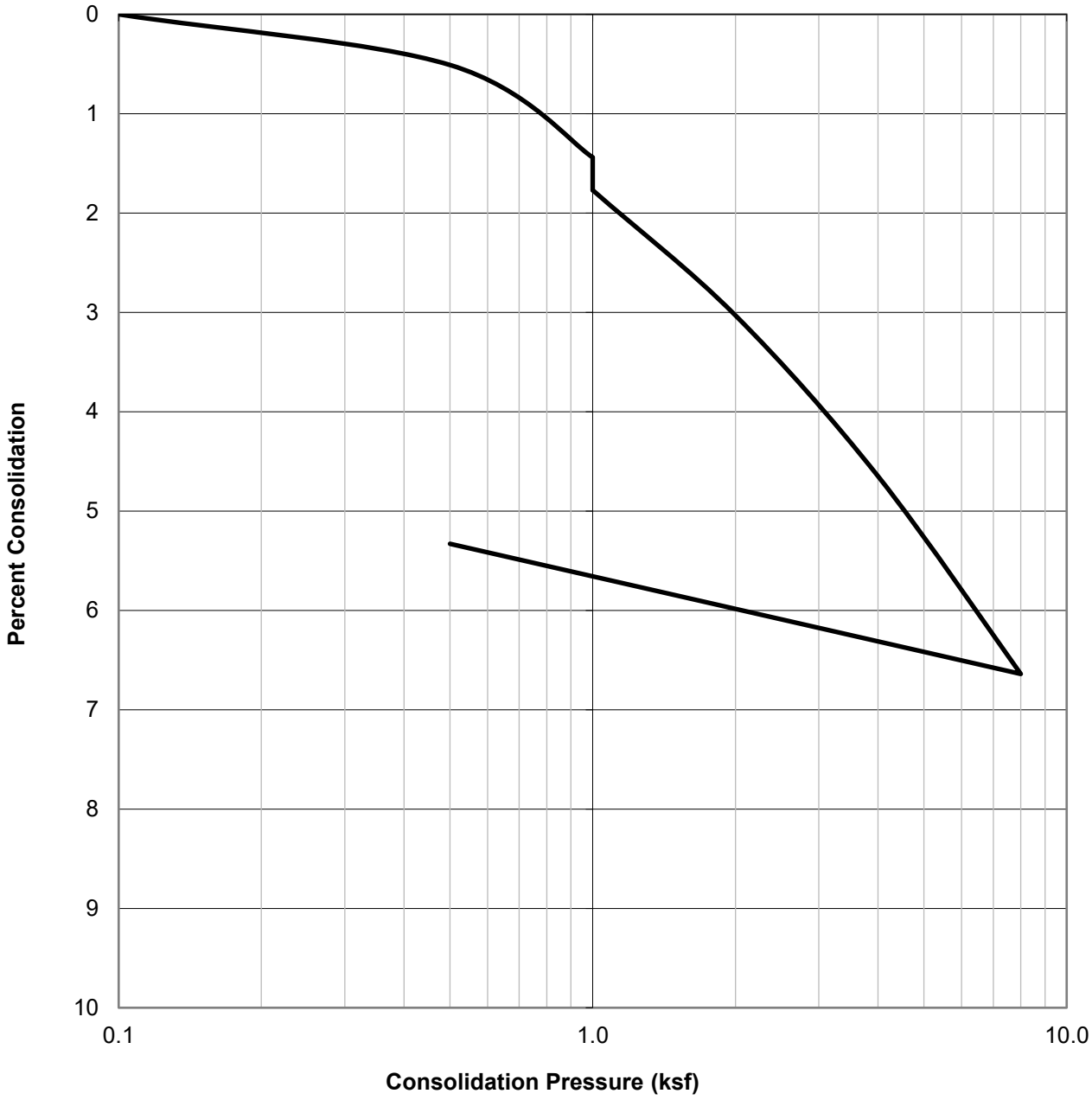
Nov 22

Figure B-24

WATER ADDED AT 1.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@7.5	Silty SAND (SM), dark brown	101.4	19.1	20.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

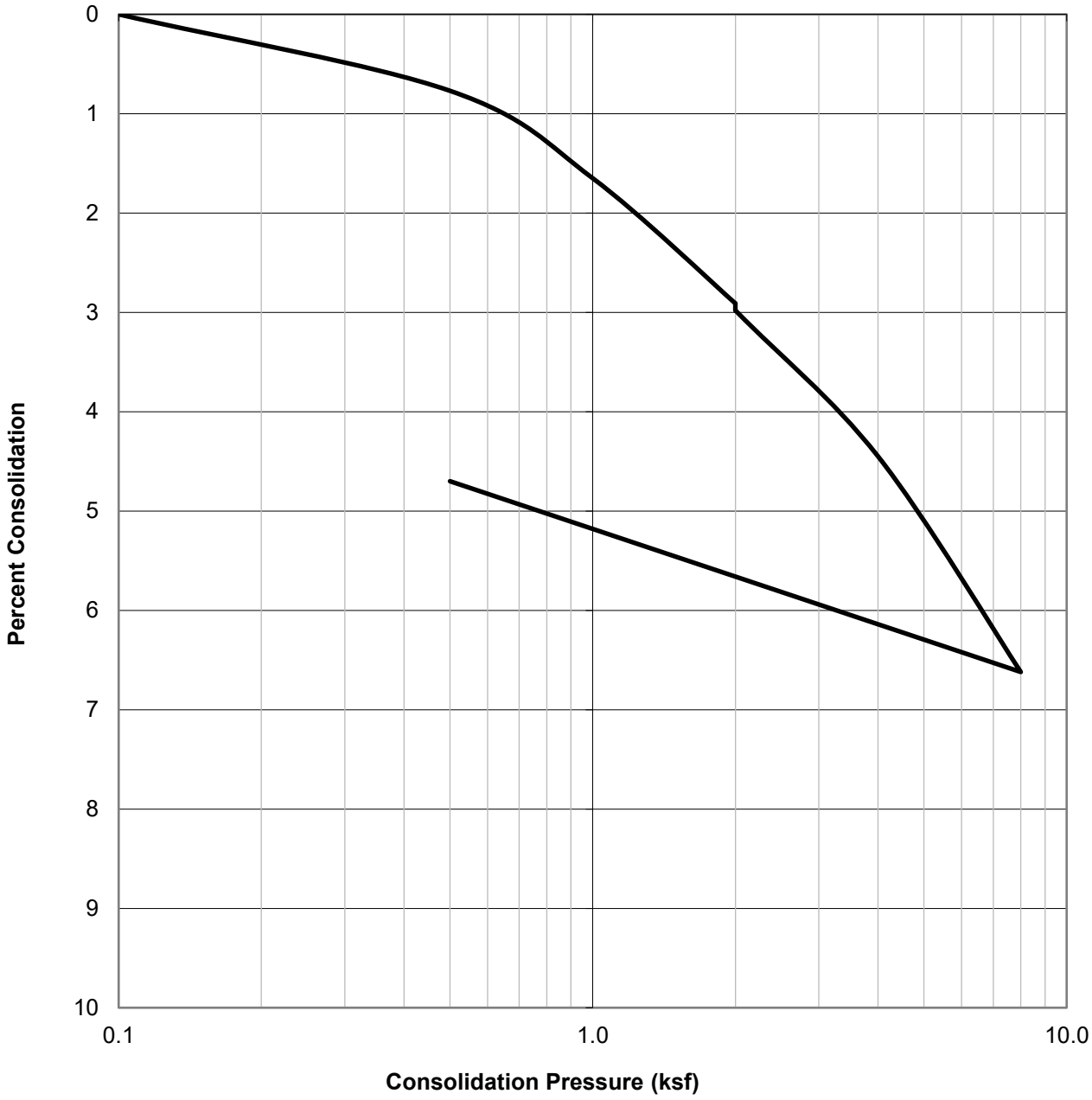
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-25

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@10	Clayey SAND (SC), dark olive brown	92.1	22.3	27.5

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

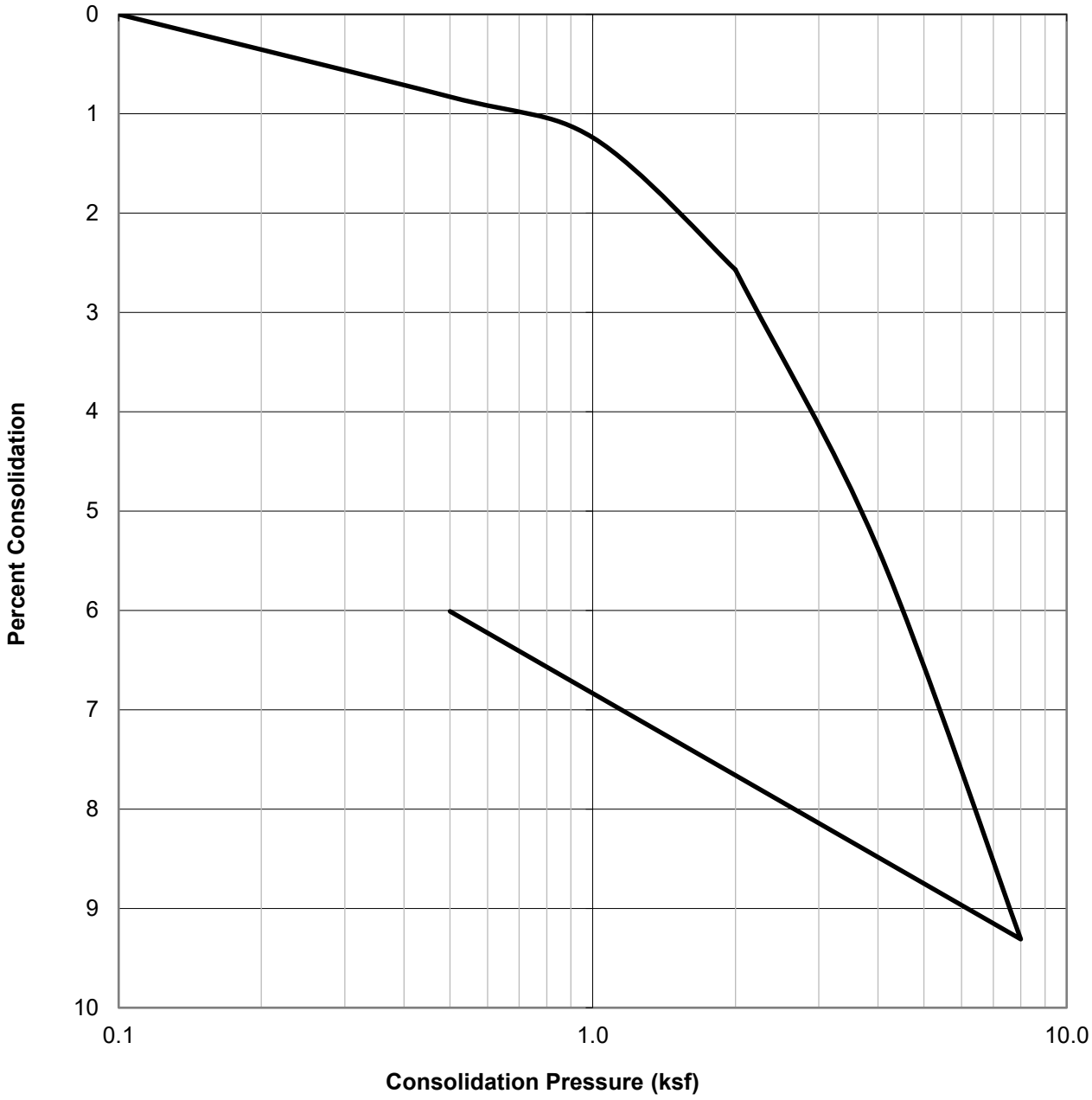
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-26

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@15	Lean CLAY (CL), olive gray	83.9	37.1	35.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

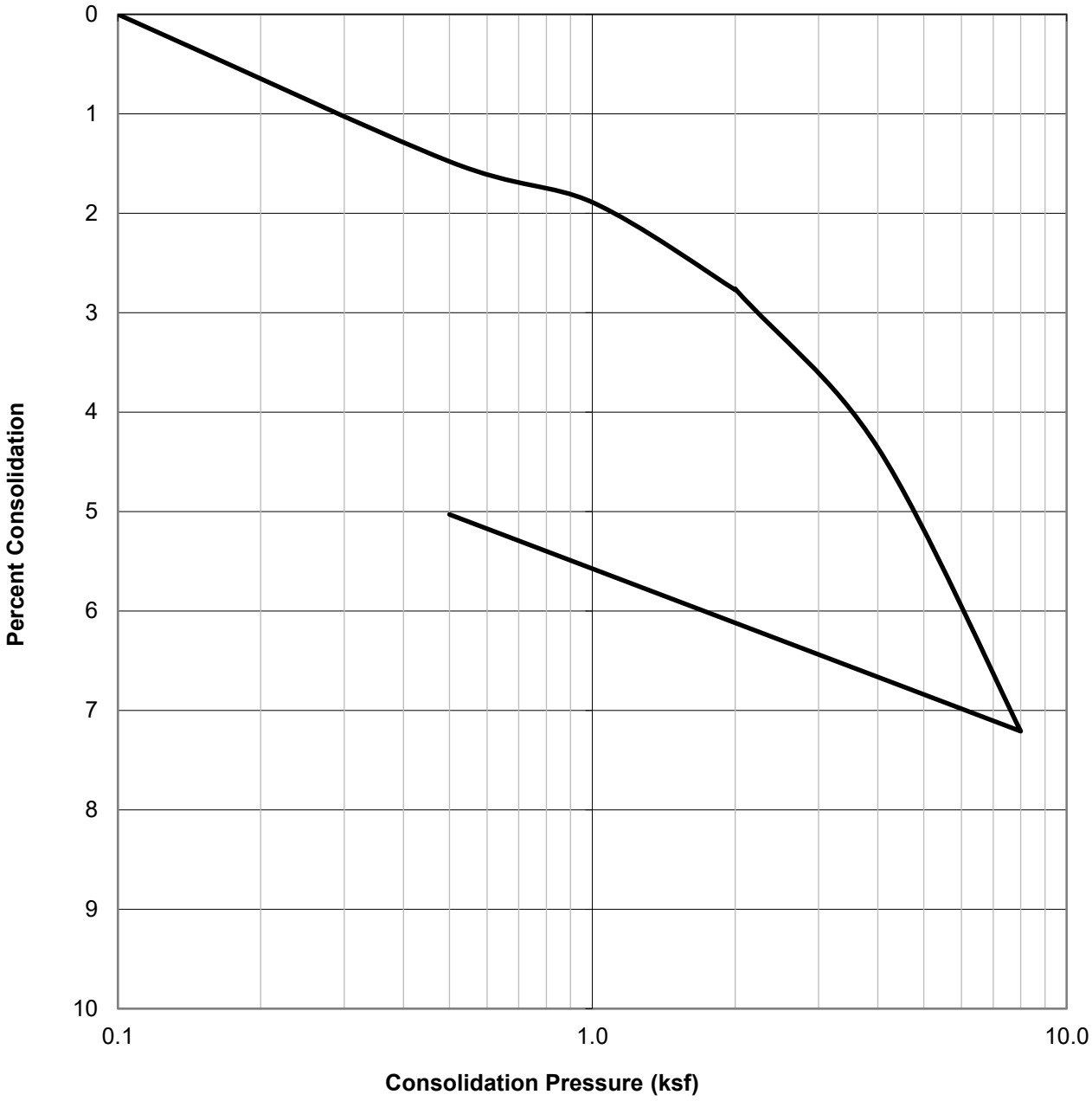
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-27

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@20	Lean CLAY (CL), dark brown	99.7	25.3	26.8

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
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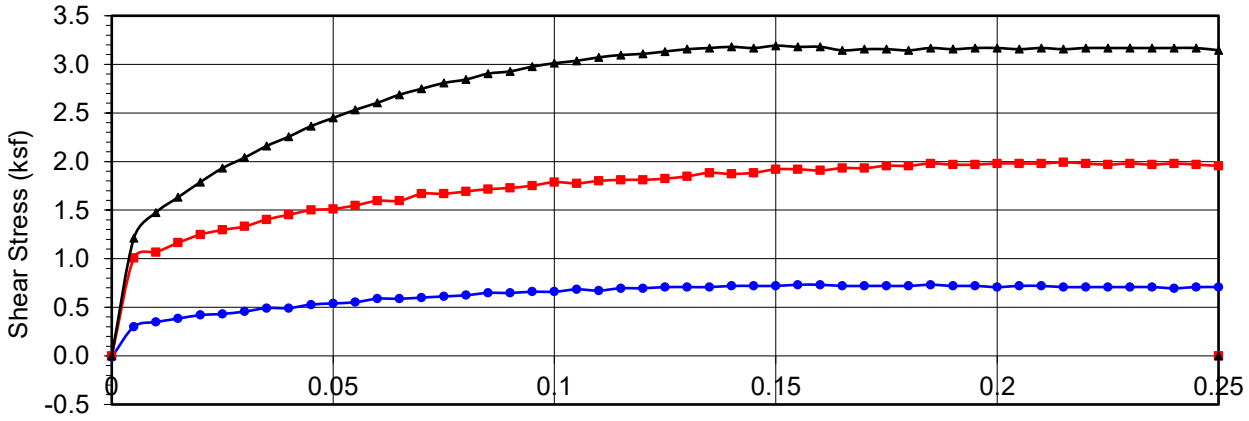
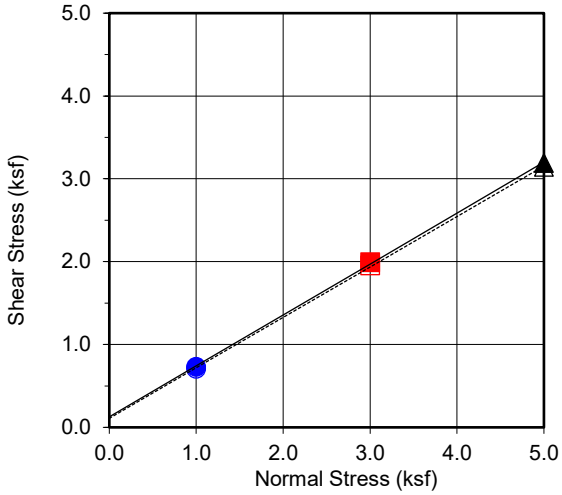
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-28





Boring No.	B2
Sample No.	B2@2.5
Depth (ft)	2.5
Sample Type:	Ring

Soil Identification:		
Silty SAND (SM), light brown		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	127	31.6
Ultimate	109	31.3

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.73	■ 1.99	▲ 3.19
Shear Stress @ End of Test (ksf)	○ 0.71	□ 1.96	△ 3.14
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	12.2	17.8	9.8
Initial Dry Density (pcf)	98.9	101.3	105.6
Initial Degree of Saturation (%)	46.8	72.2	44.5
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	24.2	14.2	21.9

GEOCON

DIRECT SHEAR TEST RESULTS

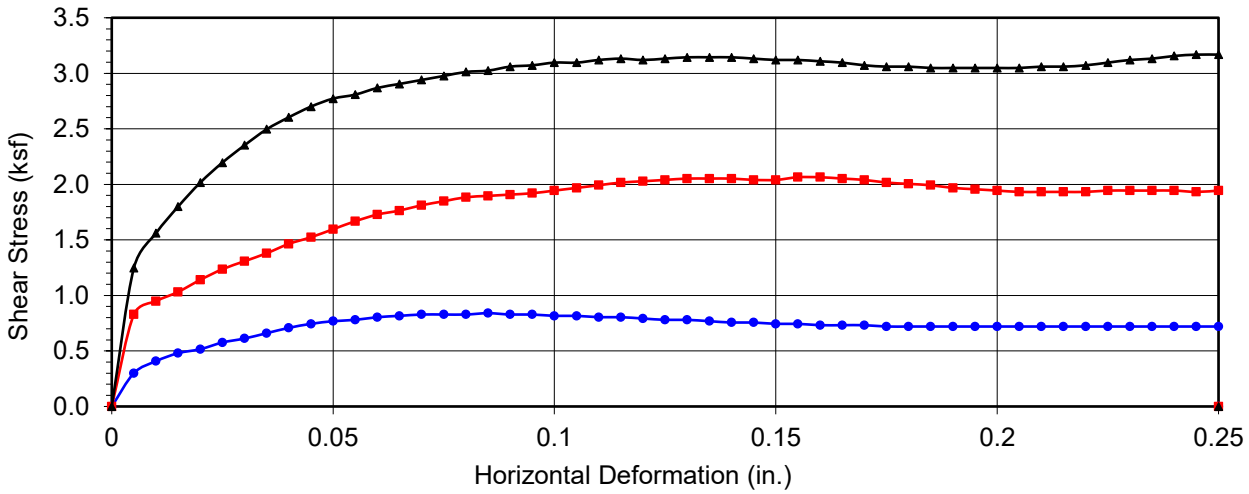
Consolidated Drained ASTM D-3080

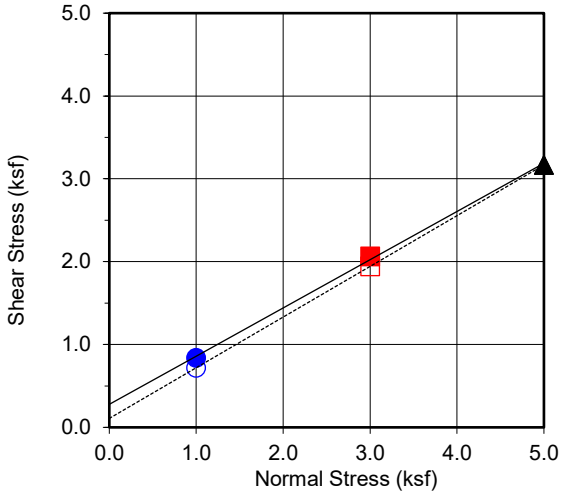
Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-29





Boring No.	B2
Sample No.	B2@2-7
Depth (ft)	**2-7**
Sample Type:	Bulk

Soil Identification:		
Silty SAND (SM), olive gray		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	278	30.2
Ultimate	108	31.5

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.84	■ 2.06	▲ 3.17
Shear Stress @ End of Test (ksf)	○ 0.72	□ 1.94	△ 3.17
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	10.1	10.1	10.1
Initial Dry Density (pcf)	110.1	110.1	110.1
Initial Degree of Saturation (%)	51.3	51.6	51.6
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	17.1	15.3	16.0

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DIRECT SHEAR TEST RESULTS

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Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
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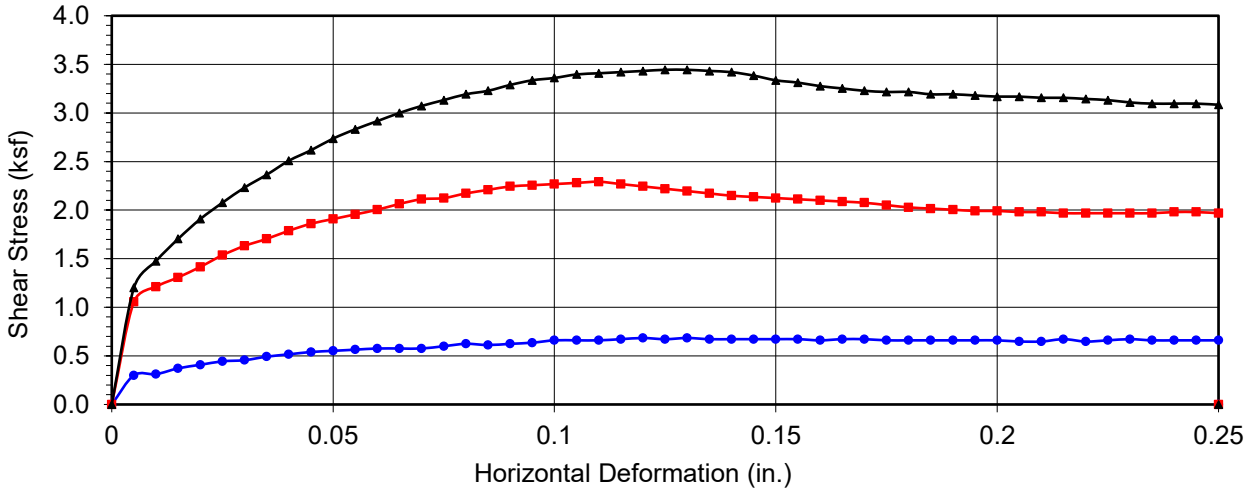
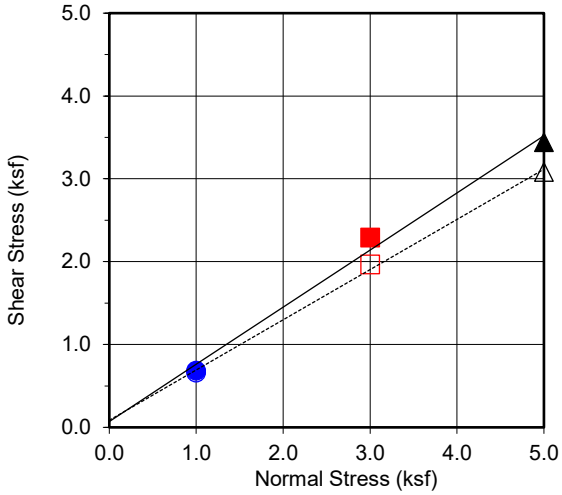
Nov 22 Figure B-30





Boring No.	B3
Sample No.	B3@2.5
Depth (ft)	2.5
Sample Type:	ring

Soil Identification:
Silty SAND (SM), brown

Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	70	34.6
Ultimate	86	31.2

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.68	■ 2.29	▲ 3.44
Shear Stress @ End of Test (ksf)	○ 0.66	□ 1.97	△ 3.08
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	14.9	17.3	15.0
Initial Dry Density (pcf)	97.8	108.0	104.7
Initial Degree of Saturation (%)	55.8	83.1	66.2
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	21.8	19.6	16.8

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DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

Checked by:

Project No.: T2998-22-01

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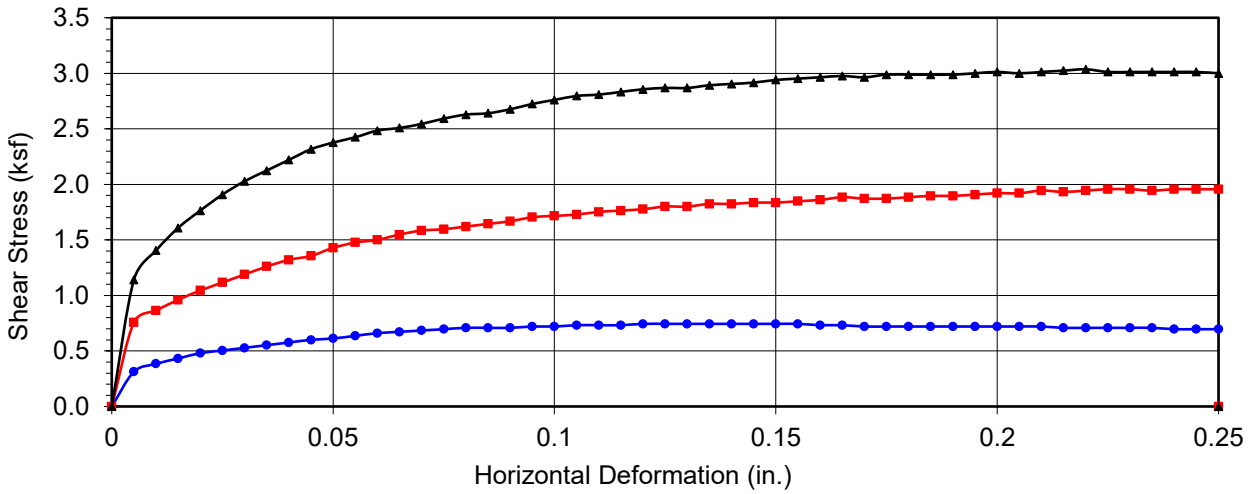
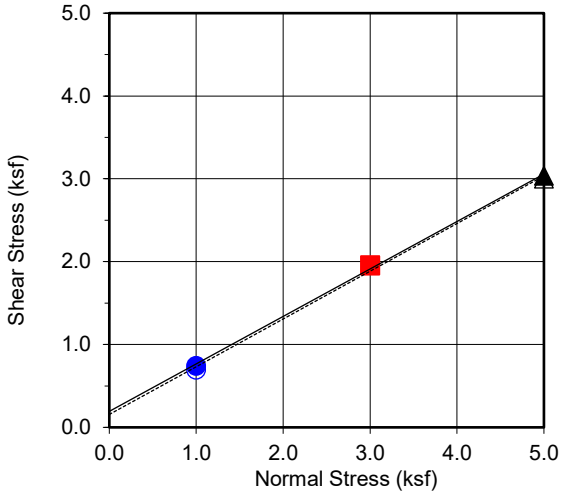
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-31





Boring No.	B4
Sample No.	B4@2-7
Depth (ft)	**2-7**
Sample Type:	Bulk

Soil Identification:		
Silty SAND (SM), dark brown		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	193	29.8
Ultimate	156	29.9

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.74	■ 1.96	▲ 3.04
Shear Stress @ End of Test (ksf)	○ 0.70	□ 1.96	△ 3.00
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	9.1	8.9	8.9
Initial Dry Density (pcf)	109.9	109.9	109.9
Initial Degree of Saturation (%)	45.9	45.1	45.0
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	16.4	15.2	14.9

GEOCON

DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

Checked by:

Project No.: T2998-22-01

RAMONA DAIRY, LLC.
SWC 7TH ST. & CAWSTON AVE.
SAN JACINTO, CALIFORNIA

Nov 22 Figure B-32

APPENDIX C

APPENDIX C

RECOMMENDED GRADING SPECIFICATIONS

FOR

SWC 7TH STREET AND CAWSTON AVENUE
SAN JACINTO, CALIFORNIA

PROJECT NO. T2998-22-01

RECOMMENDED GRADING SPECIFICATIONS

1. GENERAL

1.1 These Recommended Grading Specifications shall be used in conjunction with the Geotechnical Report for the project prepared by Geocon. The recommendations contained in the text of the Geotechnical Report are a part of the earthwork and grading specifications and shall supersede the provisions contained hereinafter in the case of conflict.

1.2 Prior to the commencement of grading, a geotechnical consultant (Consultant) shall be employed for the purpose of observing earthwork procedures and testing the fills for substantial conformance with the recommendations of the Geotechnical Report and these specifications. The Consultant should provide adequate testing and observation services so that they may assess whether, in their opinion, the work was performed in substantial conformance with these specifications. It shall be the responsibility of the Contractor to assist the Consultant and keep them apprised of work schedules and changes so that personnel may be scheduled accordingly.

1.3 It shall be the sole responsibility of the Contractor to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications and the approved grading plans. If, in the opinion of the Consultant, unsatisfactory conditions such as questionable soil materials, poor moisture condition, inadequate compaction, and/or adverse weather result in a quality of work not in conformance with these specifications, the Consultant will be empowered to reject the work and recommend to the Owner that grading be stopped until the unacceptable conditions are corrected.

2. DEFINITIONS

2.1 **Owner** shall refer to the owner of the property or the entity on whose behalf the grading work is being performed and who has contracted with the Contractor to have grading performed.

2.2 **Contractor** shall refer to the Contractor performing the site grading work.

2.3 **Civil Engineer** or **Engineer of Work** shall refer to the California licensed Civil Engineer or consulting firm responsible for preparation of the grading plans, surveying and verifying as-graded topography.

2.4 **Consultant** shall refer to the soil engineering and engineering geology consulting firm retained to provide geotechnical services for the project.

2.5 **Soil Engineer** shall refer to a California licensed Civil Engineer retained by the Owner, who is experienced in the practice of geotechnical engineering. The Soil Engineer shall be responsible for having qualified representatives on-site to observe and test the Contractor's work for conformance with these specifications.

2.6 **Engineering Geologist** shall refer to a California licensed Engineering Geologist retained by the Owner to provide geologic observations and recommendations during the site grading.

2.7 **Geotechnical Report** shall refer to a soil report (including all addenda) which may include a geologic reconnaissance or geologic investigation that was prepared specifically for the development of the project for which these Recommended Grading Specifications are intended to apply.

3. MATERIALS

3.1 Materials for compacted fill shall consist of any soil excavated from the cut areas or imported to the site that, in the opinion of the Consultant, is suitable for use in construction of fills. In general, fill materials can be classified as *soil* fills, *soil-rock* fills or *rock* fills, as defined below.

3.1.1 **Soil fills** are defined as fills containing no rocks or hard lumps greater than 12 inches in maximum dimension and containing at least 40 percent by weight of material smaller than ¾ inch in size.

3.1.2 **Soil-rock fills** are defined as fills containing no rocks or hard lumps larger than 4 feet in maximum dimension and containing a sufficient matrix of soil fill to allow for proper compaction of soil fill around the rock fragments or hard lumps as specified in Paragraph 6.2. **Oversize rock** is defined as material greater than 12 inches.

3.1.3 **Rock fills** are defined as fills containing no rocks or hard lumps larger than 3 feet in maximum dimension and containing little or no fines. Fines are defined as material smaller than ¾ inch in maximum dimension. The quantity of fines shall be less than approximately 20 percent of the rock fill quantity.

3.2 Material of a perishable, spongy, or otherwise unsuitable nature as determined by the Consultant shall not be used in fills.

3.3 Materials used for fill, either imported or on-site, shall not contain hazardous materials as defined by the California Code of Regulations, Title 22, Division 4, Chapter 30, Articles 9

and 10; 40CFR; and any other applicable local, state or federal laws. The Consultant shall not be responsible for the identification or analysis of the potential presence of hazardous materials. However, if observations, odors or soil discoloration cause Consultant to suspect the presence of hazardous materials, the Consultant may request from the Owner the termination of grading operations within the affected area. Prior to resuming grading operations, the Owner shall provide a written report to the Consultant indicating that the suspected materials are not hazardous as defined by applicable laws and regulations.

3.4 The outer 15 feet of *soil-rock* fill slopes, measured horizontally, should be composed of properly compacted *soil* fill materials approved by the Consultant. *Rock* fill may extend to the slope face, provided that the slope is not steeper than 2:1 (horizontal:vertical) and a soil layer no thicker than 12 inches is track-walked onto the face for landscaping purposes. This procedure may be utilized provided it is acceptable to the governing agency, Owner and Consultant.

3.5 Samples of soil materials to be used for fill should be tested in the laboratory by the Consultant to determine the maximum density, optimum moisture content, and, where appropriate, shear strength, expansion, and gradation characteristics of the soil.

3.6 During grading, soil or groundwater conditions other than those identified in the Geotechnical Report may be encountered by the Contractor. The Consultant shall be notified immediately to evaluate the significance of the unanticipated condition

4. CLEARING AND PREPARING AREAS TO BE FILLED

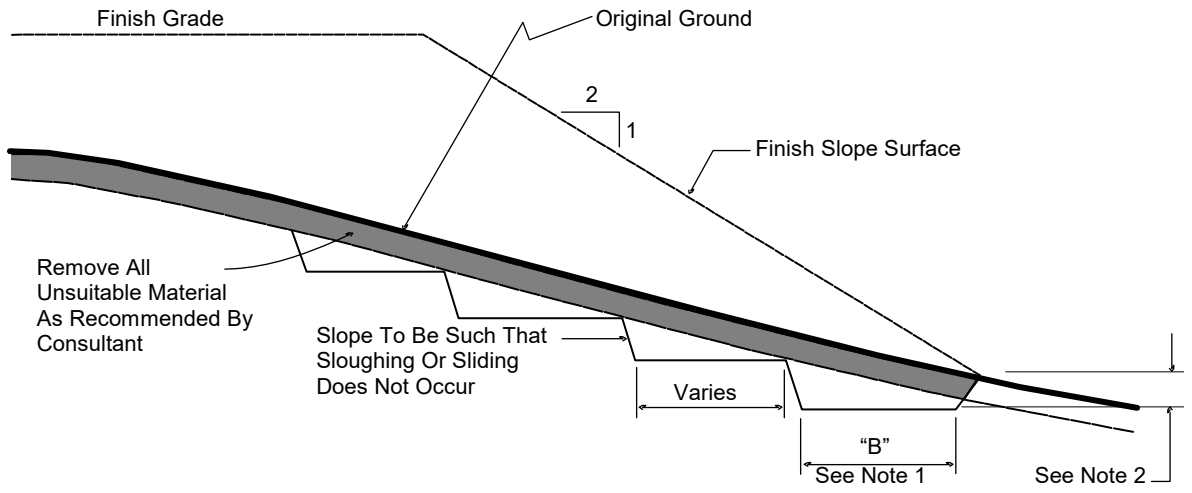
4.1 Areas to be excavated and filled shall be cleared and grubbed. Clearing shall consist of complete removal above the ground surface of trees, stumps, brush, vegetation, man-made structures, and similar debris. Grubbing shall consist of removal of stumps, roots, buried logs and other unsuitable material and shall be performed in areas to be graded. Roots and other projections exceeding 1½ inches in diameter shall be removed to a depth of 3 feet below the surface of the ground. Borrow areas shall be grubbed to the extent necessary to provide suitable fill materials.

4.2 Asphalt pavement material removed during clearing operations should be properly disposed at an approved off-site facility or in an acceptable area of the project evaluated by Geocon and the property owner. Concrete fragments that are free of reinforcing steel may be placed in fills, provided they are placed in accordance with Section 6.2 or 6.3 of this document.

4.3 After clearing and grubbing of organic matter and other unsuitable material, loose or porous soils shall be removed to the depth recommended in the Geotechnical Report. The depth of removal and compaction should be observed and approved by a representative of the Consultant. The exposed surface shall then be plowed or scarified to a minimum depth of 6 inches and until the surface is free from uneven features that would tend to prevent uniform compaction by the equipment to be used.

4.4 Where the slope ratio of the original ground is steeper than 5:1 (horizontal:vertical), or where recommended by the Consultant, the original ground should be benched in accordance with the following illustration.

TYPICAL BENCHING DETAIL



No Scale

DETAIL NOTES: (1) Key width "B" should be a minimum of 10 feet, or sufficiently wide to permit complete coverage with the compaction equipment used. The base of the key should be graded horizontal, or inclined slightly into the natural slope.

(2) The outside of the key should be below the topsoil or unsuitable surficial material and at least 2 feet into dense formational material. Where hard rock is exposed in the bottom of the key, the depth and configuration of the key may be modified as approved by the Consultant.

4.5 After areas to receive fill have been cleared and scarified, the surface should be moisture conditioned to achieve the proper moisture content, and compacted as recommended in Section 6 of these specifications.

5. COMPACTION EQUIPMENT

5.1 Compaction of *soil* or *soil-rock* fill shall be accomplished by sheepsfoot or segmented-steel wheeled rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers, or other types of acceptable compaction equipment. Equipment shall be of such a design that it will be capable of compacting the *soil* or *soil-rock* fill to the specified relative compaction at the specified moisture content.

5.2 Compaction of *rock* fills shall be performed in accordance with Section 6.3.

6. PLACING, SPREADING AND COMPACTION OF FILL MATERIAL

6.1 *Soil* fill, as defined in Paragraph 3.1.1, shall be placed by the Contractor in accordance with the following recommendations:

6.1.1 *Soil* fill shall be placed by the Contractor in layers that, when compacted, should generally not exceed 8 inches. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to obtain uniformity of material and moisture in each layer. The entire fill shall be constructed as a unit in nearly level lifts. Rock materials greater than 12 inches in maximum dimension shall be placed in accordance with Section 6.2 or 6.3 of these specifications.

6.1.2 In general, the *soil* fill shall be compacted at a moisture content at or above the optimum moisture content as determined by ASTM D 1557.

6.1.3 When the moisture content of *soil* fill is below that specified by the Consultant, water shall be added by the Contractor until the moisture content is in the range specified.

6.1.4 When the moisture content of the *soil* fill is above the range specified by the Consultant or too wet to achieve proper compaction, the *soil* fill shall be aerated by the Contractor by blading/mixing, or other satisfactory methods until the moisture content is within the range specified.

6.1.5 After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted by the Contractor to a relative compaction of at least 90 percent. Relative compaction is defined as the ratio (expressed in percent) of the in-place dry density of the compacted fill to the maximum laboratory dry density as determined in accordance with ASTM D 1557. Compaction shall be continuous over the entire area, and compaction equipment shall make sufficient passes so that the specified minimum relative compaction has been achieved throughout the entire fill.

6.1.6 Where practical, soils having an Expansion Index greater than 50 should be placed at least 3 feet below finish pad grade and should be compacted at a moisture content generally 2 to 4 percent greater than the optimum moisture content for the material.

6.1.7 Properly compacted *soil* fill shall extend to the design surface of fill slopes. To achieve proper compaction, it is recommended that fill slopes be over-built by at least 3 feet and then cut to the design grade. This procedure is considered preferable to track-walking of slopes, as described in the following paragraph.

6.1.8 As an alternative to over-building of slopes, slope faces may be back-rolled with a heavy-duty loaded sheepsfoot or vibratory roller at maximum 4-foot fill height intervals. Upon completion, slopes should then be track-walked with a D-8 dozer or similar equipment, such that a dozer track covers all slope surfaces at least twice.

6.2 *Soil-rock* fill, as defined in Paragraph 3.1.2, shall be placed by the Contractor in accordance with the following recommendations:

6.2.1 Rocks larger than 12 inches but less than 4 feet in maximum dimension may be incorporated into the compacted *soil* fill, but shall be limited to the area measured 15 feet minimum horizontally from the slope face and 5 feet below finish grade or 3 feet below the deepest utility, whichever is deeper.

6.2.2 Rocks or rock fragments up to 4 feet in maximum dimension may either be individually placed or placed in windrows. Under certain conditions, rocks or rock fragments up to 10 feet in maximum dimension may be placed using similar methods. The acceptability of placing rock materials greater than 4 feet in maximum dimension shall be evaluated during grading as specific cases arise and shall be approved by the Consultant prior to placement.

6.2.3 For individual placement, sufficient space shall be provided between rocks to allow for passage of compaction equipment.

6.2.4 For windrow placement, the rocks should be placed in trenches excavated in properly compacted *soil* fill. Trenches should be approximately 5 feet wide and 4 feet deep in maximum dimension. The voids around and beneath rocks should be filled with approved granular soil having a Sand Equivalent of 30 or greater and should be compacted by flooding. Windrows may also be placed utilizing an "open-face" method in lieu of the trench procedure, however, this method should first be approved by the Consultant.

6.2.5 Windrows should generally be parallel to each other and may be placed either parallel to or perpendicular to the face of the slope depending on the site geometry. The minimum horizontal spacing for windrows shall be 12 feet center-to-center with a 5-foot stagger or offset from lower courses to next overlying course. The minimum vertical spacing between windrow courses shall be 2 feet from the top of a lower windrow to the bottom of the next higher windrow.

6.2.6 Rock placement, fill placement and flooding of approved granular soil in the windrows should be continuously observed by the Consultant.

6.3 *Rock* fills, as defined in Section 3.1.3, shall be placed by the Contractor in accordance with the following recommendations:

6.3.1 The base of the *rock* fill shall be placed on a sloping surface (minimum slope of 2 percent). The surface shall slope toward suitable subdrainage outlet facilities. The *rock* fills shall be provided with subdrains during construction so that a hydrostatic pressure buildup does not develop. The subdrains shall be permanently connected to controlled drainage facilities to control post-construction infiltration of water.

6.3.2 *Rock* fills shall be placed in lifts not exceeding 3 feet. Placement shall be by rock trucks traversing previously placed lifts and dumping at the edge of the currently placed lift. Spreading of the *rock* fill shall be by dozer to facilitate *seating* of the rock. The *rock* fill shall be watered heavily during placement. Watering shall consist of water trucks traversing in front of the current rock lift face and spraying water continuously during rock placement. Compaction equipment with compactive energy comparable to or greater than that of a 20-ton steel vibratory roller or other compaction equipment providing suitable energy to achieve the required compaction or deflection as recommended in Paragraph 6.3.3 shall be utilized. The number of passes to be made should be determined as described in Paragraph 6.3.3. Once a *rock* fill lift has been covered with *soil* fill, no additional *rock* fill lifts will be permitted over the *soil* fill.

6.3.3 Plate bearing tests, in accordance with ASTM D 1196, may be performed in both the compacted *soil* fill and in the *rock* fill to aid in determining the required minimum number of passes of the compaction equipment. If performed, a minimum of three plate bearing tests should be performed in the properly compacted *soil* fill (minimum relative compaction of 90 percent). Plate bearing tests shall then be performed on areas of *rock* fill having two passes, four passes and six passes of the compaction equipment, respectively. The number of passes required for the *rock* fill shall be determined by comparing the results of the plate bearing tests for the *soil* fill and the *rock* fill and by evaluating the deflection

variation with number of passes. The required number of passes of the compaction equipment will be performed as necessary until the plate bearing deflections are equal to or less than that determined for the properly compacted *soil* fill. In no case will the required number of passes be less than two.

6.3.4 A representative of the Consultant should be present during *rock* fill operations to observe that the minimum number of "passes" have been obtained, that water is being properly applied and that specified procedures are being followed. The actual number of plate bearing tests will be determined by the Consultant during grading.

6.3.5 Test pits shall be excavated by the Contractor so that the Consultant can state that, in their opinion, sufficient water is present and that voids between large rocks are properly filled with smaller rock material. In-place density testing will not be required in the *rock* fills.

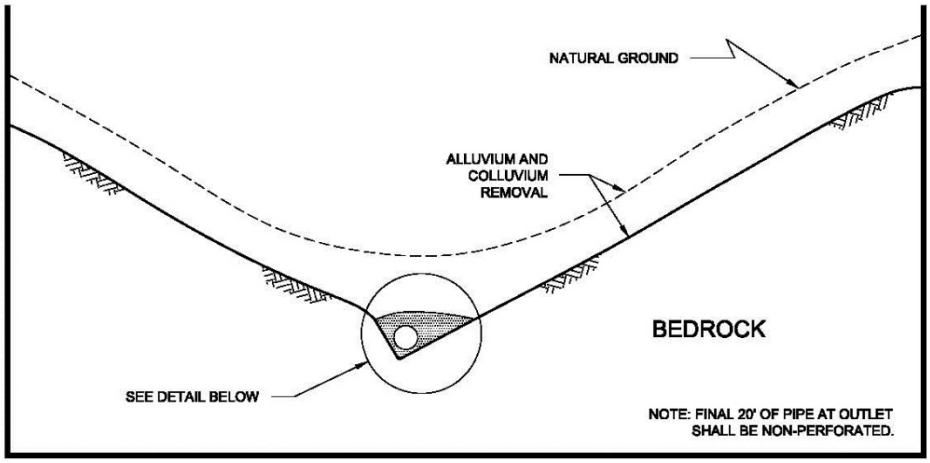
6.3.6 To reduce the potential for "piping" of fines into the *rock* fill from overlying *soil* fill material, a 2-foot layer of graded filter material shall be placed above the uppermost lift of *rock* fill. The need to place graded filter material below the *rock* should be determined by the Consultant prior to commencing grading. The gradation of the graded filter material will be determined at the time the *rock* fill is being excavated. Materials typical of the *rock* fill should be submitted to the Consultant in a timely manner, to allow design of the graded filter prior to the commencement of *rock* fill placement.

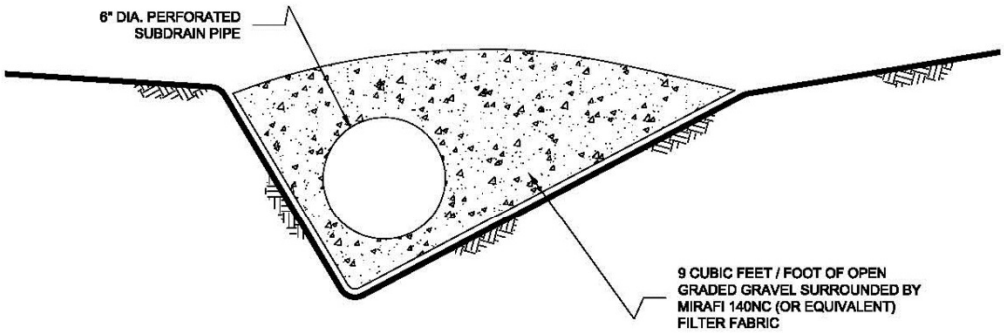
6.3.7 *Rock* fill placement should be continuously observed during placement by the Consultant.

7. SUBDRAINS

7.1 The geologic units on the site may have permeability characteristics and/or fracture systems that could be susceptible under certain conditions to seepage. The use of canyon subdrains may be necessary to mitigate the potential for adverse impacts associated with seepage conditions. Canyon subdrains with lengths in excess of 500 feet or extensions of existing offsite subdrains should use 8-inch-diameter pipes. Canyon subdrains less than 500 feet in length should use 6-inch-diameter pipes.

TYPICAL CANYON DRAIN DETAIL





NOTES:

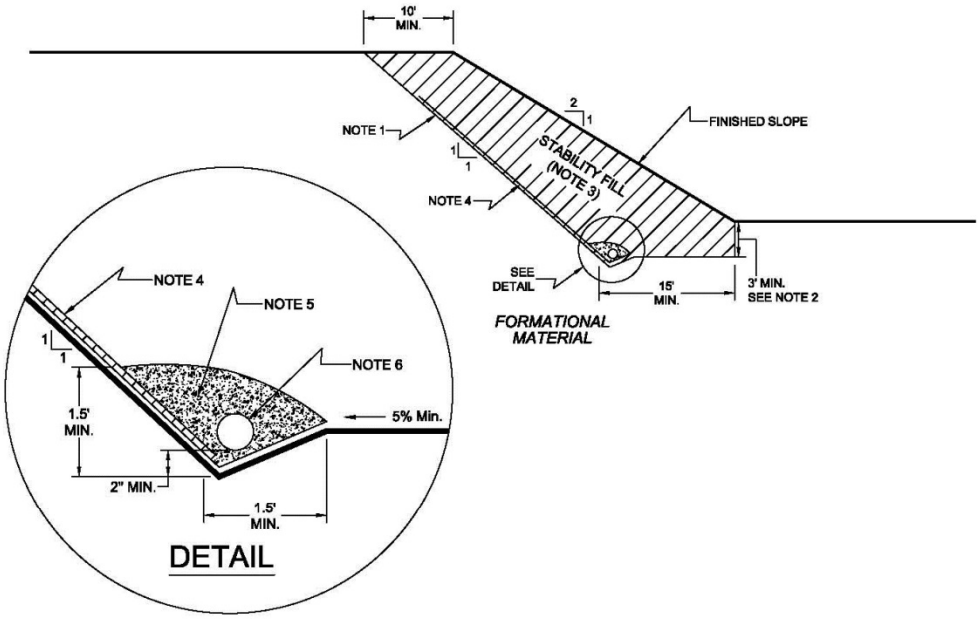
1.....6-INCH DIAMETER, SCHEDULE 80 PVC PERFORATED PIPE FOR FILLS
IN EXCESS OF 100-FEET IN DEPTH OR A PIPE LENGTH OF LONGER THAN 500 FEET.

2.....6-INCH DIAMETER, SCHEDULE 40 PVC PERFORATED PIPE FOR FILLS
LESS THAN 100-FEET IN DEPTH OR A PIPE LENGTH SHORTER THAN 500 FEET.

NO SCALE

7.2 Slope drains within stability fill keyways should use 4-inch-diameter (or lager) pipes.

TYPICAL STABILITY FILL DETAIL



NOTES:

1.....EXCAVATE BACKCUT AT 1:1 INCLINATION (UNLESS OTHERWISE NOTED).

2.....BASE OF STABILITY FILL TO BE 3 FEET INTO FORMATIONAL MATERIAL, SLOPING A MINIMUM 5% INTO SLOPE.

3.....STABILITY FILL TO BE COMPOSED OF PROPERLY COMPACTED GRANULAR SOIL.

4.....CHIMNEY DRAINS TO BE APPROVED PREFABRICATED CHIMNEY DRAIN PANELS (MIRADRAIN G200N OR EQUIVALENT) SPACED APPROXIMATELY 20 FEET CENTER TO CENTER AND 4 FEET WIDE. CLOSER SPACING MAY BE REQUIRED IF SEEPAGE IS ENCOUNTERED.

5.....FILTER MATERIAL TO BE 3/4-INCH, OPEN-GRADED CRUSHED ROCK ENCLOSED IN APPROVED FILTER FABRIC (MIRAFI 140NC).

6.....COLLECTOR PIPE TO BE 4-INCH MINIMUM DIAMETER, PERFORATED, THICK-WALLED PVC SCHEDULE 40 OR EQUIVALENT, AND SLOPED TO DRAIN AT 1 PERCENT MINIMUM TO APPROVED OUTLET.

NO SCALE

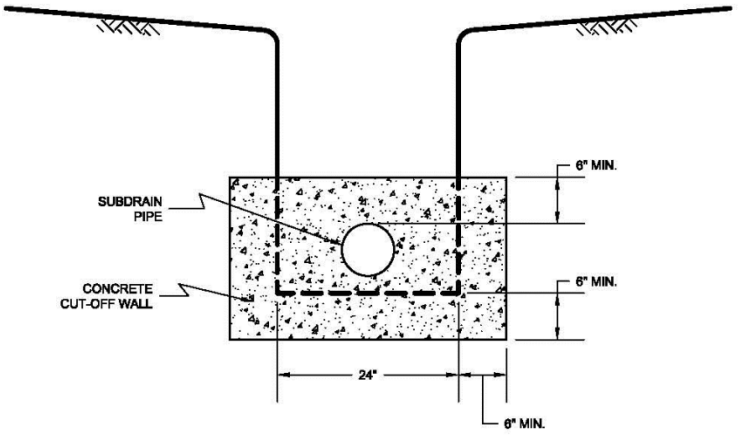
7.3 The actual subdrain locations will be evaluated in the field during the remedial grading operations. Additional drains may be necessary depending on the conditions observed and the requirements of the local regulatory agencies. Appropriate subdrain outlets should be evaluated prior to finalizing 40-scale grading plans.

7.4 *Rock* fill or *soil-rock* fill areas may require subdrains along their down-slope perimeters to mitigate the potential for buildup of water from construction or landscape irrigation. The subdrains should be at least 6-inch-diameter pipes encapsulated in gravel and filter fabric. *Rock* fill drains should be constructed using the same requirements as canyon subdrains.

7.5 Prior to outletting, the final 20-foot segment of a subdrain that will not be extended during future development should consist of non-perforated drainpipe. At the non-perforated/ perforated interface, a seepage cutoff wall should be constructed on the downslope side of the pipe.

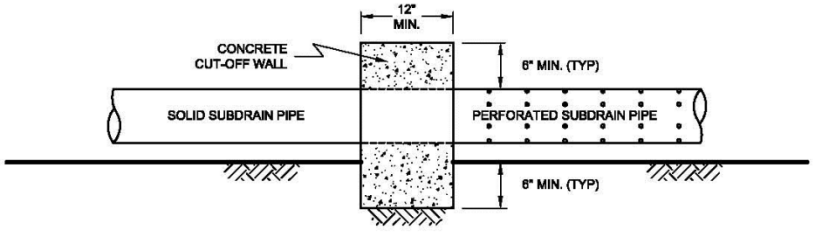
TYPICAL CUT OFF WALL DETAIL

FRONT VIEW



NO SCALE

SIDE VIEW

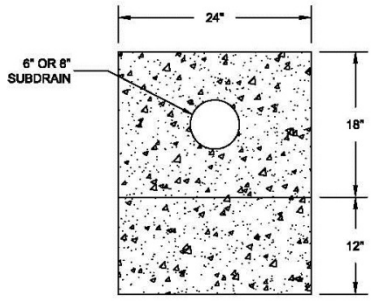


NO SCALE

7.6 Subdrains that discharge into a natural drainage course or open space area should be provided with a permanent headwall structure.

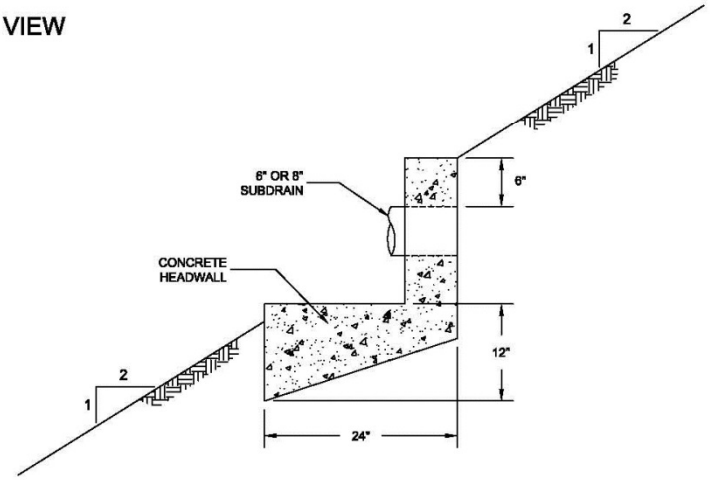
TYPICAL HEADWALL DETAIL

FRONT VIEW



NO SCALE

SIDE VIEW



NOTE: HEADWALL SHOULD OUTLET AT TOE OF FILL SLOPE OR INTO CONTROLLED SURFACE DRAINAGE

NO SCALE

7.7 The final grading plans should show the location of the proposed subdrains. After completion of remedial excavations and subdrain installation, the project civil engineer should survey the drain locations and prepare an "as-built" map showing the drain locations. The final outlet and connection locations should be determined during grading operations. Subdrains that will be extended on adjacent projects after grading can be placed on formational material and a vertical riser should be placed at the end of the subdrain. The grading contractor should consider videoing the subdrains shortly after burial to check proper installation and functionality. The contractor is responsible for the performance of the drains.

8. OBSERVATION AND TESTING

8.1 The Consultant shall be the Owner's representative to observe and perform tests during clearing, grubbing, filling, and compaction operations. In general, no more than 2 feet in vertical elevation of *soil* or *soil-rock* fill should be placed without at least one field density test being performed within that interval. In addition, a minimum of one field density test should be performed for every 2,000 cubic yards of *soil* or *soil-rock* fill placed and compacted.

8.2 The Consultant should perform a sufficient distribution of field density tests of the compacted *soil* or *soil-rock* fill to provide a basis for expressing an opinion whether the fill material is compacted as specified. Density tests shall be performed in the compacted materials below any disturbed surface. When these tests indicate that the density of any layer of fill or portion thereof is below that specified, the particular layer or areas represented by the test shall be reworked until the specified density has been achieved.

8.3 During placement of *rock* fill, the Consultant should observe that the minimum number of passes have been obtained per the criteria discussed in Section 6.3.3. The Consultant should request the excavation of observation pits and may perform plate bearing tests on the placed *rock* fills. The observation pits will be excavated to provide a basis for expressing an opinion as to whether the *rock* fill is properly seated and sufficient moisture has been applied to the material. When observations indicate that a layer of *rock* fill or any portion thereof is below that specified, the affected layer or area shall be reworked until the *rock* fill has been adequately seated and sufficient moisture applied.

8.4 A settlement monitoring program designed by the Consultant may be conducted in areas of *rock* fill placement. The specific design of the monitoring program shall be as recommended in the Conclusions and Recommendations section of the project Geotechnical Report or in the final report of testing and observation services performed during grading.

8.5 We should observe the placement of subdrains, to check that the drainage devices have been placed and constructed in substantial conformance with project specifications.

8.6 Testing procedures shall conform to the following Standards as appropriate:

8.6.1 Soil and Soil-Rock Fills:

8.6.1.1 Field Density Test, ASTM D 1556, *Density of Soil In-Place By the Sand-Cone Method.*

8.6.1.2 Field Density Test, Nuclear Method, ASTM D 6938, *Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth).*

8.6.1.3 Laboratory Compaction Test, ASTM D 1557, *Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-Pound Hammer and 18-Inch Drop*.

8.6.1.4. Expansion Index Test, ASTM D 4829, *Expansion Index Test*.

9. PROTECTION OF WORK

9.1 During construction, the Contractor shall properly grade all excavated surfaces to provide positive drainage and prevent ponding of water. Drainage of surface water shall be controlled to avoid damage to adjoining properties or to finished work on the site. The Contractor shall take remedial measures to prevent erosion of freshly graded areas until such time as permanent drainage and erosion control features have been installed. Areas subjected to erosion or sedimentation shall be properly prepared in accordance with the Specifications prior to placing additional fill or structures.

9.2 After completion of grading as observed and tested by the Consultant, no further excavation or filling shall be conducted except in conjunction with the services of the Consultant.

10. CERTIFICATIONS AND FINAL REPORTS

10.1 Upon completion of the work, Contractor shall furnish Owner a certification by the Civil Engineer stating that the lots and/or building pads are graded to within 0.1 foot vertically of elevations shown on the grading plan and that all tops and toes of slopes are within 0.5 foot horizontally of the positions shown on the grading plans. After installation of a section of subdrain, the project Civil Engineer should survey its location and prepare an *as-built* plan of the subdrain location. The project Civil Engineer should verify the proper outlet for the subdrains and the Contractor should ensure that the drain system is free of obstructions.

10.2 The Owner is responsible for furnishing a final as-graded soil and geologic report satisfactory to the appropriate governing or accepting agencies. The as-graded report should be prepared and signed by a California licensed Civil Engineer experienced in geotechnical engineering and by a California Certified Engineering Geologist, indicating that the geotechnical aspects of the grading were performed in substantial conformance with the Specifications or approved changes to the Specifications.

Appendix 4: Historical Site Conditions

Phase I Environmental Site Assessment or Other Information on Past Site Use

Not Available

Appendix 5: LID Infeasibility

LID Technical Infeasibility Analysis

Not Applicable

Appendix 6: BMP Design Details

BMP Sizing, Design Details and other Supporting Documentation

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	BLAINE A WOMER CIVIL ENGINEERING	Date	9/26/2024
Designed by	BAW	Case No	TTM 39076
Company Project Number/Name	TENTATIVE TRACT 39076-CHACON FARMS		

BMP Identification

BMP NAME / ID: BIORETENTION BASIN NO. 1 (NORTH AREA)

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85} = 0.70 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
D\1	*336831*	*Roofs*	*1*	*0.89*	*300453.3*			
D\2	*260534*	*Concrete or Asphalt*	*1*	*0.89*	*232396.3*			
D\3	*135765*	*Concrete or Asphalt*	*1*	*0.89*	*121102.4*			
D\4	*495034*	*Ornamental Landscaping*	*0.1*	*0.11*	*54680.5*			

Bioretention Facility - Design Procedure	BMP ID	Legend:	Required Entries	
	BRB NO. 1		Calculated Cells	

Company Name:	WOMER ENGINEERING	Date:	9/26/2024
Designed by:	BAW	County/City Case No.:	TTM 39076

Design Volume

Enter the area tributary to this feature	A_T=	28.2	acres
Enter V_{BMP} determined from Section 2.1 of this Handbook	V_{BMP}=	41,337	ft^3

Type of Bioretention Facility Design

(●) Side slopes required (parallel to parking spaces or adjacent to walkways)

( ) No side slopes required (perpendicular to parking space or Planter Boxes)

Bioretention Facility Surface Area

Depth of Soil Filter Media Layer	d_S =	2.5	ft
Top Width of Bioretention Facility, excluding curb	w_T =	50.0	ft
Total Effective Depth, d_E $d_E = (0.3) \times d_S + (0.4) \times 1 - (0.7/w_T) + 0.5$	d_E =	1.64	ft
Minimum Surface Area, A_m $A_M\ (ft^2) = \frac{V_{BMP}\ (ft^3)}{d_E\ (ft)}$	A_M =	25,268	ft^2
Proposed Surface Area	A=	25,300	ft^2

Bioretention Facility Properties

Side Slopes in Bioretention Facility	z =	4	:1
Diameter of Underdrain		6	inches
Longitudinal Slope of Site (3% maximum)		0	%
6" Check Dam Spacing		0	feet

Describe Vegetation: Natural Grasses

Notes: BASIN DEPTH=2.5', WIDTH=50', LENGTH=545'

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name: BLAINE A WOMER CIVIL ENGINEERING
Date: 5/24/2024
Designed by: BAW
Case No: TTM 39076
Company Project Number/Name: TENTATIVE TRACT 39076-CHACON FARMS

BMP Identification

BMP NAME / ID: BIORETENTION BASIN NO. 2 (CENTER AREA)

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.70 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
D\5	*190300*	*Roofs*	*1*	*0.89*	*169747.6*			
D\6	*151067*	*Concrete or Asphalt*	*1*	*0.89*	*134751.8*			
D\7	*73905*	*Concrete or Asphalt*	*1*	*0.89*	*65923.3*			
D\8	*367017*	*Ornamental Landscaping*	*0.1*	*0.11*	*40540*			
	782289		*Total*		*410962.7*	*0.70*	*23972.8*	*24000*

Notes:

Bioretention Facility - Design Procedure	BMP ID BRB NO. 2	Legend:	Required Entries / Calculated Cells

Company Name: WOMER ENGINEERING Date: 9/24/2024

Designed by: BAW County/City Case No.: TTM 39076

Design Volume

Enter the area tributary to this feature — A_T= 17.9 acres

Enter V_{BMP} determined from Section 2.1 of this Handbook — V_{BMP}= 23,973 ft^3

Type of Bioretention Facility Design

(●) Side slopes required (parallel to parking spaces or adjacent to walkways)

( ) No side slopes required (perpendicular to parking space or Planter Boxes)

Bioretention Facility Surface Area

Depth of Soil Filter Media Layer — d_S = 2.5 ft

Top Width of Bioretention Facility, excluding curb — w_T = 50.0 ft

Total Effective Depth, d_E

$d_E = (0.3) \times d_S + (0.4) \times 1 - (0.7/w_T) + 0.5$ — d_E = 1.64 ft

Minimum Surface Area, A_m

$$A_M\ (ft^2) = \frac{V_{BMP}\ (ft^3)}{d_E\ (ft)}$$

A_M = 14,654 ft^2

Proposed Surface Area — A= 14,700 ft^2

Bioretention Facility Properties

Side Slopes in Bioretention Facility — z = 4 :1

Diameter of Underdrain — 6 inches

Longitudinal Slope of Site (3% maximum) — 0 %

6" Check Dam Spacing — 0 feet

Describe Vegetation: Natural Grasses

Notes: DEPTH=2.5', WIDTH=53', LENGTH=290'

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name: BLAINE A WOMER CIVIL ENGINEERING
Date: 9/24/2024
Designed by: BAW
Case No: TTM 39076
Company Project Number/Name: TENTATIVE TRACT 39076-CHACON FARMS

BMP Identification

BMP NAME / ID: BIORETENTION BASIN NO 3 (SOUTH AREA)

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.70 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
D\9	*270226*	*Roofs*	*1*	*0.89*	*241041.6*			
D\10	*201412*	*Concrete or Asphalt*	*1*	*0.89*	*179659.5*			
D\11	*99625*	*Concrete or Asphalt*	*1*	*0.89*	*88865.5*			
D\12	*440645*	*Ornamental Landscaping*	*0.1*	*0.11*	*48672.8*			

Bioretention Facility - Design Procedure	BMP ID: BRB NO 3	Legend:	Required Entries / Calculated Cells

Company Name: WOMER ENGINEERING — Date: 9/24/2024

Designed by: BAW — County/City Case No.: TTM 39076

Design Volume

Enter the area tributary to this feature — A_T = 23.2 acres

Enter V_{BMP} determined from Section 2.1 of this Handbook — V_{BMP} = 32,564 ft^3

Type of Bioretention Facility Design

(●) Side slopes required (parallel to parking spaces or adjacent to walkways)

( ) No side slopes required (perpendicular to parking space or Planter Boxes)

Bioretention Facility Surface Area

Depth of Soil Filter Media Layer — d_S = 2.5 ft

Top Width of Bioretention Facility, excluding curb — w_T = 50.0 ft

Total Effective Depth, d_E

$d_E = (0.3) \times d_S + (0.4) \times 1 - (0.7/w_T) + 0.5$ — d_E = 1.64 ft

Minimum Surface Area, A_m

$$A_M\ (ft^2) = \frac{V_{BMP}\ (ft^3)}{d_E\ (ft)}$$

A_M = 19,905 ft^2

Proposed Surface Area — A= 19,910 ft^2

Bioretention Facility Properties

Side Slopes in Bioretention Facility — z = 4 :1

Diameter of Underdrain — 6 inches

Longitudinal Slope of Site (3% maximum) — 0 %

6" Check Dam Spacing — 0 feet

Describe Vegetation: Natural Grasses

Notes: DEPTH=2.5', AVE. WIDTH=85', LENGTH=260'

Appendix 7: Hydromodification

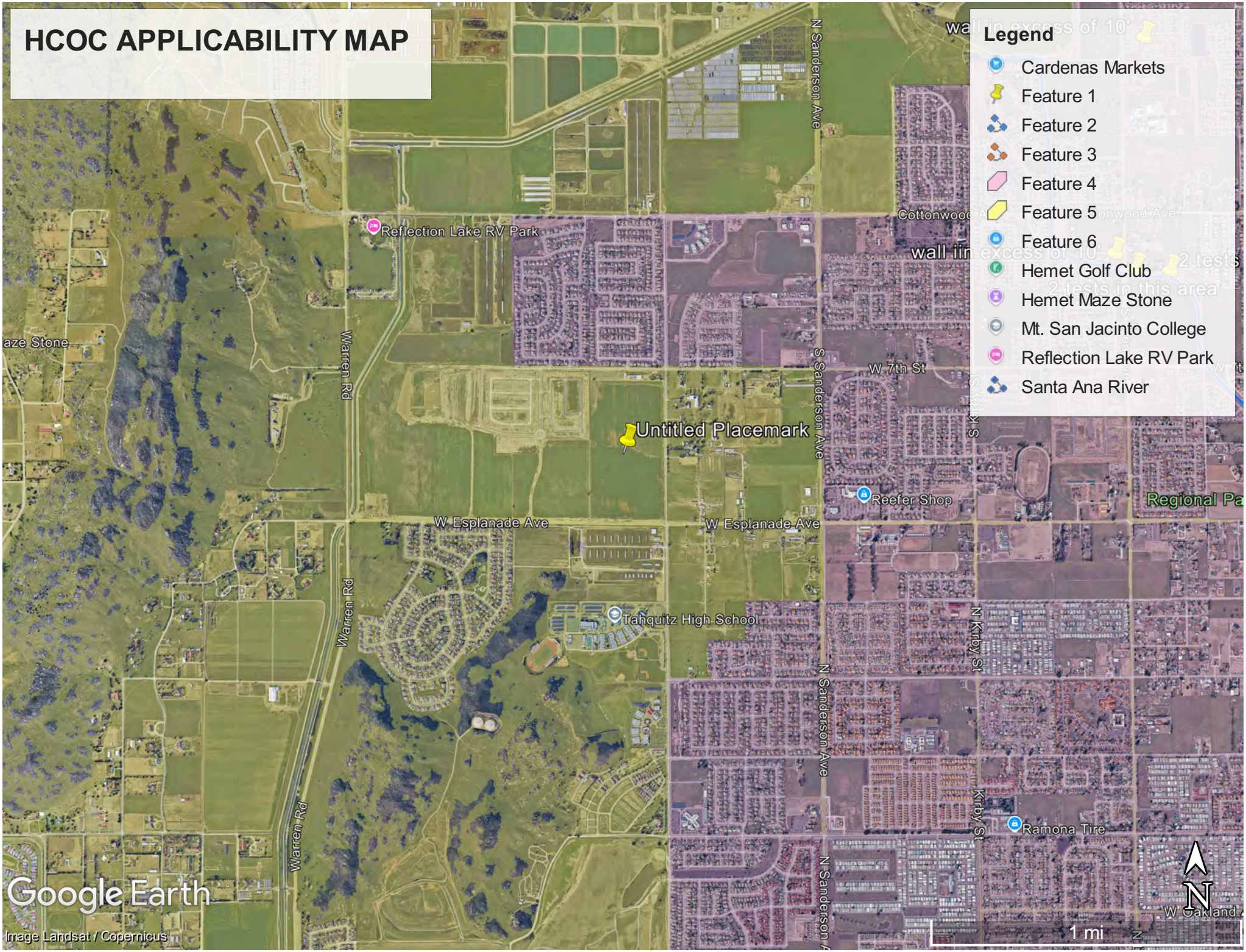
Supporting Detail Relating to Hydrologic Conditions of Concern

HCOC VOLUME SUMMARY

2-YEAR, 24 HOUR STORM RUNOFF VOLUME PER HYDROGRAPH = 267,057 CF

PROPOSED RETENTION BASIN CAPACITY = 273,199 CF

HCOC APPLICABILITY MAP



U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 10/30/24 File: TTM390762YR24HRDEV242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 4061

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

TENTATIVE TRACT 39076
HCOC HYDROLOGY
2 YEAR, 24 HOUR STORM
DEVELOPED CONDITION

Drainage Area = 75.70(Ac.) = 0.118 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 75.70(Ac.) = 0.118 Sq. Mi.
Length along longest watercourse = 2310.00(Ft.)
Length along longest watercourse measured to centroid = 1035.00(Ft.)
Length along longest watercourse = 0.438 Mi.
Length along longest watercourse measured to centroid = 0.196 Mi.
Difference in elevation = 5.50(Ft.)
Slope along watercourse = 12.5714 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.088 Hr.
Lag time = 5.25 Min.
25% of lag time = 1.31 Min.
40% of lag time = 2.10 Min.
Unit time = 15.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
75.70	1.80	136.26

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
75.70	4.50	340.65

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.800(In)

Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 1.800(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.800(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
75.700	63.00	0.550

Total Area Entered = 75.70(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
63.0	43.0	0.641	0.550	0.324	1.000	0.324
					Sum (F) =	0.324

Area averaged mean soil loss (F) (In/Hr) = 0.324
Minimum soil loss rate ((In/Hr)) = 0.162
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.460

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.250	285.675	55.160	42.083
2	0.500	571.350	37.931	28.938
3	0.750	857.025	6.908	5.270
			Sum = 100.000 Sum=	76.291

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.25	0.20	0.014	(0.571)	0.007	0.008
2	0.50	0.30	0.022	(0.565)	0.010	0.012
3	0.75	0.30	0.022	(0.558)	0.010	0.012
4	1.00	0.40	0.029	(0.551)	0.013	0.016
5	1.25	0.30	0.022	(0.545)	0.010	0.012
6	1.50	0.30	0.022	(0.539)	0.010	0.012
7	1.75	0.30	0.022	(0.532)	0.010	0.012
8	2.00	0.40	0.029	(0.526)	0.013	0.016
9	2.25	0.40	0.029	(0.519)	0.013	0.016
10	2.50	0.40	0.029	(0.513)	0.013	0.016
11	2.75	0.50	0.036	(0.507)	0.017	0.019
12	3.00	0.50	0.036	(0.501)	0.017	0.019
13	3.25	0.50	0.036	(0.494)	0.017	0.019
14	3.50	0.50	0.036	(0.488)	0.017	0.019
15	3.75	0.50	0.036	(0.482)	0.017	0.019
16	4.00	0.60	0.043	(0.476)	0.020	0.023
17	4.25	0.60	0.043	(0.470)	0.020	0.023
18	4.50	0.70	0.050	(0.464)	0.023	0.027
19	4.75	0.70	0.050	(0.458)	0.023	0.027

20	5.00	0.80	0.058	(0.452)	0.026	0.031
21	5.25	0.60	0.043	(0.446)	0.020	0.023
22	5.50	0.70	0.050	(0.440)	0.023	0.027
23	5.75	0.80	0.058	(0.435)	0.026	0.031
24	6.00	0.80	0.058	(0.429)	0.026	0.031
25	6.25	0.90	0.065	(0.423)	0.030	0.035
26	6.50	0.90	0.065	(0.418)	0.030	0.035
27	6.75	1.00	0.072	(0.412)	0.033	0.039
28	7.00	1.00	0.072	(0.406)	0.033	0.039
29	7.25	1.00	0.072	(0.401)	0.033	0.039
30	7.50	1.10	0.079	(0.395)	0.036	0.043
31	7.75	1.20	0.086	(0.390)	0.040	0.047
32	8.00	1.30	0.094	(0.385)	0.043	0.051
33	8.25	1.50	0.108	(0.379)	0.050	0.058
34	8.50	1.50	0.108	(0.374)	0.050	0.058
35	8.75	1.60	0.115	(0.369)	0.053	0.062
36	9.00	1.70	0.122	(0.364)	0.056	0.066
37	9.25	1.90	0.137	(0.358)	0.063	0.074
38	9.50	2.00	0.144	(0.353)	0.066	0.078
39	9.75	2.10	0.151	(0.348)	0.070	0.082
40	10.00	2.20	0.158	(0.343)	0.073	0.086
41	10.25	1.50	0.108	(0.338)	0.050	0.058
42	10.50	1.50	0.108	(0.333)	0.050	0.058
43	10.75	2.00	0.144	(0.329)	0.066	0.078
44	11.00	2.00	0.144	(0.324)	0.066	0.078
45	11.25	1.90	0.137	(0.319)	0.063	0.074
46	11.50	1.90	0.137	(0.314)	0.063	0.074
47	11.75	1.70	0.122	(0.310)	0.056	0.066
48	12.00	1.80	0.130	(0.305)	0.060	0.070
49	12.25	2.50	0.180	(0.300)	0.083	0.097
50	12.50	2.60	0.187	(0.296)	0.086	0.101
51	12.75	2.80	0.202	(0.292)	0.093	0.109
52	13.00	2.90	0.209	(0.287)	0.096	0.113
53	13.25	3.40	0.245	(0.283)	0.113	0.132
54	13.50	3.40	0.245	(0.279)	0.113	0.132
55	13.75	2.30	0.166	(0.274)	0.076	0.089
56	14.00	2.30	0.166	(0.270)	0.076	0.089
57	14.25	2.70	0.194	(0.266)	0.089	0.105
58	14.50	2.60	0.187	(0.262)	0.086	0.101
59	14.75	2.60	0.187	(0.258)	0.086	0.101
60	15.00	2.50	0.180	(0.254)	0.083	0.097
61	15.25	2.40	0.173	(0.250)	0.079	0.093
62	15.50	2.30	0.166	(0.246)	0.076	0.089
63	15.75	1.90	0.137	(0.242)	0.063	0.074
64	16.00	1.90	0.137	(0.239)	0.063	0.074
65	16.25	0.40	0.029	(0.235)	0.013	0.016
66	16.50	0.40	0.029	(0.232)	0.013	0.016
67	16.75	0.30	0.022	(0.228)	0.010	0.012
68	17.00	0.30	0.022	(0.225)	0.010	0.012
69	17.25	0.50	0.036	(0.221)	0.017	0.019
70	17.50	0.50	0.036	(0.218)	0.017	0.019
71	17.75	0.50	0.036	(0.215)	0.017	0.019
72	18.00	0.40	0.029	(0.211)	0.013	0.016
73	18.25	0.40	0.029	(0.208)	0.013	0.016
74	18.50	0.40	0.029	(0.205)	0.013	0.016
75	18.75	0.30	0.022	(0.202)	0.010	0.012
76	19.00	0.20	0.014	(0.199)	0.007	0.008
77	19.25	0.30	0.022	(0.197)	0.010	0.012
78	19.50	0.40	0.029	(0.194)	0.013	0.016
79	19.75	0.30	0.022	(0.191)	0.010	0.012
80	20.00	0.20	0.014	(0.189)	0.007	0.008

81	20.25	0.30	0.022	(	0.186)	0.010	0.012
82	20.50	0.30	0.022	(	0.184)	0.010	0.012
83	20.75	0.30	0.022	(	0.181)	0.010	0.012
84	21.00	0.20	0.014	(	0.179)	0.007	0.008
85	21.25	0.30	0.022	(	0.177)	0.010	0.012
86	21.50	0.20	0.014	(	0.175)	0.007	0.008
87	21.75	0.30	0.022	(	0.173)	0.010	0.012
88	22.00	0.20	0.014	(	0.171)	0.007	0.008
89	22.25	0.30	0.022	(	0.170)	0.010	0.012
90	22.50	0.20	0.014	(	0.168)	0.007	0.008
91	22.75	0.20	0.014	(	0.167)	0.007	0.008
92	23.00	0.20	0.014	(	0.165)	0.007	0.008
93	23.25	0.20	0.014	(	0.164)	0.007	0.008
94	23.50	0.20	0.014	(	0.163)	0.007	0.008
95	23.75	0.20	0.014	(	0.162)	0.007	0.008
96	24.00	0.20	0.014	(	0.162)	0.007	0.008

(Loss Rate Not Used)

Sum = 100.0 Sum = 3.9

Flood volume = Effective rainfall 0.97(In)
times area 75.7(Ac.)/[(In)/(Ft.)] = 6.1(Ac.Ft)
Total soil loss = 0.83(In)
Total soil loss = 5.223(Ac.Ft)
Total rainfall = 1.80(In)
Flood volume = 267057.4 Cubic Feet
Total soil loss = 227493.3 Cubic Feet

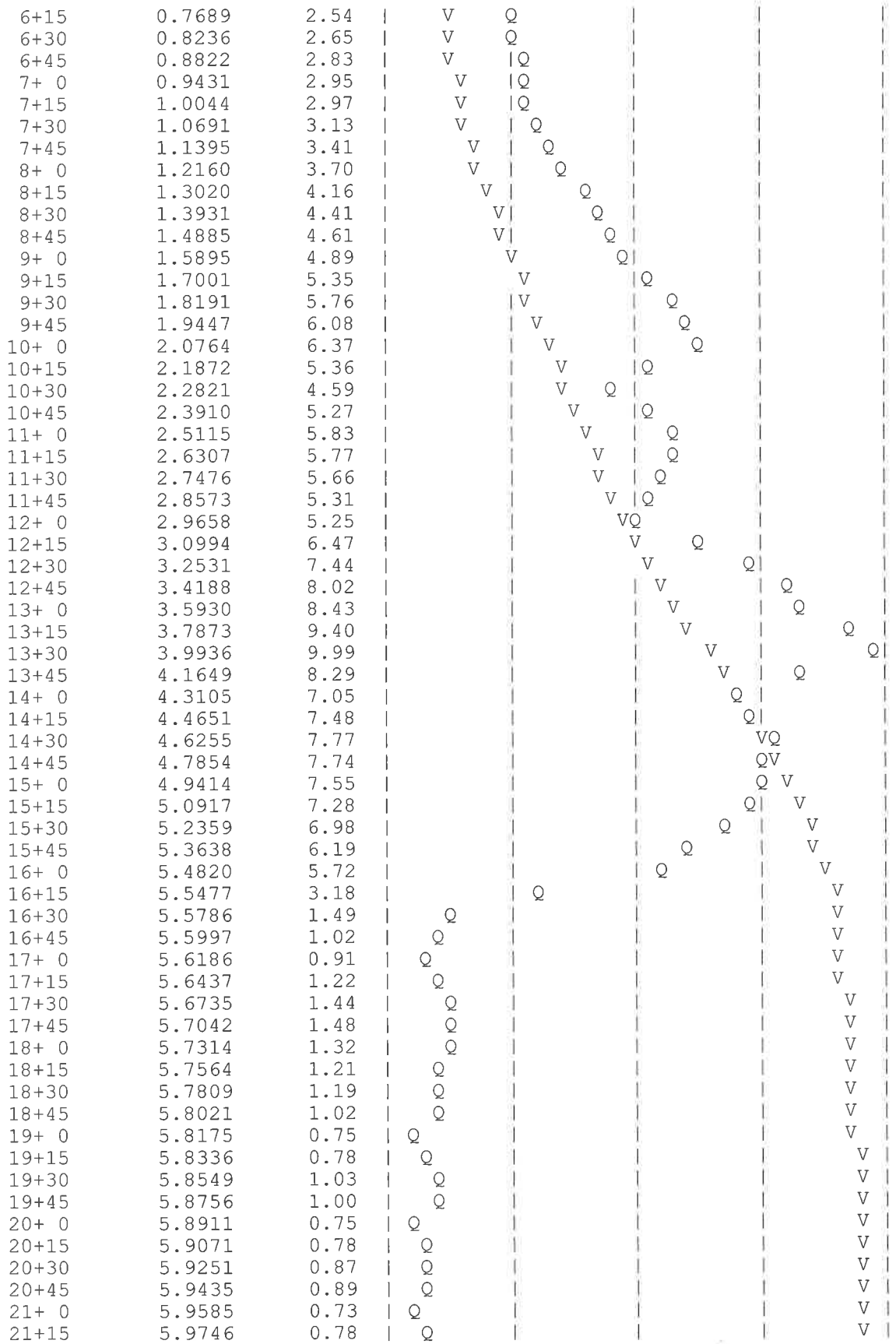
Peak flow rate of this hydrograph = 9.986(CFS)

++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 15 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+15	0.0068	0.33	VQ				
0+30	0.0216	0.72	V Q				
0+45	0.0395	0.87	V Q				
1+ 0	0.0613	1.05	V Q				
1+15	0.0820	1.00	V Q				
1+30	0.1008	0.91	V Q				
1+45	0.1192	0.89	V Q				
2+ 0	0.1410	1.05	V Q				
2+15	0.1651	1.17	V Q				
2+30	0.1896	1.19	V Q				
2+45	0.2175	1.35	V Q				
3+ 0	0.2478	1.46	V Q				
3+15	0.2784	1.48	V Q				
3+30	0.3091	1.48	V Q				
3+45	0.3397	1.48	V Q				
4+ 0	0.3738	1.65	V Q				
4+15	0.4101	1.76	V Q				
4+30	0.4503	1.94	V Q				
4+45	0.4928	2.06	V Q				
5+ 0	0.5391	2.24	V Q				
5+15	0.5809	2.03	V Q				
5+30	0.6219	1.99	V Q				
5+45	0.6678	2.22	V Q				
6+ 0	0.7164	2.35	V Q				



21+30	5.9891	0.71	Q				V
21+45	6.0052	0.78	Q				V
22+ 0	6.0198	0.71	Q				V
22+15	6.0359	0.78	Q				V
22+30	6.0505	0.71	Q				V
22+45	6.0631	0.61	Q				V
23+ 0	6.0754	0.59	Q				V
23+15	6.0877	0.59	Q				V
23+30	6.0999	0.59	Q				V
23+45	6.1122	0.59	Q				V
24+ 0	6.1244	0.59	Q				V
24+15	6.1299	0.27	Q				V
24+30	6.1308	0.04	Q				V

Appendix 8: Source Control

Pollutant Sources/Source Control Checklist

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

How to use this worksheet (also see instructions in Section G of the WQMP Template):

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to your site. Check each box that applies.
2. Review Column 2 and incorporate all of the corresponding applicable BMPs in your WQMP Exhibit.
3. Review Columns 3 and 4 and incorporate all of the corresponding applicable permanent controls and operational BMPs in your WQMP. Use the format shown in Table G.1on page 23 of this WQMP Template. Describe your specific BMPs in an accompanying narrative, and explain any special conditions or situations that required omitting BMPs or substituting alternative BMPs for those shown here.

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	**... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE**		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on WQMP Drawings**	**3** **Permanent Controls—List in WQMP Table and Narrative**	**4** **Operational BMPs—Include in WQMP Table and Narrative**
☒ **A.** On-site storm drain inlets	☒ Locations of inlets.	☒ Mark all inlets with the words "Only Rain Down the Storm Drain" or similar. Catch Basin Markers may be available from the Riverside County Flood Control and Water Conservation District, call 951.955.1200 to verify.	☒ Maintain and periodically repaint or replace inlet markings. ☒ Provide stormwater pollution prevention information to new site owners, lessees, or operators. ☐ See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com ☐ Include the following in lease agreements: "Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains."
☐ **B.** Interior floor drains and elevator shaft sump pumps		☐ State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	☐ Inspect and maintain drains to prevent blockages and overflow.
☐ **C.** Interior parking garages		☐ State that parking garage floor drains will be plumbed to the sanitary sewer.	☐ Inspect and maintain drains to prevent blockages and overflow.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **D1.** Need for future indoor & structural pest control		☐ Note building design features that discourage entry of pests.	☐ Provide Integrated Pest Management information to owners, lessees, and operators.
☒ **D2.** Landscape/ Outdoor Pesticide Use	☐ Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. ☐ Show self-retaining landscape areas, if any. ☐ Show stormwater treatment and hydrograph modification management BMPs. (See instructions in Chapter 3, Step 5 and guidance in Chapter 5.)	State that final landscape plans will accomplish all of the following. ☐ Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. ☒ Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution. ☐ Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. ☒ Consider using pest-resistant plants, especially adjacent to hardscape. To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	☐ Maintain landscaping using minimum or no pesticides. ☐ See applicable operational BMPs in "What you should know for.....Landscape and Gardening" at http://rcflood.org/stormwater/Error! Hyperlink reference not valid. ☐ Provide IPM information to new owners, lessees and operators.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
❑ **E.** Pools, spas, ponds, decorative fountains, and other water features.	❑ Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet. (Exception: Public pools must be plumbed according to County Department of Environmental Health Guidelines.)	If the Co-Permittee requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.	❑ See applicable operational BMPs in "Guidelines for Maintaining Your Swimming Pool, Jacuzzi and Garden Fountain" at http://rcflood.org/stormwater/
❑ **F.** Food service	❑ For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment. ❑ On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	❑ Describe the location and features of the designated cleaning area. ❑ Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.	❑ See the brochure, "The Food Service Industry Best Management Practices for: Restaurants, Grocery Stores, Delicatessens and Bakeries" at http://rcflood.org/stormwater/ Provide this brochure to new site owners, lessees, and operators.
❑ **G.** Refuse areas	❑ Show where site refuse and recycled materials will be handled and stored for pickup. See local municipal requirements for sizes and other details of refuse areas. ❑ If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent run-on and show locations of berms to prevent runoff from the area. ❑ Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.	❑ State how site refuse will be handled and provide supporting detail to what is shown on plans. ❑ State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.	❑ State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
❑ **H.** Industrial processes.	❑ Show process area.	❑ **If industrial processes are to be located on site, state: "All process activities to be performed indoors. No processes to drain to exterior or to storm drain system."**	❑ See Fact Sheet SC-10, "Non-Stormwater Discharges" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com See the brochure "Industrial & Commercial Facilities Best Management Practices for: Industrial, Commercial Facilities" at http://rcflood.org/stormwater/

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
❑ I. Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)	❑ Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or run-off from area. ❑ Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults. ❑ Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.	Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains. Where appropriate, reference documentation of compliance with the requirements of Hazardous Materials Programs for: ▪ Hazardous Waste Generation ▪ Hazardous Materials Release Response and Inventory ▪ California Accidental Release (CalARP) ▪ Aboveground Storage Tank ▪ Uniform Fire Code Article 80 Section 103(b) & (c) 1991 ▪ Underground Storage Tank www.cchealth.org/groups/hazmat/	❑ See the Fact Sheets SC-31, "Outdoor Liquid Container Storage" and SC-33, "Outdoor Storage of Raw Materials " in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on WQMP Drawings**	**3** **Permanent Controls—List in WQMP Table and Narrative**	**4** **Operational BMPs—Include in WQMP Table and Narrative**
❑ **J.** Vehicle and Equipment Cleaning	❑ Show on drawings as appropriate: (1) Commercial/industrial facilities having vehicle/equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses. (2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use). (3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer. (4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.	❑ If a car wash area is not provided, describe any measures taken to discourage on-site car washing and explain how these will be enforced.	Describe operational measures to implement the following (if applicable): ❑ Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system. Refer to "Outdoor Cleaning Activities and Professional Mobile Service Providers" for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/ ❑Car dealerships and similar may rinse cars with water only.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
❑ **K.** Vehicle/Equipment Repair and Maintenance	❑ Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to prevent run-on and runoff of stormwater. ❑ Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas. ❑ Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer and an industrial waste discharge permit will be obtained.	❑ State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area. ❑ State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements. ❑ State that there are no tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.	In the Stormwater Control Plan, note that all of the following restrictions apply to use the site: ❑ No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains. ❑ No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately. ❑ No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment. Refer to "Automotive Maintenance & Car Care Best Management Practices for Auto Body Shops, Auto Repair Shops, Car Dealerships, Gas Stations and Fleet Service Operations". Brochure can be found at http://rcflood.org/stormwater/ Refer to Outdoor Cleaning Activities and Professional Mobile Service Providers for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
❑ **L.** Fuel Dispensing Areas	❑ Fueling areas[6] shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable. ❑ Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area[1].] The canopy [or cover] shall not drain onto the fueling area.		❑ The property owner shall dry sweep the fueling area routinely. ❑ See the Fact Sheet SD-30 , "Fueling Areas" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

[6] The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
❑ **M.** Loading Docks	❑ Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas shall be drained to the sanitary sewer, or diverted and collected for ultimate discharge to the sanitary sewer. ❑ Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. ❑ Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.		❑ Move loaded and unloaded items indoors as soon as possible. ❑ See Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **N.** Fire Sprinkler Test Water		☐ Provide a means to drain fire sprinkler test water to the sanitary sewer.	☐ See the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
O. Miscellaneous Drain or Wash Water or Other Sources ☐ Boiler drain lines ☐ Condensate drain lines ☒ Rooftop equipment ☐ Drainage sumps ☐ Roofing, gutters, and trim. ☐ Other sources		☐ Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system. ☐ Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment. ☐ Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water. ☒ Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff. Include controls for other sources as specified by local reviewer.	

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
❑ **P.** Plazas, sidewalks, and parking lots.			❑ Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.

Appendix 9: O&M

Operation and Maintenance Plan and Documentation of Finance, Maintenance and Recording Mechanisms

To be included in the Final WQMP

Appendix 10: Educational Materials

BMP Fact Sheets, Maintenance Guidelines and Other End-User BMP Information

To be included in the Final WQMP

Appendix G

Chacon Farms SFR Noise Impact Study

MD Acoustics

October 3, 2024

Chacon Farms SFR
Noise Impact Study
City of San Jacinto, CA

Prepared for:

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Ramona Dairy, LLC
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Prepared by:

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Date: 10/3/2024

MD ACOUSTICS
Sound Solutions for Planning and Design

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1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

This noise assessment was prepared to evaluate the potential noise impacts for the project study area and to recommend noise mitigation measures, if necessary, to minimize the potential noise impacts. The assessment was conducted and compared to the noise standards set forth by the Federal, State, and Local agencies. Consistent with the City's Noise Guidelines, the project must demonstrate compliance to the applicable noise criterion as outlined within the City's Noise Element and Municipal Code.

The following is provided in this report:

- A description of the study area and the proposed project
- Information regarding the fundamentals of noise
- A description of the local noise guidelines and standards
- An analysis of traffic noise impacts to and from the project site
- An analysis of construction noise impacts

1.2 Site Location and Study Area

The project site is located at 710 Cawston Avenue in the City of San Jacinto, CA (APNs: 432-260-009, 432-260-026, 432-260-027), as shown in Exhibit A. Land uses surrounding the project site include low density residential to the north, rural residential to the east, commercial to the south, and planned low density residential to the west. The land to the south of the project site is located within the jurisdiction of Hemet, CA. Cawston Avenue is to the east, 7th Street is to the north, and Esplanade Avenue is to the south.

1.3 Proposed Project Description

The project proposes the development of 419 single-family detached lots. This study assesses the operational noise and traffic noise to and from the project site and compares the results to the applicable City noise standards. In addition, the study reviews noise generated by construction activities.

Construction activities within the project area will consist of site preparation, grading, building, paving, and architectural coating.

Exhibit A

Location Map



Exhibit B

Site Plan



2.0 Fundamentals of Noise

This section of the report provides basic information about noise and presents some of the terms used within the report.

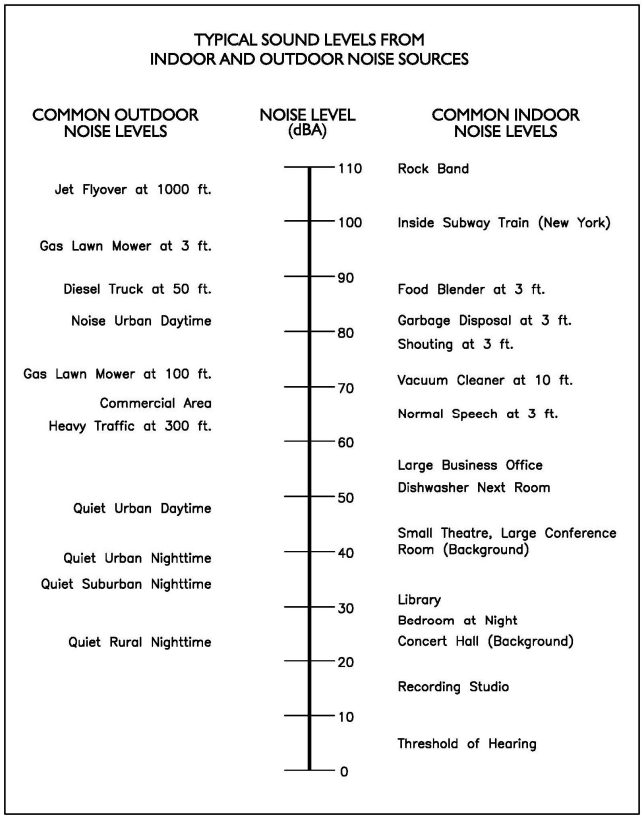
2.1 Sound, Noise and Acoustics

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as the mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic or stationary noise, the medium of concern is air. *Noise* is defined as sound that is loud, unpleasant, unexpected, or unwanted.

2.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and *amplitude* (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding), and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch from 20 Hz to the high pitch of 20,000 Hz.

Exhibit C: Typical A-Weighted Noise Levels



2.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines its loudness. The loudness of sound increases or decreases as the amplitude increases or decreases. Sound pressure amplitude is measured in units of micro-Newton per square inch meter (N/m2), also called micro-Pascal (µPa). One µPa is approximately one hundred billionths (0.00000000001) of normal atmospheric pressure. Sound pressure level (SPL or L_p) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels, abbreviated dB. Exhibit C illustrates reference sound levels for different noise sources.

2.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds or equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound.

2.5 Human Response to Changes in Noise Levels

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz (A-weighted scale), and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, the A-scale weighting is typically reported in terms of A-weighted decibel (dBA). Typically, the human ear can barely perceive the change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud

https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm

2.6 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns; others are random. Some noise levels are constant, while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels.

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high-frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after the addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB): A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A): A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time-varying noise level. The energy average noise level during the sample period.

Habitable Room: Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking, or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms, and similar spaces.

L(n): The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly L50, L90 and L99, etc.

Noise: *A*ny unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Outdoor Living Area: Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Percent Noise Levels: See L(n).

Sound Level (Noise Level): The weighted sound pressure level obtained by use of a sound level meter having a standard frequency-filter for attenuating part of the sound spectrum.

Sound Level Meter: An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL): The dB(A) level which, if it lasted for one second, would produce the same A-weighted sound energy as the actual event.

2.7 Traffic Noise Prediction

Noise levels associated with traffic depend on a variety of factors: (1) volume of traffic, (2) speed of traffic, (3) auto, medium truck (2 axle), and heavy truck percentage (3 axle and greater), and sound propagation. A greater the volume of traffic, higher speeds, and larger truck percentages equate to a

louder volume in noise. A doubling of the Average Daily Traffic (ADT) along a roadway will increase noise levels by approximately 3 dB; reasons for this are discussed in the sections above.

2.8 Sound Propagation

As sound propagates from a source, it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at a rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per doubling of distance for a line source and 7.5 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can significantly affect noise levels when noise receivers are located 200 feet or more from a noise source. Wind, temperature, air humidity, and turbulence can further impact have far sound can travel.

3.0 Ground-Borne Vibration Fundamentals

3.1 Vibration Descriptors

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude.

PPV – Known as the peak particle velocity (PPV) which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS – Known as root mean squared (RMS) can be used to denote vibration amplitude

VdB – A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.

There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wavefront, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wavefront. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are body waves carrying energy along an expanding spherical wavefront. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature, and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be

effective enough for screening purposes to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 Regulatory Setting

The proposed project is located in the City of San Jacinto and noise regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Publicize noise emission standards for interstate commerce
- Assist state and local abatement efforts
- Promote noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was originally tasked with implementing the Noise Control Act. However, it was eventually eliminated, leaving other federal agencies and committees to develop noise policies and programs. Some examples of these agencies are as follows: The Department of Transportation (DOT) assumed a significant role in noise control through its various agencies. The Federal Aviation Agency (FAA) regulates noise from aircraft and airports. The Federal Highway Administration (FHWA) regulates noise from the interstate highway system. The Occupational Safety and Health Administration (OSHA) is responsible for the prohibition of excessive noise exposure to workers.

The federal government advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being constructed adjacent to a highway or that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

4.2 State Regulations

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix.” The matrix allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

The State of California has established noise insulation standards as outlined in Title 24 of the California Building Code (CBC) which in some cases requires acoustical analyses to outline exterior noise levels and to ensure interior noise levels do not exceed the interior threshold. The State mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan.

The local noise element usually recognizes the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable, as illustrated in Exhibit D.

4.3 City of San Jacinto Noise Regulations

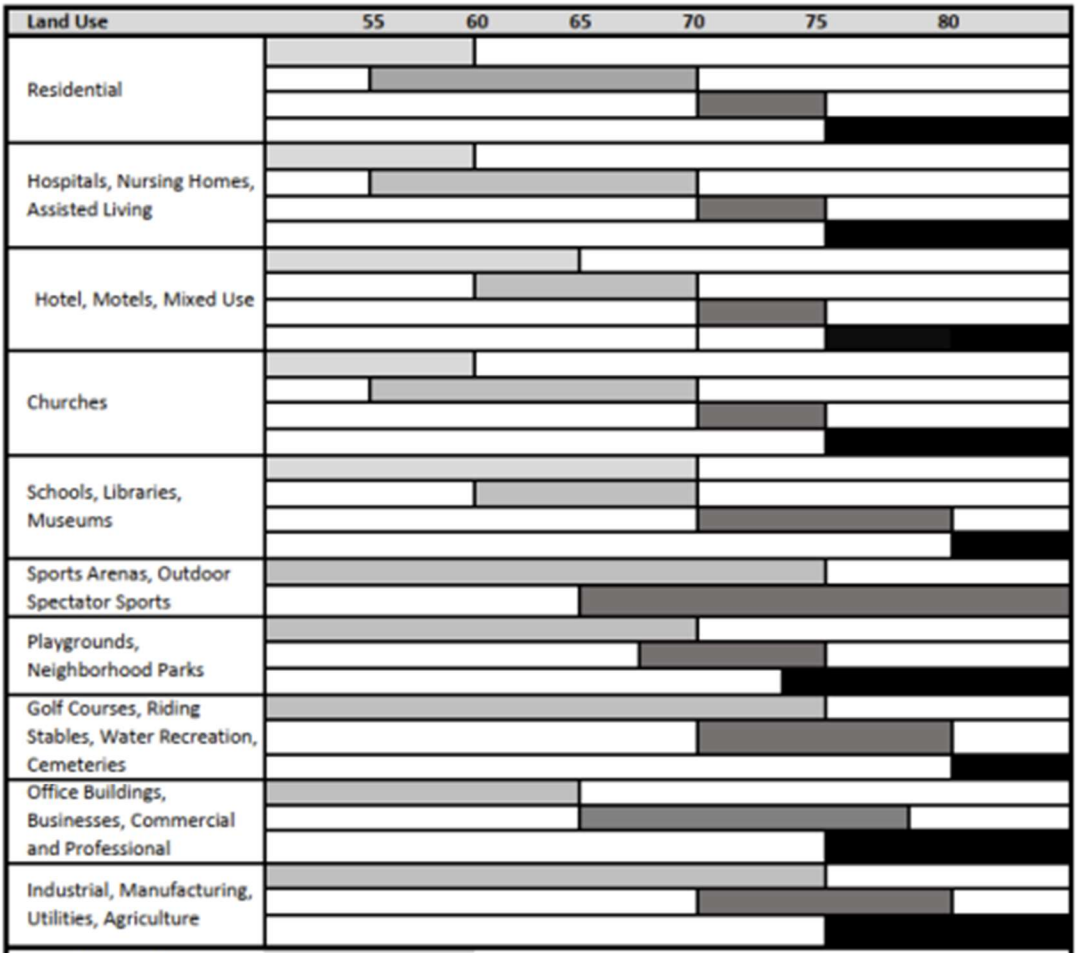
The City of San Jacinto outlines their noise regulations and standards within the Municipal Code and the Public Safety Element of the City of San Jacinto General Plan.

City of San Jacinto General Plan

Applicable policies and standards governing environmental noise in the City are set forth in the General Plan's Public Safety Element. Table PS-1 (Exhibit D of this report) of the City's Public Safety Element outlines the exterior noise standards for community noise environments.

<Exhibit D, next page>

Exhibit D: Noise/Land Use Compatibility Matrix



Normally Acceptable:
Specified land uses is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation or requirements.

Conditionally Acceptable:
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy.

Normally Unacceptable:
New construction and development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design. Outdoor areas must be shielded.

Clearly Unacceptable
New construction or development should generally not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

Source: California Office of Noise Control. Guidelines for the Preparation and Content of Noise Elements of the General Plan. February 2017.

Notes:

1. Where a proposed use is not specifically listed, the use shall comply with the standards for the most similar use as determined by the City.

2. Outdoor activity areas for residential development are considered to be the backyard patios or decks of single-family units and the common areas where people generally congregate for multi-family developments. Where common outdoor activity areas for multi-family developments comply with the outdoor noise level standard, the standard will not be applied at patios or decks of individual units provided noise-reducing measures are incorporated (e.g., orientation of patio/deck, screening of patio with masonry or other noise-attenuating material). Outdoor activity areas for non-residential developments are the common areas where people generally congregate, including pedestrian plazas, seating areas, and outside lunch facilities; not all residential developments include outdoor activity areas.

In addition to the noise standards, the City has outlined goals, policies, and actions to reduce potential noise impacts, which are presented below:

Goals, Policies, and Actions

Policies and actions from Goal PS-6 of the Public Safety Element that would mitigate potential impacts on noise include the following.

Goal PS-6: Noise. A comfortable community environment that is free from excessive noise pollution.

PS-6 Policies:

PS-6.1 **Noise Exposure.** Consider the noise compatibility of existing and future development when making land use planning decisions. Require development and infrastructure projects to be consistent with the land use compatibility standards contained in Tables PS-1, PS-2, PS-3 and PS-4 to ensure acceptable noise exposure levels for existing and future development.

PS-6.2 **Noise Mitigation.** Require new development to mitigate excessive noise to the standards indicated in Tables PS-1, PS-2, PS-3 and PS-4 to the extent feasible through best practices, including building location and orientation, building design features, placement of noise-generating equipment away from sensitive receptors, shielding of noise-generating equipment, placement of noise-tolerant features between noise sources and sensitive receptors, and use of noise-minimizing materials.

PS-6.3 **Acoustical Studies.** Require acoustical studies for new discretionary developments and transportation improvements that have the potential to affect existing noise-sensitive uses such as schools, hospitals, libraries, care facilities, and residential areas, and for projects that would introduce new noise-sensitive uses into an area where existing noise levels may exceed the thresholds identified in this element. For projects that are required to prepare an acoustical study, the following mobile and stationary noise source criteria shall be used to determine the significance of those impacts.

A. Mobile Noise Sources:

- Where existing traffic noise levels are within or below the “normally acceptable” noise criteria at the affected land use (see Table PS-1), a readily perceptible 5 dBA CNEL or greater increase in roadway noise will be considered significant;
- Where existing traffic noise levels falls within the “conditionally acceptable” noise criteria at the sensitive land use, a +3 dBA CNEL or greater increase in roadway noise levels will be considered significant; and
- Where existing traffic noise levels exceed the “conditionally acceptable” noise criteria at the sensitive land use, a + 1.5 dBA CNEL or greater increase in roadway noise levels will be considered significant.

PS-6.6 **Commercial Noise.** Require the use of noise attenuation measures, including screening and buffering techniques, for all new commercial development expected to produce excessive noise; in existing cases where the City's noise standards are exceeded, work with Code Enforcement to require compliance.

PS-6.7 **Construction Noise.** Require construction activities to reduce noise impacts on adjacent uses to the criteria identified in Tables PS-3 and PS-4, or, if the criteria cannot be met, to the maximum extent feasible complying with Chapter 8.40 of the San Jacinto Municipal Code (Noise Control) and use best practices. Construction activities outside of the permitted construction hours identified in the San Jacinto Municipal Code may be approved on a case-by-case basis by the Community Development Director.

PS-6 Actions:

PS-6b Review new development projects for compliance with the noise requirements established in this General Plan, including the standards established in Tables PS-1, PS-2, PS-3 and PS-4. Where necessary, require new development to mitigate excessive noise through best practices, including building location and orientation, building design features, placement of noise-generating equipment away from sensitive receptors, shielding of noise-generating equipment, placement of noise-tolerant features between noise sources and sensitive receptors, and use of noise-minimizing materials such as rubberized asphalt.

PS-6c Require acoustical studies for all new discretionary projects, including those related to development and transportation, which have the potential to generate noise impacts which exceed the standards identified in this General Plan. The studies shall include representative noise measurements, estimates of existing and projected noise levels, and mitigation measures necessary to ensure compliance with this element.

PS-6d Review the locations of proposed projects with the potential to generate stationary noise in relation to sensitive receptors through the discretionary project review process. Limit delivery or service hours for stores and businesses with loading areas, docks, or trash bins that front, side, border, or gain access on driveways next to residential and other noise sensitive areas. Only approve exceptions if full compliance with the nighttime limits of the noise regulations is achieved.

PS-6e Require all construction activity to comply with the limits (maximum noise levels, hours and days of allowed activity) established in the City noise regulations (Title 24 California Code of Regulations, Noise Ordinance) in order to reduce impacts associated with temporary construction noise to the extent feasible. Trucks associated with construction activities shall follow the designated truck routes described in the Mobility Element.

City of San Jacinto Municipal Code

Chapter 8.40 – Noise Control in the Municipal Code outlines the City's exterior noise limits as it relates to stationary noise sources.

8.40.050. Stationary noise source standards, exterior and interior.

(a) The following noise standards for maximum allowable noise level due to stationary noise sources shall apply to all development and infrastructure projects, unless otherwise specifically indicated:

Table 1: Exterior Noise Standards for Stationary Sources

Type of Land Use	Allowed Equivalent Noise Level (dBA Leq)	
	7:00 a.m. to 10:00 p.m.	10:00 p.m. to 7:00 a.m.
All single-family residential properties	65	45
All multifamily residential properties and mobile home parks	65	50
All commercial property	65	60
The residential portion of mixed-use properties	70	70
All manufacturing or industrial properties and all other uses	70	70

1. If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.
2. Measurements for compliance are made on the affected property pursuant to Section 8.40.160.
3. It is unlawful for any person at any location within the incorporated area of the city to create noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:
    a. The noise standard for the applicable zone for any fifteen (15) minute period;
    b. A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).
4. In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
5. The residential portion of mixed-use properties standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use if the noise originates from that commercial property or use.
6. If the measurement location is on a boundary between two different types of land uses, the lower noise level standard applicable to types of land uses shall apply.

(b) The following allowable interior noise standards due to stationary noise sources shall apply to all development and infrastructure projects, unless otherwise specifically indicated:

Table 2: Interior Noise Standards for Stationary Sources

Type of Land Use	Allowed Equivalent Noise Level (dBA Leq)	
	7:00 a.m. to 10:00 p.m.	10:00 p.m. to 7:00 a.m.
All single-family residential properties	45	40
All multifamily residential properties and mobile home parks	45	40
All commercial property	45	40
Residential portion of mixed use	45	40

1. If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.
2. Measurements for compliance are made on the affected property pursuant to Section 8.40.160.
3. It is unlawful for any person at any location within the incorporated area of the city to create noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:
    a. The noise standard for the applicable zone for any fifteen (15) minute period;
    b. A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).
4. In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
5. The residential portion of mixed-use properties standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use if the noise originates from that commercial property or use.
6. If the measurement location is on a boundary between two different types of land uses, the lower noise level standard applicable to types of land uses shall apply.

8.40.060. Sensitive uses development projects.

(a) New residential developments, mixed-use developments with a residential component, and other noise-sensitive development (including, but not limited to, schools, day cares, hospitals) shall be designed to minimize noise exposure to sensitive uses through the incorporation of site planning and architectural techniques.

New discretionary projects which have the potential to generate noise impacts which exceed the standards identified in this chapter shall be required to submit acoustical studies. The studies shall include representative noise measurements, estimates of existing and projected noise

levels, and mitigation measures necessary to ensure compliance with the noise standards established in this chapter.

8.40.090 Construction activity noise regulations

A. The erection (including excavation), demolition, alteration or repair of any building shall occur between the hours of seven a.m. and seven p.m. on weekdays and Saturdays, and between nine a.m. and six p.m. on Sundays and holidays, except when such work complies with the terms of a temporary use permit which may be issued by the community development director or his or her designee, upon a showing of sufficient need due to hot or inclement weather, or the use of an unusually long process material, or other circumstances of unusual and compelling nature.
B. No landowner, construction company owner, contractor, subcontractor or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment or machine in violation of the provisions of this section.
C. Exceptions.
    1. The provisions of this section shall not apply to emergency construction work performed by a private party when authorized by the city manager or his or her designee;
    2. The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the city of San Jacinto, or its employees, contractors or agents, unless:
        a. The city manager or a department head determines that the maintenance, repair or improvement is immediately necessary to maintain public services; or
        b. The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours; or
        c. The city council has approved project specifications, contract provisions, or an environmental document that specifically authorizes construction during hours of the day that would otherwise be prohibited pursuant to this section;
    3. Any construction that complies with the noise limits specified in Section 8.40.040 or 8.40.050. (Ord. 22-13 § 3 (Exh. A); Ord. 15-07 § 1; Ord. 07-17 § 2 (part))

8.40.140 Heating, venting, pool/spa and air conditioning—Special provisions.

Permits for heating, venting and air conditioning (HVAC) and pool/spa equipment in or adjacent to residential areas shall be issued only after the installation contractor signs an acknowledgment that the installation will meet the noise limits established in Section 8.40.050. Applications for residential mechanical permits for air conditioners may use the methodology specified in Standard 275 “Standard Application of Sound Rated Outdoor Unitary Equipment” of the Air Conditioning and Refrigeration Institute (ARI), 1984, as amended. Applicants of mechanical permits for commercial HVAC equipment shall be required to submit a detailed acoustical study that demonstrates compliance with the noise limits established in Section 8.40.050. (Ord. 22-13 § 3 (Exh. A); Ord. 07-17 § 2 (part))

5.0 Study Method and Procedure

The following section describes the noise modeling procedures and assumptions used for this assessment.

5.1 Noise Measurement Procedure and Criteria

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as the first row of houses
- Locations that are acoustically representative and equivalent of the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

MD conducted the sound level measurements in accordance to the City's and Caltrans (TeNS) technical noise specifications. All measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA). The following gives a brief description of the Caltrans Technical Noise Supplement procedures for sound level measurements:

- Microphones for sound level meters were placed 5-feet above the ground for all measurements
- Sound level meters were calibrated (Larson Davis CAL 200) before and after each measurement
- Following the calibration of equipment, a windscreen was placed over the microphone
- Frequency weighting was set on "A" and slow response
- Results of the long-term noise measurements were recorded on field data sheets
- During any short-term noise measurements, any noise contaminations such as barking dogs, local traffic, lawnmowers, or aircraft fly-overs were noted
- Temperature and sky conditions were observed and documented

5.2 Noise Measurement Locations

The noise monitoring locations were selected to obtain a baseline of the existing noise environment. Two (2) short-term 15-minute noise measurements were conducted at the project site. Appendix A includes photos, the field sheet, and measured noise data. Exhibit E illustrates the location of the measurements.

5.3 FHWA Traffic Noise Prediction Model

Traffic noise from vehicular traffic was projected using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) standards. The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Roadway volumes and percentages correspond to the San Jacinto General Plan Noise Element. Trip generation for the project was taken from the Chacon Farms Trip Generation Analysis prepared by TJW Engineering. The referenced traffic data was applied to the model and is in Appendix B. The following outlines the key adjustments made to the REMEL for the roadway inputs:

- Roadway classification – (e.g., freeway, major arterial, arterial, secondary, collector, etc.),

- Roadway Active Width – (distance between the center of the outer most travel lanes on each side of the roadway)
- Average Daily Traffic Volumes (ADT), Travel Speeds, Percentages of automobiles, medium trucks and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g., soft vs. hard)
- Percentage of total ADT which flows each hour through-out a 24-hour period

Table 3 indicates the roadway parameters and vehicle distribution utilized for this study.

Table 3: Roadway Parameters and Vehicle Distribution

Roadway	Segment	Existing ADT[1]	Existing + Project ADT[2]	Speed (MPH)	Site Conditions
Cawston Ave	East of Project Site	3,100	7,052	40	Soft
7th Street	North of Project Site	9,650	13,602	45	Soft
Esplanade Ave	South of Project Site	5800	9,752	45	Soft
Vehicle Distribution and Mix[3]					
Motor-Vehicle Type		**Daytime % (7AM to 7 PM)**	**Evening % (7 PM to 10 PM)**	**Night % (10 PM to 7 AM)**	**Total % of Traffic Flow**
Automobiles		73.4	8.2	18.4	90.13
Medium Trucks		74.5	4.8	20.7	6.89
Heavy Trucks		71.8	6.8	21.4	2.98

Notes:
[1] Existing ADT from San Jacinto General Plan Noise Element.
[2] Trip generation from TJW Engineering, Inc. Assuming 3,952 project trips applied to every segment.
[3] Typical Riverside County Vehicle Distribution and Mix.

5.4 FHWA Roadway Construction Noise Model

The construction noise analysis utilizes the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RNCM), together with several key construction parameters. Key inputs include distance to the sensitive receiver, equipment usage, % usage factor, and baseline parameters for the project site.

The project was analyzed based on the different construction phases. The construction noise calculation output worksheet is in Appendix C.

Exhibit E

Measurement Locations

= Short-Term 15-minute Monitoring Locations



Exhibit E:
Measurements Locations

6.0 Existing Noise Environment

Two (2) short-term 15-minute noise measurements were conducted at the project site to document the existing noise environment. The measurements include the 15-minute Leq, Lmin, Lmax, and other statistical data (e.g. L2, L8). Noise measurement field sheets are provided in Appendix A.

6.1 Short-Term Noise Measurement Results

The results of the short-term noise data are presented in Table 4.

Table 4: Long-Term Noise Measurement Data[1]

Location	Start	Stop	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)	L(90)
NM1	10:01 AM	10:16 AM	46.9	68.0	36.9	53.6	48.7	44.9	41.7	38.6
NM2	9:39 AM	9:54 AM	64.4	83.8	41.4	72.6	65.1	59.9	56.5	50.4

Notes:
1. Short-term noise monitoring locations are illustrated in Exhibit E.

Noise data indicates the ambient noise level ranged from 47 to 64 dBA Leq at the project site. Field notes indicate that the primary source of noise was traffic from surrounding roads. Additional field notes and photographs are provided in Appendix A.

7.0 Future Noise Environment Impacts and Mitigation

This assessment analyzes future noise impacts from the project and compares the results to the City's Noise Standards. The analysis details the estimated exterior noise levels associated with traffic from adjacent roadway sources and stationary noise due to the project.

7.1 Future Exterior Noise

The exterior noise level off-site of the project will be impacted by transportation-related sources and stationary sources from the site. The following outlines the impacts associated with exterior noise levels.

7.1.1 Future Off-Site Traffic Noise Impact

A worst-case project generated traffic noise level was modeled utilizing the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108. Traffic noise levels were calculated at the nearest sensitive receptor to each analyzed roadway. The modeling takes into account existing walls and barriers that reduce noise. The potential off-site noise impacts caused by an increase of traffic from operation of the proposed project on the nearby roadways were calculated for the following scenarios:

Existing Year (without Project): This scenario refers to existing year traffic noise conditions.

Existing Year (Plus Project): This scenario refers to existing year + project traffic noise conditions.

Table 5 compares the without and with project scenarios and shows the change in traffic noise levels as a result of the proposed project. The noise level at the existing residences to the east of the project site (off Cawston Avenue) is "normally acceptable" per the General Plan noise compatibility matrix, while the noise level at the existing residences to the north of the project site (off 7th Street) is "conditionally acceptable". Per Policy PS-6.3, it takes a change of 5 dBA or more to be significant for "normally acceptable" uses and a change of 3 dBA or more to be significant for "conditionally acceptable" uses. Although there is an increase in traffic noise levels, the impact is considered to have no impact as the change in noise levels will be less than the applicable threshold criteria per the General Plan.

Table 5: Off-Site Change in Existing Noise Levels as a Result of Project

Roadway[1]	Segment	CNEL at Nearest Sensitive Receptor, dBA[2]				
		Existing Without Project	Existing With Project	Change in Noise Level	Noise Level Increase Threshold (dBA)	Potential Significant Impact
Cawston Ave	East of Project Site	52.2	55.8	3.6	5.0	No
7th Street	North of Project Site	67.8	69.3	1.5	3.0	No

Notes:
[1] Exterior noise levels calculated at 5 feet above ground level.
[2] Noise levels calculated at the nearest sensitive receptors.

7.1.2 Future On-Site Traffic Noise Impact

Traffic noise from the local roadway network was evaluated and compared to the City's Exterior Noise Standard. Per the City's Exterior Noise Standard (Table N-2 from the City's General Plan, Noise Element), the single-family residential noise limit is 65 dBA CNEL. As shown in Table 6, existing plus project traffic 65 dBA CNEL noise projections from the loudest street (7th Street) will reach up to 133 feet from the centerline of the road. Residential yard properties are located approximately 50 feet away from the centerline of 7th Street and have a projected noise level of 71 dBA CNEL. Thus MD recommends that walls of at least 6 feet be constructed along the borders of the project site to reduce noise levels to 65 dBA CNEL and under.

Table 6: On-Site Existing + Project Exterior Noise Levels

Roadway	Segment	CNEL at 50 Ft (dBA), No Wall	CNEL at 50 Ft (dBA), With Wall	Distance to Contour, No Wall (Ft)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Cawston Ave	East of Project Site	67.5	61.1	34	73	158	340
7th St	North of Project Site	71.4	64.9	62	133	288	619
Esplanade Ave	South of Project Site	69.9	63.4	49	106	228	473

7.1.3 Noise Impacts to Off-Site Receptors Due to Stationary Sources

The nearest sensitive receptors that may be affected by project operational noise include adjacent residential uses to the north.

On-site operational noise includes transformers and HVAC units. HVAC equipment will be ground mounted in the backyards of each unit behind fences/walls. Equipment will be at least 100 feet away from the nearest residential uses to the north. The maximum sound power level from a single unit is 73 dBA. At 100 feet away, the sound pressure level a single unit is estimated to be 32 dBA. Assuming all units are running simultaneously in each unit's backyard, the sound level is 43 dBA Leq at the nearest residential receptors. The noise due to the HVAC units operating simultaneously will thus meet the City's nighttime noise level limit of 45 dBA for residential properties.

Per ANSI and NEPA requirements for transformer noise, transformers will be no louder than 65 dBA at 6 feet. Operational noise complies with the stationary noise standards set in section 8.40.050 of the City's Municipal Code. The impact is, therefore, less than significant.

8.0 Construction Noise Impact

The degree of construction noise may vary for different areas of the project site and also vary depending on the construction activities. Noise levels associated with the construction will vary with the different phases of construction. The construction noise and vibration level projections are provided in the sections below.

8.1 Construction Noise

The Environmental Protection Agency (EPA) has compiled data regarding the noise generated characteristics of typical construction activities. The data is presented in Table 7.

Table 7: Typical Construction Noise Levels[1]

Equipment Powered by Internal Combustion Engines

Type	Noise Levels (dBA) at 50 Feet
Earth Moving	
Compactors (Rollers)	73 - 76
Front Loaders	73 - 84
Backhoes	73 - 92
Tractors	75 - 95
Scrapers, Graders	78 - 92
Pavers	85 - 87
Trucks	81 - 94
Materials Handling	
Concrete Mixers	72 - 87
Concrete Pumps	81 - 83
Cranes (Movable)	72 - 86
Cranes (Derrick)	85 - 87
Stationary	
Pumps	68 - 71
Generators	71 - 83
Compressors	75 - 86

Impact Equipment

Type	Noise Levels (dBA) at 50 Feet
Saws	71 - 82
Vibrators	68 - 82

Notes:
[1] Referenced Noise Levels from the Environmental Protection Agency (EPA)

The City's Municipal Code specifies a noise level limit of 65 dBA Leq for construction activities at single-family residential receivers. The Municipal code also requires that all construction activities occur between 7am to 7pm on Monday through Saturday and between 9am to 6pm on Sundays and holidays.

Construction noise is considered a short-term impact and would be considered significant if construction activities do not follow the above recommendations. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the project vicinity. The construction noise impact is considered less than significant; however, construction noise level projections are provided.

The nearest sensitive land uses to the project site are the residential uses to the north. These uses are as close as 100 feet from construction activities.

Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Noise levels are in Table 8. A likely worst-case construction noise scenario assumes equipment operating as close as 100 feet and an average of 430 feet from the nearest sensitive receptor. The Lmax levels represent maximum levels when construction occurs adjacent to the residential receptors. Leq levels represent the average construction noise level during each phase.

Table 8: Construction Noise Levels at West Residences

Phase	dBA Lmax	dBA Leq
Prep	76	50
Grading	77	50
Build	76	48
Paving	75	44
Arch Coating	70	36
Notes: Const Equip from CalEEMod.		

The noise due to construction at the nearest residential receptor will be 36 to 50 dBA Leq and 70 to 77 dBA Lmax. The noise due to construction will not exceed the construction noise limit of 65 dBA Leq provided in the City's Municipal code. Thus, the construction noise impact is less than significant.

8.2 Construction Vibration

Construction activities can produce vibration that may be felt by adjacent land uses. The construction of the proposed project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a vibratory roller. A vibratory roller has a vibration impact of 0.210 inches per second peak particle velocity (PPV) at 25 feet.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{equipment} = PPV_{ref} (100/D_{rec})^n$$

Where: PPV_{ref} = reference PPV at 100ft.
D_{rec} = distance from equipment to receiver in ft.
n = 1.1 (the value related to the attenuation rate through ground)

The thresholds from the Caltrans Transportation and Construction Induced Vibration Guidance Manual in Table 9 (below) provides general thresholds and guidelines as to the vibration damage potential from vibratory impacts.

Table 9: Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Table 19, Transportation and Construction Vibration Guidance Manual, Caltrans, Sept. 2013.
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 10 gives approximate vibration levels for particular construction activities. This data provides a reasonable estimate for a wide range of soil conditions.

Table 10: Vibration Source Levels for Construction Equipment[1]

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

[1] Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

All proposed structures are at least 100 feet from any existing structures. At a distance of 100 feet, a vibratory roller would yield a worst-case 0.046 PPV (in/sec), which may be perceptible but below any risk of damage (0.5 in/sec PPV is the threshold of old residential structures). The impact is less than significant, and no mitigation is required.

9.0 References

State of California General Plan Guidelines: 1998. Governor's Office of Planning and Research

City of San Jacinto: General Plan Noise Element.

City of San Jacinto: Municipal Code – Noise Control.

Caltrans Noise Technical Manual. 2013

Konan Vibration Criteria

Federal Highway Administration. Noise Barrier Design Handbook. June 2017.

Federal Transit Administration. Transit Noise and Vibration Impact Assessment Manual. September 2018

Appendix A:

Photographs and Field Measurement Data

15-Minute Continuous Noise Measurement Datasheet - Cont.

Project Name: Chacon Farms - Noise

Site Address/Location: Cawtson Ave & Esplanade Ave

Site Id: NM1, NM2

Figure 1: NM1



Figure 2: NM1



Figure 3: NM2



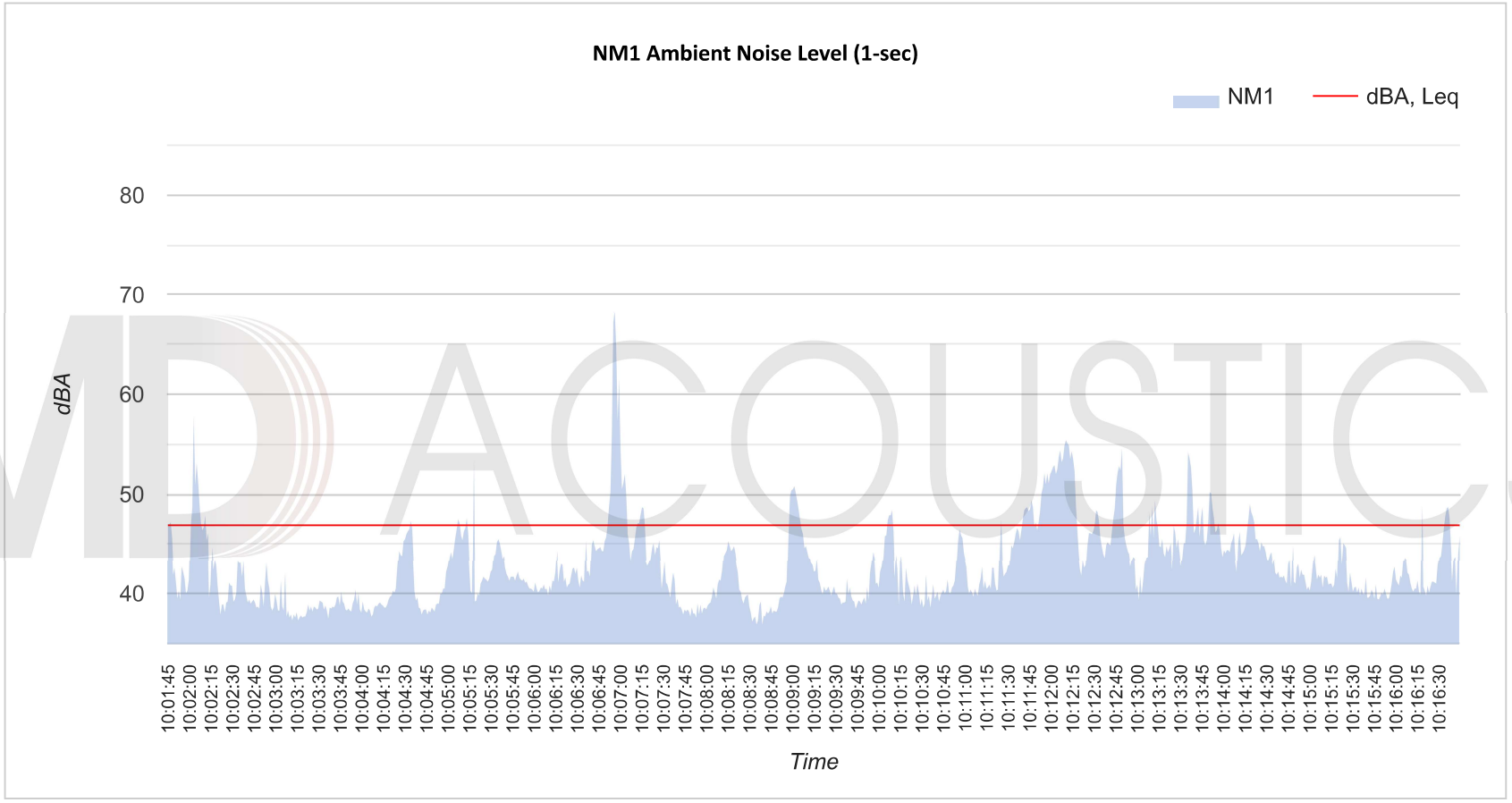
Table 1: Baseline Noise Measurement Summary

Location	Start	Stop	Leq	Lmax	Lmin	L2	L8	L25	L50	L90
NM1	10:01 AM	10:16 AM	46.9	68.0	36.9	53.6	48.7	44.9	41.7	38.6
NM2	9:39 AM	9:54 AM	64.4	83.8	41.4	72.6	65.1	59.9	56.5	50.4

MD ACOUSTICS

15-Minute Continuous Noise Measurement Datasheet - Cont.

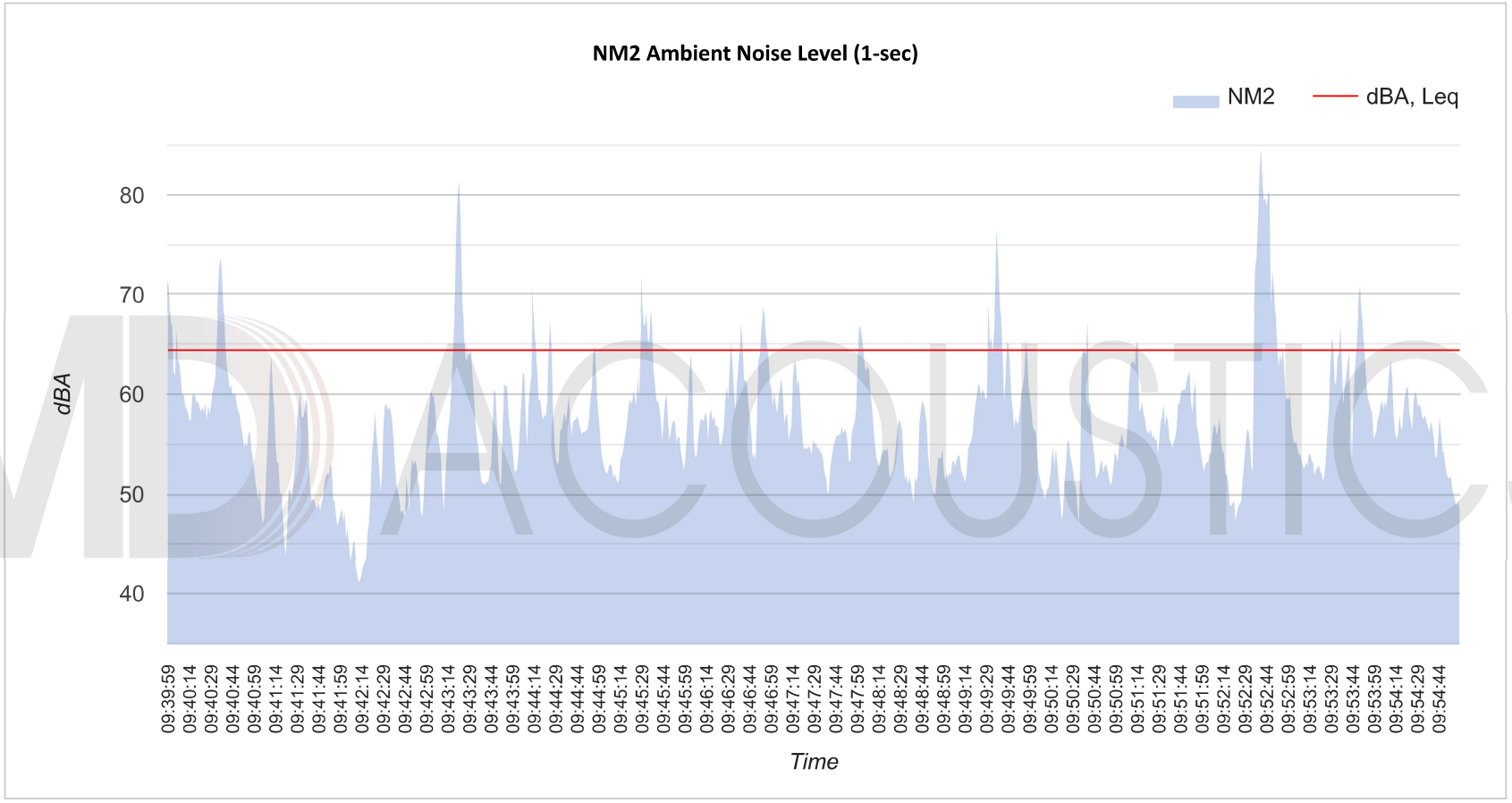
Project Name:	Chacon Farms - Noise	**Site Topo:**	Flat desert conditions	**Noise Source(s) w/ Distance:**	
Site Address/Location:	Cawtson Ave & Esplanade Ave	**Meteorological Cond.:**	78F Sunny winds 0-5MPH	Road Noise	
Site Id:	NM1	**Ground Type:**	Sandy soil and clay		



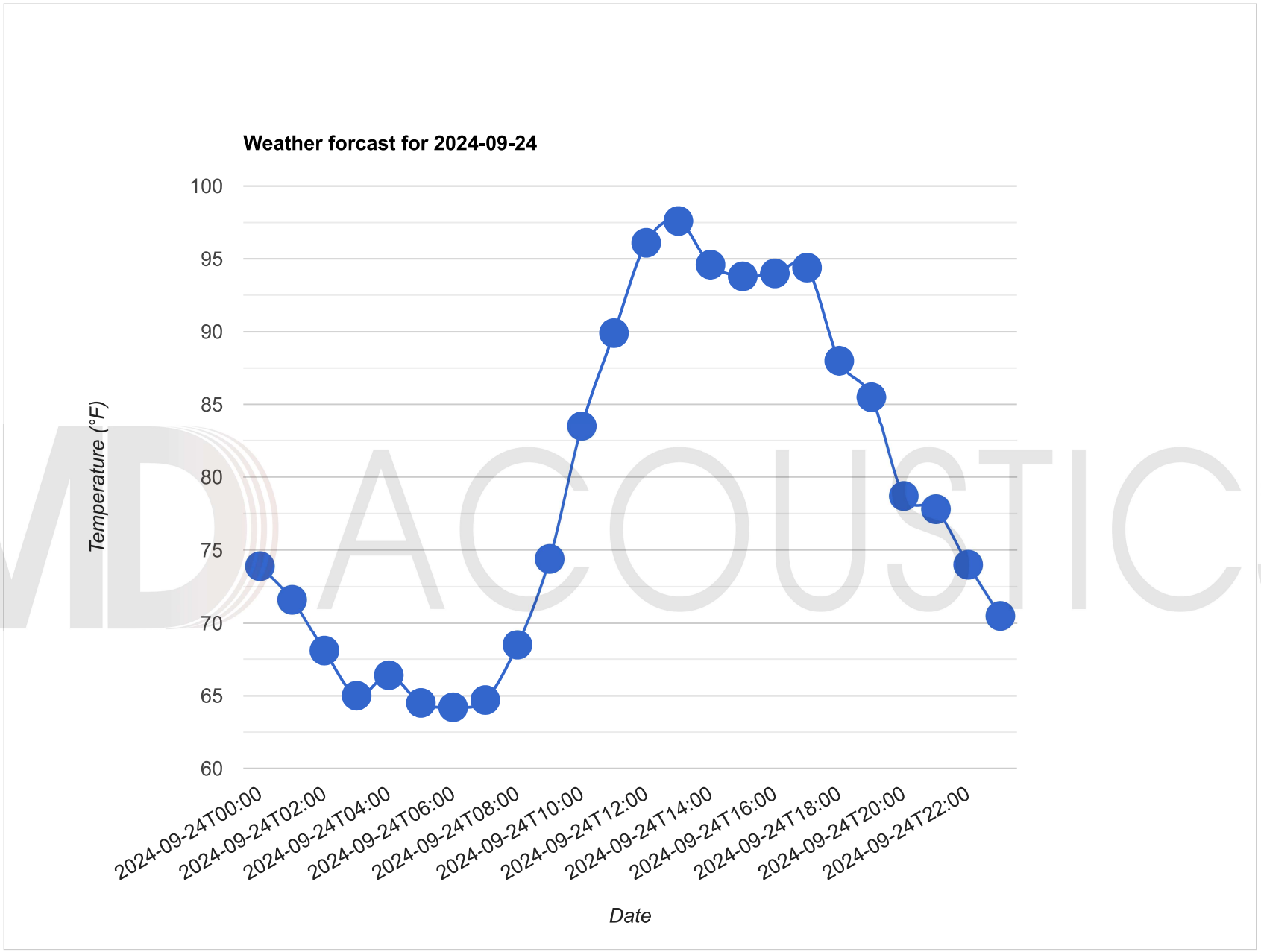
MD ACOUSTICS

15-Minute Continuous Noise Measurement Datasheet - Cont.

Project Name:	Chacon Farms - Noise	**Site Topo:**	Flat desert conditions	**Noise Source(s) w/ Distance:**	
Site Address/Location:	Cawtson Ave & Esplanade Ave	**Meteorological Cond.:**	78F Sunny winds 0-5MPH	Road Noise	
Site Id:	NM2	**Ground Type:**	Sandy soil and clay		



MD ACOUSTICS



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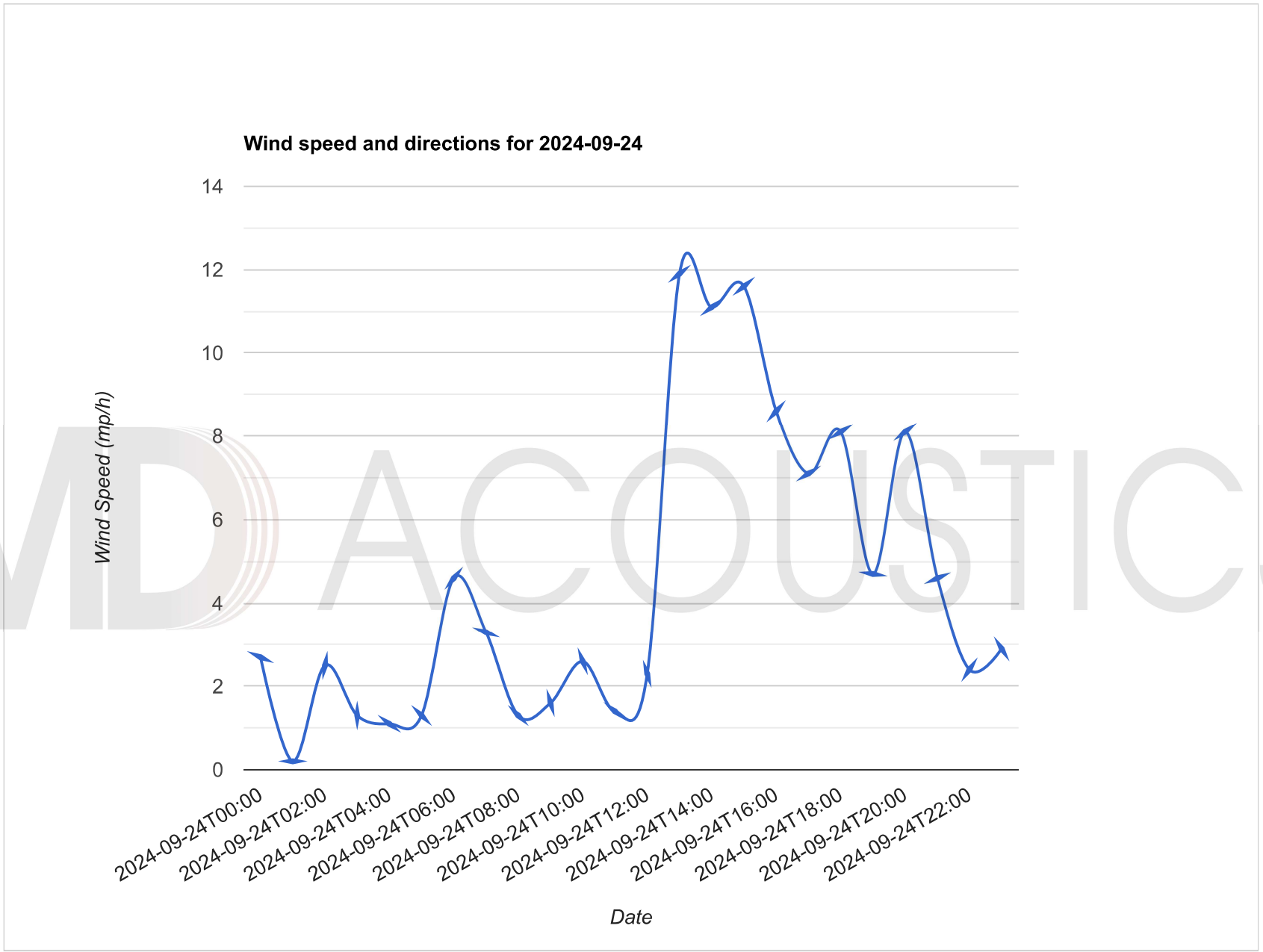

Source: Global Forecast System (GFS) weather forcast model

MD ACOUSTICS

Appendix B:

Traffic Modeling Output

TJW ENGINEERING, INC.
TRAFFIC ENGINEERING &
TRANSPORTATION PLANNING
CONSULTANTS

September 17, 2024

Richard Michael
RAMONA DAIRY, LLC
2451 Ramona Expressway
San Jacinto, CA 92582

SUBJECT: Chacon Farms Trip Generation Analysis, City of San Jacinto

Dear Mr. Michael,

TJW Engineering, Inc. (TJW) is pleased to submit this Trip Generation Analysis for the proposed project located at 710 Cawston Avenue in the City of San Jacinto. The proposed project is for the construction of 419 single family detached residential units. The purpose of this memorandum is to summarize the project Trip Generation Analysis.

Proposed Project

The proposed site is bound by 7th Street on the north, Cawston Avenue on the east, and Esplanade Avenue on the south. The project proposes to construct 419 single family detached residential units. Site access will be provided at each of the three (3) adjacent streets, Cawston Avenue, Esplanade Avenue, and 7th Street. A site plan is attached for reference.

Trip Generation Analysis

The trip generation for the proposed project was developed based on the *City of Jurupa Valley Traffic Impact Analysis Guidelines)* (November 2020). Per the *City Guidelines*, trip generation rates are to be obtained from the *Institute of Transportation Engineers Trip Generation Manual (ITE Manual)* (11th Edition, 2021). Trip generation volumes are based on the proposed land use for Single-Family Detached Housing. As shown in **Table 1** below, the proposed project is expected to generate a total of 294 AM peak hour trips, 394 PM peak hour trips, and 3,952 daily trips.

Table 1
Project Trip Generation

Proposed Land Use[1]	ITE Code	Qty	Unit[2]	Daily		AM Peak Hour					PM Peak Hour				
				Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
								In	Out	Total			In	Out	Total
Single-Family Detached Housing	210	419	DU	9.43	3,952	0.7	26:74	76	218	294	0.94	63:37	248	146	394

1: Trip generation and pass-by rates from ITE Trip Generation (11th Edition, 2021).
2: DU = Dwelling Units.

Summary

This memorandum provides an overview of the trip generation analysis for the proposed project and will generate a total of 294 AM peak hour trips, 394 PM peak hour trips, and 3,952 daily trips. It should be noted that a Draft Transportation Impact Study for the proposed project was conducted in March 2024. This study evaluated a project that generates a total of 364 AM peak hour trips, 454 PM peak hour trips, and 5,223 daily trips. As the project now generates fewer trips, the findings and conclusion of the March 2024 study would remain and be considered conservative.

It is recommended that City staff review this trip generation memorandum to determine if additional traffic analysis is warranted.

Please contact us at (949) 878-3509 if you have any questions regarding this analysis.

Sincerely,

Thomas Wheat, PE, TE
President

David Chew, PTP
Transportation Planner





Registered Civil Engineer *#69467*
Registered Traffic Engineer *#2565*

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: CHACON FARMS SFR
ROADWAY: CAWSTON AVE - EXISTING
LOCATION: NEAREST SENSITIVE RECEPTOR

JOB #: 1310-2024-02
DATE: 30-Sep-24
ENGINEER: N. Jensen

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	3,100	
SPEED =	40	
PK HR % =	10	
NEAR LANE/FAR LANE DI	13	
ROAD ELEVATION =	0.0	
GRADE =	1.0	%
PK HR VOL =	310	

RECEIVER INPUT DATA

RECEIVER DISTANCE =	300	
DIST C/L TO WALL =	0	
RECEIVER HEIGHT =	5.0	
WALL DISTANCE FROM RECEIVER	300	
PAD ELEVATION =	0.5	
ROADWAY VIEW: LF ANGLE=	-90	
RT ANGLE=	90	
DF ANGLE=	180	

SITE CONDITIONS

AUTOMOBILES =	15	
MEDIUM TRUCKS =	15	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	15	

WALL INFORMATION

HTH WALL	0.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.734	0.082	0.184	0.9013
MEDIUM TRUCK	0.745	0.048	0.207	0.0689
HEAVY TRUCKS	0.718	0.068	0.214	0.0298

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	299.95	- -
MEDIUM TRUCKS	4.0	299.93	- -
HEAVY TRUCKS	8.0	299.94	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	47.5	45.4	41.9	40.6	48.0	48.2
MEDIUM TRUCKS	45.3	43.2	37.3	38.9	46.1	46.2
HEAVY TRUCKS	46.5	44.3	40.1	40.3	47.4	47.6
NOISE LEVELS (dBA)	51.3	49.2	44.9	44.8	52.0	52.2

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	47.5	45.4	41.9	40.6	48.0	48.2
MEDIUM TRUCKS	45.3	43.2	37.3	38.9	46.1	46.2
HEAVY TRUCKS	46.5	44.3	40.1	40.3	47.4	47.6
NOISE LEVELS (dBA)	51.3	49.2	44.9	44.8	52.0	52.2

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	20	42	91	195
LDN	19	41	88	189

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: CHACON FARMS SFR
ROADWAY: CAWSTON AVE - EXISTING + PROJECT
LOCATION: NEAREST SENSITIVE RECEPTOR

JOB #: 1310-2024-02
DATE: 30-Sep-24
ENGINEER: N. Jensen

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	7,052	
SPEED =	40	
PK HR % =	10	
NEAR LANE/FAR LANE DI	13	
ROAD ELEVATION =	0.0	
GRADE =	1.0	%
PK HR VOL =	705	

RECEIVER INPUT DATA

RECEIVER DISTANCE =		300
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5.0
WALL DISTANCE FROM RECEIVER		300
PAD ELEVATION =		0.5
ROADWAY VIEW:	LF ANGLE=	-90
	RT ANGLE=	90
	DF ANGLE=	180

SITE CONDITIONS

AUTOMOBILES =	15	
MEDIUM TRUCKS =	15	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	15	

WALL INFORMATION

HTH WALL	0.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.734	0.082	0.184	0.9013
MEDIUM TRUCK	0.745	0.048	0.207	0.0689
HEAVY TRUCKS	0.718	0.068	0.214	0.0298

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	299.95	- -
MEDIUM TRUCKS	4.0	299.93	- -
HEAVY TRUCKS	8.0	299.94	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	51.1	49.0	45.5	44.2	51.5	51.8
MEDIUM TRUCKS	48.9	46.8	40.9	42.5	49.6	49.8
HEAVY TRUCKS	50.1	47.9	43.7	43.8	50.9	51.2
NOISE LEVELS (dBA)	54.9	52.7	48.5	48.3	55.5	55.8

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	51.1	49.0	45.5	44.2	51.5	51.8
MEDIUM TRUCKS	48.9	46.8	40.9	42.5	49.6	49.8
HEAVY TRUCKS	50.1	47.9	43.7	43.8	50.9	51.2
NOISE LEVELS (dBA)	54.9	52.7	48.5	48.3	55.5	55.8

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	34	73	157	338
LDN	33	70	151	326

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: CHACON FARMS SFR
ROADWAY: CAWSTON AVE - EXISTING + PROJECT
LOCATION: 50 FT FROM CENTERLINE

JOB #: 1310-2024-02
DATE: 30-Sep-24
ENGINEER: N. Jensen

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	7,052	
SPEED =	40	
PK HR % =	10	
NEAR LANE/FAR LANE DI	13	
ROAD ELEVATION =	0.0	
GRADE =	1.0	%
PK HR VOL =	705	

RECEIVER INPUT DATA

RECEIVER DISTANCE =	50	
DIST C/L TO WALL =	46	
RECEIVER HEIGHT =	5.0	
WALL DISTANCE FROM RECEIVER	4	
PAD ELEVATION =	0.5	
ROADWAY VIEW: LF ANGLE=	-90	
RT ANGLE=	90	
DF ANGLE=	180	

SITE CONDITIONS

AUTOMOBILES =	15	
MEDIUM TRUCKS =	15	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	15	

WALL INFORMATION

HTH WALL	6.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.734	0.082	0.184	0.9013
MEDIUM TRUCK	0.745	0.048	0.207	0.0689
HEAVY TRUCKS	0.718	0.068	0.214	0.0298

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	49.88	- -
MEDIUM TRUCKS	4.0	49.73	- -
HEAVY TRUCKS	8.0	49.69	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	62.8	60.6	57.2	55.9	63.2	63.5
MEDIUM TRUCKS	60.6	58.5	52.6	54.2	61.3	61.5
HEAVY TRUCKS	61.8	59.6	55.4	55.6	62.7	62.9
NOISE LEVELS (dBA)	66.6	64.4	60.2	60.0	67.2	67.5

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	55.9	53.7	50.3	49.0	56.3	56.6
MEDIUM TRUCKS	54.1	52.0	46.1	47.7	54.8	55.0
HEAVY TRUCKS	56.0	53.8	49.6	49.8	56.9	57.1
NOISE LEVELS (dBA)	60.2	58.0	53.8	53.6	60.9	61.1

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	34	73	157	339
LDN	33	71	152	328

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: CHACON FARMS SFR
ROADWAY: 7TH ST- EXISTING
LOCATION: NEAREST SENSITIVE RECEPTOR

JOB #: 1310-2024-02
DATE: 30-Sep-24
ENGINEER: N. Jensen

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	9,650	
SPEED =	45	
PK HR % =	10	
NEAR LANE/FAR LANE DI	20	
ROAD ELEVATION =	0.0	
GRADE =	1.0	%
PK HR VOL =	965	

RECEIVER INPUT DATA

RECEIVER DISTANCE =	45	
DIST C/L TO WALL =	40	
RECEIVER HEIGHT =	5.0	
WALL DISTANCE FROM RECEIVER	5	
PAD ELEVATION =	0.5	
ROADWAY VIEW: LF ANGLE=	-90	
RT ANGLE=	90	
DF ANGLE=	180	

SITE CONDITIONS

AUTOMOBILES =	15	
MEDIUM TRUCKS =	15	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	15	

WALL INFORMATION

HTH WALL	5.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.734	0.082	0.184	0.9013
MEDIUM TRUCK	0.745	0.048	0.207	0.0689
HEAVY TRUCKS	0.718	0.068	0.214	0.0298

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	43.89	- -
MEDIUM TRUCKS	4.0	43.76	- -
HEAVY TRUCKS	8.0	43.95	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	66.4	64.3	60.8	59.5	66.9	67.2
MEDIUM TRUCKS	63.6	61.5	55.6	57.2	64.3	64.5
HEAVY TRUCKS	64.4	62.2	58.0	58.2	65.3	65.5
NOISE LEVELS (dBA)	69.8	67.6	63.4	63.2	70.4	70.6

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	61.4	59.2	55.7	54.5	61.8	62.1
MEDIUM TRUCKS	58.6	56.5	50.7	52.2	59.4	59.5
HEAVY TRUCKS	64.4	62.2	58.0	58.2	65.3	65.5
NOISE LEVELS (dBA)	67.0	64.8	60.6	60.4	67.6	67.8

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	50	107	230	496
LDN	48	103	222	479

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: CHACON FARMS SFR
ROADWAY: 7TH ST - EXISTING + PROJECT
LOCATION: NEAREST SENSITIVE RECEPTOR

JOB #: 1310-2024-02
DATE: 30-Sep-24
ENGINEER: N. Jensen

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	13,602	
SPEED =	45	
PK HR % =	10	
NEAR LANE/FAR LANE DI	20	
ROAD ELEVATION =	0.0	
GRADE =	1.0	%
PK HR VOL =	1,360	

RECEIVER INPUT DATA

RECEIVER DISTANCE =	45	
DIST C/L TO WALL =	40	
RECEIVER HEIGHT =	5.0	
WALL DISTANCE FROM RECEIVER	5	
PAD ELEVATION =	0.5	
ROADWAY VIEW: LF ANGLE=	-90	
RT ANGLE=	90	
DF ANGLE=	180	

SITE CONDITIONS

AUTOMOBILES =	15	
MEDIUM TRUCKS =	15	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	15	

WALL INFORMATION

HTH WALL	5.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.734	0.082	0.184	0.9013
MEDIUM TRUCK	0.745	0.048	0.207	0.0689
HEAVY TRUCKS	0.718	0.068	0.214	0.0298

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	43.89	- -
MEDIUM TRUCKS	4.0	43.76	- -
HEAVY TRUCKS	8.0	43.95	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	67.9	65.8	62.3	61.0	68.4	68.7
MEDIUM TRUCKS	65.1	63.0	57.1	58.7	65.8	66.0
HEAVY TRUCKS	65.9	63.7	59.5	59.7	66.8	67.0
NOISE LEVELS (dBA)	71.3	69.1	64.9	64.7	71.9	72.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	62.8	60.7	57.2	55.9	63.3	63.6
MEDIUM TRUCKS	60.1	58.0	52.1	53.7	60.9	61.0
HEAVY TRUCKS	65.9	63.7	59.5	59.7	66.8	67.0
NOISE LEVELS (dBA)	68.4	66.3	62.1	61.9	69.1	69.3

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	62	134	289	624
LDN	60	130	279	602

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: CHACON FARMS SFR
ROADWAY: 7TH ST - EXISTING + PROJECT
LOCATION: 50 FT FROM CENTERLINE

JOB #: 1310-2024-02
DATE: 30-Sep-24
ENGINEER: N. Jensen

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	13,602	
SPEED =	45	
PK HR % =	10	
NEAR LANE/FAR LANE DI	20	
ROAD ELEVATION =	0.0	
GRADE =	1.0	%
PK HR VOL =	1,360	

RECEIVER INPUT DATA

RECEIVER DISTANCE =	50	
DIST C/L TO WALL =	46	
RECEIVER HEIGHT =	5.0	
WALL DISTANCE FROM RECEIVER	4	
PAD ELEVATION =	0.5	
ROADWAY VIEW: LF ANGLE=	-90	
RT ANGLE=	90	
DF ANGLE=	180	

SITE CONDITIONS

AUTOMOBILES =	15	
MEDIUM TRUCKS =	15	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	15	

WALL INFORMATION

HTH WALL	6.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.734	0.082	0.184	0.9013
MEDIUM TRUCK	0.745	0.048	0.207	0.0689
HEAVY TRUCKS	0.718	0.068	0.214	0.0298

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	49.25	- -
MEDIUM TRUCKS	4.0	49.09	- -
HEAVY TRUCKS	8.0	49.05	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	67.2	65.1	61.6	60.3	67.6	67.9
MEDIUM TRUCKS	64.3	62.2	56.4	57.9	65.1	65.2
HEAVY TRUCKS	65.2	63.0	58.8	59.0	66.1	66.3
NOISE LEVELS (dBA)	70.5	68.4	64.2	63.9	71.2	71.4

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	60.3	58.2	54.7	53.4	60.7	61.0
MEDIUM TRUCKS	57.8	55.7	49.9	51.4	58.6	58.7
HEAVY TRUCKS	59.4	57.2	53.0	53.2	60.3	60.5
NOISE LEVELS (dBA)	64.1	61.9	57.8	57.5	64.7	64.9

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	62	133	287	618
LDN	60	129	277	597

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: CHACON FARMS SFR
ROADWAY: ESPLANADE AVE- EXISTING + PROJECT
LOCATION: 50 FT FROM CENTERLINE

JOB #: 1310-2024-02
DATE: 30-Sep-24
ENGINEER: N. Jensen

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	9,752	
SPEED =	45	
PK HR % =	10	
NEAR LANE/FAR LANE DI	13	
ROAD ELEVATION =	0.0	
GRADE =	1.0	%
PK HR VOL =	975	

RECEIVER INPUT DATA

RECEIVER DISTANCE =	50	
DIST C/L TO WALL =	46	
RECEIVER HEIGHT =	5.0	
WALL DISTANCE FROM RECEIVER	4	
PAD ELEVATION =	0.5	
ROADWAY VIEW: LF ANGLE=	-90	
RT ANGLE=	90	
DF ANGLE=	180	

SITE CONDITIONS

AUTOMOBILES =	15	
MEDIUM TRUCKS =	15	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	15	

WALL INFORMATION

HTH WALL	6.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.734	0.082	0.184	0.9013
MEDIUM TRUCK	0.745	0.048	0.207	0.0689
HEAVY TRUCKS	0.718	0.068	0.214	0.0298

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	49.88	- -
MEDIUM TRUCKS	4.0	49.73	- -
HEAVY TRUCKS	8.0	49.69	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	65.7	63.5	60.0	58.8	66.1	66.4
MEDIUM TRUCKS	62.8	60.7	54.8	56.4	63.6	63.7
HEAVY TRUCKS	63.7	61.4	57.3	57.4	64.5	64.7
NOISE LEVELS (dBA)	69.0	66.8	62.7	62.4	69.6	69.9

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	58.8	56.6	53.1	51.9	59.2	59.5
MEDIUM TRUCKS	56.3	54.2	48.3	49.9	57.1	57.2
HEAVY TRUCKS	57.9	55.6	51.5	51.6	58.7	58.9
NOISE LEVELS (dBA)	62.5	60.4	56.2	56.0	63.2	63.4

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	49	105	227	489
LDN	47	102	219	472

Appendix C:

Construction Noise Modeling Output

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41

Receptor - Residences to the North

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Edge of Site to Receptor, feet	Center of Site to Receptor, feet	Item Usage Percent[1]	Ground Factor[2]	Usage Factor	Receptor Item Lmax, dBA	Recptor. Item Leq, dBA
SITE PREP									
Tractor	4	84	100	1350	40	0.66	0.40	76.0	41.9
Dozer	3	82	100	1350	40	0.66	0.40	74.0	39.9
							Log Sum	76.0	49.6
GRADE									
Excavator	2	81	100	1350	40	0.66	0.40	73.0	38.9
Grader	1	85	100	1350	40	0.66	0.40	77.0	42.9
Dozer	1	82	100	1350	40	0.66	0.40	74.0	39.9
Scraper	2	84	100	1350	40	0.66	0.40	76.0	41.9
Tractor	2	84	100	1350	40	0.66	0.40	76.0	41.9
								77.0	50.3
BUILD									
Crane	1	81	100	1350	16	0.66	0.16	73.0	35.0
Man lift	3	75	100	1350	20	0.66	0.20	67.0	29.9
Generator	1	81	100	1350	50	0.66	0.50	73.0	39.9
Tractor	3	84	100	1350	40	0.66	0.40	76.0	41.9
Welder/Torch	1	74	100	1350	40	0.66	0.40	66.0	31.9
								76.0	48.1
PAVE									
Paver	2	77	100	1350	50	0.66	0.50	69.0	35.9
Compactor (ground)	2	83	100	1350	20	0.66	0.20	75.0	37.9
Roller	2	80	100	1350	20	0.66	0.20	72.0	34.9
								75.0	44.2
ARCH COAT									
Compressor (air)	1	78	100	1350	40	0.66	0.40	70.0	35.9
								70.0	35.9

[1]FHWA Construction Noise Handbook: Table 9.1 RCNM Default Noise Emission Reference Levels and Usage Factors

VIBRATION LEVEL IMPACT

Project:	Chacon Farms SFT	Date: 9/30/24
Source:	Vibratory Roller	
Scenario:	Unmitigated	
Location:	North residences	
Address:	South Loop Rd, Placer County	

PPV = PPVref(25/D)^n (in/sec)

DATA INPUT

Equipment = Type	1	Vibratory Roller	INPUT SECTION IN BLUE
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	100.00	Distance from Equipment to Receiver (ft)	
n =	1.10	Vibration attenuation rate through the ground	

Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.

DATA OUT RESULTS

PPV =	**0.046**	IN/SEC	OUTPUT IN RED

Appendix H

Chacon Farms Trip Generation Analysis, City of San Jacinto

TJW Engineering

September 17, 2024

With

Chacon Farms Draft Transportation Impact Study

Psomas

March 2024

TJW ENGINEERING, INC.
TRAFFIC ENGINEERING &
TRANSPORTATION PLANNING
CONSULTANTS

September 17, 2024

Richard Michael
RAMONA DAIRY, LLC
2451 Ramona Expressway
San Jacinto, CA 92582

SUBJECT: Chacon Farms Trip Generation Analysis, City of San Jacinto

Dear Mr. Michael,

TJW Engineering, Inc. (TJW) is pleased to submit this Trip Generation Analysis for the proposed project located at 710 Cawston Avenue in the City of San Jacinto. The proposed project is for the construction of 419 single family detached residential units. The purpose of this memorandum is to summarize the project Trip Generation Analysis.

Proposed Project

The proposed site is bound by 7th Street on the north, Cawston Avenue on the east, and Esplanade Avenue on the south. The project proposes to construct 419 single family detached residential units. Site access will be provided at each of the three (3) adjacent streets, Cawston Avenue, Esplanade Avenue, and 7th Street. A site plan is attached for reference.

Trip Generation Analysis

The trip generation for the proposed project was developed based on the *City of Jurupa Valley Traffic Impact Analysis Guidelines)* (November 2020). Per the *City Guidelines*, trip generation rates are to be obtained from the *Institute of Transportation Engineers Trip Generation Manual (ITE Manual)* (11th Edition, 2021). Trip generation volumes are based on the proposed land use for Single-Family Detached Housing. As shown in **Table 1** below, the proposed project is expected to generate a total of 294 AM peak hour trips, 394 PM peak hour trips, and 3,952 daily trips.

Table 1
Project Trip Generation

Proposed Land Use[1]	ITE Code	Qty	Unit[2]	Daily		AM Peak Hour					PM Peak Hour				
				Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
								In	Out	Total			In	Out	Total
Single-Family Detached Housing	210	419	DU	9.43	3,952	0.7	26:74	76	218	294	0.94	63:37	248	146	394

1: Trip generation and pass-by rates from ITE Trip Generation (11th Edition, 2021).
2: DU = Dwelling Units.

Summary

This memorandum provides an overview of the trip generation analysis for the proposed project and will generate a total of 294 AM peak hour trips, 394 PM peak hour trips, and 3,952 daily trips. It should be noted that a Draft Transportation Impact Study for the proposed project was conducted in March 2024. This study evaluated a project that generates a total of 364 AM peak hour trips, 454 PM peak hour trips, and 5,223 daily trips. As the project now generates fewer trips, the findings and conclusion of the March 2024 study would remain and be considered conservative.

It is recommended that City staff review this trip generation memorandum to determine if additional traffic analysis is warranted.

Please contact us at (949) 878-3509 if you have any questions regarding this analysis.

Sincerely,

Thomas Wheat, PE, TE
President

David Chew, PTP
Transportation Planner





Registered Civil Engineer *#69467*
Registered Traffic Engineer *#2565*

SEVENTH STREET

CAWSTON AVENUE

ESPLANADE AVENUE

Chacon Farms Draft Transportation Impact Study



CHACON FARMS

PREPARED FOR

RAMONA DAIRY



March 2024

Balancing the Natural and Built Environment

PSOMAS

CHACON FARMS
TRANSPORTATION IMPACT STUDY
SAN JACINTO, CA

Prepared For

Ramona Dairy

Prepared By

PSOMAS

Psomas Project No. 4RAM020100

March 2024

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1. EXECUTIVE SUMMARY

The proposed Chacon Farms project is located in San Jacinto, CA, bound by 7th Street on the north, Cawston Avenue on the east, and Esplanade Avenue on the south. The project will include 210 detached single family residential units and 430 townhomes and is expected to be completed in 2027. The project will generate 5,223 daily trips, including 218 AM peak hour trips and 254 PM peak hour trips.

Based on direction from the City, the study area includes 20 existing intersections and 3 roadway segments. The study locations were evaluated for existing conditions, opening year conditions without the project, and opening year conditions with the project. The intersections were evaluated using *SimTraffic*, and the roadway segments were evaluated based on the capacities listed in the City's General Plan.

Improvements which are expected to be underway shortly in the study area include:

- Construct a traffic signal at Cawston Avenue and Esplanade Avenue
- Widen Esplanade Avenue to a four-lane divided roadway between Warren Road and Sanderson Avenue
- Construct a traffic signal at Esplanade Avenue and Warren Road

The modeling was completed first without the improvements in place to help determine if they would be needed without the project. Ultimately, the models all include a traffic signal at Esplanade Avenue and Warren Road as well as a four-lane section on Esplanade Road, but do not include a signal at Warrant Road and Esplanade Road.

Traffic volumes were not only collected for the AM and PM peak hours, but also for the school release peak hour. However, the school release period volumes were found to be generally lower than the "typical" peak hour volumes, the additional period was not evaluated.

The operational analysis shows that all intersections operate with an acceptable LOS under existing conditions. However, four intersections will experience degraded operations in the opening year with or without the project as indicated below:

- Ramona Expressway/Sanderson Avenue – LOS E in the AM peak hour (with and without project)
- 7th Street/Lyon Avenue – LOS E in the AM peak hour (with project) and LOS F in the PM peak hour (with and without project)
- Esplanade Avenue/Kirby Street – LOS F in both peak hours (with and without project)
- Esplanade Avenue/Lyon Avenue – LOS F in the PM peak hour due to queuing at the Esplanade Avenue/Kirby Street intersection (with and without project)

The peak hour signal warrant is met for the 7th Street/Lyon Avenue and Esplanade Avenue/Kirby Street intersections in the opening year. Therefore, it is recommended that signals be installed at both locations. With the signal, both interactions will operate at an acceptable LOS and the intersection of Esplanade Avenue and Lyon Avenue will no longer be affected by queuing from Esplanade Avenue/Kirby Street. The project will be responsible for 17% of the 7th Street/Lyon Avenue traffic signal cost and 11% of the Esplanade Avenue/Kirby Street traffic signal cost.

The study segments were found to operate with volumes well below capacity in each of the study periods, so no additional improvements are required.

Because the project is located in a low-VMT generating area and is consistent with the surrounding land uses, the project is considered to have a less than significant impact. In addition, the project will not impact existing or planned multimodal facilities. Finally, the recommended sight triangles are shown and should be maintained as the project is designed and constructed to ensure sufficient sight visibility at the project driveways.

2. INTRODUCTION

2.1. PURPOSE OF TIS AND STUDY OBJECTIVE

The purpose of this report is to evaluate anticipated traffic impacts due to the development of the Chacon Farms development. To that end, this report provides an analysis of 20 existing intersections and 3 roadway segments which were determined by the City as locations which may serve a significant amount of project traffic. Necessary improvements were then determined to ensure the roadway network continues to operate acceptably as the project is developed.

2.2. PROJECT INFORMATION

The proposed Chacon Farms development is expected to include 640 residential units, including 210 single family detached units and 430 townhouses. The project will be accessible from 7th Street on the north, Cawston Street on the east, and Esplanade Avenue on the south. The project is expected to be completed in 2027. Figure 1 shows the location of the project and Figure 2 shows the project site plan.

The site on which the project will be located is mostly vacant and is zoned as rural residential. The proposed zoning will be medium residential. Based on discussions with the City, this report includes an analysis of existing conditions, opening year conditions without the project, and opening year conditions plus the project.

Figure 1. Project Location

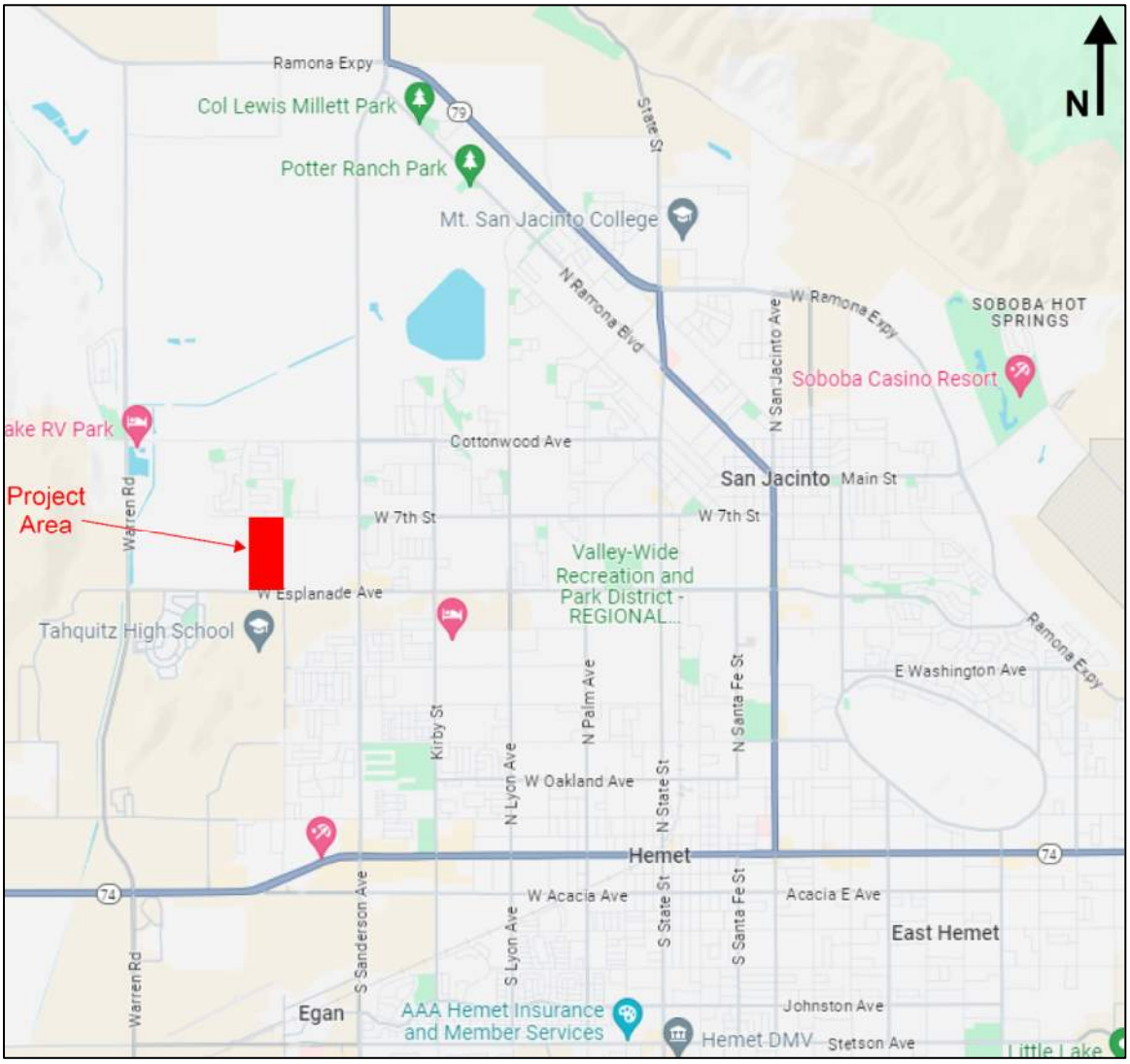


Figure 2. Site Plan



3. METHODOLOGY AND IMPACT THRESHOLDS

Level of Service (LOS) is a qualitative measure that describes operational conditions in terms of travel speed (for arterials), density (for freeways and ramps), and delays (for intersections). LOS ranges from A to F, with A representing the best operating conditions and F representing the worst. The City of San Jacinto LOS target (from the *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment*[1]) is LOS D or better. Table 1 shows the LOS thresholds for signalized intersections and Table 2 shows the LOS thresholds for unsignalized intersections.

Table 1. Level of Service Thresholds for Signalized Intersections

Delay (sec/veh)	LOS
≤ 10.0	A
> 10.0 - ≤ 20.0	B
> 20.0 - ≤ 35.0	C
> 35.0 - ≤ 55.0	D
> 55.0 - ≤ 80.0	E
> 80.0	F

Table 2. Level of Service Thresholds for Unsignalized Intersections

Delay (sec/veh)	LOS
≤ 10.0	A
> 10.0 - ≤ 15.0	B
> 15.0 - ≤ 25.0	C
> 25.0 - ≤ 35.0	D
> 35.0 - ≤ 50.0	E
> 50.0	F

Because of the high posted speeds and number of lanes at some stop-controlled intersections, the analyses were unable to be completed using the HCM methodology via Synchro. Therefore, microsimulation was completed using SimTraffic, which also captures any interaction between intersections due to queue spillback.

If a signal operates at LOS D or better with the addition of project traffic, no improvements are needed.

However, if a signal is operating at LOS D without the project and project traffic will degrade operations to LOS E or F, improvements will be needed to return operations to LOS D. Any signalized intersection operating at LOS E or F without the project for which project traffic increases delay by 5.0 seconds or more will require improvements.

For unsignalized intersections, an operational improvement would be required if either a) or b) and c) below occur:

a) The addition of project traffic causes the intersection to degrade from LOS D or better to LOS E or F.
b) The project adds 5.0 seconds or more of delay to an intersection project to operate at LOS E or F without project traffic.
c) The intersection meets the peak hour traffic signal warrant after the addition of project traffic.

If the conditions are satisfied, improvements will be required for case a) to return to LOS D or better and for case b) to return to pre-project LOS and delay (or better).

The study roadway segments were compared to the capacities listed in the *General Plan*[2], as follows:

- Arterial, 6 lanes – 55,300 vehicles per day (vpd)
- Arterial, 4 lanes – 39,300 vpd
- Major, 4 lanes divided – 35,800 vpd
- Major, 4 lanes undivided – 32,600 vpd
- Collector, 2 lanes undivided – 18,300 vpd
- Collector, 2 lanes divided – 17,800 vpd

Improvements will be needed if the addition of project traffic results in either:

- Degradation from LOS D or better to LOS E or F
- Addition of 5% of roadway capacity for a roadway operating unacceptably without project traffic

4. EXISTING CONDITIONS

4.1. EXISTING ROADWAY NETWORK

The overall project will be accessible via the existing roadways of 7th Street, Cawston Avenue, and Esplanade Avenue. The critical elements of the roadway network which will serve the project are discussed below.

Cawston Avenue is a two-lane undivided roadway along the project frontage. North of 7th Street, the roadway is four lanes with on-street parking along the east side of the roadway. South of Esplanade Avenue, the roadway is five lanes, including two travel lanes per direction and a two-way left turn lane. The posted speed limit is 40 mph in the vicinity of the project. The roadway is classified as a major roadway by the City of San Jacinto[3].

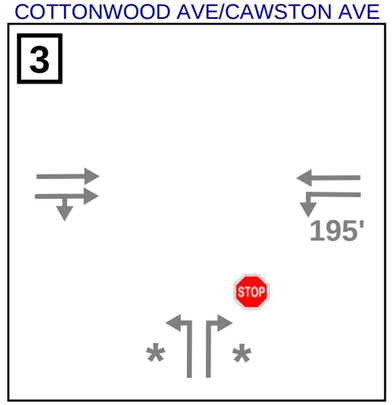
7th Street is generally a two-lane undivided roadway along the project frontage. There is no posted speed, but east of Cawston Avenue, the posted speed is 45 mph. The roadway is classified as a major roadway by the City.

Esplanade Avenue is a two-lane undivided roadway with a speed limit of 50 mph. The roadway is classified as an arterial by the City.

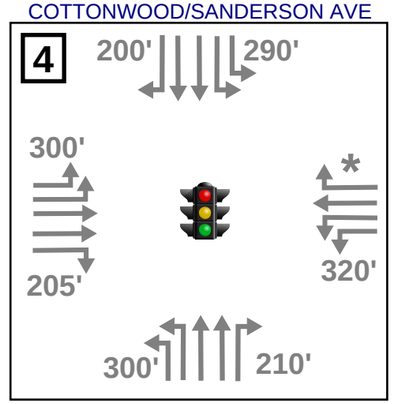
The existing intersection geometry for the study intersections, along with posted speed limits and number of travel lanes on roadways in the study area, is shown in Figure 3.



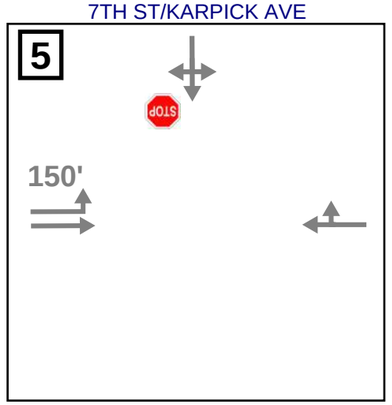
COTTONWOOD AVE/CAWSTON AVE



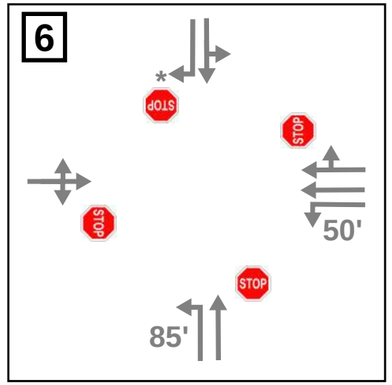
COTTONWOOD/SANDERSON AVE



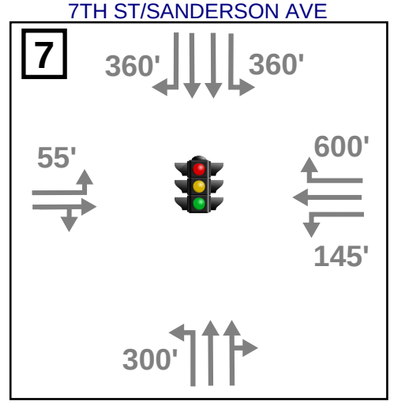
7TH ST/KARPICK AVE



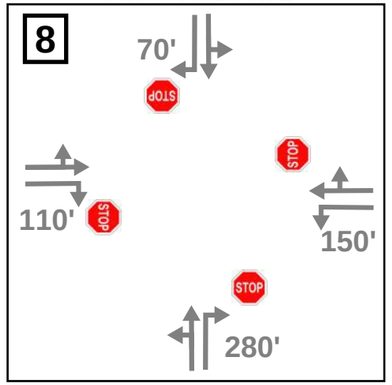
7TH ST/CAWSTON AVE



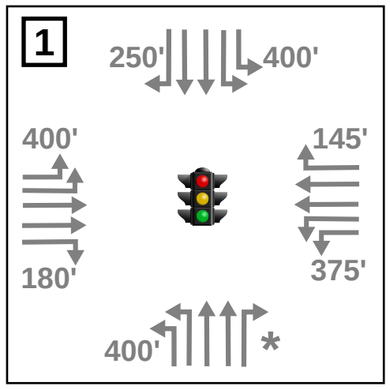
7TH ST/SANDERSON AVE



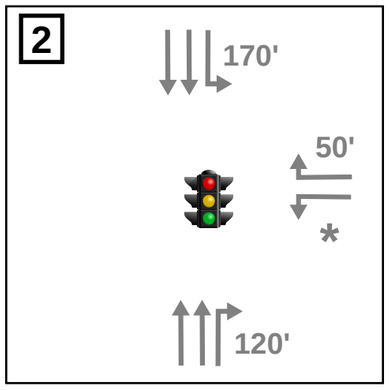
7TH ST/KIRBY AVE



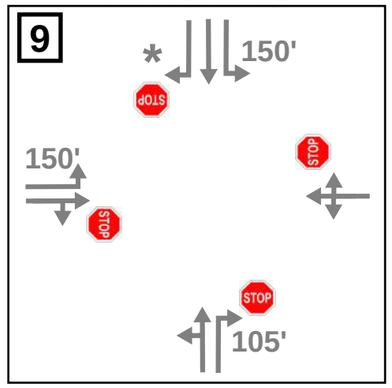
RAMONA EXPY/SANDERSON AVE



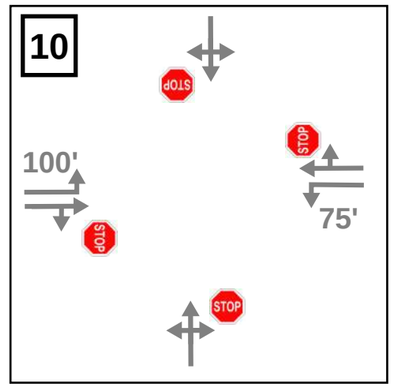
RAMONA BLVD/SANDERSON AVE



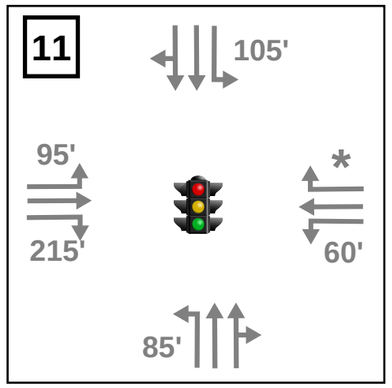
7TH ST/LYON AVE



7TH ST/PALM AVE

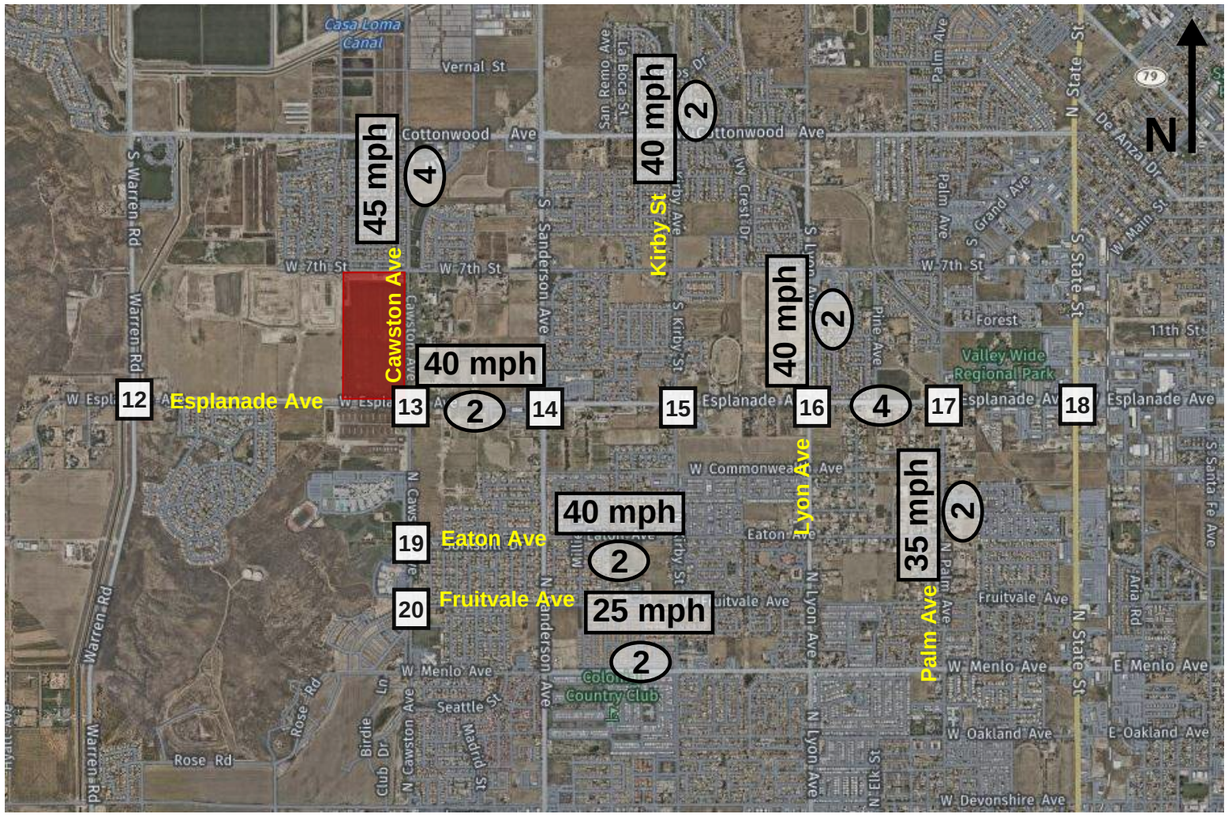


7TH ST/STATE ST

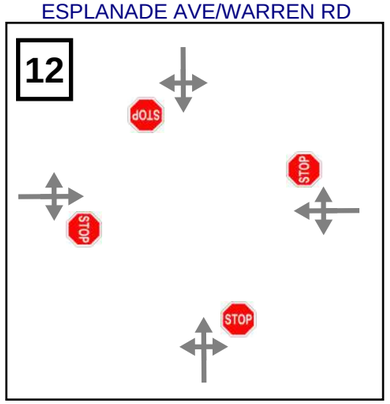


LEGEND

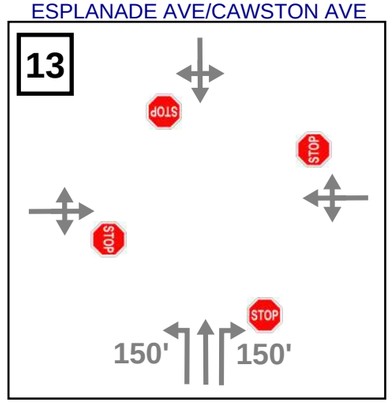
- Existing Lane
- xxx' Existing Turn Lane Storage
- (X) Number of Lanes (Two-Way)
- [X] Speed Limit (mph)
- * Trap Lane



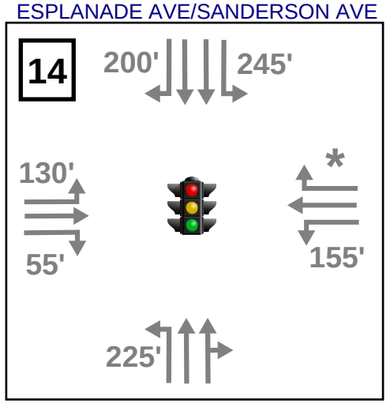
ESPLANADE AVE/WARREN RD



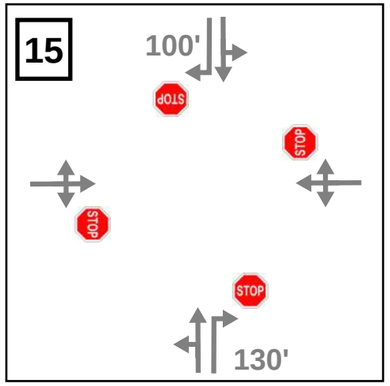
ESPLANADE AVE/CAWSTON AVE



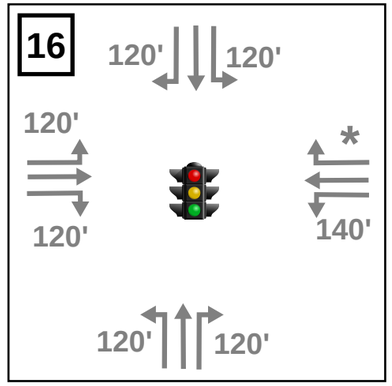
ESPLANADE AVE/SANDERSON AVE



ESPLANADE AVE/KIRBY AVE



ESPLANADE AVE/LYON AVE



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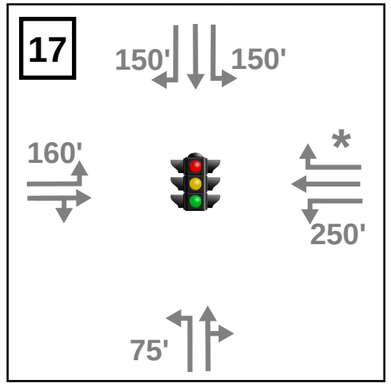
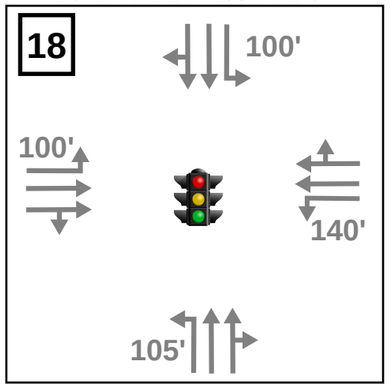
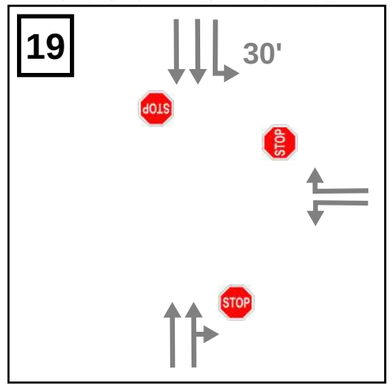


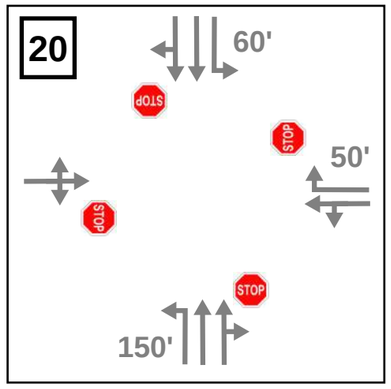
ESPLANADE AVE/STATE ST



CAWSTON AVE/EATON AVE



7TH ST/PALM AVE



LEGEND

- Existing Lane
- xxx' Existing Turn Lane Storage
- (X) Number of Lanes (Two-Way)
- [X] Speed Limit (mph)
- * Trap Lane

4.2. TRAFFIC VOLUMES

Traffic volumes were collected at the 20 study intersections and along the 3 study segments by National Data & Surveying Services (NDS) on Thursday, November 2, 2023. The peak hours for the study area were found to be from 7:30 AM to 8:30 AM and from 4:00 PM to 5:00 PM. The existing volumes are shown in Figure 4 and the data is included in Appendix A.

School release period volumes were also collected at select locations. However, the volumes were found to be generally similar or lower than the "typical" peak hour volumes. Because project trip generation (both for the proposed project and the related projects) will also be lower during that period than the peak hour, the additional period was not evaluated. The raw data is included in Appendix A.

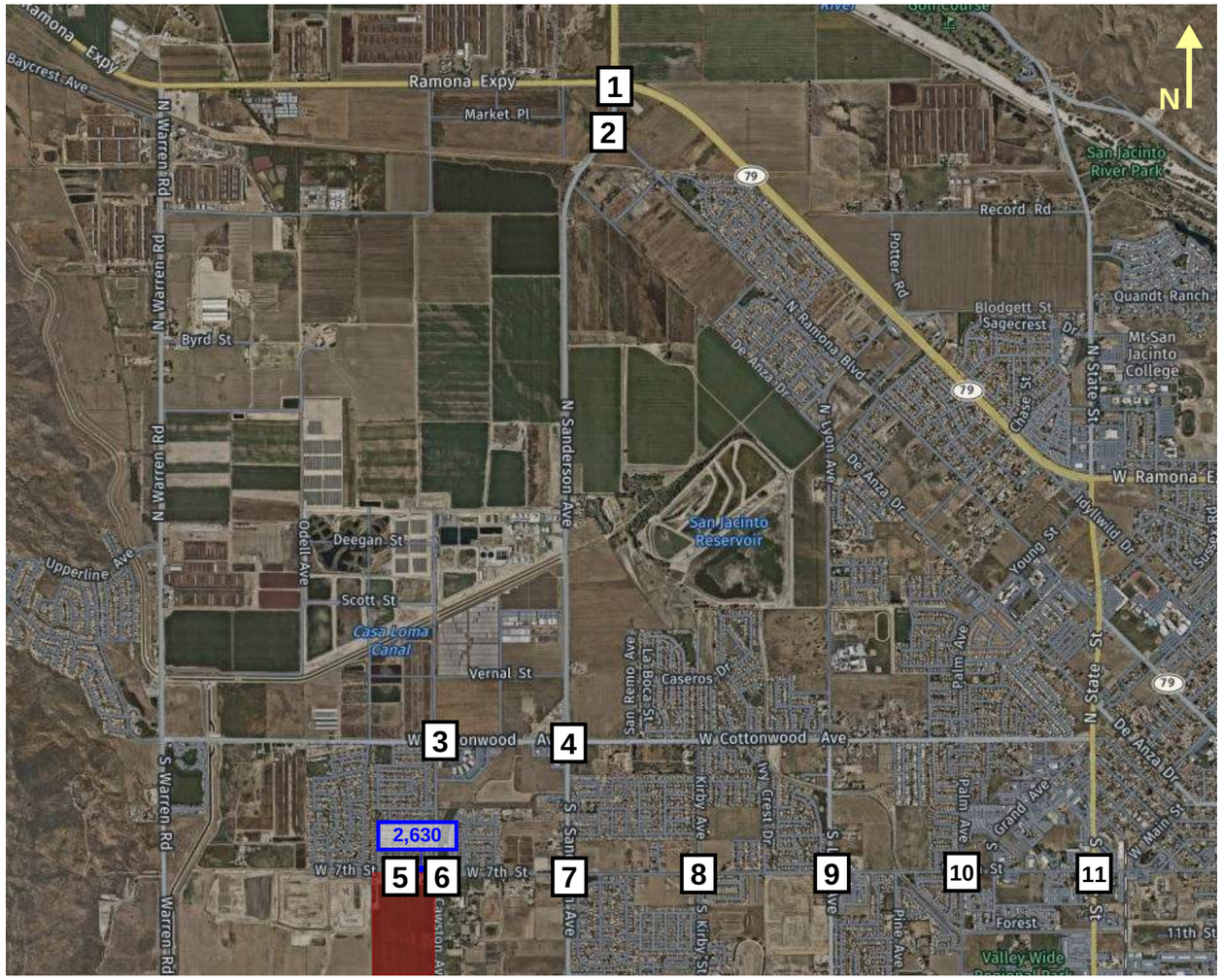
4.3. EXISTING TRAFFIC OPERATIONS

The existing operations are shown in Figure 5. As shown in the figure, all existing signalized and all-way stop control intersections currently operate at LOS D or better in both peak hours. In addition, all movements at one-way stop-controlled intersections operate at LOS A in both peak hours. The *SimTraffic* reports are included in Appendix B.

Although the study segments are classified as major or arterial roadways, each is only two lanes. Therefore, the capacity is assumed to be 18,300 vpd. Given that assumption, the three roadway study segments are all operating well below the available capacity.

4.4. EXISTING MULTIMODAL FACILITIES

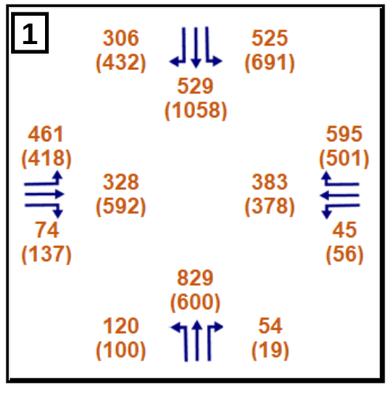
There is no transit in the project vicinity, nor are there sidewalks along the project frontage. However, there are existing sidewalks along Cawston Avenue north of 7th Street and south of Esplanade Avenue. In addition, there is an existing sidewalk along the north side of 7th Street along the project frontage. There are no existing bicycle facilties in the project vicinity, either, but Figure 6 (from the *General Plan*) shows that there are proposed Class 2 (bike lane/buffered bike lane) bicycle facilities on 7th Street and Cawston Avenue along the project frontage.



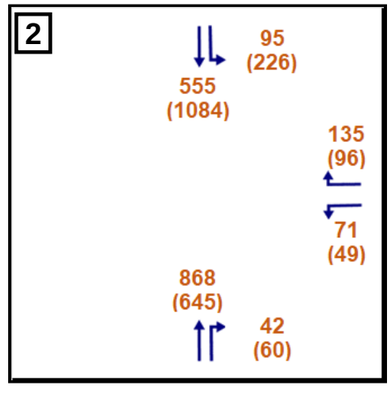
LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Daily Traffic Volume (pc/day)
- Chacon Farms Project Area

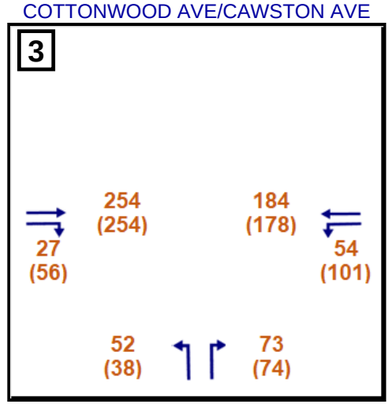
RAMONA EXPY/SANDERSON AVE



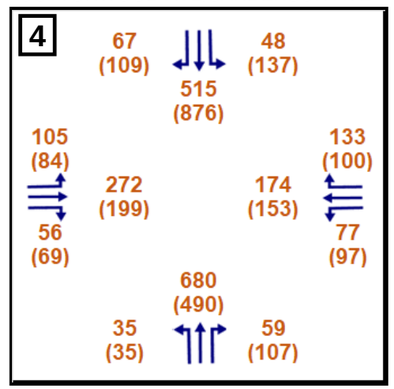
RAMONA BLVD/SANDERSON AVE



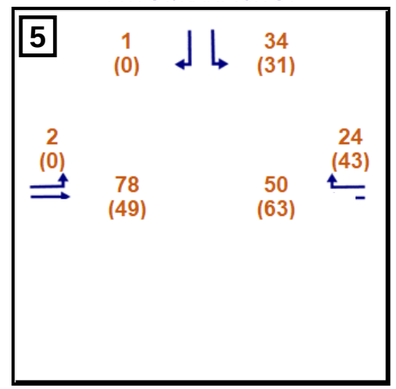
COTTONWOOD AVE/CAWSTON AVE



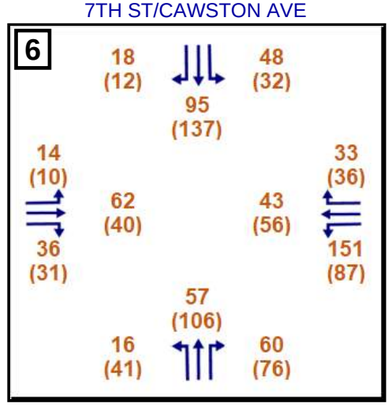
COTTONWOOD AVE/SANDERSON AVE



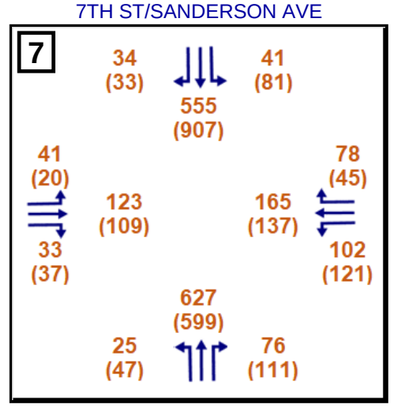
7TH ST/KARPICK ST



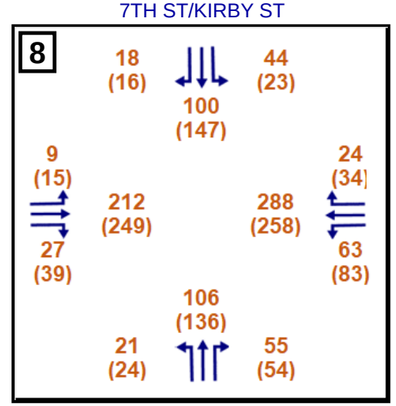
7TH ST/CAWSTON AVE



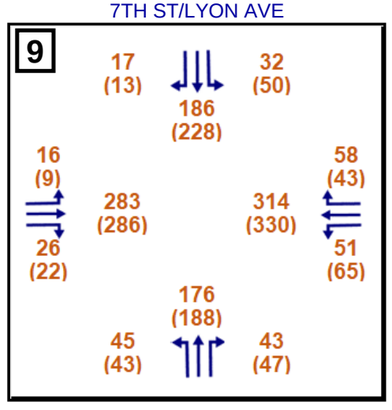
7TH ST/SANDERSON AVE



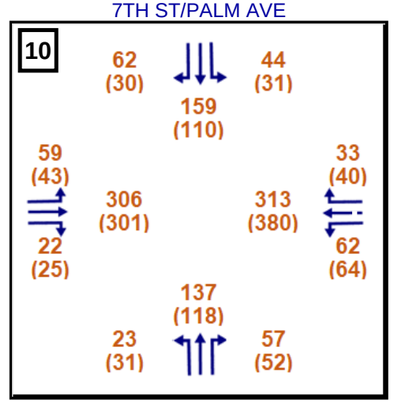
7TH ST/KIRBY ST



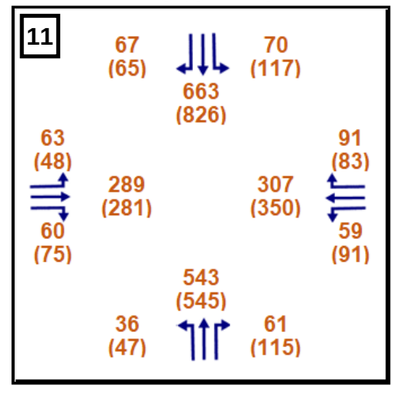
7TH ST/LYON AVE



7TH ST/PALM AVE



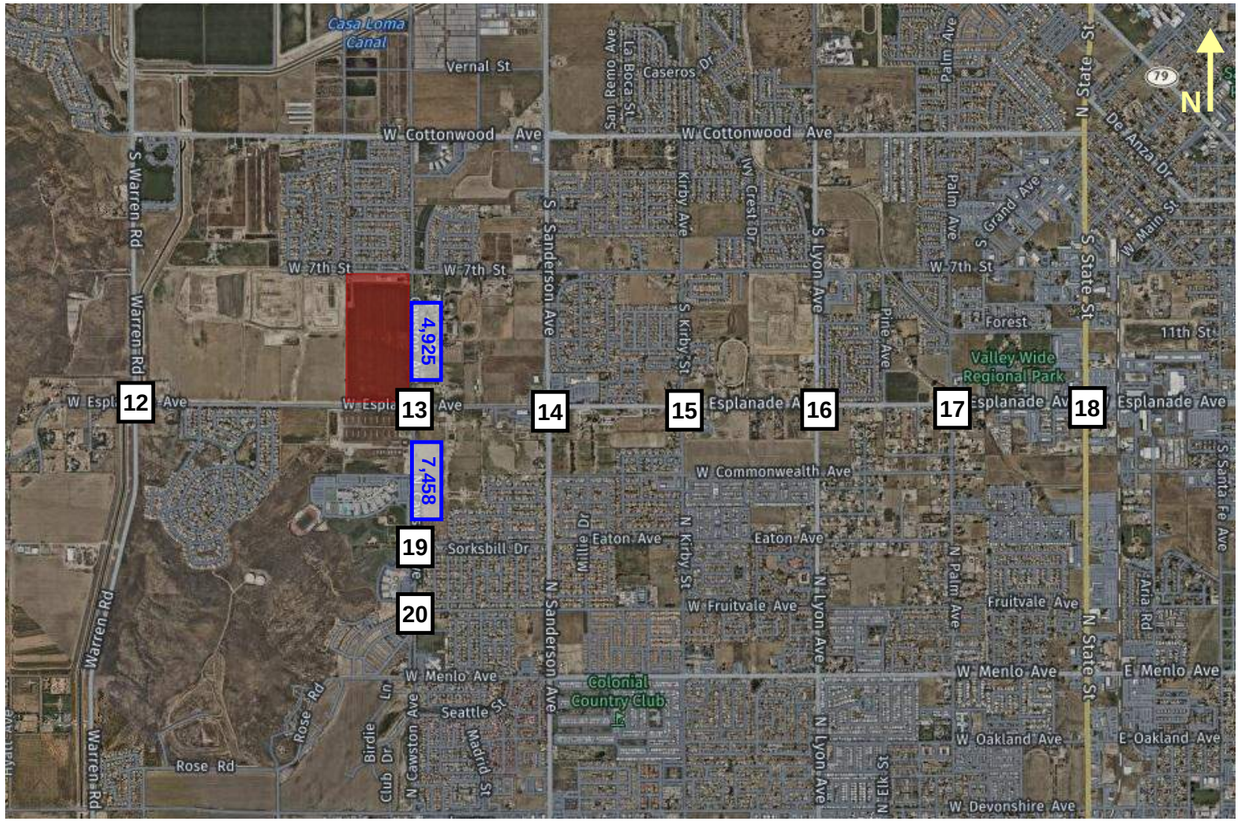
7TH ST/STATE ST



Chacon Farms
Transportation Impact Study

Figure 4.
Existing Traffic Volumes, Intersections 1-11

PSOMAS
March 2024



LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Daily Traffic Volume (pc/day)
- Chacon Farms Project Area

ESPLANADE AVE/WARREN AVE

12

	13 (25)	36 (48)
	333 (282)	
24 (11)		51 (40)
41 (29)		42 (36)
2 (1)		107 (124)
	428 (477)	
1 (5)		120 (126)

ESPLANADE AVE/CAWSTON AVE

13

	63 (71)	18 (13)
	202 (171)	
42 (53)		11 (17)
130 (167)		130 (165)
127 (70)		143 (77)
	83 (150)	
46 (59)		75 (63)

ESPLANADE AVE/SANDERSON AVE

14

	55 (62)	43 (75)
	559 (921)	
66 (63)		37 (51)
141 (139)		214 (173)
19 (43)		93 (152)
	670 (672)	
48 (54)		122 (107)

ESPLANADE AVE/KIRBY ST

15

	35 (38)	44 (38)
	175 (225)	
23 (26)		19 (36)
275 (324)		285 (302)
29 (60)		60 (78)
	150 (215)	
53 (55)		77 (89)

ESPLANADE AVE/LYON AVE

16

	35 (15)	40 (53)
	193 (243)	
20 (29)		67 (77)
351 (404)		314 (389)
18 (31)		72 (107)
	159 (196)	
14 (17)		58 (83)

ESPLANADE AVE/PALM AVE

17

	63 (43)	87 (74)
	201 (173)	
47 (30)		38 (82)
377 (464)		337 (489)
19 (38)		63 (107)
	221 (123)	
37 (46)		38 (82)

ESPLANADE AVE/STATE ST

18

	72 (104)	168 (221)
	508 (642)	
60 (77)		137 (167)
368 (481)		462 (538)
47 (74)		91 (125)
	478 (482)	
51 (64)		96 (148)

CAWSTON AVE/EATON AVE

19

		164 (70)
	397 (347)	
		234 (47)
		58 (30)
	310 (244)	
	42 (44)	

CAWSTON AVE/FRUITVALE AVE

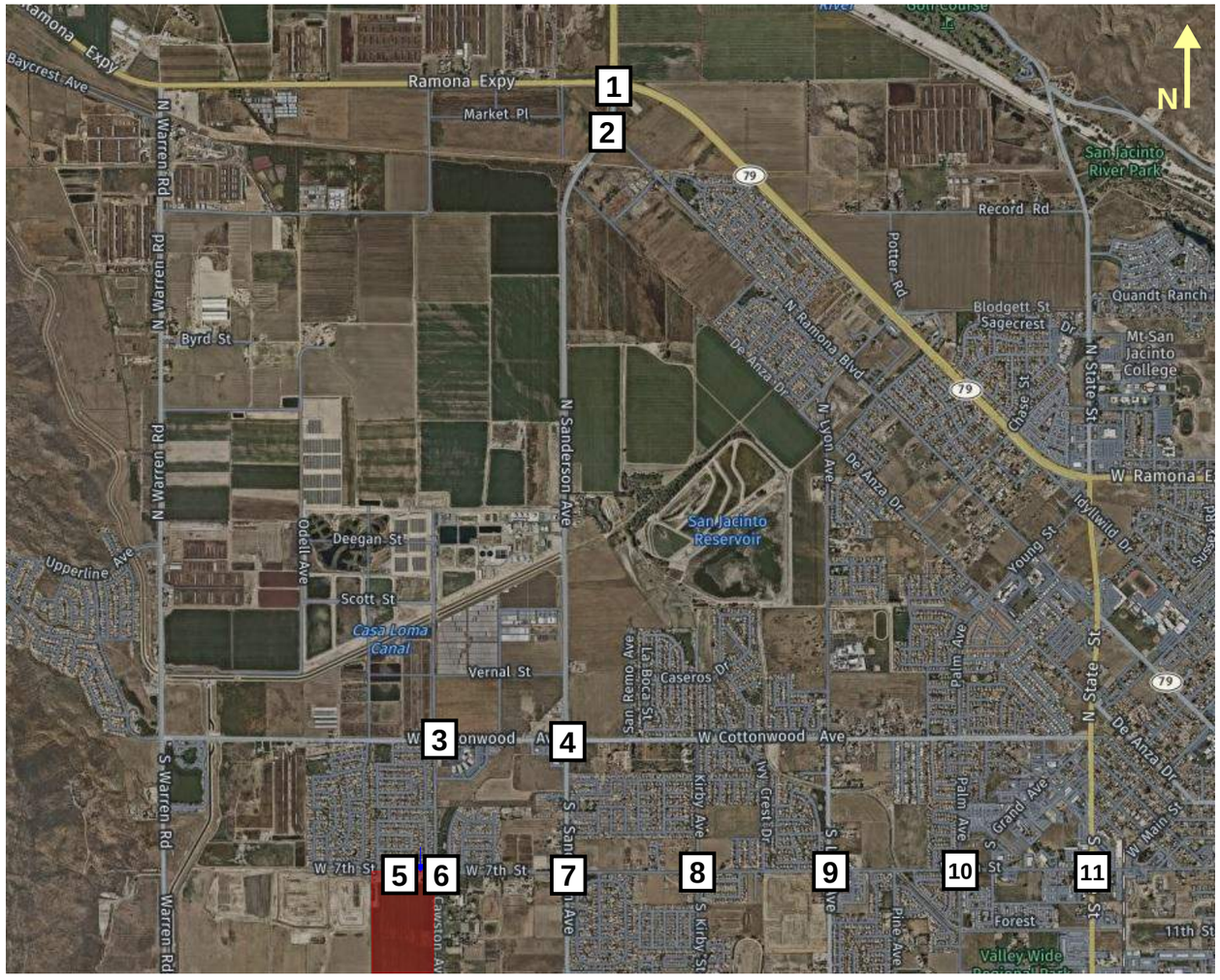
20

	1 (2)	106 (51)
	349 (387)	
2 (2)		105 (33)
1 (1)		0 (3)
5 (5)		29 (42)
	314 (262)	
2 (7)		33 (56)

Chacon Farms
Transportation Impact Study

Figure 4 cont'd.
Existing Traffic Volumes, Intersections 12-20

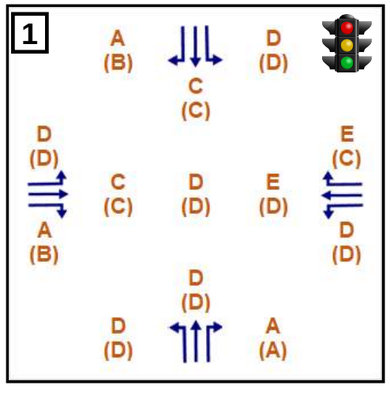
PSOMAS
March 2024



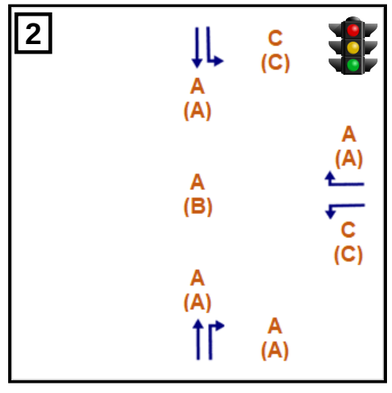
LEGEND

XX	Intersection Number
XX	AM Peak Hour Level of Service (LOS)
(XX)	PM Peak Hour Level of Service (LOS)
	Chacon Farms Project Area

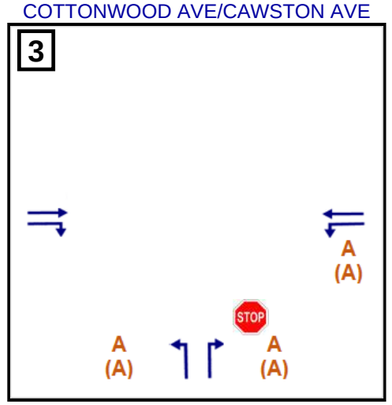
RAMONA EXPY/SANDERSON AVE



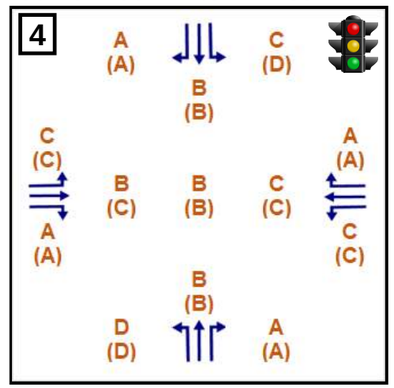
RAMONA BLVD/SANDERSON AVE



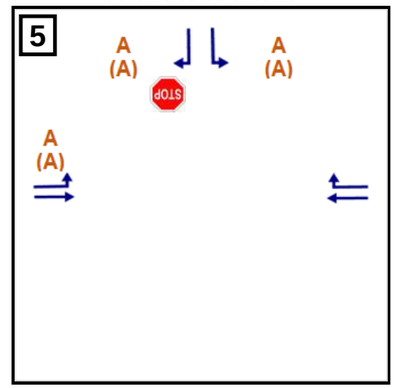
COTTONWOOD AVE/CAWSTON AVE



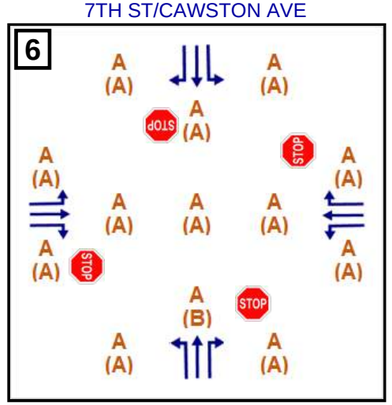
COTTONWOOD AVE/SANDERSON AVE



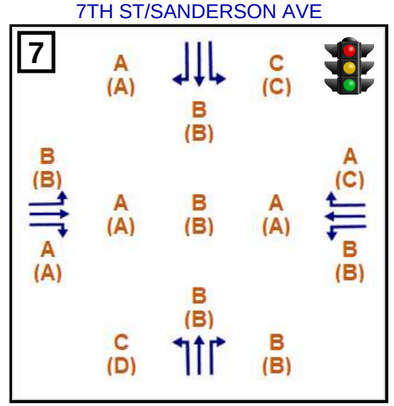
7TH ST/KARPICK ST



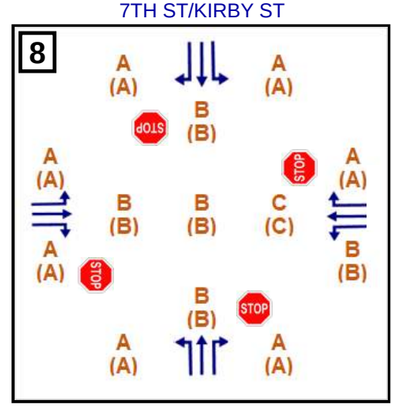
7TH ST/CAWSTON AVE



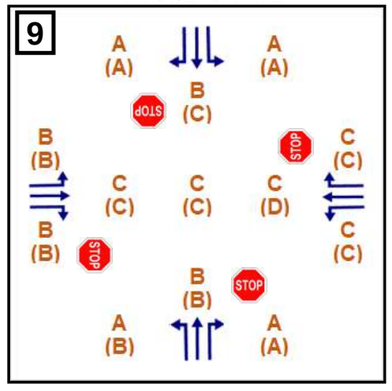
7TH ST/SANDERSON AVE



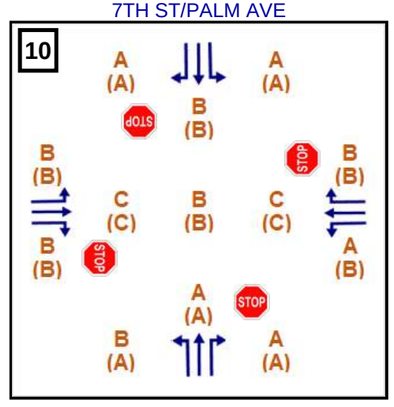
7TH ST/KIRBY ST



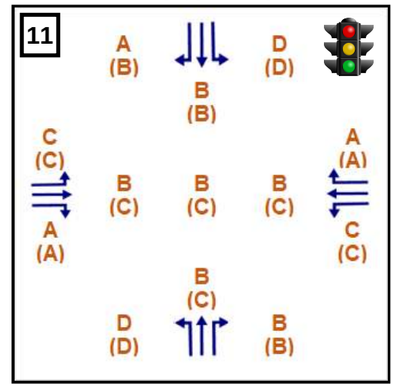
7TH ST/LYON AVE



7TH ST/PALM AVE



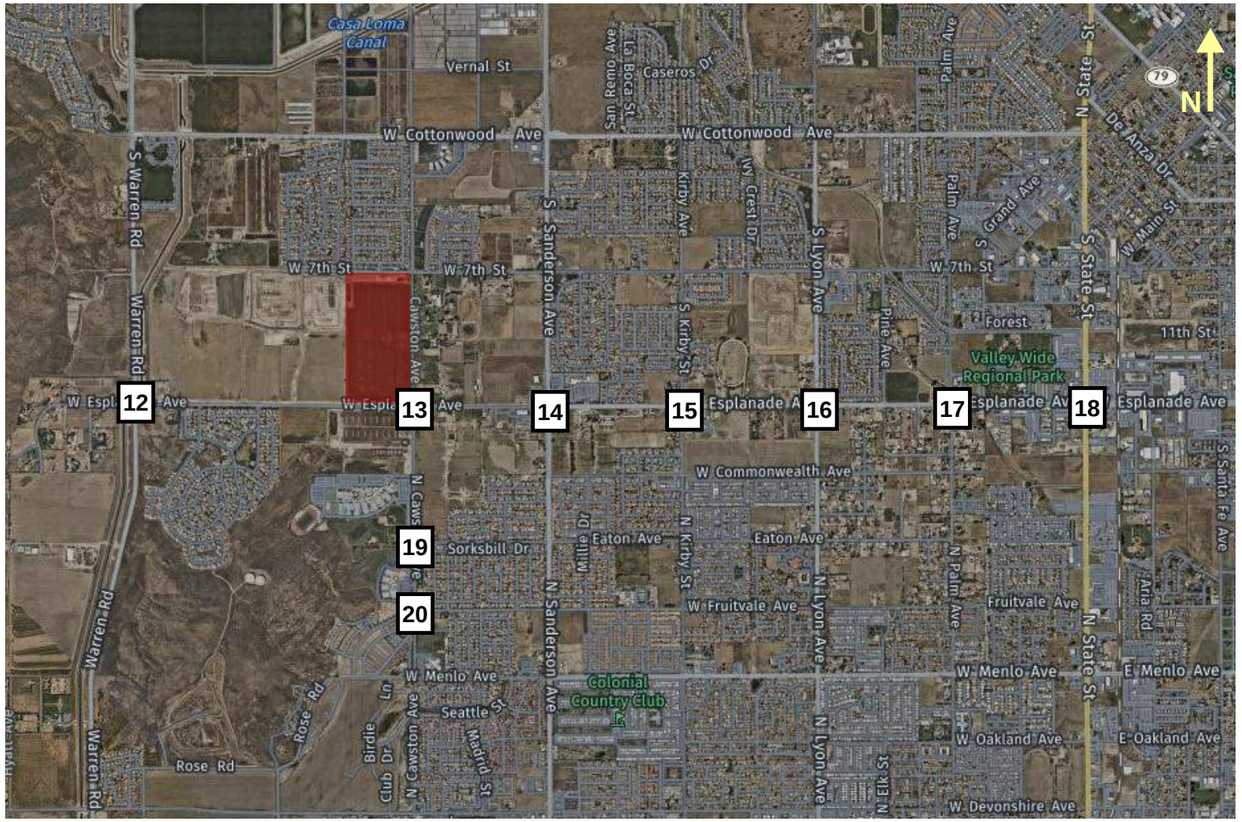
7TH ST/STATE ST



Chacon Farms
Transportation Impact Study

Figure 5.
Existing Level of Service (LOS), Intersections 1-11

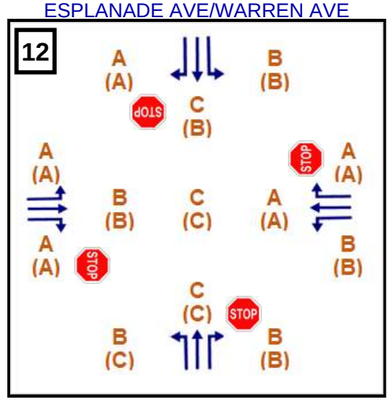
PSOMAS
March 2024



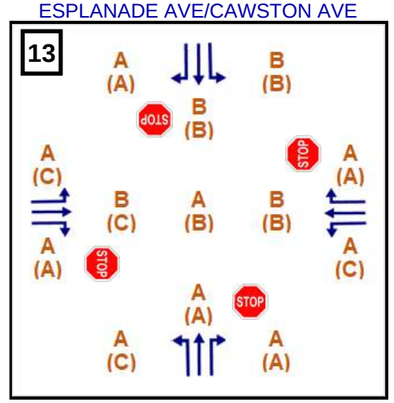
LEGEND

XX	Intersection Number
XX	AM Peak Hour Level of Service (LOS)
(XX)	PM Peak Hour Level of Service (LOS)
	Chacon Farms Project Area

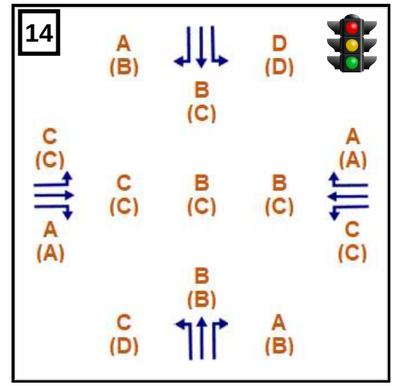
ESPLANADE AVE/WARREN AVE



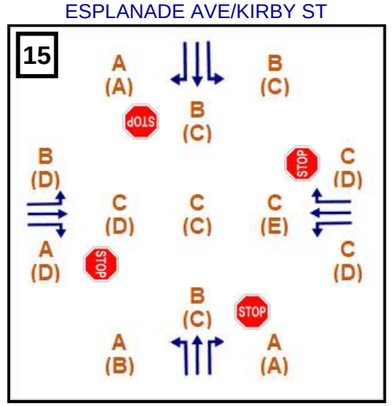
ESPLANADE AVE/CAWSTON AVE



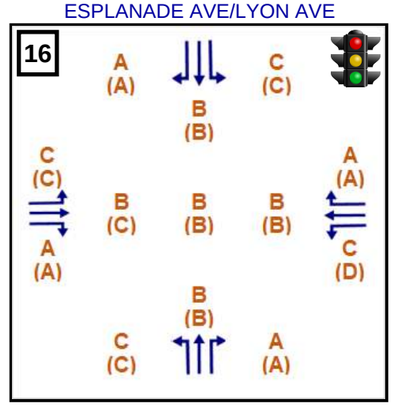
ESPLANADE AVE/SANDERSON AVE



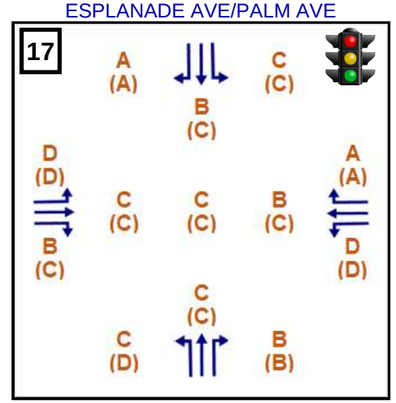
ESPLANADE AVE/KIRBY ST



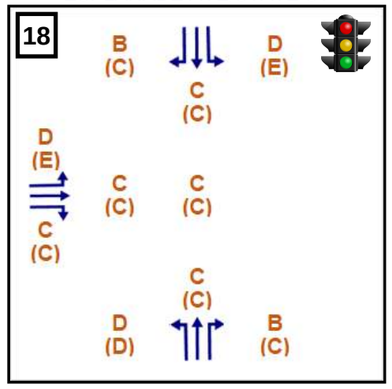
ESPLANADE AVE/LYON AVE



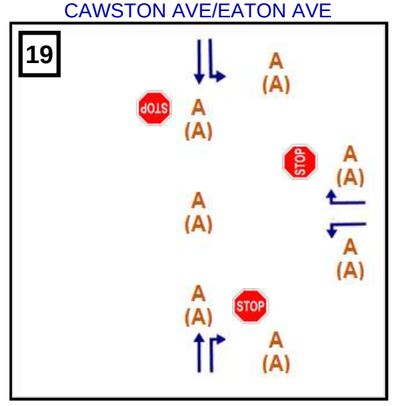
ESPLANADE AVE/PALM AVE



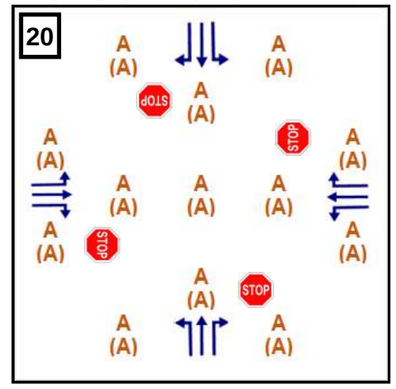
ESPLANADE AVE/STATE ST



CAWSTON AVE/EATON AVE



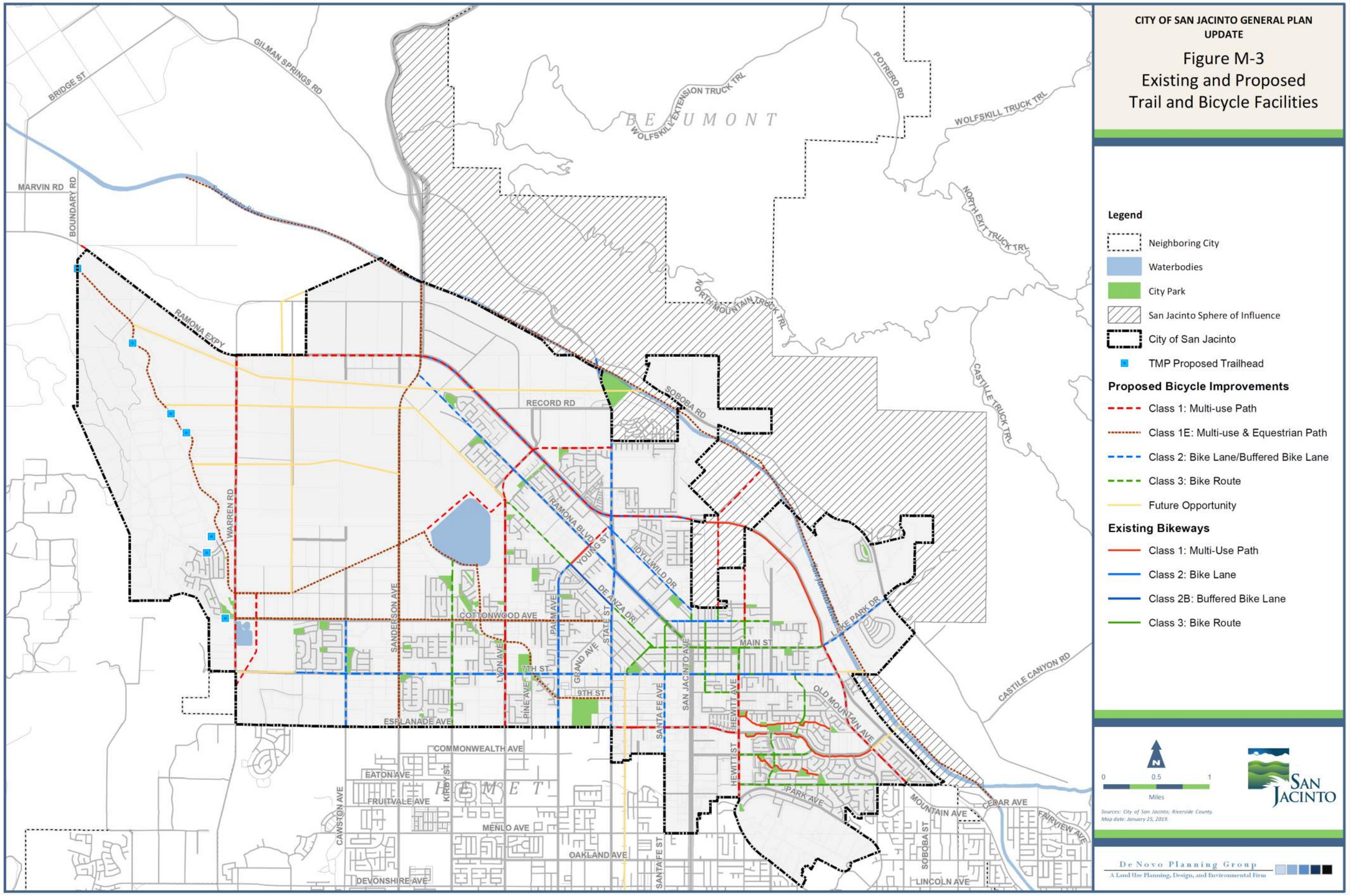
CAWSTON AVE/FRUITVALE AVE



Chacon Farms
Transportation Impact Study

Figure 5 cont'd.
Existing Level of Service (LOS), Intersections 12-20

PSOMAS
March 2024


CITY OF SAN JACINTO GENERAL PLAN UPDATE
Figure M-3
Existing and Proposed
Trail and Bicycle Facilities
Legend
Neighboring City
Waterbodies
City Park
San Jacinto Sphere of Influence
City of San Jacinto
TMP Proposed Trailhead
Proposed Bicycle Improvements
Class 1: Multi-use Path
Class 1E: Multi-use & Equestrian Path
Class 2: Bike Lane/Buffered Bike Lane
Class 3: Bike Route
Future Opportunity
Existing Bikeways
Class 1: Multi-Use Path
Class 2: Bike Lane
Class 2B: Buffered Bike Lane
Class 3: Bike Route
0
0.5
1
Miles
Sources: City of San Jacinto; Riverside County.
Map date: January 25, 2019.
SAN JACINTO
De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm
BEAUMONT
HEMET
GILMAN SPRINGS RD
BRIDGE ST
MARVIN RD
BOUNDARY RD
WOLFSKILL EXTENSION TRUCK TRL
POTRERO RD
WOLFSKILL TRUCK TRL
NORTH EXIT TRUCK TRL
NORTH MOUNTAIN TRUCK TRL
CASTILE TRUCK TRL
RAMONA EXPY
RECORD RD
SOBOBA RD
WARREN RD
RAMONA BLVD
YOUNGS ST
IDYLLWILD DR
DE ANZA DR
SANDERSON AVE
COTTONWOOD AVE
PALM AVE
STATE ST
LAKE PARK DR
MAIN ST
LYON AVE
7TH ST
GRAND AVE
9TH ST
SAN JACINTO AVE
HEWITT AVE
OLD MOUNTAIN AVE
CASTILE CANYON RD
ESPLANADE AVE
PINE AVE
SANTA FE AVE
COMMONWEALTH AVE
EATON AVE
KIRBY ST
FRUITVALE AVE
CAWSTON AVE
MENLO AVE
OAKLAND AVE
DEVONSHIRE AVE
SANTA FE ST
PARK AVE
MOUNTAIN AVE
CEDAR AVE
FAIRVIEW AVE
SOBOBA ST
LINCOLN AVE

5. PROJECT TRAFFIC

5.1. TRIP GENERATION AND DISTRIBUTION

The trip generation for the project was estimated using the ITE *Trip Generation Manual, 11th Edition*[4]. The trip generation rate equations were used for both uses based on the guidelines in the *Manual*. The anticipated project trip generation is shown in Table 3.

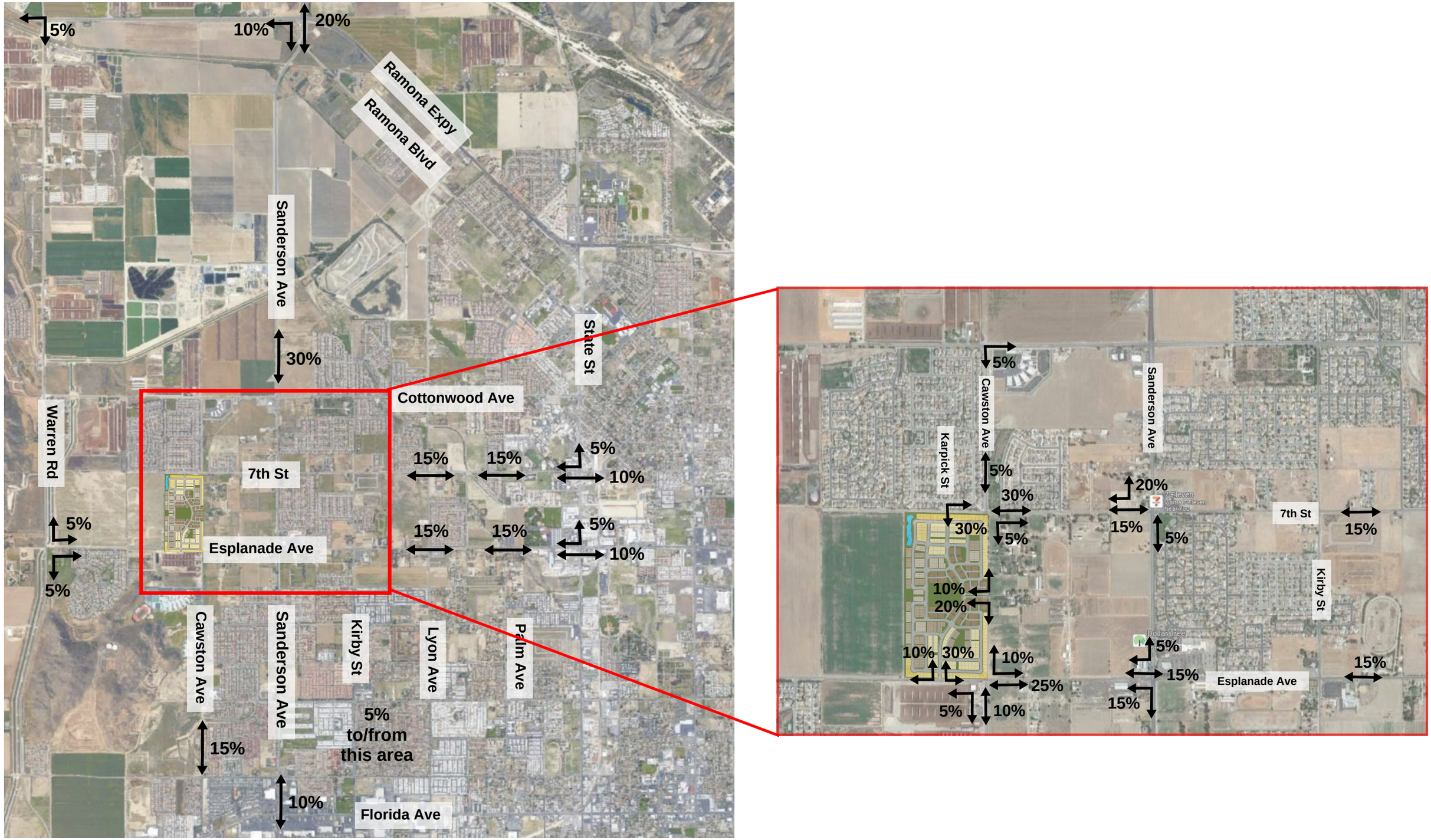
The overall trip distribution is shown in Figure 7. The distribution was approved by the City in the scoping agreement, which is included in Appendix C.

Table 3. Project Trip Generation

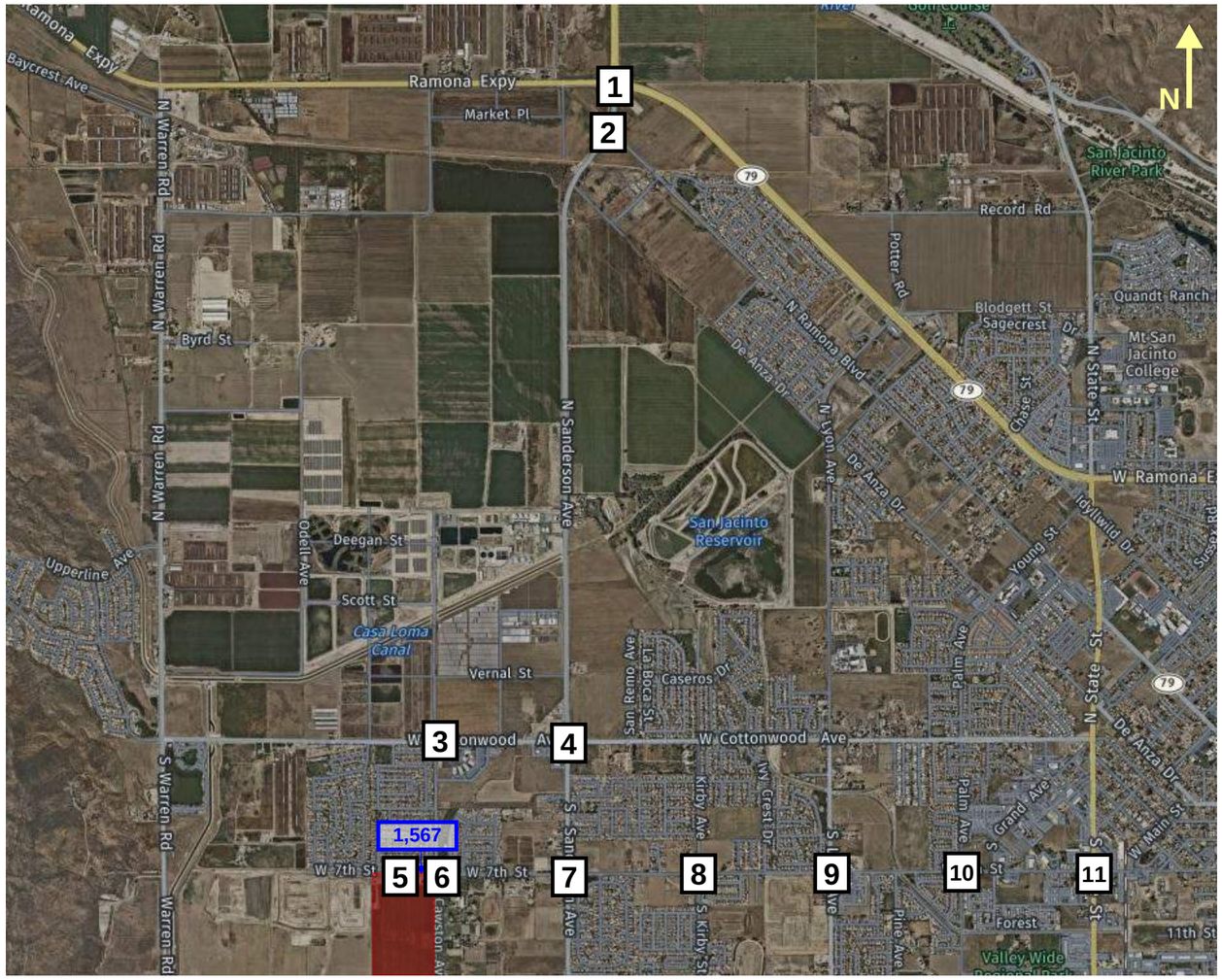
ITE Land Use Code 210 - Single Family Detached Housing						
Dwelling Units			210			
Period	Trips/Unit	Trips	% In	% Out	Trips In	Trips Out
AM Peak	0.70	146	25%	75%	37	110
PM Peak	0.95	200	63%	37%	126	74
Daily	9.51	1,997	50%	50%	998	998
ITE Land Use Code 215 - Single-Family Attached Housing						
Dwelling Units			430			
Period	Trips/Unit	Trips	% In	% Out	Trips In	Trips Out
AM Peak	0.51	218	25%	75%	54	163
PM Peak	0.59	254	59%	41%	150	104
Daily	7.50	3,226	50%	50%	1,613	1,613
TOTAL						
Period	Trips		Trips In		Trips Out	
AM Peak	364		91		273	
PM Peak	454		276		178	
Daily	5,223		2,611		2,611	

5.2. PROJECT TRAFFIC VOLUMES

Given the trip generation and distribution, the project traffic volumes were developed and are shown in Figure 8.



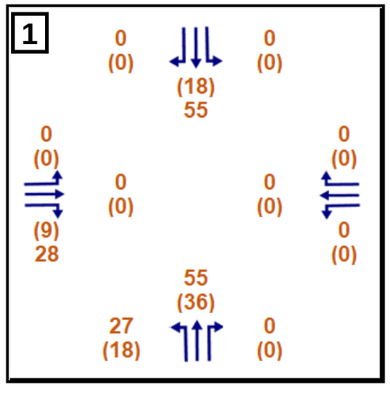
Chacon Farms Transportation Impact Study	*Figure 7. Trip Distribution*	PSOMAS March 2024



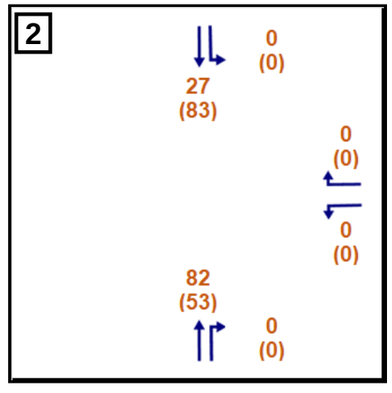
LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Daily Traffic Volume (pc/day)
- Chacon Farms Project Area

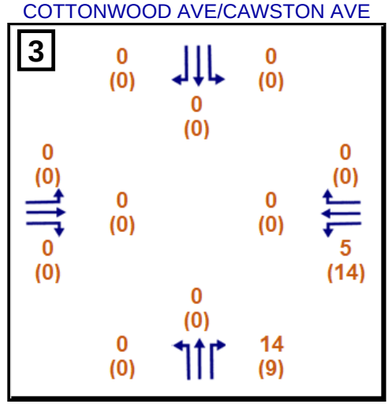
RAMONA EXPY/SANDERSON AVE



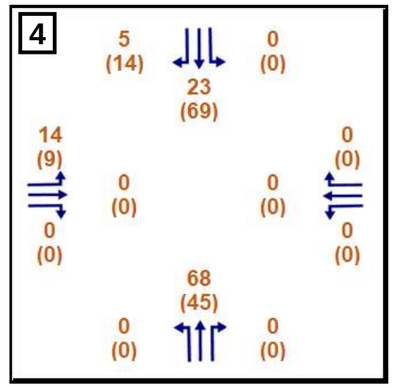
RAMONA BLVD/SANDERSON AVE



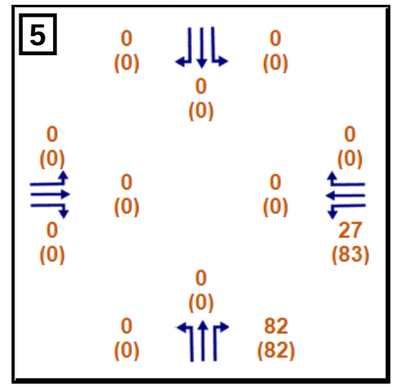
COTTONWOOD AVE/CAWSTON AVE



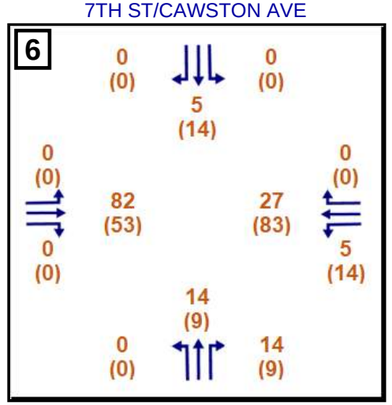
COTTONWOOD AVE/SANDERSON AVE



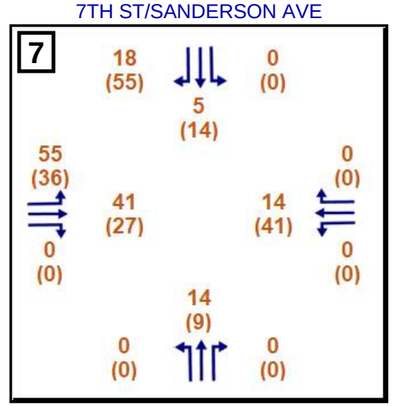
7TH ST/KARPICK ST



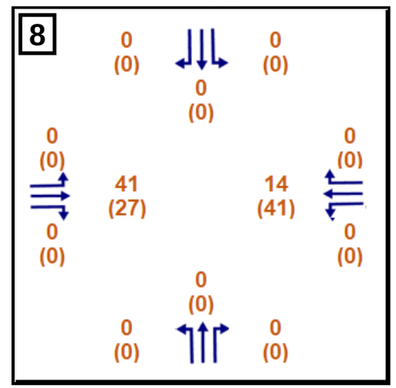
7TH ST/CAWSTON AVE



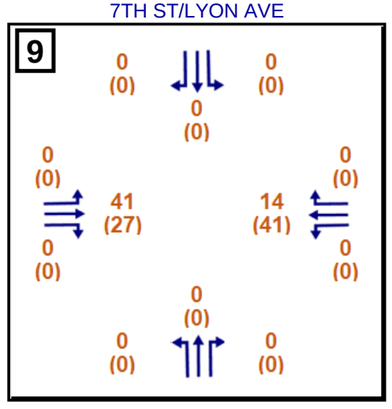
7TH ST/SANDERSON AVE



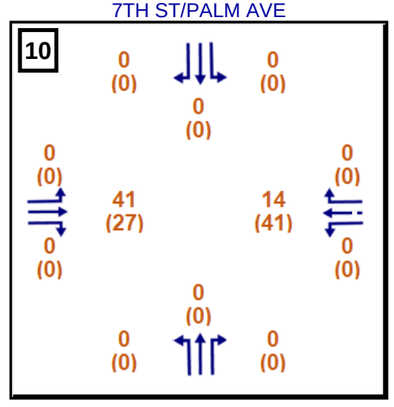
7TH ST/KIRBY ST



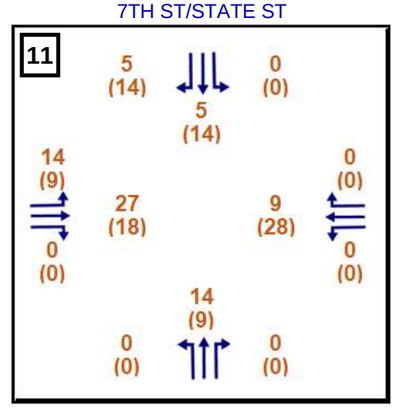
7TH ST/LYON AVE



7TH ST/PALM AVE



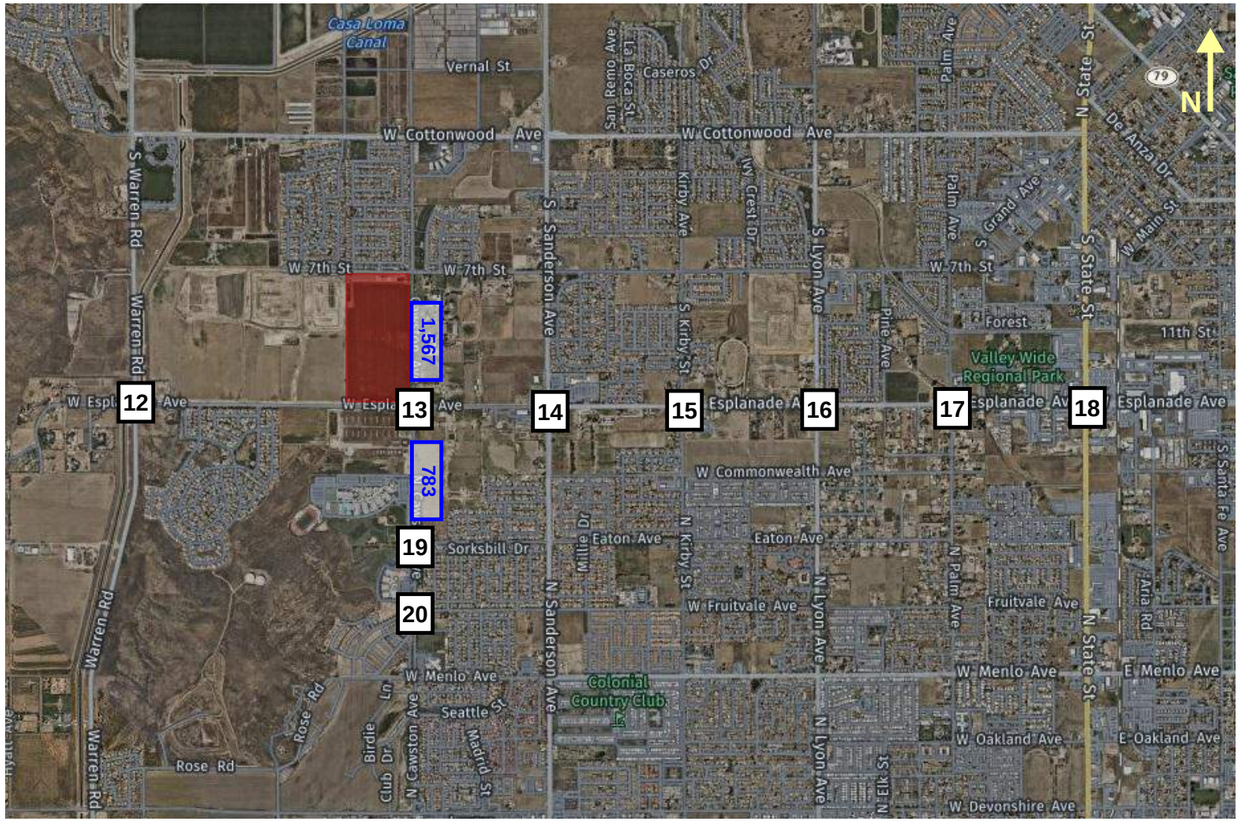
7TH ST/STATE ST



Chacon Farms
Transportation Impact Study

Figure 8.
Project Traffic Volumes, Intersections 1-11

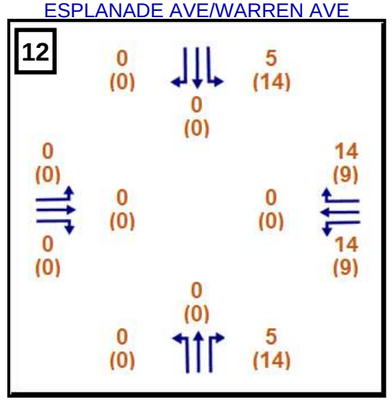
PSOMAS
March 2024



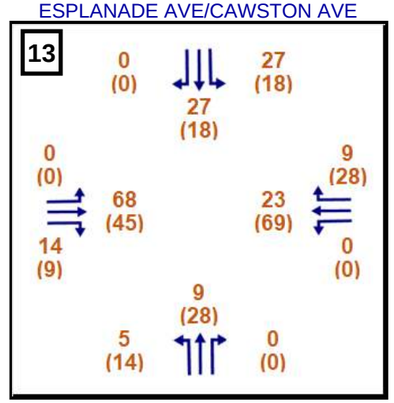
LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Daily Traffic Volume (pc/day)
- Chacon Farms Project Area

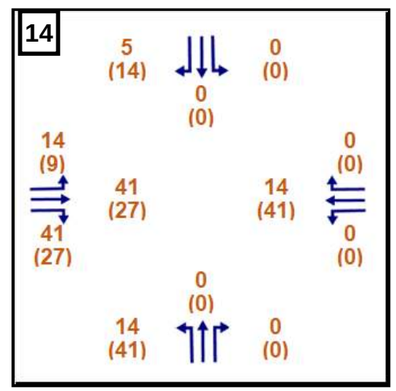
ESPLANADE AVE/WARREN AVE



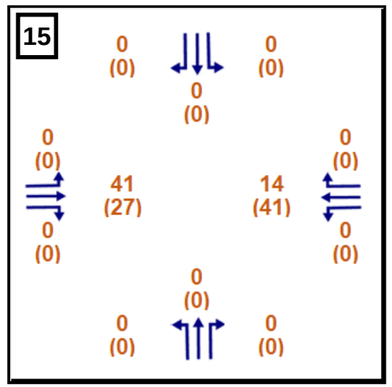
ESPLANADE AVE/CAWSTON AVE



ESPLANADE AVE/SANDERSON AVE



ESPLANADE AVE/KIRBY ST



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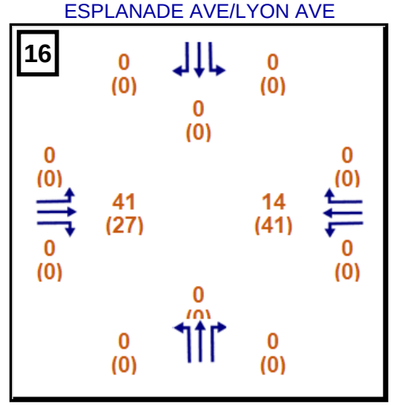

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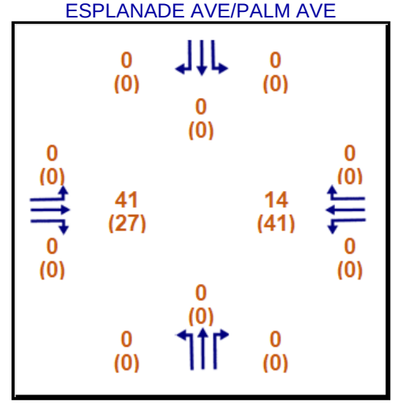
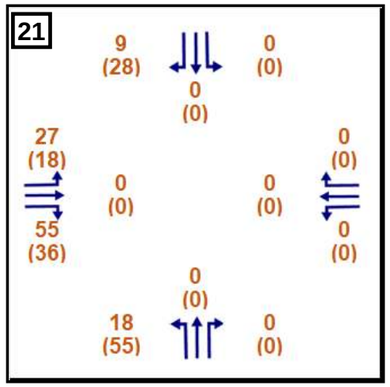


CAWSTON AVE/EAST DRIVEWAY



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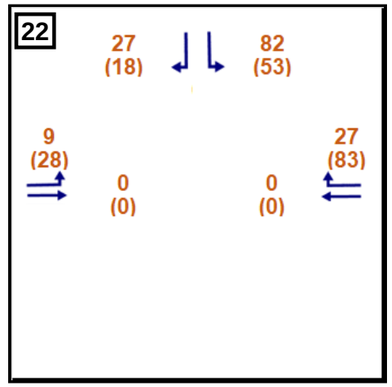

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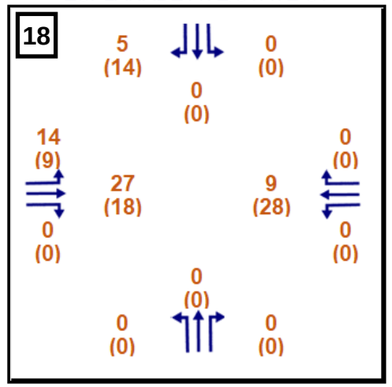
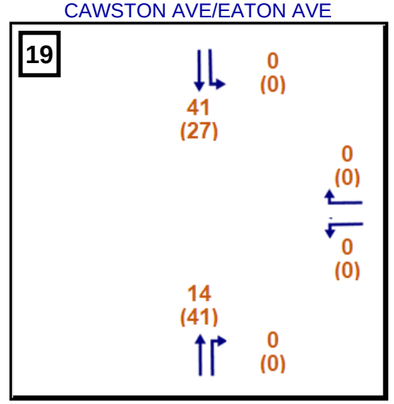
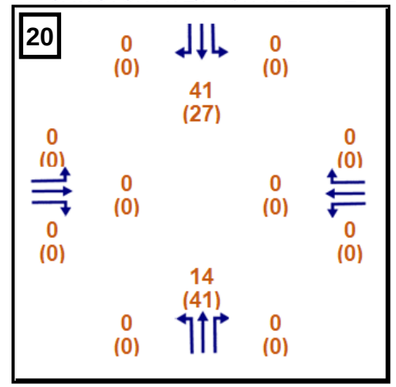


CAWSTON AVE/EATON AVE



CAWSTON AVE/FRUITVALE AVE



Chacon Farms
Transportation Impact Study

Figure 8 cont'd.
Project Traffic Volumes, Intersections 12-22

PSOMAS
March 2024

6. OPENING YEAR ANALYSIS

6.1. NO PROJECT ANALYSIS

6.1.1. Committed Roadway Improvements

The City indicated that the following improvements will take place with or without the project and are expected to go to bid soon (if they have not already by the time this report is finalized):

- Construct a traffic signal at Cawston Avenue and Esplanade Avenue
- Widen Esplanade Avenue to a four-lane divided roadway between Warren Road and Sanderson Avenue
- Construct a traffic signal at Esplanade Avenue and Warren Road

To help determine if the above improvements would be required due to the project traffic, the modeling was first completed without the improvements in place. It was found that the signal at the Cawston Avenue/Esplanade Avenue intersection would be needed based on opening year traffic volumes, but the signal at the Warren Road/Esplanade Avenue intersection would not be needed.

6.1.2. Approved Projects and Ambient Growth

The City provided a list of approved projects and projects under construction as well as other significant projects under review. Approved and under construction projects within a two-mile radius of the project were included in this study per direction from the City as well as two additional significant projects which are expected to be approved shortly. The list of related project is included in Table 4 and their locations are shown in Figure 9. The combined volumes generated by the related projects are shown in Figure 10.

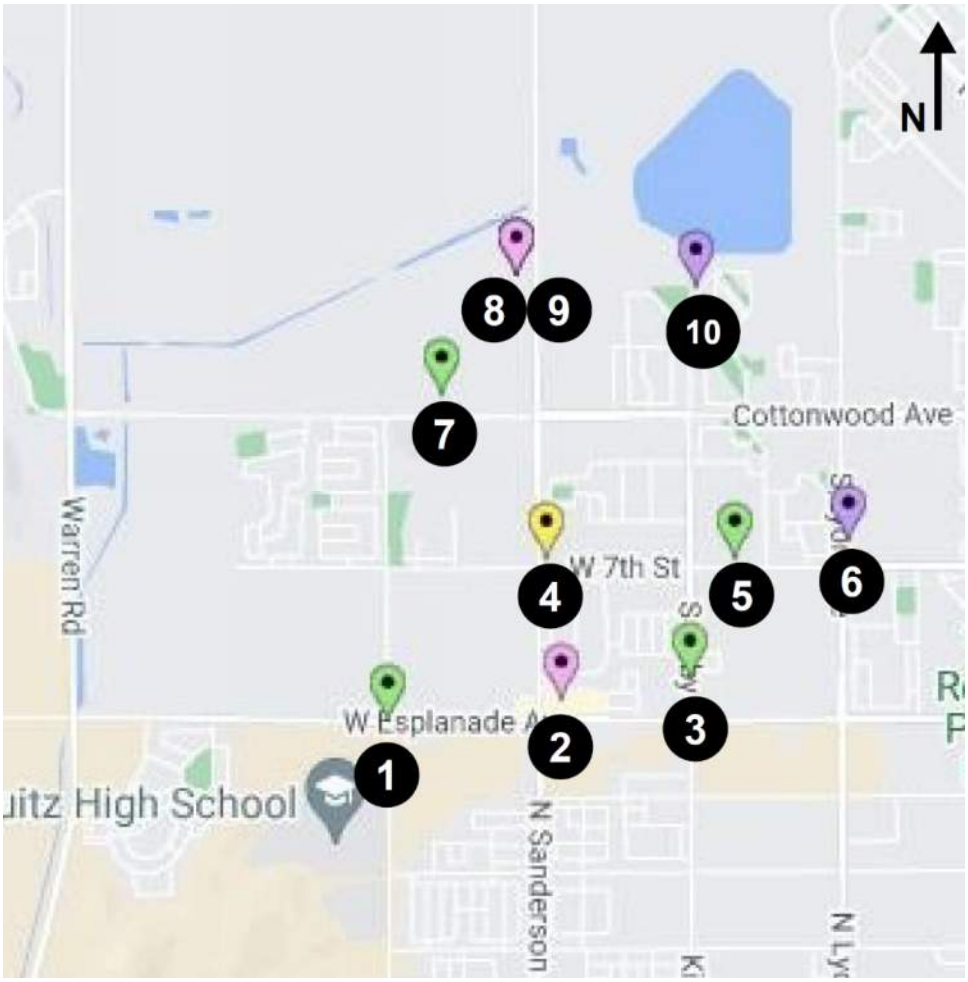
6.1.3. Total Background Opening Year Traffic Volumes

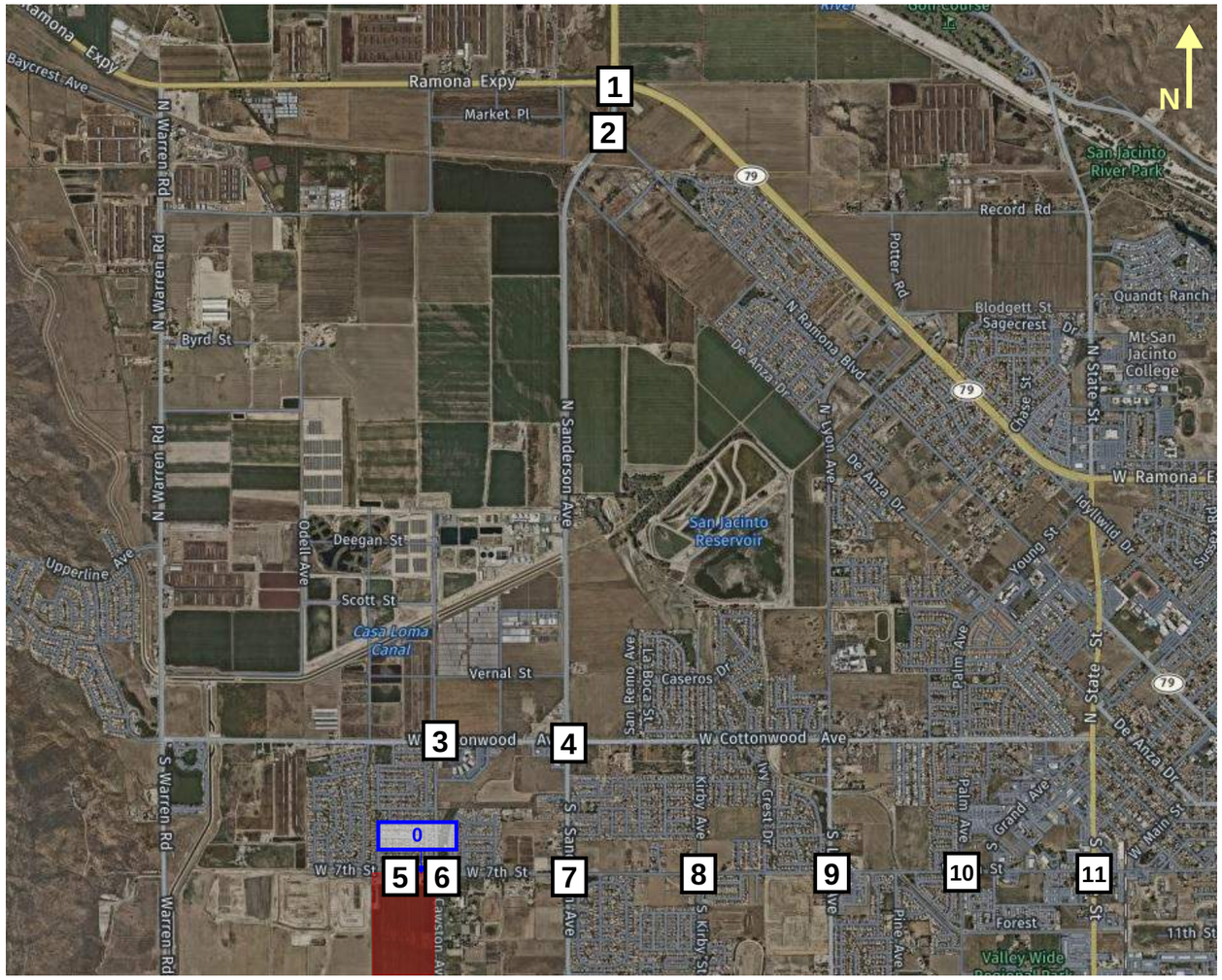
In addition to the related projects, a 1% ambient growth rate was applied to all study intersections to account for other growth which may occur. The total background opening year traffic volumes combine the ambient growth and the growth due to related projects. Figure 11 shows the total background opening year traffic volumes.

Table 4. Related Project Information

Project No.	Name	Type	Size	Units
1	Esplanade Specific Plan	Single Family Residential	622	Units
2	Dollar Tree	Retail	10,050	SF
3	Monte Vista	Single Family Residential	36	Units
4	Rancho Estudillo Plaza (phase 2)	Commercial	291,416	SF
5	Ashford Pointe	Single Family Residential	89	Units
6	Rancho Madrina TR32247	Single Family Residential	150	Units
7	Rancho de Alamo (TTM 37881)	Single Family Residential	191	Units
8	TS Farms	Cannabis	60.53	Acres
9	SoCal Innovative/Kommon Farms	Cannabis	2.70	Acres
10	TTM38339	Single Family Residential	76	Units

Figure 9. Related Project Locations

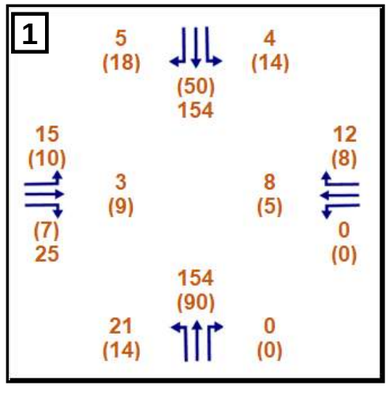




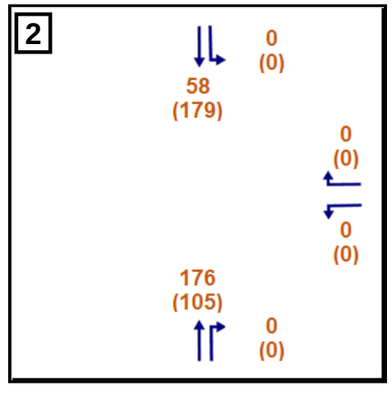
LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Daily Traffic Volume (pc/day)
- Chacon Farms Project Area

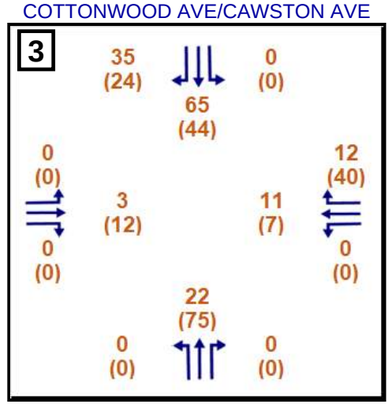
RAMONA EXPY/SANDERSON AVE



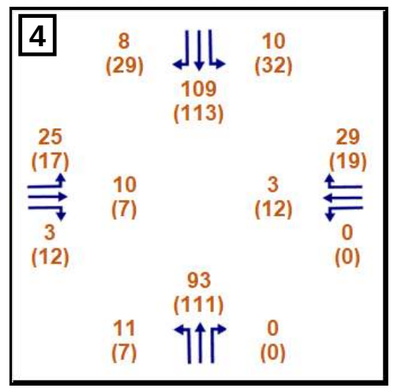
RAMONA BLVD/SANDERSON AVE



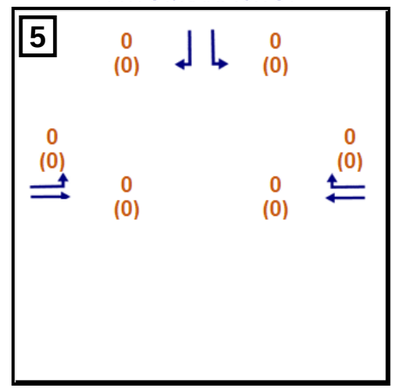
COTTONWOOD AVE/CAWSTON AVE



COTTONWOOD AVE/SANDERSON AVE



7TH ST/KARPICK ST



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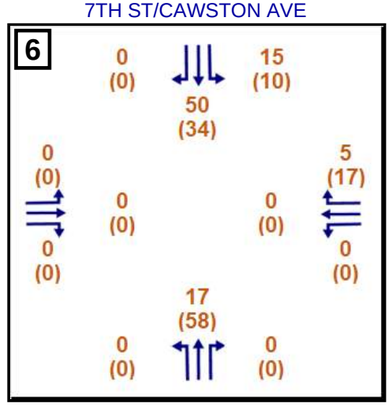

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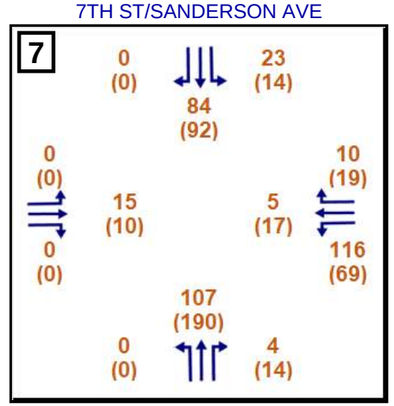
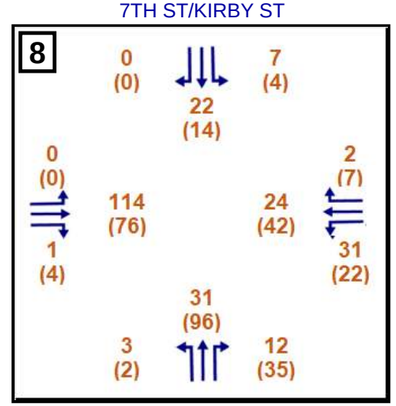


7TH ST/KIRBY ST



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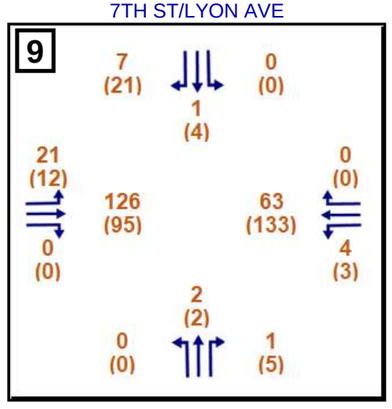

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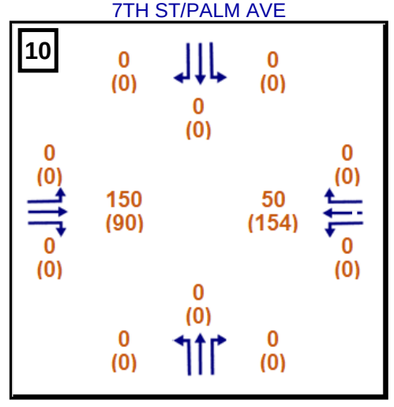

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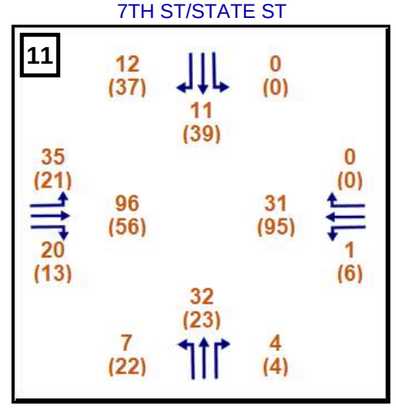

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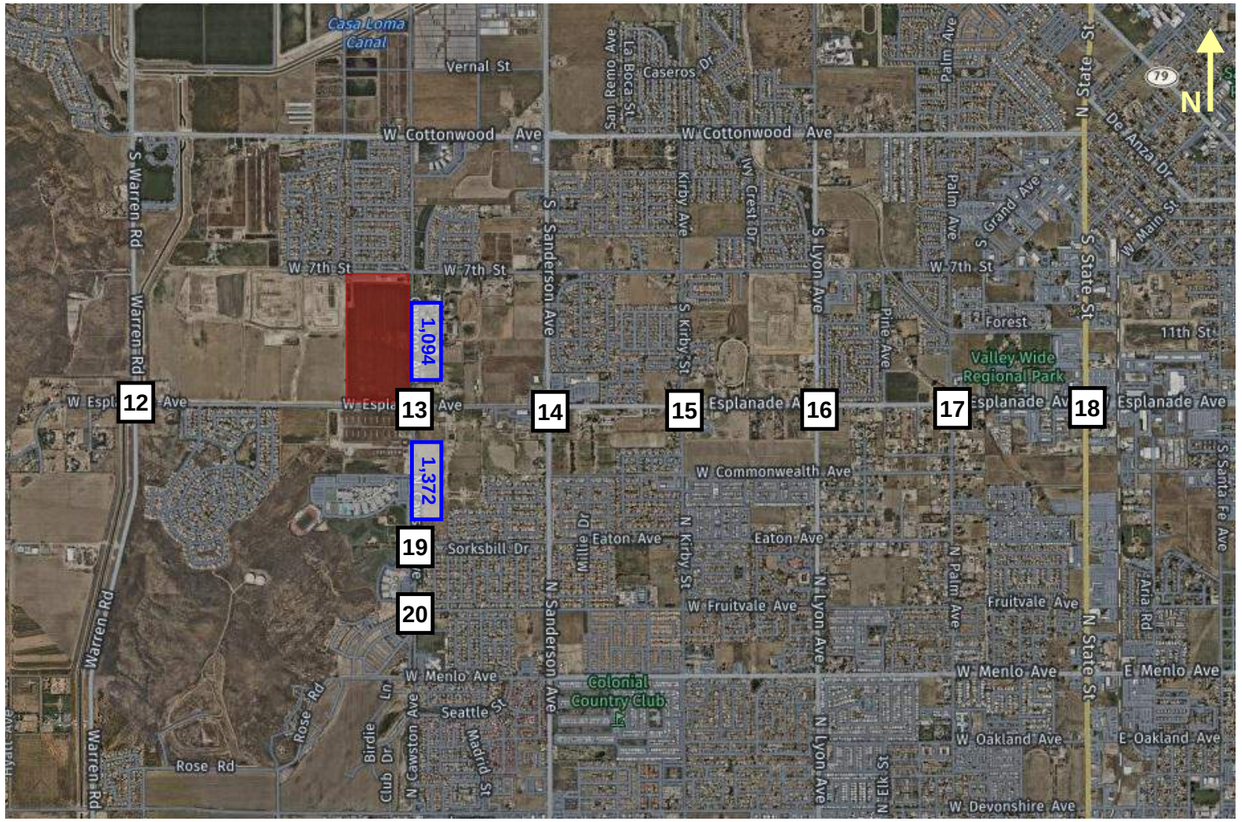
Figure 10.
Related Project Traffic Volumes, Intersections 1-11

PSOMAS
March 2024



LEGEND

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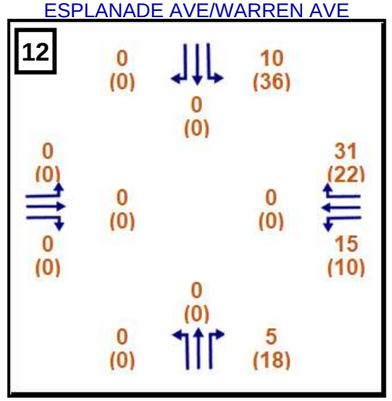
- XX,XXX — Segment Daily Traffic Volume (pc/day)
- Chacon Farms Project Area

ESPLANADE AVE/WARREN AVE



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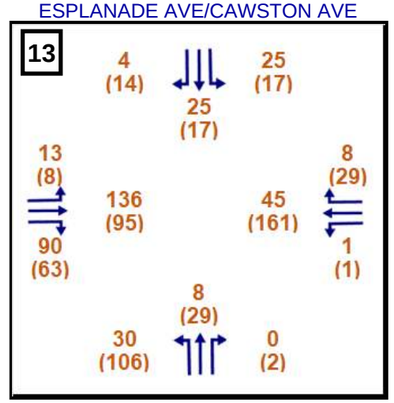
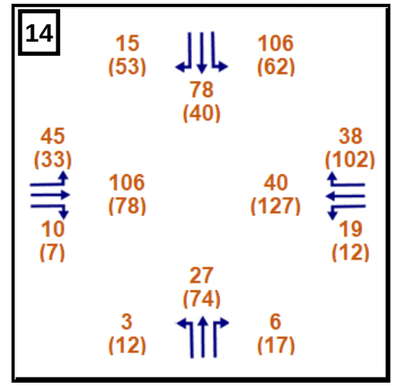


ESPLANADE AVE/SANDERSON AVE



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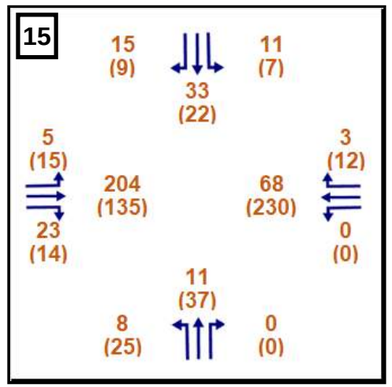

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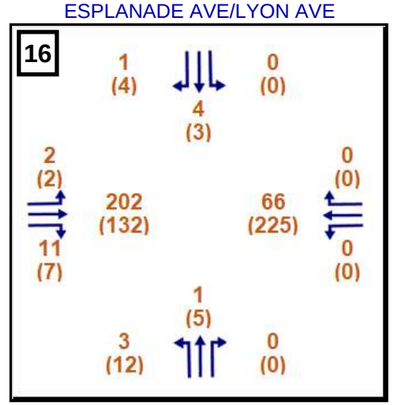

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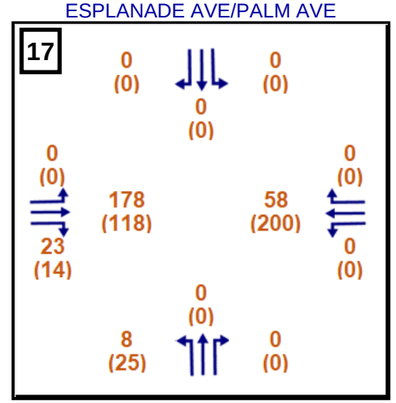

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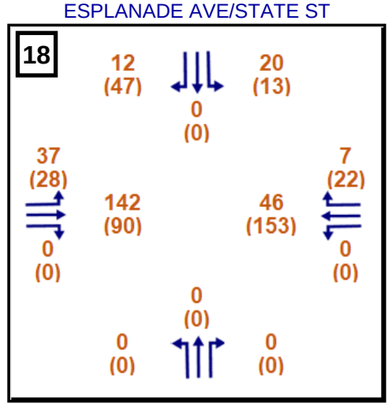
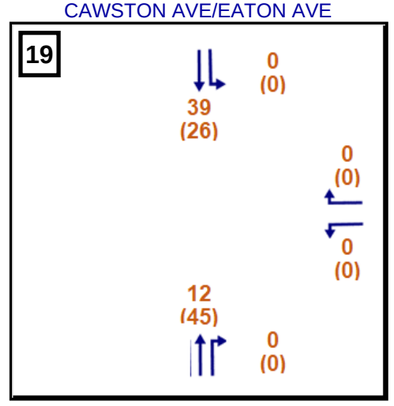
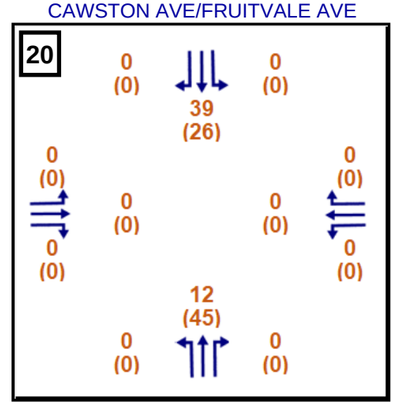


CAWSTON AVE/EATON AVE



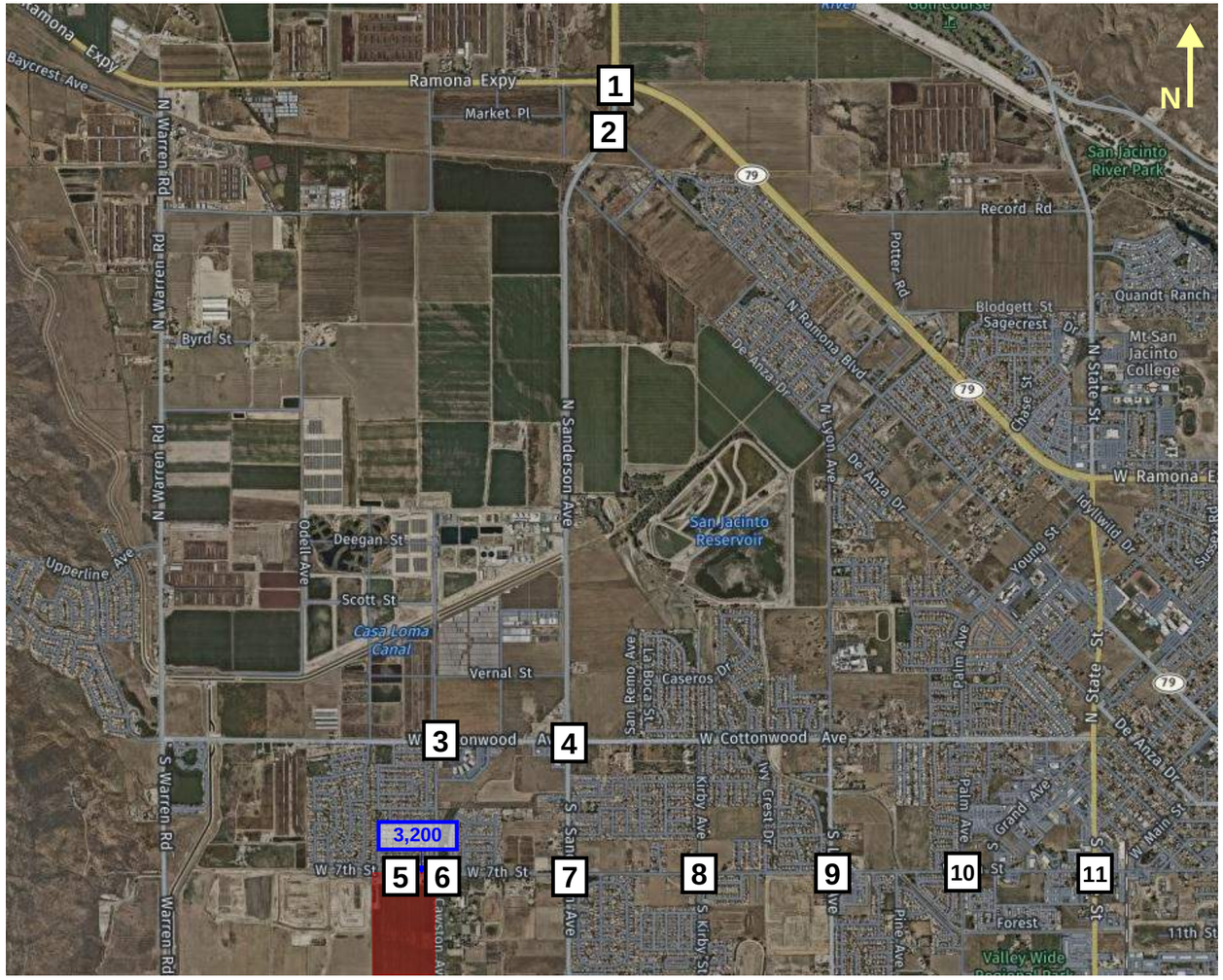
CAWSTON AVE/FRUITVALE AVE



Chacon Farms
Transportation Impact Study

Figure 10 cont'd.
Related Project Traffic Volumes, Intersections 12-20

PSOMAS
March 2024



LEGEND

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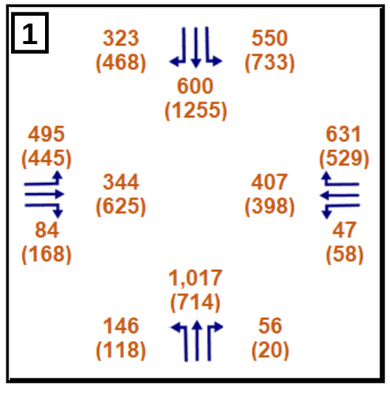
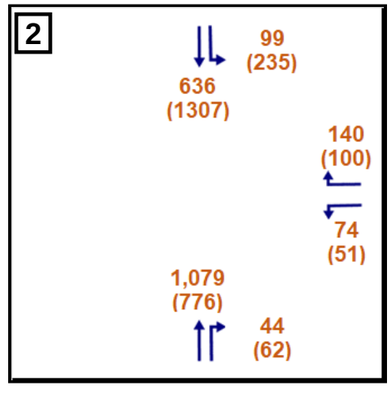
- XX,XXX — Segment Daily Traffic Volume (pc/day)
- Chacon Farms Project Area

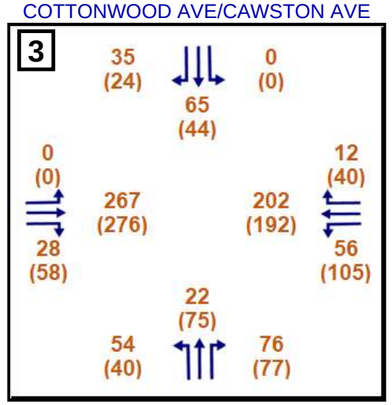
RAMONA EXPY/SANDERSON AVE



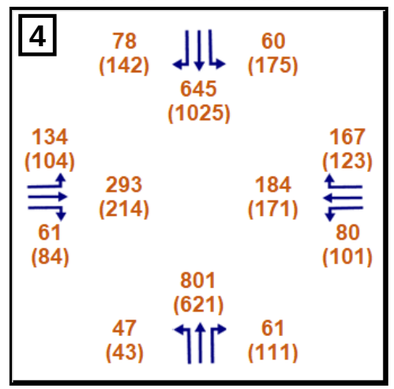
RAMONA BLVD/SANDERSON AVE



COTTONWOOD AVE/CAWSTON AVE



COTTONWOOD AVE/SANDERSON AVE



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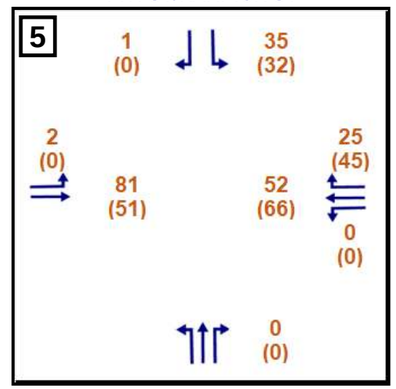

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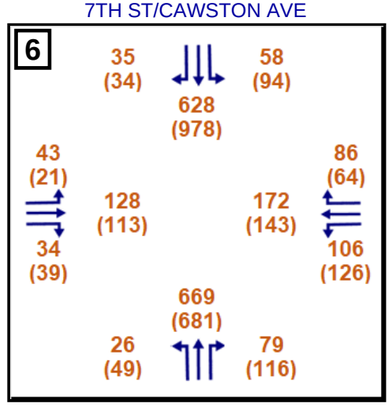

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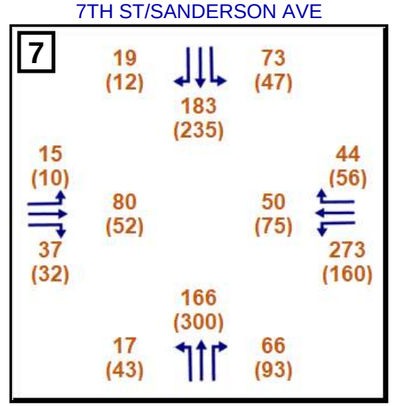

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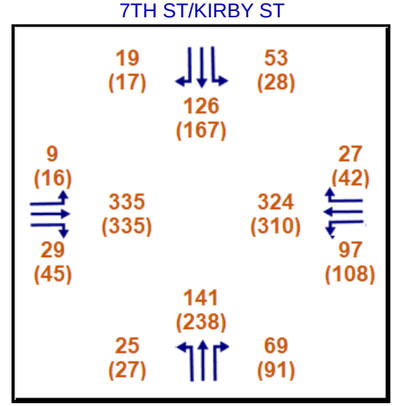

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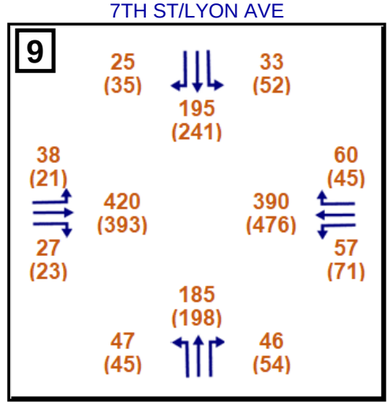

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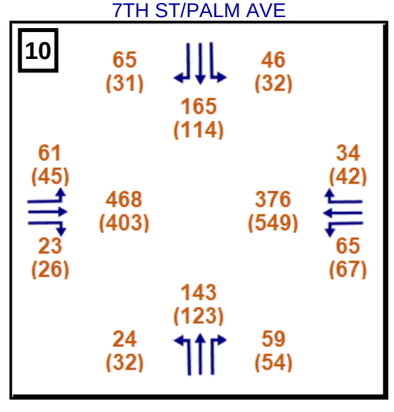

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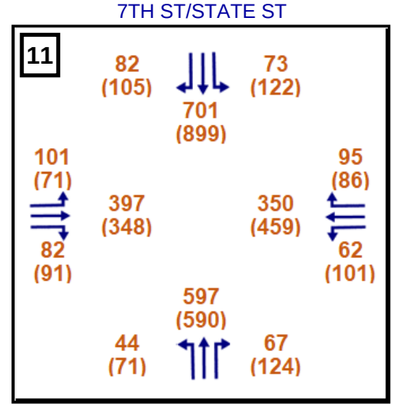
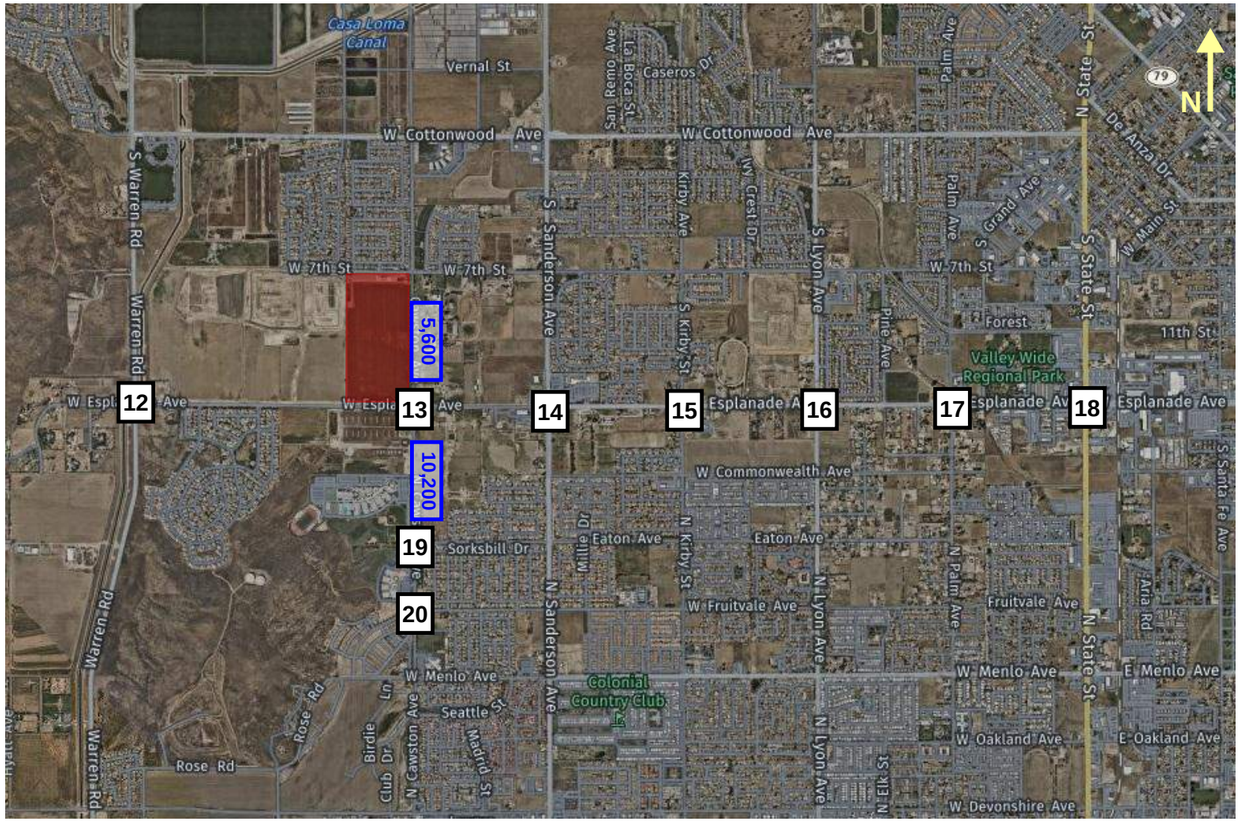


Chacon Farms
Transportation Impact Study

Figure 11.
No Project Traffic Volumes, Intersections 1-11

PSOMAS
March 2024



LEGEND

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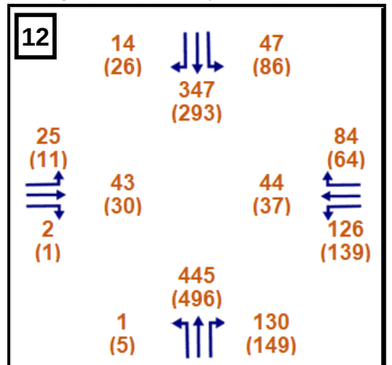
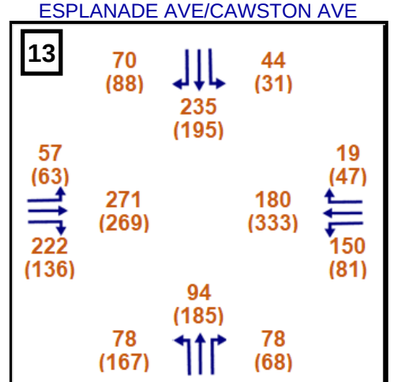
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Daily Traffic Volume (pc/day)
- Chacon Farms Project Area

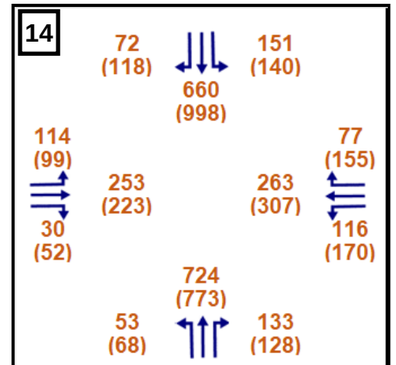
ESPLANADE AVE/WARREN AVE



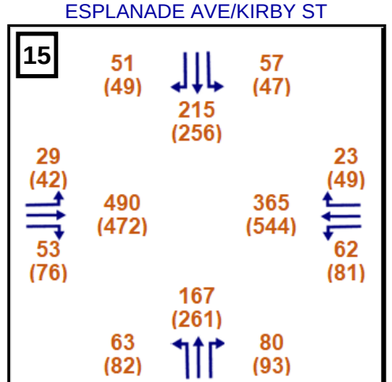
ESPLANADE AVE/CAWSTON AVE



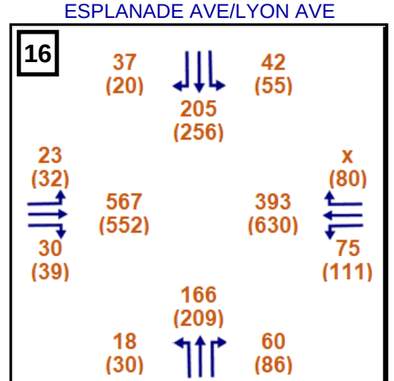
ESPLANADE AVE/SANDERSON AVE



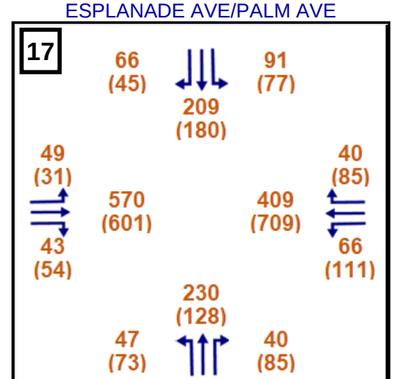
ESPLANADE AVE/KIRBY ST



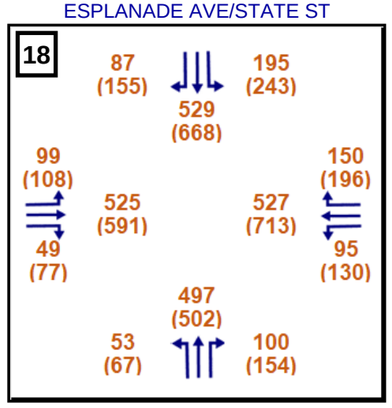
ESPLANADE AVE/LYON AVE



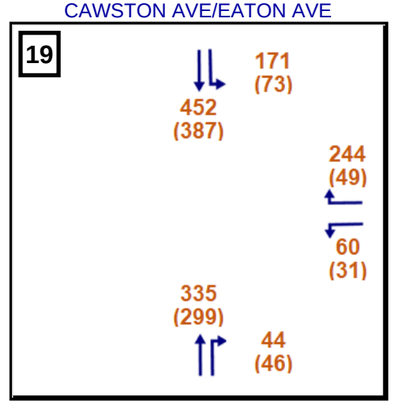
ESPLANADE AVE/PALM AVE



ESPLANADE AVE/STATE ST



CAWSTON AVE/EATON AVE



CAWSTON AVE/FRUITVALE AVE

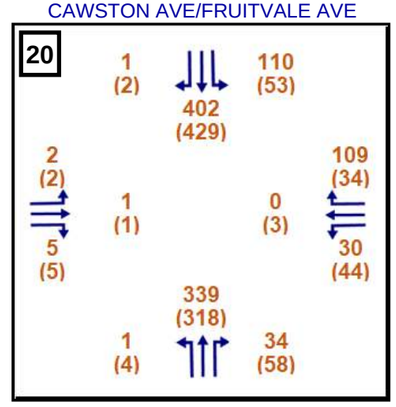


Figure 11 cont'd.
No Project Traffic Volumes, Intersections 12-20

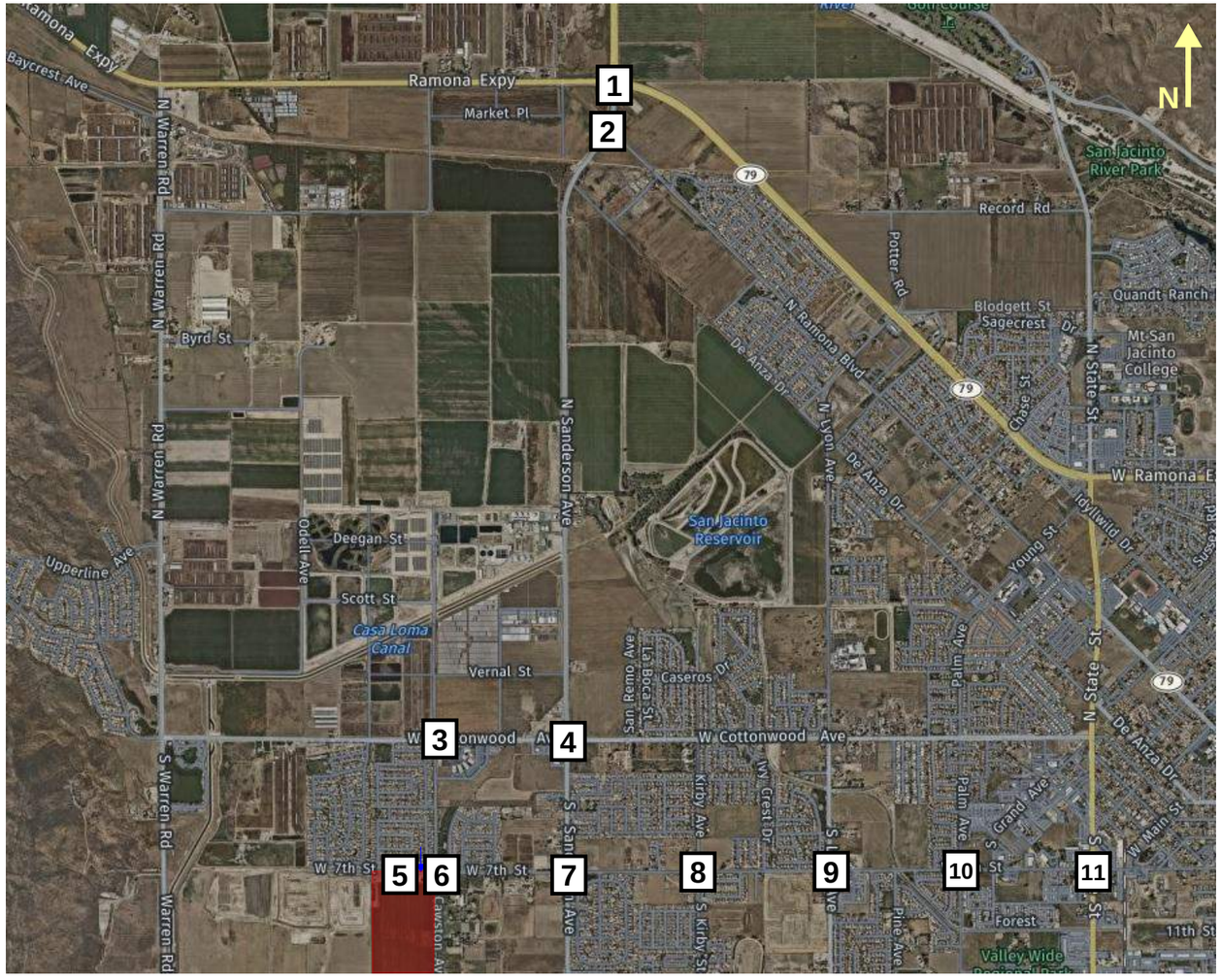
6.1.4. Background Opening Year Traffic Operations

For opening year conditions, it was assumed that Esplanade Avenue would be a four-lane roadway between Warren Road and Cawston Avenue and that the intersection of Esplanade Avenue and Cawston Avenue would be signalized. Figure 12 shows the results of the LOS analysis for opening year conditions without the project and the *SimTraffic* reports are included in Appendix D.

As seen in the figure, most of the study intersections will continue to operate acceptably. The exceptions are as follows:

- Ramona Expressway/Sanderson Avenue – LOS E in the AM peak hour
- 7th Street/Lyon Avenue – LOS F in the PM peak hour
- Esplanade Avenue/Kirby Street – LOS F in both peak hours
- Esplanade Avenue/Lyon Avenue – LOS F in the PM peak hour due to queuing at the Esplanade Avenue/Kirby Street intersection

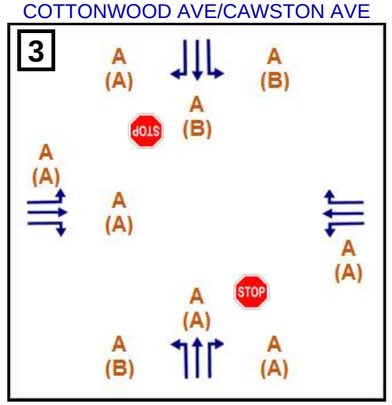
The three roadway study segments will continue to operate well below capacity in the opening year without the project.



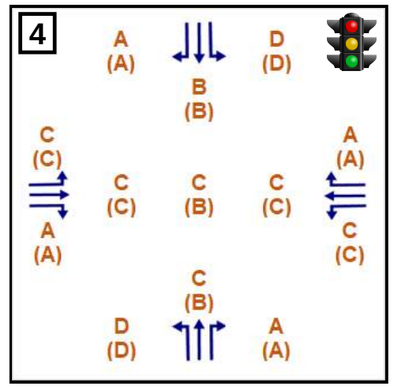
LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Level of Service (LOS)
- (XX) — PM Peak Hour Level of Service (LOS)
- Chacon Farms Project Area

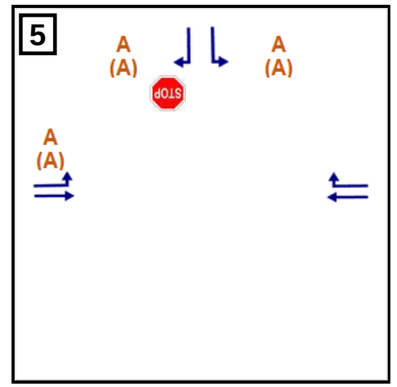
COTTONWOOD AVE/CAWSTON AVE



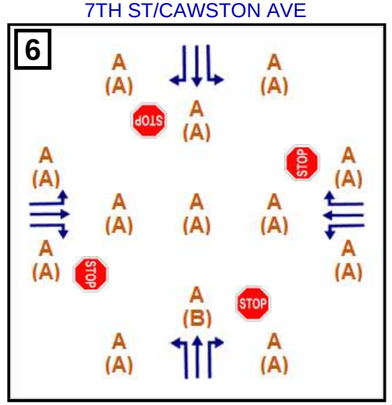
COTTONWOOD AVE/SANDERSON AVE



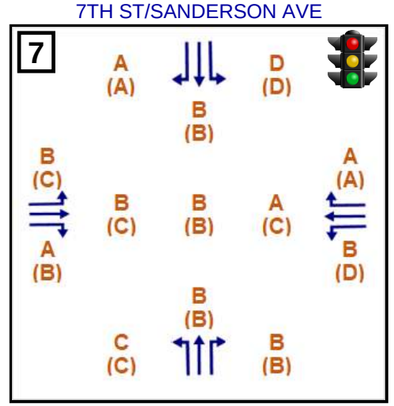
7TH ST/KARPICK ST



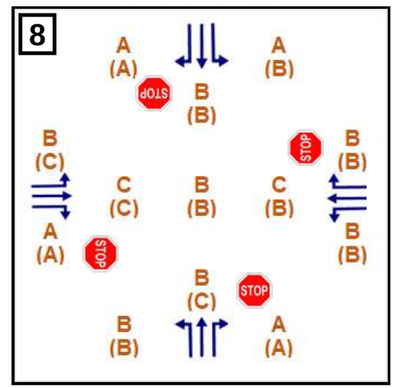
7TH ST/CAWSTON AVE



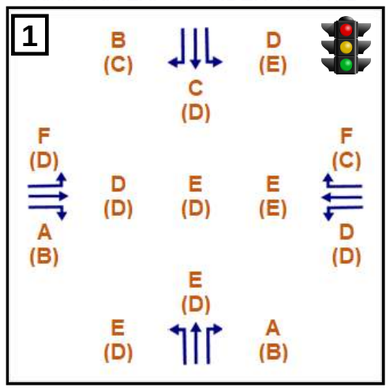
7TH ST/SANDERSON AVE



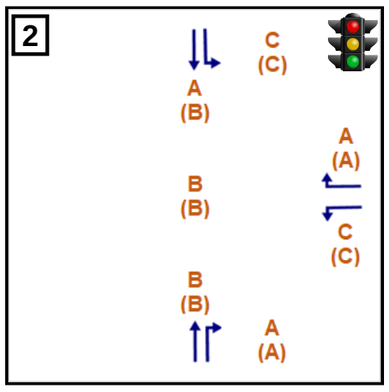
7TH ST/KIRBY ST



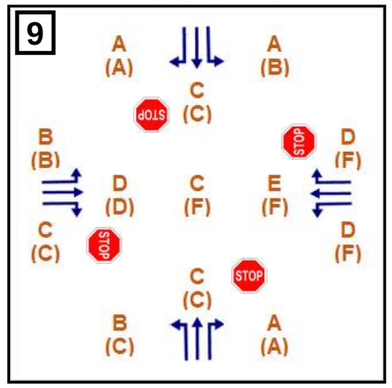
RAMONA EXPY/SANDERSON AVE



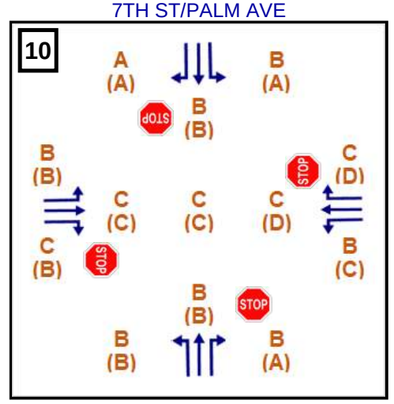
RAMONA BLVD/SANDERSON AVE



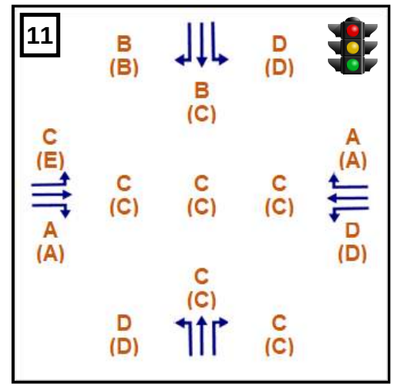
7TH ST/LYON AVE



7TH ST/PALM AVE



7TH ST/STATE ST



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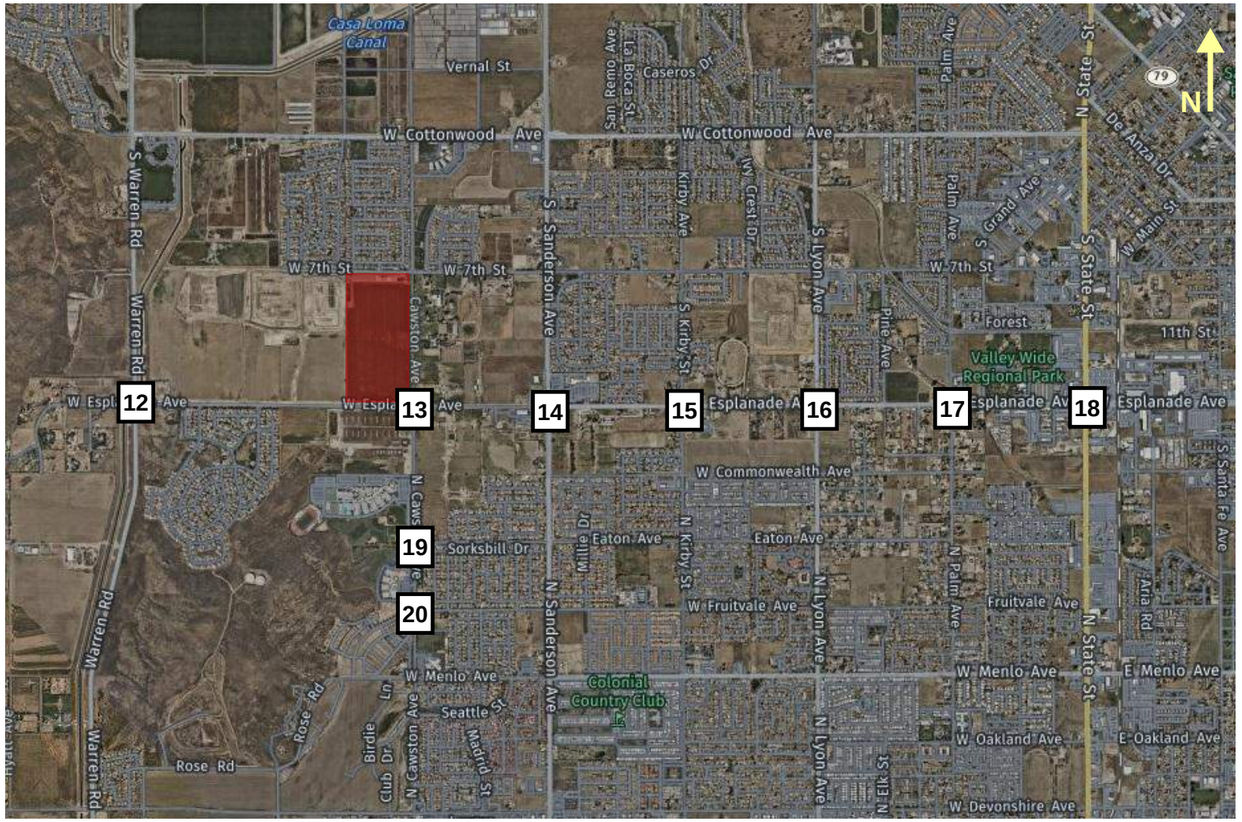
Transportation Impact Study

Figure 12.
Opening Year Without Project Level of Service (LOS), Intersections 1-11

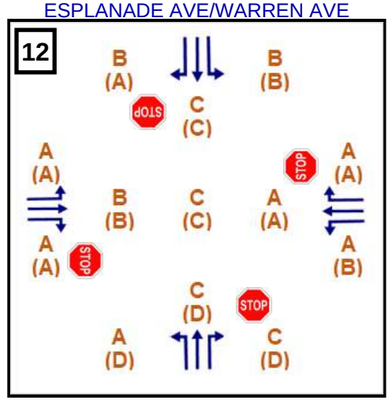
PSOMAS
March 2024



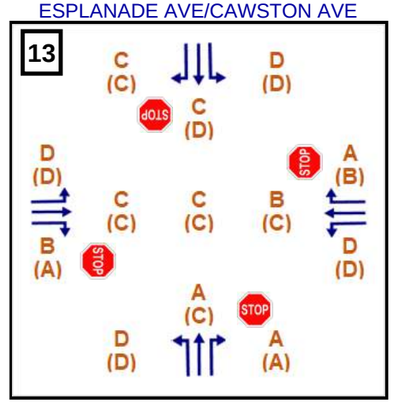
LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Level of Service (LOS)
- (XX) — PM Peak Hour Level of Service (LOS)
- Chacon Farms Project Area

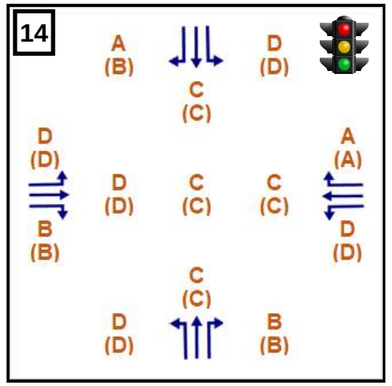
ESPLANADE AVE/WARREN AVE



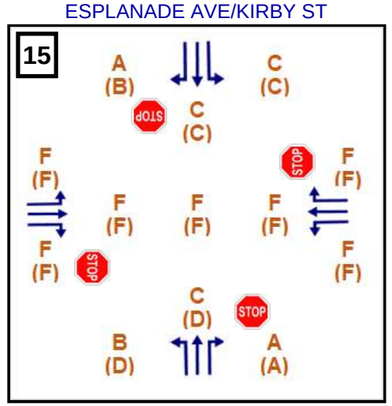
ESPLANADE AVE/CAWSTON AVE



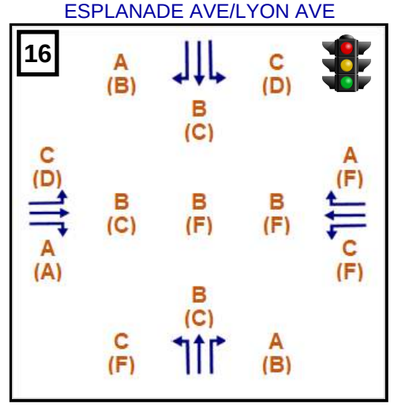
ESPLANADE AVE/SANDERSON AVE



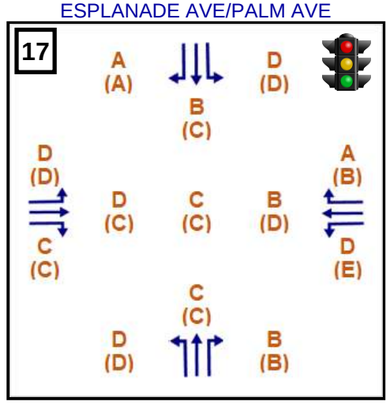
ESPLANADE AVE/KIRBY ST



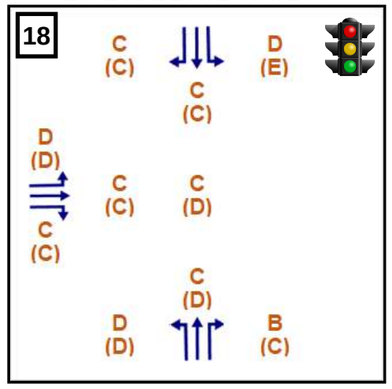
ESPLANADE AVE/LYON AVE



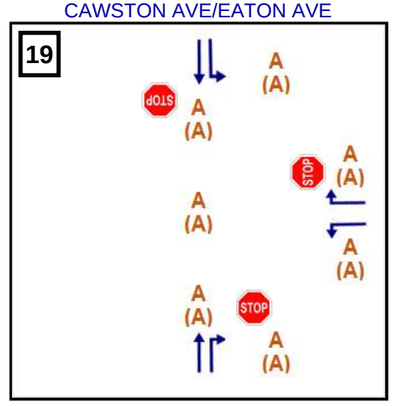
ESPLANADE AVE/PALM AVE



ESPLANADE AVE/STATE ST



CAWSTON AVE/EATON AVE



CAWSTON AVE/FRUITVALE AVE

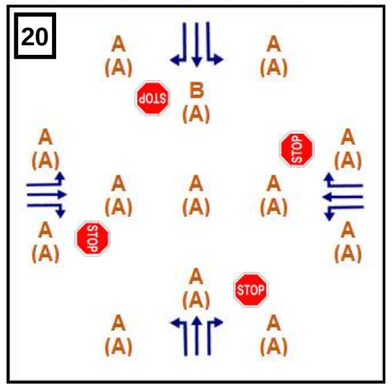


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Figure 12 cont'd.
Opening Year Without Project Level of Service (LOS), Intersections 12-20

PSOMAS
March 2024

6.2. PLUS PROJECT ANALYSIS

6.2.1. Total Opening Year Traffic Volumes

The project volumes (Figure 8) were added to the total background opening year volumes (Figure 11) to get the total opening year volumes with the project, shown in Figure 13.

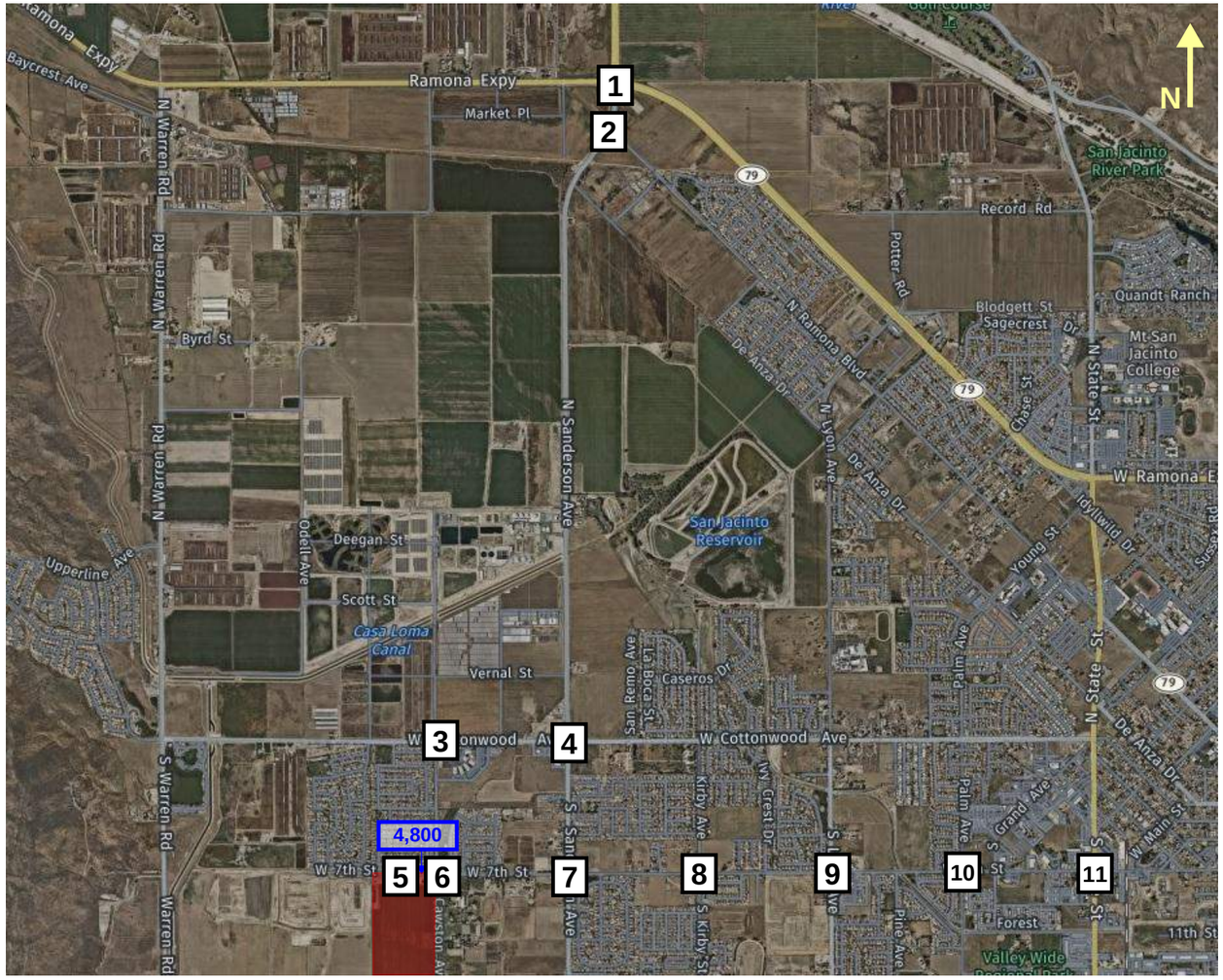
6.2.2. Total Opening Year Traffic Operations

Figure 14 shows the intersection LOS in the opening year with the project, and the *SimTraffic* reports are included in Appendix E. As seen in the figure, most of the study intersections will continue to operate acceptably with the addition of project traffic. The exceptions are as follows:

- Ramona Expressway/Sanderson Avenue – LOS E in the AM peak hour (same as without project)
- 7th Street/Lyon Avenue – LOS E in the AM peak hour (new) and LOS F in the PM peak hour (same as without project)
- Esplanade Avenue/Kirby Street – LOS F in both peak hours (same as without project)
- Esplanade Avenue/Lyon Avenue – LOS F in the PM peak hour due to queuing at the Esplanade Avenue/Kirby Street intersection (same as without project)

In addition, all movements at the new project driveways will operate at LOS B or better in both peak hours with stop control on the driveways. Traffic is assumed to be free flowing on Cawston Avenue, Esplanade Avenue, and 7th Street.

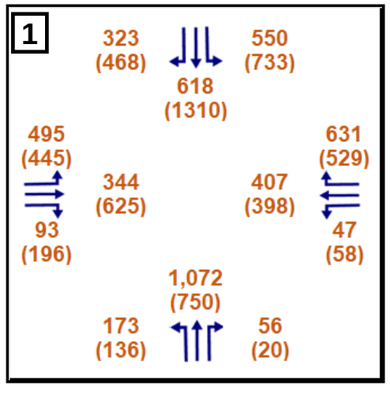
Finally, the roadway study segments will continue to operate well below the available capacity.



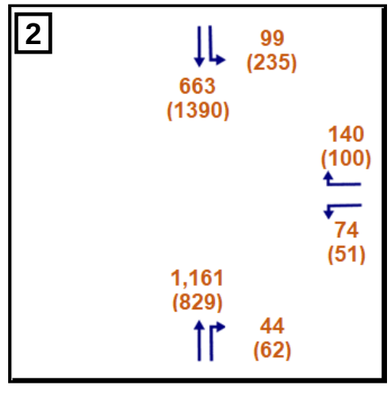
LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Daily Traffic Volume (pc/day)
- Chacon Farms Project Area

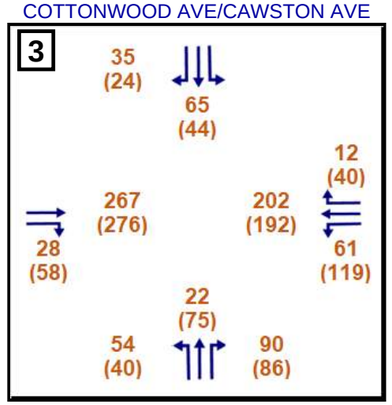
RAMONA EXPY/SANDERSON AVE



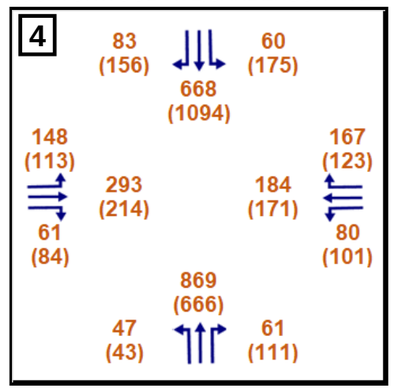
RAMONA BLVD/SANDERSON AVE



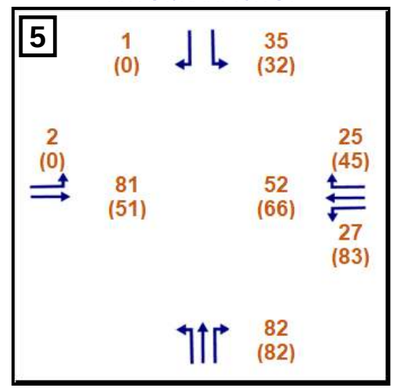
COTTONWOOD AVE/CAWSTON AVE



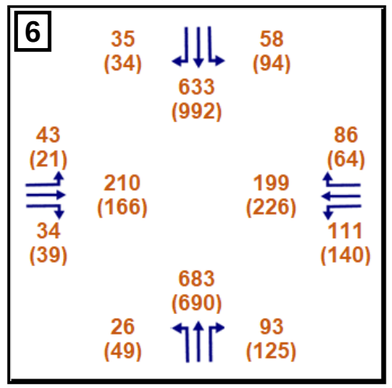
COTTONWOOD AVE/SANDERSON AVE



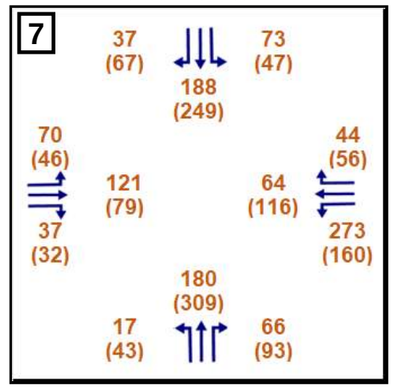
7TH ST/KARPICK ST



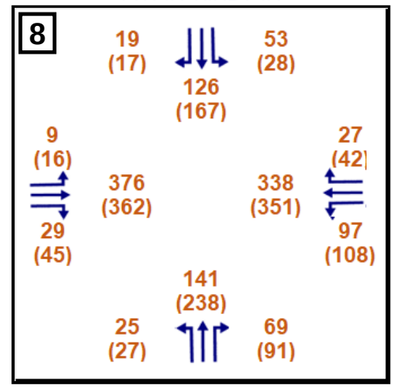
7TH ST/CAWSTON AVE



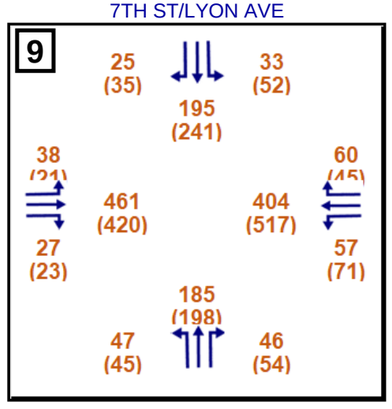
7TH ST/SANDERSON AVE



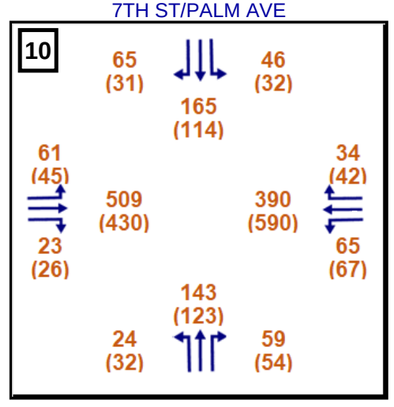
7TH ST/KIRBY ST



7TH ST/LYON AVE



7TH ST/PALM AVE



7TH ST/STATE ST

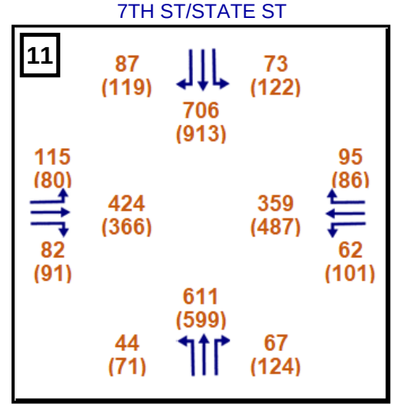


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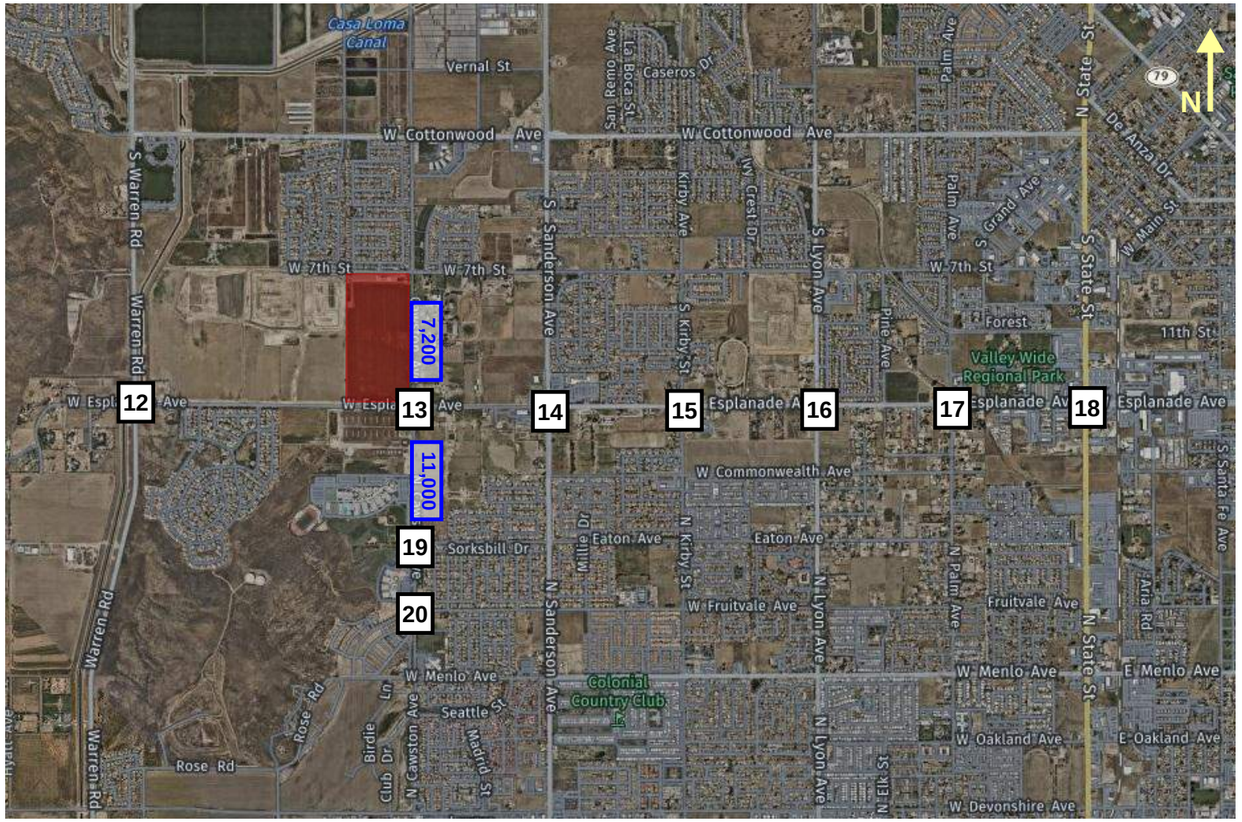
Figure 13.
Opening Year Plus Project Traffic Volumes, Intersections 1-11

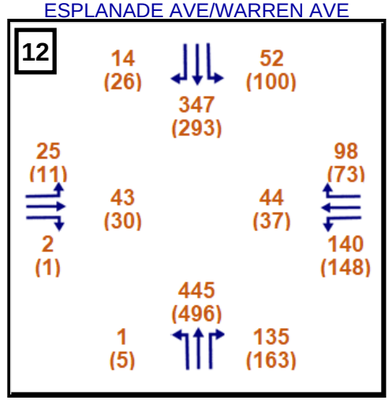
PSOMAS
March 2024



LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Daily Traffic Volume (pc/day)
- Chacon Farms Project Area

ESPLANADE AVE/WARREN AVE



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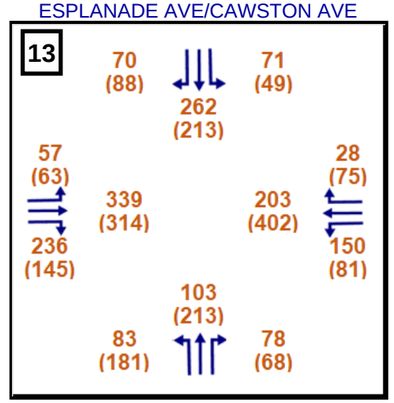
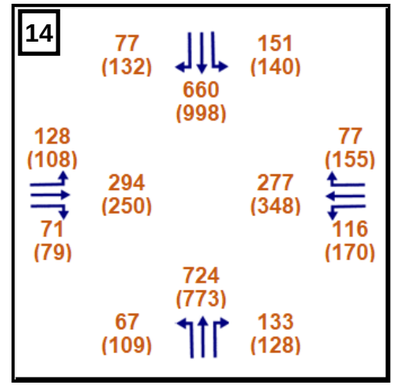
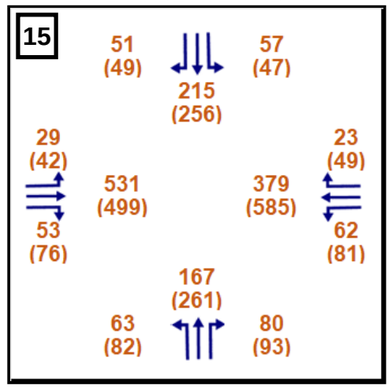


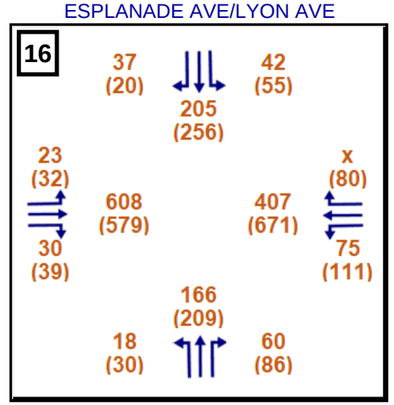
ESPLANADE AVE/SANDERSON AVE



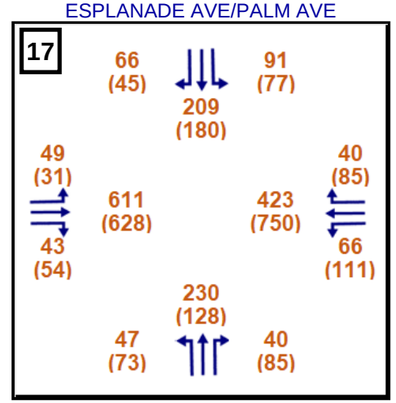
ESPLANADE AVE/KIRBY ST



ESPLANADE AVE/LYON AVE



ESPLANADE AVE/PALM AVE



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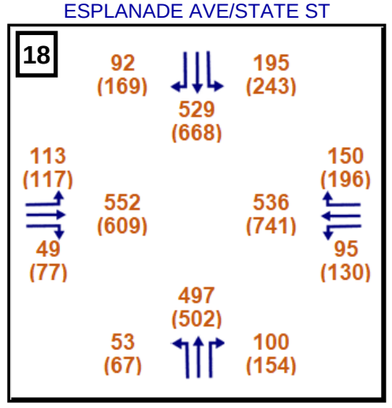
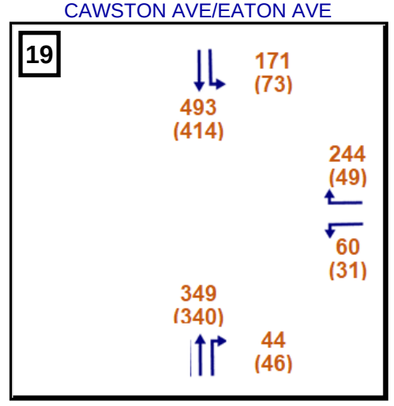
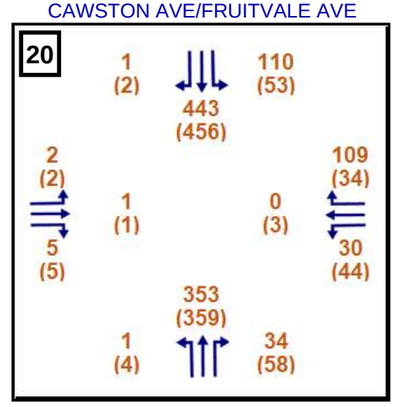


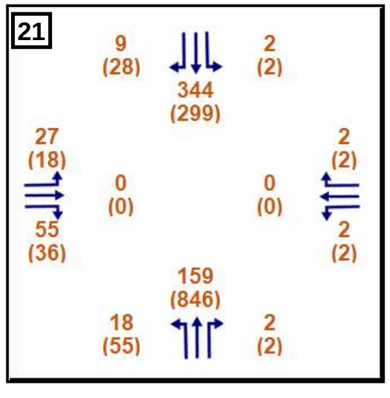
CAWSTON AVE/EATON AVE



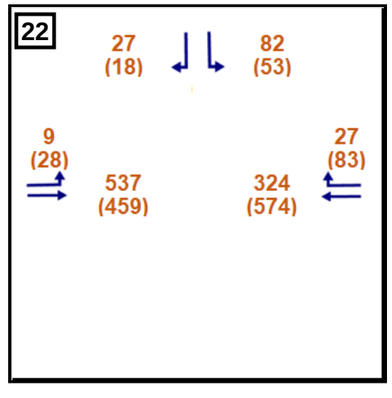
CAWSTON AVE/FRUITVALE AVE

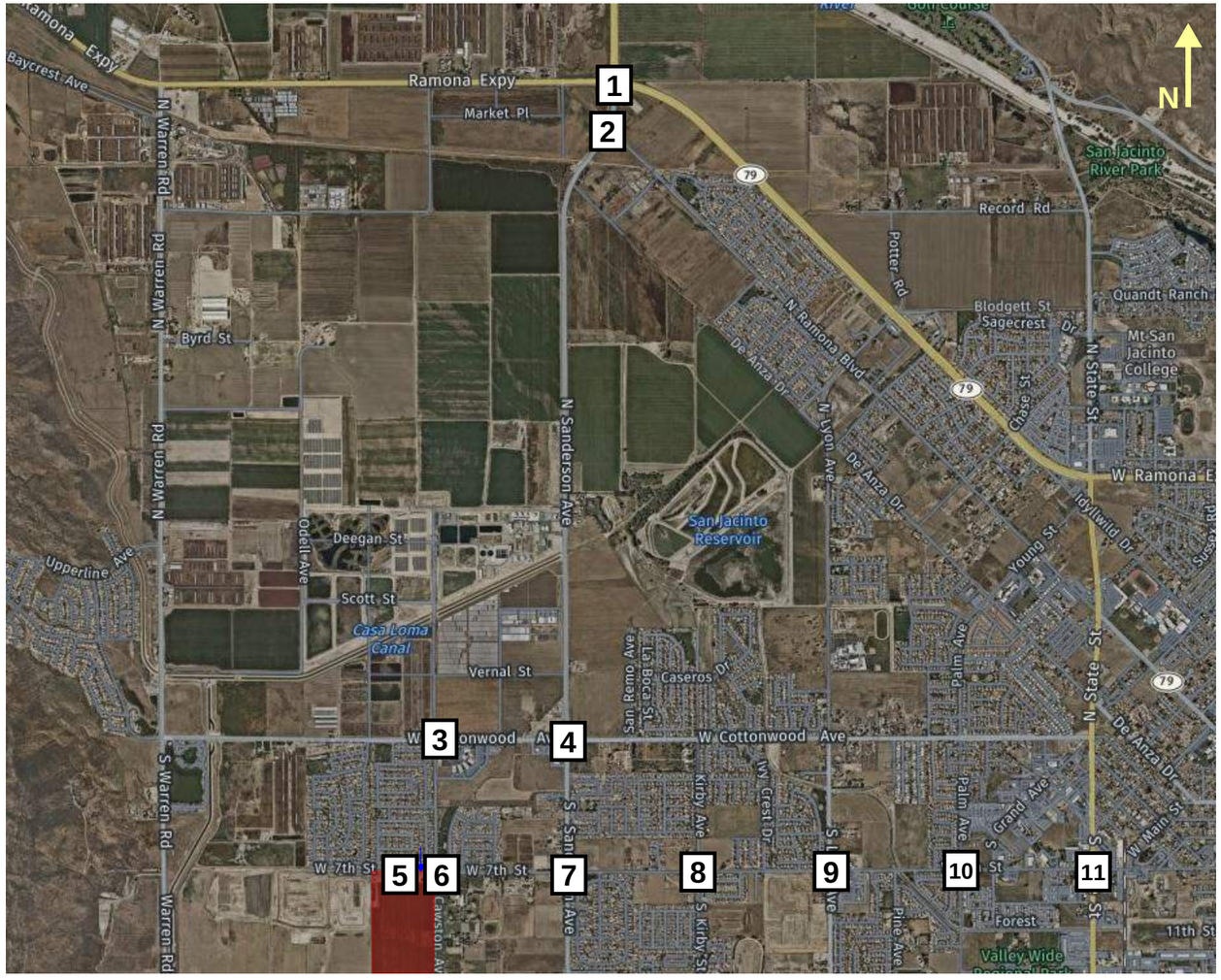


CAWSTON AVE/EAST DRIVEWAY



ESPLANADE AVE/SOUTH DRIVEWAY

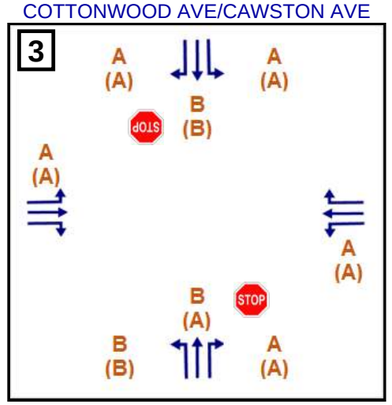




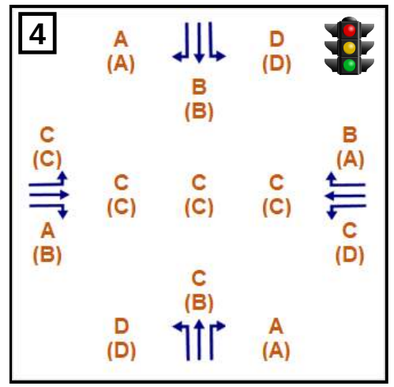
LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Level of Service (LOS)
- (XX) — PM Peak Hour Level of Service (LOS)
- Chacon Farms Project Area

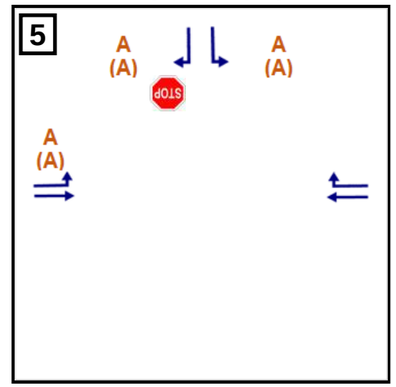
COTTONWOOD AVE/CAWSTON AVE



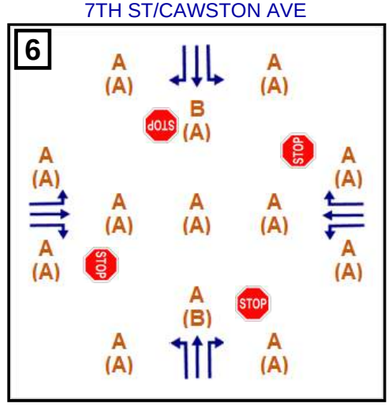
COTTONWOOD AVE/SANDERSON AVE



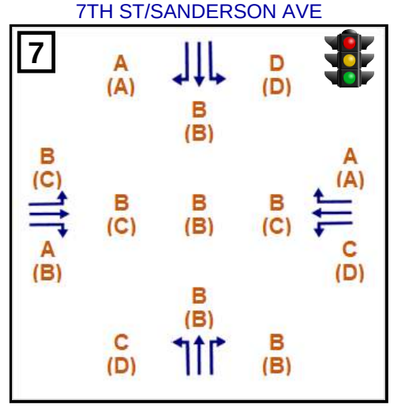
7TH ST/KARPICK ST



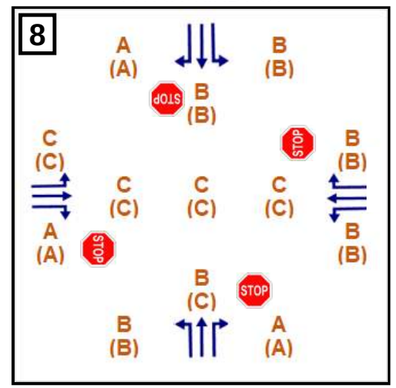
7TH ST/CAWSTON AVE



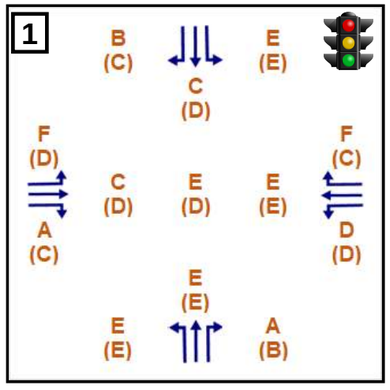
7TH ST/SANDERSON AVE



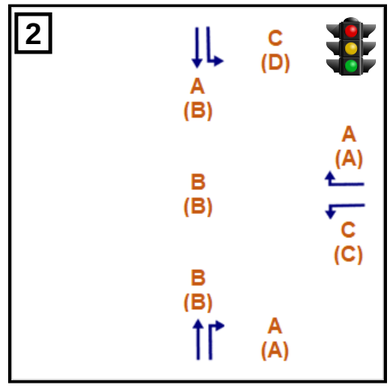
7TH ST/KIRBY ST



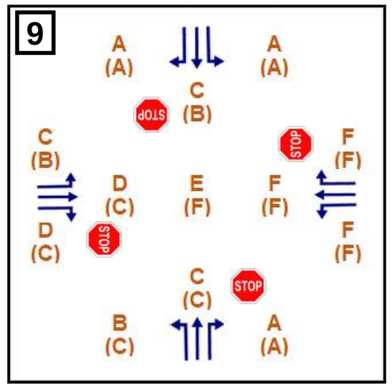
RAMONA EXPY/SANDERSON AVE



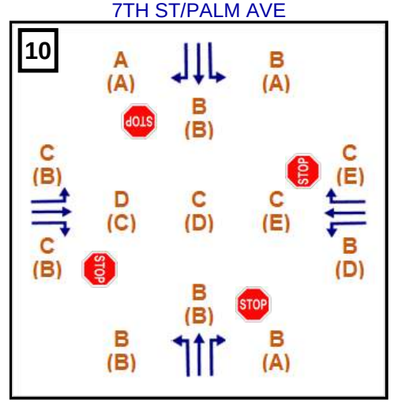
RAMONA BLVD/SANDERSON AVE



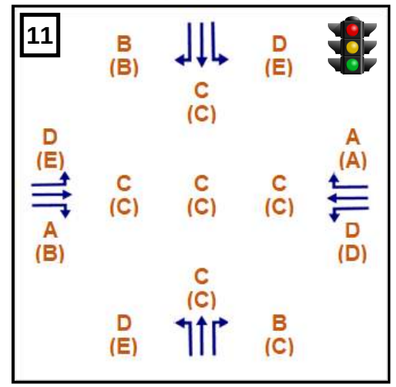
7TH ST/LYON AVE



7TH ST/PALM AVE



7TH ST/STATE ST



Chacon Farms
Transportation Impact Study

Figure 14.
Opening Year Plus Project Level of Service (LOS), Intersections 1-11

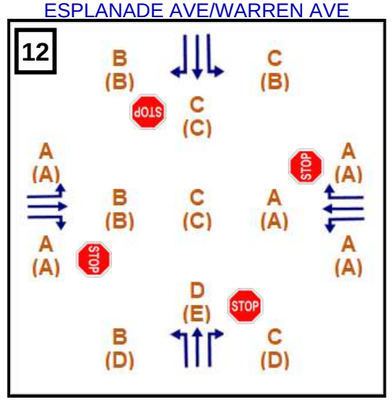
PSOMAS
March 2024



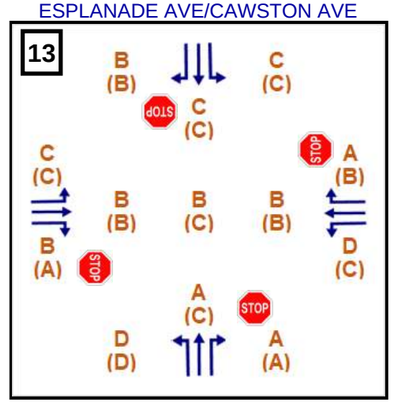
LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Level of Service (LOS)
- (XX) — PM Peak Hour Level of Service (LOS)
- Chacon Farms Project Area

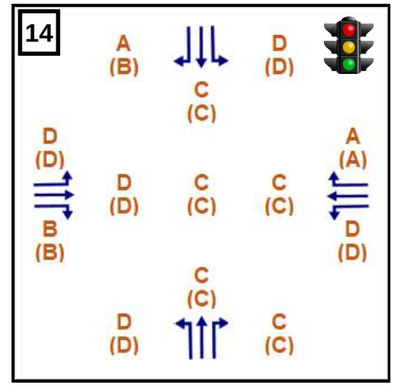
ESPLANADE AVE/WARREN AVE



ESPLANADE AVE/CAWSTON AVE



ESPLANADE AVE/SANDERSON AVE



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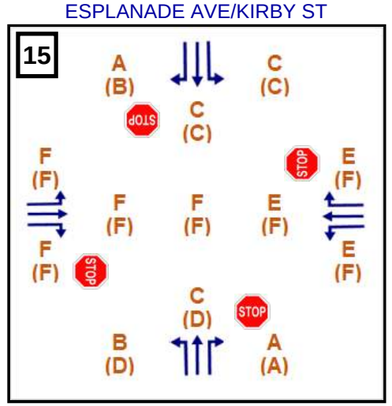

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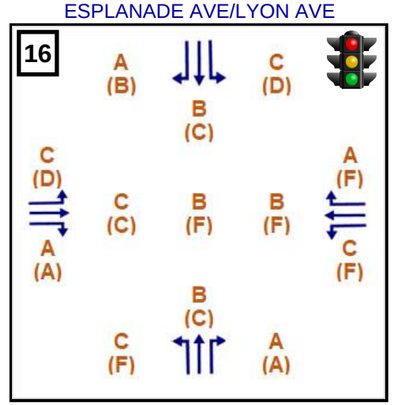

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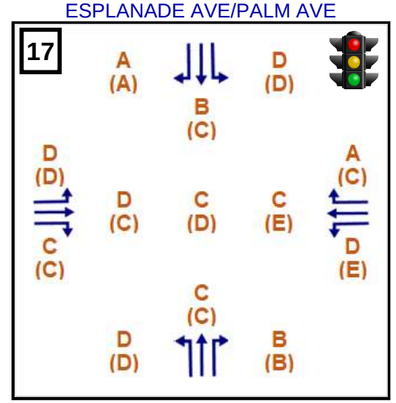
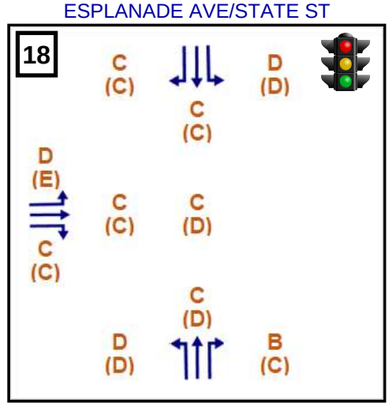
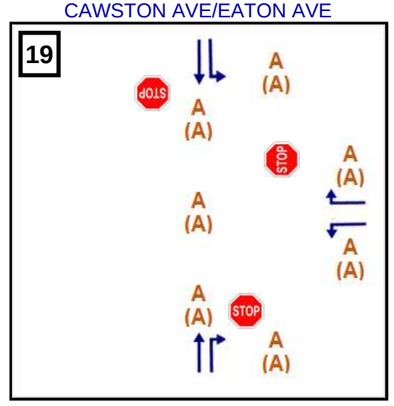


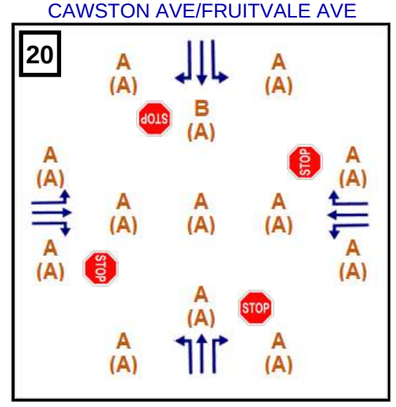
ESPLANADE AVE/STATE ST



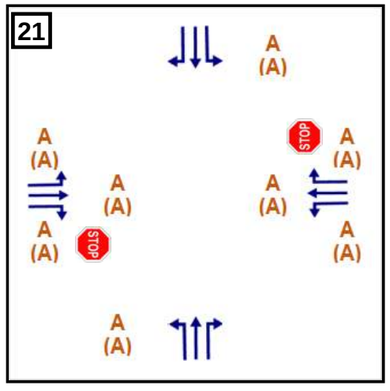
CAWSTON AVE/EATON AVE



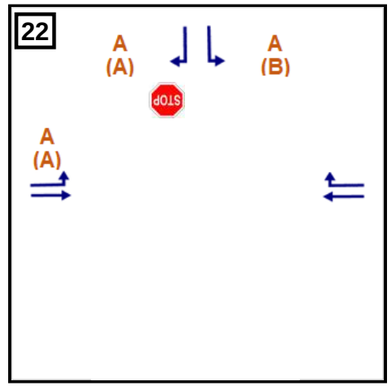
CAWSTON AVE/FRUITVALE AVE



CAWSTON AVE/EAST DRIVEWAY



ESPLANADE AVE/SOUTH DRIVEWAY



Chacon Farms
Transportation Impact Study

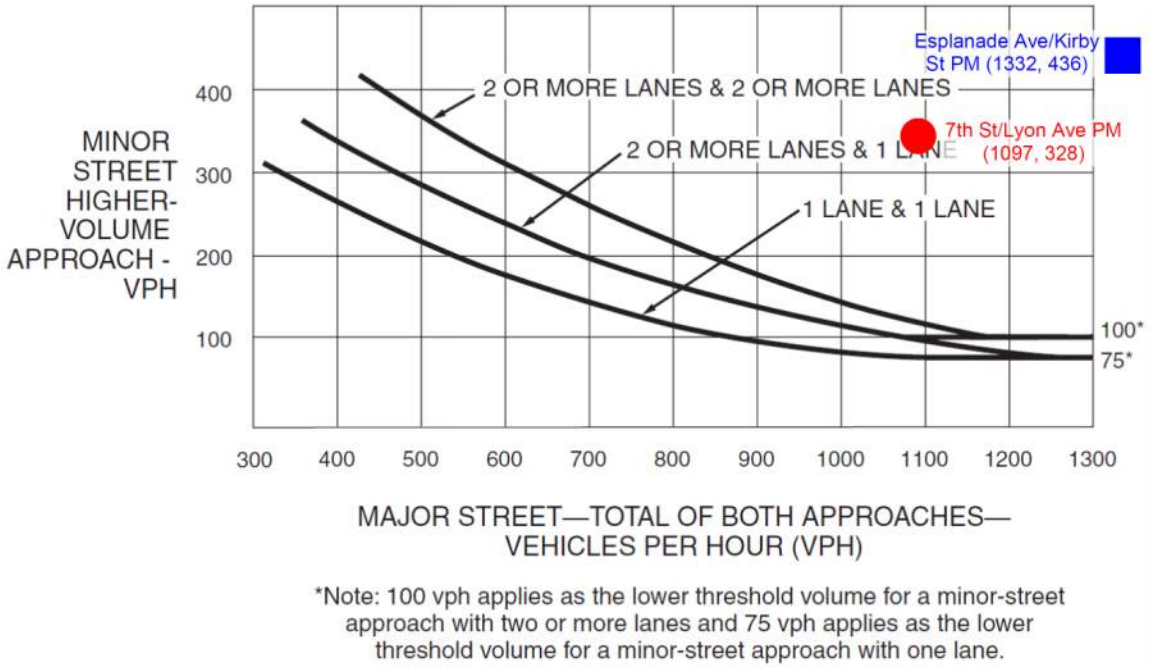
Figure 14 cont'd.
Opening Year Plus Project Level of Service (LOS), Intersections 12-20

PSOMAS
March 2024

7. TRAFFIC SIGNAL WARRANT ANALYSIS

As mentioned in the previous section, there are two all-way stop controlled intersections which are expected to fail in the opening year with or without the project. Figure 15 shows the evaluation of the peak hour signal warrant for both locations with project traffic. Because both 7th Street and Esplanade Avenue have posted speeds of 45 mph, the 70% warrant was used. As shown, both intersections are expected to meet the peak hour signal warrant.

Figure 15. Peak Hour Signal Warrant Evaluation



8. SITE ACCESS ANALYSIS

The project will have three access points; one on 7th Street to the north, one on Cawston Avenue to the east, and one on Esplanade Avenue to the south. The driveways are all expected to operate with one-way stop control on the driveway (two-way at the north driveway/Karpick Street). The access points will not be gated.

Figure x shows the sight triangles for the north, east, and south access points. The sight triangles should be maintained and considered during final design. As currently shown, there are no major existing concerns with sight visibility. Sight visibility should be verified and maintained throughout the design and construction process.

The project volumes at the north and east driveways will not reach 50 peak hour right turns, so no right turn lanes will be needed. However, it was assumed that left turn lanes would be provided at all three driveways. In addition, although the peak hour right turn volume (westbound) at the south driveway will exceed 50 vehicles, it was not assumed that a right turn lane would be provided because Esplanade Avenue will be widened to a four-lane roadway.

Sidewalks will be provided throughout the site and will connect to the existing external roadways. It is not expected that the project will include construction of sidewalk along the existing roadways; however, sidewalk should be considered with the widening of Esplanade Avenue and any future widening of 7th Street and/or Cawston Avenue. The project will not interfere with the existing or planned bicycle network.



Chacon Farms Transportation Impact Study	*Figure 16.* *Sight Triangles*	PSOMAS March 2024

9. IMPROVEMENTS AND RECOMMENDATIONS

9.1. IMPROVEMENTS AT INTERSECTIONS

As discussed in Section 6.2, the following locations will operate below an acceptable LOS in the opening year without and/or with the project as indicated.

- Ramona Expressway/Sanderson Avenue – LOS E in the AM peak hour (same as without project)
- 7th Street/Lyon Avenue – LOS E in the AM peak hour (new) and LOS F in the PM peak hour (same as without project)
- Esplanade Avenue/Kirby Street – LOS F in both peak hours
- Esplanade Avenue/Lyon Avenue – LOS F in the PM peak hour due to queuing at the Esplanade Avenue/Kirby Street intersection

Both the 7th Street/Lyon Avenue and the Esplanade Avenue/Kirby Street intersections will meet the peak hour signal warrant, so traffic signals should be installed at both locations to improve operations to an acceptable level.

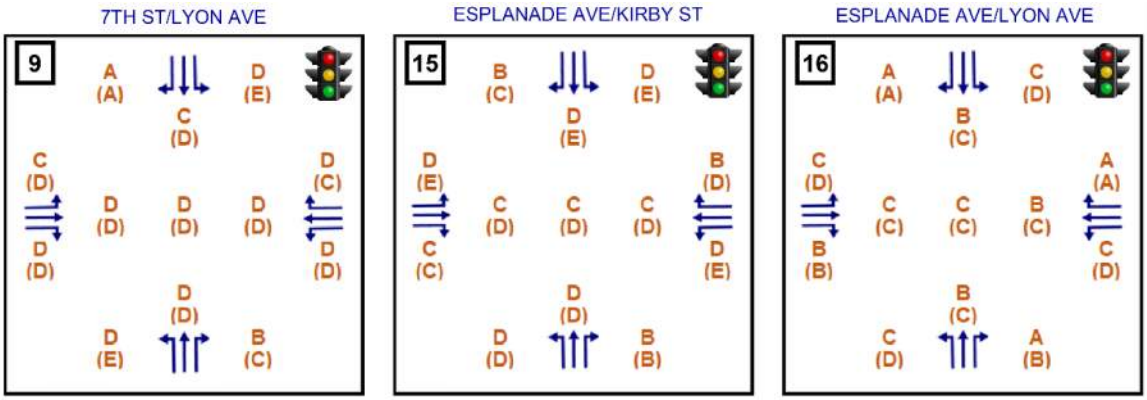
The Ramona Expressway/Sanderson Avenue intersection will operate at LOS E with 70.5 seconds of delay per vehicle in the opening year without the project and at LOS E with 71.6 seconds of delay per vehicle in the opening year with the project. Because the difference is below the threshold of 5.0 seconds, no improvements will be required.

Lastly, the intersection of Esplanade Avenue and Lyon Avenue is expected to operate acceptably with the improvement at Esplanade Avenue and Kirby Street. The LOS for the two intersections to be signalized, as well as the Esplanade Avenue/Lyon Avenue intersection, is shown in Figure 17 and the *SimTraffic* reports are included in Appendix F.

9.2. IMPROVEMENTS AT ROADWAY SEGMENTS

As discussed in Section 6.2, the study roadway segments are expected to operate efficiently in the opening year with project traffic. Therefore, there are not any required improvements to the study roadway segments.

Figure 17. Opening Year Level of Service (LOS) With Improvements



9.3. FAIR SHARE CALCULATION

Table 5 shows the fair share percentage results for the two required traffic signals. As shown, the project will be responsible for 17% of the 7th Street/Lyon Avenue traffic signal cost and 11% of the Esplanade Avenue/Kirby Street traffic signal cost.

Table 5. Fair Share Percentage Calculations for Required Traffic Signals

Intersection	Peak Hour	Project Volumes	Future Development Volumes	Project Fair Share
7th St/ Lyon Ave	AM	55	276	17%
	PM	68	330	17%
Esplanade Ave/ Kirby St	AM	55	430	11%
	PM	68	566	11%

10. VEHICLE MILES TRAVELED (VMT) ANALYSIS

Per the WRCOG VMT screening tool[5], the project is located in a low VMT generating TMZ. In addition, the project is consistent with other uses in the TAZ as the northern half of the TAZ is already developed as a single-family residential neighborhood. Therefore, the project is presumed to have a less than significant impact.

11. REFERENCES

[1] *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment.* City of San Jacinto, June 2020.

[2] *Envision San Jacinto 2040 General Plan* City of San Jacinto, November 2022.

[3] https://gis-sanjacintoca.opendata.arcgis.com/apps/5a2bbf324b5449e1a72604467c4de9b9/explore, accessed February 2024.

[4] *Trip Generation Manual, 11th Edition*. Institute of Transportation Engineers, 2021.

[5] WRCOG Screening Tool, accessed September 2023.

Appendix A – Traffic Volume Data

National Data & Surveying Services

Intersection Turning Movement Count

Location: Cawston Ave & W 7th St
City: San Jacinto
Control: 4-Way Stop

Project ID: 23-030069-001
Date: 11/2/2023

Data - Totals

NS/EW Streets:	Cawston Ave				Cawston Ave				W 7th St				W 7th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	0	1	1	0	0	1	0	0	1	1.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	26	5	0	9	18	6	0	8	12	9	0	23	5	25	0	149
7:15 AM	2	33	17	0	28	21	5	0	11	8	11	1	29	5	44	0	215
7:30 AM	2	25	15	0	23	23	8	0	6	15	8	0	25	5	5	0	160
7:45 AM	2	9	11	0	11	19	2	0	4	12	8	0	33	11	11	0	133
8:00 AM	8	7	19	0	9	20	3	0	0	14	13	0	31	10	10	0	144
8:15 AM	4	16	15	0	5	33	5	0	4	21	7	0	62	17	7	0	196
8:30 AM	0	21	19	0	4	12	4	0	1	10	6	0	24	12	2	0	115
8:45 AM	8	15	17	0	6	16	0	0	2	8	11	0	20	9	8	0	120
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	29	152	118	0	95	162	33	0	36	100	73	1	247	74	112	0	1232
APPROACH %'s :	9.70%	50.84%	39.46%	0.00%	32.76%	55.86%	11.38%	0.00%	17.14%	47.62%	34.76%	0.48%	57.04%	17.09%	25.87%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	9	93	48	0	71	81	21	0	29	47	36	1	110	26	85	0	657
PEAK HR FACTOR :	0.750	0.705	0.706	0.000	0.634	0.880	0.656	0.000	0.659	0.783	0.818	0.250	0.833	0.591	0.483	0.000	0.764
	0.721				0.801				0.911				0.708				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	0	1	1	0	0	1	0	0	1	1.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:30 PM	5	9	10	0	5	15	4	0	0	7	9	0	17	19	7	0	107
1:45 PM	5	11	6	0	9	10	3	0	2	4	4	0	9	15	5	0	83
2:00 PM	1	8	12	0	13	13	2	0	1	12	8	0	10	13	9	0	102
2:15 PM	6	16	15	0	5	9	2	0	1	8	5	0	14	12	13	0	106
2:30 PM	5	14	13	0	10	25	4	0	1	12	7	0	7	12	11	0	121
2:45 PM	5	15	14	0	6	15	1	0	2	9	8	0	9	17	7	0	108
3:00 PM	7	23	17	0	3	22	1	0	2	15	6	0	34	13	8	0	151
3:15 PM	7	19	18	0	7	20	7	0	3	12	5	0	39	9	5	0	151
3:30 PM	14	28	27	0	11	16	1	0	0	11	7	0	34	14	8	0	171
3:45 PM	9	26	41	0	7	23	4	0	3	19	5	0	33	12	8	0	190
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	64	169	173	0	76	168	29	0	15	109	64	0	206	136	81	0	1290
APPROACH %'s :	15.76%	41.63%	42.61%	0.00%	27.84%	61.54%	10.62%	0.00%	7.98%	57.98%	34.04%	0.00%	48.70%	32.15%	19.15%	0.00%	
PEAK HR :	03:00 PM - 04:00 PM																TOTAL
PEAK HR VOL :	37	96	103	0	28	81	13	0	8	57	23	0	140	48	29	0	663
PEAK HR FACTOR :	0.661	0.857	0.628	0.000	0.636	0.880	0.464	0.000	0.667	0.750	0.821	0.000	0.897	0.857	0.906	0.000	0.872
	0.776				0.897				0.815				0.969				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	0	1	1	0	0	1	0	0	1	1.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	11	27	25	0	14	27	3	0	1	11	12	0	18	18	11	0	178
4:15 PM	7	23	18	0	6	41	5	0	3	7	8	0	19	11	8	0	156
4:30 PM	11	29	18	0	7	28	2	0	3	10	4	0	25	14	9	0	160
4:45 PM	12	27	15	0	5	41	2	0	3	12	7	0	25	13	8	0	170
5:00 PM	6	27	20	0	12	27	3	0	1	11	10	0	21	16	7	0	161
5:15 PM	13	17	25	0	5	36	4	0	0	18	7	0	15	17	10	0	167
5:30 PM	18	21	28	0	13	27	2	0	2	15	3	0	21	19	10	0	179
5:45 PM	15	19	16	0	13	28	1	0	0	9	4	0	18	10	11	0	144
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	93	190	165	0	75	255	22	0	13	93	55	0	162	118	74	0	1315
APPROACH %'s :	20.76%	42.41%	36.83%	0.00%	21.31%	72.44%	6.25%	0.00%	8.07%	57.76%	34.16%	0.00%	45.76%	33.33%	20.90%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	49	92	88	0	35	131	11	0	6	56	27	0	82	65	35	0	677
PEAK HR FACTOR :	0.681	0.852	0.786	0.000	0.673	0.799	0.688	0.000	0.500	0.778	0.675	0.000	0.820	0.855	0.875	0.000	0.946
	0.854				0.922				0.890				0.910				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Karpick St & W 7th St
City: San Jacinto
Control: 1-Way Stop(SB)

Project ID: 23-030069-002
Date: 11/2/2023

Data - Totals

NS/EW Streets:	Karpick St				Karpick St				W 7th St				W 7th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	10	0	0	0	0	20	0	0	0	10	3	0	43
7:15 AM	0	0	0	0	13	0	0	0	2	17	0	0	0	10	3	0	45
7:30 AM	0	0	0	0	8	0	0	0	0	22	0	0	0	9	6	0	45
7:45 AM	0	0	0	0	9	0	0	0	1	13	0	0	0	10	4	0	37
8:00 AM	0	0	0	0	8	0	0	0	1	21	0	0	0	14	5	0	49
8:15 AM	0	0	0	0	9	0	1	0	0	22	0	0	0	17	9	0	58
8:30 AM	0	0	0	0	6	0	0	0	0	11	0	0	0	15	1	0	33
8:45 AM	0	0	0	0	6	0	0	0	0	11	0	0	0	10	6	0	33
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	69	0	1	0	4	137	0	0	0	95	37	0	343
APPROACH %'s :					98.57%	0.00%	1.43%	0.00%	2.84%	97.16%	0.00%	0.00%	0.00%	71.97%	28.03%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	34	0	1	0	2	78	0	0	0	50	24	0	189
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.944	0.000	0.250	0.000	0.500	0.886	0.000	0.000	0.000	0.735	0.667	0.000	0.815
					0.875				0.909				0.712				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	11	0	0	0	0	15	0	0	0	18	11	0	55
4:15 PM	0	0	0	0	10	0	0	0	0	6	0	0	0	16	7	0	39
4:30 PM	0	0	0	0	3	0	0	0	0	12	0	0	0	12	14	0	41
4:45 PM	0	0	0	0	7	0	0	0	0	16	0	0	0	17	11	0	51
5:00 PM	0	0	0	0	9	0	0	0	0	14	0	0	0	17	9	0	49
5:15 PM	0	0	0	0	5	0	0	0	0	19	0	0	0	27	7	0	58
5:30 PM	0	0	0	0	8	0	1	0	0	11	0	0	0	20	19	0	59
5:45 PM	0	0	0	0	5	0	0	0	1	8	0	0	0	15	8	0	37
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	58	0	1	0	1	101	0	0	0	142	86	0	389
APPROACH %'s :					98.31%	0.00%	1.69%	0.00%	0.98%	99.02%	0.00%	0.00%	0.00%	62.28%	37.72%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	29	0	1	0	0	60	0	0	0	81	46	0	217
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.806	0.000	0.250	0.000	0.000	0.789	0.000	0.000	0.000	0.750	0.605	0.000	0.919
					0.833				0.789				0.814				

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Sanderson Ave & W 7th St
City: San Jacinto
Control: Signalized

Project ID: 23-030069-003
Date: 11/2/2023

Data - Totals

NS/EW Streets:	S Sanderson Ave				S Sanderson Ave				W 7th St				W 7th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	1	2	1	0	1	0.5	0.5	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	8	166	9	0	7	126	6	0	7	15	8	0	26	34	17	0	429
7:15 AM	7	128	15	0	11	114	11	0	12	30	9	0	20	47	23	0	427
7:30 AM	2	171	23	0	6	114	4	0	17	42	8	0	18	34	17	0	456
7:45 AM	8	158	18	0	15	164	9	0	3	30	4	0	23	31	18	0	481
8:00 AM	5	152	15	0	10	122	7	0	10	29	12	0	40	43	26	0	471
8:15 AM	10	146	20	0	10	155	14	0	11	22	9	0	21	57	17	0	492
8:30 AM	3	135	23	0	18	139	10	0	6	26	6	0	20	27	9	0	422
8:45 AM	8	160	14	0	8	104	3	0	9	19	4	0	13	27	13	0	382
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	51	1216	137	0	85	1038	64	0	75	213	60	0	181	300	140	0	3560
APPROACH %'s :	3.63%	86.61%	9.76%	0.00%	7.16%	87.45%	5.39%	0.00%	21.55%	61.21%	17.24%	0.00%	29.15%	48.31%	22.54%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	25	627	76	0	41	555	34	0	41	123	33	0	102	165	78	0	1900
PEAK HR FACTOR :	0.625	0.917	0.826	0.000	0.683	0.846	0.607	0.000	0.603	0.732	0.688	0.000	0.638	0.724	0.750	0.000	0.965
	0.929				0.838				0.735				0.791				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	1	2	1	0	1	0.5	0.5	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	17	144	30	0	22	210	11	0	8	35	15	0	28	30	12	0	562
4:15 PM	8	153	35	0	19	257	8	0	2	27	7	0	29	32	12	0	589
4:30 PM	13	162	29	0	15	225	7	0	7	21	7	0	36	34	6	0	562
4:45 PM	9	140	17	0	25	215	7	0	3	26	8	0	28	41	15	0	534
5:00 PM	12	167	34	0	24	197	12	0	2	30	11	0	28	24	10	0	551
5:15 PM	11	176	21	0	24	205	9	0	5	36	7	0	26	33	17	0	570
5:30 PM	14	179	25	0	23	212	10	0	6	29	14	0	29	31	17	0	589
5:45 PM	9	141	24	0	19	239	8	0	7	25	12	0	26	21	8	0	539
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	93	1262	215	0	171	1760	72	0	40	229	81	0	230	246	97	0	4496
APPROACH %'s :	5.92%	80.38%	13.69%	0.00%	8.54%	87.87%	3.59%	0.00%	11.43%	65.43%	23.14%	0.00%	40.14%	42.93%	16.93%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	46	663	104	0	90	853	39	0	20	120	44	0	109	109	52	0	2249
PEAK HR FACTOR :	0.821	0.926	0.765	0.000	0.938	0.892	0.813	0.000	0.714	0.833	0.786	0.000	0.940	0.826	0.765	0.000	0.955
	0.932				0.923				0.939				0.877				

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Kirby St & W 7th St
City: San Jacinto
Control: 4-Way Stop

Project ID: 23-030069-004
Date: 11/2/2023

Data - Totals

NS/EW Streets:	S Kirby St				S Kirby St				W 7th St				W 7th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	0.5	0.5	1	0	0.5	0.5	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	22	11	0	3	19	7	0	2	38	4	0	14	67	0	0	191
7:15 AM	7	44	12	0	12	27	3	0	3	45	5	0	13	62	4	0	237
7:30 AM	4	29	15	0	10	23	1	0	4	57	5	0	13	73	2	0	236
7:45 AM	4	30	18	0	14	35	3	0	1	63	11	0	15	67	8	0	269
8:00 AM	8	27	12	0	13	17	9	0	1	51	5	0	20	76	10	0	249
8:15 AM	5	20	10	0	7	25	5	0	3	41	6	0	15	72	4	0	213
8:30 AM	5	19	4	0	4	22	2	0	4	53	12	0	9	50	7	0	191
8:45 AM	8	20	9	0	4	15	1	0	2	38	10	0	15	40	5	0	167
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	45	211	91	0	67	183	31	0	20	386	58	0	114	507	40	0	1753
APPROACH %'s :	12.97%	60.81%	26.22%	0.00%	23.84%	65.12%	11.03%	0.00%	4.31%	83.19%	12.50%	0.00%	17.25%	76.70%	6.05%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	23	130	57	0	49	102	16	0	9	216	26	0	61	278	24	0	991
PEAK HR FACTOR :	0.719	0.739	0.792	0.000	0.875	0.729	0.444	0.000	0.563	0.857	0.591	0.000	0.763	0.914	0.600	0.000	0.921
	0.833				0.803				0.837				0.856				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	0.5	0.5	1	0	0.5	0.5	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	9	41	12	0	6	40	8	0	6	69	11	0	27	58	5	0	292
4:15 PM	5	34	11	0	8	42	2	0	4	71	9	0	29	62	8	0	285
4:30 PM	4	29	18	0	5	23	2	0	4	51	9	0	15	71	10	0	241
4:45 PM	6	32	13	0	4	42	4	0	1	58	10	0	12	67	11	0	260
5:00 PM	4	47	11	0	5	44	4	0	5	67	11	0	13	59	8	0	278
5:15 PM	9	46	18	0	6	39	3	0	8	61	10	0	17	55	9	0	281
5:30 PM	10	38	15	0	6	37	3	0	4	67	9	0	13	65	12	0	279
5:45 PM	5	33	11	0	3	31	5	0	2	51	12	0	13	47	7	0	220
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	52	300	109	0	43	298	31	0	34	495	81	0	139	484	70	0	2136
APPROACH %'s :	11.28%	65.08%	23.64%	0.00%	11.56%	80.11%	8.33%	0.00%	5.57%	81.15%	13.28%	0.00%	20.06%	69.84%	10.10%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	29	163	57	0	21	162	14	0	18	253	40	0	55	246	40	0	1098
PEAK HR FACTOR :	0.725	0.867	0.792	0.000	0.875	0.920	0.875	0.000	0.563	0.944	0.909	0.000	0.809	0.918	0.833	0.000	0.977
	0.853				0.929				0.937				0.947				

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Lyon Ave & W 7th St
City: San Jacinto
Control: 4-Way Stop

Project ID: 23-030069-005
Date: 11/2/2023

Data - Totals

NS/EW Streets:	S Lyon Ave				S Lyon Ave				W 7th St				W 7th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	1	1	1	0	1	0.5	0.5	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	9	40	4	0	5	24	3	0	5	44	4	0	17	53	11	0	219
7:15 AM	9	49	8	0	9	26	1	0	6	55	6	0	12	61	18	0	260
7:30 AM	7	47	13	0	8	32	4	0	3	74	10	0	14	79	11	0	302
7:45 AM	7	59	14	0	15	51	6	0	4	91	4	0	7	77	27	0	362
8:00 AM	16	43	11	0	7	59	3	0	7	64	6	0	16	83	14	0	329
8:15 AM	15	27	5	0	2	44	4	0	2	54	6	0	14	75	6	0	254
8:30 AM	5	20	12	0	4	40	1	0	1	56	6	0	11	60	9	0	225
8:45 AM	5	27	7	0	3	39	2	0	0	51	10	0	11	54	4	0	213
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	73	312	74	0	53	315	24	0	28	489	52	0	102	542	100	0	2164
APPROACH %'s :	15.90%	67.97%	16.12%	0.00%	13.52%	80.36%	6.12%	0.00%	4.92%	85.94%	9.14%	0.00%	13.71%	72.85%	13.44%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	39	198	46	0	39	168	14	0	20	284	26	0	49	300	70	0	1253
PEAK HR FACTOR :	0.609	0.839	0.821	0.000	0.650	0.712	0.583	0.000	0.714	0.780	0.650	0.000	0.766	0.904	0.648	0.000	0.865
	0.884				0.767				0.833				0.927				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	1	1	1	0	1	0.5	0.5	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	9	51	12	0	18	67	3	0	3	71	8	0	17	76	19	0	354
4:15 PM	14	41	11	0	9	48	5	0	1	79	5	0	17	86	10	0	326
4:30 PM	12	53	15	0	13	57	4	0	4	62	4	0	15	82	7	0	328
4:45 PM	8	43	9	0	10	56	1	0	1	74	5	0	16	86	7	0	316
5:00 PM	13	54	9	0	12	59	3	0	2	59	5	0	13	75	12	0	316
5:15 PM	13	63	13	0	1	54	2	0	3	73	6	0	13	71	9	0	321
5:30 PM	12	41	12	0	13	70	4	0	2	65	14	0	13	75	11	0	332
5:45 PM	11	35	15	0	4	61	3	0	1	57	6	0	12	50	13	0	268
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	92	381	96	0	80	472	25	0	17	540	53	0	116	601	88	0	2561
APPROACH %'s :	16.17%	66.96%	16.87%	0.00%	13.86%	81.80%	4.33%	0.00%	2.79%	88.52%	8.69%	0.00%	14.41%	74.66%	10.93%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	43	188	47	0	50	228	13	0	9	286	22	0	65	330	43	0	1324
PEAK HR FACTOR :	0.768	0.887	0.783	0.000	0.694	0.851	0.650	0.000	0.563	0.905	0.688	0.000	0.956	0.959	0.566	0.000	0.935
	0.869				0.827				0.932				0.969				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Palm Ave & W 7th St
City: San Jacinto
Control: 4-Way Stop

Project ID: 23-030069-006
Date: 11/2/2023

Data - Totals

NS/EW Streets:	Palm Ave				Palm Ave				W 7th St				W 7th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	20	3	0	3	21	6	0	9	47	5	0	5	71	10	0	203
7:15 AM	9	25	9	0	3	30	8	0	8	57	3	0	10	61	10	0	233
7:30 AM	3	32	10	0	10	36	14	0	17	85	5	0	13	78	7	0	310
7:45 AM	7	33	10	0	11	49	19	0	18	89	7	0	15	85	6	0	349
8:00 AM	6	40	17	0	14	44	15	0	18	82	2	0	16	83	10	0	347
8:15 AM	7	32	20	0	9	30	14	0	6	50	8	0	18	67	10	0	271
8:30 AM	13	29	9	0	5	35	17	0	5	54	5	0	11	48	8	0	239
8:45 AM	5	15	5	0	6	24	4	0	7	58	7	0	10	56	6	0	203
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	53	226	83	0	61	269	97	0	88	522	42	0	98	549	67	0	2155
APPROACH %'s :	14.64%	62.43%	22.93%	0.00%	14.29%	63.00%	22.72%	0.00%	13.50%	80.06%	6.44%	0.00%	13.73%	76.89%	9.38%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	23	137	57	0	44	159	62	0	59	306	22	0	62	313	33	0	1277
PEAK HR FACTOR :	0.821	0.856	0.713	0.000	0.786	0.811	0.816	0.000	0.819	0.860	0.688	0.000	0.861	0.921	0.825	0.000	0.915
	0.861				0.839				0.849				0.936				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	11	28	17	0	14	56	11	0	12	72	3	0	20	90	6	0	340
4:15 PM	10	31	9	0	9	40	6	0	11	77	9	0	16	95	3	0	316
4:30 PM	3	19	7	0	7	21	8	0	8	78	5	0	13	100	18	0	287
4:45 PM	7	40	19	0	5	33	7	0	12	74	8	0	14	95	13	1	328
5:00 PM	5	40	12	0	6	29	8	0	8	64	6	0	15	92	18	0	303
5:15 PM	10	27	13	0	13	27	7	0	10	72	6	0	14	79	9	0	287
5:30 PM	10	30	12	0	4	32	11	0	13	77	6	0	14	80	7	0	296
5:45 PM	5	35	12	0	8	37	11	0	10	64	4	0	14	59	12	0	271
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	61	250	101	0	66	275	69	0	84	578	47	0	120	690	86	1	2428
APPROACH %'s :	14.81%	60.68%	24.51%	0.00%	16.10%	67.07%	16.83%	0.00%	11.85%	81.52%	6.63%	0.00%	13.38%	76.92%	9.59%	0.11%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	31	118	52	0	35	150	32	0	43	301	25	0	63	380	40	1	1271
PEAK HR FACTOR :	0.705	0.738	0.684	0.000	0.625	0.670	0.727	0.000	0.896	0.965	0.694	0.000	0.788	0.950	0.556	0.250	0.935
	0.761				0.670				0.951				0.924				

National Data & Surveying Services

Intersection Turning Movement Count

Location: State St & W 7th St
City: San Jacinto
Control: Signalized

Project ID: 23-030069-007
Date: 11/2/2023

Data - Totals

NS/EW Streets:	State St				State St				W 7th St				W 7th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	6	127	9	0	7	108	12	0	5	38	8	0	14	63	15	0	412
7:15 AM	3	141	21	0	18	129	16	0	12	59	6	0	15	46	16	0	482
7:30 AM	8	146	15	0	16	154	11	0	16	73	8	0	8	73	25	0	553
7:45 AM	13	127	14	0	14	168	12	0	13	82	15	0	19	92	22	0	591
8:00 AM	10	137	14	0	23	170	24	0	19	86	20	0	11	76	23	0	613
8:15 AM	5	133	18	0	17	171	20	0	15	48	17	0	21	66	21	0	552
8:30 AM	8	117	20	0	11	168	14	0	17	52	7	0	28	51	21	0	514
8:45 AM	8	113	8	0	22	144	7	0	15	40	14	0	24	60	21	0	476
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	61	1041	119	0	128	1212	116	0	112	478	95	0	140	527	164	0	4193
APPROACH %'s :	5.00%	85.26%	9.75%	0.00%	8.79%	83.24%	7.97%	0.00%	16.35%	69.78%	13.87%	0.00%	16.85%	63.42%	19.74%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	36	543	61	0	70	663	67	0	63	289	60	0	59	307	91	0	2309
PEAK HR FACTOR :	0.692	0.930	0.847	0.000	0.761	0.969	0.698	0.000	0.829	0.840	0.750	0.000	0.702	0.834	0.910	0.000	0.942
		0.947				0.922				0.824				0.859			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	6	138	19	0	27	269	20	0	11	71	21	0	30	79	22	0	713
4:15 PM	15	127	36	0	29	190	14	0	12	67	18	0	16	89	27	0	640
4:30 PM	13	149	28	0	31	168	14	0	14	79	17	0	20	92	17	0	642
4:45 PM	13	131	32	0	30	199	17	0	11	64	19	0	25	90	17	0	648
5:00 PM	16	151	27	0	25	177	16	0	19	73	18	0	27	73	30	0	652
5:15 PM	12	134	24	0	19	166	10	0	12	68	18	0	19	75	27	0	584
5:30 PM	5	160	28	0	13	175	10	0	13	70	20	0	22	72	22	0	610
5:45 PM	17	133	18	0	20	172	13	0	5	59	9	0	19	60	16	0	541
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	97	1123	212	0	194	1516	114	0	97	551	140	0	178	630	178	0	5030
APPROACH %'s :	6.77%	78.42%	14.80%	0.00%	10.64%	83.11%	6.25%	0.00%	12.31%	69.92%	17.77%	0.00%	18.05%	63.89%	18.05%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	47	545	115	0	117	826	65	0	48	281	75	0	91	350	83	0	2643
PEAK HR FACTOR :	0.783	0.914	0.799	0.000	0.944	0.768	0.813	0.000	0.857	0.889	0.893	0.000	0.758	0.951	0.769	0.000	0.927
		0.930				0.797				0.918				0.992			

National Data & Surveying Services Intersection Turning Movement Count

Location: Cawston Ave & Cottonwood Ave
City: San Jacinto
Control: 1-Way Stop(NB)

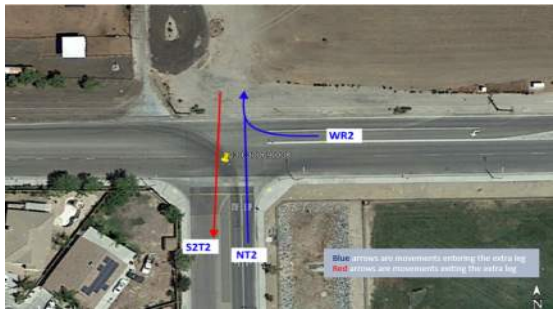
Project ID: 23-030069-008
Date: 11/2/2023

Data - Totals

NS/EW Streets:	Cawston Ave					Cawston Ave				Cottonwood Ave				Cottonwood Ave						
AM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND					SOUTHBOUND2	
	1	0	1	0	0	0	1	0	0	0	2	0	0	1	1	0	0	0	0	
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	WR2	S2T2	TOTAL
7:00 AM	25	0	16	0	0	0	0	0	0	0	73	6	0	6	32	0	2	0	0	160
7:15 AM	21	0	26	0	1	0	0	0	0	0	118	12	0	24	42	0	19	0	0	263
7:30 AM	23	0	27	0	0	0	0	0	0	0	77	4	0	7	48	0	4	0	1	191
7:45 AM	9	0	14	0	0	0	0	0	0	0	80	9	0	9	28	0	0	0	0	149
8:00 AM	8	0	13	0	0	0	0	0	0	0	56	6	0	17	50	0	0	0	0	150
8:15 AM	12	0	19	0	0	0	0	0	0	0	41	8	0	17	58	0	0	1	0	156
8:30 AM	8	0	16	0	1	0	0	0	0	0	30	10	0	16	46	0	0	0	0	127
8:45 AM	4	0	15	0	0	0	0	0	0	0	29	4	0	8	32	0	0	0	0	92
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	WR2	S2T2	TOTAL
TOTAL VOLUMES :	110	0	146	0	2	0	0	0	0	0	504	59	0	104	336	0	25	1	1	1288
APPROACH %'s :	42.64%	0.00%	56.59%	0.00%	0.78%					0.00%	89.52%	10.48%	0.00%	22.32%	72.10%	0.00%	5.36%	0.21%	100.00%	
PEAK HR :	07:00 AM - 08:00 AM																			TOTAL
PEAK HR VOL :	78	0	83	0	1	0	0	0	0	0	348	31	0	46	150	0	25	0	1	763
PEAK HR FACTOR :	0.780	0.000	0.769	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.737	0.646	0.000	0.479	0.781	0.000	0.329	0.000	0.250	0.725
			0.810								0.729					0.650				

NOON	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND						
	1	0	1	0	0	0	1	0	0	0	2	0	0	1	1	0	0	0	0	
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	WR2	S2T2	TOTAL
1:30 PM	7	0	9	0	0	1	0	0	0	0	52	8	0	7	28	0	0	0	1	113
1:45 PM	11	0	5	0	0	0	0	0	0	0	41	3	0	8	34	0	0	0	0	102
2:00 PM	6	0	6	0	0	0	0	0	0	0	49	8	0	6	27	0	0	0	0	102
2:15 PM	9	0	10	0	0	0	0	0	0	0	65	5	0	2	37	0	0	0	0	128
2:30 PM	12	0	13	1	0	0	0	0	0	0	67	10	0	18	67	0	0	0	0	188
2:45 PM	15	0	6	0	0	0	0	0	0	0	49	8	0	8	35	0	0	0	0	121
3:00 PM	10	0	16	0	0	0	0	0	0	0	55	11	0	9	34	0	0	0	0	135
3:15 PM	11	0	16	0	0	0	0	0	0	0	65	11	0	18	43	0	0	0	0	164
3:30 PM	9	0	18	0	0	0	0	0	0	0	55	3	0	13	41	0	0	0	0	139
3:45 PM	9	0	13	0	0	0	0	0	0	0	62	7	0	18	63	0	0	0	0	172
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	WR2	S2T2	TOTAL
TOTAL VOLUMES :	99	0	112	1	0	1	0	0	0	0	560	74	0	107	409	0	0	0	1	1364
APPROACH %'s :	46.70%	0.00%	52.83%	0.47%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	88.33%	11.67%	0.00%	20.74%	79.26%	0.00%	0.00%	0.00%	100.00%	
PEAK HR :	03:00 PM - 04:00 PM																			TOTAL
PEAK HR VOL :	39	0	63	0	0	0	0	0	0	0	237	32	0	58	181	0	0	0	0	610
PEAK HR FACTOR :	0.886	0.000	0.875	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.912	0.727	0.000	0.806	0.718	0.000	0.000	0.000	0.000	0.887
			0.944								0.885					0.738				

PM	NORTHBOUND					SOUTHBOUND				EASTBOUND				WESTBOUND						
	1	0	1	0	0	0	1	0	0	0	2	0	0	1	1	0	0	0	0	
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	WR2	S2T2	TOTAL
4:00 PM	10	0	18	0	0	0	0	0	0	0	81	16	0	26	51	0	0	0	0	202
4:15 PM	11	0	17	0	0	0	0	0	0	0	53	16	0	25	41	0	0	0	0	163
4:30 PM	9	0	19	0	0	0	0	0	0	0	50	15	0	26	28	0	0	0	0	147
4:45 PM	8	0	20	0	0	0	0	0	0	0	70	9	0	24	58	0	0	0	0	189
5:00 PM	9	0	19	0	0	0	0	0	0	0	58	17	0	19	59	0	0	0	0	181
5:15 PM	8	0	12	0	0	0	0	0	0	0	71	19	0	27	47	0	0	0	0	184
5:30 PM	10	0	13	0	0	0	0	0	0	0	61	12	0	21	37	0	0	0	0	154
5:45 PM	11	0	10	0	0	0	0	0	0	0	56	17	0	15	64	0	0	0	0	173
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	WR2	S2T2	TOTAL
TOTAL VOLUMES :	76	0	128	0	0	0	0	0	0	0	500	121	0	183	385	0	0	0	0	1393
APPROACH %'s :	37.25%	0.00%	62.75%	0.00%	0.00%					0.00%	80.52%	19.48%	0.00%	32.22%	67.78%	0.00%	0.00%	0.00%		
PEAK HR :	04:45 PM - 05:45 PM																			TOTAL
PEAK HR VOL :	35	0	64	0	0	0	0	0	0	0	260	57	0	91	201	0	0	0	0	708
PEAK HR FACTOR :	0.875	0.000	0.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.915	0.750	0.000	0.843	0.852	0.000	0.000	0.000	0.000	0.937
			0.884								0.881					0.890				



National Data & Surveying Services

Intersection Turning Movement Count

Location: S Sanderson Ave & Cottonwood Ave
City: San Jacinto
Control: Signalized

Project ID: 23-030069-009
Date: 11/2/2023

Data - Totals

NS/EW Streets:	S Sanderson Ave				S Sanderson Ave				Cottonwood Ave				Cottonwood Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	2	1	0	2	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	11	175	9	0	12	103	17	0	28	49	8	0	18	80	57	0	567
7:15 AM	14	137	18	1	14	97	22	0	32	98	19	0	22	100	51	0	625
7:30 AM	15	209	15	0	10	121	11	0	28	88	13	0	10	44	38	0	602
7:45 AM	6	145	17	0	13	134	20	0	32	88	23	1	19	35	32	0	565
8:00 AM	8	184	12	0	13	111	21	0	16	47	7	1	24	48	31	0	523
8:15 AM	6	142	15	0	12	149	15	0	29	49	13	0	24	47	32	0	533
8:30 AM	8	138	11	0	9	124	11	0	18	26	8	0	25	39	24	0	441
8:45 AM	7	145	18	0	9	90	6	0	10	28	11	0	31	25	27	0	407
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	75	1275	115	1	92	929	123	0	193	473	102	2	173	418	292	0	4263
APPROACH %'s :	5.12%	86.97%	7.84%	0.07%	8.04%	81.21%	10.75%	0.00%	25.06%	61.43%	13.25%	0.26%	19.59%	47.34%	33.07%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	46	666	59	1	49	455	70	0	120	323	63	1	69	259	178	0	2359
PEAK HR FACTOR :	0.767	0.797	0.819	0.250	0.875	0.849	0.795	0.000	0.938	0.824	0.685	0.250	0.784	0.648	0.781	0.000	0.944
	0.808				0.859				0.851				0.731				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	2	1	0	2	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	6	114	21	0	30	224	33	0	21	52	23	0	24	43	33	0	624
4:15 PM	10	135	28	0	27	235	27	0	22	54	15	0	28	33	31	0	645
4:30 PM	6	139	23	0	42	215	24	0	19	42	16	0	18	38	20	0	602
4:45 PM	13	102	35	0	38	202	25	0	22	51	15	0	27	39	16	0	585
5:00 PM	12	121	17	0	34	215	31	0	29	59	10	0	27	41	33	0	629
5:15 PM	6	149	28	0	26	207	29	0	18	58	25	0	27	31	22	0	626
5:30 PM	8	154	31	1	25	213	19	0	17	54	19	0	21	34	18	1	615
5:45 PM	10	114	27	0	33	213	25	0	10	50	13	0	22	44	15	0	576
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	71	1028	210	1	255	1724	213	0	158	420	136	0	194	303	188	1	4902
APPROACH %'s :	5.42%	78.47%	16.03%	0.08%	11.63%	78.65%	9.72%	0.00%	22.13%	58.82%	19.05%	0.00%	28.28%	44.17%	27.41%	0.15%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	41	497	103	0	141	867	107	0	92	206	56	0	100	151	100	0	2461
PEAK HR FACTOR :	0.788	0.894	0.736	0.000	0.839	0.922	0.863	0.000	0.793	0.873	0.875	0.000	0.893	0.921	0.758	0.000	0.954
	0.926				0.965				0.903				0.869				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Cawston Ave & W Esplanade Ave
City: San Jacinto
Control: 4-Way Stop

Project ID: 23-030069-010
Date: 11/2/2023

Data - Totals

NS/EW Streets:	Cawston Ave				Cawston Ave				W Esplanade Ave				W Esplanade Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	22	19	6	0	0	29	18	0	14	35	28	0	15	40	3	0	229
7:15 AM	26	31	17	0	1	35	25	0	12	20	28	0	17	34	7	0	253
7:30 AM	15	28	15	0	6	36	14	0	7	32	15	0	21	32	7	0	228
7:45 AM	8	10	17	0	6	38	19	0	8	28	19	0	25	32	2	0	212
8:00 AM	10	20	19	0	2	46	13	0	17	37	41	0	33	25	0	0	263
8:15 AM	13	25	24	0	4	82	17	0	10	33	52	0	64	41	2	0	367
8:30 AM	14	27	41	0	0	29	15	0	11	29	20	0	43	44	2	0	275
8:45 AM	14	27	16	0	3	32	13	0	9	29	19	0	28	28	3	0	221
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	122	187	155	0	22	327	134	0	88	243	222	0	246	276	26	0	2048
APPROACH %'s :	26.29%	40.30%	33.41%	0.00%	4.55%	67.70%	27.74%	0.00%	15.91%	43.94%	40.14%	0.00%	44.89%	50.36%	4.74%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	51	99	100	0	9	189	58	0	47	128	132	0	168	138	7	0	1126
PEAK HR FACTOR :	0.911	0.917	0.610	0.000	0.563	0.576	0.853	0.000	0.691	0.865	0.635	0.000	0.656	0.784	0.583	0.000	0.767
	0.762				0.621				0.808				0.731				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:30 PM	7	12	6	0	5	24	12	0	5	37	14	0	8	36	2	0	168
1:45 PM	6	9	11	0	3	15	6	0	7	27	8	0	14	26	6	0	138
2:00 PM	8	10	9	0	4	18	9	0	11	40	18	0	5	29	2	0	163
2:15 PM	27	21	21	0	3	18	9	0	12	38	15	0	13	24	5	0	206
2:30 PM	7	17	13	0	5	24	9	0	7	43	7	0	17	17	5	0	171
2:45 PM	3	21	7	0	1	24	7	0	9	32	12	0	16	41	5	0	178
3:00 PM	5	24	8	0	4	40	16	0	14	41	15	0	23	29	6	0	225
3:15 PM	6	25	12	0	4	32	27	0	12	27	25	0	43	52	9	0	274
3:30 PM	31	61	74	0	1	34	26	0	10	33	11	0	35	38	0	0	354
3:45 PM	28	51	51	0	3	31	21	0	19	35	14	0	30	41	6	0	330
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	128	251	212	0	33	260	142	0	106	353	139	0	204	333	46	0	2207
APPROACH %'s :	21.66%	42.47%	35.87%	0.00%	7.59%	59.77%	32.64%	0.00%	17.73%	59.03%	23.24%	0.00%	34.99%	57.12%	7.89%	0.00%	
PEAK HR :	03:00 PM - 04:00 PM																TOTAL
PEAK HR VOL :	70	161	145	0	12	137	90	0	55	136	65	0	131	160	21	0	1183
PEAK HR FACTOR :	0.565	0.660	0.490	0.000	0.750	0.856	0.833	0.000	0.724	0.829	0.650	0.000	0.762	0.769	0.583	0.000	0.835
	0.566				0.948				0.914				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	15	41	15	0	3	33	24	0	14	49	16	0	16	44	7	0	277
4:15 PM	12	35	20	0	5	46	16	0	9	44	15	0	19	32	2	0	255
4:30 PM	15	39	13	0	2	38	16	0	16	44	17	0	23	41	3	0	267
4:45 PM	17	35	15	0	3	54	15	0	14	30	22	0	19	48	5	0	277
5:00 PM	20	34	14	0	2	36	19	0	18	43	12	0	20	37	3	0	258
5:15 PM	19	30	22	0	2	46	13	0	21	46	18	0	22	39	7	0	285
5:30 PM	20	41	29	0	1	36	16	0	19	30	19	0	21	40	6	0	278
5:45 PM	18	33	15	0	2	35	11	0	14	47	14	0	21	37	5	0	252
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	136	288	143	0	20	324	130	0	125	333	133	0	161	318	38	0	2149
APPROACH %'s :	23.99%	50.79%	25.22%	0.00%	4.22%	68.35%	27.43%	0.00%	21.15%	56.35%	22.50%	0.00%	31.14%	61.51%	7.35%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	76	140	80	0	8	172	63	0	72	149	71	0	82	164	21	0	1098
PEAK HR FACTOR :	0.950	0.854	0.690	0.000	0.667	0.796	0.829	0.000	0.857	0.810	0.807	0.000	0.932	0.854	0.750	0.000	0.963
	0.822				0.844				0.859				0.927				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Cawston Ave & Eaton Ave
City: Hemet
Control: 3-Way Stop(NB/SB/WB)

Project ID: 23-030069-011
Date: 11/2/2023

Data - Totals

NS/EW Streets:	Cawston Ave				Cawston Ave				Eaton Ave				Eaton Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1	2	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	53	4	0	5	64	0	0	0	0	0	0	13	0	12	0	151
7:15 AM	0	88	11	0	16	71	0	0	0	0	0	0	19	0	28	0	233
7:30 AM	0	60	10	0	20	69	0	0	0	0	0	0	9	0	27	0	195
7:45 AM	0	46	15	0	20	73	0	0	0	0	0	0	20	0	35	0	209
8:00 AM	0	100	3	0	46	100	0	0	0	0	0	0	10	0	82	0	341
8:15 AM	0	104	14	0	78	155	0	0	0	0	0	0	19	0	90	0	460
8:30 AM	0	76	18	0	63	140	0	0	0	0	0	0	31	0	39	0	367
8:45 AM	0	48	15	0	16	81	0	0	0	0	0	0	36	0	21	0	217
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	575	90	0	264	753	0	0	0	0	0	0	157	0	334	0	2173
APPROACH %'s :	0.00%	86.47%	13.53%	0.00%	25.96%	74.04%	0.00%	0.00%					31.98%	0.00%	68.02%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	328	50	0	203	476	0	0	0	0	0	0	96	0	232	0	1385
PEAK HR FACTOR :	0.000	0.788	0.694	0.000	0.651	0.768	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.644	0.000	0.753
	0.801				0.729								0.752				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1	2	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:30 PM	0	20	8	0	3	38	0	0	0	0	0	0	6	0	5	0	80
1:45 PM	0	19	7	0	3	41	0	0	0	0	0	0	8	0	4	0	82
2:00 PM	0	24	4	1	5	39	0	0	0	0	0	0	13	0	6	0	92
2:15 PM	0	70	10	0	6	41	0	0	0	0	0	0	5	0	13	0	145
2:30 PM	0	26	4	0	7	59	0	0	0	0	0	0	4	0	10	0	110
2:45 PM	0	33	9	0	9	36	0	0	0	0	0	0	6	0	10	0	103
3:00 PM	0	55	12	0	8	52	0	0	0	0	0	0	9	0	17	0	153
3:15 PM	0	57	12	0	29	61	0	0	0	0	0	0	11	0	36	0	206
3:30 PM	0	40	19	0	73	95	0	0	0	0	0	0	17	0	38	0	282
3:45 PM	0	55	39	0	39	44	0	0	0	0	0	0	14	0	44	0	235
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	399	124	1	182	506	0	0	0	0	0	0	93	0	183	0	1488
APPROACH %'s :	0.00%	76.15%	23.66%	0.19%	26.45%	73.55%	0.00%	0.00%					33.70%	0.00%	66.30%	0.00%	
PEAK HR :	03:00 PM - 04:00 PM																TOTAL
PEAK HR VOL :	0	207	82	0	149	252	0	0	0	0	0	0	51	0	135	0	876
PEAK HR FACTOR :	0.000	0.908	0.526	0.000	0.510	0.663	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.767	0.000	0.777
	0.769				0.597								0.802				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1	2	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	55	19	0	20	78	0	0	0	0	0	0	6	0	11	0	189
4:15 PM	0	65	11	0	11	85	0	0	0	0	0	0	11	0	15	0	198
4:30 PM	0	60	9	0	19	88	0	0	0	0	0	0	8	0	8	0	192
4:45 PM	0	64	5	0	20	96	0	0	0	0	0	0	4	0	13	1	203
5:00 PM	0	71	10	0	15	62	0	0	0	0	0	0	3	0	20	0	181
5:15 PM	0	66	8	0	15	101	0	0	0	0	0	0	13	0	12	0	215
5:30 PM	0	88	14	0	17	88	0	0	0	0	0	0	7	0	16	0	230
5:45 PM	0	59	13	0	4	64	0	0	0	0	0	0	10	0	11	0	161
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	528	89	0	121	662	0	0	0	0	0	0	62	0	106	1	1569
APPROACH %'s :	0.00%	85.58%	14.42%	0.00%	15.45%	84.55%	0.00%	0.00%					36.69%	0.00%	62.72%	0.59%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	289	37	0	67	347	0	0	0	0	0	0	27	0	61	1	829
PEAK HR FACTOR :	0.000	0.821	0.661	0.000	0.838	0.859	0.000	0.000	0.000	0.000	0.000	0.000	0.519	0.000	0.763	0.250	0.901
	0.799				0.892								0.890				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Cawston Ave & W Fruitvale Ave
City: Hemet
Control: 4-Way Stop

Project ID: 23-030069-012
Date: 11/2/2023

Data - Totals

NS/EW Streets:	Cawston Ave				Cawston Ave				W Fruitvale Ave				W Fruitvale Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	56	34	0	10	74	0	0	1	0	0	0	17	1	11	0	206
7:15 AM	2	96	52	2	17	76	0	0	0	1	1	0	22	0	20	0	289
7:30 AM	0	72	20	1	17	66	0	0	1	0	3	0	10	0	18	0	208
7:45 AM	0	56	6	0	30	77	0	0	0	0	1	0	8	0	23	0	201
8:00 AM	0	88	2	0	19	88	0	0	1	1	1	0	5	0	30	0	235
8:15 AM	1	98	5	0	40	118	1	0	0	0	0	0	6	0	34	0	303
8:30 AM	0	88	2	0	56	125	0	0	0	1	1	0	6	0	23	0	302
8:45 AM	0	89	6	0	49	132	0	0	0	0	1	0	5	1	21	1	305
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	643	127	3	238	756	1	0	3	3	8	0	79	2	180	1	2049
APPROACH %'s :	0.64%	82.65%	16.32%	0.39%	23.92%	75.98%	0.10%	0.00%	21.43%	21.43%	57.14%	0.00%	30.15%	0.76%	68.70%	0.38%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	1	363	15	0	164	463	1	0	1	2	3	0	22	1	108	1	1145
PEAK HR FACTOR :	0.250	0.926	0.625	0.000	0.732	0.877	0.250	0.000	0.250	0.500	0.750	0.000	0.917	0.250	0.794	0.250	0.939
	0.911				0.867				0.500				0.825				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:30 PM	0	29	4	0	4	41	0	0	0	1	1	0	8	3	6	0	97
1:45 PM	1	22	5	0	4	52	0	0	0	4	0	0	7	1	6	0	102
2:00 PM	1	23	13	0	7	47	0	0	0	0	1	0	11	1	3	0	107
2:15 PM	2	83	52	0	8	41	0	0	0	0	2	0	8	1	5	0	202
2:30 PM	0	29	11	0	7	60	0	0	0	2	1	0	5	0	3	0	118
2:45 PM	2	48	7	0	3	33	0	0	0	0	0	0	12	1	7	0	113
3:00 PM	1	65	10	0	4	44	1	0	1	1	2	0	12	1	10	0	152
3:15 PM	2	79	11	2	9	51	0	0	0	1	1	0	16	1	21	0	194
3:30 PM	3	72	28	2	23	84	2	1	0	0	1	0	19	0	20	0	255
3:45 PM	1	51	22	0	39	99	0	0	1	0	1	0	26	1	14	0	255
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	13	501	163	4	108	552	3	1	2	9	10	0	124	10	95	0	1595
APPROACH %'s :	1.91%	73.57%	23.94%	0.59%	16.27%	83.13%	0.45%	0.15%	9.52%	42.86%	47.62%	0.00%	54.15%	4.37%	41.48%	0.00%	
PEAK HR :	03:00 PM - 04:00 PM																TOTAL
PEAK HR VOL :	7	267	71	4	75	278	3	1	2	2	5	0	73	3	65	0	856
PEAK HR FACTOR :	0.583	0.845	0.634	0.500	0.481	0.702	0.375	0.250	0.500	0.500	0.625	0.000	0.702	0.750	0.774	0.000	0.839
	0.831				0.647				0.563				0.860				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	65	18	2	20	104	0	0	0	1	1	0	11	1	13	0	237
4:15 PM	1	66	11	0	15	92	1	0	1	0	1	0	11	1	4	0	204
4:30 PM	1	61	12	0	10	92	1	0	1	0	3	0	8	1	7	0	197
4:45 PM	1	70	15	1	6	99	0	0	0	0	0	0	12	0	9	0	213
5:00 PM	1	73	13	0	6	73	0	0	0	0	0	0	5	0	13	0	184
5:15 PM	2	68	17	0	17	101	0	0	0	1	1	0	9	2	8	0	226
5:30 PM	2	90	17	0	9	99	0	0	0	1	1	0	9	0	17	0	245
5:45 PM	4	75	15	0	15	66	0	1	0	0	1	0	5	0	10	0	192
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	13	568	118	3	98	726	2	1	2	3	8	0	70	5	81	0	1698
APPROACH %'s :	1.85%	80.91%	16.81%	0.43%	11.85%	87.79%	0.24%	0.12%	15.38%	23.08%	61.54%	0.00%	44.87%	3.21%	51.92%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	6	301	62	1	38	372	0	0	0	2	2	0	35	2	47	0	868
PEAK HR FACTOR :	0.750	0.836	0.912	0.250	0.559	0.921	0.000	0.000	0.000	0.500	0.500	0.000	0.729	0.250	0.691	0.000	0.886
	0.849				0.869				0.500				0.808				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Warren Rd & Esplanade Ave
City: San Jacinto
Control: 4-Way Stop

Project ID: 23-030069-013
Date: 11/2/2023

Data - Totals

NS/EW Streets:	Warren Rd				Warren Rd				Esplanade Ave				Esplanade Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	91	23	0	11	82	5	0	14	5	1	0	44	11	17	0	304
7:15 AM	0	110	15	0	5	83	4	0	10	7	0	0	50	10	18	0	312
7:30 AM	0	110	17	0	7	97	5	0	4	7	0	0	30	5	16	0	298
7:45 AM	0	97	23	0	11	79	2	0	7	7	1	0	24	15	10	0	276
8:00 AM	1	112	39	0	8	77	4	0	8	14	1	0	23	6	13	0	306
8:15 AM	0	109	41	0	10	80	2	0	5	13	0	0	30	16	12	0	318
8:30 AM	1	89	23	0	8	98	3	0	3	5	0	0	43	12	9	0	294
8:45 AM	0	112	25	0	8	68	4	0	4	6	0	0	29	6	13	0	275
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	830	206	0	68	664	29	0	55	64	3	0	273	81	108	0	2383
APPROACH %'s :	0.19%	79.96%	19.85%	0.00%	8.94%	87.25%	3.81%	0.00%	45.08%	52.46%	2.46%	0.00%	59.09%	17.53%	23.38%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	1	428	120	0	36	333	13	0	24	41	2	0	107	42	51	0	1198
PEAK HR FACTOR :	0.250	0.955	0.732	0.000	0.818	0.858	0.650	0.000	0.750	0.732	0.500	0.000	0.892	0.656	0.797	0.000	0.942
	0.903				0.876				0.728				0.862				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	115	29	0	9	72	2	0	3	5	0	0	36	5	12	0	290
4:15 PM	1	119	35	0	12	69	4	0	2	9	0	0	28	7	11	0	297
4:30 PM	1	120	32	0	11	65	4	0	1	4	1	0	32	6	9	0	286
4:45 PM	1	123	30	0	16	76	15	0	5	11	0	0	28	18	8	0	331
5:00 PM	1	107	43	0	24	100	16	0	4	7	1	0	20	17	14	0	354
5:15 PM	0	104	42	0	27	106	18	0	6	16	0	0	18	18	14	0	369
5:30 PM	0	116	37	0	16	74	9	0	4	9	1	0	14	16	14	0	310
5:45 PM	0	108	50	0	13	91	5	0	10	12	0	0	15	14	11	0	329
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	6	912	298	0	128	653	73	0	35	73	3	0	191	101	93	0	2566
APPROACH %'s :	0.49%	75.00%	24.51%	0.00%	14.99%	76.46%	8.55%	0.00%	31.53%	65.77%	2.70%	0.00%	49.61%	26.23%	24.16%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	2	450	152	0	83	356	58	0	19	43	2	0	80	69	50	0	1364
PEAK HR FACTOR :	0.500	0.915	0.884	0.000	0.769	0.840	0.806	0.000	0.792	0.672	0.500	0.000	0.714	0.958	0.893	0.000	0.924
	0.981				0.823				0.727				0.921				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sanderson Ave & W Esplanade Ave
City: San Jacinto
Control: Signalized

Project ID: 23-030069-014
Date: 11/2/2023

Data - Totals

NS/EW Streets:	Sanderson Ave				Sanderson Ave				W Esplanade Ave				W Esplanade Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	1	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	9	155	28	0	8	138	17	2	10	28	8	0	24	32	12	0	471
7:15 AM	13	129	22	0	7	127	16	2	15	22	3	0	27	49	13	0	445
7:30 AM	10	190	26	0	10	118	11	2	19	28	4	0	26	38	10	0	492
7:45 AM	10	155	27	0	12	148	16	5	11	40	3	0	26	42	7	0	502
8:00 AM	9	180	27	0	10	133	12	1	16	35	6	0	22	48	12	0	511
8:15 AM	19	145	42	0	11	160	16	2	20	38	6	0	19	86	8	0	572
8:30 AM	8	139	32	0	9	141	14	5	25	38	5	0	38	62	12	0	528
8:45 AM	7	174	17	0	6	104	10	4	10	35	4	0	42	45	11	0	469
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	85	1267	221	0	73	1069	112	23	126	264	39	0	224	402	85	0	3990
APPROACH %'s :	5.40%	80.55%	14.05%	0.00%	5.72%	83.71%	8.77%	1.80%	29.37%	61.54%	9.09%	0.00%	31.50%	56.54%	11.95%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	46	619	128	0	42	582	58	13	72	151	20	0	105	238	39	0	2113
PEAK HR FACTOR :	0.605	0.860	0.762	0.000	0.875	0.909	0.906	0.650	0.720	0.944	0.833	0.000	0.691	0.692	0.813	0.000	0.924
	0.918				0.919				0.893				0.845				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	1	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	16	163	28	0	15	223	17	4	16	41	19	0	38	49	14	0	643
4:15 PM	11	167	24	0	14	249	11	1	14	34	10	0	39	33	17	0	624
4:30 PM	16	174	25	0	16	215	16	2	22	32	10	0	37	48	15	0	628
4:45 PM	11	168	30	0	22	234	18	1	11	32	4	0	38	43	5	0	617
5:00 PM	6	170	33	0	18	187	10	3	28	34	7	0	42	45	16	0	599
5:15 PM	15	201	26	0	17	207	16	1	17	41	9	0	34	41	16	0	641
5:30 PM	9	173	28	0	13	197	14	1	21	36	6	0	46	52	18	0	614
5:45 PM	13	143	24	0	15	234	15	3	13	48	7	0	22	42	10	0	589
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	97	1359	218	0	130	1746	117	16	142	298	72	0	296	353	111	0	4955
APPROACH %'s :	5.79%	81.18%	13.02%	0.00%	6.47%	86.91%	5.82%	0.80%	27.73%	58.20%	14.06%	0.00%	38.95%	46.45%	14.61%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	54	672	107	0	67	921	62	8	63	139	43	0	152	173	51	0	2512
PEAK HR FACTOR :	0.844	0.966	0.892	0.000	0.761	0.925	0.861	0.500	0.716	0.848	0.566	0.000	0.974	0.883	0.750	0.000	0.977
	0.969				0.962				0.806				0.931				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Kirby St & W Esplanade Ave
City: San Jacinto
Control: 4-Way Stop

Project ID: 23-030069-015
Date: 11/2/2023

Data - Totals

NS/EW Streets:	Kirby St				Kirby St				W Esplanade Ave				W Esplanade Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	1	0	1	0	1	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	8	30	8	0	7	56	5	0	7	63	5	0	18	52	5	0	264
7:15 AM	15	59	13	0	8	53	11	0	3	58	7	0	19	53	5	0	304
7:30 AM	12	41	23	0	8	42	7	0	3	63	4	0	14	58	6	0	281
7:45 AM	10	43	17	0	19	51	11	0	7	76	9	0	19	55	2	0	319
8:00 AM	14	38	17	0	11	34	11	0	6	68	9	0	16	78	4	0	306
8:15 AM	17	28	20	0	6	48	6	0	7	68	7	0	11	94	7	0	319
8:30 AM	10	29	20	0	6	34	14	0	5	77	11	0	12	77	7	0	302
8:45 AM	11	28	12	0	8	30	17	0	11	47	5	0	12	75	4	0	260
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	97	296	130	0	73	348	82	0	49	520	57	0	121	542	40	0	2355
APPROACH %'s :	18.55%	56.60%	24.86%	0.00%	14.51%	69.18%	16.30%	0.00%	7.83%	83.07%	9.11%	0.00%	17.21%	77.10%	5.69%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	51	138	74	0	42	167	42	0	25	289	36	0	58	304	20	0	1246
PEAK HR FACTOR :	0.750	0.802	0.925	0.000	0.553	0.819	0.750	0.000	0.893	0.938	0.818	0.000	0.763	0.809	0.714	0.000	0.976
	0.939				0.775				0.941				0.853				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	1	0	1	0	1	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	10	62	16	0	15	63	11	0	8	86	17	0	12	90	9	0	399
4:15 PM	13	44	21	0	8	70	10	0	5	85	18	0	28	64	7	0	373
4:30 PM	19	54	25	0	3	36	11	0	6	65	16	0	18	77	12	0	342
4:45 PM	13	55	27	0	12	56	6	0	7	88	9	0	20	71	8	0	372
5:00 PM	15	61	23	0	11	49	12	0	10	75	13	0	12	79	7	0	367
5:15 PM	20	62	26	0	14	51	13	0	11	75	14	0	14	69	9	0	378
5:30 PM	16	57	17	0	18	42	10	0	11	71	12	0	17	80	11	0	362
5:45 PM	15	48	21	0	18	46	9	0	9	95	9	0	13	56	5	0	344
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	121	443	176	0	99	413	82	0	67	640	108	0	134	586	68	0	2937
APPROACH %'s :	16.35%	59.86%	23.78%	0.00%	16.67%	69.53%	13.80%	0.00%	8.22%	78.53%	13.25%	0.00%	17.01%	74.37%	8.63%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	55	215	89	0	38	225	38	0	26	324	60	0	78	302	36	0	1486
PEAK HR FACTOR :	0.724	0.867	0.824	0.000	0.633	0.804	0.864	0.000	0.813	0.920	0.833	0.000	0.696	0.839	0.750	0.000	0.931
	0.916				0.846				0.923				0.937				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Lyon Ave & W Esplanade Ave
City: San Jacinto
Control: Signalized

Project ID: 23-030069-016
Date: 11/2/2023

Data - Totals

NS/EW Streets:	Lyon Ave				Lyon Ave				W Esplanade Ave				W Esplanade Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	1	1	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	42	13	0	8	39	7	0	3	70	4	0	10	67	14	0	281
7:15 AM	2	44	13	0	5	44	11	0	11	68	4	0	15	62	19	0	298
7:30 AM	4	51	16	0	8	38	5	0	4	82	2	0	18	73	16	0	317
7:45 AM	4	39	17	0	10	38	8	0	7	98	9	0	21	67	24	0	342
8:00 AM	2	41	9	0	14	55	13	0	3	88	6	0	17	88	16	0	352
8:15 AM	4	28	16	0	8	62	9	0	6	83	1	0	16	86	11	0	330
8:30 AM	6	24	7	0	4	54	7	0	3	100	6	0	14	84	10	0	319
8:45 AM	3	28	15	0	9	49	6	0	7	58	4	0	8	84	9	0	280
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	29	297	106	0	66	379	66	0	44	647	36	0	119	611	119	0	2519
APPROACH %'s :	6.71%	68.75%	24.54%	0.00%	12.92%	74.17%	12.92%	0.00%	6.05%	89.00%	4.95%	0.00%	14.02%	71.97%	14.02%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	16	132	49	0	36	209	37	0	19	369	22	0	68	325	61	0	1343
PEAK HR FACTOR :	0.667	0.805	0.721	0.000	0.643	0.843	0.712	0.000	0.679	0.923	0.611	0.000	0.810	0.923	0.635	0.000	0.954
	0.821				0.860				0.899				0.938				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	1	1	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	8	53	21	0	17	74	7	0	11	104	6	0	31	93	14	0	439
4:15 PM	4	50	23	0	12	58	2	0	4	103	9	0	23	92	21	0	401
4:30 PM	3	53	17	0	13	59	1	0	8	86	4	0	31	98	23	0	396
4:45 PM	2	40	22	0	11	52	5	0	6	111	12	0	22	106	19	0	408
5:00 PM	3	54	16	0	15	69	2	0	7	89	8	0	19	85	21	0	388
5:15 PM	7	66	17	0	13	58	5	0	6	103	12	0	23	85	19	0	414
5:30 PM	2	52	20	0	19	73	6	0	8	89	4	0	11	93	16	0	393
5:45 PM	5	39	28	0	18	57	4	0	9	116	7	0	28	61	15	0	387
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	34	407	164	0	118	500	32	0	59	801	62	0	188	713	148	0	3226
APPROACH %'s :	5.62%	67.27%	27.11%	0.00%	18.15%	76.92%	4.92%	0.00%	6.40%	86.88%	6.72%	0.00%	17.92%	67.97%	14.11%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	17	196	83	0	53	243	15	0	29	404	31	0	107	389	77	0	1644
PEAK HR FACTOR :	0.531	0.925	0.902	0.000	0.779	0.821	0.536	0.000	0.659	0.910	0.646	0.000	0.863	0.917	0.837	0.000	0.936
	0.902				0.793				0.899				0.942				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Palm Ave & W Esplanade Ave
City: San Jacinto
Control: Signalized

Project ID: 23-030069-017
Date: 11/2/2023

Data - Totals

NS/EW Streets:	Palm Ave				Palm Ave				W Esplanade Ave				W Esplanade Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	6	22	9	0	13	22	5	0	3	77	6	0	8	62	5	0	238
7:15 AM	10	35	23	0	8	33	6	0	3	77	4	0	13	70	12	0	294
7:30 AM	6	44	18	0	11	36	10	0	9	85	5	0	10	97	7	0	338
7:45 AM	14	50	28	0	22	46	10	0	5	117	6	0	23	73	7	0	401
8:00 AM	12	69	21	0	29	65	17	0	12	89	5	0	11	83	10	0	423
8:15 AM	5	58	21	0	25	54	26	0	21	86	3	0	19	84	14	0	416
8:30 AM	6	49	17	0	38	52	22	0	12	92	4	0	16	77	10	0	395
8:45 AM	15	23	21	0	15	42	5	0	6	85	3	0	16	86	8	0	325
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	74	350	158	0	161	350	101	0	71	708	36	0	116	632	73	0	2830
APPROACH %'s :	12.71%	60.14%	27.15%	0.00%	26.31%	57.19%	16.50%	0.00%	8.71%	86.87%	4.42%	0.00%	14.13%	76.98%	8.89%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	37	226	87	0	114	217	75	0	50	384	18	0	69	317	41	0	1635
PEAK HR FACTOR :	0.661	0.819	0.777	0.000	0.750	0.835	0.721	0.000	0.595	0.821	0.750	0.000	0.750	0.943	0.732	0.000	0.966
	0.858				0.906				0.883				0.912				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	8	28	22	0	25	60	11	0	10	120	11	0	31	121	18	0	465
4:15 PM	10	38	26	0	18	44	16	0	8	112	11	0	29	115	19	0	446
4:30 PM	16	25	37	0	11	33	5	0	3	109	6	0	24	135	21	0	425
4:45 PM	12	32	33	0	20	36	11	0	9	123	10	0	23	118	24	0	451
5:00 PM	14	36	27	0	11	38	5	0	9	99	7	0	28	133	24	0	431
5:15 PM	8	23	23	0	18	23	7	0	6	116	8	0	21	102	19	0	374
5:30 PM	9	33	19	0	20	41	4	0	6	123	5	0	24	109	17	0	410
5:45 PM	5	51	22	0	19	28	7	0	6	123	12	0	22	96	10	0	401
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	82	266	209	0	142	303	66	0	57	925	70	0	202	929	152	0	3403
APPROACH %'s :	14.72%	47.76%	37.52%	0.00%	27.79%	59.30%	12.92%	0.00%	5.42%	87.93%	6.65%	0.00%	15.74%	72.41%	11.85%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	46	123	118	0	74	173	43	0	30	464	38	0	107	489	82	0	1787
PEAK HR FACTOR :	0.719	0.809	0.797	0.000	0.740	0.721	0.672	0.000	0.750	0.943	0.864	0.000	0.863	0.906	0.854	0.000	0.961
	0.920				0.755				0.937				0.942				

National Data & Surveying Services

Intersection Turning Movement Count

Location: S State St & W Esplanade Ave
City: San Jacinto
Control: Signalized

Project ID: 23-030069-018
Date: 11/2/2023

Data - Totals

NS/EW Streets:	S State St				S State St				W Esplanade Ave				W Esplanade Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	6	130	23	0	23	90	5	0	4	76	9	0	17	66	24	0	473
7:15 AM	5	111	30	0	39	92	11	0	16	82	5	0	18	85	33	0	527
7:30 AM	7	114	20	0	39	116	15	0	13	79	10	0	24	105	40	0	582
7:45 AM	17	127	33	0	38	145	20	0	13	102	16	0	23	114	30	0	678
8:00 AM	16	128	22	0	50	130	16	0	18	102	8	0	22	115	43	1	671
8:15 AM	11	109	21	0	41	117	21	0	16	85	13	0	22	128	24	1	609
8:30 AM	16	127	15	0	39	140	18	0	18	107	12	0	12	92	39	1	636
8:45 AM	9	91	18	0	48	120	11	0	16	84	14	0	20	93	35	2	561
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	87	937	182	0	317	950	117	0	114	717	87	0	158	798	268	5	4737
APPROACH %'s :	7.21%	77.69%	15.09%	0.00%	22.90%	68.64%	8.45%	0.00%	12.42%	78.10%	9.48%	0.00%	12.86%	64.93%	21.81%	0.41%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	60	491	91	0	168	532	75	0	65	396	49	0	79	449	136	3	2594
PEAK HR FACTOR :	0.882	0.959	0.689	0.000	0.840	0.917	0.893	0.000	0.903	0.925	0.766	0.000	0.859	0.877	0.791	0.750	0.956
	0.907				0.954				0.931				0.921				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	16	117	39	0	60	194	22	0	14	123	23	0	32	113	35	0	788
4:15 PM	10	125	39	0	50	171	30	0	18	135	15	0	28	138	31	0	790
4:30 PM	16	126	34	0	63	134	22	0	23	106	13	0	39	143	53	2	774
4:45 PM	22	114	36	0	48	143	30	0	22	117	23	0	24	144	48	0	771
5:00 PM	21	132	41	0	75	170	18	0	12	115	20	0	27	133	40	1	805
5:15 PM	25	110	32	0	51	130	19	0	19	108	13	0	24	135	31	0	697
5:30 PM	21	141	21	0	53	143	25	0	18	118	20	0	16	134	27	0	737
5:45 PM	22	99	32	0	41	128	22	0	14	120	13	0	27	147	45	3	713
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	153	964	274	0	441	1213	188	0	140	942	140	0	217	1087	310	6	6075
APPROACH %'s :	11.00%	69.30%	19.70%	0.00%	23.94%	65.85%	10.21%	0.00%	11.46%	77.09%	11.46%	0.00%	13.40%	67.10%	19.14%	0.37%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	69	497	150	0	236	618	100	0	75	473	71	0	118	558	172	3	3140
PEAK HR FACTOR :	0.784	0.941	0.915	0.000	0.787	0.904	0.833	0.000	0.815	0.876	0.772	0.000	0.756	0.969	0.811	0.375	0.975
	0.923				0.907				0.921				0.898				

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Sanderson Ave & N Ramona Blvd
City: San Jacinto
Control: Signalized

Project ID: 23-030069-019
Date: 11/2/2023

Data - Totals

NS/EW Streets:	N Sanderson Ave				N Sanderson Ave				N Ramona Blvd				N Ramona Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	1	2	0	0	0	0	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	248	6	0	20	141	0	0	0	0	0	0	12	0	50	0	477
7:15 AM	0	246	8	0	14	122	0	0	0	0	0	0	15	0	42	0	447
7:30 AM	0	233	9	0	27	130	0	0	0	0	0	0	16	0	33	0	448
7:45 AM	0	233	10	0	27	152	0	0	0	0	0	0	21	0	26	0	469
8:00 AM	0	186	15	0	20	122	0	0	0	0	0	0	14	0	36	0	393
8:15 AM	0	216	8	0	21	151	0	0	0	0	0	0	20	0	40	0	456
8:30 AM	0	179	8	0	25	129	0	0	0	0	0	0	10	0	26	0	377
8:45 AM	0	187	2	0	15	99	0	0	0	0	0	0	4	0	19	0	326
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1728	66	0	169	1046	0	0	0	0	0	0	112	0	272	0	3393
APPROACH %'s :	0.00%	96.32%	3.68%	0.00%	13.91%	86.09%	0.00%	0.00%					29.17%	0.00%	70.83%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	960	33	0	88	545	0	0	0	0	0	0	64	0	151	0	1841
PEAK HR FACTOR :	0.000	0.968	0.825	0.000	0.815	0.896	0.000	0.000	0.000	0.000	0.000	0.000	0.762	0.000	0.755	0.000	0.965
		0.977				0.884								0.867			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	1	2	0	0	0	0	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	159	15	0	55	284	0	0	0	0	0	0	15	0	32	0	560
4:15 PM	0	176	16	0	45	282	0	0	0	0	0	0	10	0	27	0	556
4:30 PM	0	154	20	0	70	273	0	0	0	0	0	0	13	0	16	0	546
4:45 PM	0	156	9	0	56	245	0	0	0	0	0	0	11	0	21	0	498
5:00 PM	0	153	20	0	70	263	0	0	0	0	0	0	9	0	23	0	538
5:15 PM	0	150	14	0	68	246	0	0	0	0	0	0	7	0	28	0	513
5:30 PM	0	200	16	0	56	269	0	0	0	0	0	0	4	0	16	0	561
5:45 PM	0	132	12	0	63	238	0	0	0	0	0	0	9	0	17	0	471
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1280	122	0	483	2100	0	0	0	0	0	0	78	0	180	0	4243
APPROACH %'s :	0.00%	91.30%	8.70%	0.00%	18.70%	81.30%	0.00%	0.00%					30.23%	0.00%	69.77%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	645	60	0	226	1084	0	0	0	0	0	0	49	0	96	0	2160
PEAK HR FACTOR :	0.000	0.916	0.750	0.000	0.807	0.954	0.000	0.000	0.000	0.000	0.000	0.000	0.817	0.000	0.750	0.000	0.964
		0.918				0.955								0.771			

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Sanderson Ave & Ramona Expy
City: San Jacinto
Control: Signalized

Project ID: 23-030069-020
Date: 11/2/2023

Data - Totals

NS/EW Streets:	N Sanderson Ave				N Sanderson Ave				Ramona Expy				Ramona Expy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	2	1	0	2	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	32	244	4	0	130	133	74	0	113	72	13	0	11	146	203	0	1175
7:15 AM	48	250	8	0	146	118	79	0	88	76	10	0	10	133	176	0	1142
7:30 AM	29	207	9	0	125	131	101	0	132	80	22	0	6	112	142	0	1096
7:45 AM	34	223	23	0	131	137	64	0	104	98	24	0	14	98	166	0	1116
8:00 AM	24	143	10	0	140	126	74	0	101	81	17	0	10	109	136	0	971
8:15 AM	33	256	12	0	129	135	67	0	124	69	11	0	15	64	151	0	1066
8:30 AM	10	182	6	0	113	128	67	0	113	87	12	0	14	81	167	0	980
8:45 AM	24	183	6	0	123	100	66	0	80	68	10	0	6	58	146	0	870
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	234	1688	78	0	1037	1008	592	0	855	631	119	0	86	801	1287	0	8416
APPROACH %'s :	11.70%	84.40%	3.90%	0.00%	39.32%	38.23%	22.45%	0.00%	53.27%	39.31%	7.41%	0.00%	3.96%	36.84%	59.20%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	143	924	44	0	532	519	318	0	437	326	69	0	41	489	687	0	4529
PEAK HR FACTOR :	0.745	0.924	0.478	0.000	0.911	0.947	0.787	0.000	0.828	0.832	0.719	0.000	0.732	0.837	0.846	0.000	0.964
	0.908				0.959				0.889				0.845				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	2	1	0	2	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	27	166	4	0	152	280	97	0	96	160	31	0	18	103	145	0	1279
4:15 PM	28	160	12	0	163	283	125	0	108	153	34	0	15	90	121	0	1292
4:30 PM	18	147	8	0	146	285	107	0	101	141	40	0	13	101	130	0	1237
4:45 PM	17	148	12	0	183	268	100	0	113	138	32	0	10	84	105	0	1210
5:00 PM	24	128	6	0	152	271	113	0	100	166	40	0	13	105	108	0	1226
5:15 PM	28	164	4	0	187	264	117	0	109	118	39	0	11	105	115	0	1261
5:30 PM	19	190	5	0	173	273	102	0	108	127	43	0	16	100	108	0	1264
5:45 PM	29	118	4	0	179	250	100	0	80	164	38	0	8	109	132	0	1211
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	190	1221	55	0	1335	2174	861	0	815	1167	297	0	104	797	964	0	9980
APPROACH %'s :	12.96%	83.29%	3.75%	0.00%	30.55%	49.75%	19.70%	0.00%	35.76%	51.21%	13.03%	0.00%	5.58%	42.73%	51.69%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	90	621	36	0	644	1116	429	0	418	592	137	0	56	378	501	0	5018
PEAK HR FACTOR :	0.804	0.935	0.750	0.000	0.880	0.979	0.858	0.000	0.925	0.925	0.856	0.000	0.778	0.917	0.864	0.000	0.971
	0.934				0.958				0.972				0.879				

Prepared by National Data & Surveying Services

VOLUME

W 7th St Bet. Karpick St & Cawston Avenue

Day: Thursday
Date: 11/2/2023

City: San Jacinto
Project #: CA23_030070_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,262	1,368	2,630

DAILY TOTALS

15-Minutes Interval

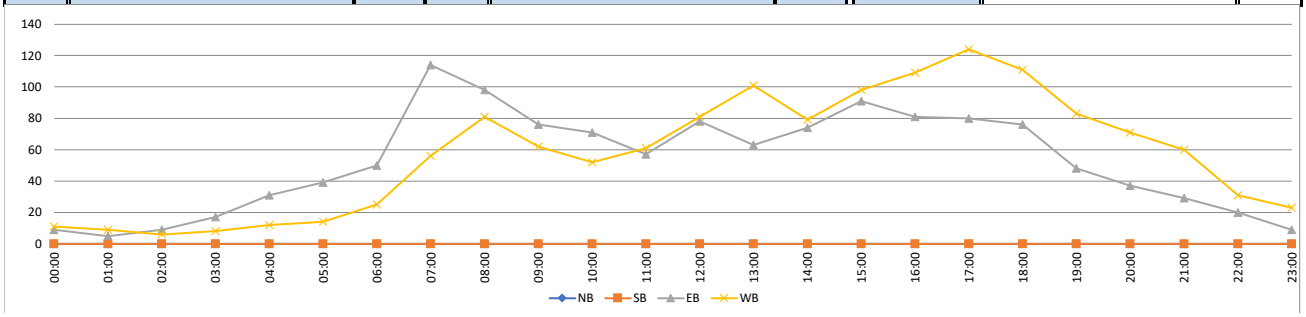
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00			2	3	5	12:00			13	14	27
00:15			4	2	6	12:15			24	21	45
00:30			1	3	4	12:30			19	25	44
00:45			2	3	5	12:45			22	21	43
01:00			1	5	6	13:00			16	22	38
01:15			1	1	2	13:15			21	27	48
01:30			1	2	3	13:30			16	28	44
01:45			2	1	3	13:45			10	24	34
02:00			1	2	3	14:00			21	16	37
02:15			2	1	3	14:15			14	19	33
02:30			4	1	5	14:30			20	21	41
02:45			2	2	4	14:45			19	23	42
03:00			2	1	3	15:00			23	21	44
03:15			2	3	5	15:15			20	23	43
03:30			4	2	6	15:30			21	29	50
03:45			9	2	11	15:45			27	25	52
04:00			7	3	10	16:00			24	31	55
04:15			11	4	15	16:15			18	23	41
04:30			6	3	9	16:30			17	26	43
04:45			7	2	9	16:45			22	29	51
05:00			13	7	20	17:00			22	25	47
05:15			6	2	8	17:15			25	34	59
05:30			10	3	13	17:30			20	39	59
05:45			10	2	12	17:45			13	26	39
06:00			7	2	9	18:00			12	37	49
06:15			12	6	18	18:15			25	24	49
06:30			12	10	22	18:30			20	21	41
06:45			19	7	26	18:45			19	29	48
07:00			29	14	43	19:00			11	27	38
07:15			30	12	42	19:15			11	24	35
07:30			30	15	45	19:30			9	14	23
07:45			25	15	40	19:45			17	18	35
08:00			26	21	47	20:00			8	21	29
08:15			33	27	60	20:15			10	20	30
08:30			17	16	33	20:30			7	15	22
08:45			22	17	39	20:45			12	15	27
09:00			18	18	36	21:00			7	20	27
09:15			16	18	34	21:15			10	12	22
09:30			21	13	34	21:30			3	18	21
09:45			21	13	34	21:45			9	10	19
10:00			20	11	31	22:00			5	11	16
10:15			14	13	27	22:15			9	11	20
10:30			17	14	31	22:30			5	6	11
10:45			20	14	34	22:45			1	3	4
11:00			19	12	31	23:00			3	7	10
11:15			15	17	32	23:15			2	7	9
11:30			10	16	26	23:30			3	6	9
11:45			13	16	29	23:45			1	3	4
TOTALS	0	0	576	397	973	TOTALS	0	0	686	971	1657
SPLIT %	0%	0%	59%	41%	37%	SPLIT %	0%	0%	41%	59%	63%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00			9	11	20
01:00	02:00			5	9	14
02:00	03:00			9	6	15
03:00	04:00			17	8	25
04:00	05:00			31	12	43
05:00	06:00			39	14	53
06:00	07:00			50	25	75
07:00	08:00			114	56	170
08:00	09:00			98	81	179
09:00	10:00			76	62	138
10:00	11:00			71	52	123
11:00	12:00			57	61	118
12:00	13:00			78	81	159
13:00	14:00			63	101	164
14:00	15:00			74	79	153
15:00	16:00			91	98	189
16:00	17:00			81	109	190
17:00	18:00			80	124	204
18:00	19:00			76	111	187
19:00	20:00			48	83	131
20:00	21:00			37	71	108
21:00	22:00			29	60	89
22:00	23:00			20	31	51
23:00	00:00			9	23	32

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume			576	397	973
Peak Hour			7:00	8:00	7:30
Peak Volume			114	81	192
Peak Hour Factor			0.950	0.750	0.800
Peak Period	12:00	to	00:00		
Volume			686	971	1657
Peak Hour			15:15	17:15	16:45
Peak Volume			92	136	216
Peak Hour Factor			0.852	0.872	0.915
Peak Period	07:00	to	09:00		
Volume			212	137	349
Peak Hour			7:00	8:00	7:30
Peak Volume			114	81	192
Peak Hour Factor			0.950	0.750	0.800
Peak Period	16:00	to	18:00		
Volume			161	233	394
Peak Hour			16:45	16:45	16:45
Peak Volume			89	127	216
Peak Hour Factor			0.890	0.814	0.915



Prepared by National Data & Surveying Services

VOLUME

Cawston Ave Bet. W 7th St & W Esplanade Ave

Day: Thursday
Date: 11/2/2023

City: San Jacinto
Project #: CA23_030070_002

DAILY TOTALS	NB	SB	EB	WB	Total
	2,341	2,584	0	0	4,925

DAILY TOTALS

15-Minutes Interval

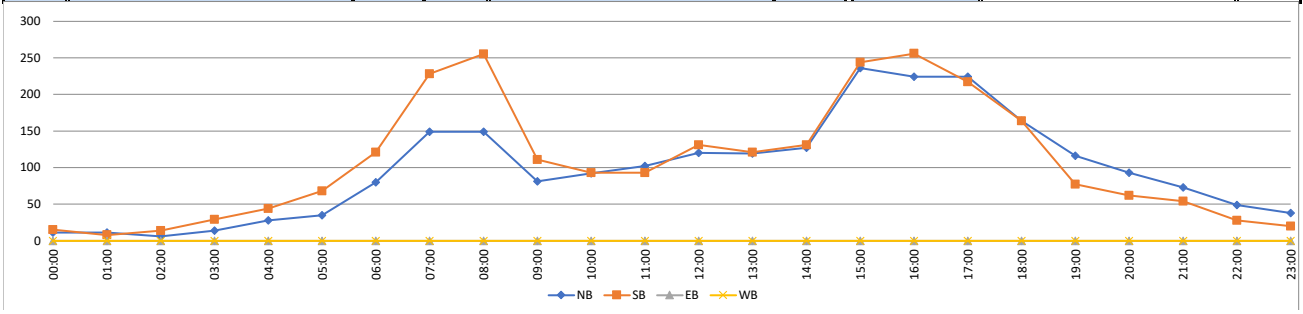
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	1	3			4	12:00	27	28			55
00:15	3	5			8	12:15	32	41			73
00:30	2	4			6	12:30	25	32			57
00:45	5	3			8	12:45	36	30			66
01:00	3	2			5	13:00	37	29			66
01:15	2	1			3	13:15	35	26			61
01:30	4	3			7	13:30	25	43			68
01:45	2	2			4	13:45	22	23			45
02:00	1	2			3	14:00	21	31			52
02:15	2	3			5	14:15	38	29			67
02:30	1	7			8	14:30	32	39			71
02:45	2	2			4	14:45	36	32			68
03:00	6	4			10	15:00	47	62			109
03:15	2	5			7	15:15	45	64			109
03:30	2	7			9	15:30	69	57			126
03:45	4	13			17	15:45	75	61			136
04:00	2	8			10	16:00	63	57			120
04:15	8	14			22	16:15	49	69			118
04:30	11	9			20	16:30	57	58			115
04:45	7	13			20	16:45	55	72			127
05:00	8	19			27	17:00	53	58			111
05:15	8	13			21	17:15	54	58			112
05:30	9	18			27	17:30	67	50			117
05:45	10	18			28	17:45	50	51			101
06:00	11	32			43	18:00	46	53			99
06:15	20	25			45	18:15	41	38			79
06:30	26	29			55	18:30	37	31			68
06:45	23	35			58	18:45	40	42			82
07:00	34	49			83	19:00	31	25			56
07:15	52	62			114	19:15	27	16			43
07:30	42	57			99	19:30	31	18			49
07:45	21	60			81	19:45	27	18			45
08:00	34	65			99	20:00	25	23			48
08:15	35	101			136	20:15	30	16			46
08:30	40	42			82	20:30	21	13			34
08:45	40	47			87	20:45	17	10			27
09:00	28	34			62	21:00	25	19			44
09:15	21	20			41	21:15	12	19			31
09:30	14	30			44	21:30	25	7			32
09:45	18	27			45	21:45	11	9			20
10:00	21	17			38	22:00	12	6			18
10:15	17	25			42	22:15	16	7			23
10:30	25	26			51	22:30	10	6			16
10:45	29	25			54	22:45	11	9			20
11:00	22	29			51	23:00	10	6			16
11:15	22	23			45	23:15	11	9			20
11:30	30	18			48	23:30	11	3			14
11:45	28	23			51	23:45	6	2			8
TOTALS	758	1079	0	0	1837	TOTALS	1583	1505	0	0	3088
SPLIT %	41%	59%	0%	0%	37%	SPLIT %	51%	49%	0%	0%	63%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00	11	15			26
01:00	02:00	11	8			19
02:00	03:00	6	14			20
03:00	04:00	14	29			43
04:00	05:00	28	44			72
05:00	06:00	35	68			103
06:00	07:00	80	121			201
07:00	08:00	149	228			377
08:00	09:00	149	255			404
09:00	10:00	81	111			192
10:00	11:00	92	93			185
11:00	12:00	102	93			195
12:00	13:00	120	131			251
13:00	14:00	119	121			240
14:00	15:00	127	131			258
15:00	16:00	236	244			480
16:00	17:00	224	256			480
17:00	18:00	224	217			441
18:00	19:00	164	164			328
19:00	20:00	116	77			193
20:00	21:00	93	62			155
21:00	22:00	73	54			127
22:00	23:00	49	28			77
23:00	00:00	38	20			58

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume	758	1079			1837
Peak Hour	6:45	7:30			7:30
Peak Volume	151	283			415
Peak Hour Factor	0.726	0.700			0.763
Peak Period	12:00	to	00:00		
Volume	1583	1505			3088
Peak Hour	15:30	16:15			15:30
Peak Volume	256	257			500
Peak Hour Factor	0.853	0.892			0.919
Peak Period	07:00	to	09:00		
Volume	298	483			781
Peak Hour	7:00	7:30			7:30
Peak Volume	149	283			415
Peak Hour Factor	0.716	0.700			0.763
Peak Period	16:00	to	18:00		
Volume	448	473			921
Peak Hour	16:45	16:15			16:00
Peak Volume	229	257			480
Peak Hour Factor	0.854	0.892			0.945



Prepared by National Data & Surveying Services

VOLUME

Cawston Ave Bet. W Esplanade Ave to Eaton Ave

Day: Thursday
Date: 11/2/2023

City: Hemet
Project #: CA23_030070_003

DAILY TOTALS	NB	SB	EB	WB	Total
	3,495	3,963	0	0	7,458

DAILY TOTALS

15-Minutes Interval

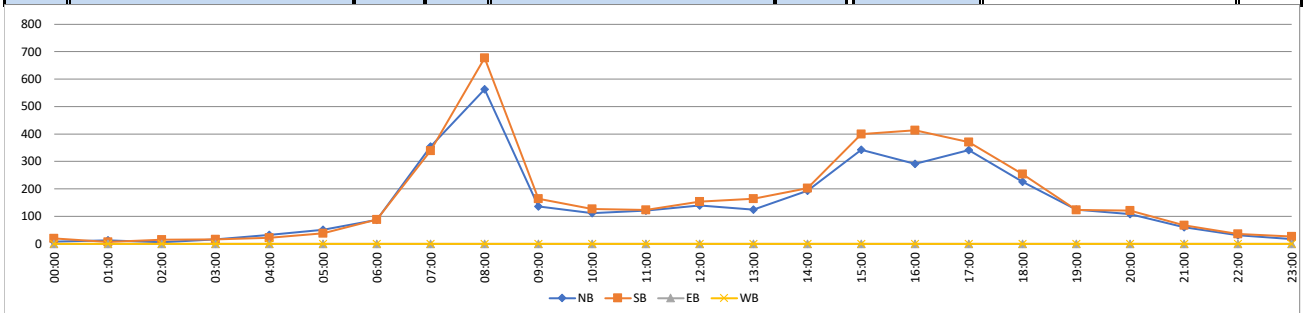
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	1	3			4	12:00	32	29			61
00:15	2	7			9	12:15	35	44			79
00:30	4	5			9	12:30	33	39			72
00:45	1	4			5	12:45	40	41			81
01:00	3	2			5	13:00	29	37			66
01:15	5	1			6	13:15	47	41			88
01:30	3	1			4	13:30	25	42			67
01:45	1	3			4	13:45	23	44			67
02:00	1	5			6	14:00	30	44			74
02:15	2	3			5	14:15	84	47			131
02:30	1	2			3	14:30	36	66			102
02:45	2	5			7	14:45	43	45			88
03:00	4	2			6	15:00	72	58			130
03:15	3	2			5	15:15	93	91			184
03:30	3	4			7	15:30	79	169			248
03:45	6	8			14	15:45	98	81			179
04:00	5	3			8	16:00	67	96			163
04:15	10	5			15	16:15	79	96			175
04:30	7	5			12	16:30	68	106			174
04:45	10	9			19	16:45	77	115			192
05:00	10	6			16	17:00	91	82			173
05:15	13	9			22	17:15	77	115			192
05:30	17	11			28	17:30	104	105			209
05:45	11	12			23	17:45	69	68			137
06:00	14	14			28	18:00	65	79			144
06:15	21	15			36	18:15	54	70			124
06:30	22	17			39	18:30	65	50			115
06:45	30	42			72	18:45	42	55			97
07:00	65	69			134	19:00	25	34			59
07:15	118	87			205	19:15	31	32			63
07:30	89	89			178	19:30	37	30			67
07:45	82	94			176	19:45	31	27			58
08:00	180	146			326	20:00	33	40			73
08:15	197	232			429	20:15	29	24			53
08:30	116	202			318	20:30	21	26			47
08:45	70	97			167	20:45	25	31			56
09:00	54	64			118	21:00	16	21			37
09:15	37	34			71	21:15	16	17			33
09:30	24	39			63	21:30	16	22			38
09:45	21	27			48	21:45	12	7			19
10:00	20	30			50	22:00	6	8			14
10:15	30	33			63	22:15	8	9			17
10:30	23	31			54	22:30	10	13			23
10:45	39	33			72	22:45	7	6			13
11:00	31	27			58	23:00	2	6			8
11:15	31	28			59	23:15	4	9			13
11:30	30	37			67	23:30	10	6			16
11:45	29	31			60	23:45	1	5			6
TOTALS	1498	1635	0	0	3133	TOTALS	1997	2328	0	0	4325
SPLIT %	48%	52%	0%	0%	42%	SPLIT %	46%	54%	0%	0%	58%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00	8	19			27
01:00	02:00	12	7			19
02:00	03:00	6	15			21
03:00	04:00	16	16			32
04:00	05:00	32	22			54
05:00	06:00	51	38			89
06:00	07:00	87	88			175
07:00	08:00	354	339			693
08:00	09:00	563	677			1240
09:00	10:00	136	164			300
10:00	11:00	112	127			239
11:00	12:00	121	123			244
12:00	13:00	140	153			293
13:00	14:00	124	164			288
14:00	15:00	193	202			395
15:00	16:00	342	399			741
16:00	17:00	291	413			704
17:00	18:00	341	370			711
18:00	19:00	226	254			480
19:00	20:00	124	123			247
20:00	21:00	108	121			229
21:00	22:00	60	67			127
22:00	23:00	31	36			67
23:00	00:00	17	26			43

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume	1498	1635			3133
Peak Hour	7:45	8:00			7:45
Peak Volume	575	677			1249
Peak Hour Factor	0.730	0.730			0.728
Peak Period	12:00	to	00:00		
Volume	1997	2328			4325
Peak Hour	16:45	15:30			15:15
Peak Volume	349	442			774
Peak Hour Factor	0.839	0.654			0.780
Peak Period	07:00	to	09:00		
Volume	917	1016			1933
Peak Hour	7:45	8:00			7:45
Peak Volume	575	677			1249
Peak Hour Factor	0.730	0.730			0.728
Peak Period	16:00	to	18:00		
Volume	632	783			1415
Peak Hour	16:45	16:30			16:45
Peak Volume	349	418			766
Peak Hour Factor	0.839	0.909			0.916



Appendix B - SimTraffic Reports - Existing Conditions

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	7:25	7:25	7:25	7:25	7:25	7:25	7:25
End Time	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Total Time (min)	65	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	13112	12986	13110	13139	13246	13402	13362
Vehs Exited	13030	12987	13025	13108	13164	13374	13296
Starting Vehs	506	482	451	487	481	473	449
Ending Vehs	588	481	536	518	563	501	515
Denied Entry Before	1	5	3	3	2	2	4
Denied Entry After	4	3	1	4	2	5	3
Travel Distance (mi)	14900	14746	14768	14913	14975	15159	15135
Travel Time (hr)	522.8	517.9	521.5	525.4	527.5	544.4	540.7
Total Delay (hr)	175.1	173.9	177.0	176.9	178.1	189.3	186.6
Total Stops	21613	21348	21373	21506	21780	22208	22165
Fuel Used (gal)	577.9	573.0	574.1	580.6	581.3	590.4	590.2

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	7:25	7:25	7:25	7:25
End Time	8:30	8:30	8:30	8:30
Total Time (min)	65	65	65	65
Time Recorded (min)	60	60	60	60
# of Intervals	2	2	2	2
# of Recorded Intervals	1	1	1	1
Vehs Entered	13211	13137	13348	13201
Vehs Exited	13199	13102	13264	13152
Starting Vehs	479	445	491	463
Ending Vehs	491	480	575	508
Denied Entry Before	6	5	2	1
Denied Entry After	3	5	3	0
Travel Distance (mi)	15032	14914	15172	14971
Travel Time (hr)	533.3	524.5	554.7	531.3
Total Delay (hr)	181.5	175.7	200.4	181.4
Total Stops	21824	21582	22203	21759
Fuel Used (gal)	583.7	580.8	591.8	582.4

Interval #0 Information Seeding

Start Time	7:25
End Time	7:30
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:30
End Time	8:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	13112	12986	13110	13139	13246	13402	13362
Vehs Exited	13030	12987	13025	13108	13164	13374	13296
Starting Vehs	506	482	451	487	481	473	449
Ending Vehs	588	481	536	518	563	501	515
Denied Entry Before	1	5	3	3	2	2	4
Denied Entry After	4	3	1	4	2	5	3
Travel Distance (mi)	14900	14746	14768	14913	14975	15159	15135
Travel Time (hr)	522.8	517.9	521.5	525.4	527.5	544.4	540.7
Total Delay (hr)	175.1	173.9	177.0	176.9	178.1	189.3	186.6
Total Stops	21613	21348	21373	21506	21780	22208	22165
Fuel Used (gal)	577.9	573.0	574.1	580.6	581.3	590.4	590.2

Interval #1 Information Recording

Start Time	7:30
End Time	8:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	13211	13137	13348	13201
Vehs Exited	13199	13102	13264	13152
Starting Vehs	479	445	491	463
Ending Vehs	491	480	575	508
Denied Entry Before	6	5	2	1
Denied Entry After	3	5	3	0
Travel Distance (mi)	15032	14914	15172	14971
Travel Time (hr)	533.3	524.5	554.7	531.3
Total Delay (hr)	181.5	175.7	200.4	181.4
Total Stops	21824	21582	22203	21759
Fuel Used (gal)	583.7	580.8	591.8	582.4

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.3	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.1	0.2
Denied Del/Veh (s)	2.7	0.4	2.6	2.1	0.4	2.1	0.0	0.0	0.0	1.9	0.6	1.9
Total Delay (hr)	6.3	2.6	0.1	0.6	6.1	11.5	1.7	10.3	0.1	6.6	3.4	0.8
Total Del/Veh (s)	48.3	28.3	6.2	51.5	55.2	67.9	51.8	44.1	7.9	45.4	23.2	9.1
Stop Delay (hr)	5.2	1.7	0.1	0.6	4.4	8.3	1.5	7.0	0.1	5.3	1.9	0.4
Stop Del/Veh (s)	40.1	18.7	3.5	46.9	40.1	48.8	45.4	29.8	6.4	36.4	13.2	4.9
Total Stops	419	188	43	40	357	550	106	659	35	439	260	160
Stop/Veh	0.89	0.57	0.54	0.91	0.90	0.90	0.91	0.78	0.67	0.84	0.49	0.51
Travel Dist (mi)	172.3	122.9	29.9	20.9	194.0	299.0	20.5	148.5	9.2	241.9	246.5	145.4
Travel Time (hr)	10.3	4.6	0.8	1.1	9.1	18.1	2.3	13.3	0.4	11.8	7.6	4.0
Vehicles Entered	459	327	79	42	387	598	114	830	51	512	522	307
Vehicles Exited	462	327	79	42	388	592	114	824	51	511	518	306
Hourly Exit Rate	462	327	79	42	388	592	114	824	51	511	518	306
Input Volume	461	328	74	45	383	595	120	829	54	525	529	306
% of Volume	100	100	107	93	101	99	95	99	94	97	98	100
Denied Entry Before	0	0	0	0	0	1	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	All
Denied Delay (hr)	1.4
Denied Del/Veh (s)	1.2
Total Delay (hr)	50.1
Total Del/Veh (s)	42.0
Stop Delay (hr)	36.4
Stop Del/Veh (s)	30.5
Total Stops	3256
Stop/Veh	0.76
Travel Dist (mi)	1650.9
Travel Time (hr)	83.2
Vehicles Entered	4228
Vehicles Exited	4214
Hourly Exit Rate	4214
Input Volume	4249
% of Volume	99
Denied Entry Before	1
Denied Entry After	0

2: Sanderson Ave & Ramona Blvd Performance by movement

Movement	NBT	NBR	SBL	SBT	NWL	NWR	All
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1	0.2
Denied Del/Veh (s)	0.2	2.5	0.0	0.0	0.3	2.0	0.3
Total Delay (hr)	2.1	0.0	0.6	1.1	0.4	0.2	4.5
Total Del/Veh (s)	8.9	2.6	22.9	7.1	21.4	6.1	9.2
Stop Delay (hr)	0.7	0.0	0.5	0.1	0.4	0.2	1.8
Stop Del/Veh (s)	2.8	1.3	17.4	0.9	18.6	4.5	3.7
Total Stops	233	12	80	64	62	114	565
Stop/Veh	0.27	0.30	0.85	0.12	0.85	0.84	0.32
Travel Dist (mi)	158.6	7.4	17.2	102.2	31.7	59.5	376.6
Travel Time (hr)	5.1	0.2	1.1	3.2	1.2	1.8	12.6
Vehicles Entered	863	40	93	549	72	134	1751
Vehicles Exited	861	40	93	552	71	135	1752
Hourly Exit Rate	861	40	93	552	71	135	1752
Input Volume	868	42	95	555	71	135	1766
% of Volume	99	95	98	99	100	100	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

3: Cawston Ave & Cottonwood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.1	0.3
Total Del/Veh (s)	0.3	0.1	2.5	1.2	7.7	2.5	1.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Stop Del/Veh (s)	0.0	0.0	0.9	0.0	6.0	2.3	0.8
Total Stops	0	0	15	0	49	72	136
Stop/Veh	0.00	0.00	0.27	0.00	0.98	1.00	0.20
Travel Dist (mi)	38.9	4.6	21.0	76.1	6.5	9.1	156.2
Travel Time (hr)	0.8	0.1	0.5	1.6	0.3	0.4	3.8
Vehicles Entered	248	29	55	217	50	72	671
Vehicles Exited	248	29	55	217	49	72	670
Hourly Exit Rate	248	29	55	217	49	72	670
Input Volume	254	27	54	222	52	73	682
% of Volume	98	107	102	98	94	99	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	0.0	0.9	3.5	0.4	0.2	0.2	0.0	0.1	3.2	0.2	3.0
Total Delay (hr)	0.7	1.5	0.1	0.6	1.1	0.3	0.3	3.6	0.1	0.4	1.9	0.1
Total Del/Veh (s)	25.3	19.6	4.0	28.2	22.6	7.5	35.3	18.7	7.9	29.9	13.9	3.0
Stop Delay (hr)	0.7	1.1	0.1	0.6	0.8	0.2	0.3	1.8	0.0	0.4	1.2	0.0
Stop Del/Veh (s)	23.5	14.7	3.7	25.7	16.0	6.6	30.2	9.2	3.0	27.3	8.2	1.6
Total Stops	88	175	38	67	117	94	32	365	33	44	246	34
Stop/Veh	0.85	0.64	0.68	0.86	0.68	0.70	0.94	0.52	0.55	0.92	0.49	0.50
Travel Dist (mi)	9.4	25.0	5.4	18.8	42.1	33.0	16.0	336.8	29.0	8.2	87.2	11.8
Travel Time (hr)	1.0	2.0	0.3	1.2	2.0	1.2	0.7	11.4	0.9	0.7	3.9	0.5
Vehicles Entered	103	270	56	76	170	133	33	691	59	47	501	68
Vehicles Exited	102	270	56	76	170	134	33	688	59	47	502	68
Hourly Exit Rate	102	270	56	76	170	134	33	688	59	47	502	68
Input Volume	105	272	56	77	174	133	35	680	59	48	515	67
% of Volume	97	99	100	99	98	101	94	101	100	98	97	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.4
Total Delay (hr)	10.7
Total Del/Veh (s)	17.4
Stop Delay (hr)	7.1
Stop Del/Veh (s)	11.5
Total Stops	1333
Stop/Veh	0.60
Travel Dist (mi)	622.7
Travel Time (hr)	25.8
Vehicles Entered	2207
Vehicles Exited	2205
Hourly Exit Rate	2205
Input Volume	2221
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

5: 7th St & Karpick St Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.8	0.1	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	1.3	0.1	2.1	1.9	4.4	5.0	1.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.2	0.0	0.4	0.3	3.1	5.0	0.7
Total Stops	0	0	0	0	34	1	35
Stop/Veh	0.00	0.00	0.00	0.00	1.00	1.00	0.18
Travel Dist (mi)	0.2	7.4	6.2	2.7	0.9	0.0	17.4
Travel Time (hr)	0.0	0.2	0.2	0.1	0.1	0.0	0.7
Vehicles Entered	2	78	52	22	34	1	189
Vehicles Exited	2	78	53	23	34	1	191
Hourly Exit Rate	2	78	53	23	34	1	191
Input Volume	2	78	53	24	34	1	192
% of Volume	100	100	100	96	100	100	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.1	0.0	0.3	0.1	0.0	0.0	0.2	0.1	0.1	0.2	0.0
Total Del/Veh (s)	5.1	8.0	3.3	6.5	7.3	2.3	7.2	9.6	5.8	5.6	8.5	1.7
Stop Delay (hr)	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0
Stop Del/Veh (s)	3.3	3.6	3.2	3.9	3.0	2.1	3.4	3.6	3.3	3.4	3.6	2.1
Total Stops	14	63	35	147	42	31	16	56	59	50	94	18
Stop/Veh	1.00	0.98	0.97	0.99	1.00	0.97	1.00	0.92	0.98	1.00	0.99	1.00
Travel Dist (mi)	1.7	7.6	4.2	32.0	9.0	6.8	7.9	29.4	29.5	9.1	17.2	3.4
Travel Time (hr)	0.1	0.4	0.2	1.3	0.3	0.2	0.3	1.0	1.0	0.4	0.7	0.1
Vehicles Entered	14	64	35	147	41	31	16	60	59	50	94	18
Vehicles Exited	14	64	35	147	41	31	16	60	59	50	95	18
Hourly Exit Rate	14	64	35	147	41	31	16	60	59	50	95	18
Input Volume	14	63	36	151	43	33	16	60	60	48	95	18
% of Volume	100	102	97	97	95	94	100	100	98	104	100	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	1.2
Total Del/Veh (s)	6.7
Stop Delay (hr)	0.6
Stop Del/Veh (s)	3.4
Total Stops	625
Stop/Veh	0.99
Travel Dist (mi)	157.9
Travel Time (hr)	6.1
Vehicles Entered	629
Vehicles Exited	630
Hourly Exit Rate	630
Input Volume	637
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

7: Sanderson Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.2	0.3	0.0	0.4	0.4	0.1	0.2	3.0	0.3	0.3	2.0	0.1
Total Del/Veh (s)	13.0	9.0	4.1	13.4	8.7	3.4	24.7	15.5	12.8	29.3	12.9	5.8
Stop Delay (hr)	0.1	0.2	0.0	0.3	0.2	0.1	0.1	1.0	0.1	0.3	0.7	0.0
Stop Del/Veh (s)	10.9	4.5	3.4	11.2	4.6	3.1	17.4	5.1	4.9	23.9	4.5	2.2
Total Stops	31	52	17	71	68	39	21	296	43	36	233	18
Stop/Veh	0.74	0.41	0.57	0.71	0.43	0.50	0.84	0.43	0.54	0.90	0.41	0.50
Travel Dist (mi)	10.7	31.7	7.6	12.7	20.3	10.0	12.4	330.0	39.4	19.8	277.2	17.8
Travel Time (hr)	0.4	1.0	0.2	0.8	0.8	0.4	0.5	9.8	1.2	0.8	7.9	0.5
Vehicles Entered	42	125	30	99	157	78	25	680	78	39	560	35
Vehicles Exited	42	125	30	99	158	78	25	680	78	39	559	35
Hourly Exit Rate	42	125	30	99	158	78	25	680	78	39	559	35
Input Volume	41	123	33	102	165	78	25	673	76	41	573	34
% of Volume	102	102	91	97	96	100	100	101	103	95	98	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Sanderson Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	7.2
Total Del/Veh (s)	13.1
Stop Delay (hr)	3.1
Stop Del/Veh (s)	5.7
Total Stops	925
Stop/Veh	0.47
Travel Dist (mi)	789.5
Travel Time (hr)	24.4
Vehicles Entered	1948
Vehicles Exited	1948
Hourly Exit Rate	1948
Input Volume	1964
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

8: Kirby St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	4.0
Total Delay (hr)	0.0	0.7	0.0	0.2	1.2	0.1	0.0	0.4	0.1	0.1	0.3	0.0
Total Del/Veh (s)	8.1	11.7	4.3	10.7	15.3	8.6	9.0	11.6	6.3	6.6	10.2	4.4
Stop Delay (hr)	0.0	0.3	0.0	0.1	0.4	0.0	0.0	0.1	0.1	0.0	0.1	0.0
Stop Del/Veh (s)	4.6	4.4	3.1	4.3	4.4	4.0	4.5	4.2	3.6	4.0	4.3	3.4
Total Stops	10	212	30	60	283	23	18	105	53	42	98	16
Stop/Veh	1.00	0.99	1.00	0.97	0.98	0.96	0.95	0.88	0.98	0.98	0.99	1.00
Travel Dist (mi)	3.5	75.2	10.9	30.0	140.6	11.5	9.2	55.6	26.6	5.0	11.6	1.9
Travel Time (hr)	0.1	2.4	0.3	0.9	4.4	0.4	0.3	1.8	0.8	0.2	0.6	0.1
Vehicles Entered	10	212	30	61	284	23	19	117	53	42	98	16
Vehicles Exited	10	211	30	60	284	23	18	117	53	42	98	16
Hourly Exit Rate	10	211	30	60	284	23	18	117	53	42	98	16
Input Volume	9	212	27	63	289	24	21	116	55	44	100	18
% of Volume	111	100	111	95	98	96	86	101	96	95	98	89
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

8: Kirby St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	3.1
Total Del/Veh (s)	11.6
Stop Delay (hr)	1.2
Stop Del/Veh (s)	4.3
Total Stops	950
Stop/Veh	0.98
Travel Dist (mi)	381.6
Travel Time (hr)	12.5
Vehicles Entered	965
Vehicles Exited	962
Hourly Exit Rate	962
Input Volume	978
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

9: Lyon Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.7	0.3	0.2
Total Delay (hr)	0.1	1.3	0.1	0.3	1.9	0.3	0.1	0.7	0.1	0.1	0.7	0.0
Total Del/Veh (s)	11.4	17.3	10.2	19.4	22.4	16.7	10.0	14.4	5.6	7.4	14.1	2.8
Stop Delay (hr)	0.0	0.5	0.0	0.2	1.0	0.2	0.1	0.3	0.1	0.0	0.3	0.0
Stop Del/Veh (s)	5.4	7.0	6.1	12.1	11.3	11.0	7.1	6.7	4.0	4.8	6.4	3.0
Total Stops	16	276	26	54	306	63	44	171	48	31	187	19
Stop/Veh	1.00	0.99	1.00	1.00	0.98	0.98	1.00	0.99	1.00	1.00	0.99	1.00
Travel Dist (mi)	7.7	134.2	12.5	25.8	146.9	30.6	8.6	33.1	9.3	2.5	15.2	1.6
Travel Time (hr)	0.2	4.5	0.4	0.9	5.3	1.1	0.3	1.4	0.3	0.2	1.1	0.1
Vehicles Entered	16	277	26	53	307	64	44	172	48	31	186	19
Vehicles Exited	16	276	26	54	305	63	44	171	48	31	187	19
Hourly Exit Rate	16	276	26	54	305	63	44	171	48	31	187	19
Input Volume	16	283	26	51	314	58	45	176	43	32	186	17
% of Volume	100	98	100	106	97	109	98	97	112	97	101	112
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

9: Lyon Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	5.7
Total Del/Veh (s)	16.4
Stop Delay (hr)	2.8
Stop Del/Veh (s)	8.1
Total Stops	1241
Stop/Veh	0.99
Travel Dist (mi)	428.0
Travel Time (hr)	15.9
Vehicles Entered	1243
Vehicles Exited	1240
Hourly Exit Rate	1240
Input Volume	1247
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

10: Palm Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3
Total Delay (hr)	0.2	1.5	0.1	0.2	1.5	0.1	0.1	0.6	0.1	0.1	0.5	0.1
Total Del/Veh (s)	12.1	16.9	11.5	9.5	16.7	11.0	11.7	9.1	9.2	9.8	12.3	7.6
Stop Delay (hr)	0.1	0.5	0.0	0.1	0.8	0.1	0.1	0.3	0.1	0.1	0.3	0.1
Stop Del/Veh (s)	4.9	6.3	6.1	4.7	8.8	8.3	7.7	4.4	6.6	6.6	6.2	6.0
Total Stops	56	304	22	64	309	33	24	139	56	39	158	64
Stop/Veh	0.98	0.98	0.96	1.03	0.99	0.97	1.00	0.60	0.98	0.98	1.00	1.00
Travel Dist (mi)	26.8	146.2	11.0	7.7	38.4	4.1	9.3	71.8	21.7	2.6	10.5	4.2
Travel Time (hr)	0.9	4.8	0.4	0.4	2.3	0.2	0.3	2.4	0.8	0.2	0.8	0.3
Vehicles Entered	56	306	22	62	310	33	24	228	56	39	157	64
Vehicles Exited	56	305	22	62	310	33	24	230	56	39	158	64
Hourly Exit Rate	56	305	22	62	310	33	24	230	56	39	158	64
Input Volume	59	307	22	62	315	33	23	226	57	44	159	62
% of Volume	95	99	100	100	98	100	104	102	98	89	99	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

10: Palm Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	5.0
Total Del/Veh (s)	13.2
Stop Delay (hr)	2.5
Stop Del/Veh (s)	6.5
Total Stops	1268
Stop/Veh	0.92
Travel Dist (mi)	354.3
Travel Time (hr)	13.9
Vehicles Entered	1357
Vehicles Exited	1359
Hourly Exit Rate	1359
Input Volume	1369
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

11: State St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	3.3	0.4	0.2	0.0	0.0	0.0	2.9	0.2	0.2
Total Delay (hr)	0.5	1.4	0.1	0.4	1.7	0.1	0.4	2.9	0.2	0.7	2.8	0.1
Total Del/Veh (s)	28.9	17.9	5.2	26.0	19.6	4.8	41.6	17.7	14.2	36.1	15.2	7.2
Stop Delay (hr)	0.4	0.9	0.1	0.4	1.1	0.1	0.4	1.4	0.1	0.6	1.6	0.1
Stop Del/Veh (s)	24.9	11.5	3.4	21.4	12.3	4.0	35.0	8.6	7.8	32.2	8.8	5.6
Total Stops	56	154	35	53	171	59	36	259	29	69	314	33
Stop/Veh	0.89	0.54	0.56	0.85	0.55	0.59	0.95	0.45	0.47	0.96	0.47	0.51
Travel Dist (mi)	23.3	104.2	22.7	8.3	41.7	13.6	18.3	277.6	30.5	6.7	62.7	6.2
Travel Time (hr)	1.1	3.7	0.7	0.7	2.7	0.6	0.9	9.3	1.0	1.0	4.3	0.4
Vehicles Entered	63	279	61	61	305	99	37	572	61	71	661	65
Vehicles Exited	62	279	60	61	306	100	37	571	60	71	661	65
Hourly Exit Rate	62	279	60	61	306	100	37	571	60	71	661	65
Input Volume	63	289	60	59	307	91	36	578	61	70	663	67
% of Volume	98	97	100	103	100	110	103	99	98	101	100	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

11: State St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.3
Total Delay (hr)	11.5
Total Del/Veh (s)	17.5
Stop Delay (hr)	7.2
Stop Del/Veh (s)	11.0
Total Stops	1268
Stop/Veh	0.54
Travel Dist (mi)	615.7
Travel Time (hr)	26.4
Vehicles Entered	2335
Vehicles Exited	2333
Hourly Exit Rate	2333
Input Volume	2344
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.2	0.0	0.0	0.0	0.2	0.5	0.5	0.3	0.3	0.3
Total Delay (hr)	0.0	0.1	0.0	0.3	0.2	0.1	0.0	2.3	0.4	0.1	1.5	0.0
Total Del/Veh (s)	4.6	10.3	2.7	11.0	9.9	8.7	11.9	19.5	12.2	11.1	15.7	7.7
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.8	0.2	0.0	0.4	0.0
Stop Del/Veh (s)	3.3	3.9	2.5	4.7	2.6	4.1	6.0	7.0	6.8	5.4	4.5	3.7
Total Stops	22	39	3	101	39	50	1	429	121	32	338	14
Stop/Veh	1.00	1.00	1.00	0.96	0.51	0.96	1.00	0.99	0.99	1.00	0.99	0.93
Travel Dist (mi)	2.8	5.0	0.3	105.7	59.8	52.5	0.2	94.9	26.8	7.2	76.8	3.3
Travel Time (hr)	0.1	0.2	0.0	2.6	1.5	1.3	0.0	4.1	1.2	0.3	2.9	0.1
Vehicles Entered	22	39	3	103	76	51	1	429	121	32	338	14
Vehicles Exited	22	39	3	101	75	50	1	429	121	32	338	14
Hourly Exit Rate	22	39	3	101	75	50	1	429	121	32	338	14
Input Volume	24	41	2	107	81	51	1	428	120	36	333	13
% of Volume	92	95	150	94	93	98	100	100	101	89	102	108
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	5.2
Total Del/Veh (s)	15.1
Stop Delay (hr)	1.9
Stop Del/Veh (s)	5.5
Total Stops	1189
Stop/Veh	0.96
Travel Dist (mi)	435.3
Travel Time (hr)	14.4
Vehicles Entered	1229
Vehicles Exited	1225
Hourly Exit Rate	1225
Input Volume	1237
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.5	0.3	0.4	0.5	0.0	0.1	0.4	0.1	0.0	0.7	0.1
Total Del/Veh (s)	9.3	14.4	7.8	9.9	11.9	6.8	8.7	3.8	5.5	10.1	12.4	8.1
Stop Delay (hr)	0.1	0.2	0.1	0.2	0.2	0.0	0.1	0.1	0.1	0.0	0.3	0.1
Stop Del/Veh (s)	4.5	4.8	4.1	5.7	4.5	4.1	4.6	1.2	3.4	5.4	5.5	4.7
Total Stops	42	128	127	136	122	12	46	81	79	16	198	62
Stop/Veh	1.00	0.97	0.98	0.99	0.78	1.00	1.00	0.19	0.99	0.94	0.97	0.98
Travel Dist (mi)	34.8	109.2	107.1	53.8	55.6	4.6	23.0	127.7	39.7	8.3	100.6	31.1
Travel Time (hr)	0.9	2.9	2.8	1.6	1.6	0.1	0.8	4.3	1.4	0.3	3.7	1.1
Vehicles Entered	42	128	127	136	157	12	46	420	79	16	201	62
Vehicles Exited	42	128	127	136	156	12	46	420	79	16	200	62
Hourly Exit Rate	42	128	127	136	156	12	46	420	79	16	200	62
Input Volume	42	130	127	143	163	11	46	423	75	18	203	63
% of Volume	100	98	100	95	96	109	100	99	105	89	99	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	3.4
Total Del/Veh (s)	8.5
Stop Delay (hr)	1.5
Stop Del/Veh (s)	3.7
Total Stops	1049
Stop/Veh	0.73
Travel Dist (mi)	695.5
Travel Time (hr)	21.6
Vehicles Entered	1426
Vehicles Exited	1424
Hourly Exit Rate	1424
Input Volume	1444
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	2.8	0.2	0.3	0.0	0.0	0.0
Total Delay (hr)	0.6	1.0	0.0	0.8	1.3	0.0	0.4	2.9	0.3	0.4	2.6	0.1
Total Del/Veh (s)	31.8	25.7	5.8	30.8	19.5	4.2	32.9	15.3	9.0	35.9	16.0	7.9
Stop Delay (hr)	0.5	0.8	0.0	0.7	1.0	0.0	0.4	1.7	0.2	0.3	1.2	0.0
Stop Del/Veh (s)	29.3	19.6	4.7	27.4	14.5	4.2	29.8	8.7	6.2	30.3	7.5	3.0
Total Stops	57	103	18	81	139	24	42	326	62	37	248	24
Stop/Veh	0.89	0.71	0.90	0.87	0.58	0.69	0.91	0.47	0.53	0.92	0.43	0.44
Travel Dist (mi)	6.1	13.9	1.9	29.8	71.9	11.0	7.3	112.1	18.8	20.0	281.4	27.1
Travel Time (hr)	0.8	1.3	0.1	1.6	3.1	0.4	0.7	5.5	0.9	0.9	8.5	0.8
Vehicles Entered	64	144	20	92	238	34	45	686	115	40	575	54
Vehicles Exited	64	145	20	91	237	34	45	684	114	40	576	54
Hourly Exit Rate	64	145	20	91	237	34	45	684	114	40	576	54
Input Volume	66	142	19	93	243	37	48	670	122	43	592	55
% of Volume	97	102	105	98	98	92	94	102	93	93	97	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	10.5
Total Del/Veh (s)	17.8
Stop Delay (hr)	6.9
Stop Del/Veh (s)	11.7
Total Stops	1161
Stop/Veh	0.55
Travel Dist (mi)	601.4
Travel Time (hr)	24.4
Vehicles Entered	2107
Vehicles Exited	2104
Hourly Exit Rate	2104
Input Volume	2130
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	3.7	0.1	0.1	1.0
Total Delay (hr)	0.1	1.2	0.1	0.3	1.7	0.1	0.2	0.5	0.1	0.1	0.7	0.1
Total Del/Veh (s)	13.8	16.8	9.5	19.5	22.4	16.0	9.8	12.5	4.9	10.8	14.1	7.5
Stop Delay (hr)	0.1	0.6	0.1	0.2	0.9	0.1	0.1	0.3	0.1	0.1	0.3	0.0
Stop Del/Veh (s)	10.2	8.5	7.7	12.6	11.4	10.8	6.6	6.2	3.7	6.6	6.6	4.4
Total Stops	24	263	30	54	273	20	60	144	79	44	174	33
Stop/Veh	1.00	0.99	1.00	0.98	0.98	1.00	1.00	0.99	0.99	1.00	0.98	1.00
Travel Dist (mi)	4.0	43.3	4.9	27.2	137.5	10.0	10.2	24.7	13.6	18.9	76.9	14.2
Travel Time (hr)	0.2	2.1	0.2	1.0	4.9	0.4	0.5	1.1	0.6	0.7	2.7	0.5
Vehicles Entered	24	263	30	54	274	20	60	145	80	44	174	32
Vehicles Exited	24	263	29	54	273	20	60	144	79	44	174	33
Hourly Exit Rate	24	263	29	54	273	20	60	144	79	44	174	33
Input Volume	23	275	29	60	285	19	53	150	77	44	175	35
% of Volume	104	96	100	90	96	105	113	96	103	100	99	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.4
Total Delay (hr)	5.2
Total Del/Veh (s)	15.4
Stop Delay (hr)	2.8
Stop Del/Veh (s)	8.3
Total Stops	1198
Stop/Veh	0.99
Travel Dist (mi)	385.3
Travel Time (hr)	14.9
Vehicles Entered	1200
Vehicles Exited	1197
Hourly Exit Rate	1197
Input Volume	1225
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	3.9	0.4	3.8	0.0	0.0	0.1
Total Delay (hr)	0.1	1.5	0.0	0.6	1.1	0.1	0.1	0.7	0.1	0.3	0.7	0.0
Total Del/Veh (s)	27.7	15.6	7.7	27.9	12.9	4.4	24.1	16.2	5.3	21.0	12.7	3.5
Stop Delay (hr)	0.1	0.7	0.0	0.4	0.4	0.0	0.1	0.4	0.1	0.2	0.4	0.0
Stop Del/Veh (s)	22.0	6.9	3.4	21.3	5.2	2.3	21.5	9.4	4.3	18.9	7.2	2.8
Total Stops	18	170	10	68	129	30	15	98	42	40	102	18
Stop/Veh	0.95	0.48	0.56	0.92	0.42	0.45	1.00	0.60	0.70	0.89	0.52	0.53
Travel Dist (mi)	9.3	173.5	8.8	35.3	144.8	31.9	1.4	14.9	5.5	13.0	57.4	10.0
Travel Time (hr)	0.4	5.6	0.3	1.5	4.8	1.0	0.2	1.0	0.4	0.6	1.9	0.3
Vehicles Entered	18	350	18	73	301	66	15	162	59	44	194	34
Vehicles Exited	19	349	18	72	300	65	15	161	59	44	194	34
Hourly Exit Rate	19	349	18	72	300	65	15	161	59	44	194	34
Input Volume	20	358	18	72	315	67	14	159	58	40	193	35
% of Volume	95	97	100	100	95	97	107	101	102	110	101	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	5.4
Total Del/Veh (s)	14.3
Stop Delay (hr)	3.0
Stop Del/Veh (s)	7.9
Total Stops	740
Stop/Veh	0.55
Travel Dist (mi)	505.7
Travel Time (hr)	17.9
Vehicles Entered	1334
Vehicles Exited	1330
Hourly Exit Rate	1330
Input Volume	1349
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.4	0.5	1.3	0.1	1.3
Total Delay (hr)	0.4	2.6	0.1	0.7	2.2	0.1	0.3	1.3	0.1	0.8	0.9	0.1
Total Del/Veh (s)	35.4	24.1	16.0	35.2	16.2	7.0	31.0	21.1	13.1	32.0	16.1	3.8
Stop Delay (hr)	0.3	1.3	0.0	0.5	1.1	0.0	0.3	0.9	0.1	0.7	0.7	0.0
Stop Del/Veh (s)	27.8	12.2	9.8	26.9	8.2	4.2	27.3	14.2	9.9	29.1	12.2	2.8
Total Stops	41	222	12	59	186	24	34	144	28	84	118	39
Stop/Veh	0.91	0.57	0.67	0.88	0.38	0.57	0.94	0.64	0.70	0.91	0.59	0.63
Travel Dist (mi)	21.8	187.0	8.8	33.0	203.5	20.9	5.1	32.2	5.7	8.0	17.7	5.4
Travel Time (hr)	1.0	6.5	0.3	1.6	7.4	0.7	0.5	2.1	0.3	1.1	1.4	0.3
Vehicles Entered	44	383	18	65	479	42	35	221	39	91	199	62
Vehicles Exited	44	380	18	65	479	42	35	222	39	90	199	62
Hourly Exit Rate	44	380	18	65	479	42	35	222	39	90	199	62
Input Volume	47	383	19	63	484	38	37	221	38	87	201	63
% of Volume	94	99	95	103	99	111	95	100	103	103	99	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	9.6
Total Del/Veh (s)	20.3
Stop Delay (hr)	6.1
Stop Del/Veh (s)	12.9
Total Stops	991
Stop/Veh	0.58
Travel Dist (mi)	549.1
Travel Time (hr)	23.3
Vehicles Entered	1678
Vehicles Exited	1675
Hourly Exit Rate	1675
Input Volume	1681
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

18: State St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	2.7	0.2	0.2	3.1	0.2	0.2	0.0	0.0	0.0
Total Delay (hr)	0.7	3.0	0.3	1.0	3.2	0.5	0.6	3.2	0.4	2.0	3.3	0.3
Total Del/Veh (s)	45.4	26.9	20.1	40.4	24.5	13.3	43.0	24.0	13.7	43.7	21.8	17.0
Stop Delay (hr)	0.6	1.9	0.2	0.9	2.3	0.4	0.5	2.3	0.3	1.6	1.9	0.2
Stop Del/Veh (s)	38.5	17.2	13.8	35.8	18.0	10.2	38.5	17.5	10.8	34.5	12.2	10.3
Total Stops	55	240	32	79	298	90	50	305	67	153	275	42
Stop/Veh	0.95	0.60	0.67	0.91	0.63	0.65	0.98	0.63	0.69	0.91	0.50	0.58
Travel Dist (mi)	28.7	192.1	23.6	24.0	130.2	38.2	11.2	108.5	21.7	82.1	264.7	36.1
Travel Time (hr)	1.4	7.1	0.8	1.7	6.5	1.6	1.0	6.0	1.0	4.1	9.4	1.3
Vehicles Entered	57	397	47	86	465	137	49	477	96	164	546	72
Vehicles Exited	56	395	47	86	464	137	50	477	96	164	544	72
Hourly Exit Rate	56	395	47	86	464	137	50	477	96	164	544	72
Input Volume	60	395	47	91	462	137	51	478	96	168	542	72
% of Volume	93	100	100	95	100	100	98	100	100	98	100	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: State St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.2
Total Delay (hr)	18.6
Total Del/Veh (s)	25.5
Stop Delay (hr)	13.2
Stop Del/Veh (s)	18.1
Total Stops	1686
Stop/Veh	0.64
Travel Dist (mi)	961.0
Travel Time (hr)	41.9
Vehicles Entered	2593
Vehicles Exited	2588
Hourly Exit Rate	2588
Input Volume	2599
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

19: Cawston Ave & Eaton Ave Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.5	2.4	0.0	0.0	0.6	0.0	0.5
Total Delay (hr)	0.1	0.3	0.9	0.1	0.4	1.0	2.9
Total Del/Veh (s)	6.5	5.1	8.6	6.6	9.1	9.2	8.1
Stop Delay (hr)	0.1	0.2	0.3	0.0	0.2	0.3	1.2
Stop Del/Veh (s)	3.5	3.3	3.0	3.6	4.2	3.1	3.3
Total Stops	57	230	315	43	163	388	1196
Stop/Veh	0.98	0.99	0.80	1.00	0.99	0.98	0.93
Travel Dist (mi)	19.1	76.5	87.3	10.6	74.7	178.8	446.9
Travel Time (hr)	0.6	2.7	3.6	0.4	2.8	6.4	16.4
Vehicles Entered	57	229	389	43	163	389	1270
Vehicles Exited	57	230	389	43	163	387	1269
Hourly Exit Rate	57	230	389	43	163	387	1269
Input Volume	58	234	379	42	164	397	1274
% of Volume	98	98	103	102	99	97	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

20: Cawston Ave & Coriander Dr/Fruitvale Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.1	0.1	0.4	3.2	2.7	0.1	0.1	0.0	0.0	0.0	0.4
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.7	0.0	0.2	0.9	0.0	2.1
Total Del/Veh (s)	5.4	2.8	3.0	5.2	3.4	5.0	7.9	3.5	8.1	9.8	8.8	7.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.1	0.3	0.0	0.8
Stop Del/Veh (s)	3.8	1.5	2.9	3.0	2.7	2.4	2.9	2.6	3.2	2.8	3.9	2.9
Total Stops	1	1	6	29	112	2	319	34	102	340	1	947
Stop/Veh	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	0.99	0.99	1.00	0.99
Travel Dist (mi)	0.2	0.1	0.7	6.9	26.5	0.5	77.4	8.2	25.6	85.3	0.4	231.6
Travel Time (hr)	0.0	0.0	0.0	0.3	1.1	0.0	2.9	0.3	1.0	3.4	0.0	9.1
Vehicles Entered	1	1	6	29	112	2	319	34	103	341	1	949
Vehicles Exited	1	1	6	29	112	2	319	34	102	339	1	946
Hourly Exit Rate	1	1	6	29	112	2	319	34	102	339	1	946
Input Volume	2	1	5	29	105	2	314	33	106	349	1	947
% of Volume	50	100	120	100	107	100	102	103	96	97	100	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	3.1
Denied Del/Veh (s)	0.9
Total Delay (hr)	178.3
Total Del/Veh (s)	47.0
Stop Delay (hr)	101.4
Stop Del/Veh (s)	26.7
Total Stops	21759
Stop/Veh	1.59
Travel Dist (mi)	14971.5
Travel Time (hr)	531.3
Vehicles Entered	13201
Vehicles Exited	13152
Hourly Exit Rate	13152
Input Volume	48784
% of Volume	27
Denied Entry Before	1
Denied Entry After	0

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	216	242	158	159	45	43	68	553	690	343	86	138
Average Queue (ft)	141	167	72	64	15	11	23	214	328	288	36	52
95th Queue (ft)	212	228	131	123	34	33	54	547	767	400	75	102
Link Distance (ft)			1976	1976				2634	2634			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	400	400			180	375	375			143	400	400
Storage Blk Time (%)				0				0	3	48		
Queuing Penalty (veh)				0				0	18	91		

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	364	362	55	231	264	178	172	129
Average Queue (ft)	229	216	14	147	168	96	86	53
95th Queue (ft)	335	331	35	217	234	158	147	104
Link Distance (ft)	873	873	873			2486	2486	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)				400	400			250
Storage Blk Time (%)	0							
Queuing Penalty (veh)	0							

Intersection: 2: Sanderson Ave & Ramona Blvd

Movement	NB	NB	NB	SB	SB	SB	NW	NW
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	163	131	39	107	103	110	105	92
Average Queue (ft)	82	47	10	53	18	34	38	37
95th Queue (ft)	138	100	32	96	64	85	79	72
Link Distance (ft)	969	969			873	873	2330	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			120	170				50
Storage Blk Time (%)		0					8	2
Queuing Penalty (veh)		0					10	2

Intersection: 3: Cawston Ave & Cottonwood Ave

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	46	63	53
Average Queue (ft)	11	27	28
95th Queue (ft)	35	51	47
Link Distance (ft)		696	696
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	195		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	R	L	L	T
Maximum Queue (ft)	71	73	108	105	50	45	82	146	95	68	37	175
Average Queue (ft)	29	31	55	46	18	9	34	66	34	22	3	92
95th Queue (ft)	62	59	91	87	39	32	68	118	73	51	21	153
Link Distance (ft)			507	507				1294	1294			2541
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300	300			205	320	320			300	300	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	R
Maximum Queue (ft)	175	41	31	80	173	143	43
Average Queue (ft)	99	12	2	31	94	55	18
95th Queue (ft)	162	32	16	65	155	112	40
Link Distance (ft)	2541				915	915	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		210	290	290			200
Storage Blk Time (%)	0						
Queuing Penalty (veh)	0						

Intersection: 5: 7th St & Karpick St

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	3	62
Average Queue (ft)	0	22
95th Queue (ft)	3	50
Link Distance (ft)		135
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Cawston Ave & 7th St

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	L	T	TR	L	TR	LT	R
Maximum Queue (ft)	55	84	40	59	31	68	77	20
Average Queue (ft)	24	39	17	24	12	36	33	8
95th Queue (ft)	42	67	40	48	36	58	59	22
Link Distance (ft)	571		1098	1098		2608	1226	1226
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		160			85			
Storage Blk Time (%)						0		
Queuing Penalty (veh)						0		

Intersection: 7: Sanderson Ave & 7th St

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	59	81	88	90	62	64	150	180	74	113	136	31
Average Queue (ft)	18	30	41	42	23	19	78	100	22	52	66	8
95th Queue (ft)	43	63	78	76	50	50	136	161	56	100	117	23
Link Distance (ft)		1368		646			2568	2568		2541	2541	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	53		145		600	300			360			360
Storage Blk Time (%)	0	1										
Queuing Penalty (veh)	0	1										

Intersection: 8: Kirby St & 7th St

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	LT	R	LT	R
Maximum Queue (ft)	100	56	50	77	65	50	77	31
Average Queue (ft)	45	14	24	42	32	17	40	12
95th Queue (ft)	79	40	41	67	54	34	63	35
Link Distance (ft)	1855			2533	2574		620	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		110	150			280		70
Storage Blk Time (%)	0						0	
Queuing Penalty (veh)	0						0	

Intersection: 9: Lyon Ave & 7th St

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	LTR	LT	R	L	T	R
Maximum Queue (ft)	27	123	214	116	62	47	116	33
Average Queue (ft)	9	49	89	57	26	21	53	12
95th Queue (ft)	27	93	169	94	51	46	88	34
Link Distance (ft)		2533	2566	1006			429	429
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150				105	150		
Storage Blk Time (%)		0		0			0	
Queuing Penalty (veh)		0		0			0	

Intersection: 10: Palm Ave & 7th St

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	56	128	145	201	141	128
Average Queue (ft)	27	62	35	91	66	63
95th Queue (ft)	50	100	86	160	111	106
Link Distance (ft)		2566		601	2000	350
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100		75			
Storage Blk Time (%)		1	0	12		
Queuing Penalty (veh)		1	0	8		

Intersection: 11: State St & 7th St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	TR
Maximum Queue (ft)	142	187	58	130	226	82	101	186	189	151	255	206
Average Queue (ft)	43	95	22	40	106	30	28	74	91	47	125	75
95th Queue (ft)	93	164	49	89	190	61	72	153	165	101	214	159
Link Distance (ft)		1929			721	721		2560	2560		491	491
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95		215	60			85			105		
Storage Blk Time (%)	1	8		2	20		1	5		0	10	
Queuing Penalty (veh)	3	10		6	12		2	2		1	7	

Intersection: 12: Warren Ave & Esplanade Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	58	89	214	145
Average Queue (ft)	28	47	94	68
95th Queue (ft)	49	75	168	115
Link Distance (ft)	671	5386	1168	1198
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Cawston Ave & Esplanade Ave

Movement	EB	WB	NB	NB	NB	SB
Directions Served	LTR	LTR	L	T	R	LTR
Maximum Queue (ft)	110	139	54	65	65	114
Average Queue (ft)	55	59	26	33	31	62
95th Queue (ft)	89	105	49	54	53	93
Link Distance (ft)	5386	2030		2597	2597	2608
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			150			
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	T
Maximum Queue (ft)	101	161	71	112	176	56	80	203	209	74	140	146
Average Queue (ft)	39	65	11	56	89	17	30	112	90	26	64	75
95th Queue (ft)	77	128	44	100	152	45	65	179	168	59	121	127
Link Distance (ft)		453			1649	1649		852	852		2568	2568
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	130		55	155			225			245		
Storage Blk Time (%)	0	12	0		1			0				
Queuing Penalty (veh)	0	10	0		1			0				

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	41
Average Queue (ft)	11
95th Queue (ft)	30
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	200
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: Kirby St & Esplanade Ave

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	R	LT	R
Maximum Queue (ft)	168	198	109	67	110	60
Average Queue (ft)	68	92	53	31	55	23
95th Queue (ft)	126	166	87	52	88	51
Link Distance (ft)	834	2574	903		2574	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				132		100
Storage Blk Time (%)			0		1	
Queuing Penalty (veh)			0		0	

Intersection: 16: Lyon Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	48	162	42	110	170	62	45	109	57	68	102	35
Average Queue (ft)	14	76	6	41	71	14	11	47	16	25	50	9
95th Queue (ft)	38	134	31	80	142	41	33	87	42	54	91	27
Link Distance (ft)		2574			2526	2526		476			1520	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	122		122	140			120		120	118		118
Storage Blk Time (%)		1		0	1			0			0	
Queuing Penalty (veh)		0		0	1			0			0	

Intersection: 17: Palm Ave & Esplanade Ave

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB		
Directions Served	L	TR	L	T	R	L	TR	L	T	R		
Maximum Queue (ft)	90	255	123	285	60	84	210	108	150	64		
Average Queue (ft)	27	121	47	120	17	26	97	57	75	24		
95th Queue (ft)	66	215	101	226	47	62	171	97	130	53		
Link Distance (ft)		2526		2572	2572		765		508			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	160		250			75		150		150		
Storage Blk Time (%)		4		1		0	16	0	0			
Queuing Penalty (veh)		2		1		0	6	0	1			

Intersection: 18: State St & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	118	170	180	175	222	206	146	220	207	149	251	242
Average Queue (ft)	44	84	102	64	125	114	49	129	109	100	108	120
95th Queue (ft)	93	148	163	124	194	190	111	199	185	158	206	203
Link Distance (ft)		2572	2572		1477	1477		1199	1199		2560	2560
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100			140			105			100		
Storage Blk Time (%)	1	6		0	6		0	15		16	8	
Queuing Penalty (veh)	3	4		1	6		1	7		41	13	

Intersection: 19: Cawston Ave & Eaton Ave

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	56	89	72	69	78	67	75
Average Queue (ft)	26	49	40	42	44	41	43
95th Queue (ft)	49	78	61	64	69	63	66
Link Distance (ft)	1756		1246	1246		2597	2597
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		50			105		
Storage Blk Time (%)	0	3			0		
Queuing Penalty (veh)	1	2			0		

Intersection: 20: Cawston Ave & Coriander Dr/Fruitvale Ave

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	30	50	68	27	74	64	57	50	66
Average Queue (ft)	7	20	34	2	41	38	28	27	29
95th Queue (ft)	28	47	54	14	62	58	45	41	51
Link Distance (ft)	670	1254			1280	1280		1246	1246
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			50	150			58		
Storage Blk Time (%)		0	1				0	0	
Queuing Penalty (veh)		0	0				0	0	

Network Summary

Network wide Queuing Penalty: 274

Intersection: 1: Sanderson Ave & Ramona Expy

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	22.5	31.5	7.5	30.5	8.5	45.5	20.5	17.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	2.7	-9.4	6.6	-5.8	8.0	5.9	0.2	-2.8
g/C Ratio	0.38	-1.35	0.66	-0.84	1.11	0.84	0.03	-0.41
Cycles Skipped (%)	0	0	30	0	3	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	97	76	24	73	50	79	73	73
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 7.0
Number of Complete Cycles : 32

Intersection: 2: Sanderson Ave & Ramona Blvd

Phase	1	2	3	6	8
Movement(s) Served	SBL	NBT	NWL	SBT	NWR
Maximum Green (s)	18.5	55.5	22.5	78.5	22.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	Min	None
Avg. Green (s)	-6.3	-0.6	-7.8	-1.2	-3.3
g/C Ratio	-1.03	-0.15	-1.18	-0.27	-0.72
Cycles Skipped (%)	39	0	45	19	19
Cycles @ Minimum (%)	0	0	0	0	16
Cycles Maxed Out (%)	0	3	0	7	0
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 3.7
Number of Complete Cycles : 75

Intersection: 4: Sanderson Ave & Cottonwood Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	8.5	40.5	11.5	31.5	8.5	40.5	12.5	30.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	6.7	0.9	8.2	3.7	6.6	2.3	-6.4	2.7
g/C Ratio	0.80	0.19	1.26	0.81	0.60	0.53	-1.10	0.56
Cycles Skipped (%)	47	0	33	3	60	0	24	7
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	7	2	7	2	4	7	7	2
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.4
Number of Complete Cycles : 57

Intersection: 11: State St & 7th St

Phase	1	2	4	5	6	8
Movement(s) Served	SBL	NBT	EBTL	NBL	SBT	WBTL
Maximum Green (s)	14.5	41.5	40.5	9.5	46.5	40.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	Min	None
Avg. Green (s)	7.9	1.2	-0.8	6.7	4.6	-0.8
g/C Ratio	1.14	0.25	-0.17	0.66	0.94	-0.17
Cycles Skipped (%)	29	0	0	52	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	8	6	4	4	6
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.9
Number of Complete Cycles : 52

Intersection: 14: Sanderson Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	8.5	45.5	14.5	23.5	10.5	43.5	11.5	26.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	6.9	3.7	-6.1	1.3	7.3	3.2	8.2	3.8
g/C Ratio	0.66	0.77	-0.93	0.23	0.75	0.65	1.06	0.73
Cycles Skipped (%)	54	0	26	15	50	0	37	5
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	7	5	9	11	2	9	6	5
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 4.9
Number of Complete Cycles : 54

Intersection: 16: Lyon Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	5.0	18.0	5.0	18.0	5.0	18.0	5.0	18.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	6.6	2.3	5.1	-0.7	6.1	-3.6	5.0	2.6
g/C Ratio	0.77	0.63	0.82	-0.22	0.29	-1.08	0.29	0.81
Cycles Skipped (%)	63	14	49	0	85	6	81	2
Cycles @ Minimum (%)	29	1	51	1	13	2	19	1
Cycles Maxed Out (%)	37	9	51	35	15	15	19	51
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 3.2
Number of Complete Cycles : 86

Intersection: 17: Palm Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	6.5	45.5	9.5	30.5	6.5	45.5	5.5	34.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	6.3	4.9	8.2	-2.0	6.1	-2.8	8.7	-0.6
g/C Ratio	1.08	1.15	1.12	-0.44	0.61	-0.66	0.97	-0.14
Cycles Skipped (%)	27	0	42	5	58	0	53	8
Cycles @ Minimum (%)	0	2	0	0	0	0	0	0
Cycles Maxed Out (%)	44	0	13	15	14	0	44	10
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 4.3
Number of Complete Cycles : 59

Intersection: 18: State St & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	21.5	31.1	13.5	25.9	9.5	43.1	9.5	29.9
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-3.9	-5.9	9.5	7.5	7.3	2.7	7.6	-5.0
g/C Ratio	-0.64	-1.03	1.34	1.31	0.82	0.48	0.90	-0.87
Cycles Skipped (%)	5	0	19	0	36	0	32	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	7	26	7	36	14	21	17	36
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 5.7
Number of Complete Cycles : 42

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	3:55	3:55	3:55	3:55	3:55	3:55	3:55
End Time	5:00	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	65	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	14718	14625	14558	14713	14505	14621	14645
Vehs Exited	14659	14533	14525	14610	14448	14525	14585
Starting Vehs	562	537	542	525	559	519	561
Ending Vehs	621	629	575	628	616	615	621
Denied Entry Before	3	3	3	4	4	2	1
Denied Entry After	2	5	1	5	6	3	9
Travel Distance (mi)	16912	16944	16971	17160	16874	16734	16962
Travel Time (hr)	620.1	616.2	623.8	631.3	618.6	609.0	616.1
Total Delay (hr)	229.7	223.6	232.0	235.5	227.8	221.7	224.9
Total Stops	23599	23436	23694	24023	23866	23155	23529
Fuel Used (gal)	667.1	665.4	668.1	675.8	662.0	657.1	665.4

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	3:55	3:55	3:55	3:55
End Time	5:00	5:00	5:00	5:00
Total Time (min)	65	65	65	65
Time Recorded (min)	60	60	60	60
# of Intervals	2	2	2	2
# of Recorded Intervals	1	1	1	1
Vehs Entered	14866	14575	14464	14632
Vehs Exited	14745	14527	14440	14560
Starting Vehs	529	538	561	535
Ending Vehs	650	586	585	598
Denied Entry Before	3	5	4	0
Denied Entry After	2	2	4	2
Travel Distance (mi)	17171	17073	16644	16945
Travel Time (hr)	632.3	633.0	598.4	619.9
Total Delay (hr)	235.5	239.1	213.9	228.4
Total Stops	23915	24027	23015	23627
Fuel Used (gal)	676.6	672.8	650.7	666.1

Interval #0 Information Seeding

Start Time	3:55
End Time	4:00
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	14718	14625	14558	14713	14505	14621	14645
Vehs Exited	14659	14533	14525	14610	14448	14525	14585
Starting Vehs	562	537	542	525	559	519	561
Ending Vehs	621	629	575	628	616	615	621
Denied Entry Before	3	3	3	4	4	2	1
Denied Entry After	2	5	1	5	6	3	9
Travel Distance (mi)	16912	16944	16971	17160	16874	16734	16962
Travel Time (hr)	620.1	616.2	623.8	631.3	618.6	609.0	616.1
Total Delay (hr)	229.7	223.6	232.0	235.5	227.8	221.7	224.9
Total Stops	23599	23436	23694	24023	23866	23155	23529
Fuel Used (gal)	667.1	665.4	668.1	675.8	662.0	657.1	665.4

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	14866	14575	14464	14632
Vehs Exited	14745	14527	14440	14560
Starting Vehs	529	538	561	535
Ending Vehs	650	586	585	598
Denied Entry Before	3	5	4	0
Denied Entry After	2	2	4	2
Travel Distance (mi)	17171	17073	16644	16945
Travel Time (hr)	632.3	633.0	598.4	619.9
Total Delay (hr)	235.5	239.1	213.9	228.4
Total Stops	23915	24027	23015	23627
Fuel Used (gal)	676.6	672.8	650.7	666.1

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.3	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.4	0.4	0.2
Denied Del/Veh (s)	2.4	0.4	2.3	2.2	0.3	2.2	0.0	0.0	0.0	2.1	1.3	2.0
Total Delay (hr)	5.8	5.6	0.6	0.8	5.3	3.4	1.4	6.6	0.1	10.5	10.3	2.1
Total Del/Veh (s)	49.5	33.2	15.3	52.8	49.8	24.5	50.5	37.6	10.0	54.0	34.3	17.0
Stop Delay (hr)	4.8	3.6	0.5	0.7	3.9	2.1	1.2	4.5	0.0	7.2	4.7	0.8
Stop Del/Veh (s)	41.2	21.1	11.6	48.6	36.7	15.2	45.2	25.9	8.6	37.3	15.5	6.7
Total Stops	378	375	84	50	320	314	91	425	14	605	594	246
Stop/Veh	0.90	0.62	0.59	0.91	0.83	0.63	0.92	0.67	0.74	0.87	0.55	0.55
Travel Dist (mi)	154.5	224.1	52.4	26.5	188.0	247.6	17.3	109.8	3.4	322.4	504.4	209.0
Travel Time (hr)	9.3	9.2	1.8	1.4	8.3	8.8	1.9	8.8	0.1	17.5	19.2	6.9
Vehicles Entered	411	595	139	53	375	494	97	625	19	683	1067	443
Vehicles Exited	416	599	140	53	376	490	97	624	18	677	1064	442
Hourly Exit Rate	416	599	140	53	376	490	97	624	18	677	1064	442
Input Volume	418	592	137	56	378	501	100	622	19	691	1058	432
% of Volume	100	101	102	95	99	98	97	100	95	98	101	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	1	0	0	0	1	0	0

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	All
Denied Delay (hr)	1.8
Denied Del/Veh (s)	1.3
Total Delay (hr)	52.5
Total Del/Veh (s)	37.1
Stop Delay (hr)	34.2
Stop Del/Veh (s)	24.2
Total Stops	3496
Stop/Veh	0.69
Travel Dist (mi)	2059.3
Travel Time (hr)	93.1
Vehicles Entered	5001
Vehicles Exited	4996
Hourly Exit Rate	4996
Input Volume	5004
% of Volume	100
Denied Entry Before	0
Denied Entry After	2

2: Sanderson Ave & Ramona Blvd Performance by movement

Movement	NBT	NBR	SBL	SBT	NWL	NWR	All
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.1	0.2
Denied Del/Veh (s)	0.2	3.1	0.2	0.0	0.3	2.1	0.3
Total Delay (hr)	1.8	0.1	1.7	2.9	0.3	0.1	6.9
Total Del/Veh (s)	9.8	3.3	27.9	9.5	25.5	5.2	11.4
Stop Delay (hr)	0.7	0.0	1.2	0.2	0.3	0.1	2.5
Stop Del/Veh (s)	3.7	2.3	19.2	0.5	23.3	4.1	4.1
Total Stops	204	24	178	83	41	85	615
Stop/Veh	0.31	0.36	0.79	0.08	0.93	0.88	0.28
Travel Dist (mi)	118.7	12.0	40.5	199.4	19.4	42.5	432.4
Travel Time (hr)	4.0	0.4	2.9	6.9	0.8	1.3	16.3
Vehicles Entered	646	65	221	1093	44	96	2165
Vehicles Exited	645	65	222	1099	44	96	2171
Hourly Exit Rate	645	65	222	1099	44	96	2171
Input Volume	645	60	226	1084	49	96	2160
% of Volume	100	108	98	101	90	100	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

3: Cawston Ave & Cottonwood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.3
Total Del/Veh (s)	0.5	0.1	2.7	1.4	8.8	0.1	2.6	1.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1
Stop Del/Veh (s)	0.0	0.0	0.8	0.0	7.3	0.0	2.4	0.7
Total Stops	0	0	26	0	34	0	76	136
Stop/Veh	0.00	0.00	0.26	0.00	1.00	0.00	1.00	0.18
Travel Dist (mi)	39.1	8.6	37.9	73.1	4.8	3.1	10.8	177.3
Travel Time (hr)	0.8	0.2	1.0	1.6	0.2	0.1	0.4	4.3
Vehicles Entered	249	55	99	201	34	40	76	754
Vehicles Exited	249	55	99	200	34	40	76	753
Hourly Exit Rate	249	55	99	200	34	40	76	753
Input Volume	254	56	101	196	38	40	74	759
% of Volume	98	98	98	102	89	100	103	99
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.2	3.5	0.4	0.2	0.0	0.0	0.0	2.6	0.3	2.6
Total Delay (hr)	0.7	1.2	0.1	0.9	1.1	0.2	0.4	2.6	0.3	1.4	3.4	0.1
Total Del/Veh (s)	30.0	22.7	6.8	31.6	26.2	5.5	36.2	18.0	8.7	35.6	13.8	3.6
Stop Delay (hr)	0.7	1.0	0.1	0.8	0.8	0.1	0.3	1.4	0.1	1.2	1.8	0.1
Stop Del/Veh (s)	28.3	18.0	6.8	28.8	19.5	4.9	31.3	9.4	3.4	31.5	7.4	1.6
Total Stops	72	135	51	84	108	77	35	252	58	127	381	54
Stop/Veh	0.87	0.69	0.76	0.87	0.72	0.73	0.95	0.48	0.53	0.92	0.43	0.47
Travel Dist (mi)	8.6	20.4	7.1	23.7	36.8	26.0	18.1	249.8	54.6	23.7	153.3	19.9
Travel Time (hr)	1.0	1.7	0.4	1.6	1.9	0.9	0.8	8.3	1.7	2.1	6.9	0.8
Vehicles Entered	82	195	67	96	149	105	36	517	110	137	881	115
Vehicles Exited	82	194	67	96	149	105	36	514	109	136	881	115
Hourly Exit Rate	82	194	67	96	149	105	36	514	109	136	881	115
Input Volume	84	199	69	97	153	100	35	522	107	137	876	109
% of Volume	98	97	97	99	97	105	103	98	102	99	101	106
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	0.6
Total Delay (hr)	12.3
Total Del/Veh (s)	17.7
Stop Delay (hr)	8.4
Stop Del/Veh (s)	12.0
Total Stops	1434
Stop/Veh	0.57
Travel Dist (mi)	641.8
Travel Time (hr)	28.1
Vehicles Entered	2490
Vehicles Exited	2484
Hourly Exit Rate	2484
Input Volume	2488
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

5: 7th St & Karpick St Performance by movement

Movement	EBT	WBT	WBR	SBL	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.1	2.3	2.2	4.1	2.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.4	0.4	2.8	0.7
Total Stops	0	0	0	32	32
Stop/Veh	0.00	0.00	0.00	1.00	0.17
Travel Dist (mi)	4.7	7.7	5.3	0.8	18.5
Travel Time (hr)	0.1	0.3	0.2	0.1	0.7
Vehicles Entered	49	64	43	32	188
Vehicles Exited	49	64	43	32	188
Hourly Exit Rate	49	64	43	32	188
Input Volume	49	66	43	31	189
% of Volume	100	97	100	103	99
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.1	0.0	0.3	0.0
Total Del/Veh (s)	4.5	7.7	2.8	5.5	4.6	2.3	8.3	10.4	6.4	6.1	8.3	1.7
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0
Stop Del/Veh (s)	3.0	3.4	2.9	3.3	1.9	2.2	3.4	3.4	3.1	3.7	3.4	2.3
Total Stops	10	38	34	85	60	33	36	106	77	29	135	12
Stop/Veh	0.91	1.00	0.97	0.99	0.60	0.97	1.00	0.98	0.99	1.00	0.99	1.00
Travel Dist (mi)	1.3	4.5	4.1	18.7	17.7	7.3	18.1	53.0	38.7	6.7	30.6	2.7
Travel Time (hr)	0.1	0.2	0.2	0.7	0.6	0.3	0.6	1.9	1.4	0.3	1.2	0.1
Vehicles Entered	11	37	34	85	100	33	36	106	77	29	135	12
Vehicles Exited	10	38	34	85	100	33	36	106	77	29	135	12
Hourly Exit Rate	10	38	34	85	100	33	36	106	77	29	135	12
Input Volume	10	40	31	87	94	36	41	106	76	32	137	12
% of Volume	100	95	110	98	106	92	88	100	101	91	99	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	1.3
Total Del/Veh (s)	6.7
Stop Delay (hr)	0.6
Stop Del/Veh (s)	3.1
Total Stops	655
Stop/Veh	0.94
Travel Dist (mi)	203.4
Travel Time (hr)	7.5
Vehicles Entered	695
Vehicles Exited	695
Hourly Exit Rate	695
Input Volume	702
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

7: Sanderson Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.3	0.1	0.5	0.3	0.0	0.5	3.0	0.4	0.8	4.5	0.1
Total Del/Veh (s)	11.0	9.2	5.4	13.9	8.9	3.0	37.5	16.7	14.4	34.2	17.2	7.7
Stop Delay (hr)	0.0	0.1	0.0	0.4	0.2	0.0	0.4	1.0	0.2	0.6	1.5	0.0
Stop Del/Veh (s)	9.1	4.9	4.8	11.6	4.7	2.9	30.1	5.6	5.6	26.3	5.5	2.3
Total Stops	12	46	18	82	61	24	44	291	65	72	425	18
Stop/Veh	0.67	0.42	0.50	0.69	0.44	0.51	0.92	0.46	0.60	0.90	0.45	0.53
Travel Dist (mi)	4.5	27.4	9.3	15.4	18.2	6.1	23.6	308.3	53.5	39.7	465.6	16.5
Travel Time (hr)	0.2	0.9	0.3	0.9	0.7	0.2	1.0	9.4	1.7	1.7	14.3	0.5
Vehicles Entered	18	108	36	117	139	47	47	629	107	79	931	33
Vehicles Exited	18	108	36	117	139	47	47	627	106	78	932	33
Hourly Exit Rate	18	108	36	117	139	47	47	627	106	78	932	33
Input Volume	20	110	37	121	137	45	47	628	111	81	928	33
% of Volume	90	98	97	97	101	104	100	100	95	96	100	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Sanderson Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	10.5
Total Del/Veh (s)	16.3
Stop Delay (hr)	4.5
Stop Del/Veh (s)	6.9
Total Stops	1158
Stop/Veh	0.50
Travel Dist (mi)	988.3
Travel Time (hr)	31.8
Vehicles Entered	2291
Vehicles Exited	2288
Hourly Exit Rate	2288
Input Volume	2298
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

8: Kirby St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	3.8
Total Delay (hr)	0.0	0.9	0.1	0.3	1.2	0.1	0.1	0.6	0.1	0.1	0.5	0.0
Total Del/Veh (s)	10.0	12.9	4.8	11.7	15.3	9.5	9.8	10.1	6.7	8.3	11.3	4.2
Stop Delay (hr)	0.0	0.4	0.0	0.1	0.4	0.0	0.0	0.2	0.1	0.0	0.2	0.0
Stop Del/Veh (s)	6.1	5.5	3.4	5.1	4.7	4.3	5.1	3.8	4.0	5.3	5.1	3.0
Total Stops	11	242	40	86	260	36	21	132	56	23	148	17
Stop/Veh	1.00	0.99	1.00	0.99	0.94	1.00	1.00	0.66	0.98	1.00	0.99	1.00
Travel Dist (mi)	3.9	87.7	14.4	42.6	132.9	17.7	10.3	83.1	28.1	2.7	17.4	2.0
Travel Time (hr)	0.1	2.8	0.4	1.3	4.2	0.6	0.3	2.7	0.9	0.1	0.9	0.1
Vehicles Entered	11	243	40	86	274	36	20	198	56	23	148	17
Vehicles Exited	11	242	40	86	273	36	21	197	56	23	148	17
Hourly Exit Rate	11	242	40	86	273	36	21	197	56	23	148	17
Input Volume	15	249	39	83	269	34	24	199	54	23	147	16
% of Volume	73	97	103	104	101	106	88	99	104	100	101	106
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

8: Kirby St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	3.8
Total Del/Veh (s)	11.7
Stop Delay (hr)	1.5
Stop Del/Veh (s)	4.7
Total Stops	1072
Stop/Veh	0.92
Travel Dist (mi)	442.7
Travel Time (hr)	14.7
Vehicles Entered	1152
Vehicles Exited	1150
Hourly Exit Rate	1150
Input Volume	1152
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

9: Lyon Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.3	0.1
Total Delay (hr)	0.0	1.5	0.1	0.4	2.7	0.2	0.2	0.8	0.1	0.1	1.0	0.0
Total Del/Veh (s)	10.8	18.0	11.7	23.5	27.3	20.4	13.1	14.5	6.2	8.7	15.6	3.6
Stop Delay (hr)	0.0	0.6	0.1	0.3	1.5	0.2	0.1	0.4	0.1	0.1	0.5	0.0
Stop Del/Veh (s)	5.3	7.7	7.5	15.7	15.6	14.2	9.9	7.6	4.3	5.6	7.7	3.7
Total Stops	7	280	24	66	342	41	42	183	48	51	232	14
Stop/Veh	0.88	0.96	0.96	0.99	0.97	0.98	1.00	0.87	1.00	0.98	0.99	1.00
Travel Dist (mi)	3.6	140.7	12.3	32.7	170.9	20.6	8.3	38.7	9.4	4.2	18.9	1.1
Travel Time (hr)	0.1	4.7	0.4	1.3	6.6	0.8	0.4	1.6	0.3	0.3	1.4	0.1
Vehicles Entered	8	288	25	66	345	41	42	208	48	52	233	14
Vehicles Exited	7	289	25	66	344	41	42	208	48	51	232	14
Hourly Exit Rate	7	289	25	66	344	41	42	208	48	51	232	14
Input Volume	9	295	22	65	333	43	43	212	47	50	228	13
% of Volume	78	98	114	102	103	95	98	98	102	102	102	108
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

9: Lyon Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	7.1
Total Del/Veh (s)	18.6
Stop Delay (hr)	3.9
Stop Del/Veh (s)	10.1
Total Stops	1330
Stop/Veh	0.96
Travel Dist (mi)	461.4
Travel Time (hr)	18.0
Vehicles Entered	1370
Vehicles Exited	1367
Hourly Exit Rate	1367
Input Volume	1360
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

10: Palm Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
Total Delay (hr)	0.1	1.3	0.1	0.2	2.1	0.1	0.1	0.4	0.1	0.1	0.3	0.0
Total Del/Veh (s)	11.6	15.3	10.4	10.5	18.8	12.7	9.5	10.0	7.2	8.2	10.8	5.2
Stop Delay (hr)	0.1	0.4	0.0	0.1	1.1	0.1	0.1	0.2	0.1	0.0	0.2	0.0
Stop Del/Veh (s)	4.8	5.1	5.0	4.8	10.3	9.4	6.3	4.9	5.1	5.6	5.0	4.2
Total Stops	43	294	26	72	389	42	31	117	55	28	111	31
Stop/Veh	0.98	0.94	1.00	1.04	0.99	1.00	0.97	0.76	1.00	1.00	1.00	1.00
Travel Dist (mi)	21.6	150.7	12.8	8.3	46.9	5.0	12.2	52.5	21.4	1.9	7.4	2.1
Travel Time (hr)	0.7	4.8	0.4	0.5	3.1	0.3	0.4	1.8	0.7	0.1	0.5	0.1
Vehicles Entered	43	309	26	69	388	42	32	151	55	28	111	31
Vehicles Exited	43	309	25	68	390	42	32	151	55	28	111	31
Hourly Exit Rate	43	309	25	68	390	42	32	151	55	28	111	31
Input Volume	43	315	25	64	380	40	31	152	52	31	110	30
% of Volume	100	98	100	106	103	105	103	99	106	90	101	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

10: Palm Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	5.0
Total Del/Veh (s)	13.9
Stop Delay (hr)	2.4
Stop Del/Veh (s)	6.8
Total Stops	1239
Stop/Veh	0.95
Travel Dist (mi)	342.6
Travel Time (hr)	13.5
Vehicles Entered	1285
Vehicles Exited	1285
Hourly Exit Rate	1285
Input Volume	1273
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

11: State St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Denied Del/Veh (s)	0.2	0.0	0.2	3.2	0.5	0.2	0.0	0.0	0.0	2.8	0.3	0.3
Total Delay (hr)	0.5	1.7	0.1	0.8	2.5	0.1	0.7	3.6	0.6	1.5	4.4	0.2
Total Del/Veh (s)	34.2	22.6	7.0	32.7	24.5	4.7	49.2	22.8	19.9	43.8	19.3	11.1
Stop Delay (hr)	0.4	1.2	0.1	0.7	1.6	0.1	0.6	2.0	0.4	1.3	2.7	0.2
Stop Del/Veh (s)	30.0	15.7	4.7	27.2	15.9	4.0	41.7	12.7	12.2	38.3	11.8	8.6
Total Stops	43	166	43	82	218	48	49	287	68	123	438	33
Stop/Veh	0.90	0.60	0.57	0.91	0.60	0.58	0.98	0.50	0.59	1.00	0.53	0.51
Travel Dist (mi)	17.4	100.1	27.4	12.1	49.5	11.2	24.6	277.5	57.2	11.5	78.0	6.1
Travel Time (hr)	0.9	4.0	0.9	1.3	3.6	0.5	1.3	10.1	2.1	2.0	6.3	0.4
Vehicles Entered	47	274	75	88	361	82	49	566	114	122	823	64
Vehicles Exited	47	272	75	89	364	82	49	560	114	122	819	65
Hourly Exit Rate	47	272	75	89	364	82	49	560	114	122	819	65
Input Volume	48	281	75	91	350	83	47	564	115	117	826	65
% of Volume	98	97	100	98	104	99	104	99	99	104	99	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

11: State St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.4
Total Delay (hr)	16.8
Total Del/Veh (s)	22.5
Stop Delay (hr)	11.3
Stop Del/Veh (s)	15.1
Total Stops	1598
Stop/Veh	0.59
Travel Dist (mi)	672.5
Travel Time (hr)	33.4
Vehicles Entered	2665
Vehicles Exited	2658
Hourly Exit Rate	2658
Input Volume	2662
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.8	0.5	0.5	0.3	0.3	0.3
Total Delay (hr)	0.0	0.1	0.0	0.4	0.2	0.1	0.0	2.9	0.5	0.1	1.2	0.1
Total Del/Veh (s)	3.8	10.1	4.9	10.5	6.5	10.0	18.8	21.8	14.8	10.5	15.0	7.5
Stop Delay (hr)	0.0	0.0	0.0	0.2	0.1	0.1	0.0	1.2	0.3	0.1	0.3	0.0
Stop Del/Veh (s)	2.9	3.9	4.0	4.4	1.3	4.5	11.2	9.0	9.0	5.1	4.1	3.5
Total Stops	11	29	1	123	33	42	5	474	122	44	289	28
Stop/Veh	1.00	1.00	1.00	0.97	0.25	1.00	1.00	0.99	0.98	0.98	1.00	1.00
Travel Dist (mi)	1.3	3.7	0.2	128.1	86.2	42.8	1.1	105.1	27.2	10.1	65.5	6.3
Travel Time (hr)	0.0	0.2	0.0	3.2	2.1	1.1	0.1	4.9	1.3	0.4	2.4	0.2
Vehicles Entered	11	29	1	126	133	41	5	476	123	44	289	28
Vehicles Exited	11	29	1	123	132	42	5	474	122	44	288	28
Hourly Exit Rate	11	29	1	123	132	42	5	474	122	44	288	28
Input Volume	11	29	1	124	131	40	5	477	126	48	282	25
% of Volume	100	100	100	99	101	105	100	99	97	92	102	112
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	5.7
Total Del/Veh (s)	15.5
Stop Delay (hr)	2.2
Stop Del/Veh (s)	6.1
Total Stops	1201
Stop/Veh	0.91
Travel Dist (mi)	477.6
Travel Time (hr)	15.8
Vehicles Entered	1306
Vehicles Exited	1299
Hourly Exit Rate	1299
Input Volume	1299
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.2	0.7	0.2	0.3	0.8	0.0	0.3	0.5	0.1	0.1	0.6	0.2
Total Del/Veh (s)	15.3	15.3	8.0	15.1	13.6	8.6	17.7	9.9	5.1	13.1	12.1	7.4
Stop Delay (hr)	0.1	0.3	0.1	0.2	0.4	0.0	0.2	0.2	0.0	0.0	0.3	0.1
Stop Del/Veh (s)	10.3	7.2	4.8	11.1	6.9	5.9	12.8	5.0	2.5	8.2	6.2	4.1
Total Stops	35	82	42	58	97	10	51	71	34	8	77	39
Stop/Veh	0.69	0.51	0.56	0.72	0.49	0.59	0.82	0.42	0.52	0.57	0.45	0.53
Travel Dist (mi)	44.3	136.8	64.0	31.4	72.5	6.8	30.6	79.4	31.7	7.1	84.7	36.6
Travel Time (hr)	1.2	3.6	1.6	1.1	2.2	0.2	1.2	2.8	1.1	0.3	3.1	1.3
Vehicles Entered	50	159	74	80	198	17	61	166	63	14	170	73
Vehicles Exited	50	158	73	78	197	17	61	167	64	14	169	72
Hourly Exit Rate	50	158	73	78	197	17	61	167	64	14	169	72
Input Volume	53	167	70	77	195	17	59	169	63	13	173	71
% of Volume	94	95	104	101	101	100	103	99	102	108	98	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	3.8
Total Del/Veh (s)	12.1
Stop Delay (hr)	2.1
Stop Del/Veh (s)	6.7
Total Stops	604
Stop/Veh	0.53
Travel Dist (mi)	625.9
Travel Time (hr)	19.7
Vehicles Entered	1125
Vehicles Exited	1120
Hourly Exit Rate	1120
Input Volume	1127
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	2.8	0.2	0.3	0.0	0.0	0.0
Total Delay (hr)	0.6	1.2	0.1	1.4	1.3	0.1	0.6	3.3	0.3	0.9	5.9	0.2
Total Del/Veh (s)	34.7	32.4	9.6	34.2	23.3	4.3	39.4	17.6	10.1	42.1	22.6	11.0
Stop Delay (hr)	0.5	1.0	0.1	1.2	1.0	0.1	0.5	2.0	0.2	0.7	2.6	0.0
Stop Del/Veh (s)	32.0	25.6	8.3	30.4	18.3	4.2	35.9	10.8	7.1	34.1	10.1	2.7
Total Stops	53	109	38	124	123	38	50	336	57	70	454	29
Stop/Veh	0.88	0.78	0.90	0.84	0.61	0.72	0.93	0.50	0.52	0.90	0.48	0.45
Travel Dist (mi)	5.7	13.3	4.0	46.9	61.1	16.9	8.7	110.0	17.7	38.5	462.5	32.0
Travel Time (hr)	0.8	1.5	0.3	2.7	2.8	0.5	0.9	5.8	0.9	1.8	15.4	1.0
Vehicles Entered	59	138	42	145	200	53	54	672	108	77	927	64
Vehicles Exited	59	137	42	145	199	52	53	672	108	76	924	64
Hourly Exit Rate	59	137	42	145	199	52	53	672	108	76	924	64
Input Volume	63	139	43	152	192	51	54	672	107	75	928	62
% of Volume	94	99	98	95	104	102	98	100	101	101	100	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	15.9
Total Del/Veh (s)	22.4
Stop Delay (hr)	10.2
Stop Del/Veh (s)	14.3
Total Stops	1481
Stop/Veh	0.58
Travel Dist (mi)	817.3
Travel Time (hr)	34.4
Vehicles Entered	2539
Vehicles Exited	2531
Hourly Exit Rate	2531
Input Volume	2538
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.2	0.0	0.0	0.0	0.5	0.5	3.5	0.0	0.0	0.4
Total Delay (hr)	0.2	2.9	0.4	0.7	3.2	0.3	0.2	0.9	0.2	0.2	1.2	0.1
Total Del/Veh (s)	28.2	31.8	25.7	33.1	35.6	31.4	14.2	15.9	6.3	16.8	18.3	9.2
Stop Delay (hr)	0.2	2.2	0.4	0.5	2.1	0.3	0.1	0.5	0.1	0.1	0.7	0.1
Stop Del/Veh (s)	24.7	23.5	24.1	25.1	23.7	24.7	10.5	9.2	4.7	11.6	10.4	5.2
Total Stops	28	327	59	75	310	38	51	208	90	34	232	39
Stop/Veh	1.00	0.99	0.98	0.99	0.97	1.00	1.00	0.99	0.99	1.00	0.98	0.98
Travel Dist (mi)	4.2	49.0	8.9	37.8	157.4	19.2	8.7	35.6	15.5	16.1	109.8	18.5
Travel Time (hr)	0.3	3.9	0.7	1.6	6.7	0.8	0.5	1.9	0.7	0.6	4.1	0.6
Vehicles Entered	28	327	59	75	314	38	51	208	91	34	232	39
Vehicles Exited	27	326	59	74	314	38	51	209	90	34	232	39
Hourly Exit Rate	27	326	59	74	314	38	51	209	90	34	232	39
Input Volume	26	324	60	78	308	36	55	215	89	38	225	38
% of Volume	104	101	98	95	102	106	93	97	101	89	103	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.4
Total Delay (hr)	10.5
Total Del/Veh (s)	25.0
Stop Delay (hr)	7.3
Stop Del/Veh (s)	17.4
Total Stops	1491
Stop/Veh	0.99
Travel Dist (mi)	480.6
Travel Time (hr)	22.6
Vehicles Entered	1496
Vehicles Exited	1493
Hourly Exit Rate	1493
Input Volume	1492
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	3.6	0.5	3.7	0.0	0.0	0.0
Total Delay (hr)	0.2	2.3	0.1	1.1	1.9	0.1	0.1	1.0	0.2	0.4	1.0	0.0
Total Del/Veh (s)	31.2	20.4	8.9	37.6	17.3	5.2	27.3	18.6	6.4	24.5	14.4	4.6
Stop Delay (hr)	0.2	1.2	0.0	0.9	0.9	0.1	0.1	0.6	0.1	0.3	0.6	0.0
Stop Del/Veh (s)	24.3	10.4	4.2	29.3	7.9	2.8	24.5	11.3	4.9	21.8	8.4	3.9
Total Stops	25	235	20	101	203	37	17	126	56	47	138	9
Stop/Veh	0.96	0.58	0.56	0.95	0.50	0.49	0.94	0.64	0.66	0.89	0.54	0.60
Travel Dist (mi)	12.9	198.6	17.4	51.3	195.5	36.9	1.6	18.1	7.8	15.9	76.4	4.4
Travel Time (hr)	0.6	6.9	0.5	2.5	7.0	1.1	0.2	1.4	0.5	0.7	2.6	0.1
Vehicles Entered	26	402	35	104	399	75	18	197	85	52	255	15
Vehicles Exited	26	400	35	104	400	74	18	197	84	52	254	14
Hourly Exit Rate	26	400	35	104	400	74	18	197	84	52	254	14
Input Volume	29	404	31	107	394	77	17	196	83	53	247	15
% of Volume	90	99	113	97	102	96	106	101	101	98	103	93
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	8.5
Total Del/Veh (s)	18.2
Stop Delay (hr)	5.0
Stop Del/Veh (s)	10.7
Total Stops	1014
Stop/Veh	0.60
Travel Dist (mi)	637.0
Travel Time (hr)	24.2
Vehicles Entered	1663
Vehicles Exited	1658
Hourly Exit Rate	1658
Input Volume	1653
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.4	0.4	1.3	0.1	1.3
Total Delay (hr)	0.4	3.8	0.2	1.2	3.2	0.2	0.5	0.9	0.4	0.7	1.0	0.1
Total Del/Veh (s)	43.3	28.7	21.7	40.1	21.6	6.7	36.0	26.0	12.3	33.4	20.3	4.5
Stop Delay (hr)	0.3	1.9	0.1	0.9	1.4	0.1	0.4	0.7	0.3	0.6	0.8	0.0
Stop Del/Veh (s)	34.4	14.5	12.6	29.6	9.8	3.0	32.1	18.9	9.3	30.7	16.2	3.5
Total Stops	30	289	26	95	252	43	44	91	87	70	116	30
Stop/Veh	0.97	0.61	0.65	0.88	0.48	0.51	0.94	0.73	0.72	0.92	0.66	0.67
Travel Dist (mi)	15.0	229.4	19.6	52.7	253.2	42.0	6.7	18.0	17.4	6.5	15.2	3.9
Travel Time (hr)	0.7	8.6	0.7	2.7	9.7	1.3	0.7	1.4	1.0	1.0	1.4	0.2
Vehicles Entered	30	467	40	105	516	83	46	124	120	75	176	45
Vehicles Exited	30	465	40	105	516	83	46	124	120	74	176	44
Hourly Exit Rate	30	465	40	105	516	83	46	124	120	74	176	44
Input Volume	30	472	38	107	517	82	46	123	118	74	173	43
% of Volume	100	99	105	98	100	101	100	101	102	100	102	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	12.5
Total Del/Veh (s)	24.2
Stop Delay (hr)	7.6
Stop Del/Veh (s)	14.8
Total Stops	1173
Stop/Veh	0.63
Travel Dist (mi)	679.7
Travel Time (hr)	29.5
Vehicles Entered	1827
Vehicles Exited	1823
Hourly Exit Rate	1823
Input Volume	1823
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

18: State St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	2.5	0.2	0.3	3.0	0.2	0.2	0.0	0.0	0.0
Total Delay (hr)	1.2	4.7	0.6	1.8	4.6	0.9	0.8	4.5	1.0	3.4	5.2	0.7
Total Del/Veh (s)	56.0	33.2	27.6	49.3	30.5	20.2	47.5	32.2	22.9	55.2	27.6	23.4
Stop Delay (hr)	1.0	3.1	0.4	1.6	3.4	0.7	0.8	3.4	0.8	2.7	2.8	0.4
Stop Del/Veh (s)	47.7	21.8	20.3	43.2	22.7	15.7	42.4	24.7	18.4	43.5	14.8	13.8
Total Stops	80	330	53	133	382	119	67	353	111	216	372	63
Stop/Veh	1.04	0.65	0.72	1.00	0.70	0.72	1.05	0.71	0.74	0.98	0.55	0.59
Travel Dist (mi)	37.9	244.9	36.3	36.5	151.3	45.7	14.3	111.6	33.6	107.6	326.3	52.2
Travel Time (hr)	2.1	9.9	1.5	2.9	8.5	2.3	1.3	7.3	2.0	6.1	12.7	2.0
Vehicles Entered	76	504	73	130	541	163	63	491	148	215	664	104
Vehicles Exited	75	500	73	130	537	163	62	491	149	216	669	105
Hourly Exit Rate	75	500	73	130	537	163	62	491	149	216	669	105
Input Volume	77	506	74	125	538	167	64	482	148	221	667	104
% of Volume	97	99	99	104	100	98	97	102	101	98	100	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: State St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.3
Total Delay (hr)	29.4
Total Del/Veh (s)	32.8
Stop Delay (hr)	21.1
Stop Del/Veh (s)	23.5
Total Stops	2279
Stop/Veh	0.71
Travel Dist (mi)	1198.1
Travel Time (hr)	58.5
Vehicles Entered	3172
Vehicles Exited	3170
Hourly Exit Rate	3170
Input Volume	3173
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

19: Cawston Ave & Eaton Ave Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.2	2.6	0.0	0.0	0.8	0.0	0.3
Total Delay (hr)	0.0	0.0	0.7	0.1	0.1	0.8	1.8
Total Del/Veh (s)	4.1	2.4	9.3	5.7	7.3	8.6	8.1
Stop Delay (hr)	0.0	0.0	0.2	0.0	0.1	0.3	0.6
Stop Del/Veh (s)	2.6	2.3	2.8	2.7	3.1	2.7	2.8
Total Stops	26	47	243	45	70	344	775
Stop/Veh	0.96	0.98	0.95	1.00	1.00	0.99	0.98
Travel Dist (mi)	8.8	15.8	61.6	11.1	30.6	152.0	280.0
Travel Time (hr)	0.3	0.5	2.5	0.4	1.1	5.3	10.1
Vehicles Entered	27	47	254	45	69	344	786
Vehicles Exited	26	47	253	45	69	344	784
Hourly Exit Rate	26	47	253	45	69	344	784
Input Volume	30	47	253	44	70	347	791
% of Volume	87	100	100	102	99	99	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

20: Cawston Ave & Coriander Dr/Fruitvale Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.2	0.3	3.3	3.0	0.1	0.1	0.6	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.6	0.1	0.1	1.0	0.0
Total Del/Veh (s)	3.9	3.2	3.0	4.8	8.3	2.7	5.2	7.6	3.4	7.6	9.6	5.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.0
Stop Del/Veh (s)	2.7	2.0	2.8	2.9	3.5	2.5	2.9	2.7	2.4	3.1	2.8	3.1
Total Stops	1	1	6	42	3	33	6	265	58	50	377	2
Stop/Veh	1.00	1.00	1.00	1.00	1.00	0.97	1.00	0.99	1.00	0.98	0.99	1.00
Travel Dist (mi)	0.1	0.1	0.7	9.8	0.7	7.9	1.5	64.2	14.0	11.6	87.8	0.5
Travel Time (hr)	0.0	0.0	0.0	0.4	0.0	0.3	0.1	2.4	0.5	0.5	3.6	0.0
Vehicles Entered	1	1	6	41	3	33	6	265	58	51	378	2
Vehicles Exited	1	1	6	42	3	33	6	265	58	50	377	2
Hourly Exit Rate	1	1	6	42	3	33	6	265	58	50	377	2
Input Volume	2	1	5	42	3	33	7	262	56	51	387	2
% of Volume	50	100	120	100	100	100	86	101	104	98	97	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

20: Cawston Ave & Coriander Dr/Fruitvale Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	1.9
Total Del/Veh (s)	7.9
Stop Delay (hr)	0.7
Stop Del/Veh (s)	2.8
Total Stops	844
Stop/Veh	0.99
Travel Dist (mi)	198.9
Travel Time (hr)	7.8
Vehicles Entered	845
Vehicles Exited	844
Hourly Exit Rate	844
Input Volume	851
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

Total Network Performance

Denied Delay (hr)	3.8
Denied Del/Veh (s)	0.9
Total Delay (hr)	224.5
Total Del/Veh (s)	53.3
Stop Delay (hr)	127.5
Stop Del/Veh (s)	30.3
Total Stops	23627
Stop/Veh	1.56
Travel Dist (mi)	16944.6
Travel Time (hr)	619.9
Vehicles Entered	14632
Vehicles Exited	14560
Hourly Exit Rate	14560
Input Volume	54088
% of Volume	27
Denied Entry Before	0
Denied Entry After	2

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	211	235	227	234	114	54	72	199	256	316	76	88
Average Queue (ft)	127	153	133	130	40	15	27	128	111	161	31	43
95th Queue (ft)	198	218	206	206	84	42	60	186	202	270	65	79
Link Distance (ft)			1976	1976				2634	2634			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	400	400			180	375	375			143	400	400
Storage Blk Time (%)				1					2	12		
Queuing Penalty (veh)				2					11	23		

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	255	245	28	322	338	799	874	242
Average Queue (ft)	155	143	6	196	213	221	215	90
95th Queue (ft)	235	222	20	287	301	552	554	197
Link Distance (ft)	873	873	873			2486	2486	
Upstream Blk Time (%)						0	0	
Queuing Penalty (veh)						0	0	
Storage Bay Dist (ft)				400	400			250
Storage Blk Time (%)				0	0		2	0
Queuing Penalty (veh)				0	0		8	1

Intersection: 2: Sanderson Ave & Ramona Blvd

Movement	NB	NB	NB	SB	SB	SB	NW	NW
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	172	128	58	201	134	145	78	75
Average Queue (ft)	81	38	16	104	26	40	26	28
95th Queue (ft)	141	90	43	178	86	105	59	55
Link Distance (ft)	969	969			873	873	2330	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			120	170				50
Storage Blk Time (%)		0		2	0		4	1
Queuing Penalty (veh)		0		9	0		4	0

Intersection: 3: Cawston Ave & Cottonwood Ave

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	56	53	56
Average Queue (ft)	17	22	30
95th Queue (ft)	44	48	49
Link Distance (ft)		697	697
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	195		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	R	L	L	T
Maximum Queue (ft)	64	72	82	88	55	63	108	136	61	78	37	141
Average Queue (ft)	20	32	42	38	21	14	43	66	24	24	4	65
95th Queue (ft)	48	62	74	73	45	43	84	117	50	55	23	120
Link Distance (ft)			513	513				1294	1294			2542
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300	300			205	320	320			300	300	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	R
Maximum Queue (ft)	156	70	113	161	231	202	53
Average Queue (ft)	79	22	17	73	129	98	25
95th Queue (ft)	137	52	63	130	198	173	47
Link Distance (ft)	2542				915	915	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		210	290	290			200
Storage Blk Time (%)					0	0	
Queuing Penalty (veh)					0	0	

Intersection: 5: 7th St & Karpick St

Movement	SB
Directions Served	LR
Maximum Queue (ft)	57
Average Queue (ft)	22
95th Queue (ft)	51
Link Distance (ft)	135
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Cawston Ave & 7th St

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	L	T	TR	L	TR	LT	R
Maximum Queue (ft)	49	59	47	58	50	89	77	20
Average Queue (ft)	22	29	22	27	22	48	37	6
95th Queue (ft)	38	50	43	49	49	75	63	20
Link Distance (ft)	571		1098	1098		2608	1226	1226
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		160			85			
Storage Blk Time (%)						0		
Queuing Penalty (veh)						0		

Intersection: 7: Sanderson Ave & 7th St

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	47	84	101	91	62	98	162	186	104	169	183	37
Average Queue (ft)	8	30	45	40	16	35	80	107	43	92	105	8
95th Queue (ft)	30	66	85	76	44	76	137	171	86	153	164	26
Link Distance (ft)		1368		646			2568	2568		2542	2542	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	53		145		600	300			360			360
Storage Blk Time (%)	0	2	0	0								
Queuing Penalty (veh)	0	0	0	0								

Intersection: 8: Kirby St & 7th St

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	LT	R	LT	R
Maximum Queue (ft)	106	48	58	82	75	43	99	31
Average Queue (ft)	50	16	28	43	36	17	46	13
95th Queue (ft)	88	36	47	70	61	34	77	36
Link Distance (ft)	1855			2533	2574		620	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		110	150			280		70
Storage Blk Time (%)	0						1	
Queuing Penalty (veh)	0						0	

Intersection: 9: Lyon Ave & 7th St

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	LTR	LT	R	L	T	R
Maximum Queue (ft)	24	105	256	138	63	58	125	40
Average Queue (ft)	4	50	109	66	27	27	63	9
95th Queue (ft)	19	89	204	109	54	53	100	31
Link Distance (ft)		2533	2566	988			429	429
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150				105	150		
Storage Blk Time (%)		0		2	0		0	
Queuing Penalty (veh)		0		1	0		0	

Intersection: 10: Palm Ave & 7th St

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	46	99	169	268	120	87
Average Queue (ft)	24	56	43	117	59	48
95th Queue (ft)	46	87	108	207	97	76
Link Distance (ft)		2566		601	2014	350
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100		75			
Storage Blk Time (%)		0	0	21		
Queuing Penalty (veh)		0	0	14		

Intersection: 11: State St & 7th St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	TR
Maximum Queue (ft)	126	234	113	140	288	77	120	221	240	174	358	310
Average Queue (ft)	37	111	31	62	147	27	37	97	120	86	178	133
95th Queue (ft)	87	190	78	127	247	57	88	190	214	164	292	246
Link Distance (ft)		1929			721	721		2560	2560		491	491
Upstream Blk Time (%)											0	
Queuing Penalty (veh)											0	
Storage Bay Dist (ft)	95		215	60			85			105		
Storage Blk Time (%)	0	14	0	7	30		1	11		5	20	
Queuing Penalty (veh)	1	17	0	25	27		3	5		20	23	

Intersection: 12: Warren Ave & Esplanade Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	57	92	275	125
Average Queue (ft)	23	49	116	62
95th Queue (ft)	47	79	211	99
Link Distance (ft)	671	5386	1168	1198
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Cawston Ave & Esplanade Ave

Movement	EB	WB	NB	NB	NB	SB
Directions Served	LTR	LTR	L	T	R	LTR
Maximum Queue (ft)	168	174	85	93	52	132
Average Queue (ft)	68	78	33	45	22	61
95th Queue (ft)	129	152	69	81	48	109
Link Distance (ft)	5386	2030		2597	2597	2608
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			150			
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	T
Maximum Queue (ft)	93	156	80	139	171	54	86	213	221	122	238	245
Average Queue (ft)	41	74	27	83	85	22	35	120	103	50	126	139
95th Queue (ft)	82	135	75	132	146	46	73	190	184	99	207	220
Link Distance (ft)		453			1649	1649		852	852		2568	2568
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	130		55	155			225			245		
Storage Blk Time (%)	0	16	0	0	1			0			0	1
Queuing Penalty (veh)	0	17	0	0	1			0			0	1

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	76
Average Queue (ft)	15
95th Queue (ft)	48
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	200
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: Kirby St & Esplanade Ave

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	R	LT	R
Maximum Queue (ft)	283	288	137	76	155	78
Average Queue (ft)	133	151	70	35	72	25
95th Queue (ft)	266	266	114	61	126	64
Link Distance (ft)	834	2574	903		2574	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				132		100
Storage Blk Time (%)			0		3	
Queuing Penalty (veh)			0		1	

Intersection: 16: Lyon Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	76	196	55	183	271	86	43	152	71	71	132	24
Average Queue (ft)	20	103	11	65	108	18	13	64	22	30	66	5
95th Queue (ft)	55	172	38	133	217	54	36	120	50	60	114	18
Link Distance (ft)		2574			2526	2526		476			1539	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	122		122	140			120		120	118		118
Storage Blk Time (%)		4		1	4			1	0		1	
Queuing Penalty (veh)		3		4	4			1	0		0	

Intersection: 17: Palm Ave & Esplanade Ave

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB		
Directions Served	L	TR	L	T	R	L	TR	L	T	R		
Maximum Queue (ft)	85	322	175	333	92	114	204	103	156	58		
Average Queue (ft)	22	163	72	163	27	31	91	50	76	22		
95th Queue (ft)	67	280	146	306	64	72	161	90	132	50		
Link Distance (ft)		2526		2572	2572		765		494			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	160		250			75		150		150		
Storage Blk Time (%)		10		2		0	15		0			
Queuing Penalty (veh)		3		2		1	7		0			

Intersection: 18: State St & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	144	224	228	191	297	272	154	258	266	150	321	301
Average Queue (ft)	69	125	139	106	171	163	65	158	151	127	171	166
95th Queue (ft)	133	201	210	190	259	248	143	239	238	173	301	279
Link Distance (ft)		2572	2572		1477	1477		1199	1199		2560	2560
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100			140			105			100		
Storage Blk Time (%)	4	18		4	17		1	23		32	14	
Queuing Penalty (veh)	10	14		10	21		2	15		102	31	

Intersection: 19: Cawston Ave & Eaton Ave

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	41	58	66	67	57	71	67
Average Queue (ft)	17	24	35	37	31	42	41
95th Queue (ft)	42	48	52	56	51	63	62
Link Distance (ft)	1756		1246	1246		2597	2597
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		50			105		
Storage Blk Time (%)	0	0					
Queuing Penalty (veh)	0	0					

Intersection: 20: Cawston Ave & Coriander Dr/Fruitvale Ave

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	30	53	46	31	63	74	48	58	58
Average Queue (ft)	6	25	21	6	38	39	21	30	31
95th Queue (ft)	26	48	46	26	55	63	40	47	52
Link Distance (ft)	670	1254			1280	1280		1246	1246
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			50	150			58		
Storage Blk Time (%)		0	0				0	0	
Queuing Penalty (veh)		0	0				0	0	

Network Summary

Network wide Queuing Penalty: 447

Intersection: 1: Sanderson Ave & Ramona Expy

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	27.5	27.5	5.5	31.5	8.5	46.5	19.5	17.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	7.1	7.3	5.7	-7.3	7.7	7.4	-1.3	-2.3
g/C Ratio	1.17	1.21	0.76	-1.20	1.23	1.23	-0.22	-0.39
Cycles Skipped (%)	0	0	19	0	3	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	85	67	78	67	38	88	67	76
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.0
Number of Complete Cycles : 32

Intersection: 2: Sanderson Ave & Ramona Blvd

Phase	1	2	3	6	8
Movement(s) Served	SBL	NBT	NWL	SBT	NWR
Maximum Green (s)	18.5	55.5	22.5	78.5	22.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	Min	None
Avg. Green (s)	0.6	-2.5	7.2	4.1	6.9
g/C Ratio	0.13	-0.67	0.82	0.68	1.14
Cycles Skipped (%)	15	0	57	38	38
Cycles @ Minimum (%)	0	0	0	0	13
Cycles Maxed Out (%)	13	3	0	14	0
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 3.8
Number of Complete Cycles : 71

Intersection: 4: Sanderson Ave & Cottonwood Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	8.5	40.5	11.5	31.5	8.5	40.5	12.5	30.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-6.4	0.5	-7.7	0.4	6.7	6.2	-8.3	1.0
g/C Ratio	-1.09	0.10	-1.15	0.08	0.60	1.19	-1.20	0.19
Cycles Skipped (%)	12	0	23	4	54	0	25	8
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	48	6	10	0	4	17	6	0
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.2
Number of Complete Cycles : 52

Intersection: 11: State St & 7th St

Phase	1	2	4	5	6	8
Movement(s) Served	SBL	NBT	EBTL	NBL	SBT	WBTL
Maximum Green (s)	14.5	41.5	40.5	9.5	46.5	40.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	Min	None
Avg. Green (s)	-6.6	0.9	-1.1	7.4	6.9	-1.1
g/C Ratio	-1.07	0.15	-0.19	0.85	1.20	-0.19
Cycles Skipped (%)	7	0	0	34	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	14	21	19	12	26	19
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.7
Number of Complete Cycles : 41

Intersection: 14: Sanderson Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	8.5	45.5	14.5	23.5	10.5	43.5	11.5	26.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	7.5	4.5	-4.0	-1.9	7.4	5.7	9.0	4.3
g/C Ratio	1.02	0.78	-0.63	-0.30	0.86	0.99	1.05	0.71
Cycles Skipped (%)	23	0	9	9	33	0	33	4
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	30	13	29	7	7	24	11	18
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.7

Number of Complete Cycles : 44

Intersection: 16: Lyon Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	5.0	18.0	5.0	18.0	5.0	18.0	5.0	18.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	5.9	3.2	5.0	-1.4	6.6	-3.5	5.0	2.4
g/C Ratio	0.78	0.82	0.96	-0.39	0.38	-0.94	0.40	0.68
Cycles Skipped (%)	53	8	31	0	79	4	72	0
Cycles @ Minimum (%)	41	0	69	0	19	0	28	0
Cycles Maxed Out (%)	47	17	69	55	21	30	28	74
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 3.6

Number of Complete Cycles : 74

Intersection: 17: Palm Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	6.5	45.5	9.5	30.5	6.5	45.5	5.5	34.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	6.3	3.5	-7.1	0.2	6.1	5.4	7.9	6.0
g/C Ratio	1.01	0.75	-1.23	0.04	0.73	1.16	0.69	1.25
Cycles Skipped (%)	25	0	19	2	44	0	60	4
Cycles @ Minimum (%)	0	2	0	0	0	0	0	0
Cycles Maxed Out (%)	43	0	35	41	23	0	37	44
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.6
Number of Complete Cycles : 51

Intersection: 18: State St & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	22.5	27.5	15.5	26.5	11.5	38.5	12.5	29.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-2.0	-8.9	-7.6	8.3	8.2	1.6	9.0	-5.5
g/C Ratio	-0.32	-1.45	-1.19	1.36	1.07	0.26	1.22	-0.89
Cycles Skipped (%)	0	0	3	0	20	0	17	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	17	67	20	58	11	53	11	69
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.1
Number of Complete Cycles : 35

Appendix C – Approved Scoping Agreement

Project Scoping Form

This scoping form shall be submitted to the City of San Jacinto to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

Project Identification:

Case Number:	ARC23-0042
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Chacon Farms
Project Address:	710 Cawston Avenue North, San Jacinto, CA 92582
Project Opening Year:	2027
Project Description:	Master planned development with 640 residential units, including 210 single family dwellings and 430 townhouses

	Consultant:	**Developer:**
Name:	Darlene Yellowhair, Psomas	Richard Michael (for Teunis J. De Jong)
Address:	333 E. Wetmore Road, Ste. 450	2451 Ramona Expressway
	Tucson, AZ 85705	San Jacinto, CA 92582
Telephone:	520-690-7878	907-229-2072
Fax/Email:	darlene.yellowhair@psomas.com	richard@homealaska.net

Trip Generation Information:

Trip Generation Data Source: ITE Trip Generation Manual, 11th Edition

Current General Plan Land Use: VLDR (very low density residential)

Proposed General Plan Land Use: MDR (medium density residential)

Current Zoning: RR (rural residential)

Proposed Zoning: RM (medium residential)

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	0	0	0	91	273	364
PM Trips	0	0	0	276	178	454

Trip Internalization: ☐ Yes ☒ No (_____% Trip Discount)

Pass-By Allowance: ☐ Yes ☒ No (_____% Trip Discount)

Potential Screening Checks

Is your project screened from specific analyses (see Page 8 of the guidelines related to LOS assessment and Page 9 related to VMT).

Is the project screened from LOS assessment? ☐ Yes ☒ No

LOS screening justification (see Page 8 of the guidelines): _____

Is the project screened from VMT assessment? ☒ Yes ☐ No

VMT screening justification (see Page 9 of the guidelines): _____
Per the WRCOG VMT screening tool, the project is located in a low VMT generating TAZ. In addition, the project is consistent with other uses in the TAZ as the northern half of the TAZ is a developed single-family residential neighborhood.

Level of Service Scoping

- Proposed Trip Distribution (Attach Graphic for Detailed Distribution):

North	South	East	West
30 %	30 %	30%	10 %

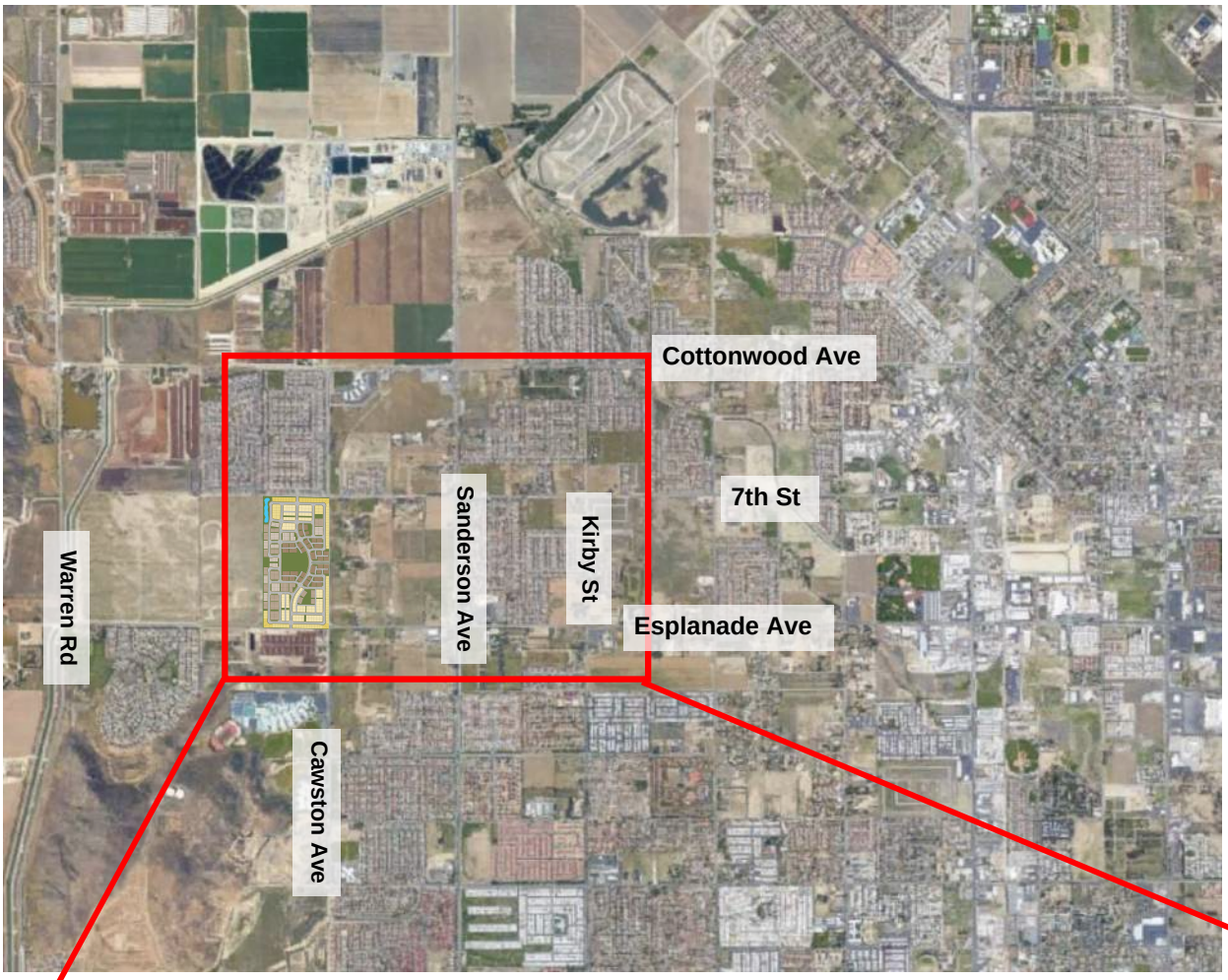
- Attach list of Approved and Pending Projects that need to be considered (provided by the lead agency and adjacent agencies) City to provide
- Attach list of study intersections/roadway segments
- Attach site plan
- Note other specific items to be addressed:
  - Site access
  - On-site circulation
  - Parking
  - Consistency with Plans supporting Bikes/Peds/Transit
  - Other _____
- Date of Traffic Counts September/October 2023
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased)

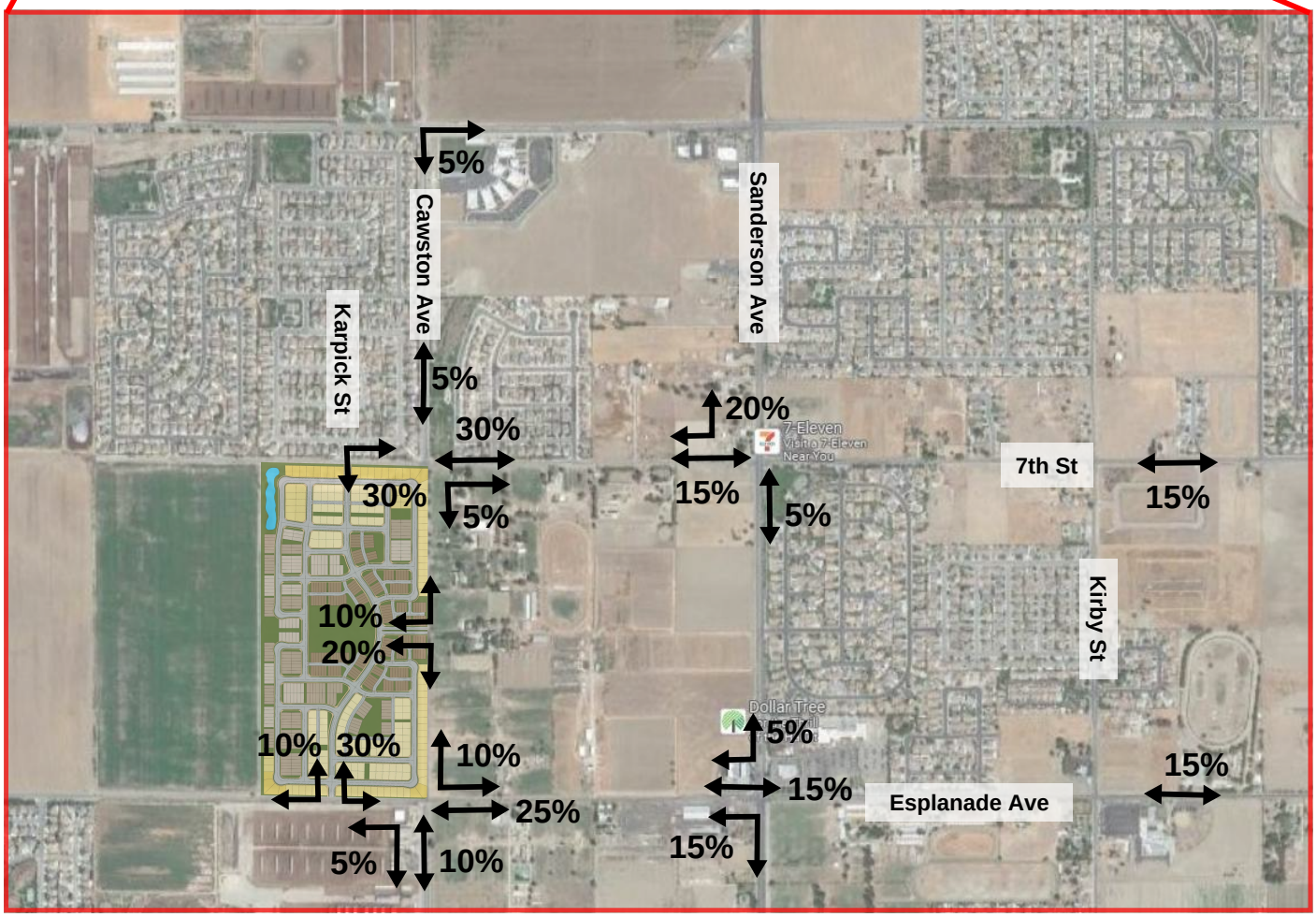
VMT Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model Used _____
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)


5%
10%
20%
Ramona Expy
Ramona Blvd
Sanderson Ave
30%
State St
Cottonwood Ave
Warren Rd
7th St
15%
15%
5%
10%
5%
Esplanade Ave
15%
15%
5%
10%
5%
5%
Cawston Ave
Sanderson Ave
Kirby St
Lyon Ave
Palm Ave
5%
to/from
this area
15%
10%
Florida Ave


Cottonwood Ave
7th St
Sanderson Ave
Kirby St
Esplanade Ave
Warren Rd
Cawston Ave


5%
Cawston Ave
Sanderson Ave
Karpick St
5%
30%
30%
5%
20%
15%
5%
7th St
15%
10%
20%
Kirby St
10%
30%
10%
25%
5%
10%
5%
15%
15%
Esplanade Ave
15%

Intersections (AM and PM peak periods, unless otherwise noted):

1. West 7th Street and Cawston Avenue (include school release period)
2. West 7th Street and Karpick Street
3. West 7th Street and Sanderson Avenue
4. West 7th Street and Kirby Street
5. West 7th Street and Lyon Avenue
6. West 7th Street and Palm Avenue
7. West 7th Street and State Street
8. Cottonwood Avenue and Cawston Avenue (include school release period)
9. Cottonwood Avenue and Sanderson Avenue
10. Cawston Avenue and Esplanade Avenue (include school release period)
11. Cawston Avenue and Eaton Avenue (include school release period)
12. Cawston Avenue and Fruitvale Avenue (include school release period)
13. Esplanade Avenue and Warren Road
14. Esplanade Avenue and Sanderson Avenue
15. Esplanade Avenue and Kirby Street
16. Esplanade Avenue and Lyon Avenue
17. Esplanade Avenue and Palm Avenue
18. Esplanade Avenue and State Street
19. Sanderson Avenue and Ramona Boulevard
20. Sanderson Avenue and Ramona Expressway

Road Segments:

1. 7th Street from Karpick Street to Cawston Avenue
2. Cawston Avenue from 7th Street to Esplanade Avenue
3. Cawston Avenue from Esplanade Avenue to Eaton Avenue

Analysis Scenarios:

1. Existing Conditions (2023)
2. Background Conditions (2027)
3. Background Plus Project Conditions (2027)
4. Cumulative No Project Conditions (2027)
5. Cumulative Plus Project Conditions (2027)

Chacon Farms

PRELIMINARY LOTTING PLAN
SAN JACINTO, CA
JULY, 2023

CHACON FARMS



STATISTICAL SUMMARY

Project Total	73.97 ac
Open Space	
Roads	

LAND USE	UNITS
75′ x 20′ Townhome	93
75′ x 24′ Townhome	152
75′ x 26′ Townhome	185
60′ x 50′ Cottage	115
75′ x 50′ Cottage	71
85′ x 53′ Cottage	24
Total	640
	(8.5 du/ac)

PARKING TYPE	SPACES
Driveway	1,034
Garage	1,266
On-Street Visitor	121
Off-Street Visitor	98
Total	2,519
Total Required	1,456

North

PSOMAS

NOT DRAWN TO SCALE

Appendix D - SimTraffic Reports – Opening Year Without Project Operations

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	7:25	7:25	7:25	7:25	7:25	7:25	7:25
End Time	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Total Time (min)	65	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	14801	15166	14812	15016	14869	15253	14973
Vehs Exited	14670	14962	14587	14822	14730	14899	14781
Starting Vehs	630	616	572	602	619	526	598
Ending Vehs	761	820	797	796	758	880	790
Denied Entry Before	5	0	2	6	4	4	6
Denied Entry After	35	21	10	24	28	16	31
Travel Distance (mi)	17569	17931	17379	17709	17628	17866	17709
Travel Time (hr)	729.4	754.0	706.1	763.6	713.0	773.1	755.8
Total Delay (hr)	318.3	335.0	300.6	349.3	300.4	354.7	341.2
Total Stops	26170	26908	26101	26718	26419	27390	27032
Fuel Used (gal)	703.8	718.9	691.2	715.0	700.4	724.4	715.1

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	7:25	7:25	7:25	7:25
End Time	8:30	8:30	8:30	8:30
Total Time (min)	65	65	65	65
Time Recorded (min)	60	60	60	60
# of Intervals	2	2	2	2
# of Recorded Intervals	1	1	1	1
Vehs Entered	15150	15019	15113	15020
Vehs Exited	14929	14807	14966	14813
Starting Vehs	600	584	601	593
Ending Vehs	821	796	748	796
Denied Entry Before	5	0	2	1
Denied Entry After	24	26	24	21
Travel Distance (mi)	18047	17559	17839	17724
Travel Time (hr)	742.4	723.9	747.5	740.9
Total Delay (hr)	321.1	314.0	331.0	326.6
Total Stops	26879	26387	27516	26756
Fuel Used (gal)	719.4	705.2	714.4	710.8

Interval #0 Information Seeding

Start Time	7:25
End Time	7:30
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:30
End Time	8:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	14801	15166	14812	15016	14869	15253	14973
Vehs Exited	14670	14962	14587	14822	14730	14899	14781
Starting Vehs	630	616	572	602	619	526	598
Ending Vehs	761	820	797	796	758	880	790
Denied Entry Before	5	0	2	6	4	4	6
Denied Entry After	35	21	10	24	28	16	31
Travel Distance (mi)	17569	17931	17379	17709	17628	17866	17709
Travel Time (hr)	729.4	754.0	706.1	763.6	713.0	773.1	755.8
Total Delay (hr)	318.3	335.0	300.6	349.3	300.4	354.7	341.2
Total Stops	26170	26908	26101	26718	26419	27390	27032
Fuel Used (gal)	703.8	718.9	691.2	715.0	700.4	724.4	715.1

Interval #1 Information Recording

Start Time	7:30
End Time	8:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	15150	15019	15113	15020
Vehs Exited	14929	14807	14966	14813
Starting Vehs	600	584	601	593
Ending Vehs	821	796	748	796
Denied Entry Before	5	0	2	1
Denied Entry After	24	26	24	21
Travel Distance (mi)	18047	17559	17839	17724
Travel Time (hr)	742.4	723.9	747.5	740.9
Total Delay (hr)	321.1	314.0	331.0	326.6
Total Stops	26879	26387	27516	26756
Fuel Used (gal)	719.4	705.2	714.4	710.8

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.4	0.0	0.1	0.0	0.1	0.4	0.0	0.0	0.0	0.3	0.1	0.2
Denied Del/Veh (s)	2.7	0.4	2.6	2.1	0.5	2.0	0.0	0.0	0.0	1.9	0.6	1.8
Total Delay (hr)	18.2	3.3	0.2	0.6	7.2	32.9	2.4	16.6	0.1	8.1	4.0	1.0
Total Del/Veh (s)	127.2	35.1	7.9	53.9	60.2	181.3	57.3	56.9	9.0	52.1	23.4	10.4
Stop Delay (hr)	16.3	2.2	0.1	0.6	4.9	27.3	2.0	11.4	0.1	6.5	2.1	0.5
Stop Del/Veh (s)	113.7	23.5	4.7	47.8	41.6	150.3	48.7	39.1	7.2	41.8	12.6	5.3
Total Stops	666	225	54	40	426	706	144	949	36	497	292	160
Stop/Veh	1.29	0.66	0.60	0.93	1.00	1.08	0.97	0.90	0.61	0.89	0.48	0.47
Travel Dist (mi)	187.3	126.5	33.6	20.7	208.3	312.0	25.8	185.8	10.5	256.7	285.6	157.4
Travel Time (hr)	22.5	5.3	1.0	1.1	10.4	39.7	3.1	20.3	0.4	13.7	8.9	4.5
Vehicles Entered	502	337	89	42	418	638	144	1038	58	544	604	332
Vehicles Exited	484	335	88	42	417	595	145	1035	58	542	602	333
Hourly Exit Rate	484	335	88	42	417	595	145	1035	58	542	602	333
Input Volume	495	344	84	47	407	631	146	1018	56	550	600	323
% of Volume	98	97	105	89	102	94	99	102	104	99	100	103
Denied Entry Before	1	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	All
Denied Delay (hr)	1.5
Denied Del/Veh (s)	1.1
Total Delay (hr)	94.7
Total Del/Veh (s)	70.5
Stop Delay (hr)	74.1
Stop Del/Veh (s)	55.2
Total Stops	4195
Stop/Veh	0.87
Travel Dist (mi)	1810.3
Travel Time (hr)	130.9
Vehicles Entered	4746
Vehicles Exited	4676
Hourly Exit Rate	4676
Input Volume	4701
% of Volume	99
Denied Entry Before	1
Denied Entry After	0

2: Sanderson Ave & Ramona Blvd Performance by movement

Movement	NBT	NBR	SBL	SBT	NWL	NWR	All
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1	0.2
Denied Del/Veh (s)	0.3	2.5	0.0	0.0	0.4	2.0	0.3
Total Delay (hr)	3.2	0.0	0.8	1.3	0.6	0.3	6.2
Total Del/Veh (s)	10.4	2.8	28.7	7.3	27.7	7.6	10.6
Stop Delay (hr)	1.0	0.0	0.6	0.1	0.5	0.2	2.6
Stop Del/Veh (s)	3.4	1.1	22.8	0.8	24.5	5.7	4.4
Total Stops	308	12	86	70	67	124	667
Stop/Veh	0.28	0.29	0.84	0.11	0.87	0.84	0.32
Travel Dist (mi)	201.5	7.7	18.6	118.2	33.1	64.4	443.4
Travel Time (hr)	7.0	0.3	1.3	3.7	1.4	2.0	15.7
Vehicles Entered	1096	42	100	637	75	145	2095
Vehicles Exited	1093	42	101	636	76	146	2094
Hourly Exit Rate	1093	42	101	636	76	146	2094
Input Volume	1079	44	99	636	74	140	2072
% of Volume	101	95	102	100	103	104	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

3: Cawston Ave & Cottonwood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.7
Total Del/Veh (s)	0.6	0.1	2.4	1.6	0.7	9.3	9.8	3.3	8.4	10.0	3.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.4
Stop Del/Veh (s)	0.0	0.0	0.7	0.0	0.0	7.2	5.5	2.8	6.1	6.3	1.6
Total Stops	0	0	12	0	0	50	21	72	32	68	255
Stop/Veh	0.00	0.00	0.21	0.00	0.00	1.00	1.00	1.00	0.97	0.99	0.30
Travel Dist (mi)	42.2	4.5	21.4	85.5	4.0	6.5	2.8	9.4	4.2	8.8	189.3
Travel Time (hr)	0.9	0.1	0.5	1.9	0.1	0.3	0.1	0.4	0.2	0.5	5.1
Vehicles Entered	267	29	56	241	10	50	21	72	33	68	847
Vehicles Exited	268	29	56	241	11	50	21	72	33	68	849
Hourly Exit Rate	268	29	56	241	11	50	21	72	33	68	849
Input Volume	267	28	56	241	12	54	22	76	35	65	856
% of Volume	100	104	100	100	92	93	95	95	94	105	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	0.0	1.0	3.4	0.4	0.2	0.1	0.0	0.1	2.9	0.2	2.9
Total Delay (hr)	1.1	1.8	0.1	0.7	1.4	0.5	0.5	4.8	0.1	0.5	2.9	0.1
Total Del/Veh (s)	30.4	22.0	5.3	32.6	27.4	9.8	40.9	21.3	8.4	35.4	16.1	3.3
Stop Delay (hr)	1.0	1.4	0.1	0.7	1.1	0.4	0.5	2.4	0.0	0.5	1.8	0.0
Stop Del/Veh (s)	28.3	17.0	4.9	30.1	20.3	8.5	35.2	10.7	2.8	32.5	9.8	1.5
Total Stops	114	196	40	69	134	122	44	418	31	50	318	34
Stop/Veh	0.86	0.65	0.69	0.86	0.71	0.73	0.94	0.52	0.51	0.91	0.49	0.47
Travel Dist (mi)	12.3	28.0	5.4	19.1	46.5	40.9	22.6	392.3	29.7	9.4	112.6	12.7
Travel Time (hr)	1.5	2.5	0.3	1.3	2.5	1.6	1.1	13.7	0.9	0.9	5.5	0.5
Vehicles Entered	131	298	58	78	188	166	46	796	60	54	647	73
Vehicles Exited	131	298	58	78	188	165	46	792	60	54	647	73
Hourly Exit Rate	131	298	58	78	188	165	46	792	60	54	647	73
Input Volume	134	293	61	80	184	167	47	801	61	60	645	78
% of Volume	98	102	95	98	102	99	98	99	98	90	100	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.4
Total Delay (hr)	14.6
Total Del/Veh (s)	20.1
Stop Delay (hr)	9.9
Stop Del/Veh (s)	13.6
Total Stops	1570
Stop/Veh	0.60
Travel Dist (mi)	731.5
Travel Time (hr)	32.3
Vehicles Entered	2595
Vehicles Exited	2590
Hourly Exit Rate	2590
Input Volume	2611
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

5: 7th St & Karpick St Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	4.8	0.1	0.0	0.0	0.1	0.2	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	1.8	0.1	2.1	1.9	4.3	3.5	1.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.4	0.4	2.9	3.3	0.7
Total Stops	0	0	0	0	34	1	35
Stop/Veh	0.00	0.00	0.00	0.00	1.00	1.00	0.18
Travel Dist (mi)	0.2	6.9	6.3	3.2	0.9	0.0	17.5
Travel Time (hr)	0.0	0.2	0.2	0.1	0.1	0.0	0.7
Vehicles Entered	2	72	54	27	34	1	190
Vehicles Exited	2	72	54	27	34	1	190
Hourly Exit Rate	2	72	54	27	34	1	190
Input Volume	2	81	57	25	35	1	201
% of Volume	100	89	95	108	97	100	95
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.1	0.0	0.3	0.1	0.0	0.0	0.2	0.1	0.1	0.4	0.0
Total Del/Veh (s)	5.3	8.0	3.3	6.4	7.3	2.6	8.4	9.4	7.2	6.4	8.5	1.6
Stop Delay (hr)	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0
Stop Del/Veh (s)	3.2	3.7	2.9	3.7	3.1	2.4	3.7	3.5	3.8	3.5	3.4	2.1
Total Stops	12	59	35	151	44	36	16	74	60	62	154	21
Stop/Veh	1.00	0.97	1.00	0.99	0.98	1.00	1.00	0.80	0.98	0.98	0.99	1.00
Travel Dist (mi)	1.5	7.1	4.1	33.2	9.7	7.8	8.0	42.2	30.4	12.3	30.3	4.3
Travel Time (hr)	0.1	0.4	0.2	1.3	0.4	0.3	0.3	1.5	1.1	0.5	1.2	0.2
Vehicles Entered	12	61	35	152	45	36	16	92	60	62	154	21
Vehicles Exited	12	61	35	151	45	36	16	91	60	62	153	21
Hourly Exit Rate	12	61	35	151	45	36	16	91	60	62	153	21
Input Volume	15	66	37	157	46	39	17	91	62	65	149	19
% of Volume	80	92	95	96	98	92	94	100	97	95	103	111
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	1.5
Total Del/Veh (s)	7.0
Stop Delay (hr)	0.7
Stop Del/Veh (s)	3.4
Total Stops	724
Stop/Veh	0.97
Travel Dist (mi)	190.9
Travel Time (hr)	7.4
Vehicles Entered	746
Vehicles Exited	743
Hourly Exit Rate	743
Input Volume	763
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

7: Sanderson Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.6	0.0	0.0	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.2	0.4	0.0	1.1	0.5	0.1	0.2	4.2	0.4	0.8	2.7	0.1
Total Del/Veh (s)	15.4	10.5	5.1	17.7	9.5	3.9	30.3	18.7	16.8	39.9	14.1	6.9
Stop Delay (hr)	0.1	0.2	0.0	0.9	0.2	0.1	0.1	1.4	0.1	0.6	0.9	0.0
Stop Del/Veh (s)	13.1	5.5	4.1	14.4	4.9	3.6	21.9	6.3	6.7	32.9	4.5	2.2
Total Stops	31	63	18	173	76	48	19	385	48	63	268	17
Stop/Veh	0.78	0.47	0.55	0.79	0.44	0.51	0.86	0.47	0.62	0.90	0.39	0.47
Travel Dist (mi)	10.0	34.0	8.3	25.0	19.9	11.0	11.1	389.5	38.6	34.5	334.9	17.8
Travel Time (hr)	0.4	1.2	0.3	1.9	0.9	0.5	0.4	12.4	1.3	1.6	9.7	0.5
Vehicles Entered	40	134	33	219	172	94	22	798	77	69	678	35
Vehicles Exited	40	134	33	219	173	94	22	798	77	69	677	35
Hourly Exit Rate	40	134	33	219	173	94	22	798	77	69	677	35
Input Volume	43	143	34	222	177	91	26	806	83	66	685	35
% of Volume	93	94	97	99	98	103	85	99	93	105	99	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Sanderson Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	10.6
Total Del/Veh (s)	15.8
Stop Delay (hr)	4.8
Stop Del/Veh (s)	7.2
Total Stops	1209
Stop/Veh	0.50
Travel Dist (mi)	934.6
Travel Time (hr)	31.1
Vehicles Entered	2371
Vehicles Exited	2371
Hourly Exit Rate	2371
Input Volume	2411
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

8: Kirby St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.1	0.9	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.3	4.0
Total Delay (hr)	0.0	1.5	0.1	0.3	1.6	0.1	0.1	0.6	0.1	0.1	0.5	0.0
Total Del/Veh (s)	13.1	16.5	6.2	12.8	16.7	10.5	10.2	14.2	7.2	9.3	12.5	5.4
Stop Delay (hr)	0.0	0.8	0.0	0.1	0.5	0.0	0.0	0.2	0.1	0.1	0.2	0.0
Stop Del/Veh (s)	8.7	8.4	3.7	5.8	5.8	5.2	5.8	6.2	4.6	6.2	6.1	3.8
Total Stops	8	324	29	88	320	28	26	138	64	51	135	20
Stop/Veh	1.00	0.99	1.00	0.98	0.94	0.97	0.96	0.99	0.98	1.00	0.99	1.00
Travel Dist (mi)	2.5	103.8	9.3	43.7	162.5	13.7	13.0	66.6	31.0	6.0	15.9	2.4
Travel Time (hr)	0.1	3.8	0.3	1.4	5.3	0.4	0.4	2.3	1.0	0.3	0.9	0.1
Vehicles Entered	8	324	29	88	333	28	27	138	65	51	135	20
Vehicles Exited	8	324	29	88	333	28	26	138	64	51	135	20
Hourly Exit Rate	8	324	29	88	333	28	26	138	64	51	135	20
Input Volume	9	335	29	97	338	27	25	141	69	53	126	19
% of Volume	89	97	100	91	99	104	104	98	93	96	107	105
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

8: Kirby St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	4.9
Total Del/Veh (s)	14.1
Stop Delay (hr)	2.2
Stop Del/Veh (s)	6.4
Total Stops	1231
Stop/Veh	0.98
Travel Dist (mi)	470.3
Travel Time (hr)	16.5
Vehicles Entered	1246
Vehicles Exited	1244
Hourly Exit Rate	1244
Input Volume	1268
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

9: Lyon Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.8	0.3	0.1
Total Delay (hr)	0.2	3.0	0.1	0.5	4.0	0.5	0.1	0.8	0.1	0.1	0.8	0.0
Total Del/Veh (s)	14.6	26.0	18.6	33.6	37.1	29.8	12.3	16.6	6.2	9.1	15.4	3.7
Stop Delay (hr)	0.1	1.7	0.1	0.4	2.8	0.4	0.1	0.4	0.1	0.1	0.4	0.0
Stop Del/Veh (s)	7.2	15.1	14.2	26.5	26.3	24.5	9.2	8.9	4.5	6.2	7.7	3.8
Total Stops	38	402	26	56	384	60	42	179	45	30	195	26
Stop/Veh	1.03	0.98	0.96	1.00	0.98	0.98	1.00	0.99	1.00	0.97	0.99	1.00
Travel Dist (mi)	17.6	193.3	12.6	26.3	183.1	29.0	8.1	34.8	8.6	2.5	15.9	2.1
Travel Time (hr)	0.6	7.4	0.5	1.2	8.2	1.3	0.4	1.5	0.3	0.2	1.2	0.1
Vehicles Entered	36	402	27	55	383	61	42	179	44	30	195	25
Vehicles Exited	36	401	26	55	382	60	42	178	44	31	195	26
Hourly Exit Rate	36	401	26	55	382	60	42	178	44	31	195	26
Input Volume	38	420	27	57	390	60	47	185	46	33	195	25
% of Volume	95	95	96	96	98	100	89	96	96	94	100	104
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

9: Lyon Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	10.3
Total Del/Veh (s)	24.7
Stop Delay (hr)	6.7
Stop Del/Veh (s)	16.0
Total Stops	1483
Stop/Veh	0.99
Travel Dist (mi)	533.8
Travel Time (hr)	22.9
Vehicles Entered	1479
Vehicles Exited	1476
Hourly Exit Rate	1476
Input Volume	1523
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

10: Palm Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
Total Delay (hr)	0.2	3.0	0.1	0.2	2.2	0.1	0.1	0.7	0.2	0.2	0.7	0.2
Total Del/Veh (s)	14.9	23.4	17.0	11.5	21.3	15.1	14.3	10.8	11.5	12.0	14.4	9.2
Stop Delay (hr)	0.1	1.5	0.1	0.1	1.4	0.1	0.1	0.4	0.1	0.1	0.4	0.1
Stop Del/Veh (s)	6.0	11.7	10.7	5.8	13.2	12.4	10.4	6.1	8.8	8.8	8.3	7.6
Total Stops	60	449	24	65	370	33	24	144	60	46	167	67
Stop/Veh	1.05	0.98	1.00	1.05	0.99	1.00	1.00	0.61	0.98	1.00	0.99	0.99
Travel Dist (mi)	26.7	213.2	11.0	7.6	46.0	4.1	9.2	74.6	23.3	3.0	11.1	4.5
Travel Time (hr)	0.9	7.8	0.4	0.4	3.3	0.3	0.3	2.6	0.9	0.3	1.0	0.4
Vehicles Entered	56	450	23	62	372	33	24	236	60	46	167	67
Vehicles Exited	56	448	24	61	371	33	24	236	60	46	166	67
Hourly Exit Rate	56	448	24	61	371	33	24	236	60	46	166	67
Input Volume	61	468	23	65	377	34	24	236	59	46	165	65
% of Volume	92	96	104	94	98	97	100	100	102	100	101	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

10: Palm Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	7.9
Total Del/Veh (s)	17.6
Stop Delay (hr)	4.5
Stop Del/Veh (s)	10.1
Total Stops	1509
Stop/Veh	0.94
Travel Dist (mi)	434.2
Travel Time (hr)	18.6
Vehicles Entered	1596
Vehicles Exited	1592
Hourly Exit Rate	1592
Input Volume	1623
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

11: State St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Denied Del/Veh (s)	0.1	0.0	0.1	3.3	0.4	0.2	0.0	0.0	0.0	2.8	0.3	0.3
Total Delay (hr)	1.0	2.3	0.2	0.6	2.1	0.1	0.5	4.1	0.3	0.8	3.7	0.2
Total Del/Veh (s)	34.6	21.5	7.0	35.4	22.0	5.5	46.9	22.8	20.7	43.2	18.8	10.6
Stop Delay (hr)	0.9	1.5	0.1	0.5	1.4	0.1	0.4	2.3	0.2	0.7	2.3	0.2
Stop Del/Veh (s)	29.1	13.9	4.0	30.2	14.1	4.7	39.2	12.7	13.2	38.4	11.6	8.2
Total Stops	100	218	44	58	196	54	42	332	36	70	370	45
Stop/Veh	0.94	0.56	0.56	0.95	0.56	0.57	1.02	0.52	0.60	1.00	0.52	0.54
Travel Dist (mi)	38.9	142.1	29.1	8.2	47.1	12.8	19.9	307.2	29.5	6.6	66.6	7.9
Travel Time (hr)	2.0	5.5	0.9	0.9	3.2	0.5	1.0	11.3	1.1	1.1	5.2	0.5
Vehicles Entered	105	383	78	60	344	94	40	633	59	70	703	84
Vehicles Exited	104	380	78	60	344	94	40	632	59	69	702	83
Hourly Exit Rate	104	380	78	60	344	94	40	632	59	69	702	83
Input Volume	107	397	82	62	350	95	44	635	67	73	701	82
% of Volume	97	96	95	97	98	99	91	100	88	95	100	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

11: State St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.3
Total Delay (hr)	16.1
Total Del/Veh (s)	21.6
Stop Delay (hr)	10.6
Stop Del/Veh (s)	14.2
Total Stops	1565
Stop/Veh	0.58
Travel Dist (mi)	715.9
Travel Time (hr)	33.5
Vehicles Entered	2653
Vehicles Exited	2645
Hourly Exit Rate	2645
Input Volume	2695
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0		0.5	0.5	0.3	0.4	0.3
Total Delay (hr)	0.0	0.1	0.0	0.3	0.2	0.2	0.0	3.1	0.6	0.2	1.7	0.0
Total Del/Veh (s)	6.4	11.9	4.0	9.8	7.3	7.8		24.7	16.9	13.9	18.0	10.1
Stop Delay (hr)	0.0	0.1	0.0	0.2	0.1	0.1	0.0	1.5	0.4	0.1	0.6	0.0
Stop Del/Veh (s)	4.7	5.3	3.5	5.3	2.2	4.7		12.3	11.7	8.0	6.6	5.9
Total Stops	26	40	3	122	43	85	0	440	132	49	334	16
Stop/Veh	1.00	1.00	1.00	0.98	0.37	0.98		0.99	0.99	0.98	0.99	1.00
Travel Dist (mi)	3.3	5.1	0.4	126.4	81.8	88.5	0.1	95.4	28.6	11.0	75.2	3.5
Travel Time (hr)	0.1	0.2	0.0	3.1	2.0	2.2	0.0	4.9	1.4	0.5	3.1	0.1
Vehicles Entered	26	40	3	122	114	86	0	440	132	49	335	16
Vehicles Exited	26	40	3	122	113	85	0	438	131	49	334	16
Hourly Exit Rate	26	40	3	122	113	85	0	438	131	49	334	16
Input Volume	25	43	2	126	118	84	1	445	130	47	347	14
% of Volume	104	93	150	97	96	101	0	98	101	104	96	114
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	6.5
Total Del/Veh (s)	17.1
Stop Delay (hr)	3.2
Stop Del/Veh (s)	8.3
Total Stops	1290
Stop/Veh	0.94
Travel Dist (mi)	519.2
Travel Time (hr)	17.7
Vehicles Entered	1363
Vehicles Exited	1357
Hourly Exit Rate	1357
Input Volume	1382
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	1.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.5	1.5	0.6	1.4	0.9	0.0	0.7	0.8	0.1	0.4	1.7	0.3
Total Del/Veh (s)	32.8	19.7	10.3	33.3	14.6	9.3	32.3	6.6	5.7	29.2	25.0	16.5
Stop Delay (hr)	0.5	0.9	0.4	1.1	0.5	0.0	0.6	0.5	0.1	0.3	1.2	0.2
Stop Del/Veh (s)	29.2	12.4	6.7	26.8	8.1	5.6	27.8	4.0	3.5	26.3	17.8	12.4
Total Stops	51	158	144	132	90	11	70	60	55	38	167	52
Stop/Veh	0.89	0.58	0.64	0.87	0.41	0.58	0.86	0.14	0.67	0.84	0.70	0.75
Travel Dist (mi)	40.0	190.6	160.8	74.3	97.8	9.6	39.8	131.8	40.3	21.7	116.6	33.6
Travel Time (hr)	1.4	5.5	4.4	3.2	3.0	0.3	2.0	4.8	1.4	1.0	5.2	1.4
Vehicles Entered	56	268	222	149	216	19	80	429	81	44	234	68
Vehicles Exited	55	266	221	148	213	19	80	428	81	44	233	67
Hourly Exit Rate	55	266	221	148	213	19	80	428	81	44	233	67
Input Volume	57	271	222	150	219	19	78	423	78	44	235	70
% of Volume	96	98	100	99	97	100	103	101	104	100	99	96
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	9.0
Total Del/Veh (s)	17.1
Stop Delay (hr)	6.4
Stop Del/Veh (s)	12.2
Total Stops	1028
Stop/Veh	0.54
Travel Dist (mi)	957.0
Travel Time (hr)	33.5
Vehicles Entered	1866
Vehicles Exited	1855
Hourly Exit Rate	1855
Input Volume	1866
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.0	0.2	0.0	0.0	0.0	2.8	0.2	0.3	0.0	0.0	0.0
Total Delay (hr)	1.4	2.7	0.2	1.3	2.3	0.1	0.7	5.3	0.7	2.0	4.2	0.2
Total Del/Veh (s)	43.8	38.1	13.3	42.2	28.6	5.4	45.2	26.5	18.4	47.0	21.9	9.0
Stop Delay (hr)	1.2	2.0	0.1	1.2	1.8	0.1	0.7	3.5	0.5	1.7	2.3	0.0
Stop Del/Veh (s)	37.1	28.8	7.9	37.9	22.6	5.2	41.2	17.6	14.0	39.2	12.1	2.7
Total Stops	101	204	53	102	187	56	52	441	88	137	329	31
Stop/Veh	0.89	0.80	0.98	0.89	0.65	0.71	0.91	0.62	0.66	0.89	0.47	0.46
Travel Dist (mi)	53.0	120.6	25.8	36.4	87.9	25.2	9.1	115.8	21.4	75.6	335.7	33.1
Travel Time (hr)	2.7	5.3	0.8	2.4	4.5	0.8	1.0	7.9	1.4	3.8	11.3	1.0
Vehicles Entered	111	252	53	113	282	78	56	711	131	151	688	66
Vehicles Exited	110	251	53	111	284	78	56	709	131	150	685	66
Hourly Exit Rate	110	251	53	111	284	78	56	709	131	150	685	66
Input Volume	114	253	52	116	286	77	53	724	133	151	695	72
% of Volume	96	99	102	96	99	101	106	98	98	99	99	92
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	21.1
Total Del/Veh (s)	27.8
Stop Delay (hr)	15.2
Stop Del/Veh (s)	20.1
Total Stops	1781
Stop/Veh	0.65
Travel Dist (mi)	939.5
Travel Time (hr)	42.9
Vehicles Entered	2692
Vehicles Exited	2684
Hourly Exit Rate	2684
Input Volume	2726
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.3	5.8	0.8	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	41.7	43.7	57.0	0.0	0.0	0.0	0.5	0.5	3.6	0.1	0.1	0.8
Total Delay (hr)	1.1	21.8	2.2	0.9	5.8	0.3	0.2	0.8	0.2	0.3	1.3	0.1
Total Del/Veh (s)	164.2	170.5	159.9	51.3	55.6	51.2	13.6	16.4	6.8	17.5	20.7	9.3
Stop Delay (hr)	1.2	22.1	2.3	0.8	4.7	0.3	0.2	0.5	0.1	0.2	0.8	0.1
Stop Del/Veh (s)	170.4	172.7	168.0	44.6	45.0	46.2	10.2	9.9	5.2	12.8	12.9	5.4
Total Stops	19	316	36	63	366	22	61	168	81	52	221	50
Stop/Veh	0.76	0.69	0.72	0.98	0.98	0.96	0.98	0.99	0.99	0.98	0.98	1.00
Travel Dist (mi)	4.1	74.1	8.1	31.7	184.3	11.2	10.5	28.7	13.8	23.0	98.1	22.4
Travel Time (hr)	1.6	29.0	3.3	1.7	10.0	0.6	0.6	1.5	0.7	0.9	3.9	0.8
Vehicles Entered	25	456	49	63	367	22	61	168	81	52	222	50
Vehicles Exited	24	428	47	63	363	22	61	167	81	52	221	50
Hourly Exit Rate	24	428	47	63	363	22	61	167	81	52	221	50
Input Volume	29	490	53	62	366	23	63	167	80	57	215	51
% of Volume	83	87	89	102	99	96	97	100	101	91	103	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	1	18	2	0	0	0	0	0	0	0	0	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	7.0
Denied Del/Veh (s)	15.4
Total Delay (hr)	35.0
Total Del/Veh (s)	77.0
Stop Delay (hr)	33.2
Stop Del/Veh (s)	72.9
Total Stops	1455
Stop/Veh	0.89
Travel Dist (mi)	510.0
Travel Time (hr)	54.5
Vehicles Entered	1616
Vehicles Exited	1579
Hourly Exit Rate	1579
Input Volume	1656
% of Volume	95
Denied Entry Before	0
Denied Entry After	21

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	3.7	0.4	3.8	0.1	0.0	0.1
Total Delay (hr)	0.2	2.8	0.1	0.6	1.7	0.1	0.1	0.8	0.1	0.3	0.8	0.0
Total Del/Veh (s)	31.7	19.6	8.8	30.2	15.4	4.8	28.9	17.5	7.4	24.5	14.5	4.6
Stop Delay (hr)	0.1	1.3	0.0	0.5	0.7	0.0	0.1	0.5	0.1	0.2	0.5	0.0
Stop Del/Veh (s)	24.8	9.0	3.5	22.9	6.4	2.5	26.1	10.7	6.3	22.2	8.6	4.0
Total Stops	19	282	16	69	186	31	17	100	46	36	117	24
Stop/Veh	0.95	0.54	0.57	0.91	0.46	0.44	1.00	0.62	0.72	0.92	0.57	0.62
Travel Dist (mi)	9.8	256.1	13.4	36.0	192.0	34.4	1.6	14.7	5.9	11.4	60.3	11.4
Travel Time (hr)	0.4	8.8	0.4	1.6	6.7	1.1	0.2	1.1	0.4	0.5	2.0	0.3
Vehicles Entered	20	514	27	74	396	70	17	160	64	39	203	38
Vehicles Exited	20	512	27	74	393	70	17	161	64	39	204	38
Hourly Exit Rate	20	512	27	74	393	70	17	161	64	39	204	38
Input Volume	23	574	30	75	393	70	18	166	60	42	205	37
% of Volume	87	89	90	99	100	100	94	97	107	93	100	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	7.7
Total Del/Veh (s)	16.9
Stop Delay (hr)	4.2
Stop Del/Veh (s)	9.2
Total Stops	943
Stop/Veh	0.57
Travel Dist (mi)	647.3
Travel Time (hr)	23.6
Vehicles Entered	1622
Vehicles Exited	1619
Hourly Exit Rate	1619
Input Volume	1693
% of Volume	96
Denied Entry Before	0
Denied Entry After	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.4	0.5	1.3	0.2	1.2
Total Delay (hr)	0.6	5.2	0.3	0.8	3.1	0.1	0.5	1.6	0.4	1.0	1.1	0.1
Total Del/Veh (s)	45.7	35.1	25.9	45.3	19.6	7.2	43.2	25.0	16.7	42.3	19.2	4.3
Stop Delay (hr)	0.4	2.7	0.2	0.6	1.6	0.0	0.5	1.1	0.3	1.0	0.9	0.1
Stop Del/Veh (s)	34.1	18.5	15.2	35.7	10.2	4.1	38.3	17.2	12.6	39.3	15.1	3.2
Total Stops	45	360	26	57	237	24	46	156	62	86	131	41
Stop/Veh	1.02	0.67	0.70	0.92	0.41	0.56	1.02	0.66	0.69	0.97	0.62	0.62
Travel Dist (mi)	21.5	259.6	18.1	30.7	247.8	21.4	6.5	34.2	13.1	7.9	18.4	5.8
Travel Time (hr)	1.1	10.6	0.7	1.6	9.5	0.7	0.8	2.5	0.9	1.4	1.7	0.3
Vehicles Entered	44	527	37	61	566	42	45	235	90	88	210	66
Vehicles Exited	43	525	36	61	564	42	45	234	90	88	209	66
Hourly Exit Rate	43	525	36	61	564	42	45	234	90	88	209	66
Input Volume	49	577	43	66	561	40	47	230	92	91	209	66
% of Volume	88	91	84	92	101	105	96	102	98	97	100	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	14.9
Total Del/Veh (s)	26.3
Stop Delay (hr)	9.5
Stop Del/Veh (s)	16.7
Total Stops	1271
Stop/Veh	0.62
Travel Dist (mi)	685.1
Travel Time (hr)	31.8
Vehicles Entered	2011
Vehicles Exited	2003
Hourly Exit Rate	2003
Input Volume	2071
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

18: State St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	2.7	0.2	0.3	3.1	0.2	0.2	0.0	0.0	0.0
Total Delay (hr)	1.4	4.2	0.3	1.2	4.2	0.7	0.8	4.2	0.5	2.7	4.1	0.5
Total Del/Veh (s)	52.1	27.1	22.4	44.5	28.4	17.9	50.1	30.5	18.9	49.0	26.1	21.6
Stop Delay (hr)	1.2	2.6	0.2	1.1	3.1	0.6	0.7	3.2	0.4	2.1	2.4	0.3
Stop Del/Veh (s)	43.6	17.0	14.9	39.2	21.1	14.0	45.1	23.2	15.3	38.8	15.0	13.2
Total Stops	94	304	30	94	359	106	59	354	71	182	306	54
Stop/Veh	0.99	0.54	0.64	0.93	0.67	0.70	1.07	0.71	0.74	0.92	0.54	0.59
Travel Dist (mi)	47.0	260.6	23.3	27.8	147.4	41.8	12.2	111.8	21.5	95.3	270.3	44.9
Travel Time (hr)	2.5	9.7	0.9	2.1	8.0	2.0	1.2	7.1	1.2	5.1	10.3	1.7
Vehicles Entered	94	556	46	100	526	150	54	491	95	191	559	90
Vehicles Exited	93	552	46	99	524	149	54	490	94	192	559	90
Hourly Exit Rate	93	552	46	99	524	149	54	490	94	192	559	90
Input Volume	99	605	49	95	527	150	53	497	100	195	563	87
% of Volume	94	91	94	104	99	99	102	99	94	98	99	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: State St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.2
Total Delay (hr)	24.9
Total Del/Veh (s)	30.0
Stop Delay (hr)	17.9
Stop Del/Veh (s)	21.6
Total Stops	2013
Stop/Veh	0.67
Travel Dist (mi)	1103.9
Travel Time (hr)	51.6
Vehicles Entered	2952
Vehicles Exited	2942
Hourly Exit Rate	2942
Input Volume	3020
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

19: Cawston Ave & Eaton Ave Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.5	2.3	0.0	0.0	0.1	0.0	0.4
Total Delay (hr)	0.1	0.4	1.0	0.1	0.4	1.3	3.3
Total Del/Veh (s)	7.1	5.6	8.9	6.9	9.6	10.0	8.6
Stop Delay (hr)	0.1	0.2	0.4	0.0	0.2	0.4	1.3
Stop Del/Veh (s)	3.8	3.5	3.2	3.7	4.2	3.1	3.4
Total Stops	60	245	346	42	165	452	1310
Stop/Veh	0.98	0.99	0.82	1.00	0.98	0.98	0.94
Travel Dist (mi)	20.0	81.1	94.7	10.4	81.6	223.3	511.2
Travel Time (hr)	0.7	2.9	3.9	0.4	3.0	8.0	18.9
Vehicles Entered	60	244	417	42	165	452	1380
Vehicles Exited	60	244	417	42	165	452	1380
Hourly Exit Rate	60	244	417	42	165	452	1380
Input Volume	60	244	406	44	171	452	1377
% of Volume	100	100	103	95	96	100	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

20: Cawston Ave & Coriander Dr/Fruitvale Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.1	0.1	0.3	3.2	2.7	0.1	0.1	0.0	0.0	0.0	0.4
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.8	0.0	0.2	1.1	0.0	2.4
Total Del/Veh (s)	4.2	6.1	3.6	5.4	3.4	6.0	8.1	3.9	8.2	10.1	8.7	8.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.1	0.3	0.0	0.9
Stop Del/Veh (s)	3.2	3.5	3.3	3.2	2.7	3.2	2.9	2.7	3.4	2.9	3.7	2.9
Total Stops	2	1	5	30	109	1	349	37	104	406	1	1045
Stop/Veh	1.00	1.00	1.00	1.00	0.99	1.00	0.99	0.97	0.99	0.99	1.00	0.99
Travel Dist (mi)	0.2	0.1	0.6	7.2	25.9	0.3	84.6	8.9	26.2	101.7	0.4	256.1
Travel Time (hr)	0.0	0.0	0.0	0.3	1.0	0.0	3.2	0.3	1.1	4.1	0.0	10.2
Vehicles Entered	2	1	5	30	109	1	349	37	105	406	1	1046
Vehicles Exited	2	1	5	30	109	1	348	37	104	406	1	1044
Hourly Exit Rate	2	1	5	30	109	1	348	37	104	406	1	1044
Input Volume	2	1	5	30	109	2	339	34	110	402	1	1035
% of Volume	100	100	100	100	100	50	103	109	95	101	100	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	10.4
Denied Del/Veh (s)	2.5
Total Delay (hr)	316.1
Total Del/Veh (s)	72.9
Stop Delay (hr)	214.0
Stop Del/Veh (s)	49.4
Total Stops	26756
Stop/Veh	1.71
Travel Dist (mi)	17723.7
Travel Time (hr)	740.9
Vehicles Entered	15020
Vehicles Exited	14813
Hourly Exit Rate	14813
Input Volume	56969
% of Volume	26
Denied Entry Before	1
Denied Entry After	21

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	377	426	497	389	60	49	109	1421	1513	343	104	259
Average Queue (ft)	260	289	159	137	20	11	24	718	920	333	48	89
95th Queue (ft)	437	475	588	515	47	36	77	1712	1857	386	93	267
Link Distance (ft)			1976	1976				2634	2634			
Upstream Blk Time (%)									0			
Queuing Penalty (veh)									0			
Storage Bay Dist (ft)	400	400			180	375	375			143	400	400
Storage Blk Time (%)	7	10	0	0				0	5	66		0
Queuing Penalty (veh)	12	17	2	0				0	28	133		0

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	487	486	120	267	278	192	181	162
Average Queue (ft)	328	314	22	168	186	108	96	59
95th Queue (ft)	556	542	126	245	261	173	160	119
Link Distance (ft)	873	873	873			2486	2486	
Upstream Blk Time (%)	0	0						
Queuing Penalty (veh)	1	0						
Storage Bay Dist (ft)				400	400			250
Storage Blk Time (%)	6						0	0
Queuing Penalty (veh)	9						0	0

Intersection: 2: Sanderson Ave & Ramona Blvd

Movement	NB	NB	NB	SB	SB	SB	NW	NW
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	202	171	43	123	106	127	119	96
Average Queue (ft)	111	71	9	60	21	37	45	42
95th Queue (ft)	184	143	32	110	72	93	96	82
Link Distance (ft)	969	969			873	873	2330	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			120	170				50
Storage Blk Time (%)		1		0	0		12	3
Queuing Penalty (veh)		0		0	0		17	2

Intersection: 3: Cawston Ave & Cottonwood Ave

Movement	WB	NB	NB	SB
Directions Served	L	LT	R	LT
Maximum Queue (ft)	32	70	63	74
Average Queue (ft)	7	34	31	40
95th Queue (ft)	24	60	50	62
Link Distance (ft)		697		682
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	195		150	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	R	L	L	T
Maximum Queue (ft)	90	93	119	117	50	42	86	180	111	71	53	194
Average Queue (ft)	38	40	63	57	18	12	36	82	43	28	6	109
95th Queue (ft)	74	73	104	102	41	35	73	149	85	60	30	185
Link Distance (ft)			507	507				1294	1294			2541
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300	300			205	320	320			300	300	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	R
Maximum Queue (ft)	219	43	30	87	212	172	48
Average Queue (ft)	120	11	2	38	121	78	19
95th Queue (ft)	202	30	15	76	188	149	42
Link Distance (ft)	2541				915	915	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		210	290	290			200
Storage Blk Time (%)	0					0	
Queuing Penalty (veh)	0					0	

Intersection: 5: 7th St & Karpick St

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	3	65
Average Queue (ft)	0	23
95th Queue (ft)	3	52
Link Distance (ft)		135
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Cawston Ave & 7th St

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	L	T	TR	L	TR	LT	R
Maximum Queue (ft)	66	87	46	57	45	84	80	20
Average Queue (ft)	34	45	20	27	12	46	39	9
95th Queue (ft)	55	71	46	50	38	73	65	24
Link Distance (ft)	572		1110	1110		2590	1226	1226
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		160			85			
Storage Blk Time (%)						0		
Queuing Penalty (veh)						0		

Intersection: 7: Sanderson Ave & 7th St

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	58	99	143	107	70	62	182	207	113	135	141	34
Average Queue (ft)	18	36	77	45	27	17	102	123	40	63	72	8
95th Queue (ft)	44	77	126	83	56	47	165	187	87	114	124	24
Link Distance (ft)		1368		646			2569	2569		2541	2541	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	53		145		600	300			360			360
Storage Blk Time (%)	0	2	0	0								
Queuing Penalty (veh)	1	1	1	0								

Intersection: 8: Kirby St & 7th St

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	LT	R	LT	R
Maximum Queue (ft)	155	59	58	97	77	54	107	35
Average Queue (ft)	70	15	29	50	39	19	51	15
95th Queue (ft)	125	46	48	81	65	39	83	39
Link Distance (ft)	1855			2533	2574		620	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		110	150			280		70
Storage Blk Time (%)	2						2	
Queuing Penalty (veh)	1						0	

Intersection: 9: Lyon Ave & 7th St

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	LTR	LT	R	L	T	R
Maximum Queue (ft)	111	233	344	134	57	52	114	52
Average Queue (ft)	20	91	156	64	25	20	59	17
95th Queue (ft)	68	190	313	108	50	47	94	41
Link Distance (ft)		2533	2566	1006			429	429
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150				105	150		
Storage Blk Time (%)		5		1			0	
Queuing Penalty (veh)		2		1			0	

Intersection: 10: Palm Ave & 7th St

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	149	223	146	244	158	170
Average Queue (ft)	37	99	42	119	77	71
95th Queue (ft)	96	174	107	201	128	123
Link Distance (ft)		2566		601	2000	350
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100		75			
Storage Blk Time (%)		14	0	26		
Queuing Penalty (veh)		8	0	17		

Intersection: 11: State St & 7th St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	TR
Maximum Queue (ft)	159	252	198	139	251	82	130	222	234	166	269	230
Average Queue (ft)	73	138	35	47	131	29	35	102	121	55	150	108
95th Queue (ft)	144	224	113	108	223	62	92	201	212	124	239	199
Link Distance (ft)		1929			721	721		2560	2560		491	491
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95		215	60			85			105		
Storage Blk Time (%)	4	19	0	4	26		0	12		1	17	
Queuing Penalty (veh)	18	36	0	15	16		1	5		3	12	

Intersection: 12: Warren Ave & Esplanade Ave

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (ft)	68	86	80	292	177
Average Queue (ft)	31	39	39	127	80
95th Queue (ft)	55	67	65	240	135
Link Distance (ft)	671	5387	5387	1142	1186
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 13: Cawston Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	89	134	188	174	102	105	107	111	61	77	236
Average Queue (ft)	37	62	89	81	30	42	50	46	28	31	121
95th Queue (ft)	74	111	154	146	76	87	91	92	54	65	201
Link Distance (ft)		5387	5387		2540	2540		2579	2579	2590	2590
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150			150			150				
Storage Blk Time (%)		0		2	0			0			
Queuing Penalty (veh)		0		1	0			0			

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	140	134	148	80	153	236	67	98	251	262	183	209
Average Queue (ft)	71	60	73	34	76	130	28	35	159	143	98	106
95th Queue (ft)	127	111	130	87	131	201	55	78	233	230	164	180
Link Distance (ft)		2540	2540			1649	1649		840	840		2569
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	130			55	155			225			245	
Storage Blk Time (%)	1	0	21	0	0	4			1			0
Queuing Penalty (veh)	2	0	11	0	1	5			0			0

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	217	76
Average Queue (ft)	121	22
95th Queue (ft)	188	59
Link Distance (ft)	2569	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 15: Kirby St & Esplanade Ave

Movement	EB	B60	WB	NB	NB	SB	SB
Directions Served	LTR	T	LTR	LT	R	LT	R
Maximum Queue (ft)	913	511	448	130	73	163	89
Average Queue (ft)	661	134	222	67	35	77	29
95th Queue (ft)	1109	524	409	107	61	132	64
Link Distance (ft)	834	1649	2574	903		2574	
Upstream Blk Time (%)	37						
Queuing Penalty (veh)	197						
Storage Bay Dist (ft)					132		100
Storage Blk Time (%)				0		5	
Queuing Penalty (veh)				0		3	

Intersection: 16: Lyon Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	59	216	54	105	244	66	52	130	58	60	119	41
Average Queue (ft)	15	114	10	42	98	15	13	52	18	24	56	11
95th Queue (ft)	45	186	37	83	188	42	40	97	41	51	99	30
Link Distance (ft)		2574			2526	2526		476			1520	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	122		122	140			120		120	118		118
Storage Blk Time (%)		6		0	2			0			0	
Queuing Penalty (veh)		3		0	2			0			0	

Intersection: 17: Palm Ave & Esplanade Ave

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB		
Directions Served	L	TR	L	T	R	L	TR	L	T	R		
Maximum Queue (ft)	227	384	188	348	71	137	274	124	173	78		
Average Queue (ft)	45	209	49	159	19	36	124	62	84	25		
95th Queue (ft)	146	344	117	294	53	92	213	111	143	58		
Link Distance (ft)		2526		2572	2572		765		508			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	160		250			75		150		150		
Storage Blk Time (%)		18		2		1	24	0	1			
Queuing Penalty (veh)		9		2		3	12	0	1			

Intersection: 18: State St & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	144	212	216	188	267	256	154	261	254	150	287	276
Average Queue (ft)	75	110	125	79	155	144	60	153	131	117	131	141
95th Queue (ft)	136	188	200	149	234	230	135	231	218	168	244	240
Link Distance (ft)		2572	2572		1477	1477		1199	1199		2560	2560
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100			140			105			100		
Storage Blk Time (%)	7	13		1	13		0	22		24	12	
Queuing Penalty (veh)	19	13		2	12		1	12		63	23	

Intersection: 19: Cawston Ave & Eaton Ave

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	76	92	71	79	87	75	83
Average Queue (ft)	30	53	41	45	47	46	50
95th Queue (ft)	58	85	63	69	74	69	73
Link Distance (ft)	1756		1246	1246		2579	2579
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		50			105		
Storage Blk Time (%)	1	4			0	0	
Queuing Penalty (veh)	1	3			0	0	

Intersection: 20: Cawston Ave & Coriander Dr/Fruitvale Ave

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	30	51	65	17	82	84	55	56	70
Average Queue (ft)	7	21	35	1	43	41	28	29	32
95th Queue (ft)	27	46	56	10	68	67	44	47	55
Link Distance (ft)	670	1254			1280	1280		1246	1246
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			50	150			58		
Storage Blk Time (%)		0	1				0	0	
Queuing Penalty (veh)		0	0				0	0	

Network Summary

Network wide Queuing Penalty: 765

Intersection: 1: Sanderson Ave & Ramona Expy

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	21.5	35.5	6.5	28.5	8.5	48.5	16.5	18.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	1.6	-4.9	6.3	-9.1	8.2	9.1	-3.4	-2.3
g/C Ratio	0.24	-0.71	0.67	-1.33	1.20	1.34	-0.50	-0.33
Cycles Skipped (%)	0	0	28	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	100	91	34	84	69	94	97	75
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.8
Number of Complete Cycles : 32

Intersection: 2: Sanderson Ave & Ramona Blvd

Phase	1	2	3	6	8
Movement(s) Served	SBL	NBT	NWL	SBT	NWR
Maximum Green (s)	18.5	55.5	22.5	78.5	22.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	Min	None
Avg. Green (s)	-6.7	2.0	-7.9	0.9	-4.5
g/C Ratio	-1.02	0.43	-1.13	0.17	-0.83
Cycles Skipped (%)	31	0	35	16	16
Cycles @ Minimum (%)	0	0	0	0	10
Cycles Maxed Out (%)	0	11	0	10	0
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.5
Number of Complete Cycles : 61

Intersection: 4: Sanderson Ave & Cottonwood Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	8.5	40.5	11.5	31.5	8.5	40.5	12.5	30.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	6.9	2.6	7.8	4.8	6.9	3.3	-6.2	2.3
g/C Ratio	0.84	0.50	1.13	0.92	0.76	0.63	-1.07	0.43
Cycles Skipped (%)	37	0	24	0	43	0	10	4
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	12	12	6	4	10	14	8	0
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.2
Number of Complete Cycles : 49

Intersection: 11: State St & 7th St

Phase	1	2	4	5	6	8
Movement(s) Served	SBL	NBT	EBTL	NBL	SBT	WBTL
Maximum Green (s)	14.5	41.5	40.5	9.5	46.5	40.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	Min	None
Avg. Green (s)	8.3	1.0	1.9	7.2	4.3	1.9
g/C Ratio	1.10	0.17	0.33	0.70	0.74	0.33
Cycles Skipped (%)	23	0	0	44	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	2	19	28	7	12	28
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.8
Number of Complete Cycles : 43

Intersection: 13: Cawston Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	10.5	24.5	14.5	42.5	10.5	24.5	9.5	47.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	-11.7	6.1	-4.2	-4.9	8.1	4.3	7.1	0.3
g/C Ratio	-1.23	1.10	-0.73	-1.07	1.20	0.89	0.87	0.06
Cycles Skipped (%)	52	18	21	0	32	5	44	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	2
Cycles Maxed Out (%)	14	28	16	0	12	14	9	2
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.6
Number of Complete Cycles : 57

Intersection: 14: Sanderson Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	15.5	36.5	16.5	23.5	10.5	41.5	14.5	25.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-6.1	-2.1	-8.2	5.5	7.7	4.6	-8.6	5.7
g/C Ratio	-0.87	-0.31	-1.10	0.82	0.86	0.68	-1.17	0.85
Cycles Skipped (%)	3	0	8	0	24	0	8	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	24	45	8	57	14	37	16	37
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.8
Number of Complete Cycles : 37

Intersection: 16: Lyon Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	5.0	18.0	5.0	18.0	5.0	18.0	5.0	18.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	6.3	2.3	5.1	0.6	6.5	4.2	5.2	4.1
g/C Ratio	0.66	0.59	0.80	0.18	0.33	1.11	0.32	1.13
Cycles Skipped (%)	62	10	43	0	82	5	78	1
Cycles @ Minimum (%)	30	0	57	0	16	0	22	0
Cycles Maxed Out (%)	38	13	57	71	18	19	22	78
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 3.6

Number of Complete Cycles : 77

Intersection: 17: Palm Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	6.5	45.5	9.5	30.5	6.5	45.5	5.5	34.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	6.4	-6.5	7.7	0.7	6.3	-3.8	7.7	2.3
g/C Ratio	0.95	-1.20	0.96	0.12	0.64	-0.71	0.78	0.41
Cycles Skipped (%)	19	0	32	2	45	0	45	4
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	55	2	15	58	26	2	53	36
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.4

Number of Complete Cycles : 47

Intersection: 18: State St & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	21.5	26.5	13.5	30.5	9.5	38.5	13.5	30.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-3.0	8.1	-9.6	-6.4	7.6	0.7	9.7	-5.6
g/C Ratio	-0.47	1.24	-1.31	-0.97	0.85	0.10	1.32	-0.85
Cycles Skipped (%)	0	0	11	0	27	0	11	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	14	54	16	43	16	43	14	57
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 6.5
Number of Complete Cycles : 37

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	3:55	3:55	3:55	3:55	3:55	3:55	3:55
End Time	5:00	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	65	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	16504	16637	16678	16870	16502	16836	16698
Vehs Exited	16129	16209	16169	16353	16088	16405	16299
Starting Vehs	715	641	701	696	705	710	702
Ending Vehs	1090	1069	1210	1213	1119	1141	1101
Denied Entry Before	9	7	5	2	4	4	5
Denied Entry After	100	67	96	79	90	64	81
Travel Distance (mi)	19483	19699	19869	19902	19614	19929	19913
Travel Time (hr)	949.0	965.2	1028.1	1024.4	932.8	994.7	974.3
Total Delay (hr)	497.7	509.3	566.5	562.3	477.7	532.1	512.7
Total Stops	28558	28866	29568	29228	28998	29901	29080
Fuel Used (gal)	811.8	821.7	835.2	839.1	814.0	833.0	831.5

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	3:55	3:55	3:55	3:55
End Time	5:00	5:00	5:00	5:00
Total Time (min)	65	65	65	65
Time Recorded (min)	60	60	60	60
# of Intervals	2	2	2	2
# of Recorded Intervals	1	1	1	1
Vehs Entered	16617	16568	16866	16681
Vehs Exited	16033	16185	16455	16234
Starting Vehs	615	645	697	675
Ending Vehs	1199	1028	1108	1124
Denied Entry Before	2	2	14	3
Denied Entry After	84	101	61	80
Travel Distance (mi)	19616	19764	19953	19774
Travel Time (hr)	991.0	930.6	960.5	975.1
Total Delay (hr)	535.5	472.8	498.4	516.5
Total Stops	28934	28447	29699	29127
Fuel Used (gal)	823.3	818.0	828.8	825.6

Interval #0 Information Seeding

Start Time	3:55
End Time	4:00
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	16504	16637	16678	16870	16502	16836	16698
Vehs Exited	16129	16209	16169	16353	16088	16405	16299
Starting Vehs	715	641	701	696	705	710	702
Ending Vehs	1090	1069	1210	1213	1119	1141	1101
Denied Entry Before	9	7	5	2	4	4	5
Denied Entry After	100	67	96	79	90	64	81
Travel Distance (mi)	19483	19699	19869	19902	19614	19929	19913
Travel Time (hr)	949.0	965.2	1028.1	1024.4	932.8	994.7	974.3
Total Delay (hr)	497.7	509.3	566.5	562.3	477.7	532.1	512.7
Total Stops	28558	28866	29568	29228	28998	29901	29080
Fuel Used (gal)	811.8	821.7	835.2	839.1	814.0	833.0	831.5

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	16617	16568	16866	16681
Vehs Exited	16033	16185	16455	16234
Starting Vehs	615	645	697	675
Ending Vehs	1199	1028	1108	1124
Denied Entry Before	2	2	14	3
Denied Entry After	84	101	61	80
Travel Distance (mi)	19616	19764	19953	19774
Travel Time (hr)	991.0	930.6	960.5	975.1
Total Delay (hr)	535.5	472.8	498.4	516.5
Total Stops	28934	28447	29699	29127
Fuel Used (gal)	823.3	818.0	828.8	825.6

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.3	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.6	0.7	0.4
Denied Del/Veh (s)	2.4	0.5	2.3	2.2	0.4	2.0	0.0	0.0	0.0	2.8	2.0	2.7
Total Delay (hr)	7.0	6.4	0.9	0.8	6.4	4.4	1.8	9.5	0.1	11.7	15.1	3.1
Total Del/Veh (s)	54.2	36.4	19.6	50.5	56.4	29.7	51.1	46.0	11.3	56.9	43.0	23.0
Stop Delay (hr)	5.8	4.1	0.7	0.7	4.8	2.8	1.5	6.7	0.1	7.2	6.4	1.1
Stop Del/Veh (s)	44.8	23.3	15.1	46.0	42.2	18.6	44.7	32.3	9.9	35.2	18.3	8.0
Total Stops	426	408	108	49	359	352	114	562	12	639	771	288
Stop/Veh	0.92	0.64	0.63	0.89	0.88	0.65	0.92	0.76	0.63	0.86	0.61	0.59
Travel Dist (mi)	168.7	233.5	64.0	26.4	198.3	264.1	21.9	129.1	3.3	342.6	587.9	227.0
Travel Time (hr)	10.8	10.1	2.4	1.3	9.5	10.2	2.4	12.0	0.1	19.3	25.7	8.4
Vehicles Entered	449	622	170	53	396	528	122	732	19	724	1241	480
Vehicles Exited	451	622	170	53	398	528	122	732	18	727	1243	480
Hourly Exit Rate	451	622	170	53	398	528	122	732	18	727	1243	480
Input Volume	445	625	168	58	398	529	118	738	20	733	1255	468
% of Volume	101	100	101	91	100	100	103	99	90	99	99	103
Denied Entry Before	0	0	0	0	0	1	0	0	0	1	1	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	1

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	All
Denied Delay (hr)	2.5
Denied Del/Veh (s)	1.6
Total Delay (hr)	67.1
Total Del/Veh (s)	42.8
Stop Delay (hr)	41.8
Stop Del/Veh (s)	26.7
Total Stops	4088
Stop/Veh	0.72
Travel Dist (mi)	2266.7
Travel Time (hr)	112.4
Vehicles Entered	5536
Vehicles Exited	5544
Hourly Exit Rate	5544
Input Volume	5555
% of Volume	100
Denied Entry Before	3
Denied Entry After	1

2: Sanderson Ave & Ramona Blvd Performance by movement

Movement	NBT	NBR	SBL	SBT	NWL	NWR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.2
Denied Del/Veh (s)	0.2	2.8	0.2	0.0	0.3	2.1	0.3
Total Delay (hr)	2.3	0.1	2.1	4.0	0.4	0.2	9.1
Total Del/Veh (s)	10.7	3.6	32.6	11.0	28.1	5.9	12.9
Stop Delay (hr)	0.9	0.0	1.5	0.2	0.4	0.1	3.1
Stop Del/Veh (s)	4.1	2.4	22.7	0.6	25.5	4.5	4.5
Total Stops	250	22	196	119	46	90	723
Stop/Veh	0.32	0.36	0.83	0.09	0.90	0.87	0.29
Travel Dist (mi)	141.7	11.1	42.2	236.2	22.0	44.9	498.1
Travel Time (hr)	4.9	0.4	3.3	8.7	0.9	1.4	19.7
Vehicles Entered	771	60	232	1297	50	102	2512
Vehicles Exited	772	60	232	1298	50	101	2513
Hourly Exit Rate	772	60	232	1298	50	101	2513
Input Volume	776	62	235	1307	51	100	2531
% of Volume	99	97	99	99	98	101	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

3: Cawston Ave & Cottonwood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1
Total Delay (hr)	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.1	0.1	0.2	1.0
Total Del/Veh (s)	0.8	0.2	3.1	2.2	1.0	12.4	8.1	3.7	11.3	10.9	3.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.5
Stop Del/Veh (s)	0.0	0.0	0.9	0.0	0.0	10.2	5.1	2.9	9.2	7.3	1.9
Total Stops	0	0	28	0	1	40	74	76	25	50	294
Stop/Veh	0.00	0.00	0.27	0.00	0.03	0.98	0.64	1.00	1.00	1.00	0.30
Travel Dist (mi)	42.2	9.1	39.0	75.0	14.4	5.8	13.6	10.7	3.2	6.5	219.6
Travel Time (hr)	0.9	0.2	1.0	1.7	0.3	0.3	0.7	0.5	0.2	0.4	6.2
Vehicles Entered	268	58	102	205	38	41	115	76	25	50	978
Vehicles Exited	268	57	102	205	38	40	115	76	25	50	976
Hourly Exit Rate	268	57	102	205	38	40	115	76	25	50	976
Input Volume	276	58	105	211	40	40	116	77	24	44	991
% of Volume	97	98	97	97	95	100	99	99	104	114	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.3	3.4	0.4	0.2	0.0	0.0	0.0	2.4	0.4	2.4
Total Delay (hr)	1.0	1.5	0.2	0.9	1.4	0.2	0.5	3.4	0.3	2.3	4.8	0.2
Total Del/Veh (s)	33.4	26.2	9.2	33.4	29.9	6.8	42.2	17.2	9.3	45.3	16.5	4.0
Stop Delay (hr)	0.9	1.2	0.2	0.8	1.1	0.2	0.4	1.9	0.1	2.1	2.6	0.1
Stop Del/Veh (s)	31.5	21.1	9.0	30.4	22.8	6.0	37.6	9.7	4.0	40.2	9.1	1.6
Total Stops	94	153	61	85	124	92	38	295	58	180	486	62
Stop/Veh	0.89	0.72	0.74	0.86	0.73	0.72	0.95	0.41	0.56	0.98	0.47	0.45
Travel Dist (mi)	10.7	21.7	8.5	24.0	41.4	31.2	19.8	323.2	51.5	31.4	179.9	24.0
Travel Time (hr)	1.3	2.0	0.5	1.6	2.4	1.1	1.0	10.8	1.6	3.3	9.0	1.0
Vehicles Entered	104	210	82	98	168	126	40	705	103	181	1034	138
Vehicles Exited	105	210	82	97	168	126	39	702	103	180	1034	138
Hourly Exit Rate	105	210	82	97	168	126	39	702	103	180	1034	138
Input Volume	104	214	84	101	171	123	43	746	111	175	1025	142
% of Volume	101	98	98	96	98	102	91	94	93	103	101	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	0.6
Total Delay (hr)	16.7
Total Del/Veh (s)	19.9
Stop Delay (hr)	11.7
Stop Del/Veh (s)	14.0
Total Stops	1728
Stop/Veh	0.57
Travel Dist (mi)	767.4
Travel Time (hr)	35.5
Vehicles Entered	2989
Vehicles Exited	2984
Hourly Exit Rate	2984
Input Volume	3039
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

5: 7th St & Karpick St Performance by movement

Movement	EBT	WBT	WBR	SBL	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.1	2.2	2.1	4.0	1.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.5	0.5	2.7	0.7
Total Stops	0	0	0	29	29
Stop/Veh	0.00	0.00	0.00	1.00	0.15
Travel Dist (mi)	5.0	8.4	5.1	0.7	19.3
Travel Time (hr)	0.1	0.3	0.2	0.1	0.8
Vehicles Entered	52	70	42	29	193
Vehicles Exited	52	70	42	29	193
Hourly Exit Rate	52	70	42	29	193
Input Volume	51	68	45	32	196
% of Volume	102	103	93	91	98
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.6	0.2	0.1	0.4	0.0
Total Del/Veh (s)	5.0	8.1	3.1	5.9	4.7	3.2	9.8	12.1	8.9	6.5	8.6	1.7
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2	0.1	0.0	0.2	0.0
Stop Del/Veh (s)	3.1	3.7	2.8	3.5	2.0	2.9	3.8	4.3	4.4	3.8	3.5	2.3
Total Stops	11	40	31	84	54	51	45	169	76	41	178	14
Stop/Veh	1.00	0.98	1.00	1.00	0.58	0.98	1.00	0.96	0.99	0.98	1.00	1.00
Travel Dist (mi)	1.2	4.8	3.6	18.4	16.4	11.4	22.5	86.7	38.3	9.6	41.0	3.1
Travel Time (hr)	0.1	0.2	0.2	0.7	0.6	0.4	0.8	3.2	1.4	0.4	1.6	0.1
Vehicles Entered	11	40	31	84	93	52	45	174	76	41	177	14
Vehicles Exited	11	40	31	84	93	51	45	173	76	41	177	14
Hourly Exit Rate	11	40	31	84	93	51	45	173	76	41	177	14
Input Volume	10	42	32	91	98	54	43	173	79	43	177	12
% of Volume	110	95	97	92	95	94	105	100	96	95	100	117
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	1.8
Total Del/Veh (s)	7.9
Stop Delay (hr)	0.8
Stop Del/Veh (s)	3.5
Total Stops	794
Stop/Veh	0.94
Travel Dist (mi)	257.0
Travel Time (hr)	9.7
Vehicles Entered	838
Vehicles Exited	836
Hourly Exit Rate	836
Input Volume	854
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

7: Sanderson Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.0	0.0	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.8	0.1	1.9	0.9	0.1	0.4	3.4	0.5	1.0	4.8	0.1
Total Del/Veh (s)	26.9	23.5	14.5	36.3	21.8	5.4	30.8	14.8	13.4	38.0	15.8	8.3
Stop Delay (hr)	0.1	0.6	0.1	1.7	0.7	0.1	0.3	0.8	0.1	0.8	1.4	0.0
Stop Del/Veh (s)	24.2	17.6	13.3	32.3	16.4	5.2	22.9	3.6	3.5	29.2	4.5	1.3
Total Stops	18	82	25	172	91	40	38	191	39	80	315	9
Stop/Veh	0.90	0.65	0.71	0.90	0.61	0.68	0.83	0.23	0.30	0.84	0.29	0.24
Travel Dist (mi)	5.0	31.8	8.6	23.1	17.7	7.0	22.9	396.4	63.1	46.9	537.1	18.4
Travel Time (hr)	0.3	1.6	0.4	2.7	1.3	0.3	0.9	11.7	2.0	2.1	16.0	0.5
Vehicles Entered	20	126	34	191	147	59	45	809	126	93	1084	36
Vehicles Exited	19	125	34	190	147	59	45	805	126	93	1084	37
Hourly Exit Rate	19	125	34	190	147	59	45	805	126	93	1084	37
Input Volume	21	124	39	195	160	66	49	848	130	98	1078	34
% of Volume	90	101	87	97	92	89	92	95	97	95	101	109
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Sanderson Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	14.2
Total Del/Veh (s)	18.2
Stop Delay (hr)	6.7
Stop Del/Veh (s)	8.7
Total Stops	1100
Stop/Veh	0.39
Travel Dist (mi)	1177.8
Travel Time (hr)	39.8
Vehicles Entered	2770
Vehicles Exited	2764
Hourly Exit Rate	2764
Input Volume	2842
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

8: Kirby St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	3.7
Total Delay (hr)	0.1	1.9	0.1	0.4	1.6	0.1	0.1	1.0	0.2	0.1	0.6	0.0
Total Del/Veh (s)	15.7	20.2	7.2	13.6	14.7	11.2	13.2	15.7	8.2	11.4	13.3	4.9
Stop Delay (hr)	0.0	1.1	0.1	0.2	0.6	0.1	0.0	0.4	0.1	0.1	0.3	0.0
Stop Del/Veh (s)	11.3	12.1	4.5	6.7	5.4	6.0	7.6	7.1	4.9	8.1	6.8	3.4
Total Stops	14	328	47	93	288	39	23	217	86	27	164	17
Stop/Veh	1.00	0.99	1.04	0.99	0.76	0.98	1.00	0.99	0.99	1.00	0.99	0.94
Travel Dist (mi)	4.9	111.8	15.3	46.1	165.3	19.5	11.4	107.8	42.7	3.2	19.2	2.1
Travel Time (hr)	0.2	4.4	0.5	1.5	5.3	0.6	0.4	3.7	1.4	0.2	1.1	0.1
Vehicles Entered	14	328	45	93	374	39	23	217	85	27	164	18
Vehicles Exited	14	327	45	93	375	39	23	217	86	27	163	18
Hourly Exit Rate	14	327	45	93	375	39	23	217	86	27	163	18
Input Volume	16	335	45	108	406	42	27	238	91	28	167	17
% of Volume	88	98	100	86	92	93	85	91	95	96	98	106
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

8: Kirby St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	6.0
Total Del/Veh (s)	15.0
Stop Delay (hr)	3.0
Stop Del/Veh (s)	7.5
Total Stops	1343
Stop/Veh	0.93
Travel Dist (mi)	549.4
Travel Time (hr)	19.5
Vehicles Entered	1427
Vehicles Exited	1427
Hourly Exit Rate	1427
Input Volume	1520
% of Volume	94
Denied Entry Before	0
Denied Entry After	0

9: Lyon Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.4	0.2
Total Delay (hr)	0.1	2.9	0.1	3.6	25.6	2.4	0.2	1.2	0.1	0.1	1.1	0.0
Total Del/Veh (s)	14.9	26.1	20.0	178.4	183.5	189.3	18.1	19.6	7.6	10.2	17.5	4.5
Stop Delay (hr)	0.0	1.8	0.1	3.6	25.2	2.4	0.2	0.7	0.1	0.1	0.6	0.0
Stop Del/Veh (s)	7.1	15.7	15.5	178.6	180.6	191.5	14.5	12.3	5.1	6.9	9.6	4.5
Total Stops	19	379	23	73	480	46	44	188	49	47	234	33
Stop/Veh	1.00	0.94	0.96	1.00	0.95	1.00	0.98	0.88	0.98	1.00	1.00	1.00
Travel Dist (mi)	9.0	192.6	11.5	34.6	232.5	22.1	8.9	40.1	9.9	3.8	19.0	2.7
Travel Time (hr)	0.3	7.4	0.4	4.5	30.9	3.0	0.5	2.0	0.4	0.3	1.5	0.1
Vehicles Entered	19	398	23	72	493	46	44	211	50	47	233	33
Vehicles Exited	18	395	23	65	448	42	44	211	49	47	233	33
Hourly Exit Rate	18	395	23	65	448	42	44	211	49	47	233	33
Input Volume	21	410	23	71	496	45	45	222	54	52	241	35
% of Volume	86	96	100	92	90	93	98	95	91	90	97	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

9: Lyon Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	37.6
Total Del/Veh (s)	80.3
Stop Delay (hr)	34.9
Stop Del/Veh (s)	74.5
Total Stops	1615
Stop/Veh	0.96
Travel Dist (mi)	586.7
Travel Time (hr)	51.3
Vehicles Entered	1669
Vehicles Exited	1608
Hourly Exit Rate	1608
Input Volume	1715
% of Volume	94
Denied Entry Before	0
Denied Entry After	0

10: Palm Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.2	0.2	0.2
Total Delay (hr)	0.2	2.0	0.1	0.3	5.0	0.3	0.1	0.5	0.1	0.1	0.4	0.1
Total Del/Veh (s)	13.2	17.4	13.0	17.6	32.6	27.4	10.3	10.9	8.5	8.0	11.5	6.6
Stop Delay (hr)	0.1	0.7	0.0	0.2	3.7	0.3	0.1	0.2	0.1	0.0	0.2	0.1
Stop Del/Veh (s)	5.6	6.5	6.9	9.4	24.2	24.3	6.9	5.7	6.4	5.5	5.8	5.4
Total Stops	41	384	24	88	548	43	29	121	52	31	113	33
Stop/Veh	0.98	0.93	1.00	1.33	0.99	1.00	0.97	0.78	1.00	0.97	0.99	0.97
Travel Dist (mi)	20.4	198.1	12.0	8.0	66.9	5.2	11.3	53.7	20.2	2.1	7.5	2.2
Travel Time (hr)	0.7	6.6	0.4	0.6	6.6	0.5	0.4	1.9	0.7	0.2	0.6	0.2
Vehicles Entered	41	410	24	66	549	43	30	154	52	31	113	33
Vehicles Exited	41	408	24	66	549	43	29	154	52	32	113	33
Hourly Exit Rate	41	408	24	66	549	43	29	154	52	32	113	33
Input Volume	45	428	26	67	549	42	32	158	54	32	114	31
% of Volume	91	95	92	99	100	102	91	97	96	100	99	106
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

10: Palm Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	9.1
Total Del/Veh (s)	21.0
Stop Delay (hr)	5.7
Stop Del/Veh (s)	13.2
Total Stops	1507
Stop/Veh	0.96
Travel Dist (mi)	407.7
Travel Time (hr)	19.1
Vehicles Entered	1546
Vehicles Exited	1544
Hourly Exit Rate	1544
Input Volume	1578
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

11: State St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Denied Del/Veh (s)	0.1	0.0	0.2	3.1	0.6	0.2	0.0	0.0	0.0	2.6	0.4	0.4
Total Delay (hr)	1.1	2.4	0.2	1.2	3.9	0.1	1.0	4.5	0.8	1.9	6.5	0.6
Total Del/Veh (s)	58.5	25.6	9.1	42.5	29.9	4.5	54.3	27.3	24.4	55.0	25.7	18.0
Stop Delay (hr)	1.0	1.7	0.1	1.0	2.6	0.1	0.8	2.7	0.6	1.6	4.2	0.4
Stop Del/Veh (s)	53.3	17.8	6.1	35.4	19.5	3.8	46.5	16.7	16.2	48.4	16.6	13.9
Total Stops	65	206	51	106	301	48	63	328	79	139	554	66
Stop/Veh	1.00	0.61	0.57	1.06	0.64	0.55	1.00	0.55	0.63	1.14	0.61	0.59
Travel Dist (mi)	23.6	122.6	32.4	13.5	63.6	11.9	30.7	286.0	61.4	11.3	85.8	10.5
Travel Time (hr)	1.7	5.2	1.1	1.7	5.4	0.5	1.7	11.3	2.5	2.3	8.5	1.0
Vehicles Entered	64	334	89	99	466	87	62	582	123	119	905	110
Vehicles Exited	64	334	87	99	466	87	61	581	123	120	903	111
Hourly Exit Rate	64	334	87	99	466	87	61	581	123	120	903	111
Input Volume	71	348	91	101	459	86	71	611	124	122	899	105
% of Volume	90	96	96	98	102	101	86	95	99	98	100	106
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

11: State St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	0.4
Total Delay (hr)	24.1
Total Del/Veh (s)	28.2
Stop Delay (hr)	16.8
Stop Del/Veh (s)	19.7
Total Stops	2006
Stop/Veh	0.65
Travel Dist (mi)	753.4
Travel Time (hr)	42.8
Vehicles Entered	3040
Vehicles Exited	3036
Hourly Exit Rate	3036
Input Volume	3088
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.6	0.6	0.6	0.4	0.3	0.3
Total Delay (hr)	0.0	0.1	0.0	0.4	0.4	0.1	0.0	4.7	1.1	0.3	1.4	0.1
Total Del/Veh (s)	5.9	11.0	4.3	10.3	4.1	7.9	32.1	34.0	26.1	14.0	17.7	9.4
Stop Delay (hr)	0.0	0.0	0.0	0.2	0.1	0.1	0.0	3.0	0.8	0.2	0.5	0.0
Stop Del/Veh (s)	4.8	5.0	3.9	5.4	0.7	4.7	24.4	21.7	21.0	8.1	6.4	5.4
Total Stops	12	31	2	123	32	59	3	495	145	83	292	26
Stop/Veh	1.00	1.00	1.00	0.97	0.09	0.97	1.00	0.99	0.99	0.99	0.99	1.00
Travel Dist (mi)	1.5	3.9	0.2	128.6	202.2	61.2	0.7	107.1	31.4	18.6	65.6	5.7
Travel Time (hr)	0.1	0.2	0.0	3.2	4.8	1.5	0.0	6.8	1.9	0.8	2.7	0.2
Vehicles Entered	12	31	2	125	354	59	3	494	144	83	292	26
Vehicles Exited	12	31	2	123	353	59	3	494	144	83	292	26
Hourly Exit Rate	12	31	2	123	353	59	3	494	144	83	292	26
Input Volume	11	30	1	139	385	64	5	496	149	86	293	26
% of Volume	109	103	200	88	92	92	60	100	97	97	100	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	8.7
Total Del/Veh (s)	18.9
Stop Delay (hr)	5.0
Stop Del/Veh (s)	11.0
Total Stops	1303
Stop/Veh	0.79
Travel Dist (mi)	626.8
Travel Time (hr)	22.2
Vehicles Entered	1625
Vehicles Exited	1622
Hourly Exit Rate	1622
Input Volume	1685
% of Volume	96
Denied Entry Before	0
Denied Entry After	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.9	0.1	0.1	0.0	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.0
Total Delay (hr)	0.5	1.4	0.4	0.6	1.5	0.1	1.6	1.0	0.1	0.2	1.3	0.4
Total Del/Veh (s)	30.0	18.7	9.4	31.6	17.0	11.2	32.1	17.8	5.2	29.0	25.1	16.2
Stop Delay (hr)	0.5	0.9	0.2	0.5	0.8	0.1	1.3	0.6	0.1	0.2	0.9	0.3
Stop Del/Veh (s)	26.5	12.1	6.5	26.9	9.8	7.3	26.1	11.5	3.0	25.8	17.8	11.8
Total Stops	56	153	88	62	152	27	156	108	38	27	138	69
Stop/Veh	0.90	0.56	0.65	0.89	0.49	0.60	0.89	0.56	0.58	0.90	0.73	0.76
Travel Dist (mi)	49.1	214.4	105.9	34.0	145.4	21.9	78.7	87.1	29.6	14.5	91.4	44.0
Travel Time (hr)	1.6	6.0	2.8	1.4	4.7	0.7	4.0	3.5	1.0	0.7	4.0	1.8
Vehicles Entered	61	268	134	69	307	44	173	191	65	29	186	89
Vehicles Exited	61	267	133	68	307	44	172	189	65	29	185	89
Hourly Exit Rate	61	267	133	68	307	44	172	189	65	29	185	89
Input Volume	63	269	136	81	366	47	167	185	68	31	195	88
% of Volume	97	99	98	84	84	94	103	102	96	94	95	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	9.1
Total Del/Veh (s)	20.0
Stop Delay (hr)	6.5
Stop Del/Veh (s)	14.2
Total Stops	1074
Stop/Veh	0.65
Travel Dist (mi)	916.1
Travel Time (hr)	32.3
Vehicles Entered	1616
Vehicles Exited	1609
Hourly Exit Rate	1609
Input Volume	1696
% of Volume	95
Denied Entry Before	0
Denied Entry After	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0	2.7	0.2	0.3	0.0	0.0	0.0
Total Delay (hr)	1.2	2.4	0.2	1.5	2.1	0.2	0.9	5.9	0.7	2.1	7.0	0.4
Total Del/Veh (s)	44.8	38.7	15.7	41.4	27.9	6.7	48.3	27.1	18.2	50.5	25.0	12.2
Stop Delay (hr)	1.0	1.8	0.2	1.3	1.7	0.2	0.8	3.9	0.5	1.7	3.3	0.1
Stop Del/Veh (s)	38.3	29.3	10.8	37.2	22.4	6.3	43.7	17.7	13.5	40.6	11.8	2.5
Total Stops	84	183	48	113	168	80	64	481	83	129	474	57
Stop/Veh	0.88	0.81	0.92	0.88	0.63	0.71	0.93	0.61	0.64	0.87	0.47	0.47
Travel Dist (mi)	46.3	109.4	25.2	40.7	79.9	36.0	11.1	126.3	21.0	73.1	496.0	60.2
Travel Time (hr)	2.3	4.7	0.9	2.6	4.1	1.2	1.3	8.8	1.3	3.8	17.4	1.9
Vehicles Entered	94	222	51	127	263	111	68	776	128	147	1000	120
Vehicles Exited	93	219	51	126	263	112	68	776	129	145	999	121
Hourly Exit Rate	93	219	51	126	263	112	68	776	129	145	999	121
Input Volume	99	223	52	170	350	155	68	773	128	140	1012	118
% of Volume	94	98	98	74	75	72	100	100	101	104	99	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	24.6
Total Del/Veh (s)	28.2
Stop Delay (hr)	16.5
Stop Del/Veh (s)	18.9
Total Stops	1964
Stop/Veh	0.62
Travel Dist (mi)	1125.1
Travel Time (hr)	50.2
Vehicles Entered	3107
Vehicles Exited	3102
Hourly Exit Rate	3102
Input Volume	3288
% of Volume	94
Denied Entry Before	0
Denied Entry After	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	2.1	24.7	4.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	201.1	195.6	208.0	0.0	0.0	0.0	0.6	0.6	3.4	0.0	0.0	0.5
Total Delay (hr)	1.9	23.4	3.7	9.3	62.3	5.2	0.6	2.0	0.2	0.2	1.6	0.1
Total Del/Veh (s)	209.2	212.3	206.9	479.9	483.6	484.6	25.9	27.7	7.6	20.3	23.3	11.0
Stop Delay (hr)	2.0	23.9	3.9	9.6	63.9	5.4	0.5	1.5	0.1	0.2	1.1	0.1
Stop Del/Veh (s)	218.1	216.6	217.7	495.1	495.6	501.6	22.2	20.9	5.2	15.5	15.5	6.5
Total Stops	19	237	38	68	454	38	87	261	95	43	242	48
Stop/Veh	0.58	0.60	0.59	0.97	0.98	0.97	0.99	0.99	0.99	0.98	0.98	1.00
Travel Dist (mi)	5.2	62.9	10.1	31.9	209.2	17.5	14.8	44.6	16.3	20.4	115.9	22.3
Travel Time (hr)	4.1	49.4	8.2	10.1	67.1	5.7	1.1	3.2	0.8	0.8	4.6	0.8
Vehicles Entered	32	393	63	69	457	39	87	260	95	43	244	48
Vehicles Exited	31	366	59	58	374	31	86	259	95	43	241	47
Hourly Exit Rate	31	366	59	58	374	31	86	259	95	43	241	47
Input Volume	42	472	76	81	550	49	82	261	93	47	256	49
% of Volume	74	78	78	72	68	63	105	99	102	91	94	96
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	5	62	10	0	0	0	0	0	0	0	0	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	31.2
Denied Del/Veh (s)	58.8
Total Delay (hr)	110.8
Total Del/Veh (s)	215.1
Stop Delay (hr)	112.3
Stop Del/Veh (s)	218.0
Total Stops	1630
Stop/Veh	0.88
Travel Dist (mi)	571.2
Travel Time (hr)	156.0
Vehicles Entered	1830
Vehicles Exited	1690
Hourly Exit Rate	1690
Input Volume	2058
% of Volume	82
Denied Entry Before	0
Denied Entry After	77

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.0	0.1	0.0	0.1	0.0	4.3	1.3	4.6	0.0	0.0	0.0
Total Delay (hr)	0.4	2.8	0.1	6.0	31.9	1.8	0.7	1.9	0.3	0.6	2.0	0.1
Total Del/Veh (s)	48.2	21.5	9.9	199.5	178.7	80.7	83.4	33.4	10.4	40.9	28.7	13.8
Stop Delay (hr)	0.3	1.5	0.0	5.8	30.0	1.6	0.7	1.5	0.2	0.6	1.5	0.1
Stop Del/Veh (s)	41.3	11.8	4.5	191.8	168.2	73.4	79.3	25.0	8.3	37.3	21.2	12.8
Total Stops	26	228	16	134	541	69	30	153	68	49	170	12
Stop/Veh	0.96	0.49	0.48	1.23	0.84	0.86	0.97	0.73	0.76	0.91	0.67	0.67
Travel Dist (mi)	13.2	226.3	16.1	46.7	287.0	37.3	2.8	19.1	8.2	15.8	74.2	5.4
Travel Time (hr)	0.7	8.0	0.5	7.3	39.3	2.8	0.8	2.4	0.7	1.0	3.5	0.2
Vehicles Entered	27	456	32	107	635	78	31	208	89	53	250	18
Vehicles Exited	27	457	32	85	525	71	29	207	89	53	248	18
Hourly Exit Rate	27	457	32	85	525	71	29	207	89	53	248	18
Input Volume	32	552	39	111	637	80	30	209	86	55	260	20
% of Volume	84	83	82	77	82	89	97	99	103	96	95	90
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	1	1	0	0	0

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.4
Total Delay (hr)	48.6
Total Del/Veh (s)	87.0
Stop Delay (hr)	43.8
Stop Del/Veh (s)	78.5
Total Stops	1496
Stop/Veh	0.74
Travel Dist (mi)	752.0
Travel Time (hr)	67.3
Vehicles Entered	1984
Vehicles Exited	1841
Hourly Exit Rate	1841
Input Volume	2111
% of Volume	87
Denied Entry Before	0
Denied Entry After	2

17: Palm Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.5	0.5	1.3	0.2	1.6
Total Delay (hr)	0.3	5.0	0.4	1.8	8.7	0.3	0.9	1.0	0.5	0.8	1.2	0.1
Total Del/Veh (s)	46.3	33.7	25.3	58.6	41.2	12.4	44.2	26.2	14.0	39.4	24.1	5.5
Stop Delay (hr)	0.2	2.6	0.2	1.2	4.8	0.2	0.8	0.7	0.4	0.8	1.0	0.1
Stop Del/Veh (s)	35.3	17.8	15.2	41.4	22.6	6.8	39.7	18.9	10.7	36.5	19.6	4.4
Total Stops	26	352	34	121	554	43	70	93	94	72	128	30
Stop/Veh	1.04	0.66	0.68	1.12	0.73	0.52	0.97	0.70	0.73	0.96	0.70	0.68
Travel Dist (mi)	12.4	258.2	24.2	53.1	367.8	40.7	10.3	19.0	18.3	6.5	16.0	3.8
Travel Time (hr)	0.6	10.4	1.0	3.2	18.2	1.4	1.3	1.5	1.1	1.1	1.7	0.2
Vehicles Entered	25	525	49	106	748	81	71	131	126	74	181	44
Vehicles Exited	25	522	49	105	733	81	70	130	126	74	181	44
Hourly Exit Rate	25	522	49	105	733	81	70	130	126	74	181	44
Input Volume	31	608	54	111	739	85	73	128	123	77	180	45
% of Volume	81	86	91	95	99	95	96	102	102	96	101	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.3
Total Delay (hr)	20.9
Total Del/Veh (s)	34.2
Stop Delay (hr)	12.9
Stop Del/Veh (s)	21.2
Total Stops	1617
Stop/Veh	0.74
Travel Dist (mi)	830.3
Travel Time (hr)	41.8
Vehicles Entered	2161
Vehicles Exited	2140
Hourly Exit Rate	2140
Input Volume	2254
% of Volume	95
Denied Entry Before	0
Denied Entry After	0

18: State St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	2.3	0.2	0.3	3.0	0.2	0.2	0.0	0.0	0.0
Total Delay (hr)	1.4	5.3	0.6	2.2	8.7	1.8	1.0	4.9	1.2	4.4	6.6	1.3
Total Del/Veh (s)	54.7	34.0	28.9	61.3	42.8	32.5	53.8	36.1	25.9	64.5	33.5	30.0
Stop Delay (hr)	1.2	3.5	0.4	1.9	6.5	1.4	0.9	3.8	0.9	3.5	3.6	0.8
Stop Del/Veh (s)	45.9	22.3	20.6	52.7	31.8	25.2	48.3	28.1	21.0	50.8	18.6	18.0
Total Stops	99	359	51	161	607	164	72	363	126	265	432	103
Stop/Veh	1.04	0.64	0.72	1.26	0.83	0.83	1.12	0.75	0.78	1.07	0.61	0.65
Travel Dist (mi)	46.2	269.8	35.2	35.1	202.2	54.8	14.2	108.3	36.1	121.1	339.9	77.9
Travel Time (hr)	2.5	11.0	1.4	3.2	13.9	3.4	1.4	7.6	2.3	7.5	14.4	3.3
Vehicles Entered	93	552	71	125	723	196	62	476	159	241	692	156
Vehicles Exited	92	549	70	125	717	194	63	479	159	242	688	154
Hourly Exit Rate	92	549	70	125	717	194	63	479	159	242	688	154
Input Volume	108	616	77	130	713	196	67	502	154	243	693	155
% of Volume	85	89	91	96	101	99	94	95	103	100	99	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: State St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.2
Total Delay (hr)	39.3
Total Del/Veh (s)	39.2
Stop Delay (hr)	28.3
Stop Del/Veh (s)	28.3
Total Stops	2802
Stop/Veh	0.78
Travel Dist (mi)	1340.8
Travel Time (hr)	72.0
Vehicles Entered	3546
Vehicles Exited	3532
Hourly Exit Rate	3532
Input Volume	3654
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

19: Cawston Ave & Eaton Ave Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	2.4	0.0	0.0	0.3	0.0	0.2
Total Delay (hr)	0.0	0.0	0.8	0.1	0.1	1.0	2.1
Total Del/Veh (s)	4.4	2.6	9.6	6.0	7.8	9.3	8.6
Stop Delay (hr)	0.0	0.0	0.3	0.0	0.1	0.3	0.7
Stop Del/Veh (s)	2.9	2.3	2.9	2.8	3.3	2.8	2.8
Total Stops	31	52	304	44	66	366	863
Stop/Veh	1.00	1.00	0.96	1.00	0.99	0.99	0.98
Travel Dist (mi)	10.4	17.3	76.6	10.9	31.7	173.0	319.8
Travel Time (hr)	0.3	0.6	3.1	0.4	1.1	6.1	11.7
Vehicles Entered	31	52	313	44	66	365	871
Vehicles Exited	31	52	314	44	66	365	872
Hourly Exit Rate	31	52	314	44	66	365	872
Input Volume	31	49	308	46	73	387	894
% of Volume	100	106	102	96	90	94	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

20: Cawston Ave & Coriander Dr/Fruitvale Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.2	0.2	3.2	2.9	0.1	0.1	0.6	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.7	0.1	0.1	1.1	0.0
Total Del/Veh (s)	6.0	3.3	3.3	5.3	8.7	2.9	5.6	7.9	3.5	7.8	9.8	6.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Stop Del/Veh (s)	4.4	2.1	3.1	3.2	3.4	2.5	3.2	2.8	2.5	3.3	2.9	3.7
Total Stops	1	1	5	47	2	37	7	319	56	51	405	1
Stop/Veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.98	0.98	0.99	1.00
Travel Dist (mi)	0.1	0.1	0.7	11.1	0.5	8.8	1.8	77.4	13.6	11.8	94.4	0.3
Travel Time (hr)	0.0	0.0	0.0	0.4	0.0	0.3	0.1	3.0	0.5	0.5	3.9	0.0
Vehicles Entered	1	1	5	47	2	37	7	319	57	51	406	1
Vehicles Exited	1	1	5	47	2	37	7	319	56	51	405	1
Hourly Exit Rate	1	1	5	47	2	37	7	319	56	51	405	1
Input Volume	2	1	5	44	3	34	7	318	58	53	429	2
% of Volume	50	100	100	107	67	109	100	100	97	96	94	50
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

20: Cawston Ave & Coriander Dr/Fruitvale Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	2.1
Total Del/Veh (s)	8.1
Stop Delay (hr)	0.7
Stop Del/Veh (s)	2.9
Total Stops	932
Stop/Veh	0.99
Travel Dist (mi)	220.6
Travel Time (hr)	8.7
Vehicles Entered	934
Vehicles Exited	932
Hourly Exit Rate	932
Input Volume	956
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

Total Network Performance

Denied Delay (hr)	35.9
Denied Del/Veh (s)	7.7
Total Delay (hr)	480.6
Total Del/Veh (s)	99.7
Stop Delay (hr)	359.9
Stop Del/Veh (s)	74.6
Total Stops	29127
Stop/Veh	1.68
Travel Dist (mi)	19774.1
Travel Time (hr)	975.1
Vehicles Entered	16681
Vehicles Exited	16234
Hourly Exit Rate	16234
Input Volume	64287
% of Volume	25
Denied Entry Before	3
Denied Entry After	80

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	252	279	250	253	156	57	69	252	351	334	94	107
Average Queue (ft)	146	173	145	143	59	15	26	145	137	196	41	50
95th Queue (ft)	228	253	219	216	119	42	58	220	267	315	81	93
Link Distance (ft)			1976	1976				2634	2634			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	400	400			180	375	375			143	400	400
Storage Blk Time (%)				2	0			0	3	19		
Queuing Penalty (veh)				4	0			0	17	38		

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	307	312	29	319	351	1448	514	334
Average Queue (ft)	198	191	5	205	223	294	256	118
95th Queue (ft)	287	285	19	292	309	795	431	262
Link Distance (ft)	873	873	873			2486	2486	
Upstream Blk Time (%)						0		
Queuing Penalty (veh)						0		
Storage Bay Dist (ft)				400	400			250
Storage Blk Time (%)				0	0	1	7	0
Queuing Penalty (veh)				0	0	4	34	2

Intersection: 2: Sanderson Ave & Ramona Blvd

Movement	NB	NB	NB	SB	SB	SB	NW	NW
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	187	143	60	222	184	175	93	86
Average Queue (ft)	99	50	16	112	40	55	32	31
95th Queue (ft)	162	108	44	189	117	132	71	67
Link Distance (ft)	969	969			873	873	2330	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			120	170				50
Storage Blk Time (%)		0		3	0		7	1
Queuing Penalty (veh)		0		17	0		7	1

Intersection: 3: Cawston Ave & Cottonwood Ave

Movement	EB	WB	WB	NB	NB	SB
Directions Served	T	L	TR	LT	R	LT
Maximum Queue (ft)	2	44	4	91	75	75
Average Queue (ft)	0	14	0	46	33	36
95th Queue (ft)	2	35	3	77	55	62
Link Distance (ft)	830		1962	697		682
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		195			150	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	R	L	L	T
Maximum Queue (ft)	80	93	94	107	66	57	102	168	77	72	52	185
Average Queue (ft)	29	40	48	47	27	17	43	77	31	27	5	85
95th Queue (ft)	65	73	82	89	55	44	84	142	60	60	29	161
Link Distance (ft)			507	507				1294	1294			2541
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300	300			205	320	320			300	300	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	R
Maximum Queue (ft)	201	70	164	190	298	278	58
Average Queue (ft)	97	21	40	98	164	136	28
95th Queue (ft)	179	51	117	166	251	225	53
Link Distance (ft)	2541				915	915	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		210	290	290			200
Storage Blk Time (%)	0				0	1	
Queuing Penalty (veh)	0				0	1	

Intersection: 5: 7th St & Karpick St

Movement	SB
Directions Served	LR
Maximum Queue (ft)	52
Average Queue (ft)	20
95th Queue (ft)	47
Link Distance (ft)	135
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Cawston Ave & 7th St

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	L	T	TR	L	TR	LT	R
Maximum Queue (ft)	57	77	48	54	65	118	77	22
Average Queue (ft)	32	34	22	30	27	62	42	7
95th Queue (ft)	50	60	46	51	55	100	68	21
Link Distance (ft)	572		1110	1110		2590	1226	1226
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		160			85			
Storage Blk Time (%)					0	1		
Queuing Penalty (veh)					0	1		

Intersection: 7: Sanderson Ave & 7th St

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	64	149	192	209	63	78	224	254	139	248	255	28
Average Queue (ft)	13	63	103	72	23	29	71	95	55	95	104	4
95th Queue (ft)	46	121	168	152	51	66	175	203	115	215	224	17
Link Distance (ft)		1368		646			2569	2569		2541	2541	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	53		145		600	300			360			360
Storage Blk Time (%)	0	12	3	0			0					
Queuing Penalty (veh)	0	2	7	1			0					

Intersection: 8: Kirby St & 7th St

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	LT	R	LT	R
Maximum Queue (ft)	209	91	58	108	92	54	109	35
Average Queue (ft)	84	23	30	51	49	23	52	13
95th Queue (ft)	165	76	49	86	78	42	86	37
Link Distance (ft)	1855			2533	2574		620	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		110	150			280		70
Storage Blk Time (%)	7			0			3	0
Queuing Penalty (veh)	3			0			0	0

Intersection: 9: Lyon Ave & 7th St

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	LTR	LT	R	L	T	R
Maximum Queue (ft)	87	210	1619	185	60	60	138	45
Average Queue (ft)	16	88	812	84	28	27	67	19
95th Queue (ft)	75	175	1762	148	55	54	110	42
Link Distance (ft)		2533	2566	1006			429	429
Upstream Blk Time (%)			0					
Queuing Penalty (veh)			0					
Storage Bay Dist (ft)	150				105	150		
Storage Blk Time (%)		5		5			0	
Queuing Penalty (veh)		1		3			0	

Intersection: 10: Palm Ave & 7th St

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	59	144	170	411	128	104
Average Queue (ft)	25	70	87	217	61	50
95th Queue (ft)	52	112	202	373	99	81
Link Distance (ft)		2566		601	2000	350
Upstream Blk Time (%)				0		
Queuing Penalty (veh)				0		
Storage Bay Dist (ft)	100		75			
Storage Blk Time (%)		2	0	61		
Queuing Penalty (veh)		1	0	41		

Intersection: 11: State St & 7th St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	TR
Maximum Queue (ft)	159	280	187	140	390	88	144	236	252	175	421	347
Average Queue (ft)	60	145	42	79	215	28	53	117	147	110	231	189
95th Queue (ft)	129	239	122	154	353	61	117	210	238	194	359	307
Link Distance (ft)		1929			721	721		2560	2560		491	491
Upstream Blk Time (%)											0	
Queuing Penalty (veh)											0	
Storage Bay Dist (ft)	95		215	60			85			105		
Storage Blk Time (%)	5	22	0	13	40		2	17		7	30	
Queuing Penalty (veh)	23	36	0	60	40		7	12		30	37	

Intersection: 12: Warren Ave & Esplanade Ave

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (ft)	59	80	61	412	176
Average Queue (ft)	25	37	32	186	80
95th Queue (ft)	49	64	55	358	136
Link Distance (ft)	671	5387	5387	1142	1186
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 13: Cawston Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	85	121	143	88	111	134	168	170	58	66	208
Average Queue (ft)	38	55	75	42	44	63	88	74	24	24	110
95th Queue (ft)	72	101	127	82	91	114	144	137	52	56	182
Link Distance (ft)		5387	5387		2540	2540		2579	2579	2590	2590
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150			150			150				
Storage Blk Time (%)		0			0		1	0			
Queuing Penalty (veh)		0			0		2	1			

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	138	150	131	80	164	214	81	145	289	273	231	322
Average Queue (ft)	62	55	67	31	84	119	37	45	171	158	99	154
95th Queue (ft)	116	108	119	82	141	191	67	103	256	252	173	262
Link Distance (ft)		2540	2540			1649	1649		840	840		2569
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	130			55	155			225			245	
Storage Blk Time (%)	1	0	19	1	1	3			2			1
Queuing Penalty (veh)	1	0	10	1	2	6			1			2

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	330	225
Average Queue (ft)	166	44
95th Queue (ft)	274	142
Link Distance (ft)	2569	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)	5	
Queuing Penalty (veh)	5	

Intersection: 15: Kirby St & Esplanade Ave

Movement	EB	B60	WB	NB	NB	SB	SB
Directions Served	LTR	T	LTR	LT	R	LT	R
Maximum Queue (ft)	922	758	2583	266	68	189	105
Average Queue (ft)	737	190	1912	117	36	84	30
95th Queue (ft)	1101	669	3274	210	60	152	75
Link Distance (ft)	834	1649	2574	903		2574	
Upstream Blk Time (%)	46		7				
Queuing Penalty (veh)	226		46				
Storage Bay Dist (ft)					132		100
Storage Blk Time (%)				11		8	
Queuing Penalty (veh)				10		4	

Intersection: 16: Lyon Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	77	239	79	220	2486	1826	123	263	153	111	201	33
Average Queue (ft)	22	135	11	128	861	443	33	107	30	38	108	7
95th Queue (ft)	58	210	46	262	2336	1479	91	209	87	82	181	24
Link Distance (ft)		2574			2526	2526		476			1520	
Upstream Blk Time (%)					2	0		1				
Queuing Penalty (veh)					8	1		0				
Storage Bay Dist (ft)	122		122	140			120		120	118		118
Storage Blk Time (%)		9		1	47		3	6		0	7	
Queuing Penalty (veh)		7		4	52		8	7		0	5	

Intersection: 17: Palm Ave & Esplanade Ave

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB		
Directions Served	L	TR	L	T	R	L	TR	L	T	R		
Maximum Queue (ft)	135	390	314	829	550	138	201	118	192	61		
Average Queue (ft)	26	219	123	324	81	49	98	56	86	22		
95th Queue (ft)	101	361	289	698	376	103	169	100	153	51		
Link Distance (ft)		2526		2572	2572		765		508			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	160		250			75		150		150		
Storage Blk Time (%)		18	0	18		4	17	0	1			
Queuing Penalty (veh)		6	0	20		9	13	0	1			

Intersection: 18: State St & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	145	238	252	195	431	421	154	294	308	150	387	364
Average Queue (ft)	82	138	156	137	268	252	71	171	166	136	216	209
95th Queue (ft)	149	220	236	235	397	374	151	259	259	171	376	346
Link Distance (ft)		2572	2572		1477	1477		1199	1199		2560	2560
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100			140			105			100		
Storage Blk Time (%)	7	22		5	39		1	27		41	18	
Queuing Penalty (veh)	21	24		18	51		2	18		136	44	

Intersection: 19: Cawston Ave & Eaton Ave

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	45	57	67	63	58	69	76
Average Queue (ft)	19	26	40	37	30	41	45
95th Queue (ft)	43	48	61	56	52	62	68
Link Distance (ft)	1756		1246	1246		2579	2579
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		50			105		
Storage Blk Time (%)	0	0					
Queuing Penalty (veh)	0	0					

Intersection: 20: Cawston Ave & Coriander Dr/Fruitvale Ave

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	30	58	52	33	67	81	50	59	70
Average Queue (ft)	7	26	22	7	40	40	22	30	33
95th Queue (ft)	27	50	49	27	60	65	41	49	57
Link Distance (ft)	670	1254			1280	1280		1246	1246
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			50	150			58		
Storage Blk Time (%)		0	0				0	0	
Queuing Penalty (veh)		0	0				0	0	

Network Summary

Network wide Queuing Penalty: 1203

Intersection: 1: Sanderson Ave & Ramona Expy

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	29.5	26.5	7.5	28.5	7.5	48.5	19.5	16.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	9.3	6.7	7.0	-8.7	7.4	8.7	-1.0	-3.6
g/C Ratio	1.36	0.97	0.77	-1.27	1.04	1.27	-0.14	-0.53
Cycles Skipped (%)	0	0	25	0	3	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	91	94	38	94	78	97	81	88
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.9
Number of Complete Cycles : 32

Intersection: 2: Sanderson Ave & Ramona Blvd

Phase	1	2	3	6	8
Movement(s) Served	SBL	NBT	NWL	SBT	NWR
Maximum Green (s)	18.5	55.5	22.5	78.5	22.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	Min	None
Avg. Green (s)	0.7	-2.1	7.5	5.3	7.2
g/C Ratio	0.16	-0.53	0.98	0.86	1.19
Cycles Skipped (%)	9	0	48	35	34
Cycles @ Minimum (%)	0	0	0	0	9
Cycles Maxed Out (%)	14	5	0	17	0
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.0
Number of Complete Cycles : 64

Intersection: 4: Sanderson Ave & Cottonwood Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	8.5	40.5	11.5	31.5	8.5	40.5	12.5	30.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-6.3	1.5	-8.1	0.8	6.8	-6.2	-8.2	0.9
g/C Ratio	-1.16	0.28	-1.29	0.15	0.66	-1.15	-1.30	0.17
Cycles Skipped (%)	2	0	15	2	48	0	15	4
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	76	11	11	2	7	46	7	0
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 5.3
Number of Complete Cycles : 46

Intersection: 7: Sanderson Ave & 7th St

Phase	2	4	6	8
Movement(s) Served	NBTL	EBTL	SBTL	WBTL
Maximum Green (s)	61.5	39.5	61.5	39.5
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	Min	None	Min	None
Avg. Green (s)	2.4	-5.5	2.4	-5.5
g/C Ratio	0.46	-1.04	0.46	-1.04
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	23	6	23	6
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): 5.3
Number of Complete Cycles : 46

Intersection: 11: State St & 7th St

Phase	1	2	4	5	6	8
Movement(s) Served	SBL	NBT	EBTL	NBL	SBT	WBTL
Maximum Green (s)	15.5	39.5	41.5	9.5	45.5	41.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	Min	None
Avg. Green (s)	-7.8	0.4	1.7	7.8	5.6	1.7
g/C Ratio	-1.16	0.06	0.27	0.96	0.86	0.27
Cycles Skipped (%)	3	0	0	19	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	17	49	58	28	51	58
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 6.6
Number of Complete Cycles : 35

Intersection: 13: Cawston Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	10.5	24.5	14.5	42.5	10.5	24.5	9.5	47.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	9.0	-0.7	7.7	-4.3	-2.5	3.1	7.0	-3.9
g/C Ratio	0.74	-0.16	1.08	-1.00	-0.52	0.64	0.99	-0.92
Cycles Skipped (%)	65	5	40	0	12	13	40	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	2
Cycles Maxed Out (%)	5	40	0	0	43	10	8	0
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 4.3
Number of Complete Cycles : 60

Intersection: 14: Sanderson Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	16.5	35.5	16.5	23.5	11.5	40.5	14.5	25.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-6.2	-0.1	-6.9	3.0	8.2	5.7	-9.8	5.5
g/C Ratio	-0.89	-0.01	-0.97	0.43	0.98	0.84	-1.29	0.81
Cycles Skipped (%)	3	0	5	3	19	0	11	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	22	70	14	41	14	65	11	39
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.8

Number of Complete Cycles : 36

Intersection: 16: Lyon Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	7.5	23.5	13.5	47.5	5.5	25.5	5.5	55.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	7.4	2.6	8.9	7.5	6.2	5.3	5.5	-1.7
g/C Ratio	0.91	0.43	1.28	1.30	0.57	0.91	0.43	-0.30
Cycles Skipped (%)	29	2	17	0	46	0	55	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	38	24	7	26	54	29	40	46
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.8

Number of Complete Cycles : 41

Intersection: 17: Palm Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	6.5	43.5	8.5	33.5	7.5	42.5	8.5	33.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	6.3	4.5	-8.4	2.4	7.0	4.4	6.9	-5.6
g/C Ratio	0.86	0.79	-1.28	0.42	0.91	0.78	0.49	-0.99
Cycles Skipped (%)	22	0	13	2	27	0	60	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	49	0	47	57	44	0	4	89
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 5.7
Number of Complete Cycles : 45

Intersection: 18: State St & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	21.5	25.5	15.5	29.5	8.5	38.5	15.5	29.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-1.1	8.0	-8.4	-8.1	7.5	1.5	10.3	-5.7
g/C Ratio	-0.17	1.22	-1.25	-1.24	0.94	0.23	1.38	-0.87
Cycles Skipped (%)	0	0	3	0	18	0	12	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	34	82	21	65	32	74	9	97
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 6.5
Number of Complete Cycles : 34

Appendix E - SimTraffic Reports – Opening Year Plus Project Operations

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	7:25	7:25	7:25	7:25	7:25	7:25	7:25
End Time	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Total Time (min)	65	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	15469	15547	15327	15466	15223	15405	15540
Vehs Exited	15171	15323	15033	15133	15054	15068	15350
Starting Vehs	641	597	602	605	640	585	598
Ending Vehs	939	821	896	938	809	922	788
Denied Entry Before	5	4	2	3	1	1	1
Denied Entry After	26	26	40	40	15	32	22
Travel Distance (mi)	18482	18478	18308	18378	18199	18277	18584
Travel Time (hr)	813.6	769.5	830.2	811.6	751.9	794.1	796.7
Total Delay (hr)	381.2	336.5	400.5	380.3	325.4	365.0	360.5
Total Stops	28739	28554	28160	28179	27855	28220	28686
Fuel Used (gal)	748.9	740.8	745.2	746.3	726.1	737.9	750.0

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	7:25	7:25	7:25	7:25
End Time	8:30	8:30	8:30	8:30
Total Time (min)	65	65	65	65
Time Recorded (min)	60	60	60	60
# of Intervals	2	2	2	2
# of Recorded Intervals	1	1	1	1
Vehs Entered	15353	15413	15654	15429
Vehs Exited	15070	15261	15389	15184
Starting Vehs	581	634	572	594
Ending Vehs	864	786	837	838
Denied Entry Before	3	3	1	0
Denied Entry After	27	16	7	22
Travel Distance (mi)	18213	18406	18470	18380
Travel Time (hr)	784.7	749.9	781.6	788.4
Total Delay (hr)	357.5	318.8	349.3	357.5
Total Stops	28424	27947	28295	28305
Fuel Used (gal)	735.4	734.1	742.5	740.7

Interval #0 Information Seeding

Start Time	7:25
End Time	7:30
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:30
End Time	8:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	15469	15547	15327	15466	15223	15405	15540
Vehs Exited	15171	15323	15033	15133	15054	15068	15350
Starting Vehs	641	597	602	605	640	585	598
Ending Vehs	939	821	896	938	809	922	788
Denied Entry Before	5	4	2	3	1	1	1
Denied Entry After	26	26	40	40	15	32	22
Travel Distance (mi)	18482	18478	18308	18378	18199	18277	18584
Travel Time (hr)	813.6	769.5	830.2	811.6	751.9	794.1	796.7
Total Delay (hr)	381.2	336.5	400.5	380.3	325.4	365.0	360.5
Total Stops	28739	28554	28160	28179	27855	28220	28686
Fuel Used (gal)	748.9	740.8	745.2	746.3	726.1	737.9	750.0

Interval #1 Information Recording

Start Time	7:30
End Time	8:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	15353	15413	15654	15429
Vehs Exited	15070	15261	15389	15184
Starting Vehs	581	634	572	594
Ending Vehs	864	786	837	838
Denied Entry Before	3	3	1	0
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Total Delay (hr)	357.5	318.8	349.3	357.5
Total Stops	28424	27947	28295	28305
Fuel Used (gal)	735.4	734.1	742.5	740.7

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.4	0.0	0.1	0.0	0.1	0.4	0.0	0.0	0.0	0.3	0.1	0.2
Denied Del/Veh (s)	2.7	0.4	2.5	2.1	0.5	2.1	0.0	0.0	0.0	1.9	0.6	1.8
Total Delay (hr)	16.8	3.3	0.2	0.7	7.2	33.4	2.8	18.6	0.1	9.1	4.2	1.1
Total Del/Veh (s)	118.1	34.7	7.9	53.2	60.9	184.0	59.1	61.7	8.5	57.2	24.2	12.3
Stop Delay (hr)	15.0	2.2	0.1	0.6	4.9	27.5	2.4	13.0	0.1	7.3	2.3	0.6
Stop Del/Veh (s)	105.4	23.3	4.9	46.8	42.0	151.7	49.7	43.0	7.0	46.1	13.1	7.1
Total Stops	650	219	55	45	430	717	167	1048	34	540	301	168
Stop/Veh	1.27	0.64	0.60	0.94	1.01	1.10	0.97	0.96	0.63	0.94	0.49	0.51
Travel Dist (mi)	186.5	126.5	33.9	22.9	206.9	309.7	30.3	191.5	9.7	265.3	289.9	153.5
Travel Time (hr)	21.0	5.3	1.0	1.2	10.4	40.1	3.7	22.4	0.4	14.9	9.2	4.6
Vehicles Entered	498	336	90	46	414	635	170	1073	54	561	613	324
Vehicles Exited	486	336	90	47	411	591	169	1062	54	561	612	325
Hourly Exit Rate	486	336	90	47	411	591	169	1062	54	561	612	325
Input Volume	495	344	93	47	407	631	173	1073	56	550	618	323
% of Volume	98	98	97	100	101	94	98	99	96	102	99	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	1	0	0	0	0	0	0

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	All
Denied Delay (hr)	1.5
Denied Del/Veh (s)	1.1
Total Delay (hr)	97.6
Total Del/Veh (s)	71.6
Stop Delay (hr)	76.1
Stop Del/Veh (s)	55.9
Total Stops	4374
Stop/Veh	0.89
Travel Dist (mi)	1826.6
Travel Time (hr)	134.1
Vehicles Entered	4814
Vehicles Exited	4744
Hourly Exit Rate	4744
Input Volume	4810
% of Volume	99
Denied Entry Before	0
Denied Entry After	1

2: Sanderson Ave & Ramona Blvd Performance by movement

Movement	NBT	NBR	SBL	SBT	NWL	NWR	All
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1	0.2
Denied Del/Veh (s)	0.3	2.4	0.0	0.0	0.3	2.0	0.4
Total Delay (hr)	3.4	0.0	0.8	1.3	0.6	0.3	6.5
Total Del/Veh (s)	10.6	2.7	30.0	7.3	28.1	8.2	10.7
Stop Delay (hr)	1.1	0.0	0.7	0.2	0.5	0.3	2.7
Stop Del/Veh (s)	3.3	1.3	24.1	0.9	24.9	6.3	4.4
Total Stops	314	14	83	76	65	125	677
Stop/Veh	0.27	0.30	0.84	0.11	0.88	0.86	0.31
Travel Dist (mi)	211.8	8.4	18.0	121.7	32.0	63.9	455.9
Travel Time (hr)	7.4	0.3	1.3	3.8	1.4	2.1	16.2
Vehicles Entered	1153	46	97	655	73	144	2168
Vehicles Exited	1152	46	96	657	72	144	2167
Hourly Exit Rate	1152	46	96	657	72	144	2167
Input Volume	1161	44	99	663	74	140	2181
% of Volume	99	105	97	99	97	103	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

3: Cawston Ave & Cottonwood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.6	0.2	0.2	0.1
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.8
Total Del/Veh (s)	0.7	0.1	2.7	1.7	1.1	10.4	10.6	3.4	9.5	11.0	3.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.4
Stop Del/Veh (s)	0.0	0.0	0.8	0.0	0.0	8.4	6.2	2.8	7.2	7.2	1.8
Total Stops	0	0	16	0	0	50	24	91	34	66	281
Stop/Veh	0.00	0.00	0.26	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.32
Travel Dist (mi)	42.3	4.5	23.6	86.6	5.3	6.5	3.1	12.0	4.4	8.5	196.8
Travel Time (hr)	0.9	0.1	0.6	1.9	0.1	0.4	0.2	0.5	0.3	0.5	5.4
Vehicles Entered	268	28	62	245	14	50	24	91	34	66	882
Vehicles Exited	268	28	62	245	14	50	24	90	34	66	881
Hourly Exit Rate	268	28	62	245	14	50	24	90	34	66	881
Input Volume	267	28	61	241	12	54	22	90	35	65	875
% of Volume	100	100	102	102	117	93	109	100	97	102	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.9	3.3	0.4	0.2	0.1	0.0	0.1	2.8	0.3	2.8
Total Delay (hr)	1.3	1.9	0.1	0.7	1.4	0.5	0.6	5.1	0.2	0.6	3.0	0.1
Total Del/Veh (s)	32.8	23.4	5.3	34.7	27.9	10.8	41.7	21.2	8.9	37.5	15.9	3.4
Stop Delay (hr)	1.2	1.5	0.1	0.7	1.1	0.5	0.5	2.5	0.0	0.6	1.9	0.0
Stop Del/Veh (s)	30.6	18.2	5.0	32.1	20.8	9.5	35.6	10.5	2.7	34.4	9.7	1.7
Total Stops	125	196	39	67	132	126	46	434	31	56	325	45
Stop/Veh	0.86	0.67	0.65	0.87	0.71	0.74	0.94	0.50	0.49	0.92	0.47	0.50
Travel Dist (mi)	13.7	27.9	5.7	18.7	45.6	42.0	23.8	420.9	30.8	10.4	118.2	15.5
Travel Time (hr)	1.8	2.5	0.3	1.3	2.5	1.7	1.2	14.8	0.9	1.0	5.7	0.6
Vehicles Entered	145	292	59	76	184	170	48	854	62	60	679	89
Vehicles Exited	144	291	59	76	184	170	48	850	62	60	680	89
Hourly Exit Rate	144	291	59	76	184	170	48	850	62	60	680	89
Input Volume	148	293	61	80	184	167	47	869	61	60	668	83
% of Volume	97	99	97	95	100	102	102	98	102	100	102	107
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.4
Total Delay (hr)	15.6
Total Del/Veh (s)	20.4
Stop Delay (hr)	10.5
Stop Del/Veh (s)	13.8
Total Stops	1622
Stop/Veh	0.59
Travel Dist (mi)	773.1
Travel Time (hr)	34.4
Vehicles Entered	2718
Vehicles Exited	2713
Hourly Exit Rate	2713
Input Volume	2721
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

5: North Driveway/Karpick St & 7th St Performance by movement

Movement	EBL	EBT	WBL	WBT	WBR	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.9	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2
Total Del/Veh (s)	1.1	0.3	3.8	2.3	2.2	3.2	4.6	2.1	2.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Stop Del/Veh (s)	0.1	0.0	0.6	0.5	0.5	2.6	3.3	2.0	1.3
Total Stops	0	0	2	0	0	85	34	2	123
Stop/Veh	0.00	0.00	0.07	0.00	0.00	0.99	1.00	1.00	0.41
Travel Dist (mi)	0.1	7.1	3.2	6.5	2.9	4.8	0.9	0.0	25.5
Travel Time (hr)	0.0	0.2	0.1	0.2	0.1	0.3	0.1	0.0	1.1
Vehicles Entered	2	75	26	55	24	85	34	2	303
Vehicles Exited	2	75	26	55	24	85	34	2	303
Hourly Exit Rate	2	75	26	55	24	85	34	2	303
Input Volume	2	81	27	58	25	82	35	1	311
% of Volume	100	93	96	95	96	104	97	200	97
Denied Entry Before	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.4	0.1	0.3	0.2	0.0	0.0	0.3	0.1	0.1	0.4	0.0
Total Del/Veh (s)	6.4	9.5	5.2	7.6	7.9	2.8	7.3	9.7	6.1	8.0	10.1	2.1
Stop Delay (hr)	0.0	0.2	0.0	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.0
Stop Del/Veh (s)	4.3	4.8	4.7	4.8	3.6	2.6	4.4	4.6	4.6	5.3	4.9	2.5
Total Stops	15	144	35	155	68	38	16	89	77	65	153	19
Stop/Veh	1.00	0.97	0.97	0.99	0.97	1.00	1.00	0.94	1.00	0.98	0.99	1.00
Travel Dist (mi)	1.8	17.3	4.2	33.9	15.1	8.2	4.1	23.4	19.5	12.8	30.8	3.9
Travel Time (hr)	0.1	1.0	0.2	1.4	0.6	0.3	0.2	0.9	0.8	0.6	1.3	0.1
Vehicles Entered	15	147	36	155	70	38	16	94	76	65	154	19
Vehicles Exited	15	146	35	155	70	38	16	94	77	65	153	19
Hourly Exit Rate	15	146	35	155	70	38	16	94	77	65	153	19
Input Volume	15	148	37	162	73	39	17	95	76	65	154	19
% of Volume	100	99	95	96	96	97	94	99	101	100	99	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	2.0
Total Del/Veh (s)	8.1
Stop Delay (hr)	1.1
Stop Del/Veh (s)	4.6
Total Stops	874
Stop/Veh	0.98
Travel Dist (mi)	175.0
Travel Time (hr)	7.5
Vehicles Entered	885
Vehicles Exited	883
Hourly Exit Rate	883
Input Volume	900
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

7: Sanderson Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.0	0.0	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.4	0.6	0.1	1.3	0.5	0.1	0.2	4.5	0.4	0.8	3.0	0.1
Total Del/Veh (s)	16.4	12.2	6.4	21.5	10.4	4.5	30.3	19.5	18.1	41.6	15.0	7.1
Stop Delay (hr)	0.4	0.3	0.0	1.1	0.3	0.1	0.2	1.5	0.2	0.6	1.0	0.0
Stop Del/Veh (s)	13.1	6.2	4.9	17.9	5.5	4.0	21.8	6.6	7.6	34.6	4.9	2.4
Total Stops	78	94	18	192	86	47	23	402	52	62	294	27
Stop/Veh	0.80	0.51	0.51	0.86	0.47	0.52	0.88	0.49	0.66	0.93	0.41	0.51
Travel Dist (mi)	24.7	47.6	9.0	25.2	21.0	10.3	12.6	395.9	38.9	32.9	345.5	26.5
Travel Time (hr)	1.1	1.7	0.3	2.2	1.0	0.4	0.5	12.8	1.3	1.5	10.2	0.7
Vehicles Entered	96	184	35	221	182	90	25	812	77	65	698	53
Vehicles Exited	96	185	35	220	181	90	25	809	77	66	697	53
Hourly Exit Rate	96	185	35	220	181	90	25	809	77	66	697	53
Input Volume	98	184	34	222	191	91	26	820	83	66	690	53
% of Volume	98	101	103	99	95	99	96	99	93	100	101	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Sanderson Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	12.0
Total Del/Veh (s)	16.8
Stop Delay (hr)	5.7
Stop Del/Veh (s)	7.9
Total Stops	1375
Stop/Veh	0.53
Travel Dist (mi)	990.2
Travel Time (hr)	33.9
Vehicles Entered	2538
Vehicles Exited	2534
Hourly Exit Rate	2534
Input Volume	2558
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

8: Kirby St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.2	3.6
Total Delay (hr)	0.0	2.1	0.1	0.4	1.6	0.1	0.1	0.6	0.1	0.1	0.4	0.0
Total Del/Veh (s)	16.5	19.9	6.8	13.2	17.0	11.2	11.5	14.2	7.8	10.4	13.0	5.1
Stop Delay (hr)	0.0	1.2	0.0	0.2	0.6	0.0	0.0	0.2	0.1	0.1	0.2	0.0
Stop Del/Veh (s)	11.8	11.5	3.7	6.1	6.0	5.7	6.6	6.3	5.0	7.4	6.7	3.5
Total Stops	10	370	29	94	329	28	22	140	65	49	124	20
Stop/Veh	1.00	0.99	1.04	0.98	0.95	1.00	0.96	0.99	0.97	1.00	1.00	1.00
Travel Dist (mi)	3.3	120.9	9.1	46.8	167.2	13.7	10.9	67.5	31.6	5.7	14.5	2.3
Travel Time (hr)	0.1	4.8	0.3	1.5	5.5	0.4	0.4	2.3	1.0	0.3	0.8	0.1
Vehicles Entered	10	370	28	94	343	28	22	140	66	49	123	20
Vehicles Exited	10	370	28	94	344	28	22	140	65	49	124	20
Hourly Exit Rate	10	370	28	94	344	28	22	140	65	49	124	20
Input Volume	9	376	29	97	352	27	25	141	69	53	126	19
% of Volume	111	98	97	97	98	104	88	99	94	92	98	105
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

8: Kirby St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	5.7
Total Del/Veh (s)	15.6
Stop Delay (hr)	2.8
Stop Del/Veh (s)	7.7
Total Stops	1280
Stop/Veh	0.98
Travel Dist (mi)	493.6
Travel Time (hr)	17.7
Vehicles Entered	1293
Vehicles Exited	1294
Hourly Exit Rate	1294
Input Volume	1323
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

9: Lyon Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.7	0.3	0.1
Total Delay (hr)	0.2	4.0	0.2	1.0	7.7	1.2	0.2	0.9	0.1	0.1	0.8	0.0
Total Del/Veh (s)	17.2	32.0	26.1	66.4	68.5	67.9	14.1	17.7	6.7	9.1	15.9	4.0
Stop Delay (hr)	0.1	2.6	0.2	1.0	6.7	1.1	0.1	0.5	0.1	0.1	0.4	0.0
Stop Del/Veh (s)	8.2	21.0	20.8	61.1	59.2	64.3	10.8	9.9	4.9	6.3	8.2	4.1
Total Stops	45	442	28	55	401	62	44	183	44	32	191	26
Stop/Veh	1.10	0.98	1.00	0.98	0.99	0.98	1.00	0.99	1.00	1.00	0.99	1.00
Travel Dist (mi)	19.6	213.5	13.6	26.2	191.5	29.5	8.5	35.2	8.4	2.6	15.6	2.1
Travel Time (hr)	0.7	8.9	0.6	1.7	12.1	2.0	0.4	1.6	0.3	0.2	1.2	0.1
Vehicles Entered	40	442	28	55	403	62	44	182	44	32	192	26
Vehicles Exited	40	441	28	54	395	60	44	183	44	31	191	26
Hourly Exit Rate	40	441	28	54	395	60	44	183	44	31	191	26
Input Volume	38	461	27	57	404	60	47	185	46	33	195	25
% of Volume	105	96	104	95	98	100	94	99	96	94	98	104
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

9: Lyon Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	16.5
Total Del/Veh (s)	37.9
Stop Delay (hr)	12.9
Stop Del/Veh (s)	29.6
Total Stops	1553
Stop/Veh	0.99
Travel Dist (mi)	566.4
Travel Time (hr)	29.8
Vehicles Entered	1550
Vehicles Exited	1537
Hourly Exit Rate	1537
Input Volume	1578
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

10: Palm Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
Total Delay (hr)	0.3	3.9	0.2	0.2	2.6	0.2	0.1	0.6	0.2	0.1	0.7	0.2
Total Del/Veh (s)	17.4	28.1	22.1	12.8	23.4	18.2	13.7	10.1	10.4	12.1	14.7	9.0
Stop Delay (hr)	0.1	2.3	0.1	0.1	1.7	0.1	0.1	0.3	0.1	0.1	0.4	0.1
Stop Del/Veh (s)	7.5	16.3	15.7	6.8	15.3	15.5	9.7	5.5	8.0	9.0	8.6	7.4
Total Stops	67	489	24	66	391	34	22	134	61	44	164	68
Stop/Veh	1.14	0.98	0.96	1.08	0.99	1.00	1.00	0.59	1.00	1.00	0.99	0.99
Travel Dist (mi)	27.7	232.0	11.6	7.5	48.5	4.1	8.5	70.4	23.5	2.9	10.9	4.5
Travel Time (hr)	1.0	9.2	0.5	0.4	3.7	0.3	0.3	2.4	0.8	0.3	1.0	0.4
Vehicles Entered	59	490	24	60	392	33	22	225	60	44	164	68
Vehicles Exited	58	487	24	61	390	34	22	224	61	44	165	68
Hourly Exit Rate	58	487	24	61	390	34	22	224	61	44	165	68
Input Volume	61	509	23	65	391	34	24	236	59	46	165	65
% of Volume	95	96	104	94	100	100	92	95	103	96	100	105
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

10: Palm Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	9.2
Total Del/Veh (s)	19.9
Stop Delay (hr)	5.6
Stop Del/Veh (s)	12.2
Total Stops	1564
Stop/Veh	0.94
Travel Dist (mi)	452.1
Travel Time (hr)	20.2
Vehicles Entered	1641
Vehicles Exited	1638
Hourly Exit Rate	1638
Input Volume	1678
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

11: State St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	3.2	0.4	0.2	0.0	0.0	0.0	2.8	0.3	0.3
Total Delay (hr)	1.1	2.5	0.2	0.7	2.2	0.1	0.6	4.1	0.4	0.8	4.0	0.3
Total Del/Veh (s)	37.0	21.8	7.3	38.9	21.3	5.0	52.8	22.6	19.7	44.8	20.3	12.2
Stop Delay (hr)	0.9	1.6	0.1	0.6	1.4	0.1	0.5	2.3	0.2	0.8	2.5	0.2
Stop Del/Veh (s)	31.2	13.9	4.2	33.9	13.5	4.3	44.7	12.6	12.4	40.1	12.8	9.6
Total Stops	105	230	43	63	197	54	43	322	40	67	381	49
Stop/Veh	0.97	0.55	0.54	0.98	0.54	0.57	1.00	0.50	0.58	0.99	0.54	0.56
Travel Dist (mi)	39.8	154.0	29.2	8.6	49.2	12.9	21.1	310.0	34.1	6.3	66.1	8.2
Travel Time (hr)	2.1	6.0	0.9	1.0	3.3	0.5	1.2	11.4	1.3	1.1	5.5	0.6
Vehicles Entered	107	413	78	63	359	94	42	637	68	67	696	87
Vehicles Exited	106	411	78	63	360	95	41	636	68	67	697	87
Hourly Exit Rate	106	411	78	63	360	95	41	636	68	67	697	87
Input Volume	115	424	82	62	359	95	44	649	67	73	706	87
% of Volume	92	97	95	102	100	100	93	98	101	92	99	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

11: State St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.3
Total Delay (hr)	16.9
Total Del/Veh (s)	22.2
Stop Delay (hr)	11.2
Stop Del/Veh (s)	14.7
Total Stops	1594
Stop/Veh	0.58
Travel Dist (mi)	739.4
Travel Time (hr)	34.9
Vehicles Entered	2711
Vehicles Exited	2709
Hourly Exit Rate	2709
Input Volume	2763
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	0.3	0.0	0.0	0.0	0.1	0.5	0.5	0.4	0.4	0.4
Total Delay (hr)	0.0	0.1	0.0	0.3	0.2	0.2	0.0	3.3	0.7	0.2	2.0	0.1
Total Del/Veh (s)	6.5	12.0	4.7	8.4	5.7	6.7	13.0	27.0	18.9	16.1	19.7	11.3
Stop Delay (hr)	0.0	0.1	0.0	0.2	0.1	0.1	0.0	1.8	0.5	0.1	0.8	0.0
Stop Del/Veh (s)	4.8	5.5	4.6	5.4	2.2	5.1	7.7	14.8	13.9	9.9	8.2	6.6
Total Stops	24	42	2	138	42	98	1	439	129	53	355	15
Stop/Veh	0.96	1.00	1.00	0.98	0.39	0.99	1.00	0.99	0.98	0.98	0.99	0.94
Travel Dist (mi)	3.1	5.3	0.3	117.6	63.2	83.1	0.2	95.1	28.1	12.0	79.6	3.4
Travel Time (hr)	0.1	0.2	0.0	2.9	1.5	2.0	0.0	5.1	1.5	0.5	3.5	0.1
Vehicles Entered	24	42	2	140	106	98	1	438	130	53	354	15
Vehicles Exited	24	42	2	138	105	98	1	439	129	53	355	15
Hourly Exit Rate	24	42	2	138	105	98	1	439	129	53	355	15
Input Volume	25	43	2	140	113	98	1	445	135	52	347	14
% of Volume	96	98	100	99	93	100	100	99	96	102	102	107
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	7.1
Total Del/Veh (s)	18.2
Stop Delay (hr)	3.8
Stop Del/Veh (s)	9.8
Total Stops	1338
Stop/Veh	0.94
Travel Dist (mi)	491.1
Travel Time (hr)	17.5
Vehicles Entered	1403
Vehicles Exited	1401
Hourly Exit Rate	1401
Input Volume	1415
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.5	1.9	0.8	1.5	1.1	0.1	0.8	0.9	0.1	0.6	1.9	0.3
Total Del/Veh (s)	34.6	19.5	11.8	35.3	15.7	9.5	35.5	7.6	6.2	30.5	26.5	18.3
Stop Delay (hr)	0.5	1.2	0.6	1.2	0.6	0.0	0.7	0.6	0.1	0.6	1.5	0.3
Stop Del/Veh (s)	31.8	13.1	8.5	28.8	8.7	5.6	30.9	4.9	4.1	28.4	20.2	15.2
Total Stops	51	196	156	129	106	15	74	70	56	60	186	51
Stop/Veh	0.91	0.57	0.66	0.87	0.44	0.56	0.89	0.16	0.72	0.85	0.71	0.77
Travel Dist (mi)	9.8	60.9	42.3	72.4	110.2	13.1	40.6	136.3	38.3	17.2	63.3	15.9
Travel Time (hr)	0.8	3.2	2.1	3.2	3.5	0.4	2.1	5.1	1.3	1.2	3.8	0.9
Vehicles Entered	55	338	235	146	241	27	82	436	77	70	259	65
Vehicles Exited	55	337	235	144	240	26	82	436	77	70	259	65
Hourly Exit Rate	55	337	235	144	240	26	82	436	77	70	259	65
Input Volume	57	339	236	150	243	28	83	432	78	71	263	70
% of Volume	96	99	100	96	99	93	99	101	99	99	98	93
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	10.5
Total Del/Veh (s)	18.4
Stop Delay (hr)	7.8
Stop Del/Veh (s)	13.7
Total Stops	1150
Stop/Veh	0.56
Travel Dist (mi)	620.5
Travel Time (hr)	27.4
Vehicles Entered	2031
Vehicles Exited	2026
Hourly Exit Rate	2026
Input Volume	2050
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.2	0.3	0.0	0.0	0.0
Total Delay (hr)	1.7	3.6	0.3	1.4	2.6	0.1	0.9	5.7	0.8	2.2	4.6	0.2
Total Del/Veh (s)	47.9	43.7	17.4	44.5	31.0	5.3	47.9	28.4	20.1	52.1	23.4	9.7
Stop Delay (hr)	1.4	2.8	0.2	1.3	2.1	0.1	0.8	3.8	0.6	1.9	2.5	0.1
Stop Del/Veh (s)	40.4	33.8	11.2	39.9	24.6	5.2	43.4	19.1	15.6	43.9	12.9	2.9
Total Stops	116	245	72	104	206	56	60	461	92	137	348	37
Stop/Veh	0.92	0.82	1.01	0.91	0.68	0.71	0.92	0.64	0.67	0.90	0.49	0.47
Travel Dist (mi)	61.4	146.4	34.9	36.3	92.2	25.2	10.4	116.2	22.2	75.0	342.8	38.7
Travel Time (hr)	3.1	6.8	1.2	2.4	4.9	0.8	1.2	8.3	1.5	4.0	11.9	1.1
Vehicles Entered	123	295	70	112	297	78	64	714	136	150	703	77
Vehicles Exited	123	292	70	112	295	78	64	713	136	147	700	77
Hourly Exit Rate	123	292	70	112	295	78	64	713	136	147	700	77
Input Volume	128	294	71	116	300	77	67	724	133	151	695	77
% of Volume	96	99	99	97	98	101	96	98	102	97	101	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	24.2
Total Del/Veh (s)	30.5
Stop Delay (hr)	17.6
Stop Del/Veh (s)	22.1
Total Stops	1934
Stop/Veh	0.68
Travel Dist (mi)	1001.8
Travel Time (hr)	47.4
Vehicles Entered	2819
Vehicles Exited	2807
Hourly Exit Rate	2807
Input Volume	2833
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	7.2	0.8	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	20.4	52.1	63.7	0.0	0.0	0.0	0.4	0.5	3.6	0.0	0.1	0.9
Total Delay (hr)	1.2	23.0	2.1	0.8	5.3	0.3	0.2	0.7	0.1	0.2	1.1	0.1
Total Del/Veh (s)	166.9	172.3	164.2	47.4	49.8	43.8	14.2	15.8	6.7	16.2	18.4	9.4
Stop Delay (hr)	1.2	23.4	2.2	0.6	4.1	0.2	0.2	0.4	0.1	0.2	0.6	0.1
Stop Del/Veh (s)	173.9	175.2	173.3	40.2	38.9	38.6	10.7	9.3	5.2	11.4	10.8	5.7
Total Stops	15	286	27	57	375	22	61	168	76	51	210	55
Stop/Veh	0.60	0.60	0.59	0.98	0.98	0.96	0.98	0.99	0.99	1.00	0.99	1.00
Travel Dist (mi)	4.0	77.5	7.4	28.7	189.5	11.1	10.5	28.7	13.0	22.8	93.4	23.9
Travel Time (hr)	1.4	31.7	3.2	1.5	9.6	0.6	0.6	1.5	0.6	0.9	3.5	0.8
Vehicles Entered	25	475	46	57	377	22	61	168	76	50	210	54
Vehicles Exited	23	447	43	56	373	22	61	167	76	50	210	55
Hourly Exit Rate	23	447	43	56	373	22	61	167	76	50	210	55
Input Volume	29	531	53	62	379	23	63	167	80	57	215	51
% of Volume	79	84	81	90	98	96	97	100	95	88	98	108
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	19	2	0	0	0	0	0	0	0	0	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	8.3
Denied Del/Veh (s)	18.1
Total Delay (hr)	35.2
Total Del/Veh (s)	77.1
Stop Delay (hr)	33.4
Stop Del/Veh (s)	73.3
Total Stops	1403
Stop/Veh	0.85
Travel Dist (mi)	510.5
Travel Time (hr)	55.9
Vehicles Entered	1621
Vehicles Exited	1583
Hourly Exit Rate	1583
Input Volume	1710
% of Volume	93
Denied Entry Before	0
Denied Entry After	21

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.0	0.0	3.7	0.4	3.7	0.1	0.0	0.1
Total Delay (hr)	0.2	3.1	0.1	0.6	1.7	0.1	0.1	0.7	0.1	0.2	0.8	0.0
Total Del/Veh (s)	28.1	20.5	9.5	29.5	15.3	4.8	23.4	16.3	7.2	24.8	14.5	4.8
Stop Delay (hr)	0.1	1.4	0.0	0.4	0.7	0.0	0.1	0.4	0.1	0.2	0.5	0.0
Stop Del/Veh (s)	20.5	9.6	3.9	21.5	6.3	2.6	21.2	9.6	6.1	22.5	8.6	4.2
Total Stops	18	302	14	68	188	32	16	97	41	34	116	23
Stop/Veh	0.90	0.56	0.54	0.91	0.46	0.46	0.94	0.59	0.67	0.94	0.56	0.62
Travel Dist (mi)	9.6	263.5	13.1	35.5	195.8	33.3	1.5	15.0	5.6	10.6	60.7	10.7
Travel Time (hr)	0.4	9.1	0.4	1.6	6.8	1.0	0.2	1.1	0.4	0.5	2.1	0.3
Vehicles Entered	19	528	26	74	402	69	17	163	61	36	205	36
Vehicles Exited	19	525	26	73	402	68	16	163	61	36	204	36
Hourly Exit Rate	19	525	26	73	402	68	16	163	61	36	204	36
Input Volume	23	615	30	75	407	70	18	166	60	42	205	37
% of Volume	83	85	87	97	99	97	89	98	102	86	100	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	7.8
Total Del/Veh (s)	17.0
Stop Delay (hr)	4.2
Stop Del/Veh (s)	9.1
Total Stops	949
Stop/Veh	0.57
Travel Dist (mi)	654.8
Travel Time (hr)	23.9
Vehicles Entered	1636
Vehicles Exited	1629
Hourly Exit Rate	1629
Input Volume	1748
% of Volume	93
Denied Entry Before	0
Denied Entry After	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.4	0.4	1.2	0.2	1.3
Total Delay (hr)	0.6	5.3	0.3	0.8	3.5	0.1	0.6	1.7	0.4	1.1	1.2	0.1
Total Del/Veh (s)	47.1	35.2	26.9	44.4	21.4	7.5	42.9	26.4	15.8	44.0	19.8	4.3
Stop Delay (hr)	0.4	2.8	0.2	0.6	1.9	0.0	0.5	1.2	0.3	1.0	0.9	0.1
Stop Del/Veh (s)	35.5	18.5	15.2	34.2	11.4	4.5	38.2	18.6	12.0	41.1	15.7	3.1
Total Stops	44	369	29	62	256	24	50	158	68	84	128	39
Stop/Veh	1.02	0.68	0.72	0.93	0.44	0.60	1.02	0.69	0.70	0.95	0.61	0.60
Travel Dist (mi)	21.2	261.9	19.9	32.8	250.2	19.4	7.0	33.1	14.0	7.8	18.4	5.8
Travel Time (hr)	1.1	10.7	0.8	1.7	9.9	0.6	0.8	2.5	0.9	1.4	1.7	0.3
Vehicles Entered	43	533	40	66	576	39	48	228	96	87	208	65
Vehicles Exited	42	528	40	64	575	39	48	227	96	87	209	65
Hourly Exit Rate	42	528	40	64	575	39	48	227	96	87	209	65
Input Volume	49	618	43	66	575	40	47	230	92	91	209	66
% of Volume	86	85	93	97	100	98	102	99	104	96	100	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	15.5
Total Del/Veh (s)	27.2
Stop Delay (hr)	9.9
Stop Del/Veh (s)	17.4
Total Stops	1311
Stop/Veh	0.64
Travel Dist (mi)	691.4
Travel Time (hr)	32.6
Vehicles Entered	2029
Vehicles Exited	2020
Hourly Exit Rate	2020
Input Volume	2126
% of Volume	95
Denied Entry Before	0
Denied Entry After	0

18: State St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	2.7	0.2	0.2	3.1	0.2	0.2	0.0	0.0	0.0
Total Delay (hr)	1.4	4.2	0.3	1.2	4.3	0.7	0.7	4.3	0.5	2.6	4.0	0.6
Total Del/Veh (s)	48.9	26.5	21.8	44.7	28.4	16.8	47.6	30.5	18.8	49.0	25.5	21.5
Stop Delay (hr)	1.1	2.6	0.2	1.1	3.2	0.5	0.6	3.3	0.4	2.0	2.3	0.3
Stop Del/Veh (s)	40.6	16.4	14.9	39.5	21.0	13.0	42.8	23.2	14.9	38.8	14.4	13.1
Total Stops	95	305	31	96	367	104	52	362	72	175	296	56
Stop/Veh	0.94	0.54	0.66	0.99	0.67	0.68	1.04	0.71	0.73	0.93	0.52	0.58
Travel Dist (mi)	49.4	259.4	23.3	26.5	150.4	41.8	11.2	113.6	22.1	91.9	271.1	46.9
Travel Time (hr)	2.5	9.7	0.8	2.0	8.1	2.0	1.0	7.2	1.2	4.9	10.3	1.8
Vehicles Entered	100	558	47	94	537	150	49	500	97	184	560	94
Vehicles Exited	98	555	46	95	538	149	49	500	97	183	554	94
Hourly Exit Rate	98	555	46	95	538	149	49	500	97	183	554	94
Input Volume	113	632	49	95	536	150	53	497	100	195	563	92
% of Volume	87	88	94	100	100	99	92	101	97	94	98	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: State St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.2
Total Delay (hr)	24.7
Total Del/Veh (s)	29.5
Stop Delay (hr)	17.6
Stop Del/Veh (s)	21.1
Total Stops	2011
Stop/Veh	0.67
Travel Dist (mi)	1107.7
Travel Time (hr)	51.4
Vehicles Entered	2970
Vehicles Exited	2958
Hourly Exit Rate	2958
Input Volume	3075
% of Volume	96
Denied Entry Before	0
Denied Entry After	0

19: Cawston Ave & Eaton Ave Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.5	2.3	0.0	0.0	0.1	0.0	0.4
Total Delay (hr)	0.1	0.4	1.1	0.1	0.5	1.4	3.5
Total Del/Veh (s)	6.9	5.4	8.9	6.9	10.0	10.0	8.7
Stop Delay (hr)	0.1	0.2	0.4	0.0	0.2	0.4	1.3
Stop Del/Veh (s)	3.7	3.5	3.1	3.8	4.4	3.0	3.4
Total Stops	55	239	356	45	167	484	1346
Stop/Veh	0.98	0.99	0.82	0.98	0.98	0.98	0.94
Travel Dist (mi)	18.3	79.6	97.5	11.2	82.5	239.2	528.3
Travel Time (hr)	0.6	2.8	4.0	0.5	3.1	8.6	19.5
Vehicles Entered	55	240	429	45	167	486	1422
Vehicles Exited	55	239	428	45	166	483	1416
Hourly Exit Rate	55	239	428	45	166	483	1416
Input Volume	60	244	420	44	171	493	1432
% of Volume	92	98	102	102	97	98	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

20: Cawston Ave & Coriander Dr/Fruitvale Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.1	0.1	0.4	3.2	3.1	0.1	0.2	0.0	0.0	0.0	0.4
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.8	0.0	0.2	1.2	0.0	2.5
Total Del/Veh (s)	3.5	8.5	2.9	5.7	3.4	4.0	8.0	3.9	8.1	10.1	8.0	8.2
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.1	0.4	0.0	0.9
Stop Del/Veh (s)	2.3	5.4	2.7	3.3	2.7	2.2	2.9	2.7	3.3	2.9	3.5	2.9
Total Stops	2	1	5	28	114	2	359	36	100	434	1	1082
Stop/Veh	1.00	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.97	0.99	1.00	0.99
Travel Dist (mi)	0.2	0.2	0.6	6.7	27.1	0.3	87.3	8.6	25.4	108.7	0.3	265.4
Travel Time (hr)	0.0	0.0	0.0	0.3	1.1	0.0	3.3	0.3	1.0	4.4	0.0	10.6
Vehicles Entered	2	1	4	28	114	1	361	35	102	435	1	1084
Vehicles Exited	2	1	5	28	114	2	359	36	100	433	1	1081
Hourly Exit Rate	2	1	5	28	114	2	359	36	100	433	1	1081
Input Volume	2	1	5	30	109	2	353	34	110	443	1	1090
% of Volume	100	100	100	93	105	100	102	106	91	98	100	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

21: Cawston Ave & East Driveway Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.5
Total Del/Veh (s)	7.4	4.0	6.7	3.5	4.9	2.3	2.7	3.3	2.4	1.9	2.8
Stop Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Stop Del/Veh (s)	5.4	3.6	4.5	3.5	1.5	0.3	0.3	0.8	0.6	0.5	1.0
Total Stops	28	57	1	2	5	0	0	0	0	0	93
Stop/Veh	1.00	0.98	1.00	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.15
Travel Dist (mi)	2.4	4.9	0.1	0.1	3.7	40.8	0.6	0.4	85.4	2.5	140.8
Travel Time (hr)	0.1	0.3	0.0	0.0	0.1	1.4	0.0	0.0	2.8	0.1	4.9
Vehicles Entered	28	57	1	2	15	166	2	2	334	10	617
Vehicles Exited	28	57	1	2	15	167	2	2	334	10	618
Hourly Exit Rate	28	57	1	2	15	167	2	2	334	10	618
Input Volume	27	55	2	2	18	168	2	2	344	9	629
% of Volume	104	104	50	100	83	99	100	100	97	111	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

22: Esplanade Ave & South Driveway Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	1.2	0.1	0.0	0.0	0.2	0.2	0.1
Total Delay (hr)	0.0	0.2	0.2	0.0	0.2	0.0	0.7
Total Del/Veh (s)	2.6	1.6	2.6	2.1	9.8	4.8	2.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.0	0.3
Stop Del/Veh (s)	1.1	0.2	0.2	0.2	8.1	4.1	1.0
Total Stops	2	0	0	0	80	29	111
Stop/Veh	0.25	0.00	0.00	0.00	1.00	1.00	0.11
Travel Dist (mi)	4.7	318.6	59.0	4.9	6.7	2.4	396.3
Travel Time (hr)	0.1	7.0	1.6	0.2	0.5	0.2	9.6
Vehicles Entered	8	536	319	27	79	28	997
Vehicles Exited	8	534	318	26	80	29	995
Hourly Exit Rate	8	534	318	26	80	29	995
Input Volume	9	537	329	27	82	27	1011
% of Volume	89	99	97	96	98	107	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	11.8
Denied Del/Veh (s)	2.7
Total Delay (hr)	345.7
Total Del/Veh (s)	77.7
Stop Delay (hr)	238.3
Stop Del/Veh (s)	53.5
Total Stops	28305
Stop/Veh	1.77
Travel Dist (mi)	18379.5
Travel Time (hr)	788.4
Vehicles Entered	15429
Vehicles Exited	15184
Hourly Exit Rate	15184
Input Volume	61035
% of Volume	25
Denied Entry Before	0
Denied Entry After	22

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	390	420	356	252	67	44	75	1486	1578	343	121	441
Average Queue (ft)	260	284	106	93	20	12	26	707	938	339	56	106
95th Queue (ft)	420	448	316	256	46	35	59	1620	1763	369	105	301
Link Distance (ft)			1976	1976				2634	2634			
Upstream Blk Time (%)								0	0			
Queuing Penalty (veh)								0	0			
Storage Bay Dist (ft)	400	400			180	375	375			143	400	400
Storage Blk Time (%)	3	5	0	0				0	5	68		0
Queuing Penalty (veh)	5	9	0	0				0	31	138		0

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	559	559	104	285	297	359	382	180
Average Queue (ft)	348	342	18	182	201	124	117	62
95th Queue (ft)	544	541	82	271	288	370	397	134
Link Distance (ft)	873	873	873			2486	2486	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)				400	400			250
Storage Blk Time (%)	8				0		0	0
Queuing Penalty (veh)	14				0		0	0

Intersection: 2: Sanderson Ave & Ramona Blvd

Movement	NB	NB	NB	SB	SB	SB	NW	NW
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	251	196	42	148	122	133	139	97
Average Queue (ft)	117	75	10	59	23	40	45	43
95th Queue (ft)	205	154	34	114	76	99	97	85
Link Distance (ft)	969	969			873	873	2330	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			120	170				50
Storage Blk Time (%)		1		0	0		12	4
Queuing Penalty (veh)		0		1	0		17	3

Intersection: 3: Cawston Ave & Cottonwood Ave

Movement	WB	NB	NB	SB
Directions Served	L	LT	R	LT
Maximum Queue (ft)	32	80	65	87
Average Queue (ft)	9	35	32	41
95th Queue (ft)	27	62	54	71
Link Distance (ft)		697		682
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	195		150	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	R	L	L	T
Maximum Queue (ft)	98	98	123	123	53	58	91	171	117	71	51	216
Average Queue (ft)	42	44	61	58	19	14	34	80	46	29	8	117
95th Queue (ft)	80	80	104	106	43	40	71	142	92	61	34	194
Link Distance (ft)			507	507				1294	1294			2541
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300	300			205	320	320			300	300	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	R
Maximum Queue (ft)	218	50	36	87	224	187	56
Average Queue (ft)	127	12	5	39	122	87	21
95th Queue (ft)	206	34	24	75	190	164	47
Link Distance (ft)	2541				915	915	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		210	290	290			200
Storage Blk Time (%)	0				0	0	
Queuing Penalty (veh)	0				0	0	

Intersection: 5: North Driveway/Karpick St & 7th St

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	3	32	63	59
Average Queue (ft)	0	2	33	23
95th Queue (ft)	3	16	54	49
Link Distance (ft)			297	136
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	150	150		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Cawston Ave & 7th St

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	L	T	TR	L	TR	LT	R
Maximum Queue (ft)	84	87	53	54	41	103	95	25
Average Queue (ft)	35	47	27	28	13	51	48	9
95th Queue (ft)	65	74	48	51	38	85	80	24
Link Distance (ft)	576		1110	1110		1288	1226	1226
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		160			85			
Storage Blk Time (%)						1		
Queuing Penalty (veh)						0		

Intersection: 7: Sanderson Ave & 7th St

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	76	125	162	142	68	61	198	229	117	154	156	43
Average Queue (ft)	37	51	85	54	27	20	110	129	41	68	80	11
95th Queue (ft)	71	99	140	106	58	52	182	203	90	126	138	30
Link Distance (ft)		1368		646			2569	2569		2541	2541	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	53		145		600	300			360			360
Storage Blk Time (%)	3	5	1	0								
Queuing Penalty (veh)	6	4	3	0								

Intersection: 8: Kirby St & 7th St

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	LT	R	LT	R
Maximum Queue (ft)	218	119	57	105	77	48	111	37
Average Queue (ft)	88	17	31	52	40	19	53	14
95th Queue (ft)	164	64	52	85	65	37	87	38
Link Distance (ft)	1855			2533	2574		620	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		110	150			280		70
Storage Blk Time (%)	7			0			3	0
Queuing Penalty (veh)	2			0			0	0

Intersection: 9: Lyon Ave & 7th St

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	LTR	LT	R	L	T	R
Maximum Queue (ft)	178	301	544	133	56	54	115	50
Average Queue (ft)	33	121	281	67	26	21	59	17
95th Queue (ft)	119	253	632	111	52	49	96	41
Link Distance (ft)		2533	2566	1006			429	429
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150				105	150		
Storage Blk Time (%)		12		2			0	
Queuing Penalty (veh)		5		1			0	

Intersection: 10: Palm Ave & 7th St

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	159	264	169	288	138	144
Average Queue (ft)	51	124	45	133	71	71
95th Queue (ft)	133	237	119	233	116	118
Link Distance (ft)		2566		601	2000	350
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100		75			
Storage Blk Time (%)		25	0	32		
Queuing Penalty (veh)		15	1	21		

Intersection: 11: State St & 7th St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	TR
Maximum Queue (ft)	159	293	217	140	274	76	136	220	235	174	278	236
Average Queue (ft)	76	150	34	51	136	29	37	102	119	58	158	118
95th Queue (ft)	150	240	105	117	239	59	94	193	214	136	249	213
Link Distance (ft)		1929			721	721		2560	2560		491	491
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95		215	60			85			105		
Storage Blk Time (%)	4	21	0	7	25		1	12		1	19	
Queuing Penalty (veh)	21	42	0	23	16		4	5		3	14	

Intersection: 12: Warren Ave & Esplanade Ave

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (ft)	66	87	90	308	215
Average Queue (ft)	30	42	42	140	91
95th Queue (ft)	55	72	72	259	169
Link Distance (ft)	671	4426	4426	1142	1186
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 13: Cawston Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	93	148	198	179	108	121	110	122	65	106	275
Average Queue (ft)	39	76	109	82	34	50	53	54	28	46	137
95th Queue (ft)	78	129	174	145	82	100	97	102	55	87	233
Link Distance (ft)		906	906		2540	2540		2579	2579	1246	1246
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150			150			150				
Storage Blk Time (%)	0	0		1			0	0			
Queuing Penalty (veh)	0	0		1			0	0			

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	167	182	190	80	206	250	71	105	282	277	213	234
Average Queue (ft)	82	78	95	46	83	143	30	41	171	156	102	117
95th Queue (ft)	138	146	166	99	149	227	58	86	257	247	180	199
Link Distance (ft)		2540	2540			1649	1649		840	840		2569
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	130			55	155			225			245	
Storage Blk Time (%)	2	2	31	1	0	8			2		1	0
Queuing Penalty (veh)	3	2	22	1	1	9			1		3	0

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	244	86
Average Queue (ft)	128	26
95th Queue (ft)	207	65
Link Distance (ft)	2569	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)	1	
Queuing Penalty (veh)	1	

Intersection: 15: Kirby St & Esplanade Ave

Movement	EB	B60	WB	NB	NB	SB	SB
Directions Served	LTR	T	LTR	LT	R	LT	R
Maximum Queue (ft)	940	1068	426	125	72	136	88
Average Queue (ft)	681	296	207	66	33	69	29
95th Queue (ft)	1134	1007	386	107	59	113	62
Link Distance (ft)	834	1649	2574	903		2574	
Upstream Blk Time (%)	46	0					
Queuing Penalty (veh)	264	1					
Storage Bay Dist (ft)					132		100
Storage Blk Time (%)				0		3	0
Queuing Penalty (veh)				0		1	0

Intersection: 16: Lyon Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	81	237	50	116	232	76	39	113	62	67	116	40
Average Queue (ft)	16	121	10	43	99	16	12	50	17	23	55	11
95th Queue (ft)	53	196	43	90	192	48	33	96	43	53	99	29
Link Distance (ft)		2574			2526	2526		476			1520	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	122		122	140			120		120	118		118
Storage Blk Time (%)		7		0	3			0			0	
Queuing Penalty (veh)		4		0	2			0			0	

Intersection: 17: Palm Ave & Esplanade Ave

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB		
Directions Served	L	TR	L	T	R	L	TR	L	T	R		
Maximum Queue (ft)	243	418	237	390	62	127	245	140	185	73		
Average Queue (ft)	43	214	53	174	17	38	128	62	87	25		
95th Queue (ft)	141	356	131	323	48	91	210	116	157	56		
Link Distance (ft)		2526		2572	2572		765		508			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	160		250			75		150		150		
Storage Blk Time (%)		19		3		1	26	1	1			
Queuing Penalty (veh)		9		2		3	12	3	2			

Intersection: 18: State St & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	143	203	210	184	276	247	154	249	238	150	272	280
Average Queue (ft)	76	110	125	82	160	146	57	151	134	114	123	138
95th Queue (ft)	136	185	194	162	236	226	132	224	211	167	236	244
Link Distance (ft)		2572	2572		1477	1477		1199	1199		2560	2560
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100			140			105			100		
Storage Blk Time (%)	7	12		1	14		0	23		23	11	
Queuing Penalty (veh)	19	14		1	14		1	12		61	22	

Intersection: 19: Cawston Ave & Eaton Ave

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	63	89	68	74	97	80	84
Average Queue (ft)	28	50	40	44	48	47	51
95th Queue (ft)	54	78	60	67	78	71	73
Link Distance (ft)	1756		1246	1246		2579	2579
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		50			105		
Storage Blk Time (%)	0	4			0	0	
Queuing Penalty (veh)	1	2			0	0	

Intersection: 20: Cawston Ave & Coriander Dr/Fruitvale Ave

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	33	55	68	24	71	73	52	68	74
Average Queue (ft)	7	21	35	1	44	40	27	31	33
95th Queue (ft)	27	48	56	12	65	63	43	53	57
Link Distance (ft)	670	1254			1280	1280		1246	1246
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			50	150			58		
Storage Blk Time (%)		0	1				0	0	
Queuing Penalty (veh)		0	0				0	0	

Intersection: 21: Cawston Ave & East Driveway

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	66	31	35	3
Average Queue (ft)	32	3	4	0
95th Queue (ft)	53	18	23	3
Link Distance (ft)	449	354		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			150	150
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 22: Esplanade Ave & South Driveway

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	23	89
Average Queue (ft)	2	43
95th Queue (ft)	12	74
Link Distance (ft)		443
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 902

Intersection: 1: Sanderson Ave & Ramona Expy

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	21.5	35.5	6.5	28.5	8.5	48.5	16.5	18.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	1.6	-5.1	6.3	-9.8	8.4	8.5	-3.5	-2.2
g/C Ratio	0.25	-0.78	0.76	-1.50	1.29	1.30	-0.54	-0.34
Cycles Skipped (%)	0	0	22	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	100	94	41	84	78	94	100	78
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.5
Number of Complete Cycles : 32

Intersection: 2: Sanderson Ave & Ramona Blvd

Phase	1	2	3	6	8
Movement(s) Served	SBL	NBT	NWL	SBT	NWR
Maximum Green (s)	18.5	55.5	22.5	78.5	22.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	Min	None
Avg. Green (s)	-7.3	2.4	-8.5	0.8	-4.8
g/C Ratio	-1.17	0.54	-1.29	0.16	-0.96
Cycles Skipped (%)	29	0	33	12	12
Cycles @ Minimum (%)	0	0	0	0	12
Cycles Maxed Out (%)	2	16	0	9	0
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.4
Number of Complete Cycles : 58

Intersection: 4: Sanderson Ave & Cottonwood Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	8.5	40.5	11.5	31.5	8.5	40.5	12.5	30.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	7.1	3.3	8.0	4.5	7.0	4.4	-6.2	1.7
g/C Ratio	0.95	0.65	1.24	0.88	0.81	0.87	-1.13	0.33
Cycles Skipped (%)	33	0	22	2	41	0	9	2
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	13	17	7	4	9	23	11	2
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.0
Number of Complete Cycles : 46

Intersection: 11: State St & 7th St

Phase	1	2	4	5	6	8
Movement(s) Served	SBL	NBT	EBTL	NBL	SBT	WBTL
Maximum Green (s)	14.5	41.5	40.5	9.5	46.5	40.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	Min	None
Avg. Green (s)	8.5	0.8	2.9	7.3	3.6	2.9
g/C Ratio	1.17	0.14	0.52	0.78	0.66	0.52
Cycles Skipped (%)	24	0	0	41	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	2	19	36	10	14	36
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.5
Number of Complete Cycles : 41

Intersection: 13: Cawston Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	10.5	24.5	14.5	42.5	10.5	24.5	9.5	47.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	-7.2	4.7	-5.2	-4.2	8.4	5.4	7.1	0.9
g/C Ratio	-1.03	0.82	-0.87	-0.84	1.23	1.06	0.92	0.19
Cycles Skipped (%)	30	14	18	0	27	4	36	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	2
Cycles Maxed Out (%)	20	28	18	4	14	25	12	6
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.9
Number of Complete Cycles : 50

Intersection: 14: Sanderson Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	15.5	36.5	16.5	23.5	10.5	41.5	14.5	25.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-6.1	-2.6	-8.4	6.5	8.2	3.7	-7.9	6.1
g/C Ratio	-0.95	-0.40	-1.25	1.03	1.03	0.59	-1.18	0.96
Cycles Skipped (%)	0	0	6	0	19	0	6	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	28	53	8	72	19	39	22	42
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.4
Number of Complete Cycles : 36

Intersection: 16: Lyon Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	5.0	18.0	5.0	18.0	5.0	18.0	5.0	18.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	6.4	2.6	5.0	0.6	6.0	4.1	5.1	4.1
g/C Ratio	0.60	0.68	0.81	0.18	0.30	1.11	0.30	1.16
Cycles Skipped (%)	67	9	44	0	82	5	79	1
Cycles @ Minimum (%)	28	1	56	0	17	0	21	0
Cycles Maxed Out (%)	33	13	56	72	18	18	21	78
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 3.5
Number of Complete Cycles : 78

Intersection: 17: Palm Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	6.5	45.5	9.5	30.5	6.5	45.5	5.5	34.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	6.4	-6.5	7.6	0.8	6.2	-4.2	8.6	2.1
g/C Ratio	0.99	-1.21	0.98	0.15	0.70	-0.78	0.91	0.37
Cycles Skipped (%)	17	0	30	0	39	0	43	6
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	59	0	17	65	28	0	54	38
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 5.4
Number of Complete Cycles : 46

Intersection: 18: State St & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	21.5	26.5	13.5	30.5	9.5	38.5	13.5	30.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-3.4	8.0	-9.5	-5.9	7.2	0.8	9.5	-5.7
g/C Ratio	-0.57	1.39	-1.47	-1.02	0.88	0.13	1.47	-0.98
Cycles Skipped (%)	3	0	11	0	29	0	11	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	11	53	13	45	11	39	16	50
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 5.8
Number of Complete Cycles : 37

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	3:55	3:55	3:55	3:55	3:55	3:55	3:55
End Time	5:00	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	65	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	17380	17404	17135	17332	17375	17395	17088
Vehs Exited	16897	16884	16470	16906	16729	16885	16667
Starting Vehs	690	758	656	718	728	689	746
Ending Vehs	1173	1278	1321	1144	1374	1199	1167
Denied Entry Before	5	4	5	4	2	3	1
Denied Entry After	71	96	88	78	87	81	70
Travel Distance (mi)	20734	20624	20252	20673	20566	20644	20434
Travel Time (hr)	1014.2	1081.2	1075.1	1045.7	1083.2	1038.0	1011.5
Total Delay (hr)	531.2	601.4	604.6	565.3	604.7	558.0	534.7
Total Stops	31432	31697	30750	31023	30963	31349	30701
Fuel Used (gal)	862.0	876.5	858.5	870.1	870.5	866.4	850.4

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	3:55	3:55	3:55	3:55
End Time	5:00	5:00	5:00	5:00
Total Time (min)	65	65	65	65
Time Recorded (min)	60	60	60	60
# of Intervals	2	2	2	2
# of Recorded Intervals	1	1	1	1
Vehs Entered	17224	17378	17195	17289
Vehs Exited	16748	16933	16608	16772
Starting Vehs	727	680	706	705
Ending Vehs	1203	1125	1293	1213
Denied Entry Before	10	0	4	1
Denied Entry After	87	88	96	81
Travel Distance (mi)	20535	20730	20186	20538
Travel Time (hr)	1019.5	1035.5	1073.0	1047.7
Total Delay (hr)	541.9	553.1	604.0	569.9
Total Stops	30914	31839	30495	31119
Fuel Used (gal)	857.2	868.1	858.4	863.8

Interval #0 Information Seeding

Start Time	3:55
End Time	4:00
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	17380	17404	17135	17332	17375	17395	17088
Vehs Exited	16897	16884	16470	16906	16729	16885	16667
Starting Vehs	690	758	656	718	728	689	746
Ending Vehs	1173	1278	1321	1144	1374	1199	1167
Denied Entry Before	5	4	5	4	2	3	1
Denied Entry After	71	96	88	78	87	81	70
Travel Distance (mi)	20734	20624	20252	20673	20566	20644	20434
Travel Time (hr)	1014.2	1081.2	1075.1	1045.7	1083.2	1038.0	1011.5
Total Delay (hr)	531.2	601.4	604.6	565.3	604.7	558.0	534.7
Total Stops	31432	31697	30750	31023	30963	31349	30701
Fuel Used (gal)	862.0	876.5	858.5	870.1	870.5	866.4	850.4

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	17224	17378	17195	17289
Vehs Exited	16748	16933	16608	16772
Starting Vehs	727	680	706	705
Ending Vehs	1203	1125	1293	1213
Denied Entry Before	10	0	4	1
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Travel Distance (mi)	20535	20730	20186	20538
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Total Delay (hr)	541.9	553.1	604.0	569.9
Total Stops	30914	31839	30495	31119
Fuel Used (gal)	857.2	868.1	858.4	863.8

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.3	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.6	0.8	0.4
Denied Del/Veh (s)	2.4	0.5	2.2	2.1	0.4	2.1	0.0	0.0	0.0	2.9	2.2	2.8
Total Delay (hr)	6.8	6.8	1.2	0.9	6.5	4.5	2.1	12.6	0.1	12.1	17.6	3.5
Total Del/Veh (s)	52.7	38.4	22.0	52.8	56.3	30.0	56.0	56.6	11.7	59.4	47.7	25.8
Stop Delay (hr)	5.6	4.4	1.0	0.8	4.8	2.8	1.8	9.2	0.1	7.4	7.7	1.2
Stop Del/Veh (s)	43.6	24.8	17.3	48.2	42.1	19.0	48.8	41.6	10.1	36.5	20.9	9.0
Total Stops	418	427	132	56	366	358	123	692	14	654	882	309
Stop/Veh	0.90	0.67	0.67	0.92	0.89	0.67	0.91	0.87	0.64	0.89	0.67	0.64
Travel Dist (mi)	169.1	237.1	73.0	30.0	200.9	264.0	23.6	138.9	4.0	338.5	615.0	226.8
Travel Time (hr)	10.6	10.6	2.9	1.5	9.6	10.2	2.8	15.3	0.2	19.7	28.7	8.8
Vehicles Entered	451	630	194	60	401	526	132	785	22	718	1300	478
Vehicles Exited	450	632	194	60	404	527	133	780	22	715	1299	478
Hourly Exit Rate	450	632	194	60	404	527	133	780	22	715	1299	478
Input Volume	445	625	196	58	398	529	136	773	20	733	1310	468
% of Volume	101	101	99	103	102	100	98	101	110	98	99	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	1	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	1	0	0

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	All
Denied Delay (hr)	2.6
Denied Del/Veh (s)	1.7
Total Delay (hr)	74.5
Total Del/Veh (s)	46.2
Stop Delay (hr)	46.9
Stop Del/Veh (s)	29.1
Total Stops	4431
Stop/Veh	0.76
Travel Dist (mi)	2321.0
Travel Time (hr)	120.9
Vehicles Entered	5697
Vehicles Exited	5694
Hourly Exit Rate	5694
Input Volume	5691
% of Volume	100
Denied Entry Before	1
Denied Entry After	1

2: Sanderson Ave & Ramona Blvd Performance by movement

Movement	NBT	NBR	SBL	SBT	NWL	NWR	All
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1	0.2
Denied Del/Veh (s)	0.2	2.8	0.2	0.0	0.3	2.1	0.2
Total Delay (hr)	2.6	0.1	2.3	4.4	0.4	0.2	10.1
Total Del/Veh (s)	11.2	4.1	35.1	11.4	28.8	7.0	13.5
Stop Delay (hr)	1.0	0.0	1.6	0.2	0.4	0.1	3.5
Stop Del/Veh (s)	4.3	2.7	24.8	0.6	26.2	5.5	4.7
Total Stops	275	22	202	124	49	87	759
Stop/Veh	0.32	0.37	0.85	0.09	0.91	0.89	0.28
Travel Dist (mi)	155.1	10.9	42.7	251.9	23.4	42.7	526.7
Travel Time (hr)	5.5	0.4	3.5	9.5	1.0	1.3	21.3
Vehicles Entered	845	59	236	1379	53	96	2668
Vehicles Exited	842	60	233	1383	53	97	2668
Hourly Exit Rate	842	60	233	1383	53	97	2668
Input Volume	829	62	235	1390	51	100	2667
% of Volume	102	97	99	99	104	97	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

3: Cawston Ave & Cottonwood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	4.1	0.2
Total Delay (hr)	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.1	0.1	0.0	0.9
Total Del/Veh (s)	0.7	0.2	3.4	2.3	1.2	12.3	8.1	3.4	10.2	3.7	3.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.5
Stop Del/Veh (s)	0.0	0.0	0.9	0.0	0.0	9.9	5.1	2.7	6.9	3.4	1.7
Total Stops	0	0	34	0	1	39	72	78	41	25	290
Stop/Veh	0.00	0.00	0.30	0.00	0.02	1.00	0.64	0.99	0.98	0.96	0.29
Travel Dist (mi)	42.7	9.3	43.3	78.1	16.0	5.5	13.3	11.2	5.3	3.3	228.1
Travel Time (hr)	0.9	0.2	1.1	1.7	0.4	0.3	0.6	0.5	0.3	0.2	6.3
Vehicles Entered	271	59	113	213	42	39	111	79	41	25	993
Vehicles Exited	271	59	112	212	42	39	111	78	41	25	990
Hourly Exit Rate	271	59	112	212	42	39	111	78	41	25	990
Input Volume	276	58	119	211	40	40	115	86	44	24	1013
% of Volume	98	102	94	100	105	98	97	91	93	104	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1
Denied Del/Veh (s)	0.0	0.0	0.6	3.5	0.4	0.2	0.0	0.0	0.0	2.4	0.5	2.3
Total Delay (hr)	1.1	1.5	0.2	1.0	1.5	0.3	0.5	3.5	0.2	2.4	5.4	0.2
Total Del/Veh (s)	34.3	26.7	10.3	36.6	30.5	8.0	40.7	16.5	8.4	47.6	17.3	4.4
Stop Delay (hr)	1.0	1.2	0.2	1.0	1.1	0.2	0.4	1.9	0.1	2.1	2.9	0.1
Stop Del/Veh (s)	32.3	21.7	10.1	33.6	23.3	7.2	36.4	9.0	3.4	42.2	9.4	1.7
Total Stops	98	146	64	91	125	95	37	306	55	175	517	72
Stop/Veh	0.86	0.71	0.77	0.88	0.72	0.76	0.90	0.40	0.52	0.98	0.46	0.46
Travel Dist (mi)	11.2	20.7	8.3	24.8	42.1	30.5	19.9	350.3	51.8	30.3	192.1	27.2
Travel Time (hr)	1.5	2.0	0.5	1.8	2.4	1.1	1.0	11.5	1.6	3.3	9.8	1.1
Vehicles Entered	113	206	82	100	170	123	40	761	105	175	1104	156
Vehicles Exited	112	205	82	101	170	124	40	757	104	174	1109	157
Hourly Exit Rate	112	205	82	101	170	124	40	757	104	174	1109	157
Input Volume	113	214	84	101	171	123	43	791	111	175	1094	156
% of Volume	99	96	98	100	99	101	93	96	94	99	101	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	0.6
Total Delay (hr)	17.8
Total Del/Veh (s)	20.2
Stop Delay (hr)	12.4
Stop Del/Veh (s)	14.0
Total Stops	1781
Stop/Veh	0.56
Travel Dist (mi)	809.3
Travel Time (hr)	37.7
Vehicles Entered	3135
Vehicles Exited	3135
Hourly Exit Rate	3135
Input Volume	3176
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

5: North Driveway/Karpick St & 7th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBR	SBL	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.0	0.1	0.1	0.0	0.1	0.0	0.3
Total Del/Veh (s)	0.3	4.3	3.2	2.8	3.1	5.1	3.2
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Stop Del/Veh (s)	0.0	0.6	0.7	0.7	2.6	3.8	1.3
Total Stops	0	3	0	0	80	30	113
Stop/Veh	0.00	0.04	0.00	0.00	1.00	1.00	0.33
Travel Dist (mi)	4.2	9.6	8.1	5.4	4.5	0.8	32.6
Travel Time (hr)	0.1	0.4	0.3	0.2	0.3	0.1	1.5
Vehicles Entered	45	78	66	43	79	30	341
Vehicles Exited	45	78	66	43	80	30	342
Hourly Exit Rate	45	78	66	43	80	30	342
Input Volume	51	83	68	45	82	32	361
% of Volume	88	94	97	96	98	94	95
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.2	0.0	0.2	0.3	0.1	0.1	0.5	0.2	0.1	0.5	0.0
Total Del/Veh (s)	6.6	7.4	4.0	7.4	6.8	4.1	8.0	11.3	7.3	7.7	10.0	2.4
Stop Delay (hr)	0.0	0.1	0.0	0.1	0.2	0.1	0.0	0.3	0.1	0.1	0.3	0.0
Stop Del/Veh (s)	4.7	3.9	3.9	4.7	3.2	3.6	4.3	5.4	5.0	5.0	4.9	2.9
Total Stops	9	92	29	100	138	52	37	170	85	38	186	12
Stop/Veh	1.00	0.78	1.00	0.99	0.77	1.00	1.00	0.98	0.99	1.00	0.99	1.00
Travel Dist (mi)	1.0	12.6	3.4	22.1	35.2	11.4	9.3	43.4	21.6	8.8	42.9	2.8
Travel Time (hr)	0.1	0.7	0.2	0.9	1.4	0.4	0.4	1.8	0.9	0.4	1.8	0.1
Vehicles Entered	9	117	29	100	179	52	37	172	85	38	185	12
Vehicles Exited	9	117	29	100	178	52	37	172	85	38	185	12
Hourly Exit Rate	9	117	29	100	178	52	37	172	85	38	185	12
Input Volume	10	123	32	105	180	54	43	180	88	43	191	12
% of Volume	90	95	91	95	99	96	86	96	97	88	97	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	2.3
Total Del/Veh (s)	8.1
Stop Delay (hr)	1.3
Stop Del/Veh (s)	4.4
Total Stops	948
Stop/Veh	0.93
Travel Dist (mi)	214.7
Travel Time (hr)	8.9
Vehicles Entered	1015
Vehicles Exited	1014
Hourly Exit Rate	1014
Input Volume	1061
% of Volume	96
Denied Entry Before	0
Denied Entry After	0

7: Sanderson Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.5	0.9	0.2	1.9	1.3	0.1	0.5	3.6	0.5	1.2	5.2	0.2
Total Del/Veh (s)	33.6	23.6	16.7	37.8	24.3	5.2	37.1	15.5	14.3	41.2	16.7	9.5
Stop Delay (hr)	0.5	0.7	0.2	1.7	1.0	0.1	0.4	0.9	0.2	0.9	1.5	0.0
Stop Del/Veh (s)	30.2	17.4	15.1	33.8	18.3	5.0	29.0	4.0	4.2	32.0	4.8	1.9
Total Stops	50	90	27	165	122	41	40	203	43	90	325	27
Stop/Veh	0.93	0.62	0.69	0.90	0.63	0.64	0.85	0.24	0.33	0.89	0.29	0.29
Travel Dist (mi)	13.9	37.0	9.8	22.1	23.4	7.8	23.3	403.5	64.8	50.4	544.1	46.2
Travel Time (hr)	0.9	1.8	0.5	2.6	1.8	0.3	1.0	12.1	2.1	2.3	16.5	1.3
Vehicles Entered	53	143	38	182	192	64	46	821	130	100	1101	92
Vehicles Exited	54	142	38	180	193	64	46	821	128	99	1098	91
Hourly Exit Rate	54	142	38	180	193	64	46	821	128	99	1098	91
Input Volume	57	150	39	195	201	66	49	857	130	98	1092	89
% of Volume	95	95	97	92	96	97	94	96	98	101	101	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Sanderson Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	16.1
Total Del/Veh (s)	19.4
Stop Delay (hr)	8.0
Stop Del/Veh (s)	9.6
Total Stops	1223
Stop/Veh	0.41
Travel Dist (mi)	1246.2
Travel Time (hr)	43.3
Vehicles Entered	2962
Vehicles Exited	2954
Hourly Exit Rate	2954
Input Volume	3023
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

8: Kirby St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	3.7
Total Delay (hr)	0.1	2.2	0.1	0.4	1.9	0.1	0.1	1.0	0.2	0.1	0.6	0.0
Total Del/Veh (s)	18.2	22.2	8.1	14.1	16.6	12.8	13.3	16.1	8.4	10.9	13.6	5.6
Stop Delay (hr)	0.1	1.4	0.1	0.2	0.8	0.1	0.0	0.5	0.1	0.1	0.3	0.0
Stop Del/Veh (s)	13.7	13.9	4.7	6.6	6.5	7.2	7.9	7.5	5.2	7.5	7.2	3.8
Total Stops	14	352	47	97	335	41	22	220	89	29	169	16
Stop/Veh	0.93	0.99	1.02	0.99	0.79	0.98	1.00	0.98	0.99	1.00	0.99	1.00
Travel Dist (mi)	5.0	120.8	15.9	47.9	187.9	20.5	11.1	109.7	44.4	3.4	19.9	1.9
Travel Time (hr)	0.2	4.9	0.5	1.6	6.3	0.7	0.4	3.8	1.5	0.2	1.2	0.1
Vehicles Entered	15	353	46	96	419	41	22	221	88	29	169	16
Vehicles Exited	14	351	46	97	418	41	22	220	89	28	169	16
Hourly Exit Rate	14	351	46	97	418	41	22	220	89	28	169	16
Input Volume	16	362	45	108	443	42	27	238	91	28	167	17
% of Volume	88	97	102	90	94	98	81	92	98	100	101	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

8: Kirby St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	6.9
Total Del/Veh (s)	16.2
Stop Delay (hr)	3.6
Stop Del/Veh (s)	8.4
Total Stops	1431
Stop/Veh	0.93
Travel Dist (mi)	588.2
Travel Time (hr)	21.3
Vehicles Entered	1515
Vehicles Exited	1511
Hourly Exit Rate	1511
Input Volume	1584
% of Volume	95
Denied Entry Before	0
Denied Entry After	0

9: Lyon Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.2	0.1
Total Delay (hr)	0.1	2.8	0.1	2.2	18.0	1.4	0.2	1.2	0.1	0.1	0.4	0.0
Total Del/Veh (s)	13.8	23.5	18.0	118.0	119.2	114.6	17.2	19.9	7.6	8.3	13.8	4.3
Stop Delay (hr)	0.0	1.5	0.1	2.1	17.1	1.4	0.2	0.8	0.1	0.1	0.2	0.0
Stop Del/Veh (s)	6.5	12.8	13.3	115.1	112.9	113.4	13.5	12.3	4.9	6.1	6.6	4.4
Total Stops	22	408	21	65	516	43	40	196	52	31	110	30
Stop/Veh	1.00	0.94	0.95	0.98	0.95	0.98	0.98	0.88	1.00	1.00	0.99	1.00
Travel Dist (mi)	10.6	206.3	10.7	31.8	257.0	21.2	8.1	42.0	10.4	2.5	9.0	2.4
Travel Time (hr)	0.4	7.6	0.4	3.0	23.9	1.9	0.4	2.1	0.4	0.2	0.6	0.1
Vehicles Entered	22	425	22	65	537	43	41	221	52	31	110	29
Vehicles Exited	21	426	21	62	509	41	41	221	51	31	110	30
Hourly Exit Rate	21	426	21	62	509	41	41	221	51	31	110	30
Input Volume	21	437	23	71	537	45	45	222	54	32	114	31
% of Volume	100	97	91	87	95	91	91	100	94	97	96	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

9: Lyon Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	26.7
Total Del/Veh (s)	59.4
Stop Delay (hr)	23.5
Stop Del/Veh (s)	52.4
Total Stops	1534
Stop/Veh	0.95
Travel Dist (mi)	611.9
Travel Time (hr)	41.0
Vehicles Entered	1598
Vehicles Exited	1564
Hourly Exit Rate	1564
Input Volume	1632
% of Volume	96
Denied Entry Before	0
Denied Entry After	0

10: Palm Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	2.3	2.7	0.6	0.0	0.0	0.0	0.2	0.2	0.2
Total Delay (hr)	0.2	2.3	0.1	0.5	7.9	0.5	0.1	0.5	0.1	0.1	0.4	0.1
Total Del/Veh (s)	14.0	19.1	13.8	28.6	48.4	39.9	10.7	11.2	9.0	9.5	12.0	6.4
Stop Delay (hr)	0.1	0.9	0.1	0.4	6.9	0.5	0.1	0.3	0.1	0.1	0.2	0.0
Stop Del/Veh (s)	5.5	7.5	7.3	21.1	42.0	38.3	7.4	6.0	6.9	6.7	6.2	5.3
Total Stops	43	412	27	95	567	43	34	116	55	32	114	32
Stop/Veh	1.00	0.97	1.00	1.48	0.96	0.96	1.00	0.77	0.98	1.00	0.99	1.00
Travel Dist (mi)	21.4	207.6	13.3	7.7	71.2	5.3	13.0	51.8	21.6	2.1	7.6	2.1
Travel Time (hr)	0.7	7.0	0.4	0.8	10.0	0.7	0.5	1.8	0.8	0.2	0.6	0.1
Vehicles Entered	43	421	27	64	585	44	33	150	55	32	114	32
Vehicles Exited	43	419	27	63	579	44	33	150	56	32	114	32
Hourly Exit Rate	43	419	27	63	579	44	33	150	56	32	114	32
Input Volume	45	436	26	67	590	42	32	158	54	32	114	31
% of Volume	96	96	104	94	98	105	103	95	104	100	100	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	1	0	0	0	0	0	0	0

10: Palm Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	1.1
Total Delay (hr)	12.7
Total Del/Veh (s)	28.3
Stop Delay (hr)	9.5
Stop Del/Veh (s)	21.1
Total Stops	1570
Stop/Veh	0.97
Travel Dist (mi)	424.8
Travel Time (hr)	23.6
Vehicles Entered	1600
Vehicles Exited	1592
Hourly Exit Rate	1592
Input Volume	1627
% of Volume	98
Denied Entry Before	0
Denied Entry After	1

11: State St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Denied Del/Veh (s)	0.1	0.0	0.2	3.0	0.6	0.2	0.0	0.0	0.0	2.5	0.4	0.5
Total Delay (hr)	1.3	2.7	0.3	1.4	4.7	0.1	1.0	5.1	0.9	1.9	6.8	0.7
Total Del/Veh (s)	61.2	27.3	10.1	49.2	34.0	5.5	56.7	29.5	27.6	55.5	26.9	20.0
Stop Delay (hr)	1.2	1.9	0.2	1.1	3.1	0.1	0.9	3.2	0.7	1.7	4.4	0.5
Stop Del/Veh (s)	55.5	19.1	6.7	41.1	22.6	4.7	48.7	18.6	19.1	49.0	17.5	15.3
Total Stops	81	219	55	110	353	48	69	356	80	137	573	74
Stop/Veh	1.08	0.61	0.59	1.10	0.71	0.54	1.06	0.57	0.65	1.12	0.63	0.63
Travel Dist (mi)	27.2	129.8	33.6	13.4	67.6	12.0	31.9	300.7	61.1	11.2	85.8	11.2
Travel Time (hr)	2.0	5.6	1.1	1.8	6.3	0.5	1.8	12.2	2.6	2.3	8.8	1.1
Vehicles Entered	74	354	92	98	495	88	64	613	122	120	905	118
Vehicles Exited	73	350	91	97	492	88	63	612	122	118	906	118
Hourly Exit Rate	73	350	91	97	492	88	63	612	122	118	906	118
Input Volume	80	366	91	101	487	86	71	620	124	122	913	119
% of Volume	91	96	100	96	101	102	89	99	98	97	99	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

11: State St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	0.4
Total Delay (hr)	26.9
Total Del/Veh (s)	30.5
Stop Delay (hr)	19.0
Stop Del/Veh (s)	21.5
Total Stops	2155
Stop/Veh	0.68
Travel Dist (mi)	785.6
Travel Time (hr)	46.3
Vehicles Entered	3143
Vehicles Exited	3130
Hourly Exit Rate	3130
Input Volume	3180
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.4	0.6	0.6	0.4	0.4	0.4
Total Delay (hr)	0.0	0.1	0.0	0.3	0.2	0.1	0.0	5.2	1.4	0.4	1.5	0.1
Total Del/Veh (s)	6.1	11.7	3.8	8.0	2.2	6.3	31.5	37.8	30.7	14.6	18.6	10.4
Stop Delay (hr)	0.0	0.0	0.0	0.2	0.0	0.1	0.0	3.5	1.2	0.2	0.6	0.0
Stop Del/Veh (s)	4.8	5.7	3.0	5.1	0.5	4.5	24.8	25.8	25.7	8.4	7.1	5.9
Total Stops	10	30	2	130	33	65	4	488	165	99	297	28
Stop/Veh	1.00	1.00	1.00	0.98	0.10	0.98	1.00	0.99	0.99	1.00	0.99	1.00
Travel Dist (mi)	1.2	3.8	0.2	110.5	151.3	55.5	0.8	105.5	35.6	22.2	66.7	6.3
Travel Time (hr)	0.1	0.2	0.0	2.7	3.3	1.3	0.1	7.2	2.4	1.0	2.8	0.3
Vehicles Entered	9	30	2	131	321	66	4	487	165	98	297	28
Vehicles Exited	10	30	2	129	319	65	4	484	163	99	297	28
Hourly Exit Rate	10	30	2	129	319	65	4	484	163	99	297	28
Input Volume	11	30	1	148	371	73	5	496	163	100	293	26
% of Volume	91	100	200	87	86	89	80	98	100	99	101	108
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	9.4
Total Del/Veh (s)	20.5
Stop Delay (hr)	6.0
Stop Del/Veh (s)	13.1
Total Stops	1351
Stop/Veh	0.82
Travel Dist (mi)	559.5
Travel Time (hr)	21.2
Vehicles Entered	1638
Vehicles Exited	1630
Hourly Exit Rate	1630
Input Volume	1717
% of Volume	95
Denied Entry Before	0
Denied Entry After	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.0
Total Delay (hr)	0.5	1.6	0.4	0.6	1.8	0.2	2.0	1.3	0.1	0.4	1.6	0.4
Total Del/Veh (s)	32.8	18.6	9.6	34.2	18.1	13.1	38.6	22.0	5.9	31.1	26.7	17.1
Stop Delay (hr)	0.5	1.1	0.3	0.6	1.0	0.1	1.6	0.9	0.1	0.3	1.2	0.3
Stop Del/Veh (s)	30.2	12.5	7.4	29.4	10.3	8.4	32.1	15.1	3.6	29.3	20.5	14.1
Total Stops	54	174	95	61	181	38	169	132	41	38	156	69
Stop/Veh	0.93	0.56	0.64	0.90	0.50	0.61	0.92	0.61	0.59	0.88	0.75	0.79
Travel Dist (mi)	10.4	55.3	26.7	33.4	171.4	30.8	83.1	97.4	31.5	10.3	49.6	20.8
Travel Time (hr)	0.8	2.8	1.2	1.5	5.6	1.0	4.5	4.2	1.1	0.7	3.0	1.1
Vehicles Entered	57	307	148	67	358	62	180	213	68	43	206	86
Vehicles Exited	57	306	148	66	354	61	178	212	69	42	206	86
Hourly Exit Rate	57	306	148	66	354	61	178	212	69	42	206	86
Input Volume	63	314	145	81	433	75	181	213	68	49	213	88
% of Volume	90	97	102	81	82	81	98	100	101	86	97	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	10.9
Total Del/Veh (s)	21.7
Stop Delay (hr)	8.1
Stop Del/Veh (s)	16.1
Total Stops	1208
Stop/Veh	0.67
Travel Dist (mi)	620.6
Travel Time (hr)	27.4
Vehicles Entered	1795
Vehicles Exited	1785
Hourly Exit Rate	1785
Input Volume	1923
% of Volume	93
Denied Entry Before	0
Denied Entry After	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	2.7	0.3	0.3	0.0	0.0	0.0
Total Delay (hr)	1.4	2.7	0.4	1.5	2.2	0.2	1.4	6.2	0.7	2.1	7.5	0.5
Total Del/Veh (s)	47.5	40.2	17.9	43.2	28.5	6.8	47.1	27.9	20.6	52.9	26.7	13.0
Stop Delay (hr)	1.2	2.1	0.3	1.3	1.8	0.2	1.3	4.1	0.6	1.7	3.6	0.1
Stop Del/Veh (s)	40.8	30.3	12.2	38.8	22.8	6.5	42.2	18.5	15.5	42.6	12.7	2.6
Total Stops	93	200	76	110	181	74	98	489	83	122	502	64
Stop/Veh	0.89	0.81	0.95	0.89	0.64	0.69	0.90	0.62	0.65	0.87	0.49	0.46
Travel Dist (mi)	50.7	119.6	38.9	39.2	85.0	34.3	17.2	128.4	20.7	68.4	497.8	67.9
Travel Time (hr)	2.6	5.3	1.4	2.6	4.4	1.2	2.0	9.1	1.4	3.6	17.9	2.1
Vehicles Entered	103	242	79	122	280	106	107	787	127	137	1002	136
Vehicles Exited	102	240	78	121	276	106	108	789	127	137	999	136
Hourly Exit Rate	102	240	78	121	276	106	108	789	127	137	999	136
Input Volume	108	250	79	170	391	155	109	773	128	140	1012	132
% of Volume	94	96	99	71	71	68	99	102	99	98	99	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	26.9
Total Del/Veh (s)	29.6
Stop Delay (hr)	18.1
Stop Del/Veh (s)	19.9
Total Stops	2092
Stop/Veh	0.64
Travel Dist (mi)	1168.3
Travel Time (hr)	53.5
Vehicles Entered	3228
Vehicles Exited	3219
Hourly Exit Rate	3219
Input Volume	3447
% of Volume	93
Denied Entry Before	0
Denied Entry After	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	1.9	26.7	3.8	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	175.4	211.5	182.8	3.6	1.9	5.8	0.6	0.6	3.4	0.0	0.0	0.3
Total Delay (hr)	2.1	24.6	4.0	8.9	66.6	5.7	0.7	2.3	0.2	0.3	1.7	0.2
Total Del/Veh (s)	221.2	223.8	219.8	517.6	503.9	502.8	29.9	31.5	8.5	22.9	24.2	10.9
Stop Delay (hr)	2.2	25.2	4.3	9.2	68.5	5.9	0.6	1.8	0.2	0.2	1.1	0.1
Stop Del/Veh (s)	231.3	229.7	232.1	535.1	517.9	521.4	26.3	24.9	6.0	18.0	16.2	6.4
Total Stops	17	182	30	62	466	41	81	262	97	44	249	52
Stop/Veh	0.50	0.46	0.45	1.00	0.98	1.00	0.99	0.99	1.01	1.00	0.99	1.04
Travel Dist (mi)	5.5	62.9	10.5	28.4	213.7	18.8	13.8	44.9	16.4	20.9	119.1	23.5
Travel Time (hr)	4.1	52.5	8.1	9.7	71.7	6.3	1.1	3.5	0.8	0.9	4.8	0.8
Vehicles Entered	34	390	65	61	468	41	81	263	95	44	249	50
Vehicles Exited	32	364	61	51	385	33	80	262	96	44	248	49
Hourly Exit Rate	32	364	61	51	385	33	80	262	96	44	248	49
Input Volume	42	499	76	81	592	49	82	261	93	47	256	49
% of Volume	76	73	80	63	65	67	98	100	103	94	97	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	5	64	9	0	1	0	0	0	0	0	0	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	32.9
Denied Del/Veh (s)	61.6
Total Delay (hr)	117.3
Total Del/Veh (s)	226.4
Stop Delay (hr)	119.3
Stop Del/Veh (s)	230.3
Total Stops	1583
Stop/Veh	0.85
Travel Dist (mi)	578.6
Travel Time (hr)	164.4
Vehicles Entered	1841
Vehicles Exited	1705
Hourly Exit Rate	1705
Input Volume	2127
% of Volume	80
Denied Entry Before	0
Denied Entry After	79

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.0	0.1	0.0	0.0	0.0	3.6	0.6	3.6	1.5	0.1	1.7
Total Delay (hr)	0.3	2.8	0.1	8.1	44.2	2.8	0.9	2.1	0.2	0.7	2.1	0.1
Total Del/Veh (s)	54.3	21.6	9.5	284.7	243.7	121.7	101.9	34.7	9.5	46.3	32.1	13.4
Stop Delay (hr)	0.3	1.5	0.0	8.0	42.6	2.6	0.9	1.6	0.2	0.6	1.6	0.1
Stop Del/Veh (s)	47.5	12.0	4.4	279.1	234.8	113.4	98.0	25.9	7.1	42.1	23.8	11.6
Total Stops	22	227	18	136	602	85	32	169	62	50	169	13
Stop/Veh	0.96	0.49	0.50	1.32	0.92	1.02	1.00	0.76	0.73	0.93	0.70	0.68
Travel Dist (mi)	11.1	226.0	17.6	44.3	287.7	37.8	2.9	20.3	7.7	12.8	57.5	4.4
Travel Time (hr)	0.6	8.0	0.6	9.3	51.6	3.9	1.0	2.6	0.6	1.0	3.3	0.2
Vehicles Entered	23	457	36	101	641	81	32	221	84	53	238	18
Vehicles Exited	22	456	35	80	527	71	30	221	84	53	237	18
Hourly Exit Rate	22	456	35	80	527	71	30	221	84	53	237	18
Input Volume	32	579	39	111	677	80	30	209	86	55	256	20
% of Volume	69	79	90	72	78	89	100	106	98	96	93	90
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.4
Total Delay (hr)	64.6
Total Del/Veh (s)	115.5
Stop Delay (hr)	60.0
Stop Del/Veh (s)	107.3
Total Stops	1585
Stop/Veh	0.79
Travel Dist (mi)	730.1
Travel Time (hr)	82.8
Vehicles Entered	1985
Vehicles Exited	1834
Hourly Exit Rate	1834
Input Volume	2174
% of Volume	84
Denied Entry Before	0
Denied Entry After	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.5	0.5	1.4	0.2	1.2
Total Delay (hr)	0.4	4.6	0.3	2.4	13.3	0.5	1.1	1.0	0.4	0.8	1.2	0.1
Total Del/Veh (s)	47.2	31.3	23.0	71.3	60.1	21.4	55.0	27.8	15.9	39.2	24.1	6.0
Stop Delay (hr)	0.3	2.3	0.2	1.8	8.9	0.4	1.0	0.7	0.3	0.8	1.0	0.1
Stop Del/Veh (s)	36.9	15.8	12.6	53.7	40.4	14.7	50.6	20.5	12.6	36.3	19.7	4.9
Total Stops	28	327	29	141	667	54	72	95	66	70	124	32
Stop/Veh	1.00	0.62	0.66	1.18	0.84	0.61	0.99	0.73	0.79	0.93	0.70	0.71
Travel Dist (mi)	13.2	257.2	21.5	56.9	380.1	43.4	10.5	18.7	12.1	6.5	15.6	4.0
Travel Time (hr)	0.7	10.0	0.8	3.9	23.2	1.7	1.5	1.5	0.8	1.1	1.6	0.2
Vehicles Entered	27	523	43	117	787	87	72	129	83	74	176	45
Vehicles Exited	27	523	44	111	743	84	70	128	83	74	174	44
Hourly Exit Rate	27	523	44	111	743	84	70	128	83	74	174	44
Input Volume	31	635	54	111	781	85	73	128	85	77	180	45
% of Volume	87	82	81	100	95	99	96	100	98	96	97	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.3
Total Delay (hr)	26.1
Total Del/Veh (s)	42.8
Stop Delay (hr)	17.7
Stop Del/Veh (s)	29.1
Total Stops	1705
Stop/Veh	0.78
Travel Dist (mi)	839.7
Travel Time (hr)	47.1
Vehicles Entered	2163
Vehicles Exited	2105
Hourly Exit Rate	2105
Input Volume	2285
% of Volume	92
Denied Entry Before	0
Denied Entry After	0

18: State St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	2.4	0.2	0.3	2.9	0.2	0.3	0.0	0.0	0.0
Total Delay (hr)	1.6	5.1	0.5	2.4	10.8	2.2	1.1	5.0	1.0	4.7	6.8	1.5
Total Del/Veh (s)	56.0	34.4	26.4	66.9	50.4	39.8	53.3	35.3	24.8	68.4	35.0	31.1
Stop Delay (hr)	1.3	3.3	0.3	2.1	8.1	1.7	1.0	3.9	0.8	3.7	3.8	0.9
Stop Del/Veh (s)	47.4	22.3	18.3	57.1	37.9	31.3	47.8	27.4	20.0	54.1	19.4	18.1
Total Stops	105	346	43	176	705	180	78	379	114	278	459	115
Stop/Veh	1.03	0.65	0.68	1.34	0.92	0.90	1.08	0.74	0.77	1.13	0.66	0.68
Travel Dist (mi)	49.6	257.5	30.5	35.7	211.9	55.0	16.0	114.5	33.2	119.8	335.7	83.6
Travel Time (hr)	2.8	10.5	1.2	3.5	16.2	3.8	1.6	7.9	2.0	7.7	14.5	3.6
Vehicles Entered	100	524	62	128	757	197	70	504	146	241	686	167
Vehicles Exited	100	518	61	128	754	196	70	502	146	237	683	167
Hourly Exit Rate	100	518	61	128	754	196	70	502	146	237	683	167
Input Volume	117	610	77	130	741	196	67	502	154	243	693	169
% of Volume	85	85	79	98	102	100	104	100	95	98	99	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: State St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.2
Total Delay (hr)	42.6
Total Del/Veh (s)	42.1
Stop Delay (hr)	30.9
Stop Del/Veh (s)	30.5
Total Stops	2978
Stop/Veh	0.82
Travel Dist (mi)	1342.9
Travel Time (hr)	75.3
Vehicles Entered	3582
Vehicles Exited	3562
Hourly Exit Rate	3562
Input Volume	3699
% of Volume	96
Denied Entry Before	0
Denied Entry After	0

19: Cawston Ave & Eaton Ave Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	2.5	0.0	0.0	0.3	0.0	0.2
Total Delay (hr)	0.0	0.0	1.0	0.1	0.2	1.1	2.3
Total Del/Veh (s)	4.5	2.6	9.9	5.8	8.1	9.5	8.8
Stop Delay (hr)	0.0	0.0	0.3	0.0	0.1	0.3	0.8
Stop Del/Veh (s)	2.9	2.3	3.0	2.7	3.3	2.8	2.9
Total Stops	31	52	337	47	68	391	926
Stop/Veh	1.00	0.98	0.97	1.00	0.97	0.98	0.98
Travel Dist (mi)	10.2	17.5	84.6	11.5	32.7	187.7	344.3
Travel Time (hr)	0.3	0.6	3.4	0.5	1.2	6.7	12.6
Vehicles Entered	30	53	345	47	69	393	937
Vehicles Exited	31	52	345	47	68	391	934
Hourly Exit Rate	31	52	345	47	68	391	934
Input Volume	31	49	349	46	73	414	962
% of Volume	100	106	99	102	93	94	97
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

20: Cawston Ave & Coriander Dr/Fruitvale Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.2	0.3	3.3	2.8	0.1	0.2	0.6	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.8	0.1	0.1	1.2	0.0
Total Del/Veh (s)	5.0	5.7	3.0	5.0	7.9	3.1	5.8	7.9	3.7	8.0	10.0	5.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.4	0.0
Stop Del/Veh (s)	3.5	3.9	2.9	3.0	3.6	2.6	3.1	2.8	2.5	3.3	2.9	2.7
Total Stops	1	1	5	44	3	36	5	354	58	51	436	2
Stop/Veh	1.00	1.00	1.00	0.98	1.00	0.97	1.00	0.99	1.00	1.00	0.99	1.00
Travel Dist (mi)	0.1	0.1	0.7	10.5	0.7	8.6	1.3	86.0	14.0	11.6	101.5	0.5
Travel Time (hr)	0.0	0.0	0.0	0.4	0.0	0.3	0.1	3.3	0.5	0.5	4.2	0.0
Vehicles Entered	1	1	5	44	3	36	5	354	58	51	437	2
Vehicles Exited	1	1	5	44	3	36	5	354	58	50	435	2
Hourly Exit Rate	1	1	5	44	3	36	5	354	58	50	435	2
Input Volume	2	1	5	44	3	34	7	359	58	53	456	2
% of Volume	50	100	100	100	100	106	71	99	100	94	95	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

20: Cawston Ave & Coriander Dr/Fruitvale Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	2.3
Total Del/Veh (s)	8.2
Stop Delay (hr)	0.8
Stop Del/Veh (s)	2.9
Total Stops	996
Stop/Veh	0.99
Travel Dist (mi)	235.5
Travel Time (hr)	9.4
Vehicles Entered	997
Vehicles Exited	994
Hourly Exit Rate	994
Input Volume	1024
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

21: Cawston Ave & East Driveway Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.2	0.0	0.6
Total Del/Veh (s)	8.8	3.4	9.7	3.0	5.0	2.5	3.2	4.8	2.8	2.4	3.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	6.7	3.1	8.0	2.8	1.3	0.2	0.2	1.6	0.5	0.5	0.8
Total Stops	19	33	2	2	16	0	0	0	0	0	72
Stop/Veh	1.00	1.00	1.00	1.00	0.31	0.00	0.00	0.00	0.00	0.00	0.10
Travel Dist (mi)	1.6	2.9	0.1	0.1	12.8	68.9	0.6	0.5	73.3	6.9	167.8
Travel Time (hr)	0.1	0.2	0.0	0.0	0.5	2.3	0.0	0.0	2.4	0.3	5.8
Vehicles Entered	19	33	2	2	51	277	2	2	286	27	701
Vehicles Exited	19	33	2	2	51	276	2	2	286	27	700
Hourly Exit Rate	19	33	2	2	51	276	2	2	286	27	700
Input Volume	18	36	2	2	55	294	2	2	299	28	738
% of Volume	106	92	100	100	93	94	100	100	96	96	95
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

22: Esplanade Ave & South Driveway Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.8	0.1	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.0	0.2	0.4	0.1	0.2	0.0	0.9
Total Del/Veh (s)	3.8	1.5	3.0	2.7	12.0	4.9	2.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.3
Stop Del/Veh (s)	2.4	0.3	0.2	0.2	10.3	4.4	0.8
Total Stops	12	0	0	0	50	18	80
Stop/Veh	0.40	0.00	0.00	0.00	1.00	0.95	0.07
Travel Dist (mi)	19.8	307.8	94.6	14.6	4.2	1.6	442.6
Travel Time (hr)	0.5	6.8	2.7	0.5	0.3	0.1	11.0
Vehicles Entered	29	451	513	78	50	19	1140
Vehicles Exited	28	453	512	78	49	18	1138
Hourly Exit Rate	28	453	512	78	49	18	1138
Input Volume	28	459	588	83	53	18	1229
% of Volume	100	99	87	94	92	100	93
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	38.3
Denied Del/Veh (s)	7.9
Total Delay (hr)	531.6
Total Del/Veh (s)	106.4
Stop Delay (hr)	402.0
Stop Del/Veh (s)	80.5
Total Stops	31119
Stop/Veh	1.73
Travel Dist (mi)	20537.9
Travel Time (hr)	1047.7
Vehicles Entered	17289
Vehicles Exited	16772
Hourly Exit Rate	16772
Input Volume	69025
% of Volume	24
Denied Entry Before	1
Denied Entry After	81

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	235	256	248	242	159	52	79	236	275	326	100	206
Average Queue (ft)	144	167	152	149	72	17	29	146	132	205	46	60
95th Queue (ft)	214	230	227	221	136	43	63	218	234	319	86	143
Link Distance (ft)			1976	1976				2634	2634			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	400	400			180	375	375			143	400	400
Storage Blk Time (%)				3	0				4	21		
Queuing Penalty (veh)				7	0				23	42		

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	394	403	38	335	421	1252	1220	361
Average Queue (ft)	240	233	6	209	231	318	326	138
95th Queue (ft)	368	374	22	311	358	754	815	305
Link Distance (ft)	873	873	873			2486	2486	
Upstream Blk Time (%)						0	0	
Queuing Penalty (veh)						0	0	
Storage Bay Dist (ft)				400	400			250
Storage Blk Time (%)	1			0	0	1	13	0
Queuing Penalty (veh)	2			0	0	10	59	2

Intersection: 2: Sanderson Ave & Ramona Blvd

Movement	NB	NB	NB	SB	SB	SB	NW	NW
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	194	158	58	225	183	158	118	93
Average Queue (ft)	105	59	16	120	42	57	36	32
95th Queue (ft)	171	124	44	204	132	132	83	68
Link Distance (ft)	969	969			873	873	2330	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			120	170				50
Storage Blk Time (%)		0		4	0		8	2
Queuing Penalty (veh)		0		28	0		8	1

Intersection: 3: Cawston Ave & Cottonwood Ave

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	T	L	TR	LT	R	LT	R
Maximum Queue (ft)	4	56	6	91	64	64	44
Average Queue (ft)	0	16	0	45	32	26	17
95th Queue (ft)	3	41	3	76	53	55	43
Link Distance (ft)	830		1962	697		682	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		195			150		150
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	R	L	L	T
Maximum Queue (ft)	69	84	98	97	79	86	121	172	80	71	49	208
Average Queue (ft)	31	40	51	47	29	19	47	80	32	25	6	89
95th Queue (ft)	62	73	89	88	61	55	92	145	67	56	31	171
Link Distance (ft)			507	507				1294	1294			2541
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300	300			205	320	320			300	300	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	R
Maximum Queue (ft)	206	61	159	191	306	288	58
Average Queue (ft)	98	19	39	97	173	150	29
95th Queue (ft)	183	47	115	163	270	249	51
Link Distance (ft)	2541				915	915	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		210	290	290			200
Storage Blk Time (%)	0				0	2	
Queuing Penalty (veh)	0				1	3	

Intersection: 5: North Driveway/Karpick St & 7th St

Movement	WB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	34	61	56
Average Queue (ft)	3	32	20
95th Queue (ft)	19	51	49
Link Distance (ft)		297	136
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	150		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Cawston Ave & 7th St

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	L	T	TR	L	TR	LT	R
Maximum Queue (ft)	69	79	68	69	70	141	113	20
Average Queue (ft)	28	37	36	37	23	68	46	6
95th Queue (ft)	52	65	57	59	54	111	83	21
Link Distance (ft)	576		1110	1110		1288	1226	1226
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		160			85			
Storage Blk Time (%)					0	2		
Queuing Penalty (veh)					0	1		

Intersection: 7: Sanderson Ave & 7th St

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	77	196	184	193	66	111	224	263	142	248	268	49
Average Queue (ft)	35	75	102	91	24	34	71	98	58	100	111	12
95th Queue (ft)	77	153	166	164	51	81	176	211	119	216	230	35
Link Distance (ft)		1368		646			2569	2569		2541	2541	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	53		145		600	300			360			360
Storage Blk Time (%)	4	14	2	1			0					
Queuing Penalty (veh)	7	8	7	4			0					

Intersection: 8: Kirby St & 7th St

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	LT	R	LT	R
Maximum Queue (ft)	207	108	56	118	98	61	103	45
Average Queue (ft)	94	21	30	61	50	24	53	12
95th Queue (ft)	174	68	48	101	80	44	87	38
Link Distance (ft)	1855			2533	2574		620	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		110	150			280		70
Storage Blk Time (%)	9	0		0			3	
Queuing Penalty (veh)	4	0		0			0	

Intersection: 9: Lyon Ave & 7th St

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	LTR	LT	R	L	T	R
Maximum Queue (ft)	50	218	1037	196	96	50	87	50
Average Queue (ft)	13	81	560	86	30	20	42	18
95th Queue (ft)	50	165	1367	152	67	46	70	42
Link Distance (ft)		2533	2566	1006			429	429
Upstream Blk Time (%)			0					
Queuing Penalty (veh)			0					
Storage Bay Dist (ft)	150				105	150		
Storage Blk Time (%)		4		5	0			
Queuing Penalty (veh)		1		3	0			

Intersection: 10: Palm Ave & 7th St

Movement	EB	EB	WB	WB	B52	NB	SB
Directions Served	L	TR	L	TR	T	LTR	LTR
Maximum Queue (ft)	82	149	170	540	38	124	109
Average Queue (ft)	26	77	107	310	6	64	52
95th Queue (ft)	58	123	224	580	46	105	87
Link Distance (ft)		2566		601	1929	2000	350
Upstream Blk Time (%)				4			
Queuing Penalty (veh)				30			
Storage Bay Dist (ft)	100		75				
Storage Blk Time (%)		4	0	74			
Queuing Penalty (veh)		2	0	50			

Intersection: 11: State St & 7th St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	TR
Maximum Queue (ft)	160	316	216	140	468	120	144	250	264	175	442	374
Average Queue (ft)	77	160	44	77	254	29	56	131	155	106	238	203
95th Queue (ft)	154	272	125	150	420	87	120	236	258	190	372	322
Link Distance (ft)		1929			721	721		2560	2560		491	491
Upstream Blk Time (%)											0	0
Queuing Penalty (veh)											0	0
Storage Bay Dist (ft)	95		215	60			85			105		
Storage Blk Time (%)	8	25	0	14	42		3	21		8	32	
Queuing Penalty (veh)	34	42	0	69	42		8	15		36	39	

Intersection: 12: Warren Ave & Esplanade Ave

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (ft)	55	78	66	506	173
Average Queue (ft)	23	39	33	213	86
95th Queue (ft)	50	64	57	429	143
Link Distance (ft)	671	4426	4426	1142	1186
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 13: Cawston Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	83	124	166	99	125	156	200	225	62	80	236
Average Queue (ft)	39	61	88	43	55	77	99	96	25	32	125
95th Queue (ft)	76	108	147	86	105	136	171	181	54	64	206
Link Distance (ft)		906	906		2540	2540		2579	2579	1246	1246
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150			150			150				
Storage Blk Time (%)		0			0		3	1			
Queuing Penalty (veh)		0			0		7	2			

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	144	126	173	80	152	224	82	157	301	309	221	315
Average Queue (ft)	68	59	81	47	82	128	36	67	174	166	95	166
95th Queue (ft)	123	110	148	97	138	198	66	130	266	269	172	278
Link Distance (ft)		2540	2540			1649	1649		840	840		2569
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	130			55	155			225			245	
Storage Blk Time (%)	1	1	22	2	0	4		0	2			2
Queuing Penalty (veh)	2	1	17	2	1	8		0	3			2

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	330	269
Average Queue (ft)	177	51
95th Queue (ft)	290	161
Link Distance (ft)	2569	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)	5	
Queuing Penalty (veh)	7	

Intersection: 15: Kirby St & Esplanade Ave

Movement	EB	B60	WB	NB	NB	SB	SB
Directions Served	LTR	T	LTR	LT	R	LT	R
Maximum Queue (ft)	945	816	2584	297	100	203	116
Average Queue (ft)	778	296	2014	124	42	89	31
95th Queue (ft)	1143	838	3335	271	114	162	80
Link Distance (ft)	834	1649	2574	903		2574	
Upstream Blk Time (%)	60		8				
Queuing Penalty (veh)	312		57				
Storage Bay Dist (ft)					132		100
Storage Blk Time (%)				14		10	
Queuing Penalty (veh)				13		5	

Intersection: 16: Lyon Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	109	244	56	220	2544	2190	124	229	138	119	205	37
Average Queue (ft)	22	139	10	132	1130	662	37	113	30	41	109	7
95th Queue (ft)	67	211	37	271	2784	1946	96	199	86	90	183	25
Link Distance (ft)		2574			2526	2526		476			1520	
Upstream Blk Time (%)					6	0						
Queuing Penalty (veh)					28	2						
Storage Bay Dist (ft)	122		122	140			120		120	118		118
Storage Blk Time (%)		10		0	55		3	8	0	0	7	
Queuing Penalty (veh)		7		3	61		8	10	0	0	5	

Intersection: 17: Palm Ave & Esplanade Ave

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB		
Directions Served	L	TR	L	T	R	L	TR	L	T	R		
Maximum Queue (ft)	207	387	315	1314	808	136	246	114	164	58		
Average Queue (ft)	32	197	149	452	140	52	99	53	82	23		
95th Queue (ft)	124	340	337	1140	667	109	207	97	139	50		
Link Distance (ft)		2526		2572	2572		765		508			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	160		250			75		150		150		
Storage Blk Time (%)		15	0	25		7	15	0	0			
Queuing Penalty (veh)		5	0	28		15	11	0	1			

Intersection: 18: State St & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	145	234	237	195	516	495	154	281	279	150	402	398
Average Queue (ft)	85	134	145	140	306	291	77	172	163	138	237	222
95th Queue (ft)	150	211	217	236	498	481	155	252	252	174	392	369
Link Distance (ft)		2572	2572		1477	1477		1199	1199		2560	2560
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100			140			105			100		
Storage Blk Time (%)	9	20		5	43		1	29		44	19	
Queuing Penalty (veh)	26	24		19	56		3	19		148	45	

Intersection: 19: Cawston Ave & Eaton Ave

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	48	58	74	78	59	79	74
Average Queue (ft)	18	26	42	38	32	43	45
95th Queue (ft)	43	47	65	61	54	65	68
Link Distance (ft)	1756		1246	1246		2579	2579
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		50			105		
Storage Blk Time (%)	0	0				0	
Queuing Penalty (veh)	0	0				0	

Intersection: 20: Cawston Ave & Coriander Dr/Fruitvale Ave

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	30	47	54	31	80	70	47	67	67
Average Queue (ft)	6	25	22	5	43	40	23	32	34
95th Queue (ft)	26	47	48	24	67	61	42	54	57
Link Distance (ft)	670	1254			1280	1280		1246	1246
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			50	150			58		
Storage Blk Time (%)		0	0				0	0	
Queuing Penalty (veh)		0	0				0	0	

Intersection: 21: Cawston Ave & East Driveway

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	54	28	44	12
Average Queue (ft)	25	4	13	0
95th Queue (ft)	48	20	39	7
Link Distance (ft)	449	354		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			150	150
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 22: Esplanade Ave & South Driveway

Movement	EB	WB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	32	2	4	78
Average Queue (ft)	9	0	0	34
95th Queue (ft)	30	2	3	63
Link Distance (ft)		906	906	443
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	150			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 1550

Intersection: 1: Sanderson Ave & Ramona Expy

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	29.5	26.5	7.5	28.5	7.5	48.5	19.5	16.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	9.0	6.9	6.9	-9.6	7.3	8.4	-1.0	-3.4
g/C Ratio	1.24	0.95	0.80	-1.32	1.01	1.15	-0.14	-0.46
Cycles Skipped (%)	0	0	16	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	91	100	38	91	84	100	81	88
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 7.3
Number of Complete Cycles : 32

Intersection: 2: Sanderson Ave & Ramona Blvd

Phase	1	2	3	6	8
Movement(s) Served	SBL	NBT	NWL	SBT	NWR
Maximum Green (s)	18.5	55.5	22.5	78.5	22.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	Min	None
Avg. Green (s)	0.6	-1.6	7.7	6.3	7.4
g/C Ratio	0.12	-0.37	0.96	0.96	1.14
Cycles Skipped (%)	8	0	46	33	33
Cycles @ Minimum (%)	0	0	0	0	8
Cycles Maxed Out (%)	18	7	0	20	0
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.3
Number of Complete Cycles : 61

Intersection: 4: Sanderson Ave & Cottonwood Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	8.5	40.5	11.5	31.5	8.5	40.5	12.5	30.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-6.9	2.5	-8.3	0.6	6.8	-6.1	-7.6	0.4
g/C Ratio	-1.20	0.45	-1.27	0.11	0.66	-1.08	-1.21	0.06
Cycles Skipped (%)	2	0	14	2	45	0	11	5
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	77	13	16	2	9	57	9	0
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.6
Number of Complete Cycles : 44

Intersection: 7: Sanderson Ave & 7th St

Phase	2	4	6	8
Movement(s) Served	NBTL	EBTL	SBTL	WBTL
Maximum Green (s)	61.5	39.5	61.5	39.5
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	Min	None	Min	None
Avg. Green (s)	1.1	-3.9	1.1	-3.9
g/C Ratio	0.21	-0.74	0.21	-0.74
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	35	12	35	12
Cycles with Peds (%)	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.3
Number of Complete Cycles : 43

Intersection: 11: State St & 7th St

Phase	1	2	4	5	6	8
Movement(s) Served	SBL	NBT	EBTL	NBL	SBT	WBTL
Maximum Green (s)	15.5	39.5	41.5	9.5	45.5	41.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	Min	None
Avg. Green (s)	-8.1	0.6	2.0	8.3	5.7	2.0
g/C Ratio	-1.32	0.10	0.34	1.13	0.94	0.34
Cycles Skipped (%)	3	0	0	18	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	21	51	71	35	57	71
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.0

Number of Complete Cycles : 34

Intersection: 13: Cawston Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	10.5	24.5	14.5	42.5	10.5	24.5	9.5	47.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	9.2	-2.3	8.0	-3.8	-3.1	4.1	7.1	-3.1
g/C Ratio	1.00	-0.45	1.03	-0.80	-0.59	0.79	0.92	-0.65
Cycles Skipped (%)	48	6	39	0	9	9	39	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	7	43	0	0	51	19	9	0
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.7

Number of Complete Cycles : 54

Intersection: 14: Sanderson Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	16.5	35.5	16.5	23.5	11.5	40.5	14.5	25.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-7.4	0.7	-7.6	4.1	9.7	3.1	-9.9	5.7
g/C Ratio	-1.00	0.11	-1.05	0.59	1.31	0.45	-1.30	0.81
Cycles Skipped (%)	6	0	3	0	6	0	9	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	19	78	11	54	37	61	14	39
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 7.0

Number of Complete Cycles : 35

Intersection: 16: Lyon Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	7.5	23.5	13.5	47.5	5.5	25.5	5.5	55.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	7.2	2.9	8.7	-7.0	6.0	4.7	5.8	-0.8
g/C Ratio	0.82	0.48	1.17	-1.13	0.58	0.76	0.38	-0.13
Cycles Skipped (%)	30	0	18	0	40	0	59	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	43	31	8	32	58	25	38	58
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.1

Number of Complete Cycles : 40

Intersection: 17: Palm Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	6.5	43.5	8.5	33.5	7.5	42.5	8.5	33.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	6.2	3.3	-7.5	2.5	7.1	2.9	6.9	-5.1
g/C Ratio	0.90	0.63	-1.23	0.46	0.99	0.55	0.53	-0.96
Cycles Skipped (%)	23	0	13	2	26	0	59	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	49	0	49	54	49	0	2	87
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.3
Number of Complete Cycles : 46

Intersection: 18: State St & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	21.5	25.5	15.5	29.5	8.5	38.5	15.5	29.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-1.5	8.3	-8.2	-8.2	7.8	0.4	10.5	-6.2
g/C Ratio	-0.23	1.26	-1.21	-1.25	1.04	0.06	1.50	-0.94
Cycles Skipped (%)	0	0	3	0	12	0	6	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	38	82	21	68	35	71	9	100
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.6
Number of Complete Cycles : 34

Appendix F - SimTraffic Reports – Opening Year Plus Project and Improvement Operations

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	7:25	7:25	7:25	7:25	7:25	7:25	7:25
End Time	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Total Time (min)	65	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	14913	14819	14868	15032	14878	14888	14843
Vehs Exited	14757	14745	14665	14857	14735	14667	14714
Starting Vehs	569	586	574	608	576	562	590
Ending Vehs	725	660	777	783	719	783	719
Denied Entry Before	4	2	1	2	2	4	5
Denied Entry After	4	1	3	0	1	7	3
Travel Distance (mi)	18020	17966	18024	18244	17940	17972	18028
Travel Time (hr)	708.4	704.5	711.1	734.9	694.9	724.4	721.3
Total Delay (hr)	287.0	283.4	288.0	307.9	273.9	302.2	297.7
Total Stops	26610	26461	26933	27191	26265	26881	27079
Fuel Used (gal)	715.6	711.8	713.8	725.6	707.2	712.5	718.8

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	7:25	7:25	7:25	7:25
End Time	8:30	8:30	8:30	8:30
Total Time (min)	65	65	65	65
Time Recorded (min)	60	60	60	60
# of Intervals	2	2	2	2
# of Recorded Intervals	1	1	1	1
Vehs Entered	14992	15037	15089	14931
Vehs Exited	14826	14889	15022	14790
Starting Vehs	581	573	627	577
Ending Vehs	747	721	694	720
Denied Entry Before	3	4	4	0
Denied Entry After	1	3	3	1
Travel Distance (mi)	17979	18166	18347	18069
Travel Time (hr)	726.4	757.0	730.9	721.4
Total Delay (hr)	305.0	330.3	300.6	297.6
Total Stops	26443	27654	27263	26876
Fuel Used (gal)	714.4	725.7	728.2	717.4

Interval #0 Information Seeding

Start Time	7:25
End Time	7:30
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:30
End Time	8:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	14913	14819	14868	15032	14878	14888	14843
Vehs Exited	14757	14745	14665	14857	14735	14667	14714
Starting Vehs	569	586	574	608	576	562	590
Ending Vehs	725	660	777	783	719	783	719
Denied Entry Before	4	2	1	2	2	4	5
Denied Entry After	4	1	3	0	1	7	3
Travel Distance (mi)	18020	17966	18024	18244	17940	17972	18028
Travel Time (hr)	708.4	704.5	711.1	734.9	694.9	724.4	721.3
Total Delay (hr)	287.0	283.4	288.0	307.9	273.9	302.2	297.7
Total Stops	26610	26461	26933	27191	26265	26881	27079
Fuel Used (gal)	715.6	711.8	713.8	725.6	707.2	712.5	718.8

Interval #1 Information Recording

Start Time	7:30
End Time	8:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	14992	15037	15089	14931
Vehs Exited	14826	14889	15022	14790
Starting Vehs	581	573	627	577
Ending Vehs	747	721	694	720
Denied Entry Before	3	4	4	0
Denied Entry After	1	3	3	1
Travel Distance (mi)	17979	18166	18347	18069
Travel Time (hr)	726.4	757.0	730.9	721.4
Total Delay (hr)	305.0	330.3	300.6	297.6
Total Stops	26443	27654	27263	26876
Fuel Used (gal)	714.4	725.7	728.2	717.4

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.3	0.0	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.3	0.1	0.2
Denied Del/Veh (s)	2.7	0.4	2.5	2.2	0.4	2.1	0.0	0.0	0.0	2.0	0.6	1.8
Total Delay (hr)	12.3	3.0	0.2	0.6	6.4	22.0	2.7	15.9	0.1	8.3	3.9	0.9
Total Del/Veh (s)	91.6	32.2	7.3	52.5	57.0	126.7	57.8	54.4	7.5	55.2	23.5	10.3
Stop Delay (hr)	10.9	2.0	0.1	0.6	4.5	17.2	2.3	10.8	0.1	6.8	2.1	0.5
Stop Del/Veh (s)	80.6	21.7	4.5	47.2	40.2	99.2	49.4	36.9	6.0	44.8	13.0	5.4
Total Stops	556	206	55	39	379	647	160	928	31	497	287	162
Stop/Veh	1.15	0.61	0.59	0.93	0.94	1.04	0.95	0.88	0.60	0.92	0.48	0.49
Travel Dist (mi)	176.2	123.8	34.5	20.3	197.4	302.5	29.5	185.2	9.3	251.4	278.5	153.3
Travel Time (hr)	16.4	5.0	1.0	1.0	9.5	28.6	3.5	19.5	0.4	13.8	8.7	4.4
Vehicles Entered	469	329	92	40	394	610	165	1036	52	532	589	324
Vehicles Exited	470	332	92	41	394	585	165	1032	52	530	586	324
Hourly Exit Rate	470	332	92	41	394	585	165	1032	52	530	586	324
Input Volume	476	331	90	45	391	607	168	1039	54	529	597	311
% of Volume	99	100	102	91	101	96	98	99	96	100	98	104
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	1	0	0	0	0	0	0

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	All
Denied Delay (hr)	1.4
Denied Del/Veh (s)	1.1
Total Delay (hr)	76.4
Total Del/Veh (s)	58.2
Stop Delay (hr)	57.9
Stop Del/Veh (s)	44.1
Total Stops	3947
Stop/Veh	0.84
Travel Dist (mi)	1761.8
Travel Time (hr)	111.7
Vehicles Entered	4632
Vehicles Exited	4603
Hourly Exit Rate	4603
Input Volume	4638
% of Volume	99
Denied Entry Before	0
Denied Entry After	1

2: Sanderson Ave & Ramona Blvd Performance by movement

Movement	NBT	NBR	SBL	SBT	NWL	NWR	All
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1	0.2
Denied Del/Veh (s)	0.3	2.5	0.0	0.0	0.3	2.0	0.3
Total Delay (hr)	3.0	0.0	0.7	1.2	0.5	0.3	5.8
Total Del/Veh (s)	9.8	2.7	26.8	6.9	27.4	7.8	10.0
Stop Delay (hr)	0.9	0.0	0.6	0.1	0.5	0.2	2.3
Stop Del/Veh (s)	2.9	1.1	21.3	0.8	24.4	6.0	4.0
Total Stops	295	11	82	66	58	122	634
Stop/Veh	0.26	0.26	0.83	0.10	0.87	0.87	0.30
Travel Dist (mi)	205.1	7.8	17.9	116.6	28.8	61.1	437.3
Travel Time (hr)	6.9	0.3	1.2	3.6	1.2	2.0	15.2
Vehicles Entered	1115	42	97	626	65	138	2083
Vehicles Exited	1115	42	97	630	65	138	2087
Hourly Exit Rate	1115	42	97	630	65	138	2087
Input Volume	1126	42	95	640	71	135	2109
% of Volume	99	100	102	98	92	102	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

3: Cawston Ave & Cottonwood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.2	0.1
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.7
Total Del/Veh (s)	0.6	0.1	2.7	1.6	0.9	9.0	9.8	3.4	9.1	9.9	3.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.4
Stop Del/Veh (s)	0.0	0.0	0.8	0.0	0.0	7.1	5.7	2.8	6.7	6.1	1.7
Total Stops	0	0	14	0	0	48	22	89	36	69	278
Stop/Veh	0.00	0.00	0.24	0.00	0.00	0.98	1.00	1.00	1.00	1.00	0.33
Travel Dist (mi)	40.6	4.1	22.0	80.7	4.9	6.4	2.8	11.7	4.6	8.9	186.9
Travel Time (hr)	0.9	0.1	0.5	1.7	0.1	0.3	0.1	0.5	0.3	0.5	5.1
Vehicles Entered	257	26	58	228	13	48	22	89	36	69	846
Vehicles Exited	258	26	57	227	13	48	22	89	36	68	844
Hourly Exit Rate	258	26	57	227	13	48	22	89	36	68	844
Input Volume	257	27	59	232	12	52	22	87	35	65	848
% of Volume	100	96	97	98	108	92	100	102	103	105	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	0.0	0.9	3.4	0.3	0.2	0.1	0.0	0.0	2.9	0.2	3.0
Total Delay (hr)	1.2	1.8	0.1	0.8	1.4	0.5	0.6	4.8	0.1	0.6	2.8	0.1
Total Del/Veh (s)	30.2	22.4	5.0	35.1	28.3	10.4	40.0	20.9	8.7	36.8	15.2	3.2
Stop Delay (hr)	1.1	1.4	0.1	0.7	1.0	0.4	0.5	2.4	0.1	0.6	1.7	0.0
Stop Del/Veh (s)	28.0	17.4	4.8	32.1	21.2	9.3	33.8	10.4	3.3	33.9	9.1	1.5
Total Stops	121	191	41	69	129	121	46	427	34	54	306	33
Stop/Veh	0.84	0.65	0.71	0.88	0.72	0.73	0.92	0.51	0.55	0.90	0.46	0.45
Travel Dist (mi)	13.4	27.5	5.5	19.0	43.3	40.7	24.2	407.7	30.5	10.3	114.9	12.9
Travel Time (hr)	1.7	2.4	0.3	1.3	2.4	1.6	1.2	14.2	0.9	1.0	5.4	0.5
Vehicles Entered	142	292	57	77	175	165	49	825	62	59	660	74
Vehicles Exited	143	292	57	77	175	164	49	822	61	59	660	74
Hourly Exit Rate	143	292	57	77	175	164	49	822	61	59	660	74
Input Volume	144	282	59	77	177	162	46	841	59	58	647	80
% of Volume	99	104	97	100	99	101	107	98	103	102	102	92
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.4
Total Delay (hr)	14.8
Total Del/Veh (s)	20.0
Stop Delay (hr)	10.0
Stop Del/Veh (s)	13.5
Total Stops	1572
Stop/Veh	0.59
Travel Dist (mi)	749.9
Travel Time (hr)	33.0
Vehicles Entered	2637
Vehicles Exited	2633
Hourly Exit Rate	2633
Input Volume	2632
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

5: North Driveway/Karpick St & 7th St Performance by movement

Movement	EBL	EBT	WBL	WBT	WBR	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	5.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2
Total Del/Veh (s)	1.9	0.3	3.7	2.5	2.3	3.2	4.6	2.2	2.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Stop Del/Veh (s)	0.1	0.0	0.6	0.5	0.5	2.7	3.3	2.0	1.3
Total Stops	0	0	2	0	0	79	34	2	117
Stop/Veh	0.00	0.00	0.08	0.00	0.00	1.00	1.00	1.00	0.39
Travel Dist (mi)	0.1	7.7	3.0	6.1	3.0	4.4	0.9	0.0	25.4
Travel Time (hr)	0.0	0.2	0.1	0.2	0.1	0.3	0.1	0.0	1.1
Vehicles Entered	1	82	24	52	24	79	34	2	298
Vehicles Exited	1	82	25	52	24	79	34	2	299
Hourly Exit Rate	1	82	25	52	24	79	34	2	299
Input Volume	2	78	27	54	24	82	34	1	302
% of Volume	50	105	93	96	100	96	100	200	99
Denied Entry Before	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.4	0.0	0.3	0.1	0.0	0.0	0.2	0.1	0.1	0.4	0.0
Total Del/Veh (s)	6.4	9.3	4.6	7.6	7.9	2.9	6.5	9.1	4.9	7.0	9.5	1.8
Stop Delay (hr)	0.0	0.2	0.0	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.0
Stop Del/Veh (s)	4.2	4.6	4.2	4.8	3.5	2.7	3.9	4.3	3.7	4.3	4.4	2.3
Total Stops	13	142	37	155	67	38	16	87	76	61	150	18
Stop/Veh	0.93	0.97	1.00	0.99	0.99	1.00	1.00	0.94	0.99	1.00	0.99	1.00
Travel Dist (mi)	1.6	17.2	4.4	33.9	14.6	8.3	4.1	22.7	19.3	12.1	30.4	3.6
Travel Time (hr)	0.1	1.0	0.2	1.4	0.6	0.3	0.2	0.9	0.7	0.5	1.3	0.1
Vehicles Entered	14	145	37	156	68	38	16	92	76	60	149	18
Vehicles Exited	13	144	37	155	68	38	16	92	76	61	150	18
Hourly Exit Rate	13	144	37	155	68	38	16	92	76	61	150	18
Input Volume	14	145	36	156	71	38	16	92	74	63	150	18
% of Volume	93	99	103	99	96	100	100	100	103	97	100	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	1.9
Total Del/Veh (s)	7.6
Stop Delay (hr)	1.0
Stop Del/Veh (s)	4.2
Total Stops	860
Stop/Veh	0.98
Travel Dist (mi)	172.2
Travel Time (hr)	7.3
Vehicles Entered	869
Vehicles Exited	868
Hourly Exit Rate	868
Input Volume	873
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

7: Sanderson Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.0	0.0	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.4	0.6	0.1	1.2	0.5	0.1	0.2	4.0	0.4	0.7	2.8	0.1
Total Del/Veh (s)	16.0	11.9	6.2	20.9	10.3	4.0	29.5	18.2	16.6	38.6	14.4	6.9
Stop Delay (hr)	0.3	0.3	0.0	1.0	0.3	0.1	0.1	1.3	0.1	0.6	0.9	0.0
Stop Del/Veh (s)	12.8	6.1	4.9	17.3	5.3	3.5	21.5	6.0	6.8	32.0	4.7	2.4
Total Stops	74	91	16	178	82	45	22	368	50	60	282	26
Stop/Veh	0.78	0.49	0.53	0.83	0.46	0.50	0.88	0.46	0.64	0.92	0.41	0.48
Travel Dist (mi)	24.2	47.4	7.6	24.8	20.6	10.4	12.4	383.9	38.5	32.0	336.0	26.6
Travel Time (hr)	1.1	1.7	0.3	2.1	1.0	0.4	0.5	12.1	1.3	1.4	9.8	0.7
Vehicles Entered	94	184	30	214	179	90	25	784	76	63	678	53
Vehicles Exited	94	183	30	213	179	90	25	781	76	64	681	53
Hourly Exit Rate	94	183	30	213	179	90	25	781	76	64	681	53
Input Volume	96	179	33	218	184	88	25	792	80	64	667	52
% of Volume	98	102	91	98	97	102	100	99	95	100	102	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Sanderson Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	11.1
Total Del/Veh (s)	16.0
Stop Delay (hr)	5.2
Stop Del/Veh (s)	7.5
Total Stops	1294
Stop/Veh	0.52
Travel Dist (mi)	964.3
Travel Time (hr)	32.5
Vehicles Entered	2470
Vehicles Exited	2469
Hourly Exit Rate	2469
Input Volume	2478
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

8: Kirby St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.9	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.2	3.9
Total Delay (hr)	0.0	2.0	0.1	0.4	2.3	0.1	0.1	0.7	0.2	0.1	0.5	0.0
Total Del/Veh (s)	17.3	19.8	6.6	16.1	24.0	19.4	14.8	17.7	9.2	9.9	12.7	5.2
Stop Delay (hr)	0.0	1.2	0.0	0.2	1.1	0.1	0.1	0.3	0.1	0.1	0.2	0.0
Stop Del/Veh (s)	12.1	11.4	3.7	6.2	10.8	11.3	9.1	8.5	5.3	6.8	6.4	3.8
Total Stops	6	364	30	96	330	27	25	133	68	50	129	17
Stop/Veh	1.00	0.99	1.03	0.99	0.94	1.00	0.96	0.99	0.99	1.00	0.99	1.00
Travel Dist (mi)	2.2	118.9	9.4	47.5	168.1	13.4	12.2	64.0	32.7	5.8	15.2	1.9
Travel Time (hr)	0.1	4.7	0.3	1.6	6.2	0.5	0.4	2.3	1.1	0.3	0.9	0.1
Vehicles Entered	6	366	29	96	347	27	25	132	68	49	130	16
Vehicles Exited	6	362	29	95	343	27	25	132	68	50	129	16
Hourly Exit Rate	6	362	29	95	343	27	25	132	68	50	129	16
Input Volume	9	367	28	94	341	26	24	137	67	51	122	18
% of Volume	67	99	104	101	101	104	104	96	101	98	106	89
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

8: Kirby St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	6.6
Total Del/Veh (s)	18.2
Stop Delay (hr)	3.4
Stop Del/Veh (s)	9.3
Total Stops	1275
Stop/Veh	0.98
Travel Dist (mi)	491.3
Travel Time (hr)	18.6
Vehicles Entered	1291
Vehicles Exited	1282
Hourly Exit Rate	1282
Input Volume	1284
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

9: Lyon Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.7	0.3	0.2
Total Delay (hr)	0.3	5.8	0.3	0.7	5.3	0.7	0.6	2.6	0.1	0.4	1.7	0.1
Total Del/Veh (s)	34.9	46.6	39.5	44.4	47.2	39.7	50.0	50.7	11.5	39.8	33.8	9.0
Stop Delay (hr)	0.2	4.0	0.2	0.5	3.5	0.5	0.6	2.2	0.1	0.3	1.3	0.1
Stop Del/Veh (s)	25.0	31.7	29.9	31.8	31.3	28.9	45.4	41.4	8.4	36.2	26.0	8.9
Total Stops	27	358	23	45	323	54	44	165	35	29	129	20
Stop/Veh	0.75	0.79	0.85	0.82	0.80	0.83	1.00	0.88	0.80	0.85	0.70	0.80
Travel Dist (mi)	16.8	214.1	12.7	25.7	190.7	30.3	8.4	35.7	8.3	2.7	14.9	2.1
Travel Time (hr)	0.8	10.8	0.6	1.3	9.7	1.5	0.8	3.4	0.4	0.5	2.1	0.1
Vehicles Entered	35	444	27	54	400	64	44	185	43	34	183	25
Vehicles Exited	34	441	26	53	399	63	44	185	43	33	184	25
Hourly Exit Rate	34	441	26	53	399	63	44	185	43	33	184	25
Input Volume	37	450	26	55	391	58	45	178	44	32	187	24
% of Volume	92	98	100	96	102	109	98	104	98	103	98	104
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

9: Lyon Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	18.8
Total Del/Veh (s)	43.4
Stop Delay (hr)	13.5
Stop Del/Veh (s)	31.3
Total Stops	1252
Stop/Veh	0.80
Travel Dist (mi)	562.5
Travel Time (hr)	32.1
Vehicles Entered	1538
Vehicles Exited	1530
Hourly Exit Rate	1530
Input Volume	1527
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

10: Palm Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3
Total Delay (hr)	0.4	5.4	0.2	0.2	2.3	0.1	0.1	0.6	0.2	0.1	0.6	0.2
Total Del/Veh (s)	23.6	38.9	33.0	11.4	21.1	15.0	12.6	10.0	11.6	10.8	13.9	8.4
Stop Delay (hr)	0.1	3.4	0.1	0.1	1.4	0.1	0.1	0.3	0.1	0.1	0.3	0.1
Stop Del/Veh (s)	9.2	24.3	23.5	5.6	12.9	12.1	9.0	5.5	8.9	7.7	7.8	6.8
Total Stops	71	493	22	66	386	32	22	133	57	40	160	67
Stop/Veh	1.31	0.98	1.00	1.05	0.99	1.00	0.96	0.59	0.98	1.00	1.00	0.99
Travel Dist (mi)	25.3	234.1	10.4	7.7	47.9	3.9	8.7	69.5	22.3	2.6	10.6	4.5
Travel Time (hr)	1.0	10.8	0.5	0.4	3.4	0.3	0.3	2.4	0.8	0.2	0.9	0.4
Vehicles Entered	54	493	22	63	388	32	22	221	57	40	160	67
Vehicles Exited	53	489	21	62	388	32	22	220	56	40	160	67
Hourly Exit Rate	53	489	21	62	388	32	22	220	56	40	160	67
Input Volume	59	497	22	62	379	33	23	226	57	44	159	62
% of Volume	90	98	95	100	102	97	96	97	98	91	101	108
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

10: Palm Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	10.4
Total Del/Veh (s)	22.9
Stop Delay (hr)	6.4
Stop Del/Veh (s)	14.1
Total Stops	1549
Stop/Veh	0.95
Travel Dist (mi)	447.8
Travel Time (hr)	21.4
Vehicles Entered	1619
Vehicles Exited	1610
Hourly Exit Rate	1610
Input Volume	1623
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

11: State St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	3.3	0.4	0.2	0.0	0.0	0.0	2.8	0.3	0.3
Total Delay (hr)	1.2	2.5	0.2	0.6	2.1	0.1	0.6	4.0	0.4	0.8	3.8	0.3
Total Del/Veh (s)	37.6	21.8	7.5	34.6	21.0	4.5	46.9	23.5	21.0	44.3	20.1	10.9
Stop Delay (hr)	1.0	1.6	0.1	0.5	1.3	0.1	0.5	2.3	0.2	0.7	2.4	0.2
Stop Del/Veh (s)	32.0	13.8	4.2	29.6	13.2	3.9	39.3	13.3	13.3	39.6	12.8	8.4
Total Stops	106	229	42	59	194	45	47	339	42	63	376	48
Stop/Veh	0.94	0.57	0.55	0.97	0.55	0.53	1.02	0.55	0.64	1.02	0.55	0.56
Travel Dist (mi)	41.7	150.1	28.3	8.2	48.0	11.6	22.5	297.4	32.6	5.8	64.8	8.1
Travel Time (hr)	2.2	5.8	0.9	0.9	3.2	0.5	1.2	11.1	1.2	1.0	5.3	0.6
Vehicles Entered	112	401	76	60	350	85	45	609	64	61	684	86
Vehicles Exited	112	401	75	61	352	85	45	606	65	61	680	85
Hourly Exit Rate	112	401	75	61	352	85	45	606	65	61	680	85
Input Volume	112	412	80	60	347	91	43	625	65	70	679	84
% of Volume	100	97	94	102	101	93	105	97	100	87	100	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

11: State St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.3
Total Delay (hr)	16.4
Total Del/Veh (s)	22.2
Stop Delay (hr)	10.9
Stop Del/Veh (s)	14.7
Total Stops	1590
Stop/Veh	0.60
Travel Dist (mi)	719.0
Travel Time (hr)	33.9
Vehicles Entered	2633
Vehicles Exited	2628
Hourly Exit Rate	2628
Input Volume	2668
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.5	0.5	0.4	0.4	0.4
Total Delay (hr)	0.0	0.1	0.0	0.3	0.2	0.2	0.0	3.0	0.6	0.2	1.6	0.0
Total Del/Veh (s)	5.9	11.4	4.1	7.9	5.3	6.3	18.2	24.9	16.8	13.6	17.8	9.9
Stop Delay (hr)	0.0	0.1	0.0	0.2	0.1	0.1	0.0	1.5	0.4	0.1	0.6	0.0
Stop Del/Veh (s)	4.3	5.0	3.9	5.0	2.0	4.7	12.7	12.6	11.7	7.8	6.6	5.5
Total Stops	22	40	2	133	44	98	1	424	134	48	325	14
Stop/Veh	1.00	1.00	1.00	0.98	0.38	0.99	1.00	0.99	0.99	1.00	0.99	1.00
Travel Dist (mi)	2.8	5.1	0.3	112.6	67.3	82.9	0.2	91.9	29.1	10.7	73.0	3.1
Travel Time (hr)	0.1	0.2	0.0	2.7	1.6	2.0	0.0	4.7	1.4	0.5	3.0	0.1
Vehicles Entered	22	40	2	133	114	98	1	424	134	48	325	14
Vehicles Exited	22	40	2	133	112	98	1	424	134	48	325	14
Hourly Exit Rate	22	40	2	133	112	98	1	424	134	48	325	14
Input Volume	24	41	2	136	109	96	1	428	130	51	333	13
% of Volume	92	98	100	98	103	102	100	99	103	94	98	108
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	6.2
Total Del/Veh (s)	16.4
Stop Delay (hr)	3.1
Stop Del/Veh (s)	8.3
Total Stops	1285
Stop/Veh	0.94
Travel Dist (mi)	478.9
Travel Time (hr)	16.4
Vehicles Entered	1355
Vehicles Exited	1353
Hourly Exit Rate	1353
Input Volume	1364
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.6	1.8	0.7	1.5	1.0	0.3	0.8	0.9	0.1	0.6	1.9	0.4
Total Del/Veh (s)	34.8	19.0	10.9	36.9	18.3	11.1	35.4	7.7	5.9	32.6	26.4	19.1
Stop Delay (hr)	0.5	1.2	0.5	1.2	0.6	0.2	0.7	0.6	0.1	0.6	1.4	0.3
Stop Del/Veh (s)	32.0	12.5	7.8	30.5	10.1	6.4	30.7	4.9	4.0	30.5	20.0	15.8
Total Stops	52	188	152	128	101	46	73	70	53	58	182	55
Stop/Veh	0.91	0.56	0.64	0.88	0.51	0.55	0.89	0.17	0.72	0.85	0.71	0.79
Travel Dist (mi)	10.1	60.6	42.0	70.5	96.3	40.5	40.2	131.2	36.2	16.6	61.6	17.1
Travel Time (hr)	0.8	3.1	2.0	3.2	3.1	1.3	2.0	4.9	1.3	1.1	3.7	0.9
Vehicles Entered	56	336	234	145	197	83	81	417	72	68	252	70
Vehicles Exited	56	334	233	142	196	82	80	417	73	67	251	70
Hourly Exit Rate	56	334	233	142	196	82	80	417	73	67	251	70
Input Volume	55	334	231	144	198	82	81	414	75	70	255	67
% of Volume	102	100	101	99	99	100	99	101	97	96	98	104
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	10.5
Total Del/Veh (s)	18.6
Stop Delay (hr)	7.8
Stop Del/Veh (s)	13.8
Total Stops	1158
Stop/Veh	0.57
Travel Dist (mi)	623.0
Travel Time (hr)	27.4
Vehicles Entered	2011
Vehicles Exited	2001
Hourly Exit Rate	2001
Input Volume	2006
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.2	0.3	0.0	0.0	0.0
Total Delay (hr)	1.5	2.6	0.3	1.3	2.6	0.1	0.8	4.8	0.6	1.9	4.1	0.2
Total Del/Veh (s)	44.4	32.5	14.3	42.9	32.0	7.1	43.4	25.0	16.0	45.1	21.5	9.2
Stop Delay (hr)	1.3	1.8	0.2	1.1	2.0	0.1	0.7	3.2	0.4	1.6	2.2	0.1
Stop Del/Veh (s)	37.6	22.4	8.4	36.8	24.5	6.6	39.1	16.4	11.8	36.9	11.7	2.8
Total Stops	108	198	66	100	206	58	61	418	82	134	318	36
Stop/Veh	0.89	0.68	0.93	0.90	0.70	0.78	0.91	0.60	0.64	0.88	0.47	0.45
Travel Dist (mi)	59.8	142.5	35.0	35.1	89.9	23.8	10.6	111.4	20.7	74.6	327.5	39.4
Travel Time (hr)	2.9	5.7	1.1	2.3	4.9	0.8	1.2	7.4	1.2	3.7	11.0	1.2
Vehicles Entered	120	287	70	109	292	74	66	691	128	150	672	79
Vehicles Exited	121	286	70	110	289	74	66	690	128	149	668	78
Hourly Exit Rate	121	286	70	110	289	74	66	690	128	149	668	78
Input Volume	125	288	70	112	291	75	65	697	128	149	671	75
% of Volume	97	99	100	98	99	99	102	99	100	100	100	104
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	20.9
Total Del/Veh (s)	27.2
Stop Delay (hr)	14.7
Stop Del/Veh (s)	19.1
Total Stops	1785
Stop/Veh	0.64
Travel Dist (mi)	970.4
Travel Time (hr)	43.3
Vehicles Entered	2738
Vehicles Exited	2729
Hourly Exit Rate	2729
Input Volume	2746
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.0	0.0	0.5	0.5	3.6	0.1	0.1	0.8
Total Delay (hr)	0.4	4.9	0.3	0.7	2.6	0.1	0.6	1.8	0.3	0.6	2.6	0.2
Total Del/Veh (s)	44.2	34.2	24.0	44.6	25.3	19.8	38.0	40.1	12.2	38.1	41.4	13.3
Stop Delay (hr)	0.4	3.1	0.3	0.6	1.5	0.1	0.5	1.4	0.2	0.5	2.0	0.1
Stop Del/Veh (s)	43.1	21.4	17.3	41.0	14.5	13.7	32.8	32.2	10.0	31.5	32.2	8.2
Total Stops	28	357	37	51	204	14	50	133	61	47	182	46
Stop/Veh	0.93	0.69	0.71	0.91	0.55	0.64	0.83	0.83	0.78	0.85	0.82	0.87
Travel Dist (mi)	4.9	84.9	8.6	27.6	185.3	11.2	10.1	27.1	13.3	23.6	97.0	23.4
Travel Time (hr)	0.5	6.7	0.6	1.4	6.8	0.4	0.9	2.5	0.8	1.2	5.1	0.9
Vehicles Entered	30	514	52	55	369	22	59	159	78	54	219	52
Vehicles Exited	30	514	52	54	366	22	59	158	78	53	218	52
Hourly Exit Rate	30	514	52	54	366	22	59	158	78	53	218	52
Input Volume	28	520	52	60	368	22	61	161	77	55	208	50
% of Volume	107	99	100	90	99	100	97	98	101	96	105	104
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	15.1
Total Del/Veh (s)	32.3
Stop Delay (hr)	10.7
Stop Del/Veh (s)	22.9
Total Stops	1210
Stop/Veh	0.72
Travel Dist (mi)	516.8
Travel Time (hr)	27.8
Vehicles Entered	1663
Vehicles Exited	1656
Hourly Exit Rate	1656
Input Volume	1662
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.0	3.7	0.4	3.7	0.0	0.0	0.1
Total Delay (hr)	0.2	4.9	0.1	0.6	1.6	0.1	0.1	0.8	0.1	0.3	0.9	0.0
Total Del/Veh (s)	33.2	29.3	14.5	30.2	14.7	4.8	23.3	18.1	7.8	25.4	16.5	4.8
Stop Delay (hr)	0.1	2.3	0.0	0.4	0.7	0.1	0.1	0.5	0.1	0.2	0.5	0.0
Stop Del/Veh (s)	20.2	13.7	4.7	22.5	5.9	2.7	20.7	11.2	6.8	21.8	9.3	2.8
Total Stops	23	441	19	67	177	35	16	101	40	37	116	20
Stop/Veh	1.05	0.73	0.68	0.93	0.44	0.50	0.94	0.63	0.71	0.92	0.59	0.61
Travel Dist (mi)	11.0	295.6	14.0	34.7	191.6	33.8	1.5	14.7	5.1	11.6	57.4	9.7
Travel Time (hr)	0.5	11.7	0.5	1.6	6.6	1.0	0.2	1.1	0.4	0.6	2.1	0.3
Vehicles Entered	22	595	28	71	395	69	16	160	56	39	194	33
Vehicles Exited	21	588	28	71	396	69	16	160	56	39	193	32
Hourly Exit Rate	21	588	28	71	396	69	16	160	56	39	193	32
Input Volume	22	601	29	72	394	67	17	160	58	40	197	36
% of Volume	95	98	97	99	101	103	94	100	97	98	98	89
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	9.8
Total Del/Veh (s)	20.8
Stop Delay (hr)	5.1
Stop Del/Veh (s)	10.8
Total Stops	1092
Stop/Veh	0.64
Travel Dist (mi)	680.7
Travel Time (hr)	26.4
Vehicles Entered	1678
Vehicles Exited	1669
Hourly Exit Rate	1669
Input Volume	1693
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.4	0.4	1.2	0.2	1.3
Total Delay (hr)	0.8	7.9	0.5	0.7	3.3	0.1	0.5	1.6	0.4	0.9	1.1	0.1
Total Del/Veh (s)	56.6	47.6	39.3	43.1	21.2	6.9	40.1	26.0	15.1	40.0	20.5	4.2
Stop Delay (hr)	0.6	4.5	0.3	0.6	1.8	0.0	0.5	1.1	0.3	0.9	0.9	0.1
Stop Del/Veh (s)	42.0	27.2	24.7	33.5	11.5	3.8	35.3	18.2	11.3	37.1	16.3	3.1
Total Stops	58	500	37	57	244	23	45	146	64	80	127	40
Stop/Veh	1.16	0.84	0.88	0.93	0.44	0.56	0.98	0.68	0.70	0.94	0.63	0.62
Travel Dist (mi)	24.3	287.7	20.4	30.3	243.2	20.0	6.5	31.0	13.1	7.5	17.7	5.8
Travel Time (hr)	1.3	13.8	1.0	1.6	9.6	0.6	0.8	2.4	0.8	1.2	1.7	0.3
Vehicles Entered	49	586	41	60	553	40	45	213	90	84	201	65
Vehicles Exited	48	581	41	59	549	40	44	213	90	84	200	65
Hourly Exit Rate	48	581	41	59	549	40	44	213	90	84	200	65
Input Volume	47	603	42	63	556	38	45	221	88	87	201	63
% of Volume	102	96	98	94	99	105	98	96	102	97	100	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	17.8
Total Del/Veh (s)	31.3
Stop Delay (hr)	11.4
Stop Del/Veh (s)	20.1
Total Stops	1421
Stop/Veh	0.69
Travel Dist (mi)	707.5
Travel Time (hr)	35.1
Vehicles Entered	2027
Vehicles Exited	2014
Hourly Exit Rate	2014
Input Volume	2054
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

18: State St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	2.7	0.2	0.2	3.1	0.2	0.2	0.0	0.0	0.0
Total Delay (hr)	1.5	4.4	0.3	1.2	4.0	0.7	0.7	4.1	0.5	2.5	4.1	0.6
Total Del/Veh (s)	51.1	26.2	21.2	45.9	27.8	17.9	47.8	30.4	19.2	48.3	26.7	22.9
Stop Delay (hr)	1.2	2.6	0.2	1.1	3.0	0.6	0.6	3.1	0.4	2.0	2.4	0.4
Stop Del/Veh (s)	42.4	15.6	13.7	40.7	20.5	14.1	43.2	23.3	15.5	37.8	15.4	14.6
Total Stops	104	324	29	93	349	103	54	341	67	178	313	55
Stop/Veh	0.99	0.54	0.62	0.95	0.67	0.72	1.04	0.71	0.73	0.94	0.56	0.63
Travel Dist (mi)	51.6	279.5	23.1	26.7	144.6	40.1	11.5	107.8	20.7	92.0	264.8	42.9
Travel Time (hr)	2.7	10.3	0.8	2.1	7.7	1.9	1.1	6.8	1.1	4.8	10.2	1.7
Vehicles Entered	103	597	47	96	516	143	50	474	91	184	547	86
Vehicles Exited	102	593	46	96	517	143	50	473	90	183	544	86
Hourly Exit Rate	102	593	46	96	517	143	50	473	90	183	544	86
Input Volume	111	613	47	91	517	144	51	478	96	188	542	89
% of Volume	92	97	98	105	100	99	98	99	94	97	100	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: State St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.2
Total Delay (hr)	24.6
Total Del/Veh (s)	29.8
Stop Delay (hr)	17.5
Stop Del/Veh (s)	21.2
Total Stops	2010
Stop/Veh	0.68
Travel Dist (mi)	1105.2
Travel Time (hr)	51.2
Vehicles Entered	2934
Vehicles Exited	2923
Hourly Exit Rate	2923
Input Volume	2967
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

19: Cawston Ave & Eaton Ave Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.5	2.4	0.0	0.0	0.1	0.0	0.4
Total Delay (hr)	0.1	0.4	1.0	0.1	0.4	1.3	3.3
Total Del/Veh (s)	6.8	5.5	8.9	6.8	9.6	10.0	8.6
Stop Delay (hr)	0.1	0.2	0.4	0.0	0.2	0.4	1.3
Stop Del/Veh (s)	3.7	3.5	3.2	3.7	4.1	3.1	3.3
Total Stops	56	235	336	40	161	472	1300
Stop/Veh	0.98	0.99	0.82	1.00	0.98	0.98	0.94
Travel Dist (mi)	18.8	78.1	92.1	10.0	80.1	234.1	513.2
Travel Time (hr)	0.6	2.8	3.8	0.4	3.0	8.4	18.9
Vehicles Entered	57	235	405	40	162	474	1373
Vehicles Exited	56	235	405	40	161	471	1368
Hourly Exit Rate	56	235	405	40	161	471	1368
Input Volume	58	234	405	42	164	477	1380
% of Volume	97	100	100	95	98	99	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

20: Cawston Ave & Coriander Dr/Fruitvale Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.2	0.1	0.3	3.2	3.9	0.1	0.1	0.0	0.0	0.0	0.4
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.8	0.0	0.3	1.2	0.0	2.4
Total Del/Veh (s)	4.3	6.9	3.2	5.4	3.3	7.0	8.0	3.4	8.5	10.2	5.2	8.2
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.1	0.3	0.0	0.9
Stop Del/Veh (s)	3.0	3.9	3.0	3.3	2.6	3.9	2.9	2.5	3.4	2.9	2.1	2.9
Total Stops	2	1	6	30	106	1	338	36	106	419	2	1047
Stop/Veh	1.00	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.99	0.99	1.00	0.99
Travel Dist (mi)	0.2	0.2	0.8	7.1	25.2	0.3	81.9	8.6	26.5	105.1	0.4	256.3
Travel Time (hr)	0.0	0.0	0.0	0.3	1.0	0.0	3.1	0.3	1.1	4.3	0.0	10.2
Vehicles Entered	2	1	6	30	106	1	339	35	107	420	2	1049
Vehicles Exited	2	1	6	30	106	1	338	36	106	418	2	1046
Hourly Exit Rate	2	1	6	30	106	1	338	36	106	418	2	1046
Input Volume	2	1	5	29	105	2	340	33	106	429	1	1053
% of Volume	100	100	120	103	101	50	99	109	100	97	200	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

21: Cawston Ave & East Driveway Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.5
Total Del/Veh (s)	7.9	3.8	8.3	4.1	4.6	1.7	1.0	3.9	2.4	2.1	2.6
Stop Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Stop Del/Veh (s)	5.8	3.4	6.9	4.0	1.5	0.3	0.2	0.9	0.6	0.5	0.9
Total Stops	25	54	1	2	6	0	0	0	0	0	88
Stop/Veh	1.00	1.00	1.00	1.00	0.35	0.00	0.00	0.00	0.00	0.00	0.13
Travel Dist (mi)	2.2	4.7	0.1	0.2	4.1	47.6	0.3	0.4	84.9	2.5	147.0
Travel Time (hr)	0.1	0.3	0.0	0.0	0.2	1.6	0.0	0.0	2.8	0.1	5.1
Vehicles Entered	25	54	1	2	16	222	2	2	332	10	666
Vehicles Exited	25	54	1	2	16	222	1	2	333	10	666
Hourly Exit Rate	25	54	1	2	16	222	1	2	333	10	666
Input Volume	27	55	2	2	18	217	2	2	333	9	667
% of Volume	93	98	50	100	89	102	50	100	100	111	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

22: Esplanade Ave & South Driveway Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	1.6	0.1	0.0	0.0	0.2	0.2	0.1
Total Delay (hr)	0.0	0.2	0.2	0.0	0.2	0.0	0.7
Total Del/Veh (s)	2.4	1.5	2.5	2.4	9.9	5.5	2.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.0	0.3
Stop Del/Veh (s)	1.1	0.2	0.2	0.3	8.1	4.8	1.0
Total Stops	2	0	0	0	80	30	112
Stop/Veh	0.22	0.00	0.00	0.00	0.99	1.00	0.11
Travel Dist (mi)	5.2	317.3	59.1	4.9	6.7	2.5	395.8
Travel Time (hr)	0.1	6.9	1.7	0.2	0.5	0.2	9.6
Vehicles Entered	8	533	320	26	80	30	997
Vehicles Exited	9	532	320	26	80	30	997
Hourly Exit Rate	9	532	320	26	80	30	997
Input Volume	9	525	319	27	82	27	989
% of Volume	100	101	100	96	98	111	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	3.5
Denied Del/Veh (s)	0.8
Total Delay (hr)	294.1
Total Del/Veh (s)	68.3
Stop Delay (hr)	185.4
Stop Del/Veh (s)	43.0
Total Stops	26876
Stop/Veh	1.73
Travel Dist (mi)	18068.6
Travel Time (hr)	721.4
Vehicles Entered	14931
Vehicles Exited	14790
Hourly Exit Rate	14790
Input Volume	59102
% of Volume	25
Denied Entry Before	0
Denied Entry After	1

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	328	358	282	211	63	41	68	998	1077	343	138	360
Average Queue (ft)	209	233	95	82	20	11	22	435	632	324	56	91
95th Queue (ft)	358	387	280	229	46	33	52	1032	1245	399	109	243
Link Distance (ft)			1976	1976				2634	2634			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	400	400			180	375	375			143	400	400
Storage Blk Time (%)	3	4	0	0				0	3	62		0
Queuing Penalty (veh)	5	7	0	0				0	17	120		0

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	515	500	53	289	307	182	178	155
Average Queue (ft)	309	301	13	164	187	106	95	60
95th Queue (ft)	480	474	38	261	280	165	158	120
Link Distance (ft)	873	873	873			2486	2486	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)				400	400			250
Storage Blk Time (%)	4			0	0			
Queuing Penalty (veh)	7			0	0			

Intersection: 2: Sanderson Ave & Ramona Blvd

Movement	NB	NB	NB	SB	SB	SB	NW	NW
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	220	174	36	132	99	196	113	92
Average Queue (ft)	108	64	9	56	20	37	39	40
95th Queue (ft)	181	130	31	106	68	138	81	77
Link Distance (ft)	969	969			873	873	2330	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			120	170				50
Storage Blk Time (%)		1		0			10	4
Queuing Penalty (veh)		0		0			13	3

Intersection: 3: Cawston Ave & Cottonwood Ave

Movement	EB	WB	NB	NB	SB
Directions Served	TR	L	LT	R	LT
Maximum Queue (ft)	2	36	66	69	76
Average Queue (ft)	0	8	34	33	41
95th Queue (ft)	2	26	58	55	64
Link Distance (ft)	830		697		682
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		195		150	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	R	L	L	T
Maximum Queue (ft)	88	89	110	114	51	74	102	170	105	76	55	207
Average Queue (ft)	41	41	62	56	18	15	38	79	44	29	8	116
95th Queue (ft)	76	75	101	100	39	46	79	141	84	64	35	190
Link Distance (ft)			507	507				1294	1294			2541
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300	300			205	320	320			300	300	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	R
Maximum Queue (ft)	214	50	32	87	199	179	52
Average Queue (ft)	124	13	4	38	118	79	18
95th Queue (ft)	200	35	19	74	182	152	42
Link Distance (ft)	2541				915	915	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		210	290	290			200
Storage Blk Time (%)	0					0	
Queuing Penalty (veh)	0					0	

Intersection: 5: North Driveway/Karpick St & 7th St

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	3	27	58	56
Average Queue (ft)	0	2	32	23
95th Queue (ft)	3	13	51	49
Link Distance (ft)			297	136
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	150	150		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Cawston Ave & 7th St

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	L	T	TR	L	TR	LT	R
Maximum Queue (ft)	68	98	56	63	35	85	85	20
Average Queue (ft)	34	47	27	29	13	46	42	8
95th Queue (ft)	58	77	50	52	38	75	71	22
Link Distance (ft)	576		1110	1110		1288	1226	1226
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		160			85			
Storage Blk Time (%)						0		
Queuing Penalty (veh)						0		

Intersection: 7: Sanderson Ave & 7th St

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	76	112	176	126	68	64	186	205	109	150	141	46
Average Queue (ft)	36	46	86	52	26	19	97	118	38	65	75	11
95th Queue (ft)	69	92	142	97	56	51	160	185	85	121	130	30
Link Distance (ft)		1368		646			2569	2569		2541	2541	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	53		145		600	300			360			360
Storage Blk Time (%)	3	4	1	0								
Queuing Penalty (veh)	6	4	3	0								

Intersection: 8: Kirby St & 7th St

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	LT	R	LT	R
Maximum Queue (ft)	215	91	81	204	119	68	118	36
Average Queue (ft)	86	17	35	99	56	25	51	12
95th Queue (ft)	171	60	64	171	99	51	88	37
Link Distance (ft)	1855			2533	2568		620	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		110	150			280		70
Storage Blk Time (%)	7		0	2			2	0
Queuing Penalty (veh)	2		0	2			0	0

Intersection: 9: Lyon Ave & 7th St

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	LTR	LT	R	L	T	R
Maximum Queue (ft)	209	455	482	294	167	82	189	52
Average Queue (ft)	36	239	267	148	28	28	98	14
95th Queue (ft)	141	426	432	256	90	64	165	40
Link Distance (ft)		2533	2566	1006			429	429
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150				105	150		
Storage Blk Time (%)		26		27	0		2	
Queuing Penalty (veh)		10		12	0		1	

Intersection: 10: Palm Ave & 7th St

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	160	389	161	236	141	131
Average Queue (ft)	72	210	42	119	71	66
95th Queue (ft)	179	348	107	203	121	108
Link Distance (ft)		2566		601	2000	350
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100		75			
Storage Blk Time (%)		45	0	27		
Queuing Penalty (veh)		27	0	17		

Intersection: 11: State St & 7th St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	TR
Maximum Queue (ft)	159	290	149	129	245	66	137	243	258	167	276	226
Average Queue (ft)	77	148	31	49	131	26	40	104	124	52	155	107
95th Queue (ft)	149	245	89	107	218	55	102	202	223	121	238	196
Link Distance (ft)		1929			721	721		2560	2560		491	491
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95		215	60			85			105		
Storage Blk Time (%)	6	20	0	4	25		1	13		0	19	
Queuing Penalty (veh)	28	38	0	14	15		3	5		1	13	

Intersection: 12: Warren Ave & Esplanade Ave

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (ft)	56	79	82	295	181
Average Queue (ft)	28	39	40	125	78
95th Queue (ft)	50	66	66	251	137
Link Distance (ft)	671	4426	4426	1142	1186
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 13: Cawston Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	90	160	213	184	116	140	122	134	65	103	265
Average Queue (ft)	39	72	104	82	38	58	54	56	29	45	137
95th Queue (ft)	76	126	178	151	91	115	101	108	55	87	226
Link Distance (ft)		906	906		2540	2540		2579	2579	1246	1246
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150			150			150				
Storage Blk Time (%)		0		2	0		0	0			
Queuing Penalty (veh)		0		2	0		0	0			

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	152	159	184	80	227	285	90	109	257	257	198	195
Average Queue (ft)	75	62	87	38	84	147	33	45	160	140	99	101
95th Queue (ft)	132	123	161	90	168	249	71	90	237	227	171	172
Link Distance (ft)		2540	2540			1649	1649		841	841		2569
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	130			55	155			225			245	
Storage Blk Time (%)	2	0	19	0	1	10			1		0	0
Queuing Penalty (veh)	3	0	14	1	4	11			1		0	0

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	216	69
Average Queue (ft)	115	25
95th Queue (ft)	188	56
Link Distance (ft)	2569	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)	1	
Queuing Penalty (veh)	0	

Intersection: 15: Kirby St & Esplanade Ave

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	R	LT	R
Maximum Queue (ft)	137	467	106	316	262	82	296	170
Average Queue (ft)	23	239	38	141	127	37	156	50
95th Queue (ft)	95	418	83	256	214	69	260	145
Link Distance (ft)	835	835	2575	2575	897		2568	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)						132		100
Storage Blk Time (%)					9		29	0
Queuing Penalty (veh)					7		15	0

Intersection: 16: Lyon Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	137	396	147	140	224	65	45	114	56	83	169	51
Average Queue (ft)	19	189	21	43	97	17	12	51	17	30	73	15
95th Queue (ft)	77	346	101	95	191	46	34	97	41	67	140	43
Link Distance (ft)		2575			2526	2526		476			1520	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	122		122	140			120		120	118		118
Storage Blk Time (%)		19		0	3			0			2	
Queuing Penalty (veh)		10		0	2			0			2	

Intersection: 17: Palm Ave & Esplanade Ave

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB		
Directions Served	L	TR	L	T	R	L	TR	L	T	R		
Maximum Queue (ft)	244	603	160	347	72	119	249	154	184	92		
Average Queue (ft)	67	292	49	165	18	35	119	59	85	26		
95th Queue (ft)	200	577	112	301	51	89	203	112	149	63		
Link Distance (ft)		2526		2572	2572		765		508			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	160		250			75		150		150		
Storage Blk Time (%)		28		3		1	23	0	1			
Queuing Penalty (veh)		13		2		2	10	0	1			

Intersection: 18: State St & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	144	220	227	188	259	243	154	248	242	150	283	281
Average Queue (ft)	79	114	130	78	152	139	53	145	128	113	131	141
95th Queue (ft)	138	192	204	151	231	226	120	222	207	170	249	245
Link Distance (ft)		2572	2572		1477	1477		1199	1199		2560	2560
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100			140			105			100		
Storage Blk Time (%)	8	14		1	13		0	21		21	12	
Queuing Penalty (veh)	20	15		2	12		0	10		54	23	

Intersection: 19: Cawston Ave & Eaton Ave

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	88	92	73	82	86	88	79
Average Queue (ft)	29	50	42	44	46	48	50
95th Queue (ft)	59	79	64	68	72	74	72
Link Distance (ft)	1756		1246	1246		2579	2579
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		50			105		
Storage Blk Time (%)	0	4			0	0	
Queuing Penalty (veh)	1	2			0	0	

Intersection: 20: Cawston Ave & Coriander Dr/Fruitvale Ave

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	30	46	63	21	73	74	56	63	67
Average Queue (ft)	8	19	34	1	43	40	29	31	32
95th Queue (ft)	29	45	52	11	64	61	47	52	56
Link Distance (ft)	670	1254			1280	1280		1246	1246
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			50	150			58		
Storage Blk Time (%)		0	1				0	0	
Queuing Penalty (veh)		0	0				1	0	

Intersection: 21: Cawston Ave & East Driveway

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	64	32	33	9
Average Queue (ft)	32	3	5	0
95th Queue (ft)	54	19	24	7
Link Distance (ft)	449	354		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			150	150
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 22: Esplanade Ave & South Driveway

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	23	94
Average Queue (ft)	2	43
95th Queue (ft)	14	74
Link Distance (ft)		443
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 616

Intersection: 1: Sanderson Ave & Ramona Expy

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	21.5	35.5	6.5	28.5	8.5	48.5	16.5	18.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	1.6	-5.2	6.5	-8.9	8.5	8.5	-3.3	-2.3
g/C Ratio	0.26	-0.83	0.72	-1.42	1.35	1.36	-0.53	-0.36
Cycles Skipped (%)	0	0	31	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	97	91	28	81	78	88	97	70
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.3
Number of Complete Cycles : 32

Intersection: 2: Sanderson Ave & Ramona Blvd

Phase	1	2	3	6	8
Movement(s) Served	SBL	NBT	NWL	SBT	NWR
Maximum Green (s)	18.5	55.5	22.5	78.5	22.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	Min	None
Avg. Green (s)	-6.9	2.0	8.3	1.1	-5.1
g/C Ratio	-1.16	0.50	1.25	0.22	-1.03
Cycles Skipped (%)	32	0	39	18	18
Cycles @ Minimum (%)	0	0	0	0	11
Cycles Maxed Out (%)	0	11	0	10	0
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.0
Number of Complete Cycles : 62

Intersection: 4: Sanderson Ave & Cottonwood Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	8.5	40.5	11.5	31.5	8.5	40.5	12.5	30.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	6.9	2.9	7.9	4.5	7.0	4.3	-6.2	1.6
g/C Ratio	0.90	0.54	1.12	0.83	0.74	0.81	-1.06	0.30
Cycles Skipped (%)	31	0	25	2	44	0	9	2
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	13	15	6	6	10	19	11	2
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 5.3
Number of Complete Cycles : 47

Intersection: 9: Lyon Ave & 7th St

Phase	2	4	6	8
Movement(s) Served	NBTL	EBTL	SBTL	WBTL
Maximum Green (s)	25.5	34.5	25.5	36.5
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	Min	None	Min	None
Avg. Green (s)	4.0	-5.9	4.0	-3.4
g/C Ratio	0.59	-0.88	0.59	-0.50
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	50	56	50	66
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): 6.8
Number of Complete Cycles : 35

Intersection: 11: State St & 7th St

Phase	1	2	4	5	6	8
Movement(s) Served	SBL	NBT	EBTL	NBL	SBT	WBTL
Maximum Green (s)	14.5	41.5	40.5	9.5	46.5	40.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	Min	None
Avg. Green (s)	8.0	1.1	2.9	7.4	3.2	2.9
g/C Ratio	1.03	0.19	0.50	0.79	0.56	0.50
Cycles Skipped (%)	26	0	0	39	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	19	33	12	12	33
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 5.7
Number of Complete Cycles : 42

Intersection: 13: Cawston Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	10.5	24.5	14.5	42.5	10.5	24.5	9.5	47.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	-8.1	4.9	-5.2	-3.6	8.1	5.0	7.1	0.8
g/C Ratio	-1.02	0.80	-0.84	-0.71	1.16	0.93	0.90	0.16
Cycles Skipped (%)	35	17	18	0	27	4	35	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	20	25	18	4	13	24	10	4
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 5.1
Number of Complete Cycles : 51

Intersection: 14: Sanderson Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	15.5	36.5	16.5	23.5	10.5	41.5	14.5	25.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-5.9	-1.0	-7.9	4.2	8.0	4.6	-7.3	3.7
g/C Ratio	-0.92	-0.17	-1.17	0.67	1.02	0.76	-1.10	0.59
Cycles Skipped (%)	5	0	10	3	23	0	8	3
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	23	38	10	38	13	33	21	28
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 6.1
Number of Complete Cycles : 39

Intersection: 15: Kirby St & Esplanade Ave

Phase	2	3	4	6	7	8
Movement(s) Served	NBTL	WBL	EBT	SBTL	EBL	WBT
Maximum Green (s)	20.5	8.5	41.5	21.5	6.5	43.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	Min	None	None	Min	None	None
Avg. Green (s)	-1.2	7.5	2.1	1.2	7.3	4.9
g/C Ratio	-0.20	0.90	0.35	0.19	0.63	0.80
Cycles Skipped (%)	0	26	0	0	47	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	28	21	46	44	18	37
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 6.1
Number of Complete Cycles : 38

Intersection: 16: Lyon Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	5.0	18.0	5.0	18.0	5.0	18.0	5.0	18.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	6.2	2.3	5.1	0.9	7.8	3.9	5.1	-4.2
g/C Ratio	0.60	0.58	0.78	0.25	0.39	0.99	0.31	-1.16
Cycles Skipped (%)	66	11	46	0	82	10	78	3
Cycles @ Minimum (%)	29	1	54	0	13	3	22	0
Cycles Maxed Out (%)	34	11	54	77	18	19	22	78
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 3.6
Number of Complete Cycles : 79

Intersection: 17: Palm Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	6.5	45.5	9.5	30.5	6.5	45.5	5.5	34.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	6.3	6.3	7.4	1.9	6.2	-4.7	8.4	2.1
g/C Ratio	1.00	1.20	0.94	0.36	0.70	-0.91	0.98	0.38
Cycles Skipped (%)	17	0	34	0	41	0	38	6
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	55	0	15	72	24	4	57	36
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 5.2
Number of Complete Cycles : 47

Intersection: 18: State St & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	21.5	26.5	13.5	30.5	9.5	38.5	13.5	30.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-3.6	7.5	-9.6	-5.1	7.6	0.0	-9.1	-5.4
g/C Ratio	-0.54	1.16	-1.33	-0.78	0.83	0.00	-1.30	-0.84
Cycles Skipped (%)	3	0	11	0	30	0	8	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	11	47	13	45	16	32	16	53
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 6.5

Number of Complete Cycles : 37

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	3:55	3:55	3:55	3:55	3:55	3:55	3:55
End Time	5:00	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	65	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1	1
Vehs Entered	16689	16739	16552	16693	16681	16691	17004
Vehs Exited	16466	16570	16288	16504	16507	16547	16836
Starting Vehs	702	711	647	642	630	661	736
Ending Vehs	925	880	911	831	804	805	904
Denied Entry Before	3	8	2	3	4	5	4
Denied Entry After	7	3	2	4	3	4	4
Travel Distance (mi)	20503	20656	20206	20445	20347	20475	20873
Travel Time (hr)	842.4	857.7	816.7	838.0	818.2	819.7	870.9
Total Delay (hr)	364.3	376.5	346.8	361.7	345.3	344.0	384.7
Total Stops	29610	29500	28743	29588	28662	28631	30920
Fuel Used (gal)	820.5	827.8	805.1	819.9	810.0	815.4	837.8

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	3:55	3:55	3:55	3:55
End Time	5:00	5:00	5:00	5:00
Total Time (min)	65	65	65	65
Time Recorded (min)	60	60	60	60
# of Intervals	2	2	2	2
# of Recorded Intervals	1	1	1	1
Vehs Entered	16854	16985	16722	16760
Vehs Exited	16632	16813	16636	16581
Starting Vehs	690	667	711	664
Ending Vehs	912	839	797	854
Denied Entry Before	1	4	2	0
Denied Entry After	4	2	4	0
Travel Distance (mi)	20716	20776	20554	20555
Travel Time (hr)	854.2	848.9	830.1	839.7
Total Delay (hr)	371.4	366.8	351.8	361.3
Total Stops	30336	29914	29017	29500
Fuel Used (gal)	830.3	833.5	821.3	822.2

Interval #0 Information Seeding

Start Time	3:55
End Time	4:00
Total Time (min)	5

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	16689	16739	16552	16693	16681	16691	17004
Vehs Exited	16466	16570	16288	16504	16507	16547	16836
Starting Vehs	702	711	647	642	630	661	736
Ending Vehs	925	880	911	831	804	805	904
Denied Entry Before	3	8	2	3	4	5	4
Denied Entry After	7	3	2	4	3	4	4
Travel Distance (mi)	20503	20656	20206	20445	20347	20475	20873
Travel Time (hr)	842.4	857.7	816.7	838.0	818.2	819.7	870.9
Total Delay (hr)	364.3	376.5	346.8	361.7	345.3	344.0	384.7
Total Stops	29610	29500	28743	29588	28662	28631	30920
Fuel Used (gal)	820.5	827.8	805.1	819.9	810.0	815.4	837.8

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	16854	16985	16722	16760
Vehs Exited	16632	16813	16636	16581
Starting Vehs	690	667	711	664
Ending Vehs	912	839	797	854
Denied Entry Before	1	4	2	0
Denied Entry After	4	2	4	0
Travel Distance (mi)	20716	20776	20554	20555
Travel Time (hr)	854.2	848.9	830.1	839.7
Total Delay (hr)	371.4	366.8	351.8	361.3
Total Stops	30336	29914	29017	29500
Fuel Used (gal)	830.3	833.5	821.3	822.2

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.3	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.5	0.6	0.3
Denied Del/Veh (s)	2.4	0.5	2.3	2.3	0.4	2.1	0.0	0.0	0.0	2.5	1.8	2.4
Total Delay (hr)	6.5	6.3	1.1	0.8	5.9	4.1	2.1	10.5	0.1	11.3	16.0	3.0
Total Del/Veh (s)	52.4	37.1	20.3	52.1	54.2	28.6	57.1	49.4	11.5	56.2	44.6	23.6
Stop Delay (hr)	5.4	4.1	0.8	0.8	4.4	2.6	1.9	7.6	0.1	7.0	7.0	1.1
Stop Del/Veh (s)	43.5	24.1	15.8	47.7	40.5	18.3	50.5	35.5	9.9	34.8	19.5	8.5
Total Stops	404	401	119	52	338	330	124	605	14	631	826	280
Stop/Veh	0.90	0.66	0.64	0.91	0.87	0.64	0.93	0.79	0.67	0.87	0.64	0.61
Travel Dist (mi)	163.7	224.7	69.5	27.7	189.6	253.2	23.4	133.1	3.7	335.6	598.3	212.4
Travel Time (hr)	10.2	9.8	2.7	1.4	8.8	9.6	2.8	13.1	0.2	18.7	26.7	7.9
Vehicles Entered	436	597	185	56	379	506	131	753	21	712	1267	449
Vehicles Exited	435	596	184	55	379	505	132	752	21	709	1261	449
Hourly Exit Rate	435	596	184	55	379	505	132	752	21	709	1261	449
Input Volume	428	601	190	56	383	509	132	748	19	705	1267	450
% of Volume	102	99	97	98	99	99	100	101	111	101	100	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

1: Sanderson Ave & Ramona Expy Performance by movement

Movement	All
Denied Delay (hr)	2.3
Denied Del/Veh (s)	1.5
Total Delay (hr)	67.6
Total Del/Veh (s)	43.5
Stop Delay (hr)	42.6
Stop Del/Veh (s)	27.4
Total Stops	4124
Stop/Veh	0.74
Travel Dist (mi)	2234.9
Travel Time (hr)	112.0
Vehicles Entered	5492
Vehicles Exited	5478
Hourly Exit Rate	5478
Input Volume	5488
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

2: Sanderson Ave & Ramona Blvd Performance by movement

Movement	NBT	NBR	SBL	SBT	NWL	NWR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.2
Denied Del/Veh (s)	0.2	2.7	0.2	0.0	0.3	2.2	0.2
Total Delay (hr)	2.3	0.1	2.2	4.3	0.4	0.2	9.3
Total Del/Veh (s)	10.2	3.4	34.4	11.4	28.7	5.7	12.9
Stop Delay (hr)	0.9	0.0	1.5	0.3	0.4	0.1	3.2
Stop Del/Veh (s)	3.8	2.2	24.2	0.7	26.1	4.4	4.4
Total Stops	240	20	190	133	44	87	714
Stop/Veh	0.30	0.34	0.84	0.10	0.90	0.88	0.28
Travel Dist (mi)	148.1	10.7	40.6	243.8	21.2	43.3	507.7
Travel Time (hr)	5.1	0.4	3.3	9.1	0.9	1.3	20.1
Vehicles Entered	806	58	223	1338	48	98	2571
Vehicles Exited	806	58	222	1339	47	98	2570
Hourly Exit Rate	806	58	222	1339	47	98	2570
Input Volume	803	60	226	1346	49	96	2580
% of Volume	100	97	98	99	96	102	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

3: Cawston Ave & Cottonwood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1
Total Delay (hr)	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.1	0.1	0.1	0.9
Total Del/Veh (s)	0.8	0.2	3.3	2.2	0.9	11.2	7.9	3.5	10.8	11.0	3.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.5
Stop Del/Veh (s)	0.0	0.0	1.1	0.0	0.0	8.9	4.9	2.9	8.6	7.5	1.8
Total Stops	0	0	33	0	1	35	74	82	24	42	291
Stop/Veh	0.00	0.00	0.29	0.00	0.02	1.00	0.64	0.99	1.00	1.00	0.30
Travel Dist (mi)	41.6	8.9	43.4	72.4	15.3	4.9	13.6	11.6	3.1	5.4	220.3
Travel Time (hr)	0.9	0.2	1.1	1.6	0.4	0.3	0.6	0.5	0.2	0.3	6.1
Vehicles Entered	264	56	114	200	40	35	115	82	24	42	972
Vehicles Exited	264	57	113	199	40	35	114	82	24	42	970
Hourly Exit Rate	264	57	113	199	40	35	114	82	24	42	970
Input Volume	266	56	115	204	40	38	116	83	24	44	986
% of Volume	99	102	98	98	100	92	98	99	100	95	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.3	3.5	0.4	0.2	0.0	0.0	0.0	2.4	0.5	2.4
Total Delay (hr)	1.0	1.5	0.2	0.9	1.3	0.3	0.4	3.6	0.3	2.2	4.9	0.2
Total Del/Veh (s)	33.5	26.5	9.2	34.2	29.6	7.7	38.9	16.8	8.5	44.3	16.4	4.2
Stop Delay (hr)	1.0	1.2	0.2	0.9	1.0	0.2	0.4	1.9	0.1	2.0	2.7	0.1
Stop Del/Veh (s)	31.5	21.4	9.0	31.3	22.4	6.9	34.5	9.0	3.5	39.3	9.0	1.6
Total Stops	97	150	59	86	121	93	37	309	57	173	493	70
Stop/Veh	0.88	0.71	0.75	0.88	0.74	0.76	0.92	0.40	0.53	0.97	0.46	0.45
Travel Dist (mi)	11.2	21.8	8.1	23.7	39.8	30.1	19.3	349.0	53.0	30.5	183.5	26.8
Travel Time (hr)	1.4	2.0	0.5	1.7	2.3	1.1	0.9	11.6	1.6	3.2	9.1	1.1
Vehicles Entered	109	209	79	96	161	122	39	764	106	176	1054	154
Vehicles Exited	108	208	78	96	161	122	38	763	106	176	1052	154
Hourly Exit Rate	108	208	78	96	161	122	38	763	106	176	1052	154
Input Volume	110	206	81	97	165	119	42	769	107	169	1058	152
% of Volume	98	101	96	99	98	103	90	99	99	104	99	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: Sanderson Ave & Cottonwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	0.6
Total Delay (hr)	16.8
Total Del/Veh (s)	19.6
Stop Delay (hr)	11.6
Stop Del/Veh (s)	13.5
Total Stops	1745
Stop/Veh	0.56
Travel Dist (mi)	796.7
Travel Time (hr)	36.4
Vehicles Entered	3069
Vehicles Exited	3062
Hourly Exit Rate	3062
Input Volume	3075
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

5: North Driveway/Karpick St & 7th St Performance by movement

Movement	EBT	WBL	WBT	WBR	NBR	SBL	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.1	0.1	0.0	0.0	0.0	0.3
Total Del/Veh (s)	0.2	4.3	3.1	2.9	2.9	4.7	3.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	0.0	0.6	0.7	0.7	2.5	3.3	1.1
Total Stops	0	4	0	0	53	31	88
Stop/Veh	0.00	0.05	0.00	0.00	1.00	1.00	0.28
Travel Dist (mi)	4.7	9.6	8.2	4.7	3.0	0.8	31.0
Travel Time (hr)	0.1	0.4	0.3	0.2	0.2	0.1	1.4
Vehicles Entered	49	78	68	38	53	31	317
Vehicles Exited	49	78	68	38	52	31	316
Hourly Exit Rate	49	78	68	38	52	31	316
Input Volume	49	83	66	43	53	31	325
% of Volume	100	94	103	88	98	100	97
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.2	0.0	0.2	0.3	0.1	0.1	0.5	0.2	0.1	0.5	0.0
Total Del/Veh (s)	6.5	8.9	4.0	7.3	7.0	3.8	8.1	10.9	6.9	8.3	10.0	1.9
Stop Delay (hr)	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.3	0.1	0.1	0.2	0.0
Stop Del/Veh (s)	4.5	4.4	3.8	4.5	3.3	3.3	4.2	5.1	4.6	5.7	4.8	2.4
Total Stops	8	93	32	97	136	49	36	174	85	41	182	11
Stop/Veh	1.00	0.99	0.97	0.99	0.77	1.00	1.00	0.98	1.00	1.00	0.99	0.92
Travel Dist (mi)	1.0	11.1	3.9	21.4	34.7	10.8	9.2	44.6	21.6	9.5	42.2	2.6
Travel Time (hr)	0.1	0.6	0.2	0.9	1.3	0.4	0.4	1.8	0.9	0.4	1.7	0.1
Vehicles Entered	8	93	33	98	176	49	36	176	85	41	182	12
Vehicles Exited	8	93	32	97	176	49	36	177	85	41	182	11
Hourly Exit Rate	8	93	32	97	176	49	36	177	85	41	182	11
Input Volume	10	93	31	101	176	53	41	175	85	42	185	12
% of Volume	80	100	103	96	100	92	88	101	100	98	98	92
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: Cawston Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	2.3
Total Del/Veh (s)	8.2
Stop Delay (hr)	1.2
Stop Del/Veh (s)	4.4
Total Stops	944
Stop/Veh	0.95
Travel Dist (mi)	212.5
Travel Time (hr)	8.8
Vehicles Entered	989
Vehicles Exited	987
Hourly Exit Rate	987
Input Volume	1004
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

7: Sanderson Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.4	1.0	0.2	1.8	1.2	0.1	0.4	3.8	0.5	1.0	4.7	0.2
Total Del/Veh (s)	28.5	23.9	15.7	35.7	22.9	5.0	33.7	16.2	14.6	38.6	15.9	9.1
Stop Delay (hr)	0.4	0.7	0.1	1.6	0.9	0.1	0.3	1.1	0.2	0.8	1.3	0.0
Stop Del/Veh (s)	25.1	17.7	14.1	31.6	16.9	4.7	25.7	4.7	4.8	29.7	4.5	1.9
Total Stops	50	94	25	163	119	40	40	230	45	80	302	27
Stop/Veh	0.94	0.62	0.69	0.90	0.61	0.63	0.87	0.27	0.37	0.87	0.28	0.30
Travel Dist (mi)	13.8	38.6	9.2	22.1	23.5	7.6	22.6	409.5	59.9	45.1	517.7	44.5
Travel Time (hr)	0.8	1.9	0.4	2.5	1.8	0.3	1.0	12.4	1.9	2.0	15.5	1.3
Vehicles Entered	53	149	36	180	194	63	45	831	120	90	1048	88
Vehicles Exited	53	149	35	180	192	63	45	828	119	90	1048	88
Hourly Exit Rate	53	149	35	180	192	63	45	828	119	90	1048	88
Input Volume	56	146	37	190	195	64	47	832	125	95	1053	88
% of Volume	95	102	95	95	98	98	96	100	95	95	100	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Sanderson Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	15.3
Total Del/Veh (s)	18.8
Stop Delay (hr)	7.6
Stop Del/Veh (s)	9.3
Total Stops	1215
Stop/Veh	0.41
Travel Dist (mi)	1214.1
Travel Time (hr)	41.9
Vehicles Entered	2897
Vehicles Exited	2890
Hourly Exit Rate	2890
Input Volume	2928
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

8: Kirby St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	3.9
Total Delay (hr)	0.1	2.1	0.1	0.5	2.8	0.2	0.2	1.4	0.3	0.1	0.6	0.0
Total Del/Veh (s)	18.8	21.3	7.5	17.9	23.4	22.1	21.1	23.1	10.4	10.5	13.9	5.8
Stop Delay (hr)	0.1	1.3	0.1	0.2	1.4	0.2	0.1	0.8	0.1	0.1	0.3	0.0
Stop Del/Veh (s)	14.7	13.0	4.4	7.7	11.8	14.3	13.8	12.8	5.6	7.5	7.5	4.1
Total Stops	14	346	43	104	333	39	26	220	89	25	166	16
Stop/Veh	1.00	0.99	1.02	1.01	0.77	0.98	1.00	0.99	1.00	1.00	1.00	1.00
Travel Dist (mi)	4.8	118.3	14.2	50.5	188.8	19.6	12.8	109.6	43.9	2.9	19.5	1.9
Travel Time (hr)	0.2	4.7	0.5	1.8	7.1	0.8	0.5	4.3	1.5	0.2	1.1	0.1
Vehicles Entered	14	346	42	102	425	40	26	220	88	25	166	16
Vehicles Exited	14	344	41	102	426	39	26	219	88	25	165	16
Hourly Exit Rate	14	344	41	102	426	39	26	219	88	25	165	16
Input Volume	15	352	43	105	435	41	26	232	89	27	161	16
% of Volume	93	98	95	97	98	95	100	94	99	93	102	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

8: Kirby St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	8.4
Total Del/Veh (s)	19.7
Stop Delay (hr)	4.6
Stop Del/Veh (s)	10.9
Total Stops	1421
Stop/Veh	0.93
Travel Dist (mi)	586.9
Travel Time (hr)	22.8
Vehicles Entered	1510
Vehicles Exited	1505
Hourly Exit Rate	1505
Input Volume	1542
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

9: Lyon Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.4	0.2
Total Delay (hr)	0.2	5.5	0.2	0.7	5.7	0.4	0.6	2.4	0.4	1.0	2.8	0.1
Total Del/Veh (s)	36.2	47.2	38.3	38.0	39.0	33.6	55.3	38.6	31.4	78.6	41.0	9.5
Stop Delay (hr)	0.2	3.9	0.2	0.5	3.4	0.3	0.6	1.8	0.4	1.0	2.2	0.1
Stop Del/Veh (s)	26.7	33.6	29.4	25.0	23.1	22.6	54.0	29.9	27.1	74.4	32.0	9.2
Total Stops	17	331	19	46	348	32	39	155	41	45	193	25
Stop/Veh	0.81	0.78	0.86	0.68	0.66	0.71	0.98	0.70	0.82	0.94	0.79	0.74
Travel Dist (mi)	10.1	200.9	10.8	33.4	254.7	21.8	8.0	41.9	10.1	3.8	19.7	2.8
Travel Time (hr)	0.5	10.2	0.5	1.5	11.5	1.0	0.8	3.2	0.7	1.2	3.2	0.2
Vehicles Entered	20	415	22	67	524	44	40	220	50	47	242	34
Vehicles Exited	20	413	22	66	517	44	40	218	50	46	242	34
Hourly Exit Rate	20	413	22	66	517	44	40	218	50	46	242	34
Input Volume	21	425	22	68	525	43	43	214	52	50	232	34
% of Volume	95	97	100	97	98	102	93	102	96	92	104	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

9: Lyon Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	20.2
Total Del/Veh (s)	41.6
Stop Delay (hr)	14.5
Stop Del/Veh (s)	29.9
Total Stops	1291
Stop/Veh	0.74
Travel Dist (mi)	617.9
Travel Time (hr)	34.6
Vehicles Entered	1725
Vehicles Exited	1712
Hourly Exit Rate	1712
Input Volume	1729
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

10: Palm Ave & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.5	1.2	1.2	0.0	0.0	0.0	0.2	0.2	0.2
Total Delay (hr)	0.2	3.3	0.2	0.4	6.6	0.4	0.1	0.5	0.1	0.1	0.3	0.1
Total Del/Veh (s)	18.2	27.5	22.8	25.3	40.8	34.7	10.3	10.8	8.1	8.2	11.2	6.3
Stop Delay (hr)	0.1	1.6	0.1	0.3	5.4	0.4	0.1	0.3	0.1	0.0	0.2	0.0
Stop Del/Veh (s)	5.3	13.3	14.1	17.4	33.5	32.6	7.0	5.6	6.2	5.6	5.4	5.1
Total Stops	46	397	24	90	564	40	30	122	47	30	107	30
Stop/Veh	1.10	0.93	0.96	1.43	0.96	0.98	1.00	0.76	0.98	1.00	0.99	1.00
Travel Dist (mi)	20.8	204.6	12.2	7.7	70.5	4.9	11.5	54.8	18.4	2.0	7.1	2.0
Travel Time (hr)	0.7	8.0	0.5	0.7	8.4	0.6	0.4	1.9	0.6	0.1	0.5	0.1
Vehicles Entered	42	424	25	63	580	41	30	158	48	30	108	30
Vehicles Exited	42	418	24	62	576	40	30	158	47	30	107	30
Hourly Exit Rate	42	418	24	62	576	40	30	158	47	30	107	30
Input Volume	43	442	25	64	575	40	31	152	52	31	110	30
% of Volume	98	95	96	97	100	100	97	104	90	97	97	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

10: Palm Ave & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.5
Total Delay (hr)	12.2
Total Del/Veh (s)	27.7
Stop Delay (hr)	8.5
Stop Del/Veh (s)	19.3
Total Stops	1527
Stop/Veh	0.96
Travel Dist (mi)	416.5
Travel Time (hr)	22.6
Vehicles Entered	1579
Vehicles Exited	1564
Hourly Exit Rate	1564
Input Volume	1595
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

11: State St & 7th St Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Denied Del/Veh (s)	0.2	0.0	0.2	3.1	0.6	0.3	0.0	0.0	0.0	2.6	0.4	0.4
Total Delay (hr)	1.4	2.4	0.2	1.2	4.3	0.1	1.1	4.5	0.7	1.7	6.3	0.6
Total Del/Veh (s)	66.1	25.8	9.2	45.1	32.0	5.1	56.1	26.6	23.0	54.6	26.1	19.8
Stop Delay (hr)	1.3	1.7	0.1	1.0	2.8	0.1	0.9	2.7	0.5	1.5	4.2	0.5
Stop Del/Veh (s)	60.7	17.8	5.9	37.6	21.0	4.3	48.4	16.0	15.0	48.3	17.0	15.6
Total Stops	78	202	43	105	326	48	72	330	69	128	537	76
Stop/Veh	1.03	0.59	0.52	1.12	0.67	0.56	1.04	0.55	0.59	1.12	0.61	0.64
Travel Dist (mi)	27.5	123.7	29.6	12.8	65.8	11.5	33.6	291.2	58.1	10.5	82.3	11.1
Travel Time (hr)	2.1	5.2	1.0	1.6	5.9	0.5	1.9	11.4	2.3	2.2	8.3	1.1
Vehicles Entered	75	337	81	94	482	84	68	591	115	112	868	117
Vehicles Exited	73	333	80	93	478	84	67	591	115	112	869	116
Hourly Exit Rate	73	333	80	93	478	84	67	591	115	112	869	116
Input Volume	78	355	88	97	473	83	69	597	119	117	879	116
% of Volume	94	94	91	96	101	101	97	99	97	96	99	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

11: State St & 7th St Performance by movement

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	0.4
Total Delay (hr)	24.7
Total Del/Veh (s)	29.0
Stop Delay (hr)	17.3
Stop Del/Veh (s)	20.4
Total Stops	2014
Stop/Veh	0.66
Travel Dist (mi)	757.8
Travel Time (hr)	43.4
Vehicles Entered	3024
Vehicles Exited	3011
Hourly Exit Rate	3011
Input Volume	3071
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.4	0.6	0.6	0.4	0.3	0.4
Total Delay (hr)	0.0	0.1	0.0	0.4	0.2	0.1	0.0	5.8	1.5	0.4	1.5	0.1
Total Del/Veh (s)	6.1	11.6	2.6	9.3	2.3	6.4	40.0	42.7	35.1	14.8	18.8	11.4
Stop Delay (hr)	0.0	0.0	0.0	0.2	0.1	0.1	0.0	4.2	1.3	0.2	0.6	0.0
Stop Del/Veh (s)	5.0	5.5	2.6	5.9	0.5	4.7	34.9	31.0	30.5	8.8	7.5	6.7
Total Stops	10	29	2	140	36	68	4	483	158	95	281	25
Stop/Veh	0.91	1.00	1.00	0.99	0.10	0.99	1.00	0.99	0.99	0.99	0.99	1.00
Travel Dist (mi)	1.3	3.6	0.2	118.7	172.0	58.0	0.8	104.5	34.4	21.4	63.1	5.7
Travel Time (hr)	0.1	0.2	0.0	2.9	3.7	1.4	0.1	7.8	2.5	0.9	2.7	0.2
Vehicles Entered	11	29	2	140	365	68	4	481	158	95	280	25
Vehicles Exited	10	29	2	140	364	68	4	482	158	95	281	25
Hourly Exit Rate	10	29	2	140	364	68	4	482	158	95	281	25
Input Volume	11	29	1	143	366	71	5	477	158	98	282	25
% of Volume	91	100	200	98	99	96	80	101	100	97	100	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

12: Warren Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	10.2
Total Del/Veh (s)	21.8
Stop Delay (hr)	6.9
Stop Del/Veh (s)	14.8
Total Stops	1331
Stop/Veh	0.79
Travel Dist (mi)	583.7
Travel Time (hr)	22.5
Vehicles Entered	1658
Vehicles Exited	1658
Hourly Exit Rate	1658
Input Volume	1666
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.0
Total Delay (hr)	0.5	1.5	0.4	0.7	2.3	0.3	2.0	1.3	0.1	0.4	1.4	0.4
Total Del/Veh (s)	31.8	17.8	9.4	37.3	19.3	15.0	38.2	22.2	6.0	31.5	25.5	16.6
Stop Delay (hr)	0.5	1.0	0.3	0.6	1.2	0.2	1.6	0.9	0.1	0.4	1.1	0.3
Stop Del/Veh (s)	29.2	12.0	7.4	31.5	10.4	9.2	31.8	15.3	3.7	29.6	19.5	13.7
Total Stops	57	169	87	63	209	42	168	134	40	41	148	66
Stop/Veh	0.92	0.56	0.64	0.88	0.50	0.60	0.91	0.63	0.62	0.89	0.73	0.78
Travel Dist (mi)	11.1	53.8	24.5	35.4	200.7	34.1	83.0	95.7	29.6	10.9	48.8	20.4
Travel Time (hr)	0.9	2.6	1.1	1.6	6.7	1.1	4.5	4.1	1.0	0.7	2.9	1.1
Vehicles Entered	61	298	136	72	417	69	180	208	64	45	202	84
Vehicles Exited	61	298	136	71	415	68	180	206	64	45	201	84
Hourly Exit Rate	61	298	136	71	415	68	180	206	64	45	201	84
Input Volume	61	307	142	78	425	74	179	207	65	48	206	85
% of Volume	100	97	96	91	98	92	101	100	98	94	98	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

13: Cawston Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	11.3
Total Del/Veh (s)	21.8
Stop Delay (hr)	8.2
Stop Del/Veh (s)	15.9
Total Stops	1224
Stop/Veh	0.66
Travel Dist (mi)	648.0
Travel Time (hr)	28.3
Vehicles Entered	1836
Vehicles Exited	1829
Hourly Exit Rate	1829
Input Volume	1877
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	2.7	0.3	0.3	0.0	0.0	0.0
Total Delay (hr)	1.3	2.4	0.4	2.2	3.7	0.4	1.4	5.6	0.6	1.9	7.3	0.5
Total Del/Veh (s)	47.0	36.1	17.8	49.5	35.4	9.5	46.4	26.6	17.8	51.3	26.8	13.0
Stop Delay (hr)	1.1	1.8	0.3	1.9	2.8	0.3	1.2	3.7	0.5	1.6	3.6	0.1
Stop Del/Veh (s)	40.6	26.4	12.1	42.4	27.1	8.3	41.5	17.5	13.0	41.7	13.2	3.0
Total Stops	88	174	73	158	258	110	98	465	79	118	490	61
Stop/Veh	0.88	0.72	0.94	0.97	0.69	0.73	0.91	0.61	0.63	0.88	0.50	0.47
Travel Dist (mi)	48.5	118.1	38.1	51.7	112.1	48.4	17.1	121.2	20.2	65.5	477.3	64.0
Travel Time (hr)	2.5	4.9	1.3	3.7	6.5	1.8	2.0	8.4	1.3	3.4	17.2	2.0
Vehicles Entered	98	239	77	160	369	150	107	752	126	131	962	128
Vehicles Exited	97	238	78	159	365	150	106	749	124	130	964	128
Hourly Exit Rate	97	238	78	159	365	150	106	749	124	130	964	128
Input Volume	105	244	77	164	383	153	107	746	124	137	974	129
% of Volume	92	98	101	97	95	98	99	100	100	95	99	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

14: Sanderson Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	27.7
Total Del/Veh (s)	29.8
Stop Delay (hr)	18.9
Stop Del/Veh (s)	20.3
Total Stops	2172
Stop/Veh	0.65
Travel Dist (mi)	1182.3
Travel Time (hr)	54.9
Vehicles Entered	3299
Vehicles Exited	3288
Hourly Exit Rate	3288
Input Volume	3343
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.2	0.1	0.0	0.0	0.0	0.7	0.6	3.5	0.0	0.0	0.4
Total Delay (hr)	0.6	5.6	0.7	1.2	6.8	0.5	1.1	3.5	0.3	0.7	4.4	0.4
Total Del/Veh (s)	55.1	42.3	33.7	61.4	42.3	38.9	50.7	49.2	13.0	60.2	61.4	30.1
Stop Delay (hr)	0.6	3.8	0.6	1.1	4.0	0.3	1.0	2.8	0.3	0.6	3.6	0.3
Stop Del/Veh (s)	53.5	28.8	26.2	56.5	24.9	25.7	43.5	39.3	9.9	51.8	50.3	23.4
Total Stops	35	360	60	71	405	34	74	223	72	41	251	53
Stop/Veh	0.92	0.75	0.79	0.99	0.71	0.76	0.91	0.88	0.78	1.02	0.98	1.10
Travel Dist (mi)	5.8	73.9	11.7	36.0	285.7	22.4	13.5	42.5	15.5	18.8	120.2	22.3
Travel Time (hr)	0.7	7.1	1.1	2.1	13.3	1.1	1.6	4.6	0.9	1.2	7.5	1.0
Vehicles Entered	37	476	76	71	568	44	80	250	91	39	252	47
Vehicles Exited	36	472	75	71	562	44	79	250	91	39	250	47
Hourly Exit Rate	36	472	75	71	562	44	79	250	91	39	250	47
Input Volume	41	486	74	78	577	48	80	252	89	45	247	47
% of Volume	88	97	101	91	97	92	99	99	102	87	101	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

15: Kirby St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.3
Total Delay (hr)	25.8
Total Del/Veh (s)	45.2
Stop Delay (hr)	18.9
Stop Del/Veh (s)	33.0
Total Stops	1679
Stop/Veh	0.82
Travel Dist (mi)	668.4
Travel Time (hr)	42.3
Vehicles Entered	2031
Vehicles Exited	2016
Hourly Exit Rate	2016
Input Volume	2064
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.0	0.1	0.0	0.0	0.0	3.7	0.6	3.5	0.0	0.0	0.0
Total Delay (hr)	0.4	3.9	0.1	1.4	3.8	0.1	0.3	1.7	0.2	0.7	2.1	0.0
Total Del/Veh (s)	50.8	24.8	13.3	48.6	21.0	5.8	43.1	30.5	10.9	44.9	28.8	7.4
Stop Delay (hr)	0.3	1.7	0.0	1.1	1.7	0.1	0.3	1.3	0.2	0.6	1.5	0.0
Stop Del/Veh (s)	40.2	11.1	4.3	37.2	9.5	2.8	39.6	22.3	9.0	39.5	19.9	4.9
Total Stops	31	278	17	102	295	36	26	145	62	52	174	12
Stop/Veh	1.03	0.50	0.47	0.99	0.45	0.45	0.96	0.70	0.76	0.96	0.66	0.67
Travel Dist (mi)	14.3	273.2	17.4	49.7	317.4	38.8	2.4	18.7	7.5	16.0	76.5	5.3
Travel Time (hr)	0.8	10.2	0.6	2.7	12.0	1.2	0.4	2.2	0.6	1.1	3.6	0.2
Vehicles Entered	29	552	35	101	646	78	27	204	82	54	259	18
Vehicles Exited	29	550	35	100	644	78	27	204	82	53	257	18
Hourly Exit Rate	29	550	35	100	644	78	27	204	82	53	257	18
Input Volume	31	563	38	107	660	77	29	201	83	53	250	19
% of Volume	94	98	92	93	98	101	93	101	99	100	103	95
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

16: Lyon Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	14.9
Total Del/Veh (s)	25.4
Stop Delay (hr)	8.8
Stop Del/Veh (s)	15.0
Total Stops	1230
Stop/Veh	0.58
Travel Dist (mi)	837.3
Travel Time (hr)	35.5
Vehicles Entered	2085
Vehicles Exited	2077
Hourly Exit Rate	2077
Input Volume	2111
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.4	0.4	1.4	0.1	1.3
Total Delay (hr)	0.4	8.1	0.5	1.6	7.3	0.2	0.7	1.0	0.5	0.7	1.2	0.1
Total Del/Veh (s)	54.0	47.2	38.5	53.6	34.5	10.1	38.8	28.2	15.4	37.5	24.5	5.1
Stop Delay (hr)	0.3	4.5	0.3	1.1	3.5	0.1	0.7	0.7	0.4	0.7	1.0	0.1
Stop Del/Veh (s)	39.3	26.1	23.1	37.1	16.6	4.8	34.6	21.0	12.1	34.6	20.0	4.1
Total Stops	36	521	43	111	491	45	66	91	92	66	121	31
Stop/Veh	1.24	0.85	0.88	1.06	0.65	0.54	0.96	0.72	0.77	0.94	0.71	0.70
Travel Dist (mi)	14.1	298.2	23.9	51.4	366.6	41.3	9.9	18.2	17.3	6.1	15.0	3.9
Travel Time (hr)	0.8	14.3	1.1	3.0	16.7	1.4	1.1	1.5	1.1	1.0	1.6	0.2
Vehicles Entered	28	608	48	102	743	83	67	125	119	69	171	44
Vehicles Exited	28	601	48	102	742	82	68	125	119	70	169	44
Hourly Exit Rate	28	601	48	102	742	82	68	125	119	70	169	44
Input Volume	30	617	52	107	760	82	71	123	118	74	173	43
% of Volume	93	97	92	95	98	100	96	102	101	95	98	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

17: Palm Ave & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	22.3
Total Del/Veh (s)	35.8
Stop Delay (hr)	13.3
Stop Del/Veh (s)	21.3
Total Stops	1714
Stop/Veh	0.76
Travel Dist (mi)	865.7
Travel Time (hr)	43.8
Vehicles Entered	2207
Vehicles Exited	2198
Hourly Exit Rate	2198
Input Volume	2250
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

18: State St & Esplanade Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	2.4	0.2	0.3	3.0	0.2	0.2	0.0	0.0	0.0
Total Delay (hr)	1.7	5.7	0.6	2.0	8.8	1.8	0.9	4.7	1.0	4.1	6.0	1.3
Total Del/Veh (s)	55.1	33.7	30.4	60.3	43.8	34.1	52.1	34.9	23.9	63.4	32.2	29.0
Stop Delay (hr)	1.4	3.6	0.4	1.8	6.6	1.4	0.8	3.7	0.8	3.3	3.3	0.8
Stop Del/Veh (s)	45.6	21.2	21.6	51.9	32.9	26.8	46.8	27.3	19.2	50.6	17.8	17.3
Total Stops	121	375	53	154	609	165	67	350	115	244	391	100
Stop/Veh	1.07	0.62	0.74	1.26	0.84	0.85	1.06	0.73	0.78	1.04	0.59	0.63
Travel Dist (mi)	55.2	291.6	35.5	33.2	200.1	53.6	14.1	108.2	33.3	114.3	321.7	78.1
Travel Time (hr)	3.0	11.8	1.5	3.1	13.9	3.4	1.4	7.4	2.0	7.0	13.3	3.3
Vehicles Entered	111	598	71	119	716	191	62	476	147	229	656	157
Vehicles Exited	111	592	70	118	709	190	62	474	145	227	652	155
Hourly Exit Rate	111	592	70	118	709	190	62	474	145	227	652	155
Input Volume	114	613	74	125	719	189	64	482	148	234	665	165
% of Volume	97	97	95	94	99	101	97	98	98	97	98	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: State St & Esplanade Ave Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.2
Total Delay (hr)	38.7
Total Del/Veh (s)	38.9
Stop Delay (hr)	27.9
Stop Del/Veh (s)	28.0
Total Stops	2744
Stop/Veh	0.77
Travel Dist (mi)	1338.9
Travel Time (hr)	71.1
Vehicles Entered	3533
Vehicles Exited	3505
Hourly Exit Rate	3505
Input Volume	3592
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

19: Cawston Ave & Eaton Ave Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	2.4	0.0	0.0	0.3	0.0	0.2
Total Delay (hr)	0.0	0.0	0.9	0.1	0.1	1.0	2.2
Total Del/Veh (s)	4.2	2.6	9.7	5.8	7.7	9.5	8.8
Stop Delay (hr)	0.0	0.0	0.3	0.0	0.1	0.3	0.7
Stop Del/Veh (s)	2.8	2.4	2.9	2.7	3.3	2.8	2.9
Total Stops	25	51	331	40	67	382	896
Stop/Veh	0.96	1.00	0.96	0.98	0.99	0.98	0.98
Travel Dist (mi)	8.4	16.8	83.2	9.9	31.9	182.4	332.6
Travel Time (hr)	0.3	0.5	3.4	0.4	1.2	6.5	12.2
Vehicles Entered	25	51	340	40	67	383	906
Vehicles Exited	25	51	341	40	67	381	905
Hourly Exit Rate	25	51	341	40	67	381	905
Input Volume	30	47	339	44	70	400	930
% of Volume	83	109	101	91	96	95	97
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

20: Cawston Ave & Coriander Dr/Fruitvale Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.2	0.2	3.3	2.5	0.1	0.1	0.5	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.8	0.1	0.1	1.2	0.0
Total Del/Veh (s)	4.0	7.2	3.1	5.0	7.7	2.9	5.4	7.9	3.5	7.9	9.9	7.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Stop Del/Veh (s)	2.7	4.5	2.9	3.0	3.3	2.6	2.9	2.8	2.4	3.2	2.9	3.4
Total Stops	2	1	5	42	2	33	8	346	56	46	419	2
Stop/Veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	0.98	0.99	1.00
Travel Dist (mi)	0.2	0.2	0.6	10.0	0.5	7.8	1.8	84.0	13.4	10.9	97.7	0.6
Travel Time (hr)	0.0	0.0	0.0	0.4	0.0	0.3	0.1	3.2	0.5	0.5	4.0	0.0
Vehicles Entered	2	1	5	42	2	33	8	346	55	47	419	2
Vehicles Exited	2	1	5	41	2	33	8	346	56	46	419	2
Hourly Exit Rate	2	1	5	41	2	33	8	346	56	46	419	2
Input Volume	2	1	5	42	3	33	7	348	56	51	440	2
% of Volume	100	100	100	98	67	100	114	99	100	90	95	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

20: Cawston Ave & Coriander Dr/Fruitvale Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	2.2
Total Del/Veh (s)	8.2
Stop Delay (hr)	0.8
Stop Del/Veh (s)	2.8
Total Stops	962
Stop/Veh	0.99
Travel Dist (mi)	227.6
Travel Time (hr)	9.0
Vehicles Entered	962
Vehicles Exited	961
Hourly Exit Rate	961
Input Volume	990
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

21: Cawston Ave & East Driveway Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.2	0.0	0.6
Total Del/Veh (s)	7.5	3.5	6.1	3.2	4.9	2.4	2.4	6.7	2.8	2.5	3.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	5.8	3.2	4.6	2.9	1.2	0.2	0.2	2.1	0.5	0.5	0.7
Total Stops	16	37	2	3	16	0	0	0	0	0	74
Stop/Veh	0.94	1.00	1.00	1.00	0.31	0.00	0.00	0.00	0.00	0.00	0.10
Travel Dist (mi)	1.4	3.2	0.1	0.2	13.0	70.1	0.5	0.3	72.2	7.4	168.4
Travel Time (hr)	0.1	0.2	0.0	0.0	0.5	2.3	0.0	0.0	2.4	0.3	5.8
Vehicles Entered	17	37	2	3	52	282	2	1	283	29	708
Vehicles Exited	16	37	2	3	52	282	2	1	282	29	706
Hourly Exit Rate	16	37	2	3	52	282	2	1	282	29	706
Input Volume	18	36	2	2	55	286	2	2	289	28	720
% of Volume	89	103	100	150	95	99	100	50	98	104	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

22: Esplanade Ave & South Driveway Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	1.0	0.1	0.0	0.0	0.2	0.2	0.1
Total Delay (hr)	0.0	0.2	0.5	0.1	0.2	0.0	1.0
Total Del/Veh (s)	4.3	1.4	3.2	3.1	12.9	7.3	3.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.0	0.3
Stop Del/Veh (s)	2.7	0.3	0.2	0.2	11.2	6.7	0.9
Total Stops	12	0	0	0	52	18	82
Stop/Veh	0.43	0.00	0.00	0.00	0.98	1.00	0.07
Travel Dist (mi)	18.4	295.8	105.4	14.7	4.4	1.5	440.3
Travel Time (hr)	0.5	6.6	3.0	0.5	0.4	0.1	11.0
Vehicles Entered	27	435	572	79	52	18	1183
Vehicles Exited	27	434	571	79	52	18	1181
Hourly Exit Rate	27	434	571	79	52	18	1181
Input Volume	28	447	576	83	53	18	1205
% of Volume	96	97	99	95	98	100	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	4.9
Denied Del/Veh (s)	1.0
Total Delay (hr)	356.5
Total Del/Veh (s)	73.6
Stop Delay (hr)	217.8
Stop Del/Veh (s)	45.0
Total Stops	29500
Stop/Veh	1.69
Travel Dist (mi)	20555.3
Travel Time (hr)	839.7
Vehicles Entered	16760
Vehicles Exited	16581
Hourly Exit Rate	16581
Input Volume	67129
% of Volume	25
Denied Entry Before	0
Denied Entry After	0

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	238	258	249	249	159	60	69	253	311	319	117	156
Average Queue (ft)	138	164	144	141	63	17	28	138	124	187	46	58
95th Queue (ft)	217	235	223	218	126	45	61	210	237	302	94	116
Link Distance (ft)			1976	1976				2634	2634			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	400	400			180	375	375			143	400	400
Storage Blk Time (%)				3	0			0	3	18		
Queuing Penalty (veh)				5	0			0	18	34		

Intersection: 1: Sanderson Ave & Ramona Expy

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	358	346	36	312	372	943	1050	319
Average Queue (ft)	215	205	6	198	220	298	300	115
95th Queue (ft)	332	321	23	282	323	684	736	268
Link Distance (ft)	873	873	873			2486	2486	
Upstream Blk Time (%)						0	0	
Queuing Penalty (veh)						0	0	
Storage Bay Dist (ft)				400	400			250
Storage Blk Time (%)	0			0	0	1	9	0
Queuing Penalty (veh)	0			0	0	7	42	3

Intersection: 2: Sanderson Ave & Ramona Blvd

Movement	NB	NB	NB	SB	SB	SB	NW	NW
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	180	146	54	228	232	187	79	80
Average Queue (ft)	97	49	14	118	50	60	30	31
95th Queue (ft)	160	106	39	198	150	146	65	64
Link Distance (ft)	969	969			873	873	2330	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			120	170				50
Storage Blk Time (%)		0		3	0		6	1
Queuing Penalty (veh)		0		22	1		6	1

Intersection: 3: Cawston Ave & Cottonwood Ave

Movement	EB	WB	WB	NB	NB	SB
Directions Served	TR	L	TR	LT	R	LT
Maximum Queue (ft)	2	48	8	93	70	73
Average Queue (ft)	0	15	0	43	33	35
95th Queue (ft)	2	39	4	75	54	61
Link Distance (ft)	830		1962	697		682
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		195			150	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	R	L	L	T
Maximum Queue (ft)	71	81	101	105	72	54	116	165	82	66	45	200
Average Queue (ft)	29	39	48	48	28	15	45	74	31	24	4	89
95th Queue (ft)	63	70	83	88	57	41	87	135	63	54	24	169
Link Distance (ft)			507	507				1294	1294			2541
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300	300			205	320	320			300	300	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 4: Sanderson Ave & Cottonwood Ave

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	R
Maximum Queue (ft)	218	64	137	170	264	248	62
Average Queue (ft)	101	19	32	94	159	132	29
95th Queue (ft)	187	47	96	153	241	220	52
Link Distance (ft)	2541				915	915	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		210	290	290			200
Storage Blk Time (%)	0				0	1	
Queuing Penalty (veh)	0				0	2	

Intersection: 5: North Driveway/Karpick St & 7th St

Movement	WB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	31	52	54
Average Queue (ft)	4	27	21
95th Queue (ft)	20	49	49
Link Distance (ft)		297	136
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	150		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Cawston Ave & 7th St

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	L	T	TR	L	TR	LT	R
Maximum Queue (ft)	59	84	78	77	58	120	107	22
Average Queue (ft)	28	39	37	35	24	63	46	5
95th Queue (ft)	48	64	61	61	51	101	82	19
Link Distance (ft)	576		1110	1110		1288	1226	1226
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		160			85			
Storage Blk Time (%)					0	2		
Queuing Penalty (veh)					0	1		

Intersection: 7: Sanderson Ave & 7th St

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	77	177	186	220	60	88	252	286	153	247	501	56
Average Queue (ft)	34	74	99	91	23	32	81	108	52	92	115	13
95th Queue (ft)	76	144	163	168	50	73	193	227	114	202	380	40
Link Distance (ft)		1368		646			2569	2569		2541	2541	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	53		145		600	300			360			360
Storage Blk Time (%)	2	16	2	2			0					
Queuing Penalty (veh)	4	9	6	4			0					

Intersection: 8: Kirby St & 7th St

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	LT	R	LT	R
Maximum Queue (ft)	212	144	147	250	175	79	113	31
Average Queue (ft)	92	22	43	115	87	30	55	12
95th Queue (ft)	164	76	109	202	147	59	89	35
Link Distance (ft)	1855			2533	2568		620	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		110	150			280		70
Storage Blk Time (%)	7			5			3	
Queuing Penalty (veh)	3			5			0	

Intersection: 9: Lyon Ave & 7th St

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	LTR	L	TR	L	T	R
Maximum Queue (ft)	192	408	422	100	284	168	270	68
Average Queue (ft)	22	222	275	35	142	51	144	18
95th Queue (ft)	105	359	400	80	247	122	236	47
Link Distance (ft)		2533	2574	1006	1006		429	429
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150					150		
Storage Blk Time (%)		27				1	9	
Queuing Penalty (veh)		6				3	5	

Intersection: 10: Palm Ave & 7th St

Movement	EB	EB	WB	WB	B52	NB	SB
Directions Served	L	TR	L	TR	T	LTR	LTR
Maximum Queue (ft)	159	260	170	515	45	117	79
Average Queue (ft)	38	151	94	267	6	62	47
95th Queue (ft)	113	234	212	506	59	100	74
Link Distance (ft)		2574		601	1929	2000	350
Upstream Blk Time (%)				3			
Queuing Penalty (veh)				20			
Storage Bay Dist (ft)	100		75				
Storage Blk Time (%)		21	0	69			
Queuing Penalty (veh)		9	0	44			

Intersection: 11: State St & 7th St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	TR
Maximum Queue (ft)	159	330	200	140	423	70	144	232	255	175	419	350
Average Queue (ft)	72	150	36	77	230	26	59	117	140	103	226	190
95th Queue (ft)	150	272	110	154	383	55	126	213	233	190	356	305
Link Distance (ft)		1929			721	721		2560	2560		491	491
Upstream Blk Time (%)											0	0
Queuing Penalty (veh)											0	0
Storage Bay Dist (ft)	95		215	60			85			105		
Storage Blk Time (%)	10	21	0	12	41		5	16		6	30	
Queuing Penalty (veh)	46	35	0	55	40		13	11		27	35	

Intersection: 12: Warren Ave & Esplanade Ave

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (ft)	62	89	65	512	195
Average Queue (ft)	23	42	35	232	85
95th Queue (ft)	50	73	58	501	148
Link Distance (ft)	671	4426	4426	1142	1186
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 13: Cawston Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	TR
Maximum Queue (ft)	98	116	169	106	164	179	188	197	62	87	237
Average Queue (ft)	42	60	82	45	68	91	98	89	24	34	118
95th Queue (ft)	83	104	142	89	137	161	165	161	52	68	201
Link Distance (ft)		906	906		2540	2540		2579	2579	1246	1246
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150			150			150				
Storage Blk Time (%)		0			0		3	1			
Queuing Penalty (veh)		0			0		6	2			

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	144	127	176	80	234	356	158	149	292	283	200	312
Average Queue (ft)	66	53	79	40	130	189	54	72	176	163	92	163
95th Queue (ft)	119	104	145	90	232	326	109	131	263	258	160	281
Link Distance (ft)		2540	2540			1649	1649		841	841		2569
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	130			55	155			225			245	
Storage Blk Time (%)	1	0	19	2	4	20			2		0	2
Queuing Penalty (veh)	1	0	15	2	13	32			2		0	2

Intersection: 14: Sanderson Ave & Esplanade Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	339	269
Average Queue (ft)	175	55
95th Queue (ft)	292	172
Link Distance (ft)	2569	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)	6	
Queuing Penalty (veh)	8	

Intersection: 15: Kirby St & Esplanade Ave

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	R	LT	R
Maximum Queue (ft)	211	493	250	556	375	226	422	170
Average Queue (ft)	35	270	62	288	209	48	215	62
95th Queue (ft)	126	454	158	499	343	148	385	168
Link Distance (ft)	835	835	2575	2575	897		2568	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)						132		100
Storage Blk Time (%)					32	0	48	0
Queuing Penalty (veh)					29	0	22	0

Intersection: 16: Lyon Ave & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	R	L	T	R
Maximum Queue (ft)	191	409	164	219	441	134	75	196	110	141	240	38
Average Queue (ft)	33	183	20	91	198	28	22	92	28	45	122	10
95th Queue (ft)	116	357	103	194	383	78	57	162	71	99	215	33
Link Distance (ft)		2575			2526	2526		476			1520	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	122		122	140			120		120	118		118
Storage Blk Time (%)		13		1	14			4	0	0	13	
Queuing Penalty (veh)		9		4	15			5	0	1	9	

Intersection: 17: Palm Ave & Esplanade Ave

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB		
Directions Served	L	TR	L	T	R	L	TR	L	T	R		
Maximum Queue (ft)	225	601	314	585	316	142	201	108	161	54		
Average Queue (ft)	46	307	116	287	49	44	100	50	82	22		
95th Queue (ft)	171	555	279	552	187	93	174	95	138	48		
Link Distance (ft)		2526		2572	2572		765		508			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	160		250			75		150		150		
Storage Blk Time (%)		29		14		1	19	0	0			
Queuing Penalty (veh)		9		15		3	13	0	0			

Intersection: 18: State St & Esplanade Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	145	248	257	195	485	466	154	263	281	150	371	367
Average Queue (ft)	90	148	162	130	265	253	67	161	157	133	202	192
95th Queue (ft)	157	233	239	233	422	402	145	238	249	174	339	329
Link Distance (ft)		2572	2572		1477	1477		1199	1199		2560	2560
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100			140			105			100		
Storage Blk Time (%)	11	23		4	39		1	26		40	18	
Queuing Penalty (veh)	33	26		16	49		2	17		130	42	

Intersection: 19: Cawston Ave & Eaton Ave

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	47	56	78	69	66	74	80
Average Queue (ft)	17	26	42	37	31	43	47
95th Queue (ft)	42	48	65	57	53	65	70
Link Distance (ft)	1756		1246	1246		2579	2579
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		50			105		
Storage Blk Time (%)	0	0			0		
Queuing Penalty (veh)	0	0			0		

Intersection: 20: Cawston Ave & Coriander Dr/Fruitvale Ave

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	30	51	53	33	78	71	44	68	61
Average Queue (ft)	7	24	21	6	43	40	21	32	32
95th Queue (ft)	27	48	47	26	67	62	40	52	54
Link Distance (ft)	670	1254			1280	1280		1246	1246
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			50	150			58		
Storage Blk Time (%)		0	0				0	0	
Queuing Penalty (veh)		0	0				0	0	

Intersection: 21: Cawston Ave & East Driveway

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	53	31	47	12
Average Queue (ft)	24	4	13	0
95th Queue (ft)	45	21	40	6
Link Distance (ft)	449	354		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			150	150
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 22: Esplanade Ave & South Driveway

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (ft)	48	6	87
Average Queue (ft)	10	0	36
95th Queue (ft)	33	4	68
Link Distance (ft)		906	443
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	150		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1054

Intersection: 1: Sanderson Ave & Ramona Expy

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	29.5	26.5	7.5	28.5	7.5	48.5	19.5	16.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	9.3	6.8	6.8	-9.4	7.3	8.5	-1.2	-3.5
g/C Ratio	1.39	1.02	0.83	-1.41	1.10	1.27	-0.17	-0.52
Cycles Skipped (%)	0	0	19	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	91	94	41	91	81	97	78	82
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.7
Number of Complete Cycles : 32

Intersection: 2: Sanderson Ave & Ramona Blvd

Phase	1	2	3	6	8
Movement(s) Served	SBL	NBT	NWL	SBT	NWR
Maximum Green (s)	18.5	55.5	22.5	78.5	22.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	Min	None
Avg. Green (s)	0.2	-1.2	7.4	5.9	7.2
g/C Ratio	0.03	-0.28	0.89	0.94	1.14
Cycles Skipped (%)	13	0	50	34	34
Cycles @ Minimum (%)	0	0	0	0	10
Cycles Maxed Out (%)	16	6	0	18	0
Cycles with Peds (%)	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.2
Number of Complete Cycles : 62

Intersection: 4: Sanderson Ave & Cottonwood Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	8.5	40.5	11.5	31.5	8.5	40.5	12.5	30.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-6.6	2.2	-8.6	0.6	6.8	-6.2	-8.0	0.4
g/C Ratio	-1.20	0.40	-1.34	0.11	0.70	-1.15	-1.29	0.08
Cycles Skipped (%)	2	0	16	0	44	0	13	4
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	76	11	11	0	4	48	7	0
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.4
Number of Complete Cycles : 45

Intersection: 7: Sanderson Ave & 7th St

Phase	2	4	6	8
Movement(s) Served	NBTL	EBTL	SBTL	WBTL
Maximum Green (s)	61.5	39.5	61.5	39.5
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	Min	None	Min	None
Avg. Green (s)	1.0	-3.6	1.0	-3.6
g/C Ratio	0.18	-0.63	0.18	-0.63
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	27	14	27	14
Cycles with Peds (%)	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.8
Number of Complete Cycles : 44

Intersection: 9: Lyon Ave & 7th St

Phase	2	4	6	8
Movement(s) Served	NBTL	EBTL	SBTL	WBTL
Maximum Green (s)	22.5	30.5	22.5	43.5
Minimum Green (s)	5.0	5.0	5.0	5.0
Recall	Min	None	Min	None
Avg. Green (s)	2.7	9.3	2.7	2.3
g/C Ratio	0.40	1.36	0.40	0.34
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	79	65	79	68
Cycles with Peds (%)	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.8

Number of Complete Cycles : 33

Intersection: 11: State St & 7th St

Phase	1	2	4	5	6	8
Movement(s) Served	SBL	NBT	EBTL	NBL	SBT	WBTL
Maximum Green (s)	15.5	39.5	41.5	9.5	45.5	41.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	Min	None
Avg. Green (s)	-8.1	0.8	1.9	8.2	5.2	1.9
g/C Ratio	-1.24	0.12	0.30	1.07	0.82	0.30
Cycles Skipped (%)	3	0	0	17	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	14	51	69	33	49	69
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.3

Number of Complete Cycles : 35

Intersection: 13: Cawston Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	10.5	24.5	14.5	42.5	10.5	24.5	9.5	47.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	9.2	-3.1	8.0	-3.5	-3.3	3.5	7.2	-2.5
g/C Ratio	1.00	-0.60	1.07	-0.73	-0.63	0.68	0.93	-0.52
Cycles Skipped (%)	47	6	35	0	8	7	38	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	8	40	2	2	57	15	13	0
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 4.8

Number of Complete Cycles : 53

Intersection: 14: Sanderson Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	16.5	35.5	16.5	23.5	11.5	40.5	14.5	25.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-7.3	0.7	-5.3	2.0	9.6	3.4	-10.1	6.1
g/C Ratio	-1.14	0.10	-0.82	0.31	1.40	0.54	-1.42	0.97
Cycles Skipped (%)	3	0	3	3	8	0	11	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	17	75	31	33	33	58	14	57
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.3

Number of Complete Cycles : 35

Intersection: 15: Kirby St & Esplanade Ave

Phase	2	3	4	6	7	8
Movement(s) Served	NBTL	WBL	EBT	SBTL	EBL	WBT
Maximum Green (s)	24.5	7.5	39.5	20.5	5.5	41.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	Min	None	None	Min
Avg. Green (s)	3.3	7.1	0.7	0.2	5.7	4.4
g/C Ratio	0.51	0.98	0.11	0.03	0.54	0.69
Cycles Skipped (%)	0	12	0	0	39	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	62	61	79	68	61	79
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 6.4
Number of Complete Cycles : 33

Intersection: 16: Lyon Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	7.5	23.5	13.5	47.5	5.5	25.5	5.5	55.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	None	None	Min	None	None	None	Min
Avg. Green (s)	7.6	2.4	-8.4	6.0	6.6	5.4	5.5	-2.1
g/C Ratio	0.88	0.42	-1.31	1.08	0.52	0.94	0.47	-0.37
Cycles Skipped (%)	36	2	14	0	57	2	52	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	34	21	12	16	39	25	43	18
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary
Average Cycle Length (s): 5.5
Number of Complete Cycles : 44

Intersection: 17: Palm Ave & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	6.5	43.5	8.5	33.5	7.5	42.5	8.5	33.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	6.3	3.9	-8.5	3.3	6.8	3.2	7.3	-5.3
g/C Ratio	0.82	0.70	-1.28	0.57	0.93	0.57	0.58	-0.95
Cycles Skipped (%)	26	0	16	2	24	0	56	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	46	0	44	78	41	0	4	89
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 5.6
Number of Complete Cycles : 45

Intersection: 18: State St & Esplanade Ave

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT
Maximum Green (s)	21.5	25.5	15.5	29.5	8.5	38.5	15.5	29.5
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Recall	None	Min	None	None	None	Min	None	None
Avg. Green (s)	-2.1	8.1	-8.6	-7.1	7.6	0.8	-9.2	-6.3
g/C Ratio	-0.33	1.29	-1.29	-1.12	0.96	0.13	-1.37	-1.00
Cycles Skipped (%)	0	0	6	0	21	0	6	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	32	76	17	74	32	71	11	94
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 6.3
Number of Complete Cycles : 34


PSOMAS

Appendix I

Planned Development Permit, Chacon Farms,
Tentative Tract Map No. 39076

Taylor & Clark Consulting, LLC

November 4, 2024

Planned Development Permit

Chacon Farms

Tentative Tract Map No. 39076

Prepared for:

City of San Jacinto
595 S. San Jacinto Avenue
San Jacinto, CA 92583
951.487.7330
Point of Contact: Steven Valdez, Principal Planner
Svaldez@sanjacintoca.gov

Project Proponent:

Ramona Dairy, LLC
(Applicant: Brian Taylor)
805-305-3651
brian@taylor-clark.com

Prepared by:

Taylor & Clark Consulting, LLC
1968 S. Coast Hwy., Suite 3043
Laguna Beach, CA 92651
805-305-3651
brian@taylor-clark.com

In Consultation With:

BMLA - *Landscape Architecture*
Blaine A. Womer - *Civil Engineering*
Taylor & Clark Consulting – *Planning Consultant*

CHACON FARMS

November 4, 2024

OVERVIEW

1. **Project Title:** Chacon Farms, TTM 39076
2. **Project Location:** The Project site is in the City of San Jacinto, County of Riverside, California. The site is located off Cawston Ave and between W. 7th St. and W. Esplanade Ave.
3. **Project Sponsor's Name and Addres**s: Ramona Dairy, LLC, 2451 Ramona Expressway, San Jacinto, CA 92582
4. **Current Zoning & General Plan Designation**: RR (Rural Residential) & VLDR (Very Low Density Residential)
5. **Proposed Zoning & General Plan Designation:** Residential, Low Density (RL), pursuant to the Zoning Map (San Jacinto 2012). Low Density Residential (LDR) (2.0 to 7.0 Dwelling Units per Acre), pursuant to the General Plan Land Use Policy Map (San Jacinto 2022).
6. **Proposed Project:** Ramona Dairy, LLC ("Applicant") proposes to develop approximately 75.70 acres of vacant land with up to 419 detached single-family homes and associated infrastructure and amenities to serve the residential community ("Project"). The development would include the construction of homes, four expansive active parks and amenities that will feature, pickle ball, shade structures, picnic tables, BBQs, and multiple play structures. Four water quality/stormwater detention basins, internal streets and sidewalks, bike lanes, landscaping, signage, and utility improvements to serve the site. Offsite improvements include street and sidewalk connections along the frontage of W. 7th St., Cawston Ave., and W. Esplanade Ave.

PLANNED DEVELOPMENT PERMIT PROCEDURAL GUIDELINES

1. All development within the PDP shall comply with the requirements and standards set forth in this document. In some cases, this PDP provides direct references to the City of San Jacinto Development Code, and where this PDP is silent, the City of San Jacinto Development Code will provide additional guidance. Where a conflict exists between standards contained herein and those found in the City of San Jacinto Development Code, the standards in this document shall apply.

2. The Director shall require the posting of cash, a savings and loan certificate, or a performance bond issued by a corporate surety company, in an amount to be determined by the City Engineer, in compliance with Section 17.660.070 (Performance Guarantees), to cover the costs of the public improvements adjacent to the proposed development before the issuance of the Building Permit for the first phase of construction.

3. All modifications to PDP must follow City of San Jacinto Develop Code, Section 17.620.070 – Planned Development Permit Amendment.

4. All development timing/scheduling shall be in tandem with Tentative Tract Map 39076 and shall not supersede Planning Commission Approvals.

    a. The development schedule for a Planned Development Permit shall indicate the approximate time period, after the Planned Development Permit becomes effective, when construction of the project can be expected to begin, the anticipated rate of development, and the anticipated completion date. If approved by the Commission, shall become a part of the Planned Development Permit and shall be adhered to by the owner of the property and the owner's successor(s)-in-interest.

    b. "NOTE: The Director shall require the posting of cash, a savings and loan certificate, or a performance bond issued by a corporate surety company, in an amount to be determined by the City Engineer, in compliance with Section 17.660.070 (Performance Guarantees), to cover the costs of the public improvements adjacent to the proposed development before the issuance of the Building Permit for the first phase of construction."

    c. The developer shall construct all amenities shown and landscape all open spaces within each phase as it is completed, and before occupancy of any structure located within each phase of the development."

PROJECT ATTRIBUTES & JUSTIFICATION FOR DENSITY INCENTIVE AND PLANNED DEVELOPMENT PERMIT

The Project has been a collaborative effort with City staff to design a high-quality residential community with modified standards and density incentives to help address the regions need for attainable homes and the critical housing shortage in California. The project conforms to the City's General Plan and Zoning Designation, but requires slight modifications to Development Code Standards.

<u>As part of the coordination local issues and constraints were improved:</u>

- **Issue:** Pedestrian connectivity.
  Improvement: Installation of sidewalks connecting 7th St and Esplanade Ave.

- **Issue:** Increased park and open space above typical Development Code Standards
  Improvement: Provide spaces for event programing, including multiple parks, pickle ball, shade structures, BBQs, picnic tables, and open space.

<u>Additional Attributes:</u>

- Enhanced Open Space and Architecture Guidelines.
- Located nearby Tahquitz High School
- Strong compatibility with existing surrounding uses
- Meets or exceeds current solar energy and T-24 requirements

The Project has been a collaborative effort with City staff to design a high-quality residential community with modified standards and density incentives to help address the regions need for attainable homes and the critical housing shortage in California.

SITE PLANNING AND DESIGN

Quality residential subdivisions function as neighborhoods, encourage social interaction, promote healthful activities, and incorporate best practices in sustainable development planning. This section provides development standards for the planning and design of homes within the project to accomplish these goals and provide for a visually appealing, pedestrian friendly neighborhood environment.

1. Development Standards

Residential development within the Chacon Farms community shall comply with the development standards listed below:

Table 1

Lot Requirements	
Lot Area (minimum):	4,500 square feet
Lot Width (minimum):	45 feet
Lot Depth (minimum):	100 feet
Lot Frontage (minimum):	24 feet
Lot Coverage Impervious (maximum)	70%

Setbacks	
Front Elevation (minimum):	10 feet
Front Elevation Garage (minimum):	20 feet
Side Elevation Zero Lot Line (minimum):	4 feet
Side Elevation Corner (minimum):	10 feet
Rear Elevation (minimum):	10 feet

Buildings	
Height of Buildings (maximum):	35 feet
Size of Buildings (maximum):	4,500 square feet
Number of Stories (maximum):	Two Stories
Allowed Percentage of Units at Two Stories:	100%
FAR (maximum):	2:1

2. Plotting Guidelines

The Chacon Farms community provides for a range of home sizes, home styles and floor plans. Exhibit A Tentative Tract Map shows the overall design of the Chacon Farms community with the building envelopes plotted. The Chacon Farms community is comprised of a single neighborhood with a minimum lot size of 4,500 sf.

Single family homes within Chacon Farms shall creatively use “architecture forward” designs, landscaping, and other innovative neighborhood design techniques to create a visually interesting street scene and identifiable neighborhood character. To encourage a diverse and visually interesting street scene, the neighborhood within the Chacon Farms community shall comply with the following guidelines:

1. A minimum of three (3) architectural elevations and three (3) floor plans are required for the community.
2. The same elevation style shall be plotted next to itself.
3. All setbacks shall meet the minimum requirement listed in Table 1.

ARCHITECTURAL DESIGN GUIDELINES

These Architectural Design Guidelines convey the Chacon Farms community's architectural design theme. It is not the intent of these Guidelines to mandate that all the identified design components and elements described herein be incorporated into the actual building designs. Rather, these Guidelines serve as a "palette" of character-defining exterior elements that should be used in home design. It is expected that builders and their architects will prepare architectural building plans that substantially conform to these guidelines, while also applying creativity and innovation in response to housing design trends, homebuyer expectations, and other market conditions.

1. Design Principles

While these Architectural Design Guidelines do not expressly limit architectural styles, the styles employed in Chacon Farms should be complementary and compatible with the styles described in this document. The defining features of the selected architectural styles must be consistently implemented across the community to visually identify and differentiate each style. These Guidelines allow for both traditional/historical styles and contemporary interpretations of these styles, provided that the style's defining features can be visually identified, consistently applied, and differentiated from the character defining features of other styles implemented in the community.

The selection of architectural styles should be compatible with the massing of their floor plans; as such, a certain style should not be forced onto every floor plan if it is not compatible. By emphasizing the use of distinct and identifiable styles, these guidelines discourage monotony. Street scenes shall incorporate multiple architectural styles and should be divers as to form, massing, features, windows, front doors, materials, and colors.

2. Form and Massing

Building mass and scale are two primary design components that affect how a building is perceived. The created use of design articulation of the building's visible facades, variation of rooflines, balance of roof forms, and changes in vertical and horizontal plans reduces the perceived mass of a building.

3. Roofs

The roofline is a dominant visual element of a home. A roof's composition should allow for a clean interface with the building and the building façade. A roof's form and composition should reflect the appropriate roof pitch, characteristics, and materials that are consistent with and true to the selected architectural style and shall also not be overbearing nor give the appearance of being disjointed.

I. Rooflines of adjacent homes should vary to create a variety of silhouettes and ridge heights.
II. Roof pitches and colors should vary from one house to the next, when appropriate for the architectural styles.
III. Roof materials and colors selected for an architectural style must reflect the elements that are typically used in that style.
IV. Roofing Materials shall be non-combustible.
V. Solar panels, if used, should be integrated into the roof design as an unobstructive element.

4. Garage Location and Design

To achieve attractive street scenes throughout the Chacon Farms community, particular attention must be given to the design and placement of garages.

I. Garage door style, color and design shall reflect the architectural character of the home and shall vary between adjacent homes, when appropriate. Acceptable garage door styles include, but are not limited to raised panel, recessed panel, flush panel in both roll-up and carriage swing door designs.
II. Window may be incorporated into the garage door design. Where provided, garage door window styles shall correspond to the window forms of the house.
III. Architectural features, such as varied rooflines (including height and pitch) and second story setbacks, can be incorporated into the garage design to reduce building mass and sale and create a visually interesting street scene, when appropriate for the selected architectural style.
IV. Landscaping can be introduced to soften the visual impact of the garage door and accent the garage facade.

5. Windows and Doors

Window and door details are architectural components that carry a strong visual impact through their placement and design.

I. Front door details shall be consistent with the architectural style.
II. Feature window shapes shall be consistent with the architectural style.
III. Accent shutters are not required; however, when used, shutter size shall be proportional to the window and shall reflect the architectural style.
IV. Window trim details used on the front elevation can also be applied to the sides and rear of the house for continuity.
V. Windows and/or doors with silver or gold frames or reflective glass are prohibited.

6. Building Materials and Colors

A complementary mixture of colors, textures, and building materials is encouraged throughout the Chacon Farms community. Building material and color selection are integral components in the definition of a specific architectural style and provide a varied streetscape design. Material breaks, transitions and termination should produce complementary and clear definition of separation while maintaining a prescribed color and material palette. A variety of exterior accent materials should be used as an integral feature in home construction to convey the selected architectural styles.

I. Color schemes shall be simple, tasteful, and consistent with architectural styles.
II. A scheme of color values on all exterior elements shall be distinct from one house to the next, with deeper tones encouraged to promote variations. This avoids a monotonous appearance of multiple buildings of the same colors and tones.

7. Site Lighting

Lighting standards throughout Chacon Farms shall be similar in style, color and materials, embracing a natural and minimal lighting approach.

All outdoor lighting shall incorporate, to the extent feasible and permissible under City standards, measures to aid in reducing light pollution. Such measure include: wattage reduction, directing lighting downward, shielding lights (or using “cut-off lights” that only illuminate the side or underside of a fixture, rather than shining skyward) and lowering the height of light poles to reduce the illumination radius.

All outdoor lighting fixtures shall be focused, directed, and arranged to minimize glare and illumination of public streets and adjoining property.

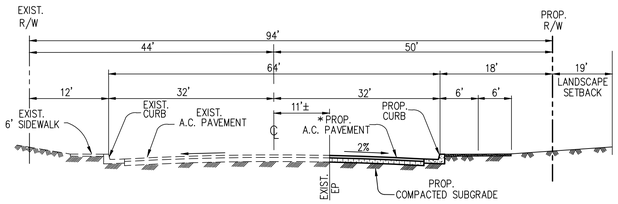
Mechanical Equipment

Mechanical equipment such as air conditioners, heaters, evaporative coolers, and other such devices shall not be mounted on any roof and must be located behind privacy walls or landscaping.

Exhibit A – Tentative Tract Map

IN THE CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076

PORTION SECTION 31, TOWNSHIP 4 SOUTH, RANGE 1 WEST, S.B.M.

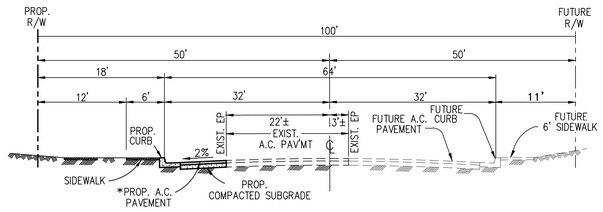


TYPICAL STREET SECTION
SEVENTH STREET - MAJOR

NOT TO SCALE

T.I. = 9.0

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.

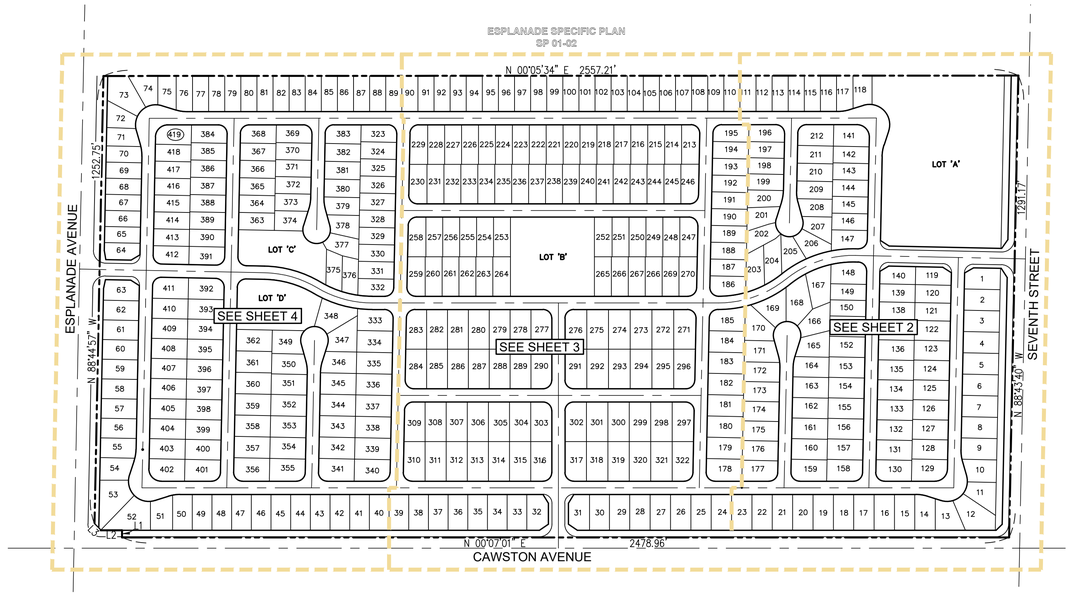


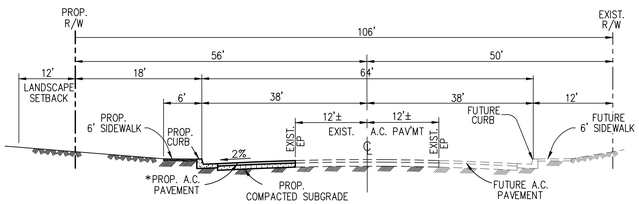
TYPICAL STREET SECTION
CAWSTON AVENUE - MAJOR

NOT TO SCALE

T.I. = 9.0

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.



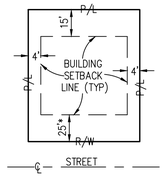


TYPICAL STREET SECTION
ESPLANADE AVENUE - ARTERIAL

NOT TO SCALE

T.I. = 9.5

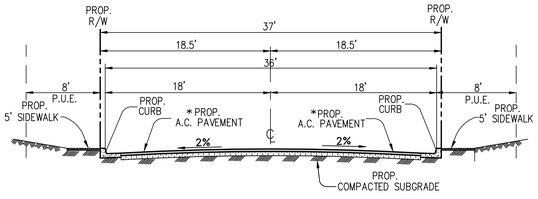
*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.



TYPICAL BUILDING SETBACKS

NTS

*20' FROM BACK OF SW TO GARAGE, 15' FROM R\W TO HOUSE FEATURE.

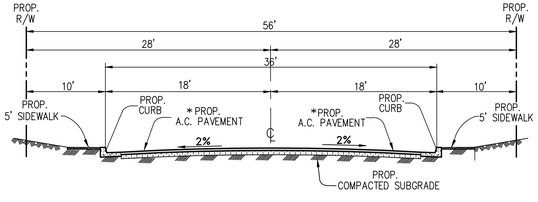


TYPICAL STREET SECTION
ROADS - MODIFIED LOCAL PRIVATE STREETS

NOT TO SCALE

T.I. = 5.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.



TYPICAL STREET SECTION
ENTRANCE ROADS - MODIFIED LOCAL PRIVATE STREETS

NOT TO SCALE

T.I. = 5.5

*FINAL PAVEMENT STRUCTURAL SECTION WILL BE DETERMINED BASED ON THE PROJECT GEOTECHNICAL REPORT AND THE TRAFFIC INDEX.

EASEMENT NOTES

1. A RIGHT OF WAY FOR ONE DITCH, FLUME OR OTHER AQUEDUCT, ACROSS THE LAND OF ANY OTHER OWNER LYING BETWEEN THE LANDS OF SAID OWNER AND THE SAN JACINTO VIEJO, BY DECREE OF PARTITION OF SAID RANCHO RECORDED IN BOOK 43, PAGE 161 OF DEEDS, RECORDS OF SAN DIEGO COUNTY, CALIFORNIA. ROUTE NOT DEFINED OF RECORD.

2. THE RIGHT TO DEVELOP, TAKE, EXPORT AND APPROPRIATE TO ITS OWN USE IN ANY MANNER AND BY AN AGENCY, ALL WATER THAT MAY BE DISCOVERED IN OR THAT MAY BE DEPOSITED IN OR UNDERLIE THE PROPERTY HEREIN DESCRIBED, AND ALL RIPARIAN AND OTHER WATER RIGHTS THAT MAY BE AND APPURTENANT TO OR BELONG TO THE SAID LAND; PROVIDED, HOWEVER, THAT NO WORKS FOR THE DEVELOPMENT OF SAID WATER SHALL BE LOCATED ON THE LANDS HEREIN DESCRIBED; AND PROVIDED, HOWEVER, FURTHER, THAT THE OWNERS SHALL HAVE THE RIGHT TO DEVELOP WATER FOR DOMESTIC USE ON SAID LAND, CONVEYED BY DEED FROM THE SAN JACINTO LAND COMPANY TO CITIZENS WATER COMPANY OF SAN JACINTO, RECORDED DECEMBER 4, 1911 IN BOOK 341, PAGE 195 OF DEEDS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA AND IS BLANKET IN NATURE.

3. A RIGHT OF WAY OVER A STRIP OF LAND 30 FEET WIDE ON EACH SIDE OF THE SECTION AND QUARTER SECTION LINES FOR ROAD OR FOR DITCHES OR PIPES FOR CONDUCTING AND DISTRIBUTING WATER, AS DESCRIBED IN BOOK 341, PAGE 195 DEEDS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA AND IS SHOWN HEREON.

4. AN EASEMENT GRANTED TO EASTERN MUNICIPAL WATER DISTRICT, A PUBLIC AGENCY TO CONSTRUCT, ENLARGE, RECONSTRUCT, REMOVE AND REPLACE, OPERATE, INSPECT, MAINTAIN, REPAIR, IMPROVE AND RELOCATE, SEWAGE TRANSMISSION AND COLLECTION FACILITIES, INCLUDING, BUT NOT LIMITED TO, GRAVITY PIPELINES, PRESSURE PIPELINES, MANHOLES, CONNECTIONS, AND APPURTENANT EQUIPMENT FOR THE COLLECTION AND TRANSMISSION OF SEWAGE, TOGETHER WITH REASONABLE RIGHT OF ACCESS TO AND FROM SAID EASEMENT FOR THE PURPOSE OF EXERCISING THE RIGHTS GRANTED IN SAID EASEMENT, RECORDED SEPTEMBER 14, 2010 AS INSTRUMENT NO. 2010-0439200 OF OFFICIAL RECORDS, AND IS SHOWN HEREON.

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF SAN JACINTO, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE EAST ½ OF FARM LOT 161 OF THE LANDS OF SAN JACINTO LAND ASSOCIATION, AS SHOWN BY MAP ON FILE IN BOOK 8, PAGE 357 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

EXCEPTING THEREFROM THAT PORTION OF LAND CONVEYED TO THE CITY OF SAN JACINTO, A CALIFORNIA MUNICIPAL CORPORATION, IN GRANT DEED RECORDED OCTOBER 2, 2019 AS INSTRUMENT NO. 2019-394879 OFFICIAL RECORDS.

LINE DATA

LINE	BEARING	DISTANCE
L1	N 89°52'59" W	20.00'
L2	N 00°07'01" E	60.00'
L3	N 45°40'13" E	24.28'



VICINITY MAP

N.T.S.

OWNER

TEUNIS J. DE JONG, TRUSTEE OF THE TEUNIS J. JONG TRUST.
2451 RAMONA EXPRESSWAY
SAN JACINTO, CA. 92582
907-229-2072

APPLICANT

RICHARD MICHAEL
RAMONA DAIRY
2451 RAMONA EXPRESSWAY
SAN JACINTO, CA 92582
907-229-2072
richard@homealaska.net

ASSESSOR'S PARCEL NO(S).

432-260-009, 026 AND 027

ADJACENT LAND USE

WEST – ESPLANADE SP/ESPLANADE SP
NORTH – LDR/RL
EAST – VLDR/RR
SOUTH – CITY OF HEMET/CITY OF HEMET

ZONING

RL
RL/PI
RL
RM

EXISTING LAND USE

VLDR – VERY LOW DENSITY RESIDENTIAL

PROPOSED LAND USE

MDR – MEDIUM DENSITY RESIDENTIAL

EXISTING ZONING

RR – RURAL RESIDENTIAL

PROPOSED ZONING

RM – RESIDENTIAL MEDIUM DENSITY

UTILITIES

SEWER	CITY OF SAN JACINTO
WATER	EASTERN MUNICIPAL WATER DISTRICT
GAS	SOUTHERN CALIFORNIA GAS COMPANY
ELECTRIC	SOUTHERN CALIFORNIA EDISON COMPANY
TELEPHONE	FRONTIER
CABLE	FRONTIER

NUMBER OF LOTS

419 SINGLE FAMILY RESIDENTIAL
4 OPEN SPACE LOTS

ACREAGE

75.70 GROSS ACRES WITHIN BOLD BOUNDARY

SCHOOL DISTRICT

SAN JACINTO UNIFIED

SOURCE OF TOPOGRAPHY

AN AERIAL SURVEY BY PSOMAS DATED 10/22

FLOOD PLAIN

ZONE X PER COMMUNITY PANEL NO. 06065C1470G, DATED 8/28/2008.

SHEET INDEX

SHEET 1 . . . . . TITLE SHEET
SHEET 2 . . . . . TENTATIVE TRACT MAP
SHEET 3 . . . . . TENTATIVE TRACT MAP
SHEET 4 . . . . . TENTATIVE TRACT MAP
SHEET 5 . . . . . LOT AREA SUMMARY TABLE

DIG ALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

DATE	BY	MARK	REVISIONS	APPR.	DATE
				CITY	

ENGINEER
DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL
REGISTERED PROFESSIONAL ENGINEER
BLAINE A. WOMER
No. 46354
CIVIL
STATE OF CALIFORNIA

APPROVED BY: DATE
CONTRACT CITY ENGINEER

PREPARED BY: DATE

R.C.E. NO.

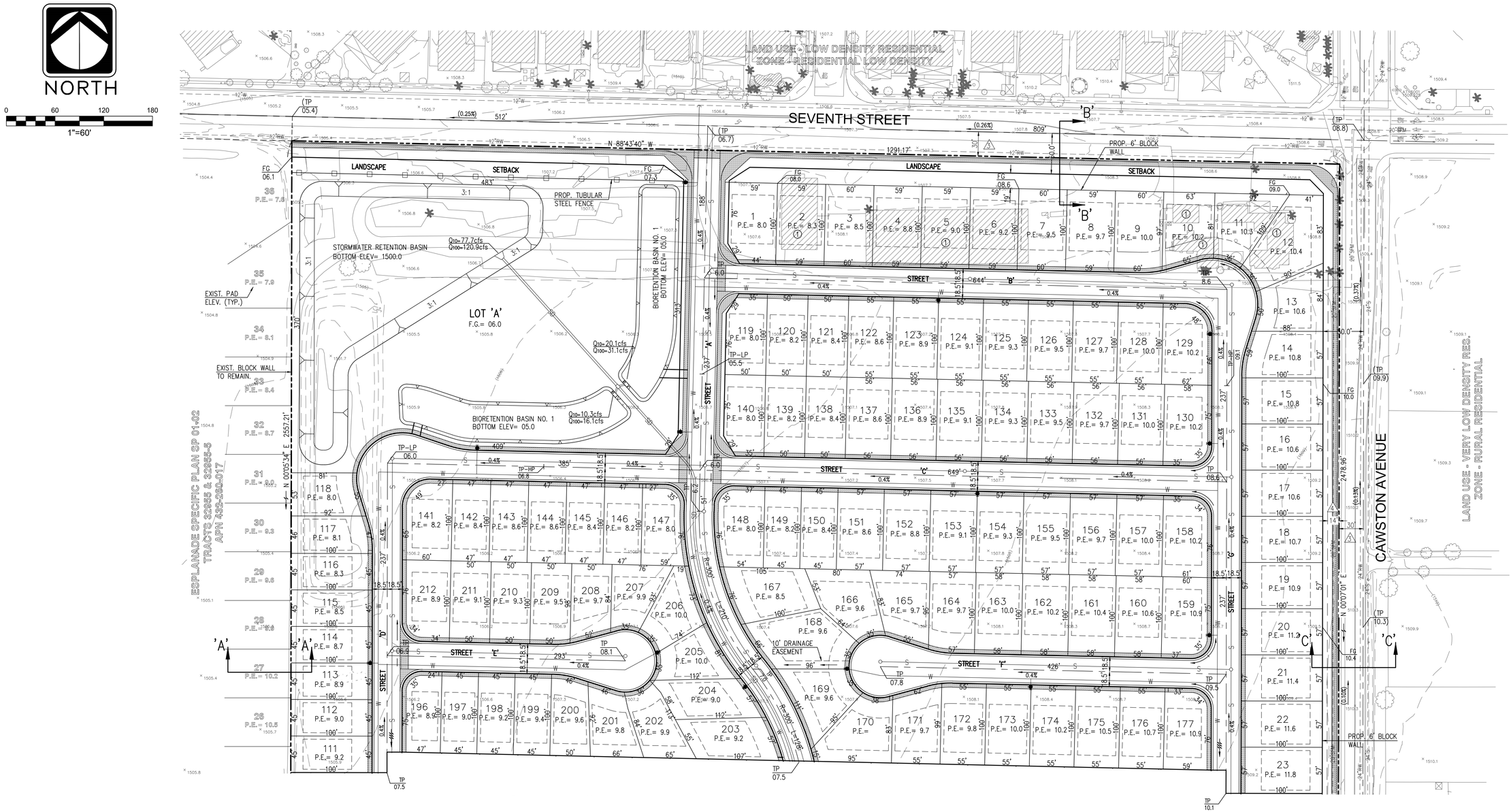
BLAINE A. WOMER
CIVIL ENGINEERING
• PLANNING
• SURVEYING
• CIVIL ENGINEERING
• PUBLIC WORKS
Hemet, CA. 92544, 41555 E Florida Ave., Suite G. Phone (951)658-1727 Fax (951)658-9347
Park City, UT 84098, 5133 Cove Canyon Dr. #302
Boise, ID. 83706, 4355 W Emerald Street, St. 145. Phone (208)593-7555

SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

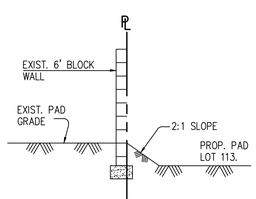
CITY OF SAN JACINTO
TENTATIVE TRACT MAP NO. 39076

FOR RAMONA DAIRY
W.O.

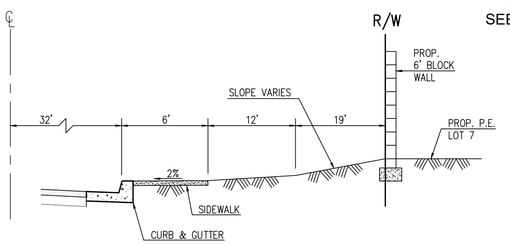
SHEET NO. 1 OF 5 SHEETS
FILE NO.



SEE SHEET NO. 3



SECTION 'A' – 'A'
NTS



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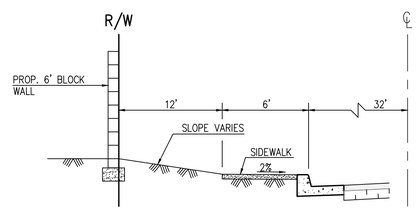

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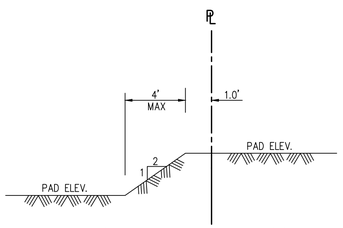

TYPICAL REAR YARD SECTION
NTS

KEY NOTES

1. EXISTING STRUCTURES TO BE REMOVED.

SEE SHEET 1 FOR EASEMENT AND LINE DATA INFORMATION.

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ENGINEER			REVISIONS	CITY	

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SCALE 1" = 60'
DATE SEPT. 18, 2024
BENCHMARK:

CITY OF SAN JACINTO
TENTATIVE TRACT MAP
NO. 39076

FOR RAMONA DAIRY
W.O.

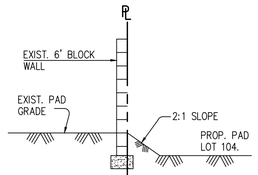
SHEET NO. 2 OF 5 SHEETS
FILE NO.

SEE SHEET NO. 2

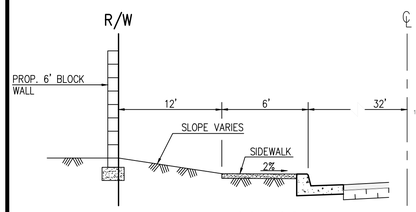
NORTH

0 60 120 180

1"=60'



SECTION 'A' – 'A'
NTS



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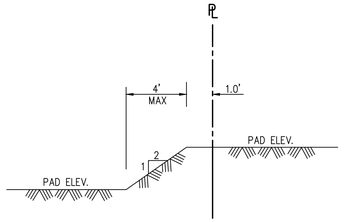
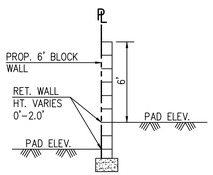


TYPICAL REAR YARD SECTION
NTS



SECTION 'E' – 'E'
NTS

ESPLANADE SPECIFIC PLAN SP 01-02
TRACT 32925-1
APN 432-280-014

EXIST. BLOCK WALL

PROP. 6' BLOCK WALL ON RETAINING WALL.

N 00°05'34" E 2557.21'

BIORETENTION BASIN NO. 2
BOTTOM ELEV= 07.0
Q10=4.5cfs
Q100=7.0cfs
Q10=6.9cfs
Q100=10.8cfs

LOT 'B'
F.G.= 08.0

Q10=9.7cfs
Q100=15.1cfs

STREET 'H' STREET 'I' STREET 'J' STREET 'K' STREET 'L' STREET 'G'

CAWSTON AVENUE
LAND USE: VARIOUS DENSITY RESIDENTIAL
ZONE: RURAL RESIDENTIAL

2479.96'

PROP. 6' BLOCK WALL.

SEE SHEET NO. 4

SEE SHEET 1 FOR EASEMENT AND LINE DATA INFORMATION.

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ENGINEER				CITY	

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TENTATIVE TRACT MAP
NO. 39076

FOR RAMONA DAIRY
W.O.

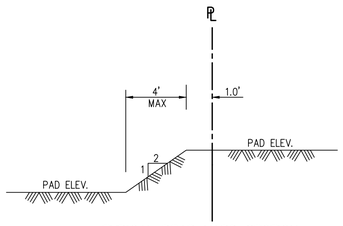
SHEET NO. 3 OF 5 SHEETS
FILE NO.

NORTH

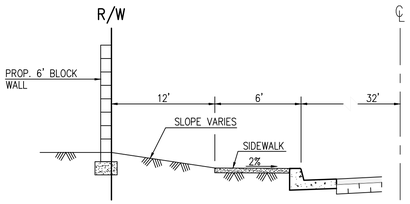
0 60 120 180

1"=60'

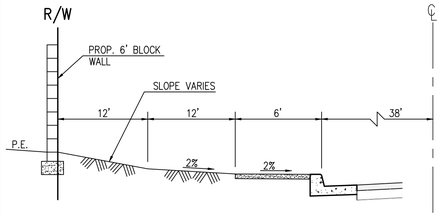
SEE SHEET NO. 3



TYPICAL REAR YARD SECTION
NTS



SECTION 'C' – 'C'
NTS



SECTION 'D' – 'D'
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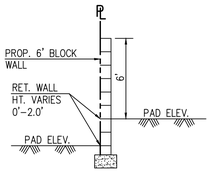

SECTION 'E' – 'E'
NTS



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SCALE 1" = 60'

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BENCHMARK:

CITY OF SAN JACINTO

TENTATIVE TRACT MAP NO. 39076

FOR RAMONA DAIRY

W.O.

SHEET NO. 4 OF 5 SHEETS

FILE NO.

LOT AREA TABLE	
LOT #	AREA SQFT.
1	5,763
2	5,950
3	5,950
4	5,950
5	5,950
6	5,950
7	5,950
8	5,950
9	5,924
10	5,523
11	5,500
12	7,645
13	5,500
14	5,500
15	5,685
16	5,690
17	5,690
18	5,690
19	5,690
20	5,690
21	5,690
22	5,690
23	5,690
24	5,690
25	5,690
26	5,690
27	5,690
28	5,690
29	5,690
30	5,690
31	5,500
32	5,500
33	5,500
34	5,500
35	5,500
36	5,500
37	5,500
38	5,500
39	5,500
40	5,500
41	5,500
42	5,500
43	5,500
44	5,500
45	5,500
46	5,500
47	5,500
48	5,500
49	5,500
50	5,500

LOT AREA TABLE	
LOT #	AREA SQFT.
51	5,501
52	8,426
53	8,622
54	5,500
55	5,500
56	5,500
57	5,500
58	5,500
59	5,500
60	5,500
61	5,500
62	5,500
63	5,500
64	4,500
65	4,500
66	4,500
67	4,500
68	4,500
69	4,500
70	4,500
71	4,500
72	4,576
73	7,716
74	4,963
75	5,690
76	4,500
77	4,500
78	4,500
79	4,500
80	4,500
81	4,500
82	4,500
83	4,500
84	4,500
85	4,500
86	4,500
87	4,500
88	4,500
89	4,500
90	4,500
91	4,500
92	4,500
93	4,500
94	4,500
95	4,500
96	4,500
97	4,500
98	4,500
99	4,500
100	4,500

LOT AREA TABLE	
LOT #	AREA SQFT.
101	4,500
102	4,500
103	4,500
104	4,500
105	4,500
106	4,500
107	4,500
108	4,500
109	4,500
110	4,500
111	4,500
112	4,500
113	4,500
114	4,500
115	4,500
116	4,500
117	4,500
118	4,502
119	4,831
120	5,013
121	5,013
122	5,535
123	5,535
124	5,534
125	5,534
126	5,535
127	5,535
128	5,535
129	5,534
130	5,592
131	5,592
132	5,592
133	5,592
134	5,592
135	5,592
136	5,592
137	5,592
138	5,014
139	5,013
140	4,831
141	5,483
142	4,679
143	4,679
144	4,679
145	4,679
146	4,679
147	5,041
148	5,705
149	4,500
150	4,500

LOT AREA TABLE	
LOT #	AREA SQFT.
151	5,700
152	5,734
153	5,734
154	5,734
155	5,734
156	5,734
157	5,734
158	5,733
159	5,756
160	5,756
161	5,756
162	5,756
163	5,756
164	5,625
165	5,525
166	5,683
167	6,440
168	7,576
169	5,818
170	6,116
171	5,500
172	5,500
173	5,500
174	5,500
175	5,500
176	5,500
177	5,500
178	5,952
179	5,952
180	5,952
181	5,952
182	5,952
183	5,952
184	5,952
185	5,952
186	5,065
187	4,695
188	4,695
189	4,695
190	4,695
191	4,695
192	4,695
193	4,695
194	4,691
195	4,500
196	4,500
197	4,500
198	4,500
199	4,500
200	4,599

LOT AREA TABLE	
LOT #	AREA SQFT.
201	4,570
202	4,715
203	5,604
204	5,441
205	4,584
206	4,884
207	4,516
208	4,523
209	4,947
210	4,961
211	4,959
212	5,609
213	5,229
214	5,239
215	5,232
216	5,231
217	5,231
218	5,230
219	5,230
220	5,229
221	5,229
222	5,228
223	5,228
224	5,227
225	5,227
226	5,226
227	5,226
228	5,226
229	5,229
230	5,228
231	5,226
232	5,226
233	5,226
234	5,227
235	5,227
236	5,228
237	5,228
238	5,229
239	5,229
240	5,230
241	5,230
242	5,231
243	5,231
244	5,232
245	5,236
246	5,228
247	5,238
248	5,235
249	5,238
250	5,238

LOT AREA TABLE	
LOT #	AREA SQFT.
251	5,238
252	5,461
253	5,238
254	5,238
255	5,238
256	5,238
257	5,238
258	5,238
259	5,238
260	5,238
261	5,238
262	5,238
263	5,238
264	5,459
265	5,238
266	5,238
267	5,238
268	5,238
269	5,238
270	5,238
271	6,537
272	6,724
273	6,724
274	6,724
275	6,724
276	6,424
277	6,155
278	6,456
279	6,456
280	6,456
281	6,456
282	6,456
283	6,046
284	6,265
285	6,456
286	6,456
287	6,456
288	6,456
289	6,456
290	6,155
291	6,424
292	6,724
293	6,724
294	6,724
295	6,724
296	6,314
297	6,441
298	6,628
299	6,628
300	6,628

LOT AREA TABLE	
LOT #	AREA SQFT.
301	6,628
302	6,328
303	6,236
304	6,537
305	6,537
306	6,537
307	6,537
308	6,537
309	6,127
310	6,346
311	6,537
312	6,537
313	6,537
314	6,537
315	6,537
316	6,236
317	6,328
318	6,628
319	6,628
320	6,628
321	6,628
322	6,218
323	4,500
324	4,778
325	4,778
326	4,778
327	4,778
328	4,778
329	4,778
330	4,778
331	4,778
332	4,574
333	5,657
334	6,046
335	5,983
336	5,983
337	5,983
338	5,983
339	5,983
340	5,815
341	5,989
342	5,983
343	5,983
344	5,983
345	5,983
346	5,694
347	6,241
348	6,807
349	5,500
350	5,500

LOT AREA TABLE	
LOT #	AREA SQFT.
351	5,724
352	5,975
353	5,975
354	5,975
355	5,985
356	6,160
357	5,975
358	5,975
359	5,975
360	5,975
361	5,975
362	6,020
363	4,853
364	4,853
365	4,853
366	4,853
367	4,853
368	4,858
369	4,736
370	4,736
371	4,736
372	4,736
373	4,736
374	4,734
375	4,533
376	4,529
377	4,937
378	4,865
379	4,833
380	4,989
381	4,989
382	4,989
383	4,987
384	4,738
385	4,833
386	4,833
387	4,833
388	4,833
389	4,833
390	4,835
391	4,801
392	5,604
393	5,604
394	5,604
395	5,604
396	5,604
397	5,604
398	5,604
399	5,604
400	5,607

LOT AREA TABLE	
LOT #	AREA SQFT.
401	5,737
402	5,604
403	5,607
404	5,604
405	5,604
406	5,604
407	5,604
408	5,604
409	5,604
410	5,604
411	5,604
412	4,801
413	4,728
414	4,728
415	4,728
416	4,728
417	4,728
418	4,726
419	4,911
LOT 'A'	3.74 AC
LOT 'B'	1.19 AC
LOT 'C'	0.58 AC
LOT 'D'	1.10 AC

MINIMUM LOT SIZE: 4,500 S.F.
AVERAGE LOT SIZE: 5,419 S.F.
MINIMUM LOT WIDTH: 45 FT.
MINIMUM LOT WIDTH CORNER: 49 FT.
MINIMUM LOT DEPTH: 100 FT.
MAXIMUM IMPERVIOUS COVER: 59%

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DATE	BY	MARK	REVISIONS	APPR.	DATE

ENGINEER | CITY

DESIGNED BY: DRAWN BY: CHECKED BY:

SEAL

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SCALE 1" = 60'

DATE

BENCHMARK:

CITY OF SAN JACINTO

TENTATIVE TRACT MAP NO. 39076 LOT AREAS

FOR

W.O.

SHEET NO. 5 OF 5 SHEETS

FILE NO.

LANDSCAPE DESIGN GUIDELINES

These Landscape Design Guidelines articulate the various landscape design components of Chacon Farms thematic identity. The community's landscape theme draws from the rural, agricultural heritage of the San Jacinto area.

As demonstrated by Exhibit B, Conceptual Landscape Plan, the landscape concept is intended to create a sense of community identity that links together Chacon Farms' residential land uses. Furthermore, the recommended plant palette is designed to reinforce and emphasize the community's landscape theme at major focal points.

Although a great deal of specific design information is provided in these Landscape Design Guidelines, these Guidelines are not intended to establish a set of rigid landscaping requirements for the Chacon Farms community. Instead, these Guidelines provide landscape principals and standards to ensure that plant materials, streetscapes community wall and fences are compatible with the community's design theme. These Guidelines are intended to be a living document and, as such, are subject to modification over time to allow for creative and innovative responses to unanticipated conditions, such as changes in housing design trends or community desires.

A. Plant Palette

The plant palette for Chacon Farms complements and enhances the community's setting, while also reducing irrigation needs and conserving water resources. The plant palette includes colorful plant materials along with trees appropriate for the property's climatic conditions. The plant palette also emphasizes other design elements in the community, such as the recommend architectural styles, monumentation sign, walls and fences, etc. Many of the plant materials are water efficient species native to Southern California or naturalized to the arid Southern California climate.

The plant palette provides a list of the plant materials approved for use in the Chacon Farms' community. The plans listed in the plant palette provide a base palette for the community's landscape design. Other similar plant materials may be substituted provided the selected plant materials are water-efficient and complement the Chacon Farms community theme. Plant selection for specific areas of the community shall have similar watering requirements so that the irrigation systems can be designed to minimize water us and plant materials can thrive under optimal conditions.

B. Walls & Fences

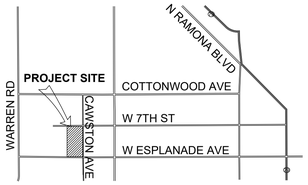
The conceptual Wall and Fence Plan for the Chacon Farms community is illustrated on Exhibit B. As shown, a variety of walls and fences are provided throughout the community to minimize roadway noise, increase privacy within each residential lot, and increase safety along Palomar Road. Community walls and fences are designed as an integral component and extension for

the building designed and surrounding landscape. Gates should be complementary in style and color to its fence or wall.

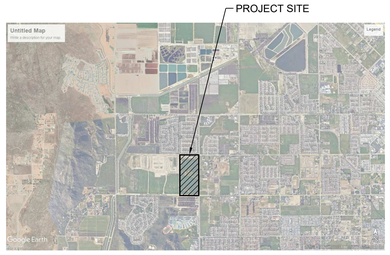
Masonry Block Wall. Masonry block walls are located between roadways and residential lots to maximize privacy and provide noise attenuation. The masonry block wall shall be up to six feet (6') tall (from the resident's yard finish grade elevation).

Privacy fences are provided in the rear and side yards of residential lots that do not have masonry walls. These privacy fences are vinyl. A minimum of five feet (5') tall and up to six feet (6') tall.

Exhibit B – Landscape Architecture



LOCATION MAP
NOT TO SCALE



SITE CONTEXT MAP
NOT TO SCALE

Sheet List Table	
Sheet Number	Sheet Title
1	OVERALL SITE PLAN
2	OVERALL SITE PLAN
3	OVERALL SITE PLAN
4	BASIN PARK ENLARGEMENT
5	CENTRAL PARK ENLARGEMENT
6	EAST WEST NEIGHBORHOOD PARKS ENLARGEMENT
7	STREETSCAPE ENLARGEMENT
8	CONCEPTUAL PLANT PALETTE
9	AMENITIES
10	WALL AND FENCE PLAN
11	WALL AND FENCE PLAN
12	WALL AND FENCE PLAN

REFER TO SHEET 4 FOR BASIN PARK ENLARGEMENT

REFER TO SHEET 7 FOR 7TH STREETSCAPE ENLARGEMENT



MATCHLINE - SEE SHEET 2

PLANT SCHEDULE			
SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
ACCENT TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	36" BOX	M
FRONT YARD STREET TREE			
	KOELREUTERIA BIPINNATA CHINESE FLAME TREE	24" BOX	M
	MAGNOLIA GRANDIFLORA `LITTLE GEM` LITTLE GEM DWARF SOUTHERN MAGNOLIA	24" BOX	M
	PISTACIA CHINENSIS 'KEITH DAVEY' KEITH DAVEY CHINESE PISTACHE	24" BOX	M
	RHUS LANCEA AFRICAN SUMAC	24" BOX	L
STREETSCAPE - MAIN			
	PINUS ELDARICA AFGHAN PINE	24" BOX	L
	PISTACIA CHINENSIS CHINESE PISTACHE	24" BOX	M
	PLATANUS X ACERIFOLIA 'BLOODGOOD' BLOODGOOD LONDON PLANE TREE	24" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	24" BOX	M
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	24" BOX	L
ACCENT SHRUBS			
	AGAVE DESMETIANA SMOOTH AGAVE	5 GAL	L
	ALOE BLUE ELF BLUE ELF	1 GAL	L
	DIANELLA REVOLUTA 'DTN03' BABY BLISS™ FLAX LILY	1 GAL	L
BACKGROUND SHRUBS			
	LAURUS NOBILIS 'MONRIK' LITTLE RAGU® SWEET BAY	5 GAL	L
	LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD' GREEN CLOUD TEXAS SAGE	5 GAL	L
	OLEA EUROPAEA 'MONTRA' LITTLE OLLIE® OLIVE	5 GAL	L
	WESTRINGIA X 'WYNYABBIE GEM' WYNYABBIE GEM COAST ROSEMARY	5 GAL	L
MIDGROUND SHRUBS			
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	CAREX DIVULSA EUROPEAN GREY SEDGE	1 GAL	L
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	PARTHENOCISSUS TRICUSPIDATA BOSTON IVY	5 GAL	M
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	MYOPORUM PARVIFOLIUM 'FINE LEAF FORM' FINE LEAF TRAILING MYOPORUM	1 GAL	L
	ROSMARINUS OFFICINALIS 'PROSTRATUS' DWARF ROSEMARY	1 GAL	L
	SENECIO MANDRALISCAE BLUE FINGERS	1 GAL	L
	WESTRINGIA FRUTICOSA 'NFL25' MUNDI™ COAST ROSEMARY	1 GAL	L

DRAINAGE BASIN HYDROSEED SCHEDULE - WUCOLS - LOW				
SYMBOL	SCIENTIFIC NAME	COMMON NAME	PURITY/ GERMINATION	BULK (LBS/ACRE)
	AGROTIS EXARATA	BENT GRASS	98/80	4.0
	BACCHARIS PILULARIS	COYOTE BRUSH	2/40	2.0
	BROMUS CARINATUS	CALIFORNIA BROME GRASS	95/80	1.5
	HELIOTROPIUM CURASSAVICUM	SALT HELIOTROPE	20/60	2.0
	HEMIZONIA FASCICLATA	FASCICLED TARWEED	10/25	1.0
	LASTHENIA CALIFORNICA	COASTAL GOLDFIELDS	90/85	0.25
	LEYMUS CONDENSATUS	GIANT WILD RYE	80/80	8.0
	LOTUS SCOPARIUS	DEERWEED	90/60	6.0
	LUPINUS BICOLOR	DOVE LUPINE	98/80	0.25
	MIMULUS GATTATUS	SEEP MONKEY FLOWER	10/60	1.0
	PLANTAGO OVATA	PLANTAIN	98/75	10.0
	TRIFOLIUM TRIDENTATUM	TOMCAT CLOVER	90/80	2.0
	VULPIA MICROSTACHYS	SMALL FESCUE	90/80	6-8

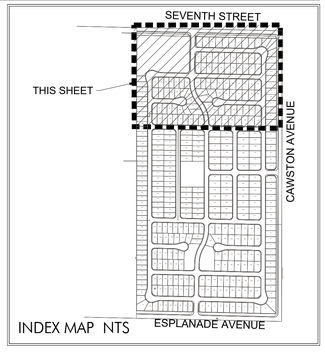
BIORETENTION BASIN PLANT SCHEDULE - WUCOLS - LOW				
SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	WUCOLS
TREES				
	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	15 GALLON	M
	CHILOPSIS LINEARIS	DESERT WILLOW	15 GALLON	L
	SHRUBS			
	SCIENTIFIC NAME	COMMON NAME	SIZE/SPACING	DENSITY/ ACRE
	JUNCUS BUFONIUS	TOAD RUSH	PLUGS/1' O.C.	10,890
	JUNCUS MEXICANUS	MEXICAN RUSH	PLUGS/1' O.C.	10,890
	SCHOENOPLECTUS AMERICANUS	WINGED THREE-SQUARE	PLUGS/1' O.C.	10,890

IRRIGATION CONCEPT NOTE:

THE IRRIGATION DESIGN WILL INCORPORATE THE LATEST IN SMART IRRIGATION TECHNOLOGIES. ALL NEW LANDSCAPE AREAS WILL INCLUDE HIGH EFFICIENCY, LOW WATER USE IRRIGATION EQUIPMENT AND METHODS. A SMART IRRIGATION CONTROLLER WITH A RAIN SHUT OFF DEVICE WILL ALSO BE INCORPORATED. BARK MULCH WILL BE USED TO RETAIN MOISTURE AND REDUCE EVAPORATION AND AN IRRIGATION SCHEDULE WILL BE PROVIDED TO PROGRAM THE CONTROLLER. TWO IRRIGATION SCHEDULES SHALL BE PREPARED, ONE FOR PLANT ESTABLISHMENT AND ONE FOR MAINTENANCE. ALL NEW IRRIGATION SYSTEMS WILL COMPLY WITH ALL CURRENT LANDSCAPE GUIDELINES.

LANDSCAPE CONCEPT NOTE:

THIS LANDSCAPE WILL CONSIST OF CALIFORNIA-FRIENDLY, LOW AND MEDIUM WATER USE PLANT MATERIAL. ALL PLANTS HAVE BEEN CHOSEN FROM THE LOW OR MEDIUM WATER USE CATEGORY ACCORDING TO WUCOLS. PLANTS HAVE BEEN CHOSEN TO CREATE A UNIFORM THEME ACROSS THE SITE CONSISTING OF MEDITERRANEAN AND CALIFORNIA FRIENDLY PLANT MATERIAL. MAINTENANCE AND LONGEVITY OF PLANT MATERIAL HAS BEEN TAKEN INTO CONSIDERATION. ROOT PANELS AND BARRIERS WILL BE UTILIZED ON ALL TREES NECESSARY, CONSISTENT WITH ALL STANDARDS AND SPECIFICATIONS. A 3" LAYER OF BARK MULCH WILL BE USED IN ALL LANDSCAPE AREAS. ALL LANDSCAPE AREAS WILL CONFORM TO ALL CURRENT LANDSCAPE GUIDELINES.



CHACON FARMS - TRACT 39076 - OVERALL SITE PLAN

NORTH 0' 60' 120' 180'

CONCEPTUAL LANDSCAPE PLAN

SHEET 1

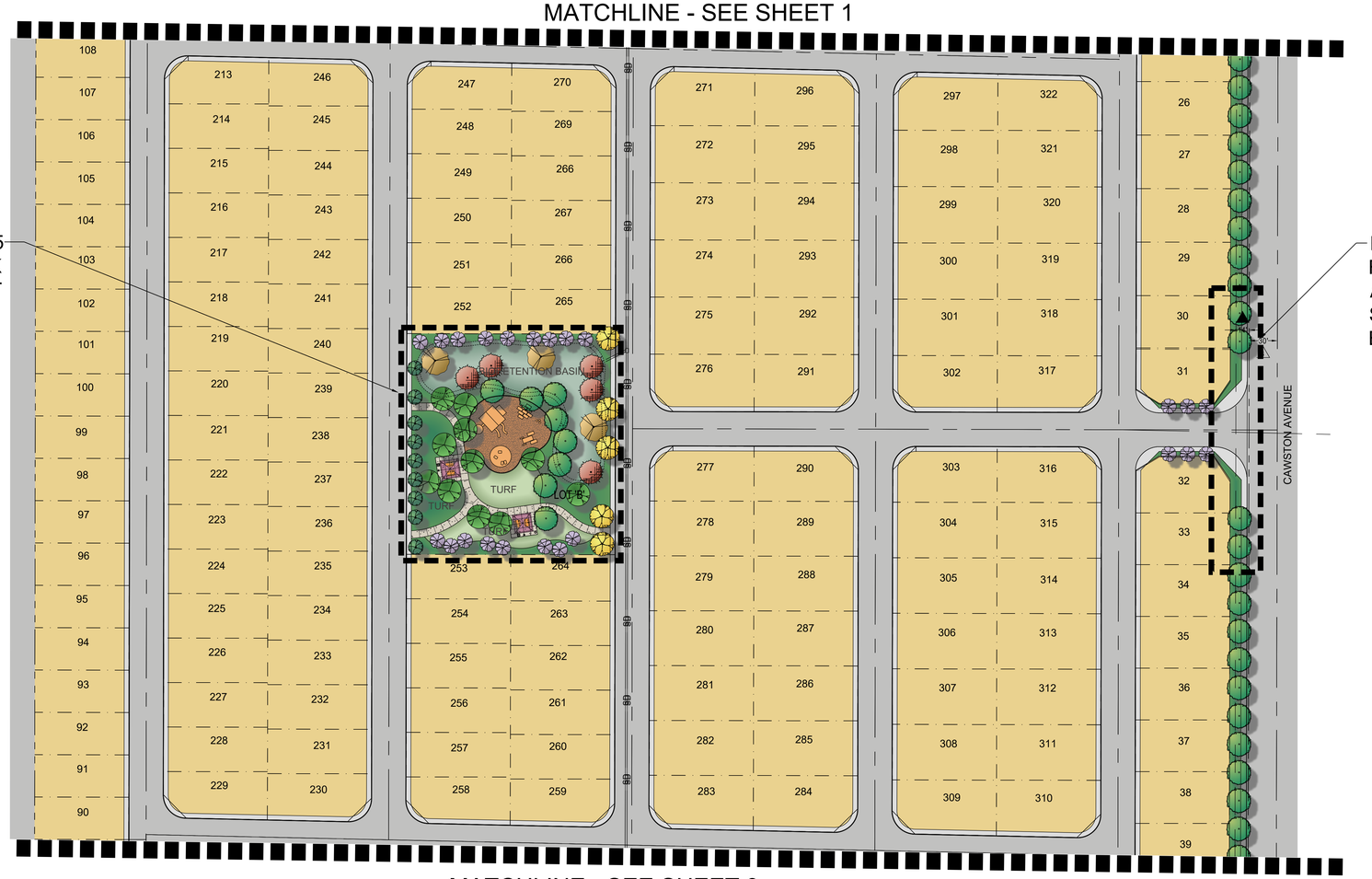
bmla
LANDSCAPE ARCHITECTURE
310 NORTH JOY STREET | CORONA, CA 92879
T: 951.737.1124 | F: 951.737.6551

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
November 13, 2024

MATCHLINE - SEE SHEET 1

REFER TO SHEET 5 FOR CENTRAL PARK ENLARGEMENT

REFER TO SHEET 7 FOR CAWSTON AVENUE STREETSCAPE ENLARGEMENT



MATCHLINE - SEE SHEET 3

PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
ACCENT TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	36" BOX	M
FRONT YARD STREET TREE			
	KOELREUTERIA BIPINNATA CHINESE FLAME TREE	24" BOX	M
	MAGNOLIA GRANDIFLORA `LITTLE GEM` LITTLE GEM DWARF SOUTHERN MAGNOLIA	24" BOX	M
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STREETSCAPE - MAIN			
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	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	24" BOX	L
ACCENT SHRUBS			
	AGAVE DESMETIANA SMOOTH AGAVE	5 GAL	L
	ALOE BLUE ELF BLUE ELF	1 GAL	L
	DIANELLA REVOLUTA 'DTN03' BABY BLISS™ FLAX LILY	1 GAL	L
BACKGROUND SHRUBS			
	LAURUS NOBILIS 'MONRIK' LITTLE RAGU® SWEET BAY	5 GAL	L
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	SHRUBS			
	SCIENTIFIC NAME	COMMON NAME	SIZE/SPACING	DENSITY/ ACRE
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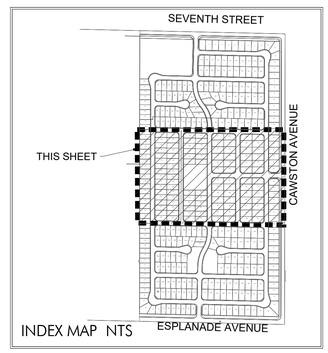

NORTH 0' 60' 120' 180'

CHACON FARMS - TRACT 39076 - OVERALL SITE PLAN

CONCEPTUAL LANDSCAPE PLAN SHEET 2

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
November 13, 2024

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LANDSCAPE ARCHITECTURE
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PLANT SCHEDULE

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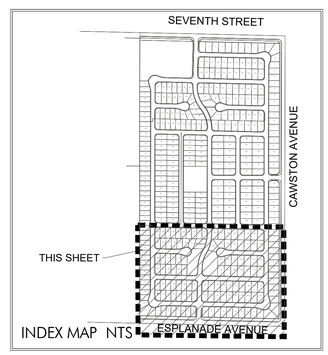

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CONCEPTUAL LANDSCAPE PLAN SHEET 3

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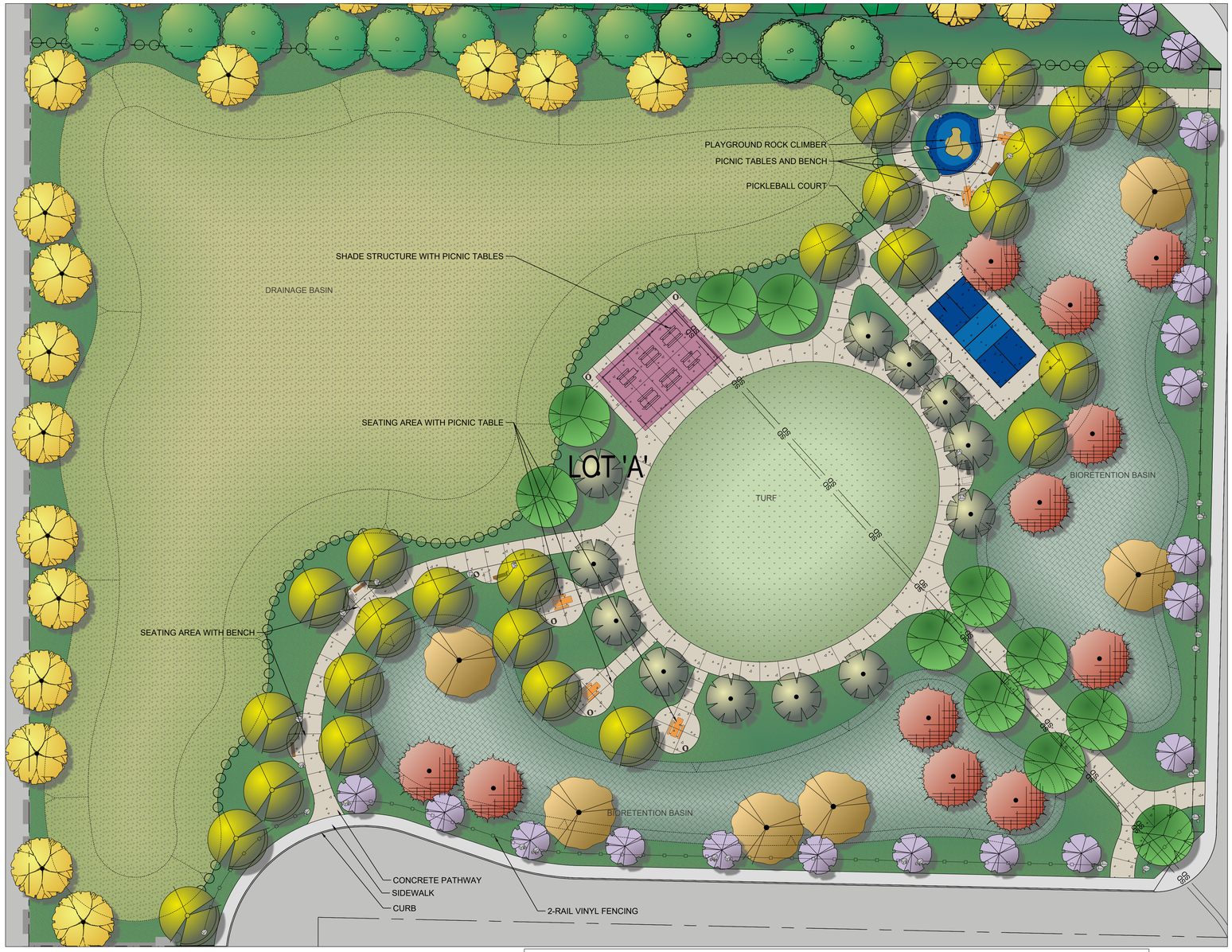

BASIN PARK ENLARGEMENT

CHACON FARMS - TRACT 39076 - ENLARGEMENT

PLANT SCHEDULE

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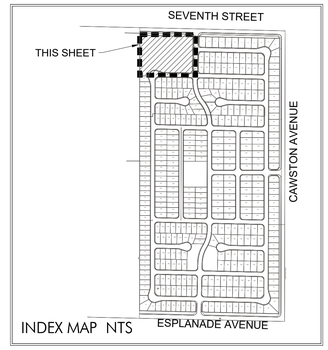
	WESTRINGIA FRUTICOSA 'NFL25' MUNDI™ COAST ROSEMARY	1 GAL	L

DRAINAGE BASIN HYDROSEED SCHEDULE - WUCOLS - LOW

SYMBOL	SCIENTIFIC NAME	COMMON NAME	PURITY/ GERMINATION	BULK (LBS/ACRE)
	AGROTIS EXARATA	BENT GRASS	98/80	4.0
	BACCHARIS PILULARIS	COYOTE BRUSH	2/40	2.0
	BROMUS CARINATUS	CALIFORNIA BROME GRASS	95/80	1.5
	HELIOTROPIUM CURASSAVICUM	SALT HELIOTROPE	20/60	2.0
	HEMIZONIA FASCICLATA	FASCICLED TARWEED	10/25	1.0
	LASTHENIA CALIFORNICA	COASTAL GOLDFIELDS	90/85	0.25
	LEYMUS CONDENSATUS	GIANT WILD RYE	80/80	8.0
	LOTUS SCOPARIUS	DEERWEED	90/60	6.0
	LUPINUS BICOLOR	DOVE LUPINE	98/80	0.25
	MIMULUS GATTATUS	SEEP MONKEY FLOWER	10/60	1.0
	PLANTAGO OVATA	PLANTAIN	98/75	10.0
	TRIFOLIUM TRIDENTATUM	TOMCAT CLOVER	90/80	2.0
	VULPIA MICROSTACHYS	SMALL FESCUE	90/80	6-8

BIORETENTION BASIN PLANT SCHEDULE - WUCOLS - LOW

SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	WUCOLS
TREES				
	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	15 GALLON	M
	CHILOPSIS LINEARIS	DESERT WILLOW	15 GALLON	L
SHRUBS				
	SCIENTIFIC NAME	COMMON NAME	SIZE/SPACING	DENSITY/ ACRE
	JUNCUS BUFONIUS	TOAD RUSH	PLUGS/1' O.C.	10,890
	JUNCUS MEXICANUS	MEXICAN RUSH	PLUGS/1' O.C.	10,890
	SCHOENOPLECTUS AMERICANUS	WINGED THREE-SQUARE	PLUGS/1' O.C.	10,890



NORTH 0' 20' 40' 60'

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LANDSCAPE ARCHITECTURE
310 NORTH JOY STREET | CORONA, CA 92879
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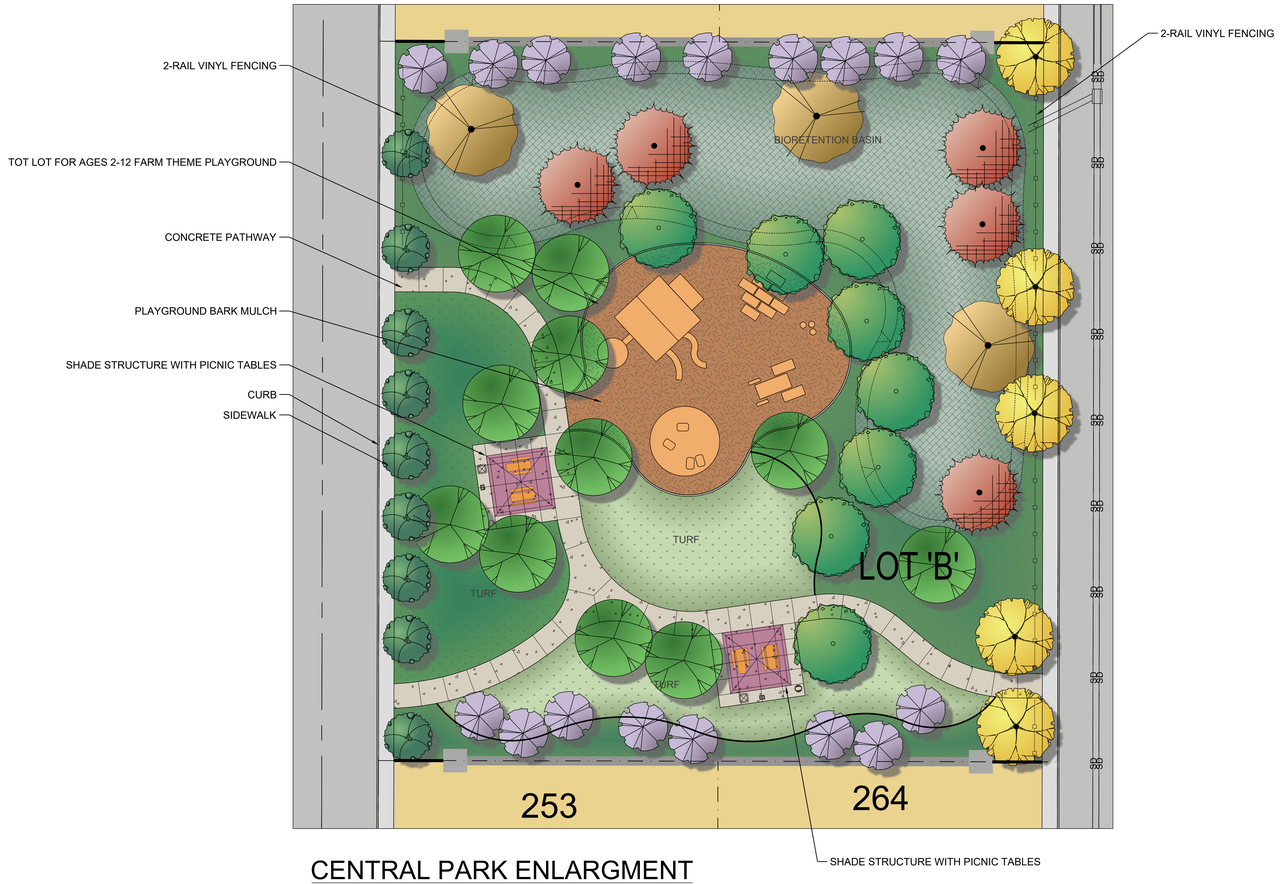
CONCEPTUAL LANDSCAPE PLAN

SHEET 4

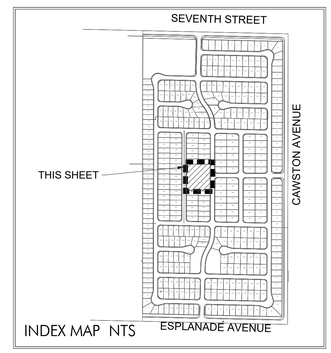
PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
November 13, 2024



CENTRAL PARK ENLARGMENT

PLANT SCHEDULE			
SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
ACCENT TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	36" BOX	M
FRONT YARD STREET TREE			
	KOELREUTERIA BIPINNATA CHINESE FLAME TREE	24" BOX	M
	MAGNOLIA GRANDIFLORA `LITTLE GEM` LITTLE GEM DWARF SOUTHERN MAGNOLIA	24" BOX	M
	PISTACIA CHINENSIS 'KEITH DAVEY' KEITH DAVEY CHINESE PISTACHE	24" BOX	M
	RHUS LANCEA AFRICAN SUMAC	24" BOX	L
STREETSCAPE - MAIN			
	PINUS ELDARICA AFGHAN PINE	24" BOX	L
	PISTACIA CHINENSIS CHINESE PISTACHE	24" BOX	M
	PLATANUS X ACERIFOLIA 'BLOODGOOD' BLOODGOOD LONDON PLANE TREE	24" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	24" BOX	M
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	24" BOX	L
ACCENT SHRUBS			
	AGAVE DESMETIANA SMOOTH AGAVE	5 GAL	L
	ALOE BLUE ELF BLUE ELF	1 GAL	L
	DIANELLA REVOLUTA 'DTN03' BABY BLISS™ FLAX LILY	1 GAL	L
BACKGROUND SHRUBS			
	LAURUS NOBILIS 'MONRIK' LITTLE RAGU® SWEET BAY	5 GAL	L
	LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD' GREEN CLOUD TEXAS SAGE	5 GAL	L
	OLEA EUROPAEA 'MONTRA' LITTLE OLLIE® OLIVE	5 GAL	L
	WESTRINGIA X 'WYNYABBIE GEM' WYNYABBIE GEM COAST ROSEMARY	5 GAL	L
MIDGROUND SHRUBS			
	CALLISTEMON VIMINALIS 'LITTLE JOHN' LITTLE JOHN WEEPING BOTTLEBRUSH	5 GAL	L
	CAREX DIVULSA EUROPEAN GREY SEDGE	1 GAL	L
	HESPERALOE PARVIFLORA RED YUCCA	1 GAL	L
	LOMANDRA LONGIFOLIA 'BREEZE' BREEZE™ MAT RUSH	5 GAL	L
	MUHLENBERGIA CAPILLARIS PINK MUHLY GRASS	1 GAL	L
	ROSMARINUS OFFICINALIS 'TUSCAN BLUE' TUSCAN BLUE ROSEMARY	5 GAL	L
	SALVIA GREGGII AUTUMN SAGE	5 GAL	L
	SALVIA LEUCOPHYLLA PURPLE SAGE	5 GAL	L
	WESTRINGIA FRUTICOSA 'MORNING LIGHT' MORNING LIGHT COAST ROSEMARY	5 GAL	L
VINES			
	PARTHENOCISSUS TRICUSPIDATA BOSTON IVY	5 GAL	M
GROUNDCOVERS			
	BACCHARIS PILULARIS 'TWIN PEAKS' TWIN PEAKS COYOTE BRUSH	1 GAL	L
	MYOPORUM PARVIFOLIUM 'FINE LEAF FORM' FINE LEAF TRAILING MYOPORUM	1 GAL	L
	ROSMARINUS OFFICINALIS 'PROSTRATUS' DWARF ROSEMARY	1 GAL	L
	SENECIO MANDRALISCAE BLUE FINGERS	1 GAL	L
	WESTRINGIA FRUTICOSA 'NFL25' MUNDI™ COAST ROSEMARY	1 GAL	L

BIORETENTION BASIN PLANT SCHEDULE - WUCOLS - LOW				
SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	WUCOLS
TREES				
	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	15 GALLON	M
	CHILOPSIS LINEARIS	DESERT WILLOW	15 GALLON	L
SHRUBS				
	SCIENTIFIC NAME	COMMON NAME	SIZE/SPACING	DENSITY/ ACRE
	JUNCUS BUFONIUS	TOAD RUSH	PLUGS/1' O.C.	10,890
	JUNCUS MEXICANUS	MEXICAN RUSH	PLUGS/1' O.C.	10,890
	SCHOENOPLECTUS AMERICANUS	WINGED THREE-SQUARE	PLUGS/1' O.C.	10,890



NORTH 0' 20' 40' 60'

CHACON FARMS - TRACT 39076 - ENLARGEMENT

bmla
LANDSCAPE ARCHITECTURE
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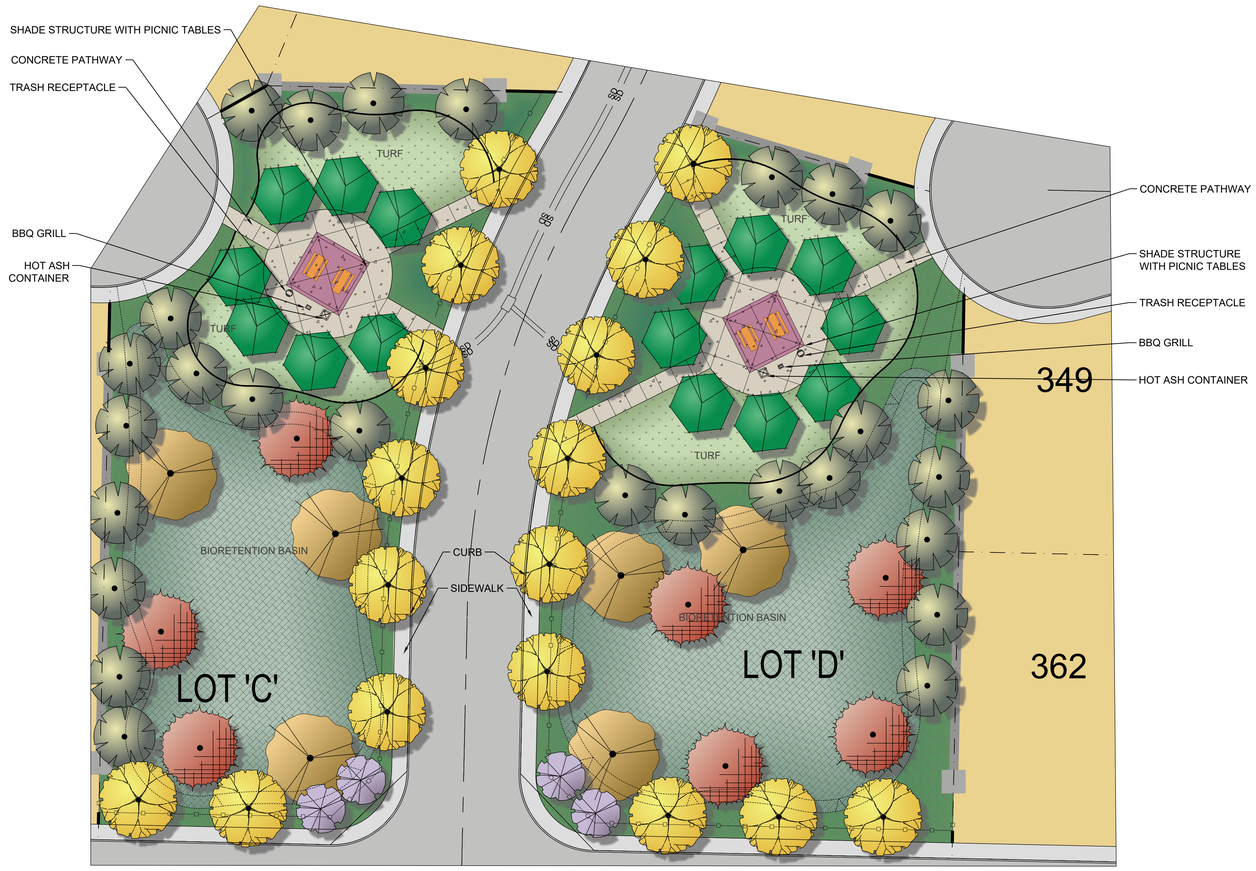
CONCEPTUAL LANDSCAPE PLAN

SHEET 5

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
November 13, 2024

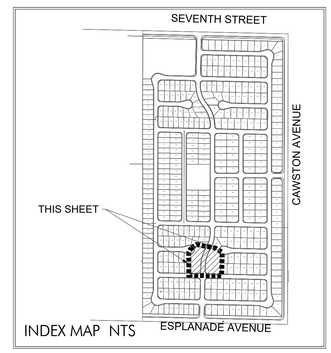


NEIGHBORHOOD PARKS WEST/EAST ENLARGMENT

BIORETENTION BASIN PLANT SCHEDULE - WUCOLS - LOW				
SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	WUCOLS
TREES				
	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	15 GALLON	M
	CHILOPSIS LINEARIS	DESERT WILLOW	15 GALLON	L
SHRUBS				
	SCIENTIFIC NAME	COMMON NAME	SIZE/SPACING	DENSITY/ ACRE
	JUNCUS BUFONIUS	TOAD RUSH	PLUGS/1' O.C.	10,890
	JUNCUS MEXICANUS	MEXICAN RUSH	PLUGS/1' O.C.	10,890
	SCHOENOPLECTUS AMERICANUS	WINGED THREE-SQUARE	PLUGS/1' O.C.	10,890

PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
ACCENT TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MUSKOGEE CRAPE MYRTLE	36" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	36" BOX	M
FRONT YARD STREET TREE			
	KOELREUTERIA BIPINNATA CHINESE FLAME TREE	24" BOX	M
	MAGNOLIA GRANDIFLORA `LITTLE GEM' LITTLE GEM DWARF SOUTHERN MAGNOLIA	24" BOX	M
	PISTACIA CHINENSIS 'KEITH DAVEY' KEITH DAVEY CHINESE PISTACHE	24" BOX	M
	RHUS LANCEA AFRICAN SUMAC	24" BOX	L
STREETSCAPE - MAIN			
	PINUS ELDARICA AFGHAN PINE	24" BOX	L
	PISTACIA CHINENSIS CHINESE PISTACHE	24" BOX	M
	PLATANUS X ACERIFOLIA 'BLOODGOOD' BLOODGOOD LONDON PLANE TREE	24" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	24" BOX	M
	ULMUS PARVIFOLIA 'DRAKE' DRAKE LACEBARK ELM	24" BOX	L
ACCENT SHRUBS			
	AGAVE DESMETIANA SMOOTH AGAVE	5 GAL	L
	ALOE BLUE ELF BLUE ELF	1 GAL	L
	DIANELLA REVOLUTA 'DTN03' BABY BLISS™ FLAX LILY	1 GAL	L
BACKGROUND SHRUBS			
	LAURUS NOBILIS 'MONRIK' LITTLE RAGU® SWEET BAY	5 GAL	L
	LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD' GREEN CLOUD TEXAS SAGE	5 GAL	L
	OLEA EUROPAEA 'MONTRA' LITTLE OLLIE® OLIVE	5 GAL	L
	WESTRINGIA X 'WYNYABBIE GEM' WYNYABBIE GEM COAST ROSEMARY	5 GAL	L
MIDGROUND SHRUBS			
	CALLISTEMON VIMINALIS 'LITTLE JOHN' LITTLE JOHN WEEPING BOTTLEBRUSH	5 GAL	L
	CAREX DIVULSA EUROPEAN GREY SEDGE	1 GAL	L
	HESPERALOE PARVIFLORA RED YUCCA	1 GAL	L
	LOMANDRA LONGIFOLIA 'BREEZE' BREEZE™ MAT RUSH	5 GAL	L
	MUHLENBERGIA CAPILLARIS PINK MUHLY GRASS	1 GAL	L
	ROSMARINUS OFFICINALIS 'TUSCAN BLUE' TUSCAN BLUE ROSEMARY	5 GAL	L
	SALVIA GREGGII AUTUMN SAGE	5 GAL	L
	SALVIA LEUCOPHYLLA PURPLE SAGE	5 GAL	L
	WESTRINGIA FRUTICOSA 'MORNING LIGHT' MORNING LIGHT COAST ROSEMARY	5 GAL	L
VINES			
	PARTHENOCISSUS TRICUSPIDATA BOSTON IVY	5 GAL	M
GROUNDCOVERS			
	BACCHARIS PILULARIS 'TWIN PEAKS' TWIN PEAKS COYOTE BRUSH	1 GAL	L
	MYOPORUM PARVIFOLIUM 'FINE LEAF FORM' FINE LEAF TRAILING MYOPORUM	1 GAL	L
	ROSMARINUS OFFICINALIS 'PROSTRATUS' DWARF ROSEMARY	1 GAL	L
	SENECIO MANDRALISCAE BLUE FINGERS	1 GAL	L
	WESTRINGIA FRUTICOSA 'NFL25' MUNDI™ COAST ROSEMARY	1 GAL	L



NORTH 0' 20' 40' 60'

CHACON FARMS - TRACT 39076 - ENLARGEMENT

CONCEPTUAL LANDSCAPE PLAN

SHEET 6

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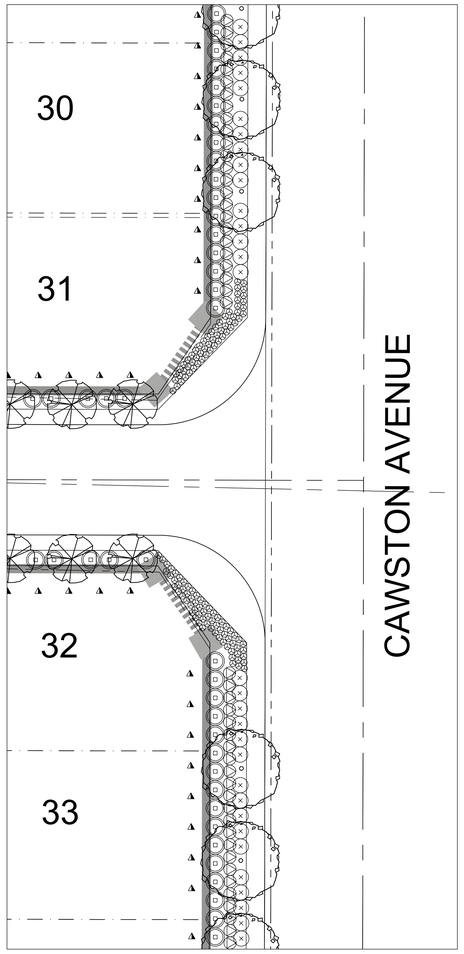
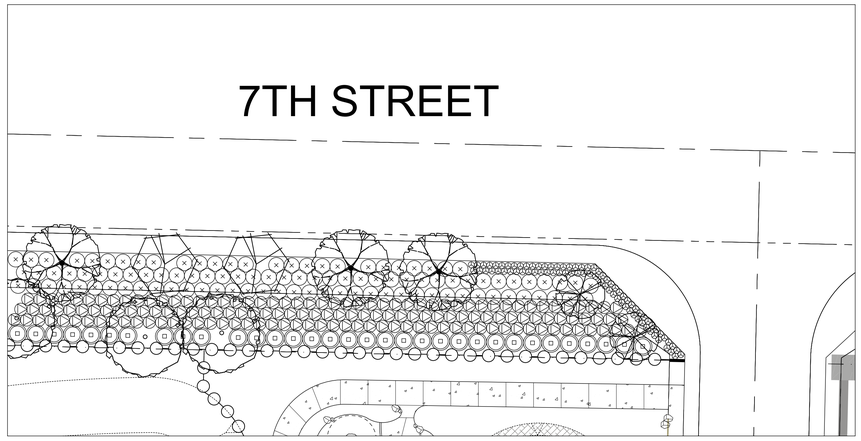
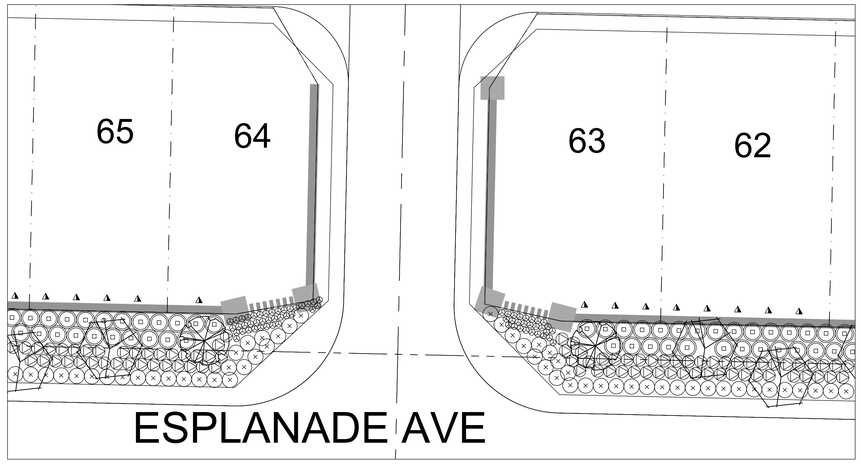
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
November 13, 2024



CAWSTON AVE STREETSCAPE ENLARGMENT



7 TH STREET STREETSCAPE ENLARGMENT

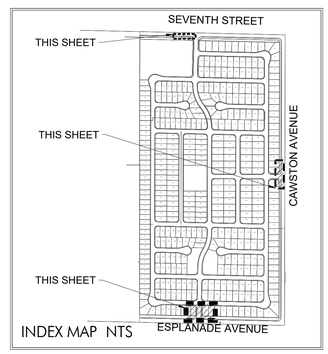


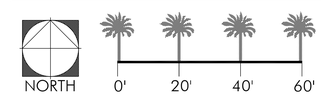
ESPLANADE STREETSCAPE ENLARGMENT

PLANT SCHEDULE - STREETSCAPE

SYMBOL	BOTANICAL / COMMON NAME	SIZE	WUCOLS
ACCENT TREES			
	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MUSKOGEE CRAPE MYRTLE	36" BOX	M
FRONT YARD STREET TREE			
STREET TREE			
	PISTACIA CHINENSIS CHINESE PISTACHE	24" BOX	M
	PLATANUS X ACERIFOLIA 'BLOODGOOD' BLOODGOOD LONDON PLANE TREE	24" BOX	M
	PODOCARPUS GRACILIOR FERN PINE	24" BOX	M
ACCENT SHRUBS			
	AGAVE DESMETIANA SMOOTH AGAVE	5 GAL	L
	ALOE BLUE ELF BLUE ELF	1 GAL	L
	DIANELLA REVOLUTA 'DTN03' BABY BLISS™ FLAX LILY	1 GAL	L
BACKGROUND SHRUBS			
	LAURUS NOBILIS 'MONRIK' LITTLE RAGU® SWEET BAY	5 GAL	L
	LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD' GREEN CLOUD TEXAS SAGE	5 GAL	L
	OLEA EUROPAEA 'MONTRA' LITTLE OLLIE® OLIVE	5 GAL	L
	WESTRINGIA X 'WYNYABBIE GEM' WYNYABBIE GEM COAST ROSEMARY	5 GAL	L
MIDGROUND SHRUBS			
	CALLISTEMON VIMINALIS 'LITTLE JOHN' LITTLE JOHN WEEPING BOTTLEBRUSH	5 GAL	L
	CAREX DIVULSA EUROPEAN GREY SEDGE	1 GAL	L
	HESPERALOE PARVIFLORA RED YUCCA	1 GAL	L
	LOMANDRA LONGIFOLIA 'BREEZE' BREEZE™ MAT RUSH	5 GAL	L
	MUHLENBERGIA CAPILLARIS PINK MUHLY GRASS	1 GAL	L
	ROSMARINUS OFFICINALIS 'TUSCAN BLUE' TUSCAN BLUE ROSEMARY	5 GAL	L
	SALVIA GREGGII AUTUMN SAGE	5 GAL	L
	SALVIA LEUCOPHYLLA PURPLE SAGE	5 GAL	L
	WESTRINGIA FRUTICOSA 'MORNING LIGHT' MORNING LIGHT COAST ROSEMARY	5 GAL	L
VINES			
	PARTHENOCISSUS TRICUSPIDATA BOSTON IVY	5 GAL	M
GROUND COVERS			
	BACCHARIS PILULARIS 'TWIN PEAKS' TWIN PEAKS COYOTE BRUSH	1 GAL	L
	MYOPORUM PARVIFOLIUM 'FINE LEAF FORM' FINE LEAF TRAILING MYOPORUM	1 GAL	L
	ROSMARINUS OFFICINALIS 'PROSTRATUS' DWARF ROSEMARY	1 GAL	L
	SENECIO MANDRALISCAE BLUE FINGERS	1 GAL	L
	WESTRINGIA FRUTICOSA 'NFL25' MUNDI™ COAST ROSEMARY	1 GAL	L

NOTE:
1. VINES PLACEMENT IS DIAGRAMMATIC. FINAL PLACEMENT IS TO BE ON THE STREET SIDE OF WALL.





CHACON FARMS - TRACT 39076 - ENLARGEMENT

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CONCEPTUAL LANDSCAPE PLAN SHEET 7

PREPARED FOR RAMONA DAIRY
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November 13, 2024

TREES



LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE'



PODOCARPUS GRACILIOR



KOELREUTERI BIPINNATA



MAGNOLIA GRANDIFLORA 'LITTLE GEM'



PISTACHIA CHINENSIS 'KEITH DAVEY'



RHUS LANCEA



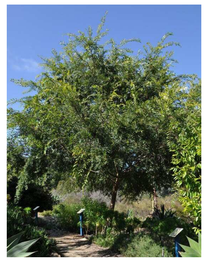
PINUS ELDARICA



PISTACIA CHINENSIS



PLATANUS ACERIFOLIA 'BLOOD GOOD'



ULMUS PARVIFOLIA 'DRAKE'



PLATANUS RACEMOSA



CHILOPSIS LINEARIS

SHRUBS



AGAVE DESMETIANA



ALOE 'BLUE ELF'



DIANELLA REVOLUTA 'BABY BLISS'



LAURUS NOBILIS 'MONRIK'



LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD'



OLEA EUROPAEA 'MONTRA'



WESTRINGIA X 'WYNABBIE GEM'



CALLISTEMON VIMINALIS 'LITTLE JOHN'



CAREX DIVULSA



HESPERALOE PARVIFLORA



LOMANDRA LONGIFOLIA 'BREEZE'



MUHLENBERGIA CAPILARIS



ROSMARINUS OFFICINALIS 'TUSCAN BLUE'



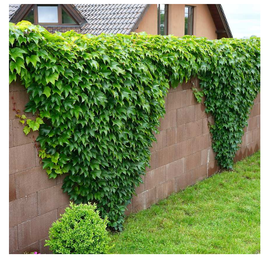
SALVIA GREGGI



SALVIA LEUCOPHYLLA



WESTRINGIA FRUTICOSA 'MORNING LIGHT'



PARTHENOCISSUS TRICUSPIDATA

GROUNDCOVER



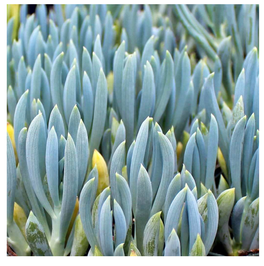
BACCHARIS PILULARIS 'TWIN PEAKS'



MYOPORUM PARVIFOLIUM 'FINE LEAF FORM'



ROSMARINUS OFFICINALIS 'PROSTRATUS'



SENECIO MANDRALISCAE



WESTRINGIA 'MUNDI'

CHACON FARMS - TRACT 39076 - CONCEPTUAL PLANT PALETTE

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CONCEPTUAL LANDSCAPE PLAN SHEET 8

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
November 13, 2024



SHADE STRUCTURE
GABLE ROOF RECTANGLE MULTI-RIB ROOF
MANUFACTURER: POLIGON
MODEL: REK 30 x 44 -73967
ROOF COLOR: COLONIAL RED
FRAME COLOR: ALMOND



SHADE STRUCTURE
SQUARE MULTI-RIB ROOF
MANUFACTURER: POLIGON
MODEL: SQR-20
ROOF COLOR: COLONIAL RED
FRAME COLOR: ALMOND



8' ADA RECTANGULAR PERFORATED STEEL TABLE
MANUFACTURER: ANOVA
MODEL: D1007
COLOR: TABLE TOP - PINE, SEAT - PINE , FRAME - BLACK



8' RECTANGULAR PERFORATED STEEL TABLE
MANUFACTURER: ANOVA
MODEL: D2014
COLOR: TABLE TOP - PINE, SEAT - PINE , FRAME - BLACK



6' BENCH WITH STEEL SLAT SEAT
MANUFACTURER: VICTOR STANLEY
MODEL: NRB-28
COLOR: BLACK



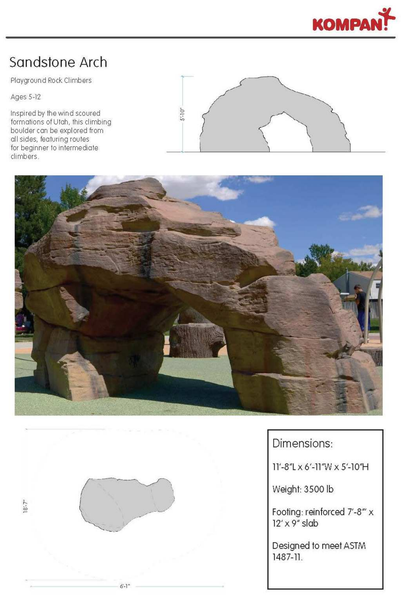
TRASH RECEPTACLE W/OPEN HOOD TOP
MANUFACTURER: VICTOR STANLEY
MODEL: S-4524
COLOR: BLACK



HOT ASH RECEPTACLE
MANUFACTURER: OUTDOOR CREATIONS
MODEL: 300CR



SURFACE MOUNTED GRILL
MANUFACTURER: PILOT ROCK MFG
MODEL: N-20-B3



SANDSTONE ARCH ROCK CLIMBER CONCEPT IMAGERY
MANUFACTURER: KOMPAN



PICKLEBALL COURT



PLAYGROUND CONCEPT IMAGERY
MANUFACTURER: Landscape Structures



CHACON FARMS - TRACT 39076 - AMENITIES

bmla
LANDSCAPE ARCHITECTURE
310 NORTH JOY STREET | CORONA, CA 92879
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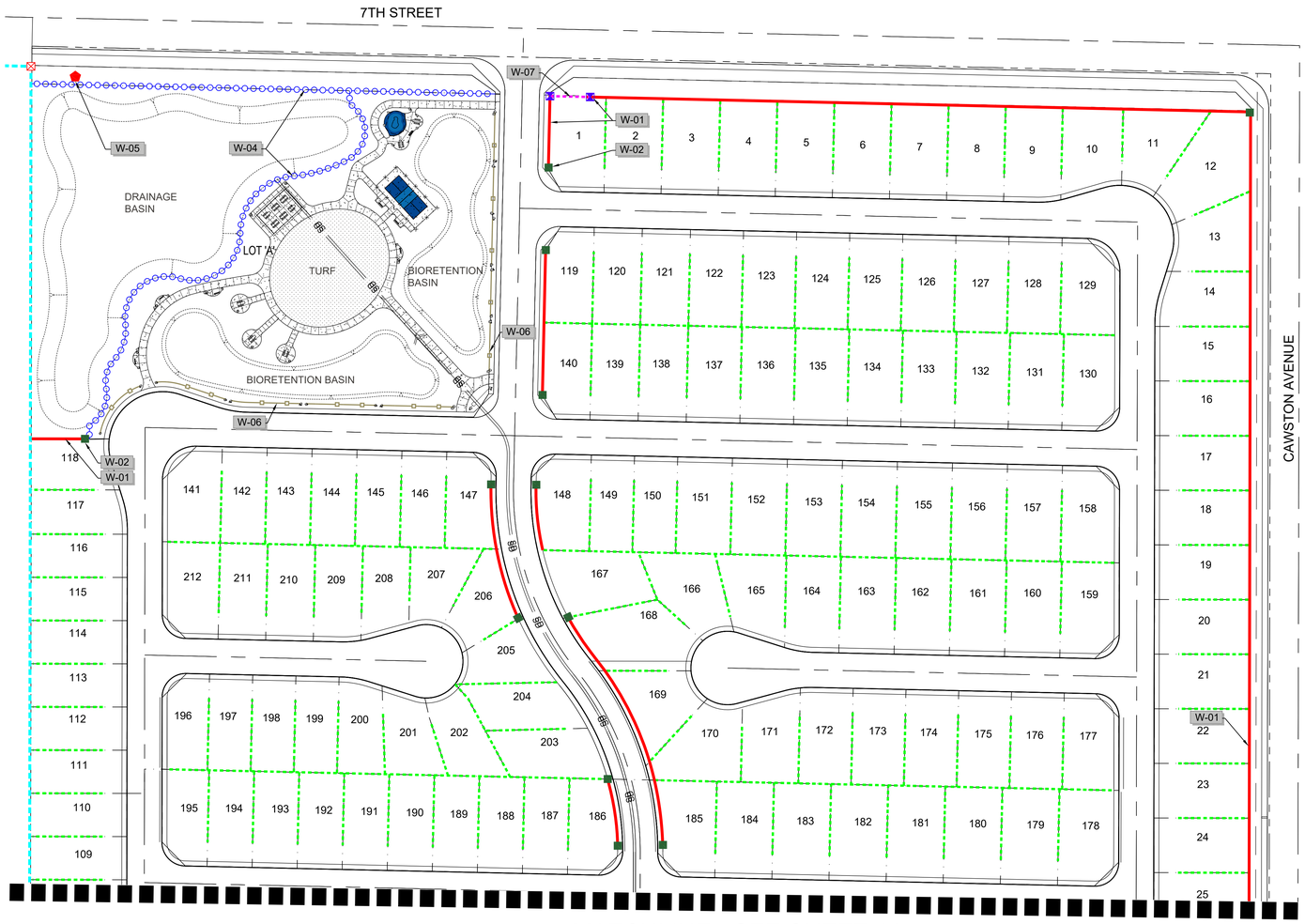
CONCEPTUAL LANDSCAPE PLAN

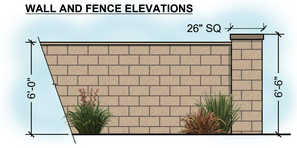
PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
November 13, 2024



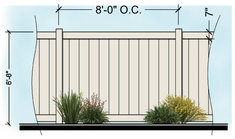
MATCHLINE - SEE SHEET 11

WALL AND FENCE LEGEND	
CODE/SYMBOL	DESCRIPTION
W-01	6'-0" TALL SPLIT-FACE BLOCK WALL W/ 2" THICK SPLIT-FACE CAP
W-02	6'-6" TALL SPLIT-FACE BLOCK PILASTER W/ 4" THICK SPLIT-FACE CAP
W-03A	6-0" TALL INTERIOR VINYL FENCE, COLOR TAN
W-04	6'-0" TALL TUBULAR STEEL FENCE
W-05	6'-0" TALL TUBULAR STEEL MAINTENANCE GATE
W-06	2'-4" TALL SPLIT RAIL VINYL FENCE
W-07	6'-0" TALL PROJECT ENTRY MONUMENT WALL
	EXISTING PERIMETER WALL
	EXISTING PILASTER

WALL AND FENCE ELEVATIONS



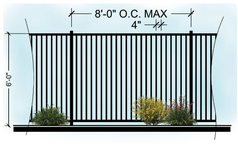
WALL: W-01
PILASTER: W-02
6'-0" TALL SPLIT-FACE BLOCK WALL W/ 2" PRECISION CAP
6'-6" SPLITFACE PILASTER WITH 4" PRECISION CAP



FENCE: W-03
5'-6" TALL INTERIOR VINYL FENCE, COLOR WHITE



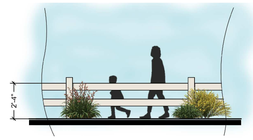
GATE: W-03B
3-0" WIDE VINYL GATE, COLOR WHITE



FENCE: W-04
6'-0" TALL TUBULAR STEEL FENCE



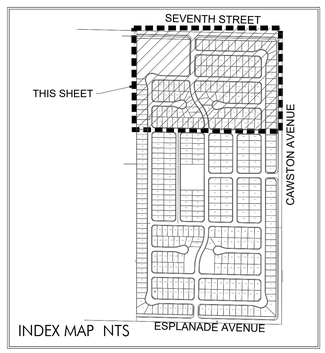
FENCE: W-05
6'-0" TALL TUBULAR STEEL FENCE GATE

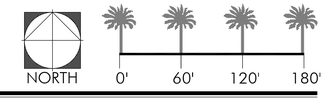


FENCE: W-06
6'-0" TALL TUBULAR STEEL FENCE



WALL: W-07
6'-0" TALL ENTRY MONUMENT WALL
TEXT IS 18" HIGH BY 16' WIDE, 24 SF TOTAL.





CHACON FARMS - TRACT 39076 - WALL AND FENCE PLAN

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LANDSCAPE ARCHITECTURE
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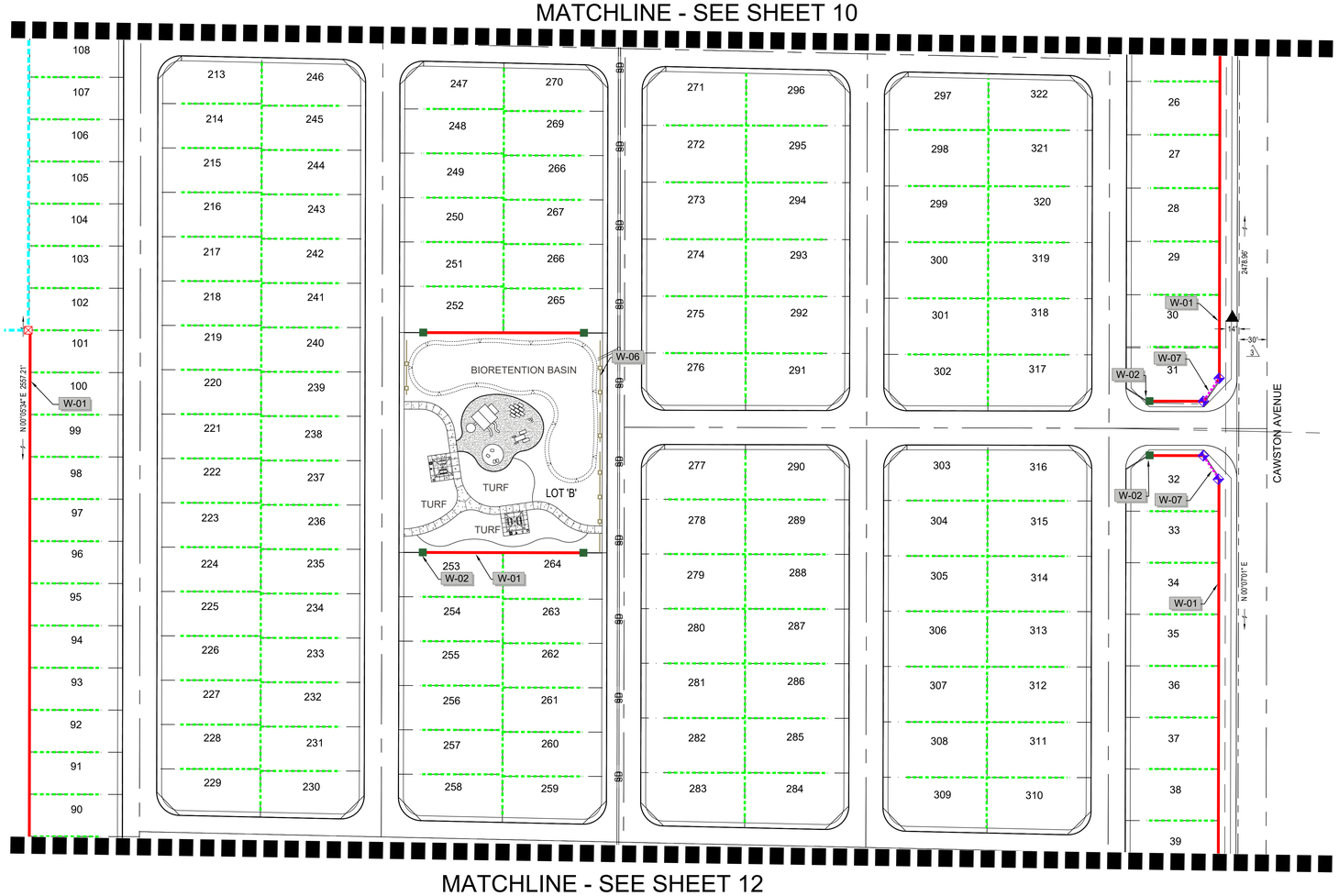
CONCEPTUAL LANDSCAPE PLAN

SHEET 10

PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
November 13, 2024

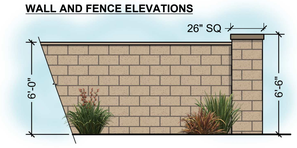
MATCHLINE - SEE SHEET 10



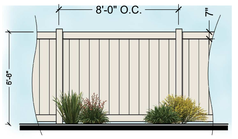
MATCHLINE - SEE SHEET 12

WALL AND FENCE LEGEND	
CODE/SYMBOL	DESCRIPTION
W-01	6'-0" TALL SPLIT-FACE BLOCK WALL W/ 2" THICK SPLIT-FACE CAP
W-02	6'-6" TALL SPLIT-FACE BLOCK PILASTER W/ 4" THICK SPLIT-FACE CAP
W-03A	6-0" TALL INTERIOR VINYL FENCE, COLOR TAN
W-04	6'-0" TALL TUBULAR STEEL FENCE
W-05	6'-0" TALL TUBULAR STEEL MAINTENANCE GATE
W-06	2'-4" TALL SPLIT RAIL VINYL FENCE
W-07	6'-0" TALL PROJECT ENTRY MONUMENT WALL
	EXISTING PERIMETER WALL
	EXISTING PILASTER

WALL AND FENCE ELEVATIONS



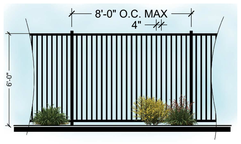
WALL: W-01
PILASTER: W-02
6'-0" TALL SPLIT-FACE BLOCK WALL W/ 2" PRECISION CAP
6'-6" SPLITFACE PILASTER WITH 4" PRECISION CAP



FENCE: W-03
5'-6" TALL INTERIOR VINYL FENCE, COLOR WHITE



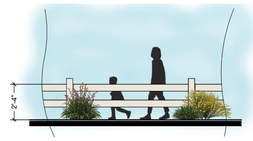
GATE: W-03B
3-0" WIDE VINYL GATE, COLOR WHITE



FENCE: W-04
6'-0" TALL TUBULAR STEEL FENCE



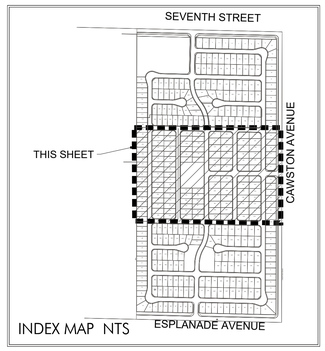
FENCE: W-05
6'-0" TALL TUBULAR STEEL FENCE GATE



FENCE: W-06
6'-0" TALL TUBULAR STEEL FENCE



WALL: W-07
6'-0" TALL ENTRY MONUMENT WALL
TEXT IS 18" HIGH BY 16' WIDE, 24 SF TOTAL.



CHACON FARMS - TRACT 39076 - WALL AND FENCE PLAN

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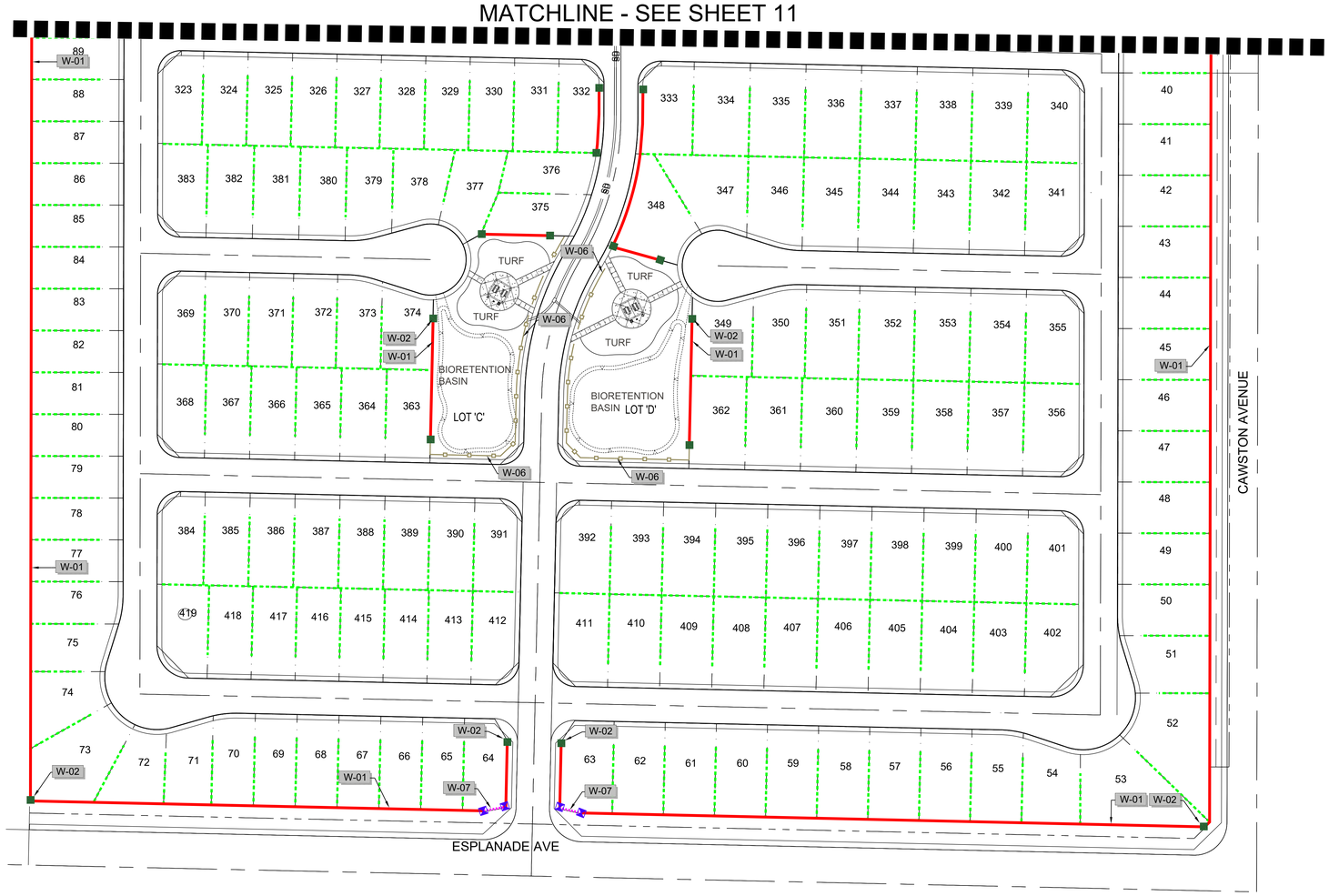
CONCEPTUAL LANDSCAPE PLAN

SHEET 11

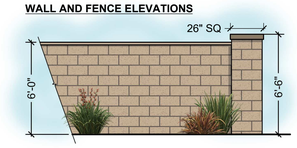
PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
November 13, 2024

MATCHLINE - SEE SHEET 11

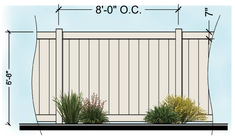


WALL AND FENCE LEGEND	
CODE/SYMBOL	DESCRIPTION
W-01	6'-0" TALL SPLIT-FACE BLOCK WALL W/ 2" THICK SPLIT-FACE CAP
W-02	6'-6" TALL SPLIT-FACE BLOCK PILASTER W/ 4" THICK SPLIT-FACE CAP
W-03A	6-0" TALL INTERIOR VINYL FENCE, COLOR TAN
W-04	6'-0" TALL TUBULAR STEEL FENCE
W-05	6'-0" TALL TUBULAR STEEL MAINTENANCE GATE
W-06	2'-4" TALL SPLIT RAIL VINYL FENCE
W-07	6'-0" TALL PROJECT ENTRY MONUMENT WALL
	EXISTING PERIMETER WALL
	EXISTING PILASTER

WALL AND FENCE ELEVATIONS



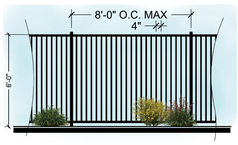
WALL: W-01
PILASTER: W-02
6'-0" TALL SPLIT-FACE BLOCK WALL W/ 2" PRECISION CAP
6'-6" SPLITFACE PILASTER WITH 4" PRECISION CAP



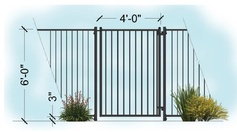
FENCE: W-03
5'-6" TALL INTERIOR VINYL FENCE, COLOR WHITE



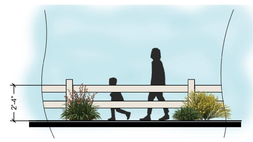
GATE: W-03B
3-0" WIDE VINYL GATE, COLOR WHITE



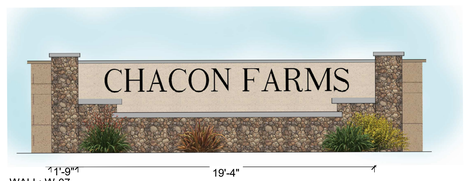
FENCE: W-04
6'-0" TALL TUBULAR STEEL FENCE



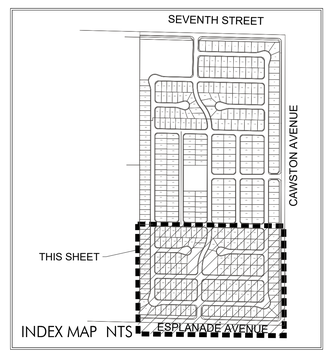
FENCE: W-05
6'-0" TALL TUBULAR STEEL FENCE GATE

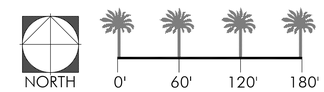


FENCE: W-06
6'-0" TALL TUBULAR STEEL FENCE



WALL: W-07
6'-0" TALL ENTRY MONUMENT WALL
TEXT IS 18" HIGH BY 16' WIDE, 24 SF TOTAL.





CHACON FARMS - TRACT 39076 - WALL AND FENCE PLAN

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CONCEPTUAL LANDSCAPE PLAN SHEET 12
PREPARED FOR RAMONA DAIRY
2451 RAMONA EXPRESSWAY, SAN JACINTO, CA 92582
November 13, 2024