SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

ITEM: 23.1
(ID # 29032)
MEETING DATE:
Tuesday, November 04, 2025

FROM : TLMA-PLANNING

SUBJECT: TRANSPORTATION AND LAND MANAGEMENT AGENCY/PLANNING: GENERAL PLAN AMENDMENT NO. 230008 (GPA230008), CHANGE OF ZONE NO. 2300030 (CZ2300030), and PLOT PLAN NO. 230048 (PPT230048) – Adopt a Mitigated Negative Declaration (SCH No. 2025050128) under CEQA- Applicant: Thrifty Oil, Co. c/o Stephane Wandel – Engineer/ Representative: The Orden Company c/o Jaime Jones – First Supervisorial District – North Perris Zoning Area – Mead Valley Area Plan – Rural Community- Very Low Density Residential (RC-VLDR) – Location: North of Water Ave., south of Placentia Ave., west of Harvill Ave., and east of Tobacco Rd. – 9.62 Gross Acres – Zoning: Rural Residential- one acre minimum (R-R-1) - REQUEST: General Plan Amendment No. 230008 proposes to change the General Plan Foundation Component from Rural Community (RC) to Community Development (CD), and the General Plan land use designation from Very Low Density Residential (VLDR) to Business Park (BP). Change of Zone No. 2300030 proposes to change the zone from Rural Residential (R-R-1) to Industrial Park (I-P). Plot Plan No. 230048 proposes to construct a 185,912 square foot warehouse with 9,000 square feet of office space, including 23 loading dock doors, 126 parking spaces, and 33 truck trailer spaces on approximately 9.62 gross acres - APNs 317-260-017, 317-260-018- District 1. [Applicant Fees 100%]

That the Board of Supervisors take the following actions:

1. **TENTATIVELY ADOPT the MITIGATED NEGATIVE DECLARATION**, based on the findings and conclusions provided in the initial study, attached hereto, and the conclusion that the project will not have a significant effect on the environment;

Continued on page 2
ACTION:Policy

John Hildebrand, Planning Director 10/27/2025

MINUTES OF THE BOARD OF SUPERVISORS

On motion of Supervisor Medina, seconded by Supervisor Perez and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes:	Medina, Spiegel, Washington, Perez and Gutierrez
Nays:	None
Absent:	None
Date:	November 4, 2025
xc:	Planning

Kimberly A. Rector
Clerk of the Board
By: _____ Deputy

That the Board of Supervisors take the following actions:

2. **TENTATIVELY APPROVE General Plan Amendment No. 230008**, which proposes the changes to the Foundation Component and Land Use Designation of the General Plan from Rural Community-Very Low Density Residential (RC-VLDR) to Community Development-Business Park (CD:BP), based on the findings and conclusions incorporated in the staff report and all exhibits and pending final adoption of the General Plan Cycle Resolution by the Board of Supervisors;

3. **TENTATIVELY APPROVE Change of Zone No. 2300030**, which proposes to change the zone from Rural Residential (R-R-1) to Industrial Park (I-P), based on the findings and conclusions incorporated in the staff report and all exhibits and pending final adoption of the Change of Zone Ordinance and General Plan Cycle Resolution by the Board of Supervisors; and,

4. **TENTATIVELY APPROVE Plot Plan No. 230048**, based on the findings and conclusions incorporated in the staff report and all exhibits and pending final adoption of the Change of Zone Ordinance and General Plan Cycle Resolution by the Board of Supervisors.

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost
COST	$ 0	$ 0	$ 0	$ 0
NET COUNTY COST	$ 0	$ 0	$ 0	$ 0
SOURCE OF FUNDS: Applicant Fees 100 %			**Budget Adjustment:**	**N/A**
			For Fiscal Year:	25/26

C.E.O. RECOMMENDATION: Approve

BACKGROUND:

Project Timeline

Application Submittal:

On December 07, 2023, the applicant Thrifty Oil, Co. submitted an application to initiate a Foundation Component General Plan Amendment to change the land use designation for two lots from Rural Community - Very Low Density Residential (RC-VLDR) to Community Development - Business Park (CD-BP) along with a Change of Zone (CZ230030) and Plot Plan (PPT230048) applications. On November 05, 2025, the Board of Supervisors voted in favor to allow the applicant to apply for the implementing project consistent with the requested Foundation Change.

The proposed Project consists of the following:

- General Plan Amendment No. 230008 (GPA230008) is a proposal to change the General Plan Foundation Component and Land Use designation for two lots from Rural Community-Very Low Density Residential (RC-VLDR) to Community Development – Business Park (CD-BP).

- Change of Zone No. 2300030 (CZ230030) is a proposal to change the zoning classification for two lots from and Rural Residential (R-R-1) to Industrial Park (I-P).

- Plot Plan No. 230048 (PPT230048) proposes to construct a 185,912 square foot (SF) concrete tilt up, non-refrigerated warehouse on 9.62 acres of vacant land designated as APNs 317-260-017 and 317-260-018. The proposed Project would include one 176,912 square foot warehouse with 23 dock doors and two 4,500 SF office spaces with mezzanines for a total square footage of 185,912 square feet, with related landscaping, drainage basin, and parking. The Project site will be accessed via a shared driveway on Tobacco Avenue, will include 33 truck trailer parking spaces, and 126 parking spaces. The Project also includes dedication of approximately 0.90 acres for public right of way improvements to be built along Tobacco Road and Placentia Avenue, including a "multipurpose trail," and off-site utility improvements.

Planning Commission Hearing:
On June 25, 2025, the Planning Commission (Commission) voted four (in favor) (with zero opposed) to approve the Planning staff's recommended motion to the Board of Supervisors for consideration of GPA230008, CZ230030, and PPT230048.

California Environmental Quality Act (CEQA) Impact on Residents and Businesses
An Initial Study (IS) and Mitigated Negative Declaration (MND) have been prepared for this project in accordance with the California Environmental Quality Act (CEQA). The Initial Study identified potentially significant impacts for the following environmental factors analyzed: Biological Resources, Cultural Resources, Paleontological and Tribal Cultural Resources. However, with the incorporation of mitigation measures the impacts were reduced to less than significant. Based on the Initial Study's conclusions, the County of Riverside determined that an MND is appropriate for the proposed Project pursuant to CEQA Guidelines. The IS/MND represent the independent judgment of Riverside County. The documents were circulated for public review on May 1, 2025, per the State CEQA Guidelines Section 15105. The public review period ended on May 21, 2025.

Public Opposition and Response/ Mitigation
Two comment letters, two requests for technical data, one phone call and one letter of support were received during the public review timeframe. On May 12, 2025, a technical data request was received from the Golden State Environmental Justice Alliance (GSJEA). Subsequently, on May 19, 2025, correspondence was received from Blum, Collins & Ho, LLP a law firm on behalf of the Golden State Environmental Justice Alliance (GSEJA). The comment letter requested an EIR be prepared for the project site to evaluate the project as part of a larger development area.

On May 13, 2025, a technical data request was received from South Coast Air Quality Management District (SCAQMD). Additionally, on May 21, 2025, a letter was received on behalf of the Center for Community Action and Environmental Justice (CCAEJ). The comment letter expressed concerns about the change of zone requested as part of the application. Specifically, the change of zone from Rural Residential (R-R) to Industrial Park (I-P), stating this would create "a substantial shift in land uses," and depart from the Mead Valley Area Plan. One letter was received in support of the Project, and one phone call received requesting more information about the tentative hearing dates. Each commenter was provided with responses, which were included with the Draft-Final MND.

Impact on Residents and Businesses

All potential project impacts have been studied under CEQA and noticed to the public pursuant to the requirements of the County.

Additional Fiscal Information:

All fees are paid by the applicant; there is no General Fund obligation.

ATTACHMENTS:

A. Planning Commission Report of Actions for 6.25.2025 (Item# 3.2_PPT230048)
B. Planning Commission Staff Report
C. PPT230048-Exhibit A-Planning Commission Resolution No. 2025-003
D. PPT230048-Exhibit B-GIS Exhibits
E. PPT230048-Exhibit C-Project Exhibits
F. PPT230048-Exhibit D-Change of Zone Exhibit
G. PPT230048-Exhibit E-Draft Mitigated Negative Declaration
H. PPT230048-Exhibit F-AND & Conditions of Approval
I. PPT230048-Exhibit G-Environmental Justice Checklist
J. PPT230048-Exhibit H-Public Correspondence
K. PPT230048-Exhibit I-ALUC Approval Letter
L. PPT230048-Exhibit M-Mailing Labels and Radius Map

Jason Farin, Principal Policy Analyst 10/29/2025

RIVERSIDE COUNTY
PLANNING DEPARTMENT

REPORT OF ACTIONS
RIVERSIDE COUNTY PLANNING COMMISSION – JUNE 25, 2025
COUNTY ADMINISTRATIVE CENTER
1st Floor, Board Chambers, 4080 Lemon Street, Riverside, CA 92501

1st District	2nd District	3rd District	4th District	5th District
Mussa Khiar	Marissa Gruytch	Shellie Clack	Bill Sanchez	Romelio Ruiz
Vice- Chair				Chair

CALL TO ORDER: 9:00 a.m.
OATH OF OFFICE
ROLL CALL: Members Present: Khiar, Gruytch, Clack, Sanchez
Members Absent: Ruiz

1.0 CONSENT CALENDAR

1.1 **GENERAL VACATION SU619020** – Applicant: Transportation and Land Management Agency (TLMA) – Representative: State of California – Fifth Supervisorial District – Edgemont-Sunnymead District– Reche Canyon/Badlands Area Plan – Community Development: Public Facilities (CD:PF) – Location: north of State Route 60, south of San Timoteo Canyon, east of Highland Boulevard, and west of Oak Valley Parkway – Zoning: Controlled Development (W-2) & Controlled Development – 20 Acre Minimum (W-2-20) – REQUEST: A recommendation by the Planning Commission to the Transportation Department, in accordance with County of Riverside policies and procedures, to continue processing SU619020 for the Conditional General Vacation of Ironwood Avenue is at the request of the County of Riverside, to vacate and terminate maintenance of various roads within the Badlands Sanitary Landfill property – APNs: 413-140-033, 413-140-030, 413-140-034, 413-140-036 and 413-140-024– Project Planner: Steven Chaffin at 951-304-5838 or email at SChaffin@RIVCO.ORG.

Planning Commission Action:
Public Hearing: Closed

Motioned by Commissioner Gruytch, 2nd by Commissioner Sanchez

By vote of 4-0, Ruiz absent, the Planning Commission took the following actions:

RECOMMENDED the Transportation Department process SU619020 for the Conditional General Vacation.

2.0 PUBLIC HEARINGS CONTINUED

NONE

3.0 PUBLIC HEARINGS – NEW

3.1 **CHANGE OF ZONE NO. 2400058** – Applicant: Shakil Patel – Engineer/Representative: Shakil Patel – First Supervisorial District – Not within an Area Plan – Community Development – Commercial Office: (CD: CO) – Location: north of Gless Ranch Road, south of Van Buren Boulevard, east of Barton Street, and west of Coyote Bush Road – 1.14 Gross Acres – Existing Zoning: Commercial Office (C-O) – Proposed Zoning: Scenic Highway Commercial (C-P-S) – REQUEST: Change of Zone No. 2400058 is a proposal to change the subject site from Commercial-Office Zone (C-O) to Scenic Highway Commercial (C-P-S) to allow for a wider range of both retail and office uses to be proposed on site. A commercial building is presently under construction on the site under building permit number BNR2300041, which is associated with the

Planning Commission Action:
Public Hearing: Closed

Motioned by Commissioner Gruytch, 2nd by Commissioner Clack

By vote of 4-0, Ruiz absent, the Planning Commission recommends that the Board of Supervisors take the following actions:

FIND No New Environmental Document is Required; and,

TENTATIVELY APPROVE Change of Zone No. 2400058.

approved entitlement project Plot Plan No. 25382 (PP25382), PP25382S03, and EA42600 for a proposed commercial office center – Nothing Further Required under CEQA - APN: 294-030-047 – Related Cases: PP25382S03 and PPA240094 - Project Planner: Christian Lua at 951-955-0972 or email at clua@rivco.org.

3.2 **GENERAL PLAN AMENDMENT NO. 230008 (GPA230008), CHANGE OF ZONE NO. 2300030 (CZ2300030), and PLOT PLAN NO. 230048 (PPT230048)** – Adopt an MND (SCH No. 2025050128) under CEQA, Applicant: Thrifty Oil, Co. c/o Stephane Wandel – Engineer/ Representative: The Orden Company c/o Jaime Jones – First Supervisorial District – North Perris Zoning Area – Mead Valley Area Plan – Rural Community- Very Low Density Residential (RC-VLDR) – Location: North of Water Ave., south of Placentia Ave., west of Harvill Ave., and east of Tobacco Rd. – 9.62 Gross Acres – Zoning: Rural Residential- one acre minimum (R-R-1) - REQUEST: General Plan Amendment No. 230008 proposes to change the General Plan Foundation Component from Rural Community (RC) to Community Development (CD), and the General Plan land use designation from Very Low Density Residential (VLDR) to Business Park (BP). Change of Zone No. 2300030 proposes to change the zone from Rural Residential (R-R-1) to Industrial Park (I-P). Plot Plan No. 230048 proposes to construct a 185,912 square foot warehouse with 9,000 square feet of office space, including 23 loading dock doors, 126 parking spaces, and 33 truck trailer spaces on approximately 9.62 gross acres- APNs 317-260-017, 317-260-018- Project Planner: Krista Mason at 951-955-1722 or email at kmason@rivco.org.

Planning Commission Action:
Public Hearing: Closed

Motioned by Commissioner Sanchez, 2nd by Commissioner Gruytch,

By vote of 4-0, Ruiz absent, the Planning Commission took the following actions:

ADOPTED Planning Commission Resolution 2025-003; and,

Recommends that the Board of Supervisors take the following actions:

TENTATIVELY APPROVE General Plan Amendment No. 230008; and,

TENTATIVELY APPROVE Change of Zone No. 2300030; and,

APPROVE Plot Plan No. 230048, Subject to Conditions of Approval, and Advisory Notification Document.

4.0 GENERAL PLAN AMENDMENT INITIATION PROCEEDINGS

4.1 **INITIATION OF FOUNDATION COMPONENT GENERAL PLAN AMENDMENT NO. 240019 (GPA240019) – REQUEST:** The applicant requests that the County of Riverside consider whether to recommend the initiation of GPA240019 to change the General Plan Foundation Component of one (1) parcel from Open Space: Rural (OS: RUR) to Rural Community: Low Density Residential (RC: LDR), to allow for submittal of an application for mixed-use with a small eco-tourist or glamping resort on a portion of the site. Additional development applications and review by the County to confirm that the overall project complies with applicable standards, policies, findings, and other requirements will be required if the proposed GPA240019 is initiated by the Board of Supervisors. – Fourth Supervisorial District – Pass & Desert District – Western Coachella Valley Area Plan – Applicant: Scott Taschner – Engineer / Representative: SRK Architects c/o Brian Kite – Existing Zoning: W-2 (Controlled Development Areas) – Existing Land Use: Open Space: Rural (OS: RUR) – Location: 0.5

Planning Commission Action:
Public Hearing: Closed

CONTINUED off Calendar

miles north of Mission Lakes Boulevard and 0.9 miles east of Annandale Avenue – APN(s): 638-070-001 – 161.76 Gross Acres – Planning Contact: Elizabeth Mora-Rodriguez at emorarodriguez@rivco.org or 951-955-3024.

4.2 **INITIATION OF FOUNDATION COMPONENT GENERAL PLAN AMENDMENT NO. 240039 (GPA240039)** – REQUEST: The applicant requests that the County of Riverside consider whether to recommend the initiation of GPA240039 to change the General Plan Foundation Component for 3 of 6 parcels from Rural: Rural Mountainous (R: RM) & Rural: Rural Residential (R: RR) to Community Development: Commercial Retail (CD: CR) to allow for submittal of an application for the development of local & regional retail & service uses, such as a service station & lodging for three (3) of the six (6) parcels; & change the Temecula Valley Wine Country Policy Area for 3 of 6 parcels from Equestrian District to Winery District to allow for the submittal of an application for the development of a resort, spa, winery, vineyard, & similar types of uses. Additional development applications & review by the County to confirm that the overall project complies with applicable standards, policies, findings, & other requirements will be required if the proposed GPA240039 is initiated by the Board of Supervisors. – Third Supervisorial District – Rancho California Area – Southwest Area Plan – Applicant: Ken Smith – Existing Zoning: R-R (Rural Residential) & WC-E (Wine Country – Equestrian) – Existing Land Use: Rural: Rural Mountainous (R: RM) & Rural: Rural Residential (R: RR) – Location: Three (3) of the six (6) parcels are located south of De Portola Road, north of State Highway 79/Temecula Parkway, east of Los Caballos Road, & west of Anza Road. Three (3) of the six (6) parcels are located south of State Highway 79/Temecula Parkway, north of Monte Verde Road, east of Woodchuck Road, & west of Los Caballos Road – APN(s): 927-180-002, -030, & -031; & 927-580-003, -004, & -005 – 178 Gross Acres – Contact: Elizabeth Mora-Rodriguez at emorarodriguez@rivco.org or (951) 955-3024. – THE APPLICANT HAS WITHDRAWN THEIR APPLICATION. NO ACTION IS REQUIRED AT THIS TIME.

Planning Commission Action:
Public Hearing: Closed

APPLICATION WITHDRAWN by Applicant

5.0 WORKSHOPS

NONE

6.0 PUBLIC COMMENTS

PUBLIC COMMENTS RECEIVED

7.0 DIRECTOR'S REPORT

NONE

8.0 COMMISSIONER'S COMMENTS

NONE

ADJOURNMENT: 9:51 A.M.

COUNTY OF RIVERSIDE
PLANNING DEPARTMENT
STAFF REPORT

Agenda Item No.
MEETING DATE:
Wednesday, June 25, 2025

SUBJECT:

PROPOSED PROJECT

John Hildebrand, Planning Director 6/18/2025

PROJECT DESCRIPTION AND LOCATION

“multipurpose trail,” and off

PROJECT RECOMMENDATION

STAFF RECOMMENDATIONS:

THAT THE PLANNING COMMISSION TAKE THE FOLLOWING ACTIONS:

ADOPT PLANNING COMMISSION RESOLUTION NO. 2025-003

THAT THE PLANNING COMMISSION RECOMMEND THE BOARD OF SUPERVISORS TAKE THE FOLLOWING ACTIONS:

ADOPT MITIGATED NEGATIVE DECLARATION

TENTATIVELY APPROVE GENERAL PLAN AMENDMENT NO. 230008

TENTATIVELY APPROVE CHANGE OF ZONE NO. 2300030 (CZ2300030)

APPROVE PLOT PLAN NO. 230048 (PPT230048)

PROJECT DATA

Land Use and Zoning:

Project Details:

Item	*Value*	*Min./Max. Development Standard*

Parking:

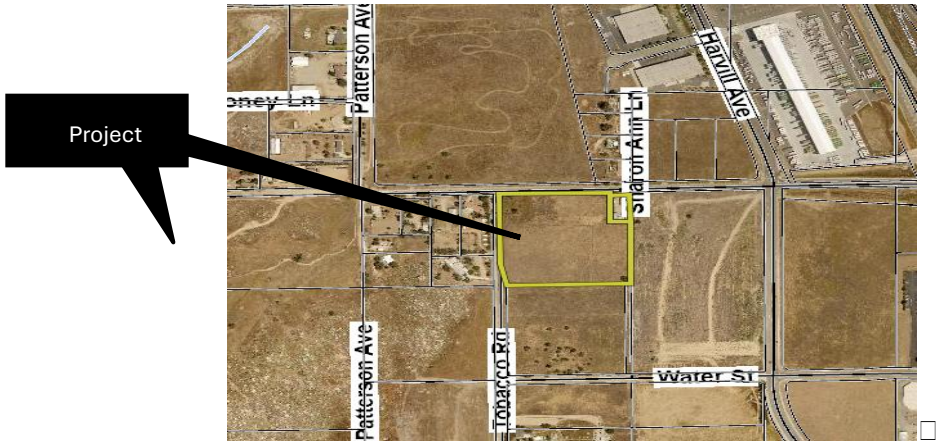
Type of Use	*Building Area (in SF)*	*Parking Ratio*	*Spaces Required*	*Spaces Provided*
TOTAL:			**125**	**126**

Located Within:

City's Sphere of Influence:	
Community Service Area ("CSA"):	

[illegible]	[illegible]
[illegible]	[illegible]
M[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
Stephens Kangaroo Rat ("SKR") Fee Area: [illegible]	[illegible]
Airport Influence Area ("AIA"): [illegible]	[illegible]

PROJECT LOCATION MAP



[illegible]

PROJECT BACKGROUND AND ANALYSIS

Background:

[illegible]

access and circulation have been reviewed by the County's Transportation Department and

Pursuant to the County's adopted General Plan, with additional guidelines from the Mead Valley

LU 30.1 *Accommodate the continuation of existing development of new industrial, manufacturing, research and development, and professional offices in areas appropriately designated by General Plan land use maps.*

LU 30.4 *Concentrate industrial and business park uses in proximity to transportation and utilities, and along transit corridors.*

The proposed Project's location is in close proximity to transit with access to existing utilities.

MVAP 6.1 *In conjunction with the first warehousing/distribution building proposed for the industrial area located along Interstate 215 (including land designated Light Industrial, Business Park, and Light Industrial with a Community Center Overlay) whereby the cumulative square footage of warehousing/distribution space in the area would exceed 200,000 square feet, an Environmental Impact Report (EIR) shall be prepared that assesses the potential impacts of the project. The EIR would be required to address air quality, including a health risk assessment of diesel particulates and impacts to sensitive receptors, truck traffic and noise, and the cumulative impacts of reasonably foreseeable warehouse development in the area.*

(MND) was deemed appropriate for the Project's scope of work and analyzed several topic

MVAP 6.2 *A minimum 50 foot setback shall be required for any new industrial project on properties zoned I-P, if that property abuts a property that is zoned for residential, agricultural, or commercial uses. A minimum of 20 feet of the setback shall be landscaped, unless a tree screen is approved, in which case the setback area may be used for automobile parking, driveways or landscaping. Block walls or other fencing may be required.*

MVAP 11.1 *Maintain and improve the trails and bikeways system to reflect Figure 9, Trails and Bikeway System, and as discussed in the Non-motorized Transportation section of the General Plan Circulation Element.*

MVAP 17.6 *Protect sensitive biological resources in Mead Valley Area Plan through adherence to policies found in the Multiple Species Habitat Conservation Plans, Environmentally Sensitive Lands, Wetlands, and Floodplain and Riparian Area Management sections of the General Plan Multipurpose Open Space Element.*

Project's landscaping plan complies with County Landscaping Ordinance.

The current zoning classification for the project site's two lots is Rural Residential one
allow the proposed use, including "warehousing and distribution, including mini warehouses,"
Specific findings detailing Project compliance are listed under "Development Standards Findings."

The Project site is identified as an "EJ Community" pursuant to the Healthy Communities
"Civic Engagement, Health Risk Reduction, Public Facilities and Other" and propose any of

- [illegible] length of the Project site's Placentia Avenue frontage, extending segments to be [illegible]

ENVIRONMENTAL REVIEW / ENVIRONMENTAL FINDINGS

[illegible] significant. Based on the Initial Study's conclusions, the County of Riverside determined that an [illegible] would create "a substantial shift in land uses," and depart from the Mead Valley Area Plan. One [illegible] provided "detailed information in the letter to support the claim." [illegible] Final MND. The document is attached as Exhibit "C," with the supporting Technical Appendices available online via the Planning Department's website at: [illegible]

FINDINGS AND CONCLUSIONS

In order for the County to approve a proposed project, the following findings are required to be made:

Land Use Findings:

and housing in closer proximity to one another." As the proposed Project includes industrial

the "Riverside County Wellness Village" which has a zoning of Manufacturing

the project's applicability and consistency with the Environmental Justice policies within the

curb, gutter and sidewalk, landscaping, streetlights, a "multi-use trail," and monetary

Entitlement Findings:

General Plan Amendment Findings (GPA230008):

a. *The proposed FC-GPA addresses a new circumstance:*

directly to the County's economic base and that would improve the ratio of jobs

site) to expand the County's permanent local employment base in conformance with

b. Riverside County Vision Statement Element of the Riverside General Plan:

Statement provides a more detailed listing of both the County's values as well as specific

c. Internal Consistency within the surrounding area:

Riverside County "Wellness Village," zoned Manufacturing

the subject property with connectivity to existing projects in the area, including a "multi purpose trail".

Change of Zone Findings (CZ2300030):

Change of Zone No. 2300030 is a proposal to change the project site's Zoning Classification

1. *The subject Project is consistent with and does not involve a change in or conflict with the Riverside County Vision*

2. *Any General Planning Principle set forth in General Plan Appendix B*

2. *The proposed change would not be detrimental to the health, safety or general welfare of the community, as the proposed change* landscaping, and streetlights, a "multi-use trail," and monetary contribution to continue trail

3. *The change of zone is not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat,* intensive use, and the Project's landscaping plan

The proposed project is compatible with surrounding land uses, as the surrounding land uses consist of Industrial Park, and the Riverside County "Wellness Village," zoned Manufacturing

2

Plot Plan Findings (PPT230048):

safety, and general welfare. As detailed in the Project's Initial Study/Mitigated Negative Health Risk Assessment which determined that impacts from the Project's emissions on the

Tobacco Road and one driveway from Placentia Avenue. The Project's conceptual grading

Development Standards Findings:

Development standards for the Project's proposed Industrial Park (I

- *The minimum lot size shall be 20,000 square feet with a minimum average lot width of 100 feet.*

The maximum height of all structures, including buildings, shall be 35 feet at the yard setback line. Any portion of a structure that exceeds 35 feet in height shall be set back from each yard setback line not less than two feet for each one foot in height that is in excess of 35 feet. All buildings and structures shall not exceed 50 feet in height, unless a height up to 75 feet for buildings, or 105 feet for other structures is specifically permitted under the provisions of Section 18.34. of this ordinance.

A minimum 15 percent of the site shall be landscaped, and automatic irrigation shall be installed.

D *A minimum 25-foot setback shall be required on any street. A minimum ten-foot strip adjacent to the street line shall be appropriately landscaped and maintained, except for designated pedestrian and vehicular accessways. The remainder of the setback may be used for off-street automobile parking, driveways or landscaping.*

The minimum side-yard setback shall equal not less than ten feet for the two side lot areas combined.

The minimum rear yard setback shall be 15 feet.

□

□

□

□□□ □r□□□□□d□□ □□□□□ □□□□□□□□□ □r□□□□□□ □ □□□d□ □r□□d□□ □□□ □ □□□□□ □□□ □ □□□d□□□□□ □□□□□□□□□□
□□□□□r□□□□ □□□□□□□□□□

□

□

□□□ *All new utilities shall be underground.*

□

□□□□ □□□□ □□□□□□□□□□ □ □□□□ □□□□□ □□□□□d □rd □ □□□□□□□□ □□ □□□□d□□□□□□ □□□□ □□□□r □□□□□□□ □□□□□□□ □□□□□□□□□□□□□□—□
□ □d□r□r□□□d□□□ □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□d□d□□□□□□□□□□□□d□rd□□□□□d□□□□□□□□□□□□□ □r□□□□□□□□□□□□□□□□□□□

intensive use, and the Project's landscaping plan complies with County Ordinance No. 859.3, "Water Efficient Landscape Requirements".

Area ("AIA") boundary and is therefore subject to the Airport Land Use Commission ("ALUC") review. The Project was reviewed by ALUC for compliance with standards that the Project was "consistent" with all applicable requirements and provided conditions of

- M r d M d R d r r 2 2
  r d d r r 2 2 2
- R d d R d r 22 2 2
  r d d r 2 2
- d M d R d r 2 2
  r d d d
- d M d R d r 2 22
  r d d 22 2 22
- d M d R d r r 2 2
  r d d r r 2 2 2

r R r r d d r r d r r r r d r r r r

5. The Project site is located within Zone "B" of the Palomar Observatory Zone and proposes enumerated in Ordinance No's. 655 and 915.

6. The project site is located within the Fee Assessment Area of the Stephen's Kangaroo Rat Habitat Conservation Plan ("SKRHCP"). Per County Ordinance No. 663 and the SKRHCP, implementation of the SKRHCP as all core reserves required for permanent Stephen's

Fire Findings:

Pursuant to County records, the Project site is located within a designated "Very High" Fire Project has been reviewed by the County's Fire Department and as proposed, been found to

Conclusion:

PUBLIC HEARING NOTIFICATION AND COMMUNITY OUTREACH

ATTACHMENTS

Planning Commission **County of Riverside**

RESOLUTION 2025-003

RECOMMENDING ADOPTION OF

GENERAL PLAN AMENDMENT NO. 230008

WHEREAS, pursuant to the provisions of Government Code Section(s) 65350/65450 et seq., a public hearing was held before the Riverside County Planning Commission in Riverside, California on June 25, 2025, to consider the above-referenced matter; and,

WHEREAS, all the procedures of the California Environmental Quality Act and the Riverside County Additional Procedures to Implement the California Environmental Quality Act have been satisfied and the environmental document prepared or relied on is sufficiently detailed so that all the potentially significant effects of the project on the environment and measures necessary to avoid or substantially lessen such effects have been evaluated in accordance with the above-referenced Act and Procedures; and,

WHEREAS, new conditions or circumstances disclosed during the review process justify modifying the General Plan, the modifications do not conflict with the overall Riverside County Vision, and the amendment would not create an internal inconsistency among the elements of the General Plan; and,

WHEREAS, the matter was discussed fully with testimony and documentation presented by the public and affected government agencies; now, therefore,

BE IT RESOLVED, FOUND, DETERMINED, AND ORDERED by the Planning Commission of the County of Riverside, in regular session assembled on June 25, 2025, that it has reviewed and considered the environmental document prepared or relied on and recommends the following based on the staff report and the findings and conclusions stated therein:

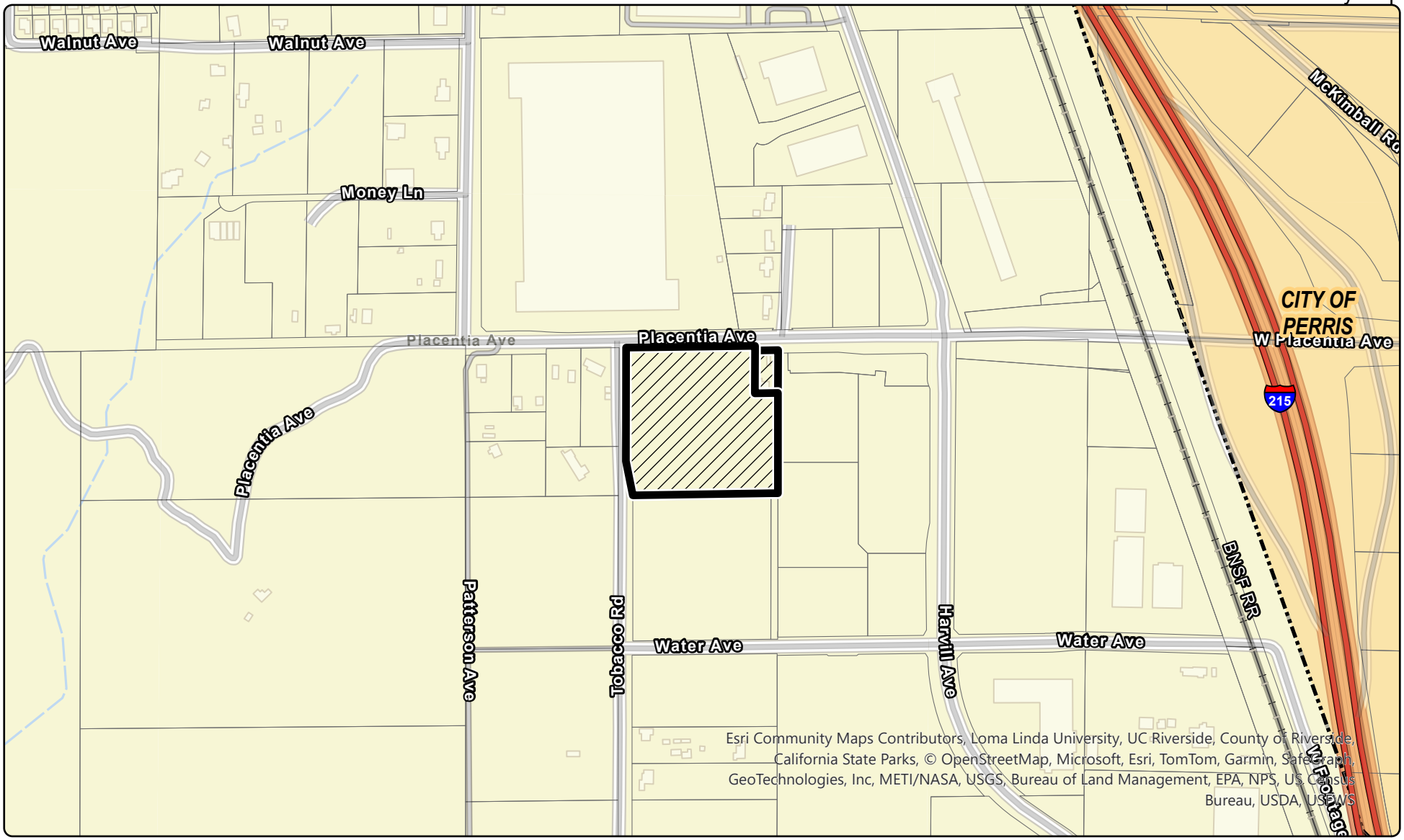
1. ADOPTION of the MITIGATED NEGATIVE DECLARATION; and

2. ADOPTION of GENERAL PLAN AMENDMENT NO. 230008

RIVERSIDE COUNTY PLANNING DEPARTMENT
PPT230048 / GPA230008 / CZ2300030
VICINITY/POLICY AREAS

Supervisor: Medina
District 1

Date Drawn: 6/11/2025
Vicinity Map



Zoning Area: NORTH PERRIS

Author: PetePang

N

0 1,250 2,500
Feet

DISCLAIMER: On October 7, 2003, the County of Riverside adopted a new General Plan providing new land use designations for unincorporated Riverside County parcels. The new General Plan may contain different type of land use than is provided for under existing zoning. For further information, please contact the Riverside County Planning Department offices in Riverside at (951)955-3200 (Western County) or in Palm Desert at (760)863-8277 (Eastern County) or Website http://planning.rctlma.org

RIVERSIDE COUNTY PLANNING DEPARTMENT

PPT230048 / GPA230008 / CZ2300030

Supervisor: Medina
District 1

LAND USE

Date Drawn: 6/11/2025
Exhibit 1



Zoning Area: NORTH PERRIS

Author: PetePang

DISCLAIMER: On October 7, 2003, the County of Riverside adopted a new General Plan providing new land use designations for unincorporated Riverside County parcels. The new General Plan may contain different type of land use than is provided for under existing zoning. For further information, please contact the Riverside County Planning Department offices in Riverside at (951)955-3200 (Western County) or in Palm Desert at (760)863-8277 (Eastern County) or Website http://planning.rctlma.org

N

0 150 300 600
Feet

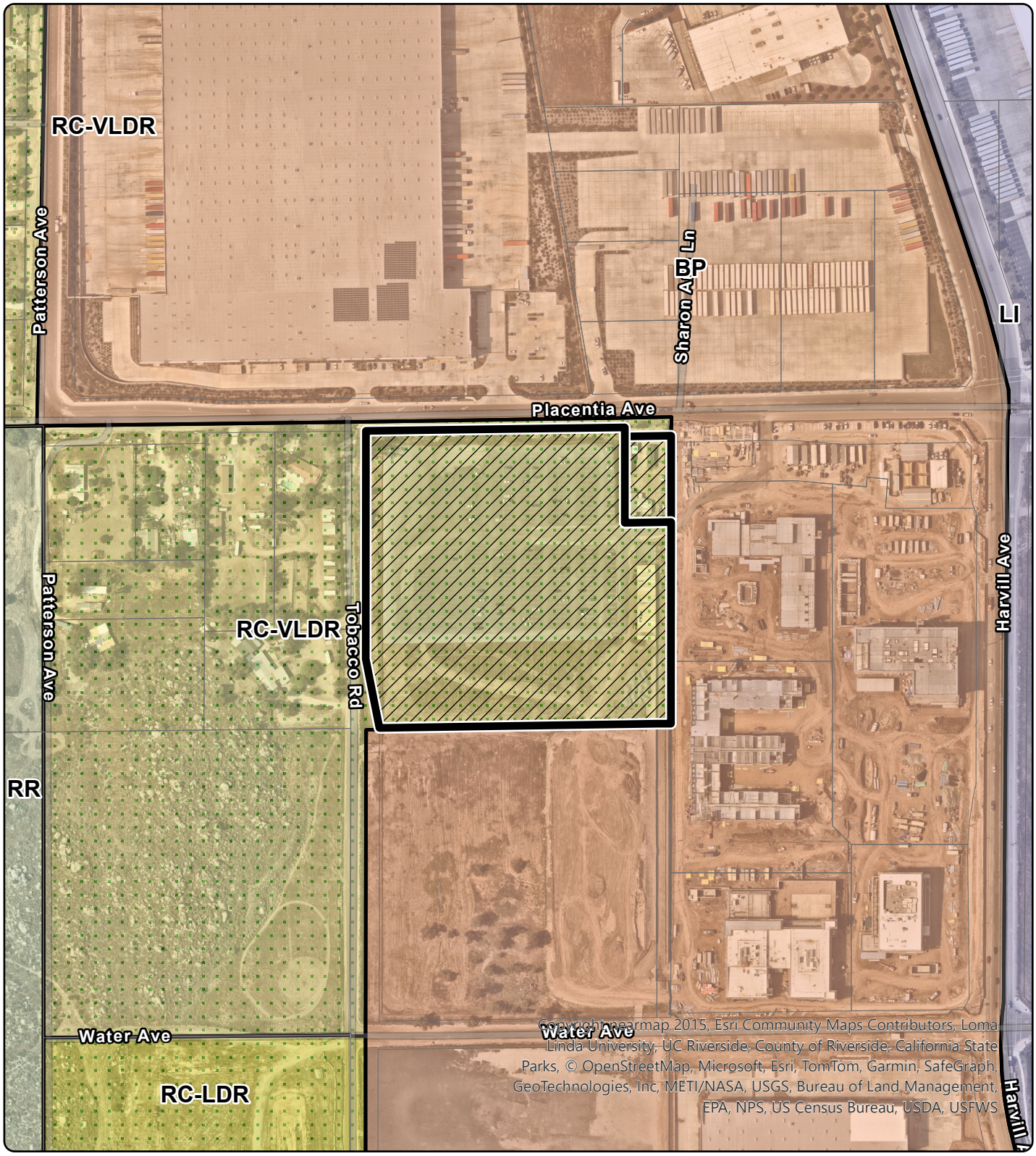
RIVERSIDE COUNTY PLANNING DEPARTMENT

PPT230048 / GPA230008 / CZ2300030

EXISTING GENERAL PLAN

Supervisor: Medina
District 1

Date Drawn: 6/11/2025
Exhibit 5



Zoning Area: NORTH PERRIS

Author: PetePang

DISCLAIMER: On October 7, 2003, the County of Riverside adopted a new General Plan providing new land use designations for unincorporated Riverside County parcels. The new General Plan may contain different type of land use than is provided for under existing zoning. For further information, please contact the Riverside County Planning Department offices in Riverside at (951)955-3200 (Western County) or in Palm Desert at (760)863-8277 (Eastern County) or Website http://planning.rctlma.org

N

0 170 340 510 680
Feet

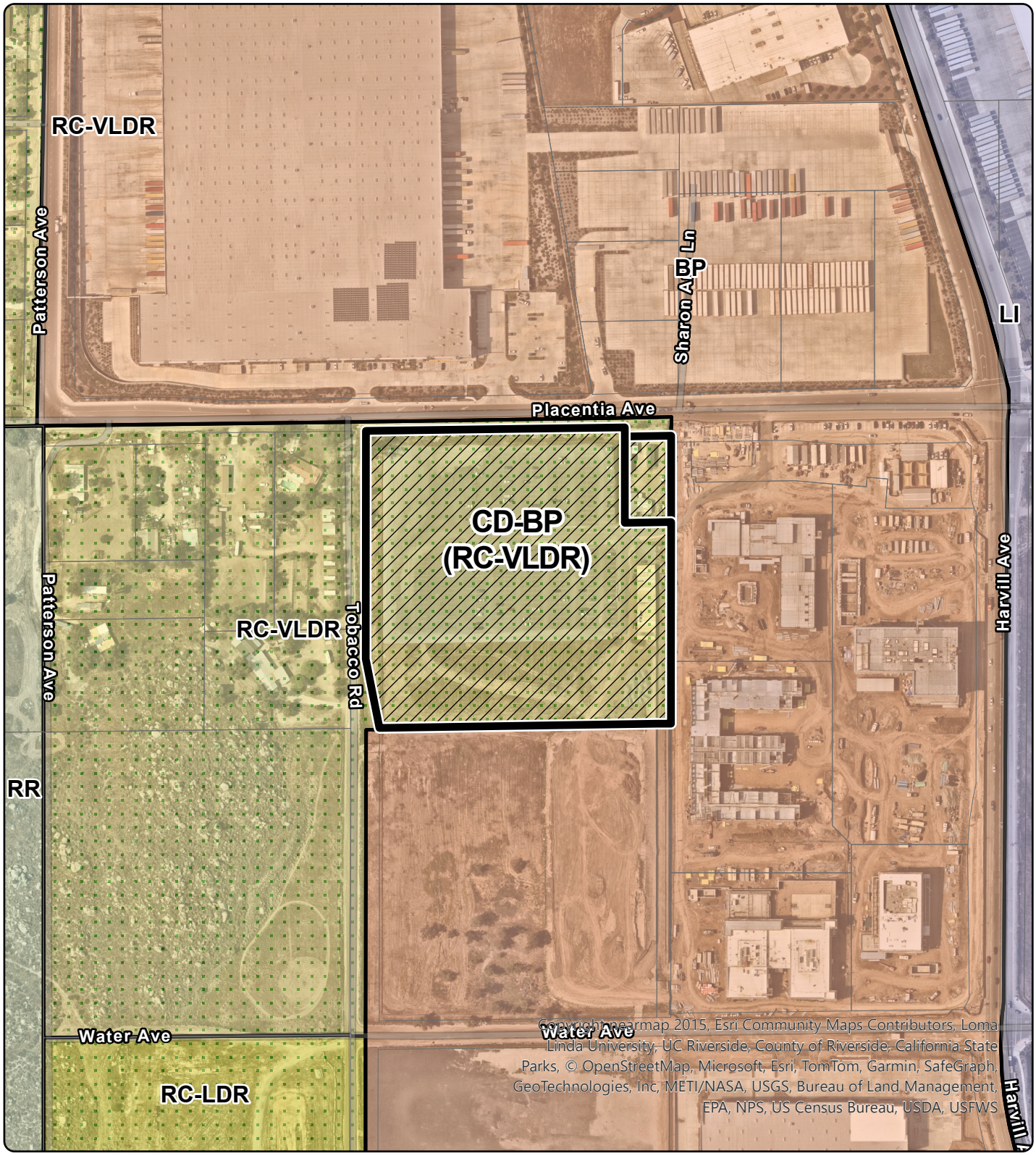
RIVERSIDE COUNTY PLANNING DEPARTMENT

PPT230048 / GPA230008 / CZ2300030

PROPOSED GENERAL PLAN

Supervisor: Medina
District 1

Date Drawn: 6/11/2025
Exhibit 6



Zoning Area: NORTH PERRIS

Author: PetePang

DISCLAIMER: On October 7, 2003, the County of Riverside adopted a new General Plan providing new land use designations for unincorporated Riverside County parcels. The new General Plan may contain different type of land use than is provided for under existing zoning. For further information, please contact the Riverside County Planning Department offices in Riverside at (951)955-3200 (Western County) or in Palm Desert at (760)863-8277 (Eastern County) or Website http://planning.rctlma.org

N

0 170 340 510 680
Feet

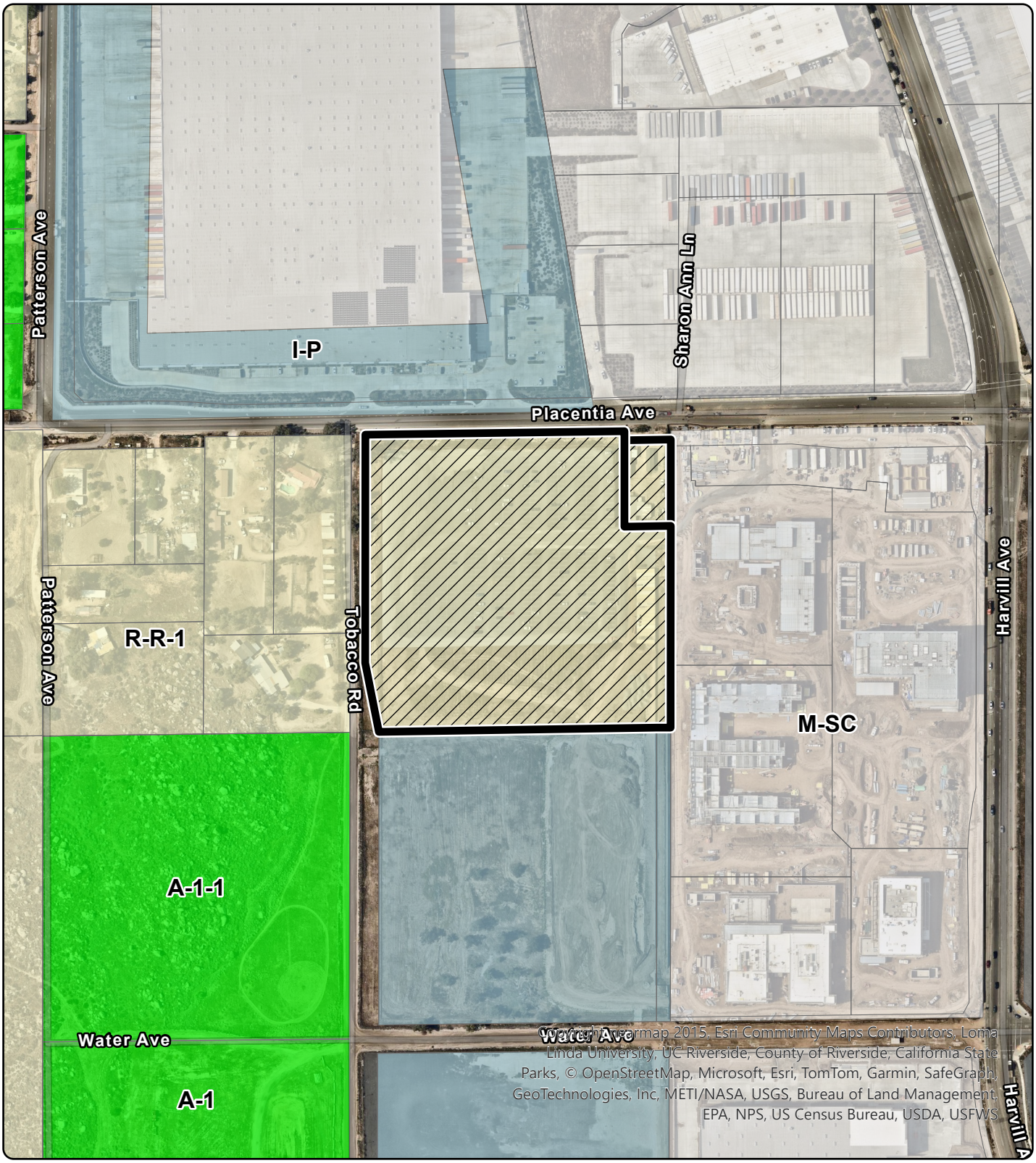
RIVERSIDE COUNTY PLANNING DEPARTMENT

PPT230048 / GPA230008 / CZ2300030

Supervisor: Medina
District 1

EXISTING ZONING

Date Drawn: 6/11/2025
Exhibit 2



Zoning Area: NORTH PERRIS

Author: PetePang

DISCLAIMER: On October 7, 2003, the County of Riverside adopted a new General Plan providing new land use designations for unincorporated Riverside County parcels. The new General Plan may contain different type of land use than is provided for under existing zoning. For further information, please contact the Riverside County Planning Department offices in Riverside at (951)955-3200 (Western County) or in Palm Desert at (760)863-8277 (Eastern County) or Website http://planning.rctlma.org

N

0 150 300 600
Feet

RIVERSIDE COUNTY PLANNING DEPARTMENT

PPT230048 / GPA230008 / CZ2300030

Supervisor: Medina
District 1

PROPOSED ZONING

Date Drawn: 6/11/2025
Exhibit 3



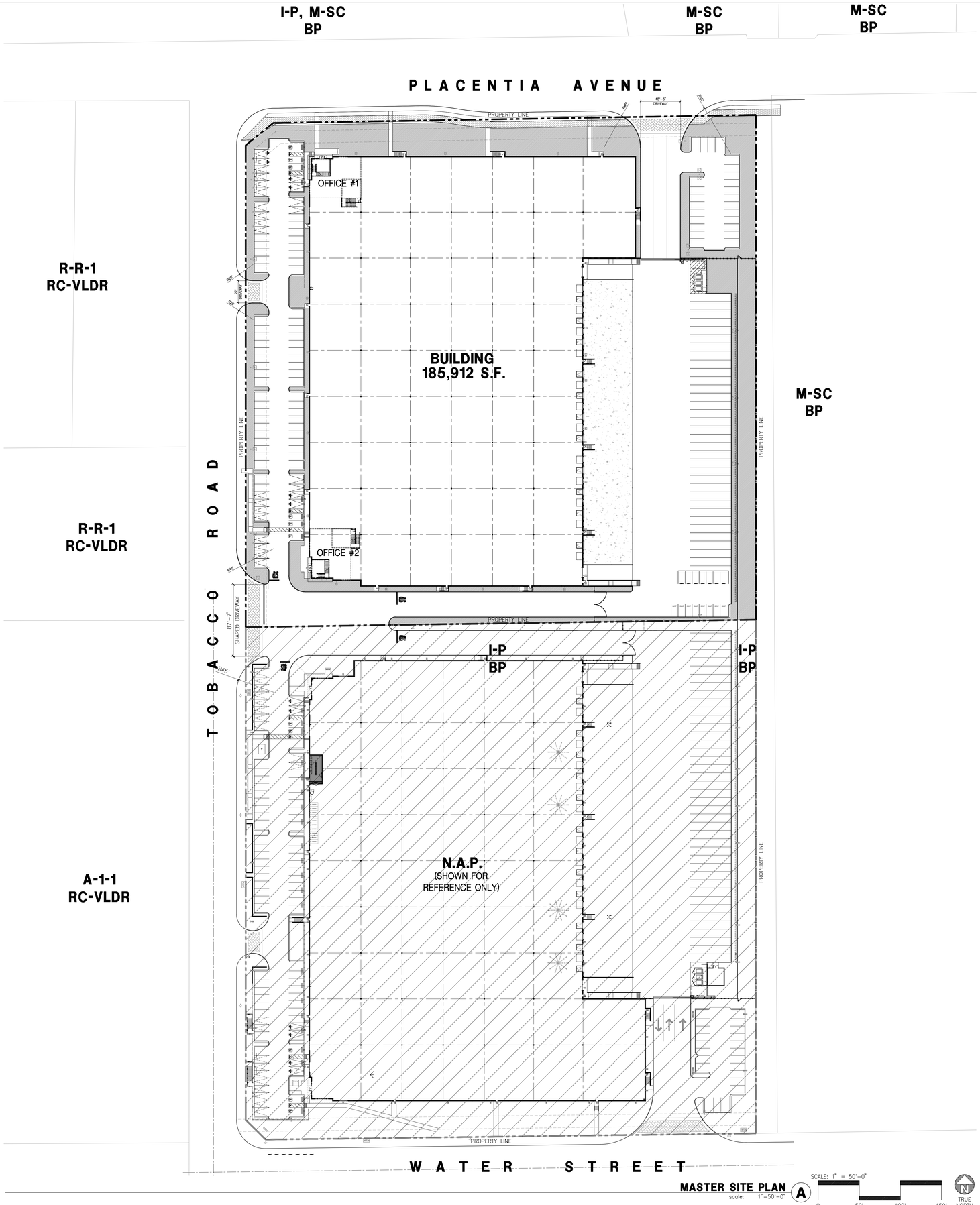
Zoning Area: NORTH PERRIS

Author: PetePang

N

0 150 300 600
Feet

DISCLAIMER: On October 7, 2003, the County of Riverside adopted a new General Plan providing new land use designations for unincorporated Riverside County parcels. The new General Plan may contain different type of land use than is provided for under existing zoning. For further information, please contact the Riverside County Planning Department offices in Riverside at (951)955-3200 (Western County) or in Palm Desert at (760)863-8277 (Eastern County) or Website http://planning.rctlma.org



MASTER SITE PLAN (A) scale: 1"=50'-0"

SCALE: 1" = 50'-0"

0 50' 100' 150'

TRUE NORTH

PROJECT INFORMATION

Owner / Applicant

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

Applicant Representative

HPA, INC.
18831 BARDEEN AVE. STE 100
IRVINE, CA 92612
PHONE:
CONTACT: JOSEPH KIM

Project Address

T.B.D.

Zoning

CURRENT: R-R
PROPOSED: I-P

APN

317-260-017
317-260-018

Project Description

SPECULATIVE 185,912 SF WAREHOUSE BUILDING
INCLUDING 9,000 SF SUPPORT OFFICE

Construction Type

CONCRETE TILT-UP BUILDING

BUILDING OCCUPANCY:	MAIN: S-1/B (FUTURE)
CONSTRUCTION TYPE:	III-B
NUMBER OF STORIES:	1 + MEZZANINE
AUTOMATIC FIRE SPRINKLER	YES (ESFR)
ALLOWABLE HEIGHT	75' (CBC 504.3)

Code Analysis

2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA FIRE CODE
2022 CALIFORNIA ENERGY CODE
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

LEGAL DESCRIPTION

APN #317-260-017, RIVERSIDE, CA

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

LOT 3 OF OAKES AND SAWYERS SUBDIVISION, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 1, PAGE 5 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPT THE NORTH 230.00 FEET OF THE EAST 100.00 FEET, SAID 230.00 FEET BEING MEASURED ON THE CENTER LINE OF PLACENTIA STREET;

ALSO EXCEPT THAT PORTION DESCRIBED IN DEED TO THE COUNTY OF RIVERSIDE, RECORDED FEBRUARY 5, 1962 AS INSTRUMENT NO. 11202 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 3;
THENCE NORTH 00°30'04" WEST ALONG THE WEST LINE OF SAID LOT, A DISTANCE OF 150.00 FEET; THENCE 11°50'30" EAST, A DISTANCE OF 152.54 FEET TO THE SOUTH LINE OF SAID LOT; THENCE SOUTH 88°39'22" WEST, ALONG SAID SOUTH LINE, A DISTANCE OF 30.00 FEET TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM ANY MOBILE HOME LOCATED OR PLACED THERON.

APN #317-260-018, RIVERSIDE, CA

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

THE NORTH 230.00 FEET (MEASURED FROM THE CENTER LINE PLACENTIA STREET) OF THE EAST 100.00 FEET OF LOT 3 OAKES AND SAWYER'S SUBDIVISION, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 1, PAGE 5 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPTING THEREFROM, THAT PORTION CONVEYED TO THE COUNTY OF RIVERSIDE BY DEED RECORDED DECEMBER 6, 1974 AS INSTRUMENT NO. 155641, OF OFFICIAL RECORDS.

AREA JUSTIFICATION :

SECTION 507
UNLIMITED AREA BUILDINGS

507.2.1 REDUCED OPEN SPACE
THE PUBLIC WAYS OR YARDS OF 60 FEET (18 288 MM) IN WIDTH REQUIRED IN SECTIONS 507.3, 507.4, 507.5, 507.6 AND 507.12 SHALL BE PERMITTED TO BE REDUCED TO NOT LESS THAN 40 FEET (12 192 MM) IN WIDTH PROVIDED ALL OF THE FOLLOWING REQUIREMENTS ARE MET:

1. THE REDUCED WIDTH SHALL NOT BE ALLOWED FOR MORE THAN 75 PERCENT OF THE PERIMETER OF THE BUILDING.
2. THE EXTERIOR WALLS FACING THE REDUCED WIDTH SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 3 HOURS.
3. OPENINGS IN THE EXTERIOR WALLS FACING THE REDUCED WIDTH SHALL HAVE OPENING PROTECTIVES WITH A FIRE PROTECTION RATING OF NOT LESS THAN 3 HOURS.

507.4 SPRINKLERED, ONE STORY
THE AREA OF A GROUP B, F, M OR S BUILDING NO MORE THAN ONE STORY ABOVE GRADE PLANE OF ANY CONSTRUCTION TYPE, SHALL NOT BE LIMITED WHERE THE BUILDING IS PROVIDED WITH AN AUTOMATIC SPRINKLER SYSTEM THROUGHOUT IN ACCORDANCE WITH SECTION 903.3.1.1 AND IS SURROUNDED AND ADJOINED BY PUBLIC WAYS OR YARDS NOT LESS THAN 60 FEET IN WIDTH

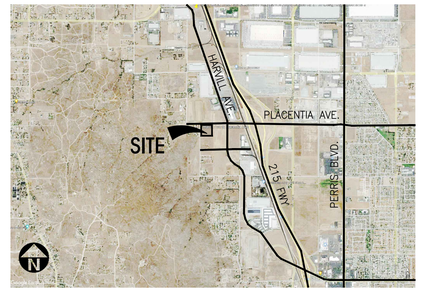
UTILITY PURVEYORS

WATER: EASTERN MUNICIPAL WATER DISTRICT
SEWER: EASTERN MUNICIPAL WATER DISTRICT
ELECTRIC: SOUTHERN CALIFORNIA EDISON
GAS: SOUTHERN CALIFORNIA GAS COMPANY
CABLE: CHARTER
TELE: FRONTIER
WASTE: WASTE MANAGEMENT

SCHOOL DISTRICT

VAL VERDE UNIFIED

VICINITY MAP



PROJECT DATA

SITE AREA			
Gross Land Area	In acres	9.619	ac
Gross Land Area	In s.f.	419,004	s.f.
Area Dedication	In acres	0.943	ac
Area Dedication	In s.f.	41,077	s.f.
Net Land Area	In acres	8.714	ac
Net Land Area	In s.f.	379,575	s.f.
BUILDING AREA			
Building footprint (not including 2nd fl)		181,412	s.f.
Office #1			
Office - 1st floor		2,250	s.f.
Office - 2nd floor		2,250	s.f.
Office #2			
Office - 1st floor		2,250	s.f.
Office - 2nd floor		2,250	s.f.
Warehouse		176,912	s.f.
TOTAL		**185,912**	s.f.
FLOOR AREA RATIO (Gross)		0.44	
LOT COVERAGE (Gross)		47.8%	
CLEAR HEIGHT		36'	
AUTO PARKING REQUIRED			
Office:	1/250 s.f.	36	stalls
Whse:	1/2000 s.f.	89	stalls
TOTAL		125	stalls
AUTO PARKING PROVIDED			
Standard (9' x 18')		79	stalls
Compact (8.5'x16')		15	stalls
Accessible (9' x 18')		5	stalls
Van Accessible (12' x 18')		1	stalls
EVCS (9' x 18')		4	stalls
EVCS ADA (9' x 18')		1	stalls
EVCS van ADA (12' x 18')		1	stalls
EV Capable		20	stalls
Total		**126**	stalls
TRAILER PARKING PROVIDED			
Trailer (10' x 53')		33	stalls
ZONING ORDINANCE FOR CITY			
Zoning Designation - I-P			
General Plan Land Use Designation: Business Park (BP)			
MAXIMUM BUILDING HEIGHT ALLOWED			
Height - 35' (1' additional height every 2' additional set back)			
MAXIMUM FLOOR AREA RATIO			
FAR - 0.25-0.60			
LANDSCAPE REQUIREMENT			
Percentage - 15 %		56,936	s.f.
LANDSCAPE PROVIDED			
In percentage -		16.0%	
In s.f. -		60,911	s.f.
SETBACKS			
Building	Parking/Landscape		
Front -25', 50' if abuts R zone	10'		
Side - 10' two side lot areas combined	0		
Rear - 15'	0		

CASE: PPT230048
EXHIBIT: A- Site Plan
DATE: 6/25/2025
PLANNER: KMason

☐ Meeting ☐ Comment Agenda ☑ Final

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

HPA architecture

hpa, inc.
18831 bardeen avenue - ste. #100 irvine, ca 92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

Consultants:

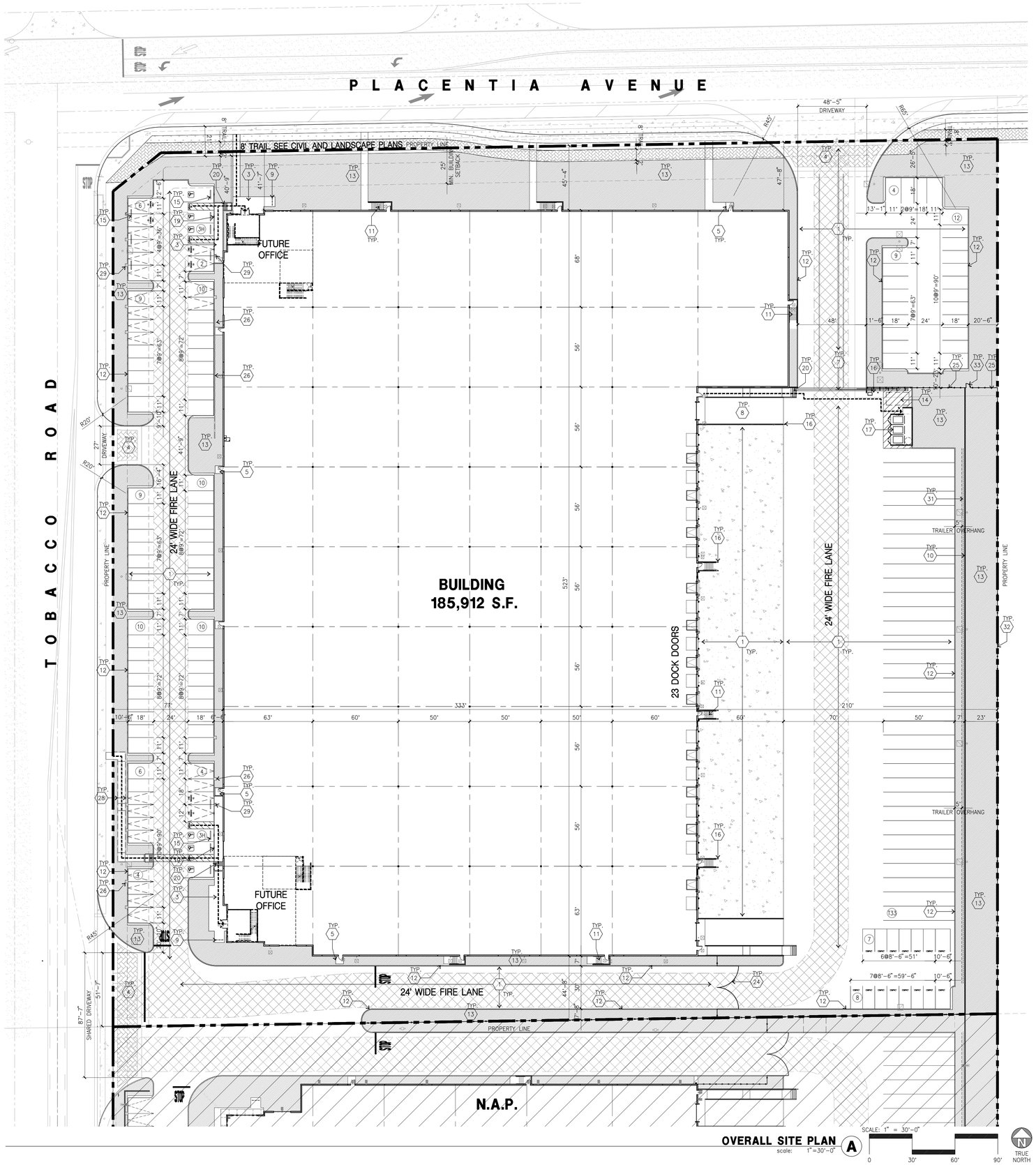
Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

Title: MASTER SITE PLAN

Project Number:	22484
Drawn by:	JK
Date:	
Revision:	
DAC 5TH SUBMITTAL	01/13/25

Sheet:

DAB-A1.0



OVERALL SITE PLAN A
scale: 1"=30'-0"

SCALE: 1" = 30'-0"
0 30' 60' 90'
TRUE NORTH

SITE PLAN KEYNOTES

1. PAVEMENT PER CIVIL. SEE CIVIL PLANS
2. NOT USED
3. CONCRETE WALKWAY, MEDIUM BROOM FINISH
4. DRIVEWAY APRONS TO BE CONSTRUCTED. SEE LANDSCAPE DRAWINGS.
5. 5'-6"X4" THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY AS REQ. BY CITY INSPECTOR.
6. APPROXIMATE LOCATION OF TRANSFORMER. CONTRACTOR TO VERIFY WITH S.C.E.,
7. PROVIDE 8' HIGH METAL SLIDING GATES W/ KNOX-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
8. CONCRETE RAMP W/ 42" HIGH CONCRETE WALL.
9. EXTERIOR BIKE RACK TYPICAL.
10. 12' HIGH CONCRETE TILT-UP SCREEN WALL.
11. EXTERIOR CONCRETE STAIR.
12. CONCRETE CURB. SEE CIVIL DRAWINGS.
13. LANDSCAPE. ALL LANDSCAPE AREAS INDICATED BY SHADING.
14. FUTURE GUARD SHACK. PROVIDE CONDUIT.
15. PRE-CAST CONCRETE WHEEL STOP.
16. CONCRETE FILLED GUARD POST "6 DIA. U.N.O. 42" H,
17. TRASH ENCLOSURE PER COUNTY STANDARD.
18. ACCESSIBLE ENTRY SIGN.
19. ACCESSIBLE PARKING STALL SIGN.
20. TRUNCATED DOME.
21. APPROXIMATE LOCATION OF FIRE HYDRANT.
22. WALL MOUNTED LIGHTING FIXTURE.
23. SITE LIGHT POLE W/ CONCRETE BASE.
24. 8' HIGH METAL SWING GATE W/ KNOX-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
25. 8' HIGH METAL FENCE.
26. 2'X2' CONCRETE PAD FOR FUTURE EV CHARGER. PROVIDE CONDUIT.
27. ROOF DRAIN THRU CURB.
28. RETAINING WALL. SEE CIVIL DRAWINGS.
29. 2'X2' CONCRETE PAD WITH EV CHARGER INSTALLED.
30. NOT USED.
31. CONDUIT FOR FUTURE TRUCK EV CHARGERS
32. RETAINING WALL AND GUARDRAIL TO BE CONSTRUCTED BY EAST DEVELOPEMENT. SEE DETAIL BELOW FOR REFERENCE.
33. 3'W X 8'H MAN GATE FOR MAINTENANCE ACCESS.

SITE PLAN GENERAL NOTES

1. THE SITE PLAN BASED ON THE SOILS REPORT PREPARED BY: TBD
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C"DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". FINISH TO BE A MEDIUM BROOM FINISH U.N.O.
11. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
12. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
13. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
14. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
15. ALL VERTICAL MOUNTING POLES OF CHAIN LINK FENCING SHALL BE CAPPED.
16. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB.
17. PROVIDE PHOTOVOLTAIC PANELS AS REQUIRED BY APPLICABLE CODES.

SITE LEGEND

- PAVING. SEE "C" DRWGS.
- STANDARD PARKING STALL (9' X 18')
- ACCESSIBLE PARKING STALL (9' X 18') W/ 5' ACCESSIBLE AISLE
- VAN ACCESSIBLE PARKING STALL (12' X 18') W/ 5' ACCESSIBLE AISLE
- STANDARD ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 9'X18' +5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 12'X18'+5' W/ ACCESSIBLE AISLE
- STANDARD EVCS SIZE, 9'X18'
- EV CAPABLE SPACE WITHOUT EVSE SIZE 9'X18'
- LANDSCAPED AREA
- 26' WIDE FIRE LANE
- TRAIL
- PROPERTY LINE
- ACCESSIBLE PATH OF TRAVEL 4' MIN. WIDE, 1:20 MAX. SLOPE & 2% MAX. CROSS SLOPE EXCEPT FOR PARKING ACCESS AISLES AND DOOR LANDINGS WHERE THE MAX SLOPE IS 2% IN ALL DIRECTIONS AND UNLESS NOTED OTHERWISE.
- LIGHTING FIXTURE
- EV CHARGER
- EV CHARGER FOR FUTURE

HPA architecture

hpa, inc.
18831 bardeen avenue - ste. #100 irvine, ca 92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

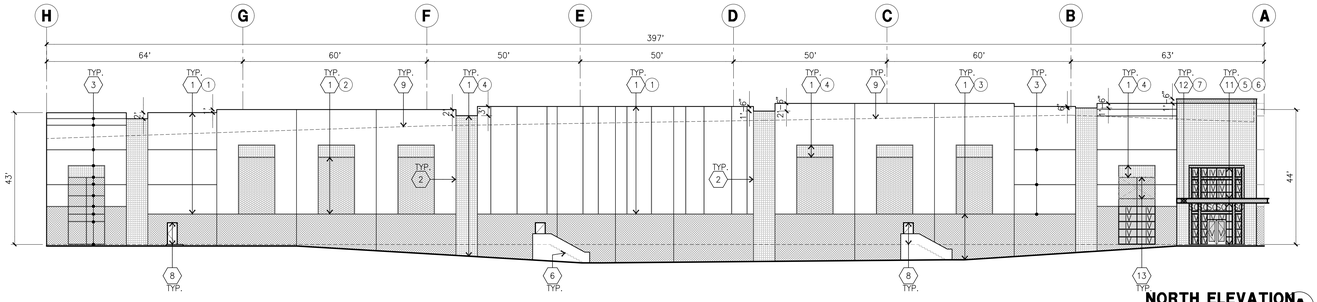
Title: OVERALL SITE PLAN

Project Number:	22484
Drawn by:	JK
Date:	
Revision:	
DAC 5TH SUBMITTAL	01/13/25

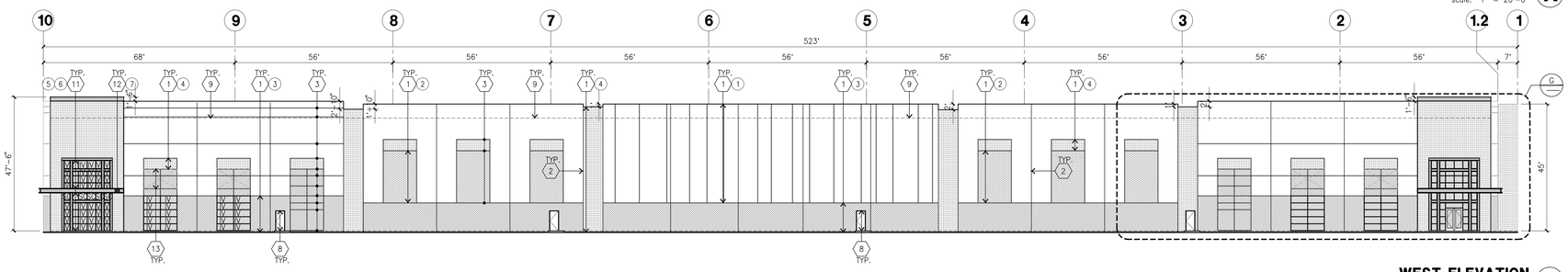
Sheet:

DAB-A1.1

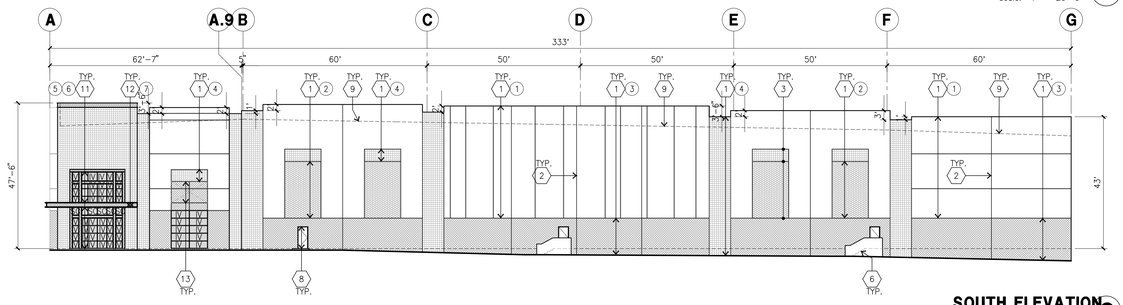
CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT



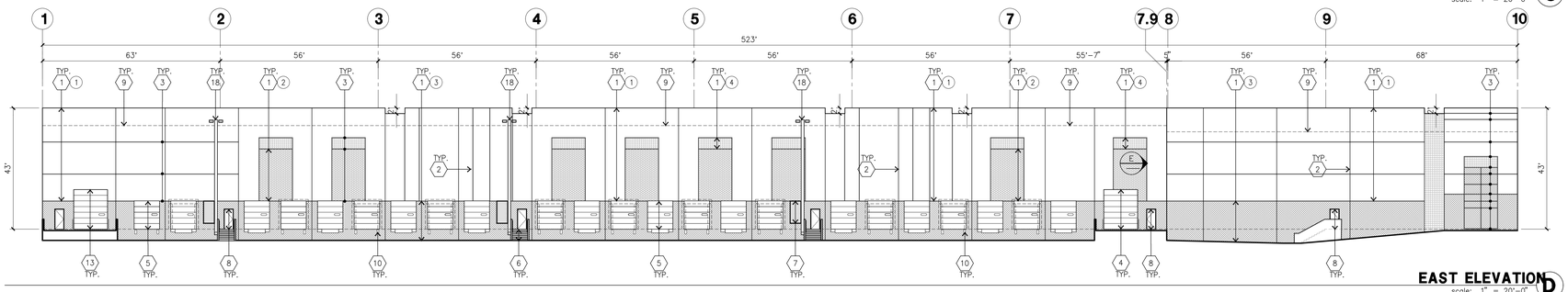
NORTH ELEVATION A
scale: 1" = 20'-0"



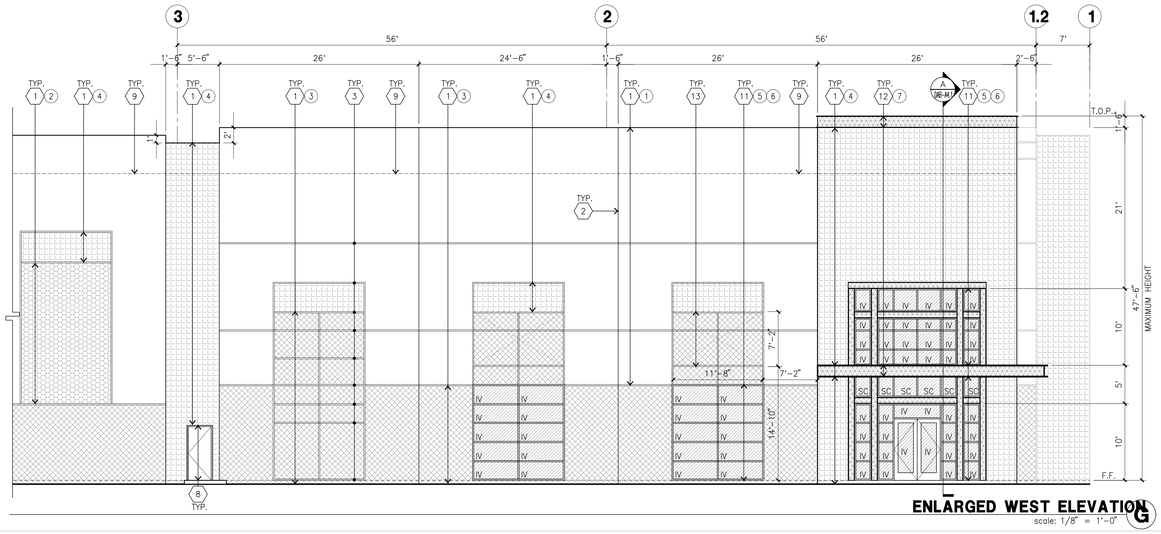
WEST ELEVATION B
scale: 1" = 20'-0"



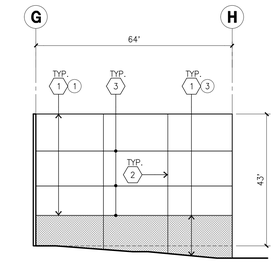
SOUTH ELEVATION C
scale: 1" = 20'-0"



EAST ELEVATION D
scale: 1" = 20'-0"



ENLARGED WEST ELEVATION G
scale: 1/8" = 1'-0"



NORTHEAST ELEVATION E
scale: 1" = 20'-0"

ELEVATION KEYNOTES

1. CONCRETE TILT-UP PANEL.
2. PANEL JOINT.
3. PANEL REVEAL. ALL REVEALS TO HAVE A MAX. OF 3/8" CHAMFER. REVEAL COLOR TO MATCH ADJACENT BUILDING FIELD COLOR, U.N.O.
4. 12' X 14' OVERHEAD DOOR @ DRIVE THRU. PROVIDE COMPLETE WEATHER-STRIPPING PROTECTION ALL AROUND.
5. 9' X 10' OVERHEAD DOOR @ DRIVE THRU. PROVIDE COMPLETE WEATHER-STRIPPING PROTECTION ALL AROUND.
6. CONCRETE STAIR, LANDING AND GUARDRAIL W/ METAL PIPE HANDRAIL. PROVIDE NON SKID NOSING TO MEET ADA REQUIREMENTS. PROVIDE CONTRASTING COLORED 3" WIDE WARNING STRIPE INTEGRAL TO CONCRETE AT TOP LANDING AND BOTTOM TREAD PER ADA REQUIREMENTS.
7. 4' X 8' METAL LOUVER OPENING FOR VENTILATION. PAINT TO MATCH BUILDING COLOR.
8. HOLLOW METAL DOORS. PROVIDE COMPLETE WEATHER STRIPING ALL AROUND DOOR.
9. ROOF LINE BEYOND.
10. DOCK DOOR BUMPER TYPICAL.
11. ALUMINUM STOREFRONT FRAMING WITH TEMPERED GLAZING AT ALL DOORS, SIDELITES ADJACENT TO DOORS AND GLAZING WITH BOTTOMS LESS THAN 18" ABOVE FINISH FLOOR ELEVATION.
12. METAL CANOPY.
13. KNOCK-OUT PANEL.
14. INTERIOR ROOF DRAIN W/ 2 OVERFLOW SCUPPERS.
15. CONC. FILLED GUARD POST. 6" DIA. U.N.O., 42"H.
16. EXTERIOR LIGHTING FIXTURE.
17. APPROXIMATE LOCATION OF ADDRESS ON WALL.
18. EXTERIOR DOWN SPOUTS W/ 2 OVERFLOW SCUPPERS.

ELEVATION GENERAL NOTES

1. ALL PAINT COLOR CHANGES TO OCCUR AT INSIDE CORNERS UNLESS NOTED OTHERWISE.
2. ALL PAINT FINISHES ARE TO BE FLAT UNLESS NOTED OTHERWISE.
3. T.O.P. EL.= TOP OF PARAPET ELEVATION.
4. F.F. = FINISH FLOOR ELEVATION.
5. STOREFRONT CONSTRUCTION: GLASS, METAL ATTACHMENTS AND LINTELS SHALL BE DESIGNED TO RESIST — MPH. EXPOSURE "C" WINDS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.
6. CONTRACTOR SHALL FULLY PAINT ONE CONCRETE PANEL W/ SELECTED COLORS. ARCHITECT AND OWNER SHALL APPROVE PRIOR TO PAINTING REMAINDER OF BUILDING.
7. BACK SIDE OF PARAPETS TO HAVE SMOOTH FINISH AND BE PAINTED WITH ELASTOMERIC PAINT.
8. FOR SPANDREL GLAZING, ALLOW SPACE BEHIND SPANDREL TO BREATH. PROVIDE 1" DIAMETER HOLES AT CONCRETE WALL.
9. USE ADHESIVE BACK WOOD STRIPS FOR ALL REVEAL FORMS.
10. THE FIRST COAT OF PAINT TO BE ROLLED-ON AND THE SECOND COAT TO BE SPRAYED-ON
11. ALL ROLL-UP DOORS AND SERVICE DOORS TO BE PAINTED TO MATCH BUILDING COLOR.

ELEVATION COLOR LEGEND/SCHED.

1. PAINT. COLOR : SW 6070 HERON PLUME (259-C1)
2. PAINT. COLOR : SW 7051 ANALYTICAL GRAY (246-C2)
3. PAINT. COLOR : SW 7640 FAWN BRINDLE (247-C5)
4. PAINT. COLOR : SW 7075 WEB GRAY (235-C6)
5. MULLIONS COLOR : BLACK MULLION
6. GLAZING COLOR : BLUE GLAZING
7. METAL CANOPY: BLACK I-BEAM

GLAZING LEGEND

NOTE: ALL EXTERIOR AND INTERIOR GLAZING SHALL BE TEMPERED.

IV — INSULATED VISION GLASS

SC — SPANDREL GLASS WITH CONCRETE BEHIND

V — SINGLE LITE VISION GLASS

IV : INSULATED VISION GLASS
1/4" **VISTACOOL PACIFICA** + 1/4" **SOLARBAN 60** CLEAR
1" INSULATED GLASS UNIT WITH 1/2" AIRSPACE AND 1/4" LITES
U: **0.27** SHGC: **0.21** VLT: **26%**
MINIMUM VT TO BE 0.42 PER 2016 CEC TABLE 140.3-B

SC : SPANDREL WITH CONCRETE BEHIND
1/4" **VISTACOOL PACIFICA** WITH **HARMONY BLUE** OPACICOAT PAINTED ON REFLECTIVE. INSTALLED ON CONCRETE.

V : VISION GLASS
1/4" **VISTACOOL PACIFICA**

MULLIONS : **BLACK ANODIZED.**

CASE: PPT230048
EXHIBIT: B-Elevations
DATE: 6/25/2025
PLANNER: KMason
☐ Meeting ☐ Comment Agenda ☑ Final

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

HPA architecture

hpa, inc.
18831 bardeen avenue - ste. #100 irvine, ca 92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

Title: ELEVATIONS

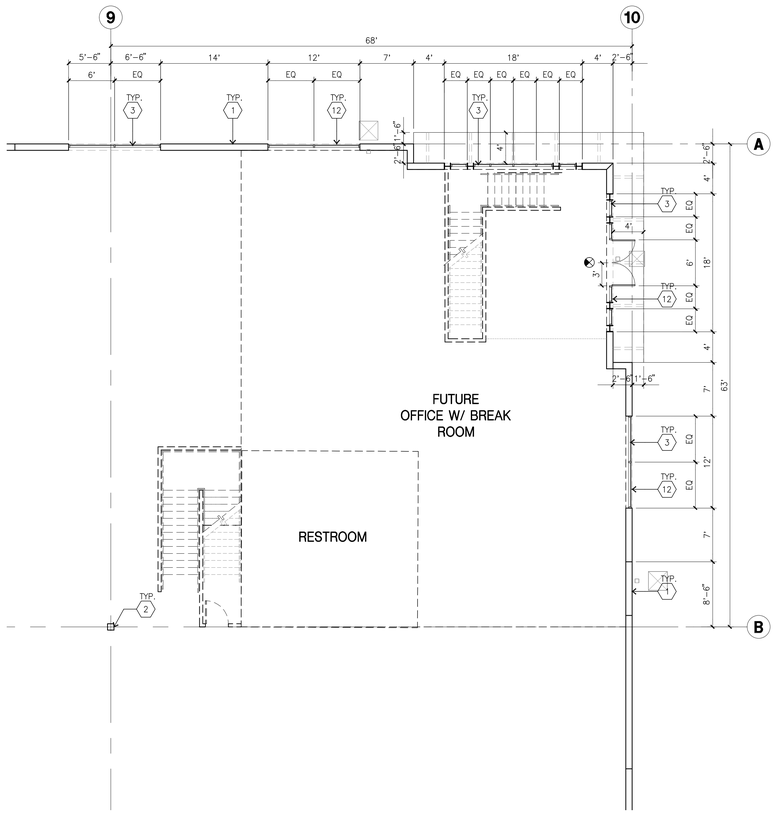
Project Number:	22484
Drawn by:	JK
Date:	
Revision:	
DAC 5TH SUBMITTAL	01/13/25

Sheet:

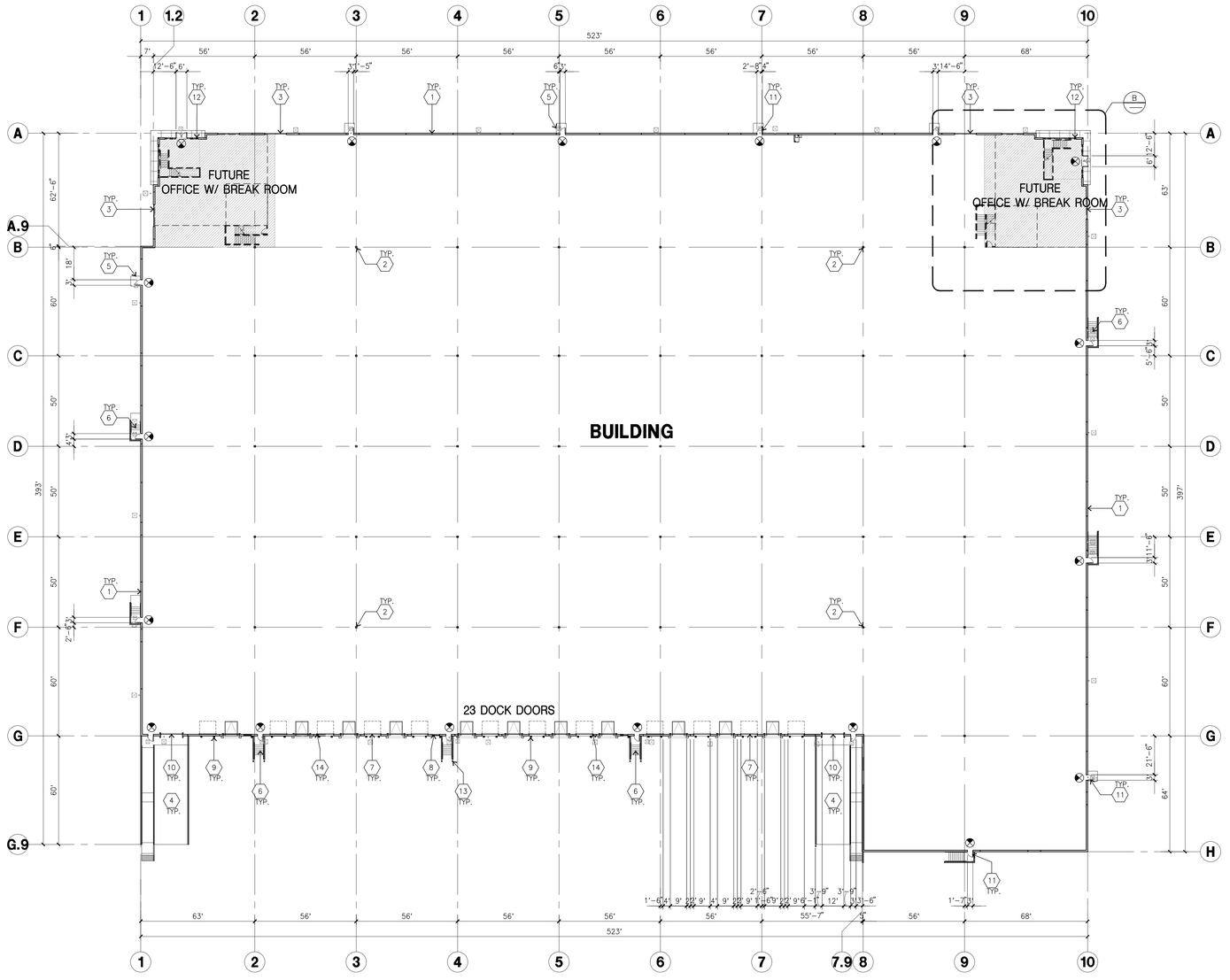
DAB-A3.1

CASE: PPT230048
EXHIBIT: C-Floor Plans
DATE: 6/25/2025
PLANNER: KMason

☐ Meeting ☐ Comment Agenda ☑ Final



ENLARGED FLOOR PLAN B
scale: 1/8" = 1'-0"
SCALE: 1/8" = 1'-0"
0 8' 16' 24'
TRUE NORTH



OVERALL FLOOR PLAN A
scale: 1"=30'-0"
SCALE: 1" = 30'-0"
0 30' 60' 90'
TRUE NORTH

FLOOR PLAN KEYNOTES

1. CONCRETE TILT-UP PANEL.
2. STRUCTURAL STEEL COLUMN.
3. TYPICAL STOREFRONT SYSTEM WITH GLAZING. SEE OFFICE BLOW-UP AND ELEVATIONS FOR SIZE, COLOR AND LOCATIONS.
4. CONCRETE RAMP W/ 42"HIGH CONC TILT-UP GUARD WALL OR BUILDING WALL ON BOTH SIDE OF RAMP.
5. 5'-6"X5'-6"X4" THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY AS REQ. BY CITY INSPECTOR.
6. EXTERIOR CONCRETE STAIR W/ 42"HIGH CONC TILT-UP GUARD WALL OR BUILDING WALL.
7. 9' X 10' TRUCK DOOR, SECTIONAL O'H., STANDARD GRADE.
8. 4' X 8' LOUVERED OPENING FOR VENTILATION.
9. DOCK DOOR BUMPER TYPICAL.
10. 12' X 14' DRIVE THRU. SECTIONAL O.H., STANDARD GRADE.
11. 3' X 7' HOLLOW METAL EXTERIOR MAN DOOR.
12. SOFFIT LINE ABOVE
13. CONC. FILLED GUARD POST. 6" DIA. U.N.O.. 42"H.
14. Z GUARD
15. EXTERIOR LIGHTING FIXTURE.

FLOOR PLAN GENERAL NOTES

A. THIS BUILDING IS DESIGNED FOR HIGH PILE STORAGE WITH FIRE ACCESS MAN DOORS APPROX. 100' MAXIMUM. A SEPARATE PERMIT WILL BE REQUIRED FOR ANY RACKING/CONVEYER SYSTEMS.
B. FIRE HOSE LOCATIONS SHALL BE APPROVED PER FIRE DEPARTMENT.
C. THE BUILDING FLOOR SLAB IS SLOPED, SEE "C" DRAWINGS FOR FINISH SURFACE ELEVATIONS.
D. PROVIDE 6" DIA. CONCRETE BOLLARD AT ALL FIRE RISER AND UNPROTECTED INTERIOR ROOF DRAIN.
E. WAREHOUSE INTERIOR CONCRETE WALLS ARE PAINTED WHITE. COLUMNS ARE TO RECEIVE PRIMER ONLY. ALL GYP. BD. WALLS IN WAREHOUSE TO RECEIVE 1 COAT OF WHITE TO COVER.
F. SLOPE POUR STRIP 1/2" TO EXTERIOR AT ALL MANDOOR EXITS.
G. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE PANEL WALL, GRIDLINE, OR FACE OF STUD U.N.O.
H. SEE CIVIL DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR TO VERIFY ACTUAL UTILITY LOCATIONS. PLUMBING/ELECTRICAL COORDINATION.
I. FOR DOOR TYPES AND SIZES, SEE DETAIL SHEET AD.4. NOTE: ALL DOORS PER DOOR SCHEDULE ARE FINISH OPENINGS.
J. CONTRACTOR TO PROTECT AND KEEP THE FLOOR SLAB CLEAN. ALL EQUIPMENT TO BE DIAPERED INCLUDING CARS AND TRUCKS.
K. ALL EXIT MAN DOORS IN WAREHOUSE TO HAVE ILLUMINATED EXIT SIGN. HARDWARE.
L. HIGHLY FLAMMABLE AND COMBUSTIBLE MATERIAL SHALL NOT BE USED OR STORED IN THIS BUILDING.
M. EACH EXTERIOR EXIT DOOR SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS "EXIT". THE MOUNTING HEIGHT FOR SUCH SIGNAGE SHALL BE 60" FROM FINISH FLOOR LEVEL TO THE CENTER OF THE SIGN.
N. NON-ACCESSIBLE DOOR. PROVIDE WARNING SIGN LOCATED IN THE INTERIOR SIDE PER CBC 1133B.1.1.1
O. ALL ROOF MOUNTED MATERIALS SHALL BE FULLY SCREENED FROM PUBLIC VIEW.

FLOOR SLAB & POUR STRIPS REQ.

THESE NOTES ARE VERY MIN. REQUIREMENT.

1. FLOOR COMPACTION - 95%
2. TRENCH COMPACTION - 90%
3. BUILDING FLOOR SLAB:
4. CONTRACTOR TO BUILD FOR CLASS V FLOOR PER A.C.I. 302-1R-96
5. CONCRETE SLAB TO HAVE STEEL FLOAT HARD TROWEL BURNISHED FINISH.
6. CONTRACTOR TO CURE SLAB TO BE WET CURING USING BURLINE FOR 7 DAYS MIN.
7. ALL EQUIPMENT & MOVING VEHICLES SHALL BE DIAPERED.
8. NO CRANES, CONCRETE TRUCKS, OR ANYTHING HEAVIER WILL BE PLACED ON THE SLAB.
9. SLAB TO BE FF50 FL35 MEASURED WITHIN 24 HOURS.
10. NO FLY ASH IN THE CONCRETE
11. WHERE INDICATED, PROVIDE VAPOR BARRIER (15MIL STEGO OR EQUAL) UNDER THE CONCRETE SLAB. PROVIDE SAND PER SOILS ENGINEER OR MANUFACTURER'S RECOMMENDATION.

CONCRETE SLAB IN FUTURE OFFICE AREAS, WHERE SAND OVER VIQUEEN ARE REQUIRED, SHALL BE NATURALLY HYDRATED WITHOUT USE OF BURLENE, CURING COMPOUND, OR RELEASE AGENTS.
CONTROL/CONSTRUCTION JOINTS SHALL NOT BE FILLED WITH MM-80 JOINT FILLER IN FUTURE OFFICE AREAS.
12. SEAL CONCRETE SLAB W/ "LIPIDOLITH SEALER

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

HPA architecture

hpa, inc.
18831 bardeen avenue - ste. #100 irvine, ca 92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:
THRIFTY OIL CO.
13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:
Perris North
SEC of Tobacco and Placentia
Riverside County CA

Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

Title: OVERALL FLOOR PLAN

Project Number: 22484
Drawn by: JK
Date:
Revision:
DAC 5TH SUBMITTAL 01/13/25

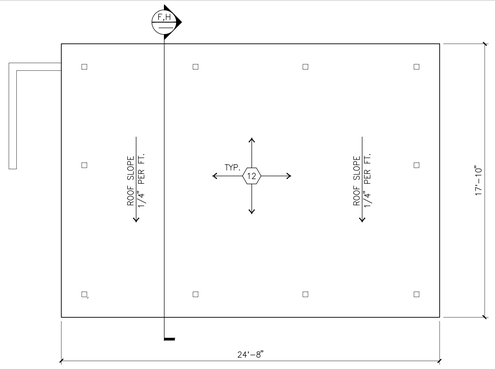
Sheet:
DAB-A2.1

CASE: PPT230048
EXHIBIT: D-Details
DATE: 6/25/25
PLANNER: KMason

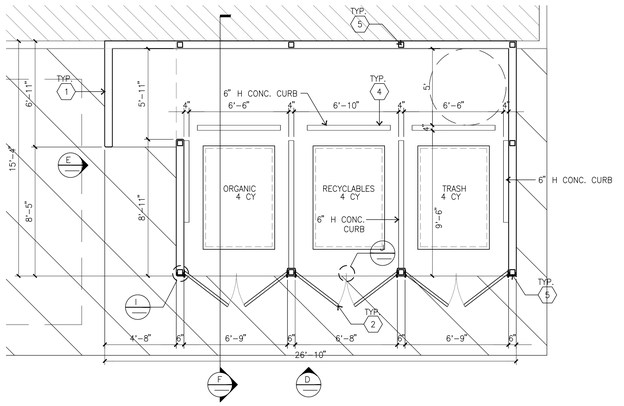
☐ Meeting ☐ Comment Agenda ☑ Final

KEYNOTES - TRASH ENCLOSURE

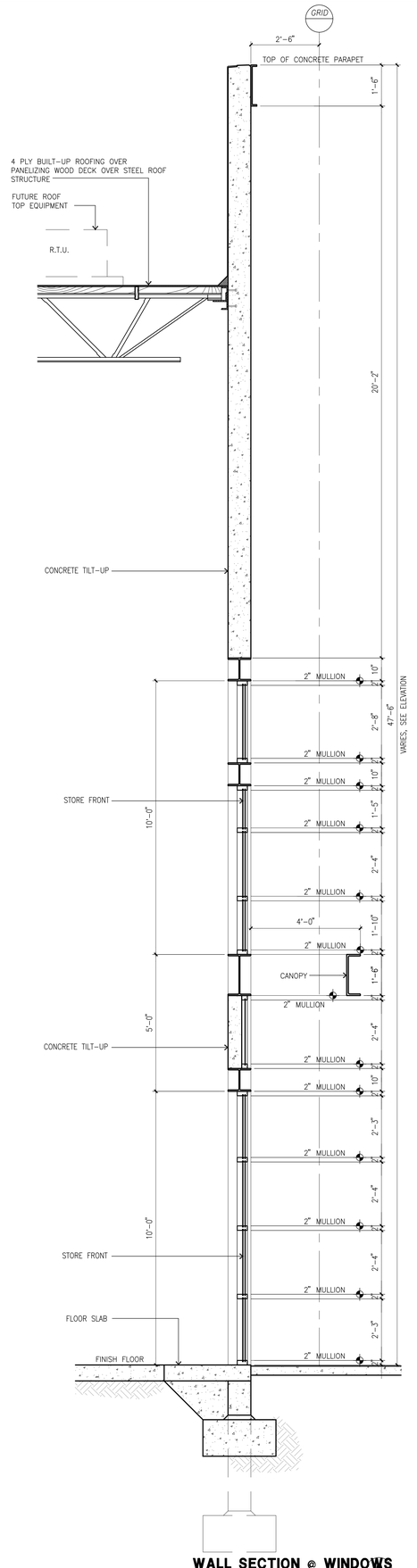
1. CONCRETE TILT-UP WALL. EXTERIOR COLOR AND FINISH TO MATCH BUILDING
2. DOUBLE SWING METAL GATES.
3. NOT USED.
4. 4"W X 6"H WHEEL STOPS WITH 1" BEVEL TOP CUTS, SHALL BE FROM RECYCLED MATERIALS. SECURED TO SLAB W/ 1/2" DIA. ANCHOR BLOTS @ 36" O.C. MIN. TYPICAL
5. STEEL TUBE FRAME PER "S" DRAWINGS.
6. 18 GA. X 1 1/2" DEEP G.I. STEEL DECKING WELDED TO STEEL FRAME AND 1 1/2" X 1 1/2" X 1/4" STEEL ANGLE CROSS BRACE.
7. FINISH SURFACE.
8. STEEL CANE BOLT W/ SLEEVE, LOCATED ON OUTSIDE OF ONE GATE. (TYPICAL EA. SIDE)
9. HEAVY DUTY STEEL HINGE. (TYPICAL EA. GATE)
10. HEAVY DUTY SLIDE BOLT. (TYPICAL EA. GATE)
11. METAL FASCIA
12. STANDING SEAM METAL ROOF
13. GUTTER



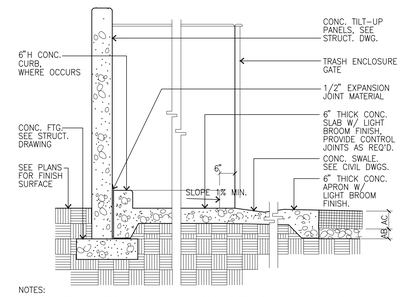
TRASH ENCLOSURE ROOF PLAN C
scale: 1/4"=1'-0"
SCALE: 1/4" = 1'-0" (0, 4', 8', 12')
TRUE NORTH



TRASH ENCLOSURE PLAN B
scale: 1/4"=1'-0"
SCALE: 1/4" = 1'-0" (0, 4', 8', 12')
TRUE NORTH

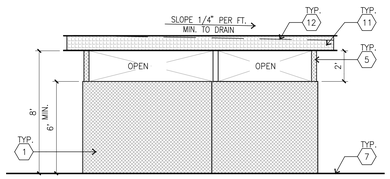


WALL SECTION @ WINDOWS A
scale: 1/2"=1'-0"

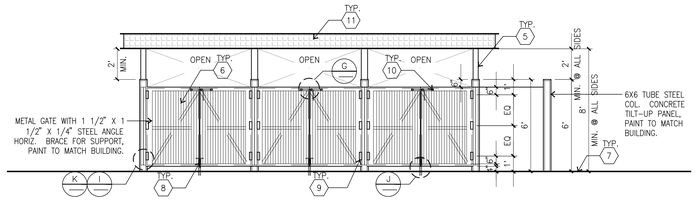


NOTES:
1. SEE SOILS REPORT FOR BELOW SLAB PREPARATIONS AND STEEL REINFORCEMENT RECOMMENDATIONS.

TRASH ENCLOSURE SECTION F
scale: 1/4"=1'-0"



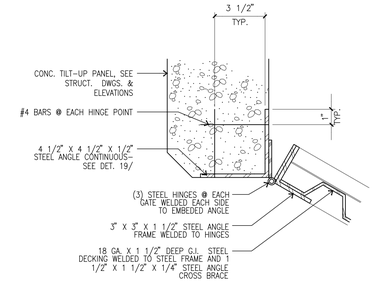
TRASH ENCLOSURE SIDE ELEVATION E
scale: 1/4"=1'-0"



TRASH ENCLOSURE GATE ELEVATION D
scale: 1/4"=1'-0"

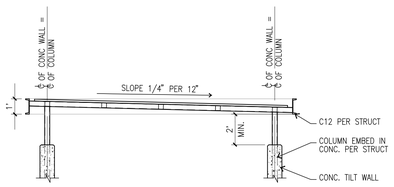
ELEVATION COLOR LEGEND/SCHED.

1. PAINT. COLOR : SW 7640 FAWN BRINDLE (247-C5)
2. PAINT. COLOR : SW 7075 WEB GRAY (235-C6)

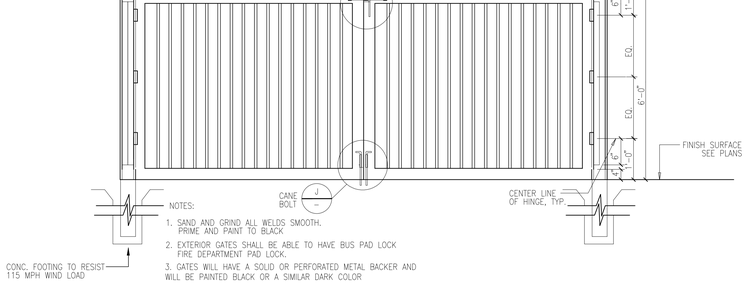


NOTES:
1. PAINT ALL METAL TO MATCH ENCLOSURE PER SPECIFICATIONS. UNLESS OTHERWISE NOTED ON ELEVATIONS

TRASH ENCLOSURE GATE AND HINGE I
scale: 3" = 1'-0"

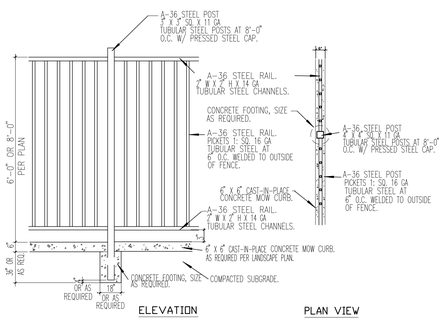


TRASH ENCLOSURE CANOPY DETAIL H
scale: 1/4"=1'-0"



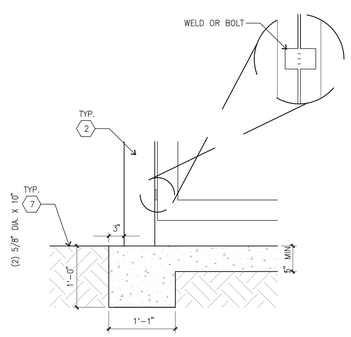
NOTES:
1. SAND AND GRIND ALL WELDS SMOOTH. PRIME AND PAINT TO BLACK
2. EXTERIOR GATES SHALL BE ABLE TO HAVE BUS PAD LOCK FIRE DEPARTMENT PAD LOCK.
3. GATES WILL HAVE A SOLID OR PERFORATED METAL BACKER AND WILL BE PAINTED BLACK OR A SIMILAR DARK COLOR

METAL SWING GATE G
scale: 1/2"=1'-0"

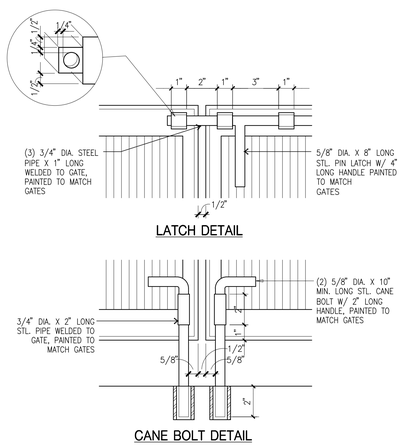


NOTES:
1. ALL TERMINAL POSTS TO BE 3"W X 3"D X 11GA STEEL TUBES W/ PRESSED STEEL CAP.
2. ALL FENCE COMPONENTS TO BE PRIMED AND POWDER COATED TO MATCH BLDG.
3. CONCRETE MOW CURB IS REQUIRED WHEN FENCE IS ADJACENT TO TURF AREAS ONLY. ALL OTHER PLANTER AREAS ADJACENT TO FENCE WILL NOT HAVE MOW CURB.
4. SAND AND GRIND ALL WELDS SMOOTH.

METAL FENCE L
scale: N.T.S



WALL FOOTING K
scale: N.T.S



TRASH ENCLOSURE GATE LATCHES J
scale: 3" = 1'-0"

LEGEND

- BROWN = BUILDING & SAFETY GRADING DIVISION COMMENTS
- PURPLE = PLANNING DEPARTMENT COMMENTS
- GREEN = ENVIRONMENTAL PROGRAMS DEPARTMENT COMMENTS
- LIGHT ORANGE = TRANSPORTATION DEPARTMENT COMMENTS
- BLUE = FLOOD CONTROL DISTRICT COMMENTS
- LIGHT GREEN = REGIONAL PARKS & OPEN SPACE DISTRICT COMMENTS
- RED = FIRE DEPARTMENT COMMENTS
- YELLOW = ENVIRONMENTAL HEALTH DEPARTMENT COMMENTS
- LIGHT BLUE = BUILDING & SAFETY PLAN CHECK COMMENTS
- ORANGE = WASTE MANAGEMENT DEPARTMENT COMMENTS

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

HPA architecture

hpa, inc.
18831 bardeen avenue - ste. #100 irvine, ca 92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

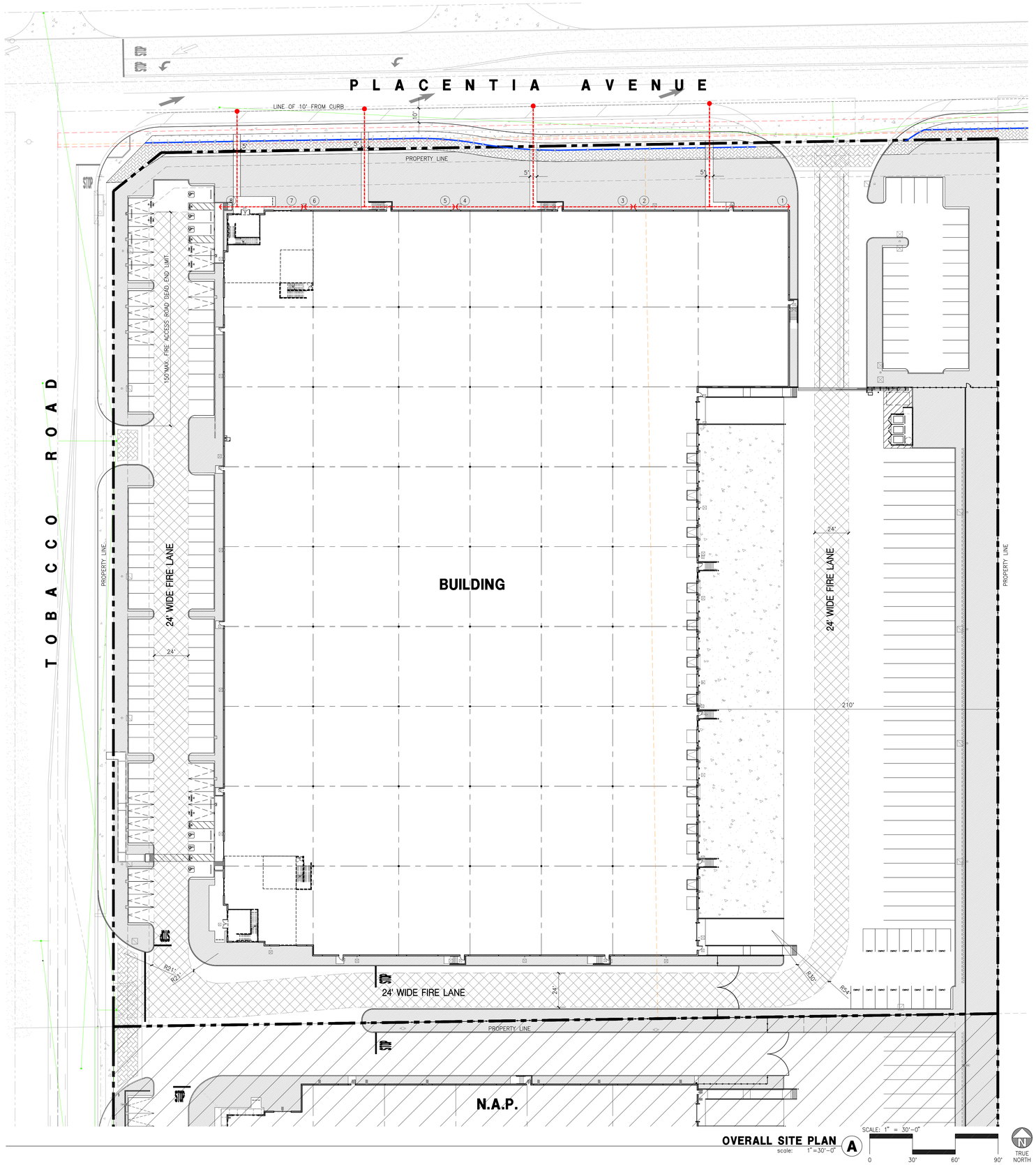
Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

Title:	DETAILS
Project Number:	22484
Drawn by:	JK
Date:	
Revision:	
DAC 5TH SUBMITTAL	01/13/25

Sheet:

DAB-A4.2



OVERALL SITE PLAN A
scale: 1"=30'-0"

SCALE: 1" = 30'-0"
0 30' 60' 90'
TRUE NORTH

FIRE HOSE PULL LENGTH

1	129'
2	126'
3	140'
4	126'
5	132'
6	110'
7	114'
8	79'

XX SEGMENT ID

ONE HOSE PULL SEGMENT

TRAIL FENCE

CASE: PPT230048
EXHIBIT: F-Fire Access
DATE: 6/25/2025
PLANNER: KMason

☐ Meeting ☐ Comment Agenda ☑ Final

HPA architecture

hpa, inc.
18831 bardeen avenue - ste. #100 irvine, ca 92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

Title: FIRE ACCESS PLAN

Project Number:	22484
Drawn by:	JK
Date:	
Revision:	
DAC 5TH SUBMITTAL	01/13/25

Sheet:

DAB-A1.1A

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

PLACENTIA AVENUE

APN: 317-240-001
OWNER: CHANDLERS SUB REVISED

APN: 317-240-021
OWNER: CHANDLERS SUB REVISED

16+63.70
1553.21 FS
℄ PER IP 200047

1/2-STREET IMPROVEMENTS
WIDEN 17' W/6" C&G PER
RECORD STD. 94 (15' EX.)
AC PER IP200047 SPP DELTA 3

JOIN EX. 36" RCP LATERAL H-10.1
PER RCFCD & WCD PLAN DWG.
NO. 4-1173 & INSTALL NEW SDMH NO. 2

3' TRAIL EASEMENT

LIMIT OF TRAIL EASEMENT

UNDER SIDEWALK DRAIN 3" MIN.

INFILTRATION BASIN

24" CMP RISER

18" RCP S.D.

6" RCP S.D.

24" RCP S.D.

9 RISERS @ 0.49'=4.48'

13 RISERS @ 0.49'=6.38'

12 RISERS @ 0.48'=5.78'

5 RISERS @ 0.47'=2.75'

3 RISERS @ 0.44'=1.32'

OFFICE

8.0% RAMP

3.0% RAMP

ADA P.O.T.

PROP. RETAINING WALL
HEIGHT VARIES 4' MAX. TO 6" MIN.

PROP. RETAINING WALL
HEIGHT VARIES 4' MAX. TO 6" MIN.

APN:317-260-017

FF=50.50 TO 48.55
PAD=49.75 TO 47.80
S=0.50%
SLOPING FF/PAD

APN:317-260-018

APN: 317-260-034
OWNER: CITY OF RIVERSIDE
PERRIS-COUNTY PARCEL

APN: 317-260-004
OWNER: SERRANO SILVANO

APN: 317-260-005
OWNER: OAKS AND SAWERS SUB

APN: 317-260-016
OWNER: THRIFTY OIL COMPANIES
PERRIS -SOUTH PARCEL

TOBACCO ROAD

EX. EDGE OF PAVEMENT
EX. FENCE
PROP. AC DIKE
EX. P.P. TO BE UNDERGROUNDED
PROP. CATCH BASIN
EX. R/W
EX. EDGE OF PAVEMENT
EX. FENCE
EX. P.P. TO BE UNDERGROUNDED
PROP. AC DWY
EX. P.P. TO BE UNDERGROUNDED
EX. STREET IMPROVEMENTS PLUS 18' OF AC WIDENING PER PPT 220047
PROP. AC DWY
EX. R/W

PLOT PLAN :
COUNTY OF RIVERSIDE
CASE NO: 230048

SECTION A-A
NTS

PROP. TRUCK YARD PARKING
2-FT. BENCH
23'±
PROP. 6" C&G
PROP. 12' HIGH PERIMETER CONC. TILT UP WALL 5' MIN. TO DAYLIGHT
PROP. RIP RAP & GALVANIZED SCUPPER SLEEVE*
PROP. FILL SLOPE
PROP. CMU WALL & W.I. FENCE*
*SEE WELLNESS CENTER (IP240026) FOR IMPROVEMENTS ALONG EASTERN ℄
F.M.#0541-001-2596-1

SECTION B-B
NTS

W'LY R/W
C.L. TOBACCO RD.
E'LY R/W
26'
33'
15'
24'
9'
3'
7'
6'
5'
EXISTING AC PAVING
PROP. REDWOOD HEADER 2.0%
PROP. TOBACCO RD. STREET IMPROVEMENTS 2.0%
S/W 1.5%
L.A.
INTERIM CONDITION 8' GRADED SHOULDER & SWALE
PROP. 3:1 MAX.

SECTION C-C
NTS

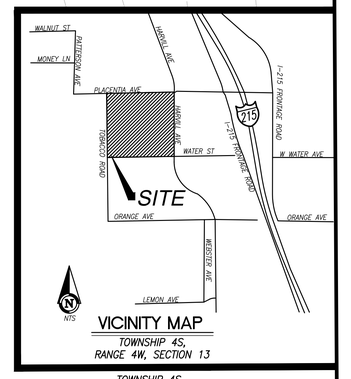
S'LY R/W
N'LY R/W
38.50' to 44.50' BLDG. LNDSCP SETBACK
53'
50'
EX. ½ ST. R/W
MODIFIED COR STD 405
21'
32'
32'
18'
3' BUFFER
8'
DG TRAIL
5'
LNDSCP
6'
S/W
PROP. C/G
PCC HEADER
PROP. SPLIT RAIL PVC FENCE
PLACENTIA AVE

EXCEPTIONS: APN 317-260-017

1. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: CALIFORNIA ELECTRIC POWER COMPANY, A CORPORATION
PURPOSE: POLE LINES, CONDUITS OR UNDERGROUND FACILITIES
RECORDING DATE: NOVEMBER 24, 1944
RECORDING NO: IN BOOK 648, PAGE 500 OF OFFICIAL RECORDS
AFFECTS: SAID LAND MORE PARTICULARLY DESCRIBED THEREIN (NOTE: EASEMENT WIDTH NOT SPECIFIED IN SAID DOCUMENT, RECOMMEND CHECK WITH TITLE COMPANY FOR EASEMENT TO BE QUITCLAIMED OR REMOVED : WILLIAM BROOKS)
4. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: CALIFORNIA WATER AND TELEPHONE COMPANY, A CORPORATION
PURPOSE: POLE LINES, CONDUITS OR UNDERGROUND FACILITIES
RECORDING DATE: SEPTEMBER 18, 1961
RECORDING NO: AS INSTRUMENT NO. 79974 OF OFFICIAL RECORDS
AFFECTS: SAID LAND MORE PARTICULARLY DESCRIBED THEREIN (NOTE: WITHIN ULTIMATE 50' R/W DEDICATION OF PLACENTIA AVE.) WILLIAM BROOKS

UTILITY PURVEYORS

WATER:	EASTERN MUNICIPAL WATER DISTRICT
SEWER:	EASTERN MUNICIPAL WATER DISTRICT
ELECTRIC:	SOUTHERN CALIFORNIA EDISON
GAS:	SOUTHERN CALIFORNIA GAS COMPANY
CABLE:	CHARTER
TELE:	FRONTIER
WATSE:	WASTE MANAGEMENT



VICINITY MAP
TOWNSHIP 4S,
RANGE 4W, SECTION 13

TOWNSHIP 4S,
RANGE 4W, SECTION 13

APPROXIMATE GROSS LAND AREA:	APPROXIMATE NET LAND AREA:
APN: 317-260-017-9.19 AC APN: 317-260-018-0.429 AC	APN: 317-260-017-8.27 AC APN: 317-260-018-0.406 AC

DEDICATION DATA

PARCEL	GROSS ACREAGE	DEDICATED ACREAGE	NET ACREAGE
017	9.19 ACRES	0.92 ACRES	8.27 ACRES
018	0.429 ACRES	0.023 ACRES	0.406 ACRES
TOTAL GROSS ACREAGE = 9.61		TOTAL DEDICATION ACREAGE = 0.943	TOTAL NET ACREAGE = 8.68

TOTAL OFFSITE STREET IMPROVEMENTS (IMPACT AREA) = 0.433 ACRES

LEGEND

- PROPOSED ASPHALT CONCRETE & BASE (STREET WIDENING)
- EX. ASPHALT CONCRETE & BASE (PER PPT220047)
- PROPOSED PCC SIDEWALK / CURB & GUTTER
- EXISTING D.G. MULTIPURPOSE TRAIL
- EXISTING LANDSCAPE BUFFER
- PROPOSED LANDSCAPING
- EX. ASPHALT CONCRETE

CB	CATCH BASIN	-S-	SEWER
FH	FIRE HYDRANT	-OH-	OVERHEAD ELECTRICAL
SMH	SEWER MANHOLE	-W-	WATER
SDMH	STORM DRAIN MANHOLE	590	EXISTING GROUND CONTOUR
WV	WATER VALVE		CENTERLINE
	EXISTING TREE		R/W LINE
-X-	CHAINLINK FENCE		BOUNDARY
-COM-	COMMUNICATIONS		RETAINING WALL

ABBREVIATIONS

AC	ASPHALT CONCRETE	N	NORTH
℄	CENTERLINE	OH-C	OVERHEAD CONDUIT
C&G	CURB & GUTTER	PCC	PORTLAND CEMENT CONCRETE
COMM.	COMMUNICATION	℘	PROPERTY LINE
CONC.	CONCRETE	PROP.	PROPOSED
DIA.	DIAMETER	R	RANGE
DWG.	DRAWING	RCFC&WCD	RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
E	EAST	R.W.	RETAINING WALL
EXIST.	EXISTING	R/W	RIGHT-OF-WAY
F.F.	FINISHED FLOOR	S	SOUTH
F.G.	FINISHED GRADE	SCE	SOUTHERN CALIFORNIA EDISON
F.H.	FIRE HYDRANT	SD	STORM DRAIN
F.L.	FLOW LINE	SS	SANITARY SEWER
F.S.	FINISHED SURFACE	FW	FIRE WATER
G.B.	GRADE BREAK	T	TOWNSHIP
G.N.V.	GROUND NOT VISIBLE	TC	TOP OF CURB
H	HEIGHT	T.O.C.	THRIFTY OIL COMPANY
L.A.	LANDSCAPE AREA/LANDSCAPE ARCH.	TE	TRASH ENCLOSURE

EARTHWORK QUANTITIES
CUT = 3,500 CU. YD.
FILL = 65,525 CU. YD.
NET RAW IMPORT = 62,025 CU. YD.

SCALE 1" = 30'

CASE: PPT230048
EXHIBIT: G-Grading
DATE: 6/25/2025
PLANNER: KMason
☐ Meeting ☐ Comment Agenda ☑ Final

DAC 5TH SUBMITTAL: PPT 230048

PREPARED BY:
Armstrong & Brooks Consulting Engineers, Inc.
Civil Engineering · Water Resources · Surveying
1350 E. Chase Drive. Corona, CA 92881
Mail: P.O. Box 78088, Corona, CA 92887
Ph. (951) 372-8400, Fax (951) 372-8430

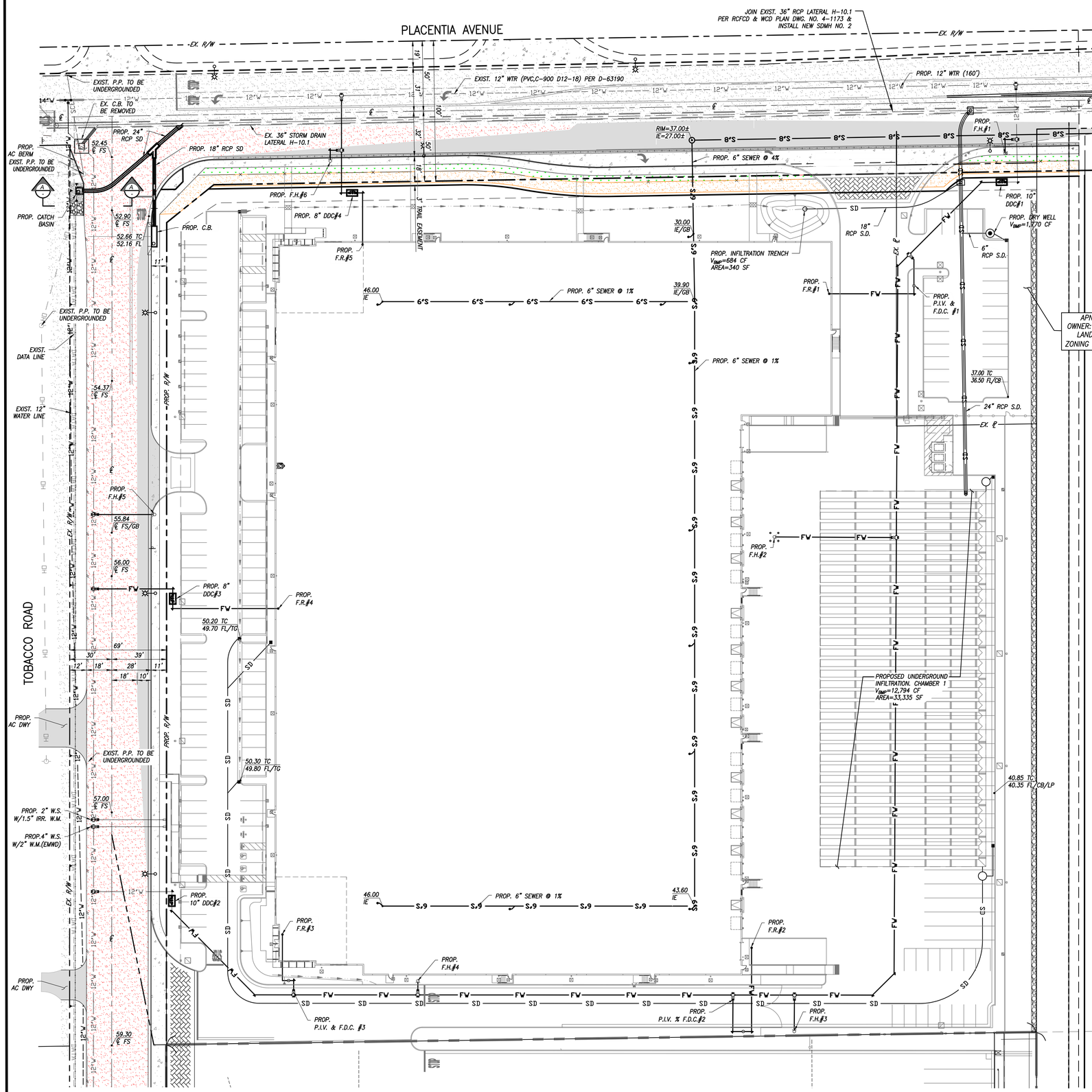
REGISTERED PROFESSIONAL ENGINEER
WILLIAM D. BROOKS
No.C53114
Exp. 6/30/25
CIVIL
STATE OF CALIFORNIA

THE ORDEN COMPANY - PERRIS NORTH SITE
CONCEPTUAL GRADING PLAN
INDUSTRIAL BLDG. SCHEME 10
APN'S 317-260-017 AND 317-260-018

SHEET 1 OF 4

G:\ORDEN\PERRIS NORTH\CAD\GP\317-GDP-01 SCHEME 10.DWG 5/1/25

PLOT PLAN : COUNTY OF RIVERSIDE CASE NO: 230048



UTILITY PURVEYORS

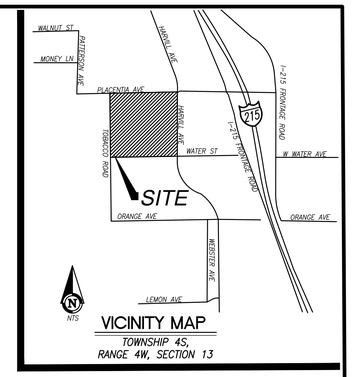
WATER:	EASTERN MUNICIPAL WATER DISTRICT
SEWER:	EASTERN MUNICIPAL WATER DISTRICT
ELECTRIC:	SOUTHERN CALIFORNIA EDISON
GAS:	SOUTHERN CALIFORNIA GAS COMPANY
CABLE:	CHARTER
TELE:	FRONTIER
WATSE:	WASTE MANAGEMENT

FIRE FLOW DEMAND
4,000 GPM FOR 4 HOURS (ESTIMATE)

DOMESTIC WATER DEMAND
102 GPM PEAK EST.

IRRIGATION DEMAND
42 GPM PEAK EST.

SANITARY SEWER
33 GPM PEAK EST.



VICINITY MAP
TOWNSHIP 4S, RANGE 4W, SECTION 13

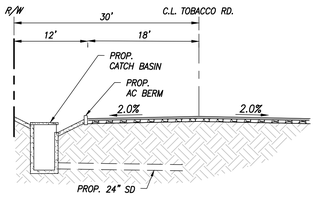
LEGEND

- PROPOSED ASPHALT CONCRETE & BASE (STREET WIDENING)
- EX. ASPHALT CONCRETE & BASE
- PROPOSED PCC SIDEWALK / CURB & GUTTER
- EXISTING D.G. MULTIPUPROSE TRAIL
- EXISTING LANDSCAPE BUFFER
- EX. ASPHALT CONCRETE

CB	CATCH BASIN
FH	FIRE HYDRANT
SMH	SEWER MANHOLE
SDMH	STORM DRAIN MANHOLE
WV	WATER VALVE
	EXISTING TREE
-X-	CHAINLINK FENCE
-COM-	COMMUNICATIONS
-S-	SEWER
-OH-	OVERHEAD ELECTRICAL
-W-	WATER
590	EXISTING GROUND CONTOUR
	CENTERLINE
	R/W LINE
	BOUNDARY
	RETAINING WALL

ABBREVIATIONS

AC	ASPHALT CONCRETE	N	NORTH
℄	CENTERLINE	OH-C	OVERHEAD CONDUIT
C&G	CURB & GUTTER	PCC	PORTLAND CEMENT CONCRETE
COMM.	COMMUNICATION	ℙ	PROPERTY LINE
CONC.	CONCRETE	PROP.	PROPOSED
DIA.	DIAMETER	R	RANGE
DWG.	DRAWING	RCFC&WCD	RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
E	EAST		
EXIST.	EXISTING	R.W.	RETAINING WALL
F.F.	FINISHED FLOOR	R/W	RIGHT-OF-WAY
F.G.	FINISHED GRADE	S	SOUTH
F.H.	FIRE HYDRANT	SCE	SOUTHERN CALIFORNIA EDISON
F.L.	FLOW LINE	SD	STORM DRAIN
F.S.	FINISHED SURFACE	SS	SANITARY SEWER
FW	FIRE WATER	T	TOWNSHIP
G.B.	GRADE BREAK	TC	TOP OF CURB
G.N.V.	GROUND NOT VISIBLE	T.O.C.	THRIFTY OIL COMPANY
H	HEIGHT	TE	TRASH ENCLOSURE
L.A.	LANDSCAPE AREA/LANDSCAPE ARCH.		



SECTION A-A
NTS

DAC 5TH SUBMITTAL: PPT 230048

SCALE 1" = 30'

PREPARED BY:
Armstrong & Brooks Consulting Engineers, Inc.
Civil Engineering · Water Resources · Surveying
1350 E. Chase Drive. Corona, CA 92881
Mail: P.O. Box 78088, Corona, CA 92887
Ph. (951) 372-8400, Fax (951) 372-8430

REGISTERED PROFESSIONAL ENGINEER — WILLIAM D. BROOKS — Exp. 6/30/25 — CIVIL — STATE OF CALIFORNIA

THE ORDEN COMPANY - PERRIS NORTH SITE
ONSITE COMPOSITE UTILITY PLAN
INDUSTRIAL BLDG. SCHEME 10
APN'S 317-260-017 AND 317-260-018

SHEET 2 OF 4

G:\ENGPROJECTS\ORDEN CO_PERRIS NORTH\CAD\DP2317-DDP-02-COMPOSITE UTILITIES 1.DWG

PLOT PLAN : COUNTY OF RIVERSIDE CASE NO: 230048

PLACENTIA AVENUE

DEDICATED BY OTHERS

PROP. AC BERM

EXIST. P.P. TO BE UNDERGROUNDED

PROP. CATCH BASIN

PROP. 6' S/W

PROP. 6' S/W

PROP. R/W

8' TRAIL W/ 2' BUFFER

6' SIDEWALK BY WELLNESS CENTER & PPT #230047

8' TRAIL W/ 2' BUFFER BY WELLNESS CENTER & PPT #230047

8' MULTIPURPOSE TRAIL W/ 2' BUFFER

PROP. 8" VCP SEWER CONNECTION TO TEMP. CLEANOUT (D-73240)

PROP. R/W

1/2-STREET IMPROVEMENTS WIDEN 17-FEET W. 6-INCH C & G PER RCRD STD. 94 (15-FEET EXIST.) PAVEMENT PER IP200047 SPP DELTA 3

APN: 317-260-018
OWNER: PRIVATE RESIDENCE
LAND USE : RC-VLDR
ZONING : R-R-1, CZ #6312

APN: 317-260-017
OWNER: THRIFTY OIL COMPANY
PERRIS - NORTH PARCEL
LAND USE : RC-VLDR
ZONING : R-R-1, CZ #6312

PROPOSED UNDERGROUND STORM DRAIN CHAMBER

PROP. 8" VCP SEWER PER RUHS WELLNESS CENTER (D-73240)

TRAIL & STREET IMPROVEMENTS BY THE WELLNESS CENTER & PPT#230047

1/2-STREET IMPROVEMENTS PLUS 18' OF AC WIDENING PER RCRD STD. 111

PROP. AC DWY

EXIST. P.P. TO BE UNDERGROUNDED

APN: 317-260-005
OWNER: SERRANO SILVANO
LAND USE : RC-VLDR
ZONING : R-R-1, CZ #6312

PROP. AC DWY

15' DEDICATION FOR TRAIL SYSTEM

PROPOSED STORM DRAIN LATERAL H-10, R.C.F.C. & W.C.D. MDP - (L=1384± L.F.)

APN: 317-260-034
OWNER: COUNTY OF RIVERSIDE
PERRIS-COUNTY PARCEL
LAND USE : BP
ZONING : M-SC

TOBACCO ROAD

HARVILL AVENUE

APN: 317-260-014
OWNER: ESQUIRE JEAN PIERRE
LAND USE : RC-VLDR
ZONING : A-1-1, CZ #6312

APN: 317-260-016
OWNER: THRIFTY OIL COMPANY
PERRIS -SOUTH PARCEL
LAND USE : BP
ZONING : I-P, CZ NUMBER 5676

PPT#220047

PROPOSED UNDERGROUND STORM DRAIN CHAMBER

APN: 317-260-015
OWNER: THRIFTY OIL COMPANY
PERRIS-SOUTH PARCEL (VACATED R/W)
LAND USE : BP
ZONING : I-P, CZ NUMBER 5676

TRAIL & STREET IMPROVEMENTS BY THE WELLNESS CENTER & PPT#230047

PROP. 6' S/W

PROPOSED 36" STORM DRAIN (L=665± L.F.) R.C.D.F.C. & W.C.D. LATERAL H-10 MDP SD)

PROPOSED 8" SEWER LINE (L=1245± L.F.) TO HARVILL AVE. TIE-IN (EMWD SEWER)

PROP. 6' S/W

℄ TOBACCO ROAD ESTABLISHED AT RECORD ANGLE TO WATER ROAD PER R1

EMERGENCY PCC DROP INLET PER RCFC/WCD STD. CB110

PROPOSED CONCRETE DROP INLET PER RCFC/WCD STD. CB110 W=12', A=4', V =7', H=1.5' (SEE SECTION ON SHEET 3) Q100=134.4 CFS, Q10=88.0 CFS OFF-SITE DRAINAGE STUDY TO BE SUBMITTED FOR REVIEW

GRADED RIP-RAP LINED SWALE UPSTREAM OF DROP INLETS PER RIV. COUNTY STD. NO. 314

1/2-STREET IMPROVEMENTS PLUS 18' OF AC WIDENING PER RCRD STD. 111

WATER STREET

JOIN EXIST. 36" RCP MANHOLE STUB-OUT (PER PPT220002) & PROP. STREET IMP. PER PP

PROPOSED 8" VCP SEWER LINE (L=1245±) PER EMWD STDS.

EXIST. 8" VCP SEWER STUB-OUT JOIN LOCATION

APN: 317-270-002
OWNER: SSR INV CO
LAND USE : BP
ZONING : I-P, CZ #7830

APN: 317-270-015
OWNER: BCIF HARVILL BUSINESS CENTER LP
LAND USE : BP
ZONING : M-SC

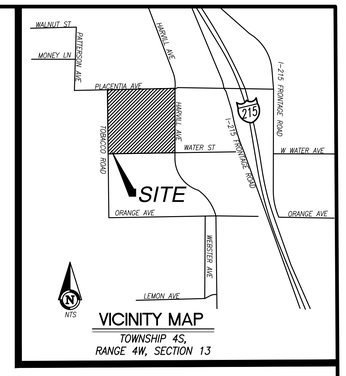
SCALE 1" = 60'

LAND AREA DEDICATION SUMMARY			
PARCEL	GROSS ACREAGE	DEDICATED ACREAGE	NET ACREAGE
017	9.19 ACRES	0.92 ACRES	8.27 ACRES
018	0.429 ACRES	0.023 ACRES	0.406 ACRES
TOTAL GROSS ACREAGE = 9.61		TOTAL DEDICATION ACREAGE = 0.943	TOTAL NET ACREAGE = 8.68

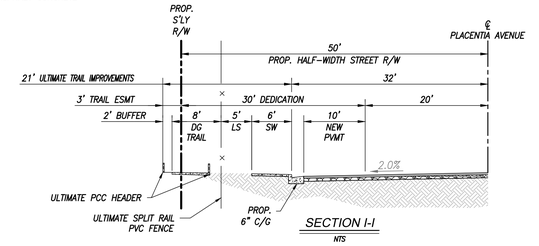
TOTAL OFFSITE STREET IMPROVEMENTS (IMPACT AREA) = 0.433 ACRES

LEGEND

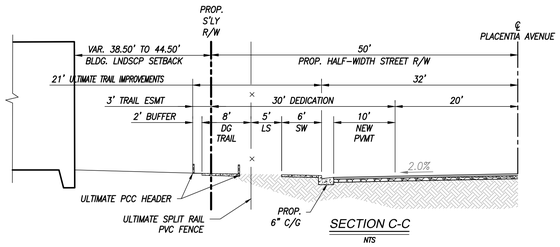
- PROPOSED ASPHALT CONCRETE & BASE (STREET WIDENING)
- EX. ASPHALT CONCRETE & BASE
- PROPOSED PCC SIDEWALK / CURB & GUTTER
- EXISTING D.G. MULTIPURPOSE TRAIL
- EXISTING LANDSCAPE BUFFER
- EX. ASPHALT CONCRETE



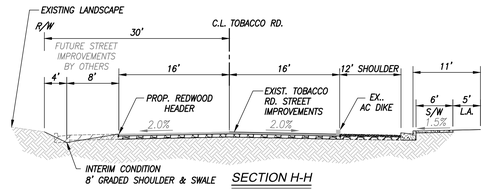
VICINITY MAP
TOWNSHIP 4S, RANGE 4W, SECTION 13



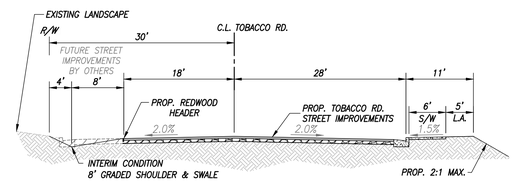
SECTION I-I
NTS



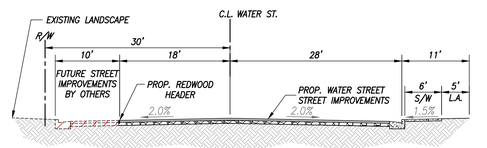
SECTION C-C
NTS



SECTION H-H
NTS



SECTION F-F (IMPROVEMENTS PER PPT 220047)
NTS



SECTION G-G (IMPROVEMENTS PER PPT220047)
NTS

TOBACCO ROAD & PLACENTIA AVENUE IMPROVEMENTS
SEE SHEET NO. 4 FOR TRUCK TURNING MOVEMENTS

SAC 5TH SUBMITTAL: PPT 230048

PREPARED BY:
Armstrong & Brooks Consulting Engineers, Inc.
Civil Engineering · Water Resources · Surveying
1350 E. Chase Drive, Corona, CA 92881
Mail: P.O. Box 78088, Corona, CA 92887
Ph. (951) 372-8400, Fax (951) 372-8430

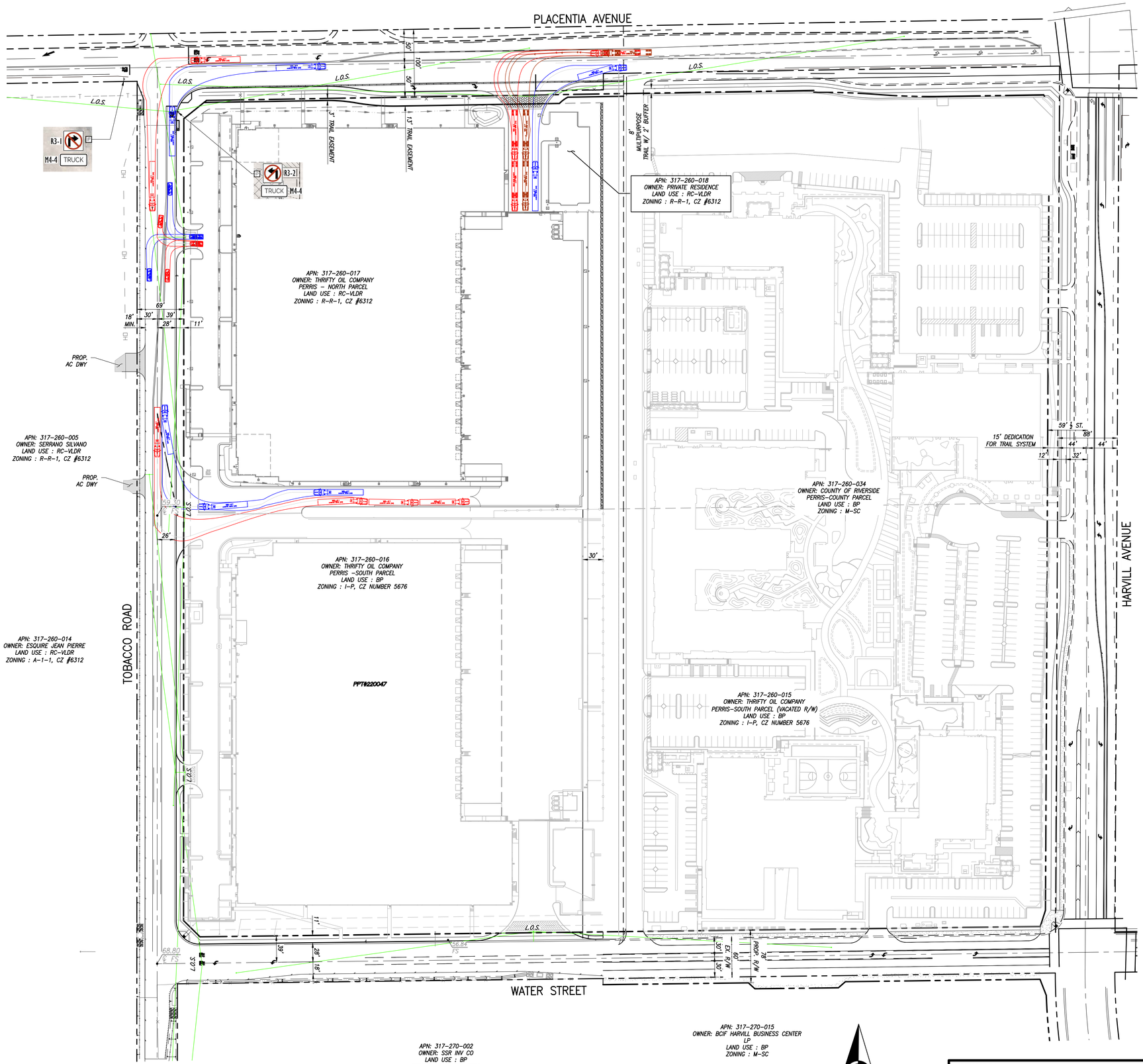
REGISTERED PROFESSIONAL ENGINEER — CLINTON D. BROOKS — No. 56616 — Exp. 6/30/25 — CIVIL — STATE OF CALIFORNIA

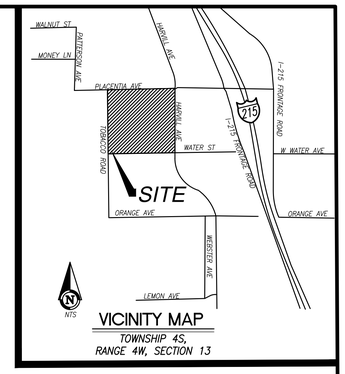
THE ORDEN COMPANY - PERRIS NORTH SITE
OFF-SITE IMPROVEMENT EXHIBIT
INDUSTRIAL BLDG. SCHEME 10
APN'S 317-260-017 AND 317-260-018

SHEET 3 OF 4

\\PROJECTS\ORDEN COMPANY_PERRIS NORTH\CAD\CUP\317-CUP-03-OFFSITE IMPROVEMENTS.DWG 5/1/23

PLOT PLAN : COUNTY OF RIVERSIDE CASE NO: 230048





VICINITY MAP

TOWNSHIP 4S,
RANGE 4W, SECTION 13

DAC 5TH SUBMITTAL: PPT 230048

PREPARED BY:

Armstrong & Brooks Consulting Engineers, Inc.
Civil Engineering · Water Resources · Surveying
1350 E. Chase Drive. Corona, CA 92881
Mail: P.O. Box 78088, Corona, CA 92887
Ph. (951) 372-8400, Fax (951) 372-8430

REGISTERED PROFESSIONAL ENGINEER
WILLIAM D. BROOKS
No. C53114
Exp. 6/30/25
CIVIL
STATE OF CALIFORNIA

THE ORDEN COMPANY - PERRIS NORTH SITE

OFFSITE TRUCK TURNING MOVEMENTS

INDUSTRIAL BLDG. SCHEME 10

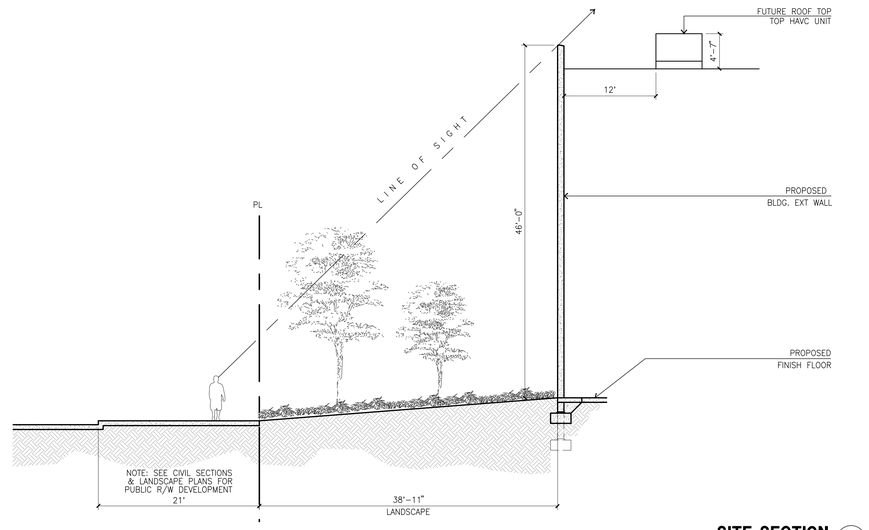
APN'S 317-260-017 AND 317-260-018

SHEET 4 OF 4

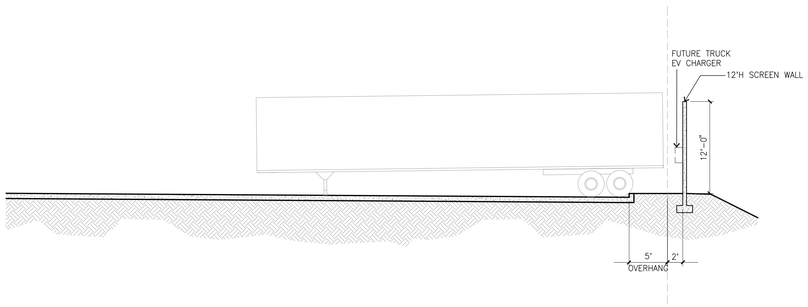
P:\ORDEN COMPANY\PERRIS NORTH\CAD\CUP\317-CUP-04-TRUCK TURNING TIER 4.DWG 5/1/23

CASE: PPT230048
EXHIBIT: H- Line of Sig
DATE: 6/25/2025
PLANNER: KMason

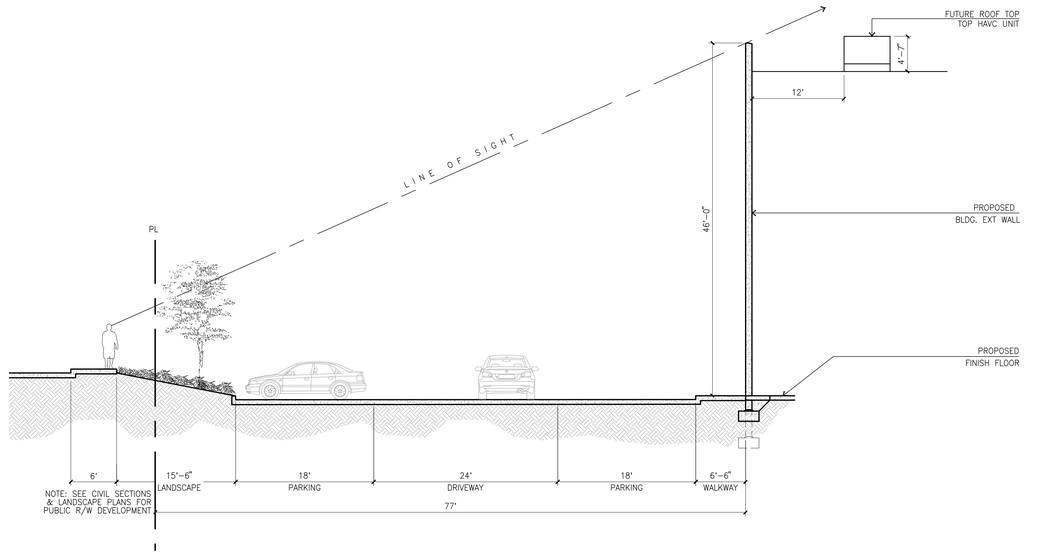
☐ Meeting ☐ Comment Agenda ☑ Final



SITE SECTION A
scale: 1/8" = 1'-0"

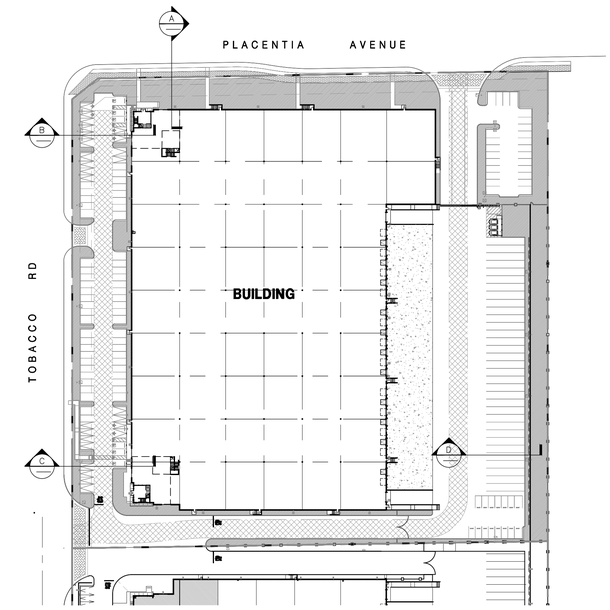


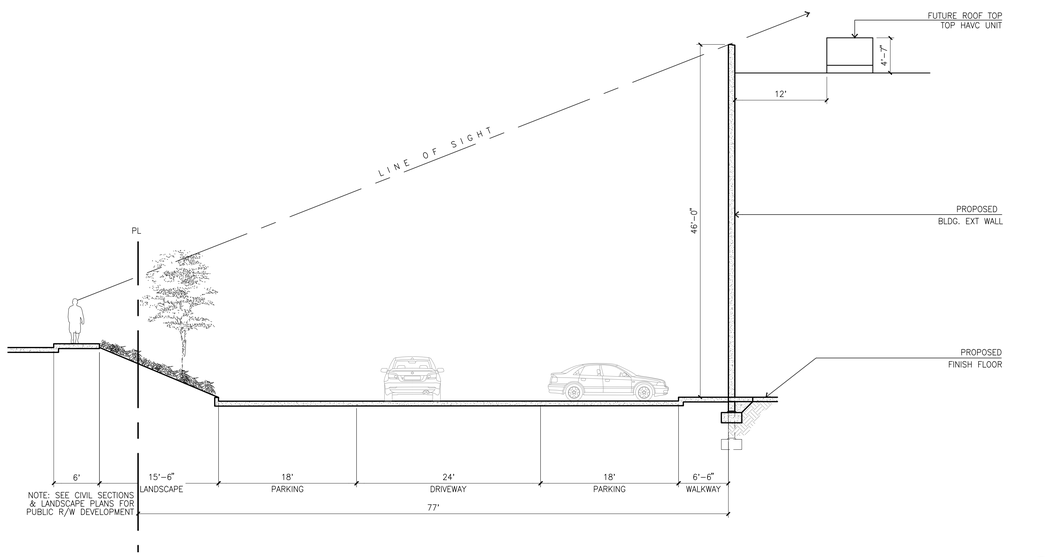
SITE SECTION @ OVERHANG D
scale: 1/8" = 1'-0"



SITE SECTION B
scale: 1/8" = 1'-0"

KEYMAP





SITE SECTION C
scale: 1/8" = 1'-0"

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

HPA architecture

hpa, inc.
18831 bardeen avenue - ste.
#100 irvine, ca
92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

Title: SITE SECTIONS

Project Number:	22484
Drawn by:	JK
Date:	

Revision:

DAC 5TH SUBMITTAL	01/13/25

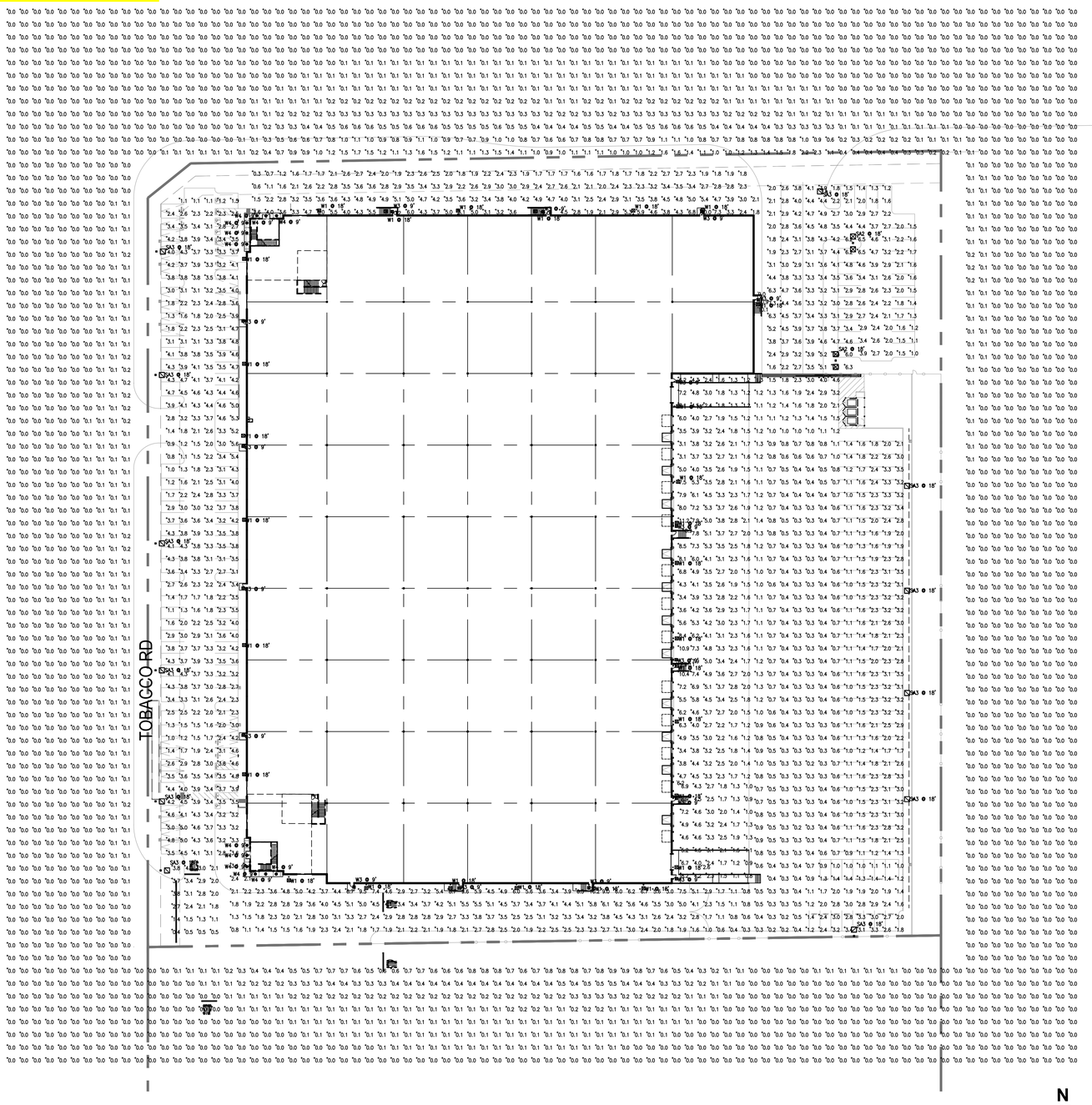
Sheet:

DAB-A4.1

CASE: PPT230048
EXHIBIT: P-Photometric
DATE: 6/25/2025
PLANNER: KMason

☐ Meeting ☐ Comment Agenda ☑ Final

PLACENTIA AVENUE



ELECTRICAL SITE PHOTOMETRIC PLAN

SCALE: 1"=40'-0"

1

N

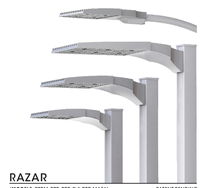
SOLID STATE AREA LIGHTING

RAZAR SERIES-LED

S P E C I F I C A T I O N S

PROJECT NAME:

PROJECT TYPE:



OPTICAL HOUSING
Heavy cast low copper aluminum (A356 alloy; <0.2% copper) assembly with integral cooling fins. The Optical Panel mounting surface is milled flat (surface variance +/- .002") to facilitate thermal transfer of heat to housing and cooling fins. Solid barrier wall separates optical and electrical compartments. The optical and electrical compartments are integrated to create one assembly. Minimum wall thickness is .188".

ELECTRICAL HOUSING w/ INTEGRATED ARM
Heavy cast low copper aluminum (A356 alloy; <0.2% copper) assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photocell receptacle. Solid barrier wall separates optical and electrical compartments. The electrical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188". Cast and hinged driver assembly cover is integrated with wiring compartment cover.

PLED® OPTICS
Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer post and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-refractor inside the refractor re-directs the house side emitter output towards the street side and functions as a house side shielding element. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments.

LED DRIVER(S)
Constant current electronic with a power factor of > 90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized and mounted directly against the Electrical Housing to facilitate thermal transfer, held down by universal clamps to facilitate easy removal. In-line terminal blocks facilitate wiring of (2) 18 AWG conductors for power and control input. (120-277V, 50/60Hz or 347V-480V, 50/60Hz.) 0-10V dimmable driver is standard. Driver has a minimum of 2.5KV internal surge protection. Luminaire supplied with 20KV surge protector for field accessible installation.)

LED EMITTERS
High output LED's are utilized with drive currents ranging from 350mA to 1050mA. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

AMBER LED's
PCA (Phosphor Converted Amber) LED's utilize phosphors to create color output similar to LPS lamps and have a slight output in the blue spectral bandwidth. **TRA** (True Amber) LED's utilize material that emits light in the amber spectral bandwidth only without the use of phosphors.

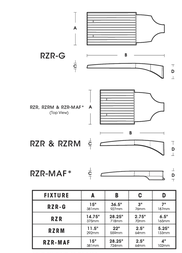
FINISH
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step media blast and iron phosphate pretreatment for protection and paint adhesion. 400°F bake for maximum hardness and durability.

MAST ARM FITTER/ELECTRICAL HOUSING
Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each encircle the lower half of the tenon. Upper half of the tenon rests on self-centering steps that position the angle of the luminaire at 0°, +1.5°, +1.5 or +3° up from the horizontal. All hardware is stainless steel.

RAZAR

(MODELS- RZRM, RZR, RZR-G & RZR-MAF*)

PATENT PENDING



FIXTURE	A	B	C	D
RZR-G	18" (457mm)	36.5" (927mm)	9" (229mm)	7" (178mm)
RZR	14.75" (375mm)	28.25" (718mm)	2.75" (70mm)	6.5" (165mm)
RZRM	11.5" (292mm)	22" (559mm)	2.5" (64mm)	6.25" (159mm)
RZR-MAF	19" (483mm)	28.25" (718mm)	2.5" (64mm)	6" (152mm)

*DLC PENDING AS OF 7/17

2018358

U.S. Architectural Lighting

660 West Avenue O, Palmdale, CA 93551
Phone (661) 263-2000 Fax (661) 263-2001
www.usalfg.com

U.S. ARCHITECTURAL LIGHTING

SOLID STATE AREA LIGHTING

RAZAR WALLMOUNT-LED

S P E C I F I C A T I O N S

PROJECT NAME:

PROJECT TYPE:

OPTICAL HOUSING
Heavy cast low copper aluminum (A356 alloy; <0.2% copper) assembly with integral cooling fins. The Optical Panel mounting surface is milled flat (surface variance +/- .003") to facilitate thermal transfer of heat to housing and cooling fins. The Optical Housing bolts to the Electrical Housing forming a unified assembly. The minimum wall thickness is .188".

ELECTRICAL HOUSING
Heavy cast low copper aluminum (A356 alloy; <0.2% copper) assembly. Minimum wall thickness is .188". Fixture Mounting Plate offsets to mounting surface over a recessed j-box. Electrical Housing anchors on the top edge of the Mounting Plate and stainless steel recessed socket head screws tighten the Electrical Housing to the Mounting Plate from the bottom.

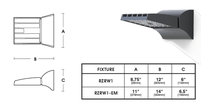
PLED® OPTICAL MODULES
Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. The asymmetric distributions, have a micro-refractor inside the refractor which re-directs the house side emitter output towards the street side and functions as a house side shielding element. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce type II, III, and type IV site/area distributions as well as other specialty asymmetric distributions. Panels are field replaceable and field rotatable in 90° increments.

LED DRIVER(S)
Constant current electronic with a power factor of > 90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized and mounted directly against the Electrical Housing to facilitate thermal transfer, held down by universal clamps to facilitate easy removal. In-line terminal blocks facilitate wiring of (2) 18 AWG conductors for power and control input. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50,60Hz. (0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with 20KV surge protector for field accessible installation.)

LED EMITTERS
High output LED's are utilized with drive currents ranging from 350mA to 1050mA. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

AMBER LED's
PCA (Phosphor Converted Amber) LED's utilize phosphors to create color output similar to LPS lamps and have a slight output in the blue spectral bandwidth. **TRA** (True Amber) LED's utilize material that emits light in the amber spectral bandwidth only without the use of phosphors.

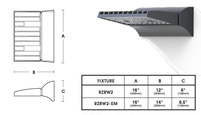
FINISH
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step media blast and iron phosphate pretreatment for protection and paint adhesion. 400°F bake for maximum hardness and durability.



FIXTURE	A	B	C
RZRW1	8.75" (222mm)	13" (330mm)	6" (152mm)
RZRW1-EM	11" (279mm)	18" (457mm)	8.5" (216mm)

RZR-WM1

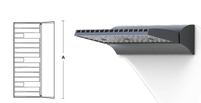
PATENT PENDING



FIXTURE	A	B	C
RZRW2	18" (457mm)	13" (330mm)	6" (152mm)
RZRW2-EM	18" (457mm)	18" (457mm)	8.5" (216mm)

RZR-WM2

PATENT PENDING



FIXTURE	A	B	C
RZRW3	23" (584mm)	13" (330mm)	6" (152mm)
RZRW3-EM	23" (584mm)	18" (457mm)	8.5" (216mm)

RZR-WM3

PATENT PENDING

2019093

U.S. Architectural Lighting

660 West Avenue O, Palmdale, CA 93551
Phone (661) 263-2000 Fax (661) 263-2001
www.usalfg.com

U.S. ARCHITECTURAL LIGHTING

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
☒ ▫	W3	19	U.S. ARCHITECTURAL LIGHTING	RZR-WM1-PLED-III-W-20LED-350mA-27K EM1 WALL MT AT 9 FT AFG MMS11 BUG RATING B1 UO G1	CAST BLACK PAINTED FINNED METAL HOUSING.	20 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.	20	RZR-WM1-PLED-III-W-20LED-350mA-40K.ies	151	0.9	21.4
◪ ▫	SA3	12	U.S. ARCHITECTURAL LIGHTING	RZR-M-PLED-IV-FT-48LED-1050mA-27K-HS MSF311MM511 POLE MT AT 18 FT AFG BUG RATING B1 UO G3	CAST BLACK PAINTED FINNED METAL HOUSING.	48 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.	48	RZRM-PLED-IV-FT-48LED-1050mA-27K-HS.ies	256	0.9	159.6
☒ ▫	W1	29	U.S. ARCHITECTURAL LIGHTING	RZR-WM2-PLED-IV-FT-40LED-1050mA-27K MM511 MSF 311 WALL MT AT 18 FT AFG BUG RARING B2 UO G3	CAST BLACK PAINTED FINNED METAL HOUSING.	40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.	40	RZR-WM2-PLED-IV-FT-40LED-1050mA-27K.ies	326	0.9	128.2
☒ ▪ ☒	SA2	2	U.S. ARCHITECTURAL LIGHTING	RZR-M-PLED-VSQ-W-48LED-1050mA-27K MM511 MSF311 POLE MT AT 18 FT AFG 15.5 FT POLE 30 IN BASE BUG RATING B5 U0 G3	CAST BLACK PAINTED FINNED METAL HOUSING.	48 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.	48	RZR-PLED-VSQ-W-48LED-1050mA-27K.ies	358	0.9	319.2
	W4	12	U.S. ARCHITECTURAL LIGHTING	LC6SLEM 27K 6LCSL 14 L EM	6 INCH LBR DOWNLIGHT 1400LM 2700K		1		1641	0.9	18

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	2.5 fc	16.7 fc	0.0 fc	N/A	N/A
Calc Zone #2	+	0.1 fc	9.6 fc	0.0 fc	N/A	N/A
Calc Zone #3	+	3.2 fc	10.0 fc	0.3 fc	33.3:1	10.7:1
Calc Zone #4	+	2.1 fc	3.9 fc	1.0 fc	3.9:1	2.1:1
Calc Zone #6	+	10.0 fc	10.0 fc	10.0 fc	1.0:1	1.0:1
Calc Zone #6	+	10.2 fc	10.2 fc	10.2 fc	1.0:1	1.0:1
Calc Zone #7	+	10.0 fc	10.9 fc	9.0 fc	1.2:1	1.1:1
Calc Zone #8	+	10.9 fc	10.9 fc	10.9 fc	1.0:1	1.0:1
Calc Zone #9	+	11.5 fc	12.9 fc	10.1 fc	1.3:1	1.1:1
Calc Zone #10	+	6.2 fc	6.2 fc	6.2 fc	1.0:1	1.0:1
Calc Zone #11	+	2.6 fc	2.6 fc	2.6 fc	1.0:1	1.0:1
Calc Zone #14	+	3.0 fc	8.9 fc	0.8 fc	11.1:1	3.8:1

LEGEND

BROWN = BUILDING & SAFETY GRADING DIVISION COMMENTS
PURPLE = PLANNING DEPARTMENT COMMENTS
GREEN = ENVIRONMENTAL PROGRAMS DEPARTMENT COMMENTS
LIGHT ORANGE = TRANSPORTATION DEPARTMENT COMMENTS
BLUE = FLOOD CONTROL DISTRICT COMMENTS
LIGHT GREEN = REGIONAL PARKS & OPEN SPACE DISTRICT COMMENTS
RED = FIRE DEPARTMENT COMMENTS
YELLOW = ENVIRONMENTAL HEALTH DEPARTMENT COMMENTS
LIGHT BLUE = BUILDING & SAFETY PLAN CHECK COMMENTS
ORANGE = WASTE MANAGEMENT DEPARTMENT COMMENTS

RPM Engineers, Inc.
102 DISCOVERY
Irvine, CA. 92618
Tel: 949-580-0514
Fax: 949-460-1454
Contact: David Du
e-mail: davidd@rpmpe.com

REGISTERED PROFESSIONAL ENGINEER
LAN V. NGUYEN
No. E15596
Exp.12-31-2025
ELECTRICAL
STATE OF CALIFORNIA

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

HPA architecture
hpa, inc.
18831 bardeen avenue - ste. #100 irvine, ca 92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	-
Fire Protection:	-
Soils Engineer:	-

Title:

SITE PHOTOMETRIC PLAN

Project Number: 22484
Drawn by: J.K.
Date:
Revision:

DAC 5TH SUBMITTAL 01/13/25

Sheet:

FC-1.0

RPM#23-001W1 01/17/2025

PLACENTIA AVE.

MATCH LINE B - SEE BELOW

MATCH LINE C - SEE NEXT SHEET

EX. C&G

120' GAP

200'

90' GAP

EX. R/W

120' GAP

50'

PROP. C&G

PROP. EP

TO BE DONE BY OTHERS

PROP. R/W

300'

6' OFFSET @ 50 MPH

15' OFFSET @ 10:1

150'

R45'

MATCH LINE A - SEE LEFT

DWY. 3

TOBACCO RD.

DWY. 1

8' OFFSET @ 30 MPH

120'

DWY. 2

R45.00'

R35.00'

R3.00'

STOP

PATTERSON AVE.

MATCH LINE A - SEE RIGHT

MATCH LINE B - SEE ABOVE

SCALE: 1" = 30' (ON 24" x 36" SHEET)

0 15 30 60 90 120

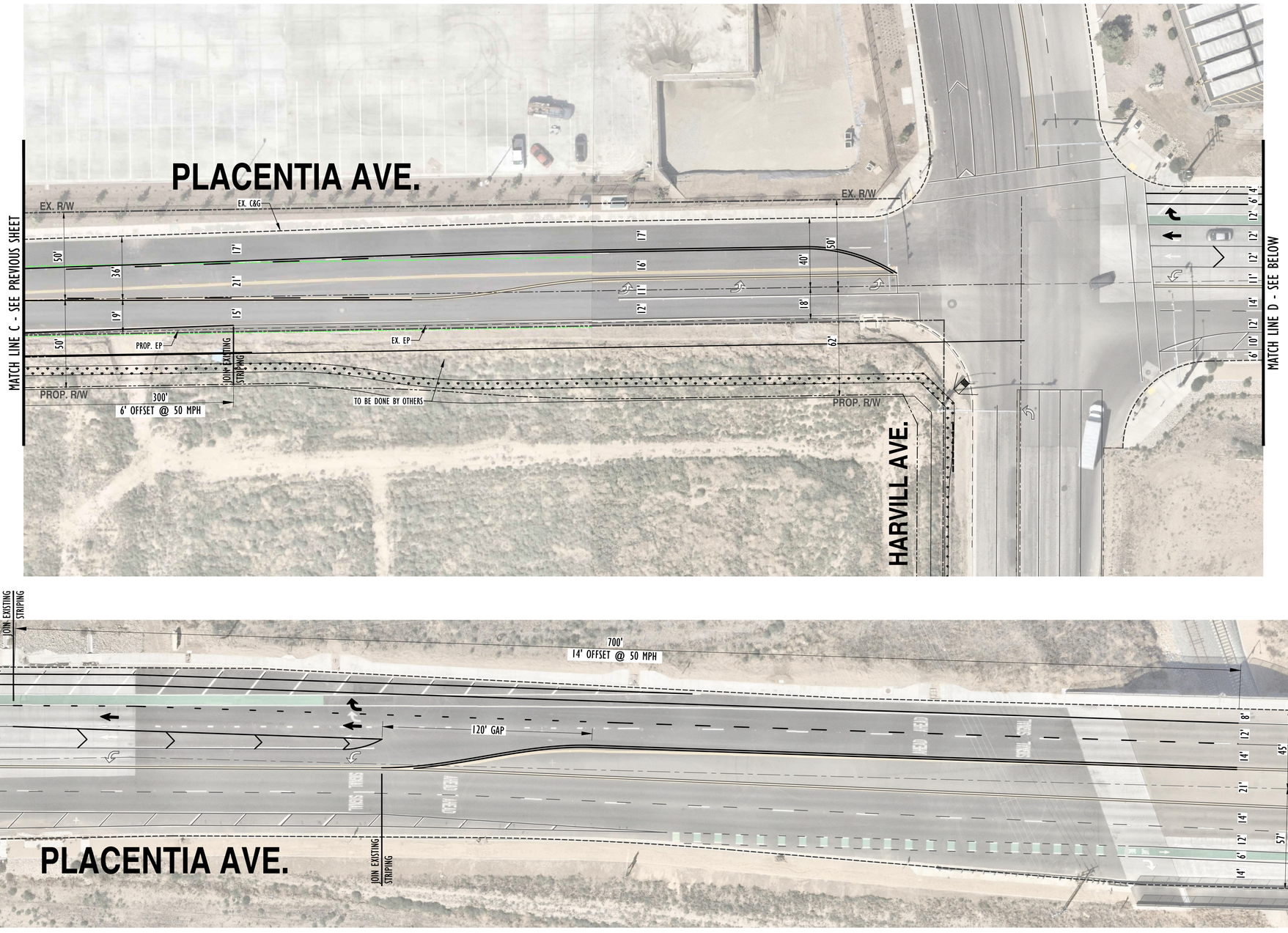
CASE: PPT230048
EXHIBIT: T- Trans
DATE: 6/25/2025
PLANNER: KMason

☐ Meeting ☐ Comment Agenda ☑ Final

EXHIBIT 1: TOBACCO ROAD AT PLACENTIA AVENUE OPENING DAY CONCEPT STRIPING IMPROVEMENTS

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG



SCALE: 1" = 30' (ON 24" x 36" SHEET)

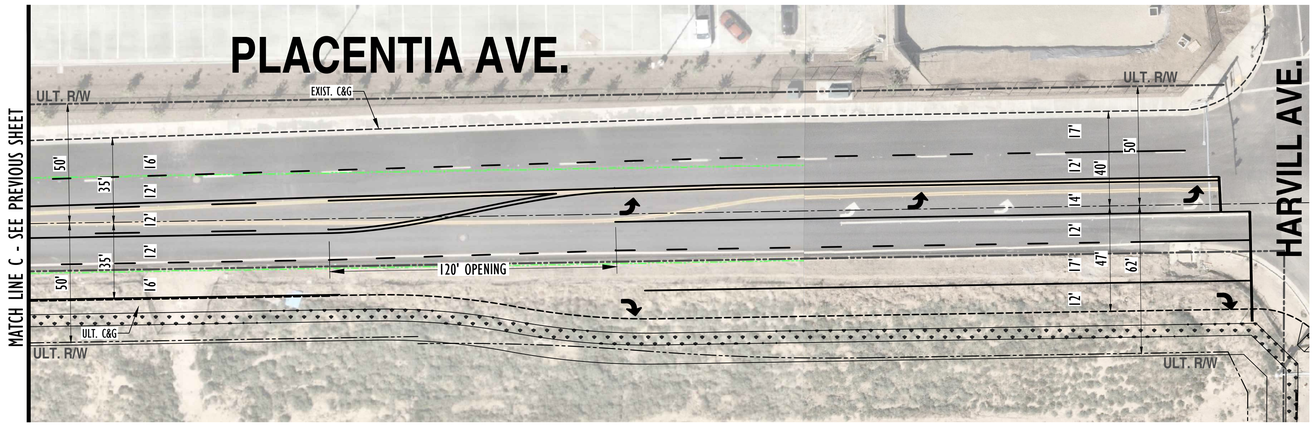
0 15 30 60 90 120

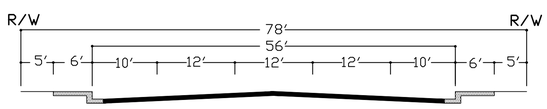
EXHIBIT 1: TOBACCO ROAD AT PLACENTIA AVENUE OPENING DAY CONCEPT STRIPING IMPROVEMENTS

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

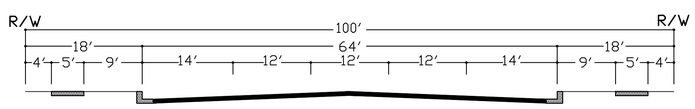
15749 - ACAD\15749_F5.dwg - 4/16/25 - JG







INDUSTRIAL COLLECTOR
TOBACCO RD.



SECONDARY HIGHWAY
PLACENTIA AVE.

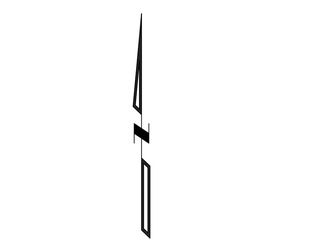


EXHIBIT 2: TOBACCO ROAD AT PLACENTIA AVENUE
ULTIMATE CONCEPT STRIPING IMPROVEMENTS

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG

PLACENTIA AVE.

MATCH LINE B - SEE NEXT SHEET

MATCH LINE C - NEXT SHEET

ULT. R/W

EXIST. C&G

50'

32'

14'

12'

12'

ULT. C&G

R35'

120' OPENING

200'

100'

LANDSCAPE SETBACK

MINIMUM BUILDING SETBACK

R45'

R65'

34'

35'

30'

28'

75'

8' OFFSET @ 10:1 = 80' TAPER

80'

TOBACCO RD.

DWY. 1

DWY. 2

DWY. 3

22'

39'

MATCH LINE A - SEE LEFT

MATCH LINE A - SEE RIGHT

R30'

R3.00'

STOP

48'

15'

18'

INDUSTRIAL COLLECTOR
TOBACCO RD.

R/W 78' R/W
5' 6' 10' 12' 12' 12' 10' 6' 5'
56'

SECONDARY HIGHWAY
PLACENTIA AVE.

R/W 100' R/W
4' 5' 9' 14' 12' 12' 12' 14' 9' 5' 4'
18' 64' 18'

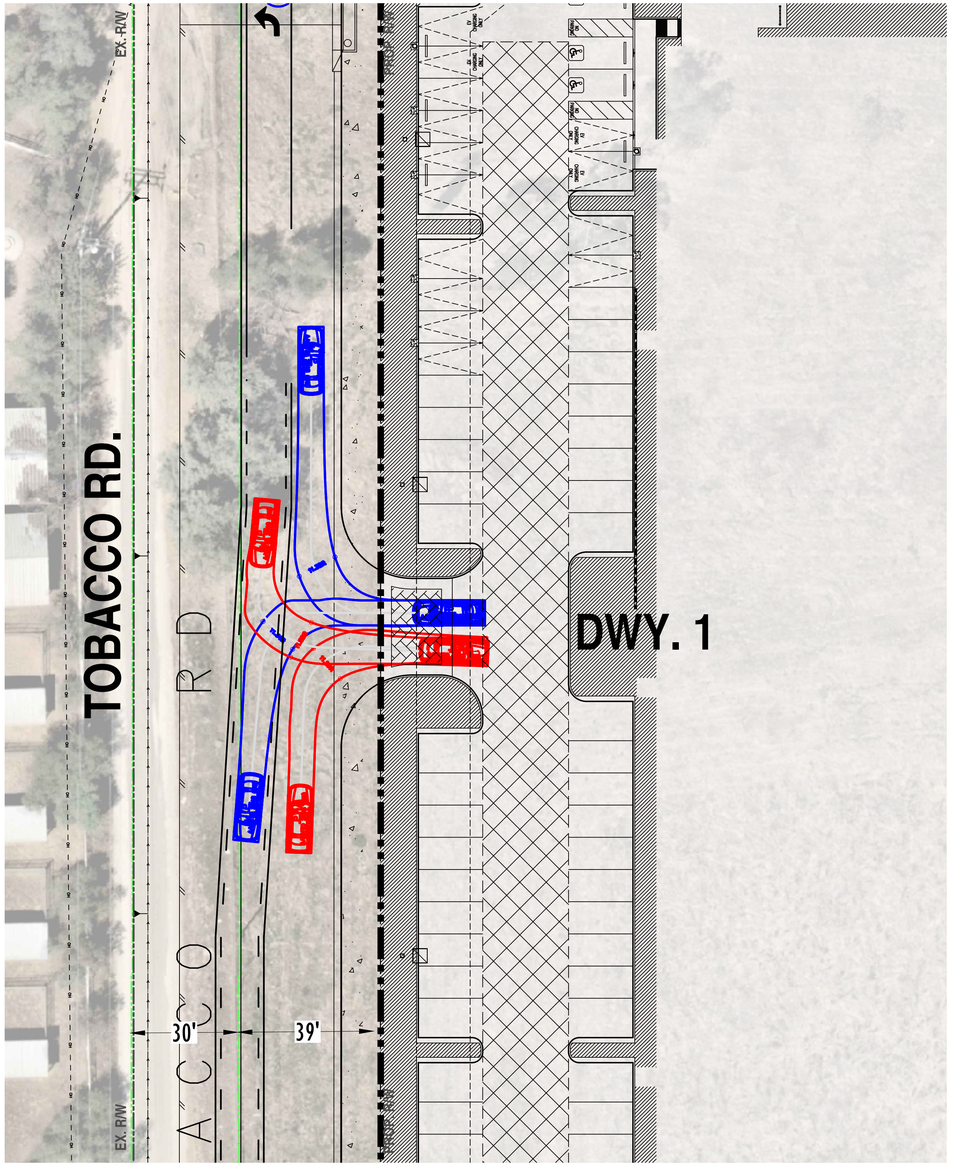
SCALE: 1" = 30' (ON 24" x 36" SHEET)

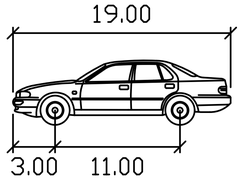
0 15 30 60 90 120

EXHIBIT 2: TOBACCO ROAD AT PLACENTIA AVENUE
ULTIMATE CONCEPT STRIPING IMPROVEMENTS

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG





P

	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6

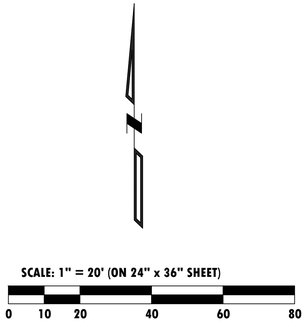
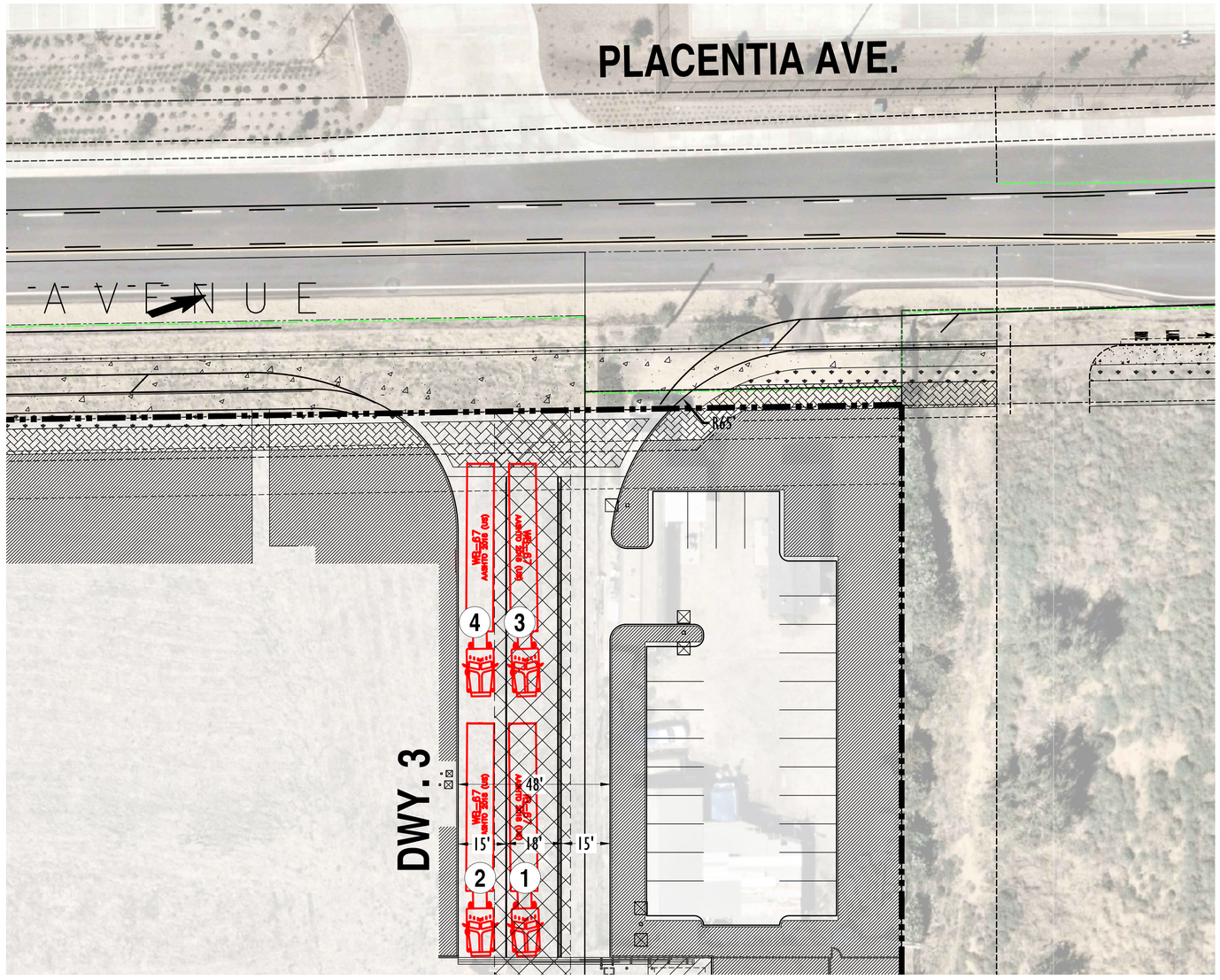


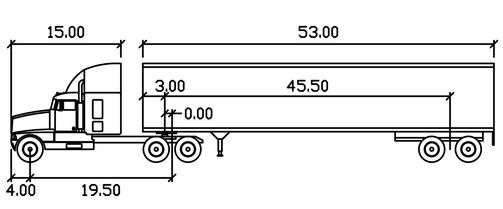
EXHIBIT 5: PASSENGER CAR TURNING TEMPLATE
OPENING DAY TOBACCO ROAD AT PROJECT DRIVEWAY 1

URBAN CROSSROADS

WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG





WB-67

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

SCALE: 1" = 20' (ON 24" x 36" SHEET)

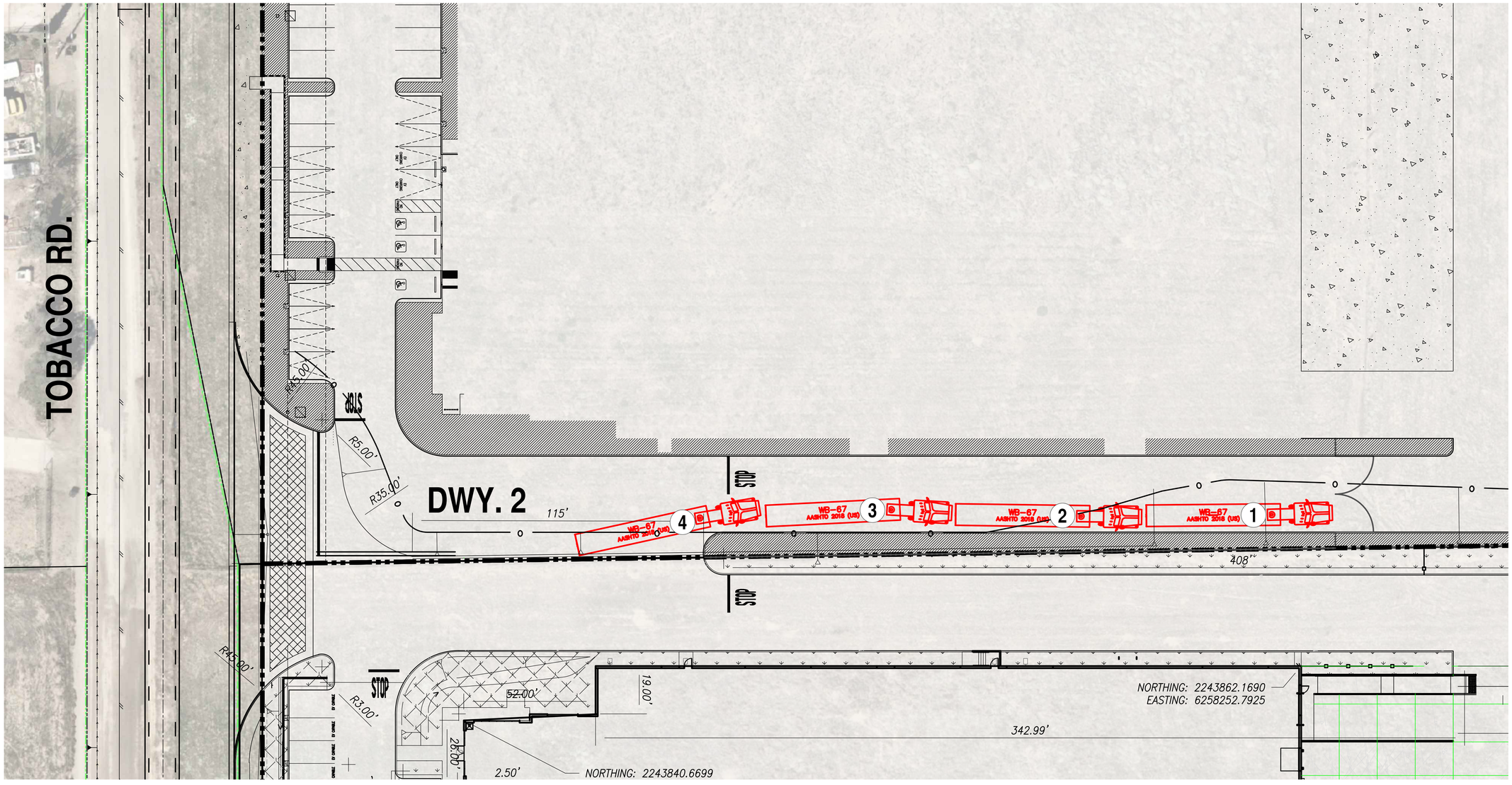
0 10 20 40 60 80

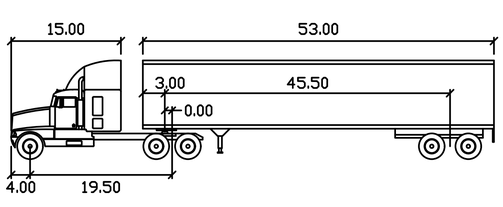
EXHIBIT 4: WB-67 TRUCK STACKING
PLACENTIA AVENUE AT PROJECT DRIVEWAY 3

URBAN CROSSROADS

WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG





WB-67

	feet		
Tractor Width	8.00	Lock to Lock Time	6.0
Trailer Width	8.50	Steering Angle	28.4
Tractor Track	8.00	Articulating Angle	75.0
Trailer Track	8.50		

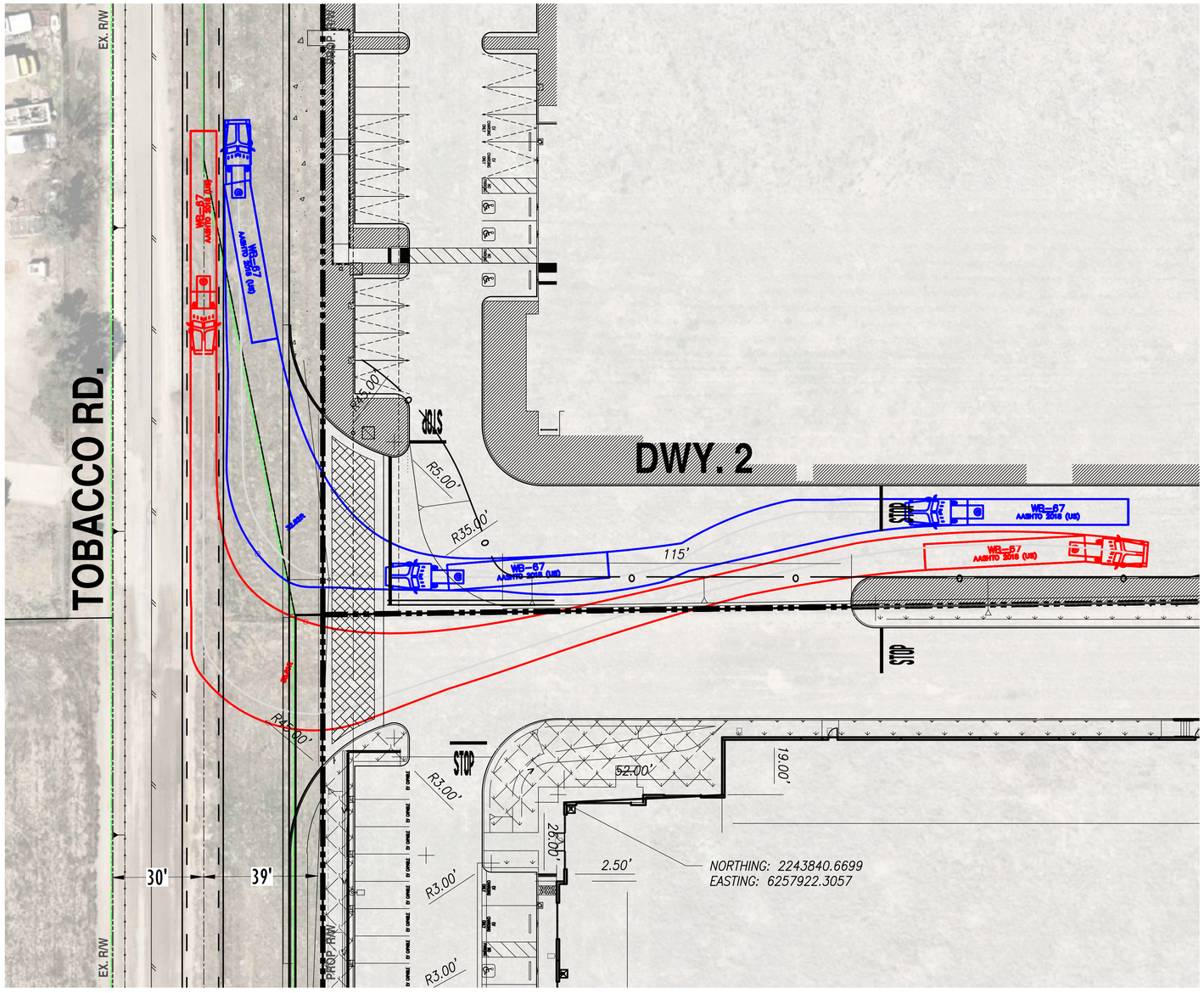
SCALE: 1" = 20' (ON 24" x 36" SHEET)

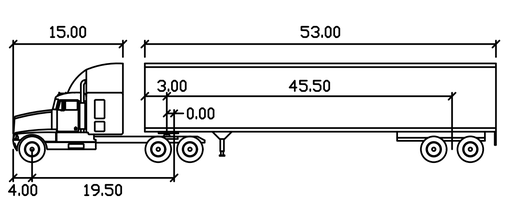
0 10 20 40 60 80

EXHIBIT 3: WB-67 TRUCK STACKING
TOBACCO ROAD AT PROJECT DRIVEWAY 2

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG





WB-67

SCALE: 1" = 20' (ON 24" x 36" SHEET)

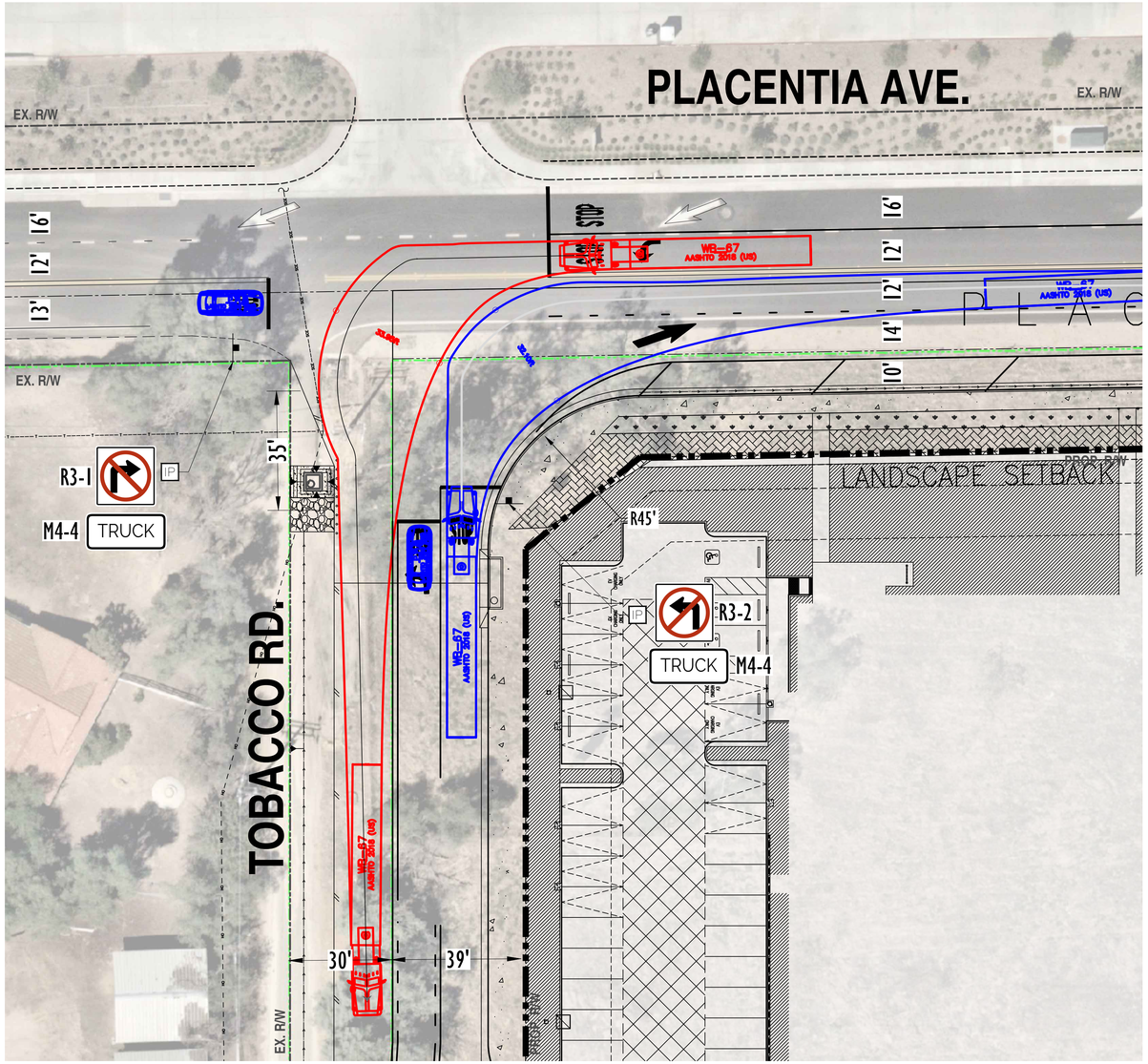
0 10 20 40 60 80

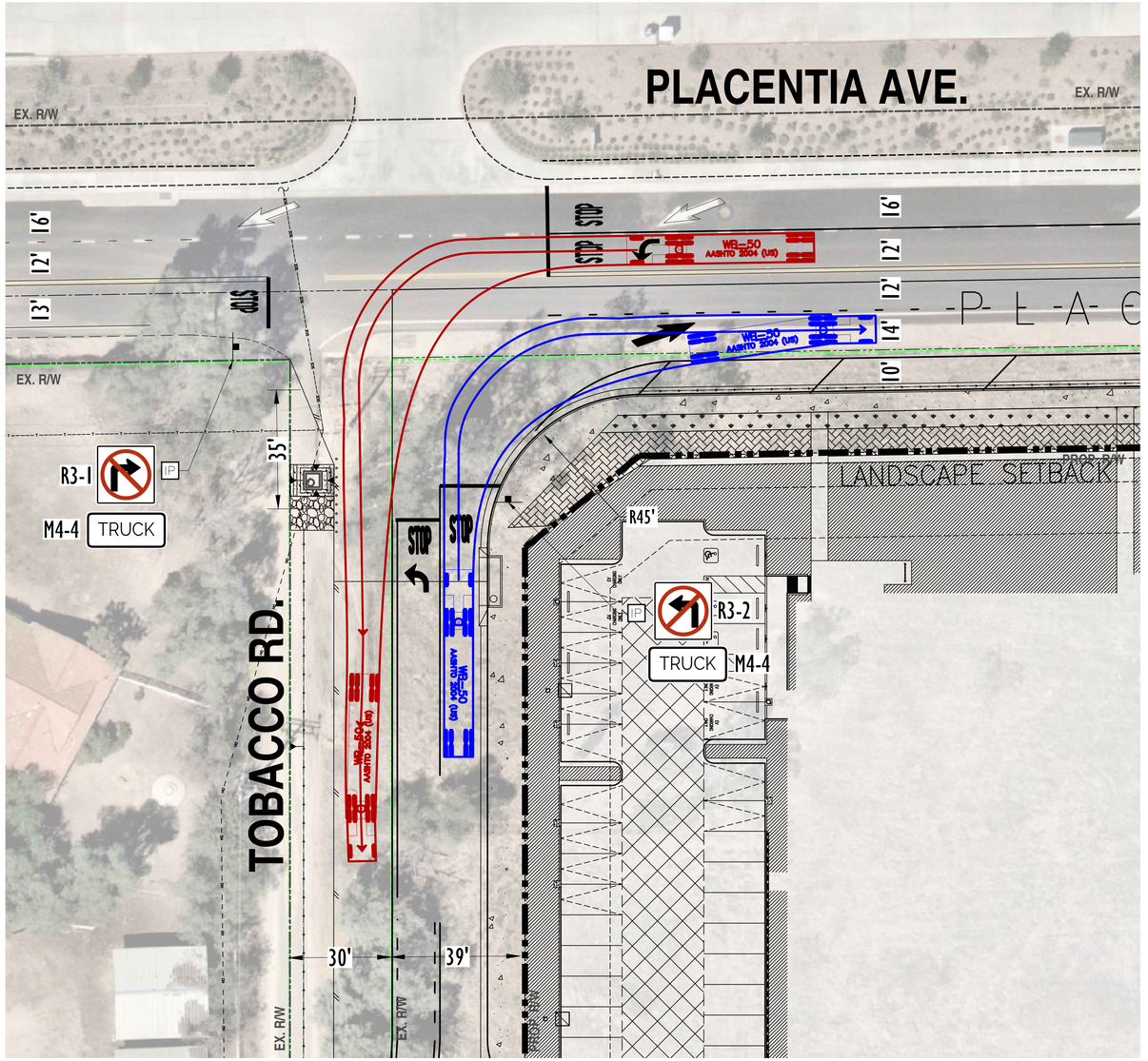
	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

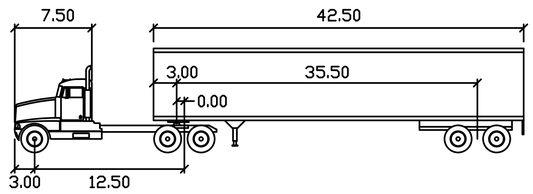
EXHIBIT 6: WB-67 TRUCK TURNING TEMPLATE
OPENING DAY TOBACCO ROAD AT PROJECT DRIVEWAY 2

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG

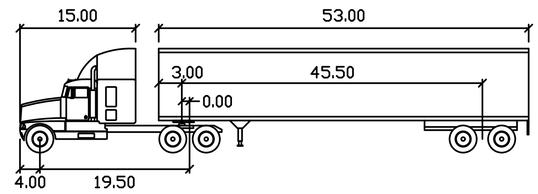






WB-50

	feet		
Tractor Width	8.00	Lock to Lock Time	6.0
Trailer Width	8.50	Steering Angle	17.7
Tractor Track	8.00	Articulating Angle	70.0
Trailer Track	8.50		



WB-67

	feet		
Tractor Width	8.00	Lock to Lock Time	6.0
Trailer Width	8.50	Steering Angle	28.4
Tractor Track	8.00	Articulating Angle	75.0
Trailer Track	8.50		

SCALE: 1" = 20' (ON 24" x 36" SHEET)

0 10 20 40 60 80

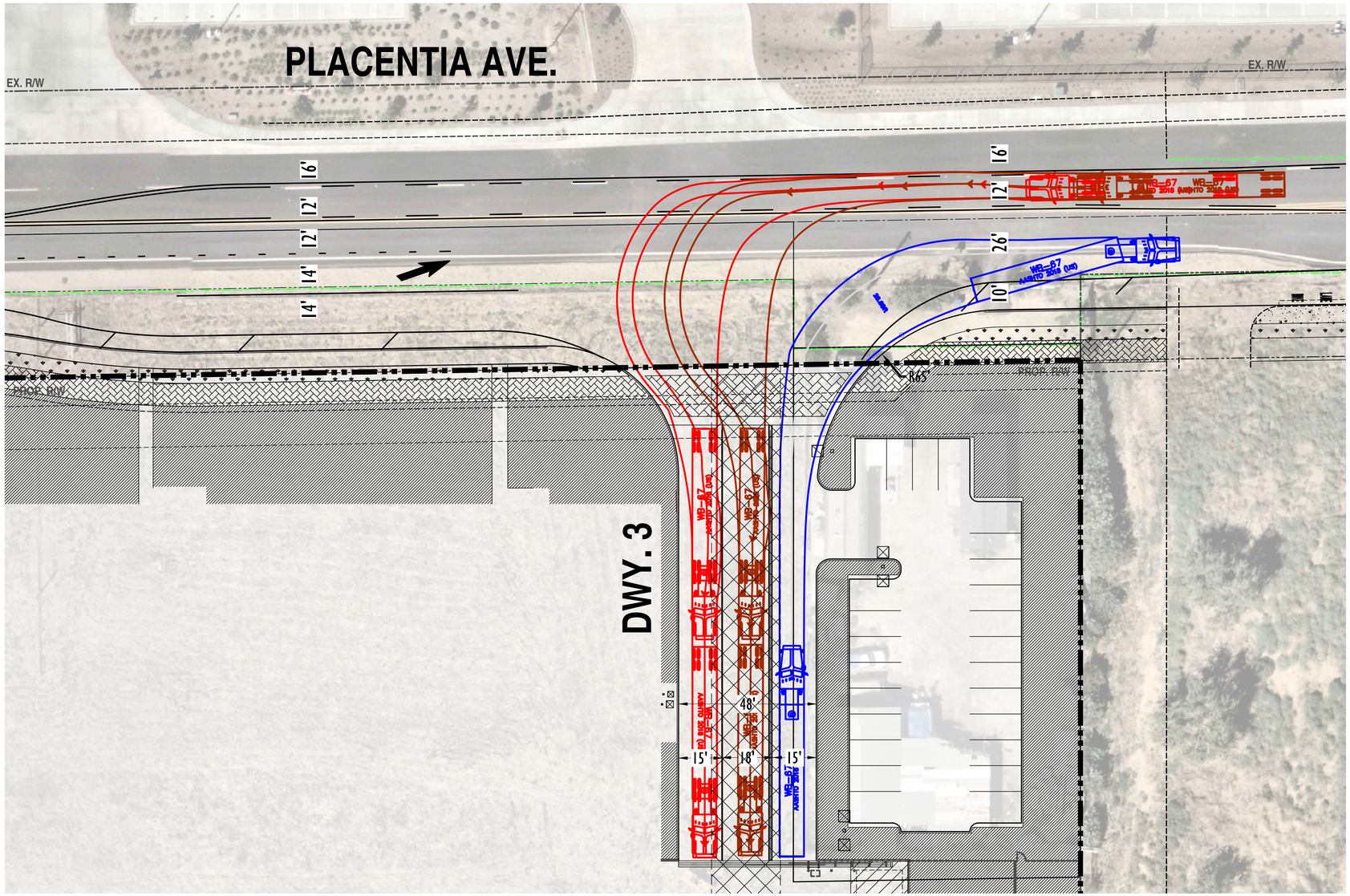
SIGNING CONSTRUCTION NOTES:

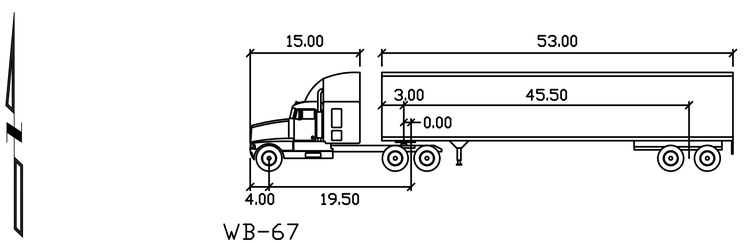
IP FURNISH AND INSTALL SIGN (AS NOTED) AND POST (IF NECESSARY) PER CITY STANDARDS.

EXHIBIT 7: WB-67 & WB-50 TRUCK TURNING TEMPLATE
OPENING DAY TOBACCO ROAD AT PLACENTIA AVENUE

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG





WB-67

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

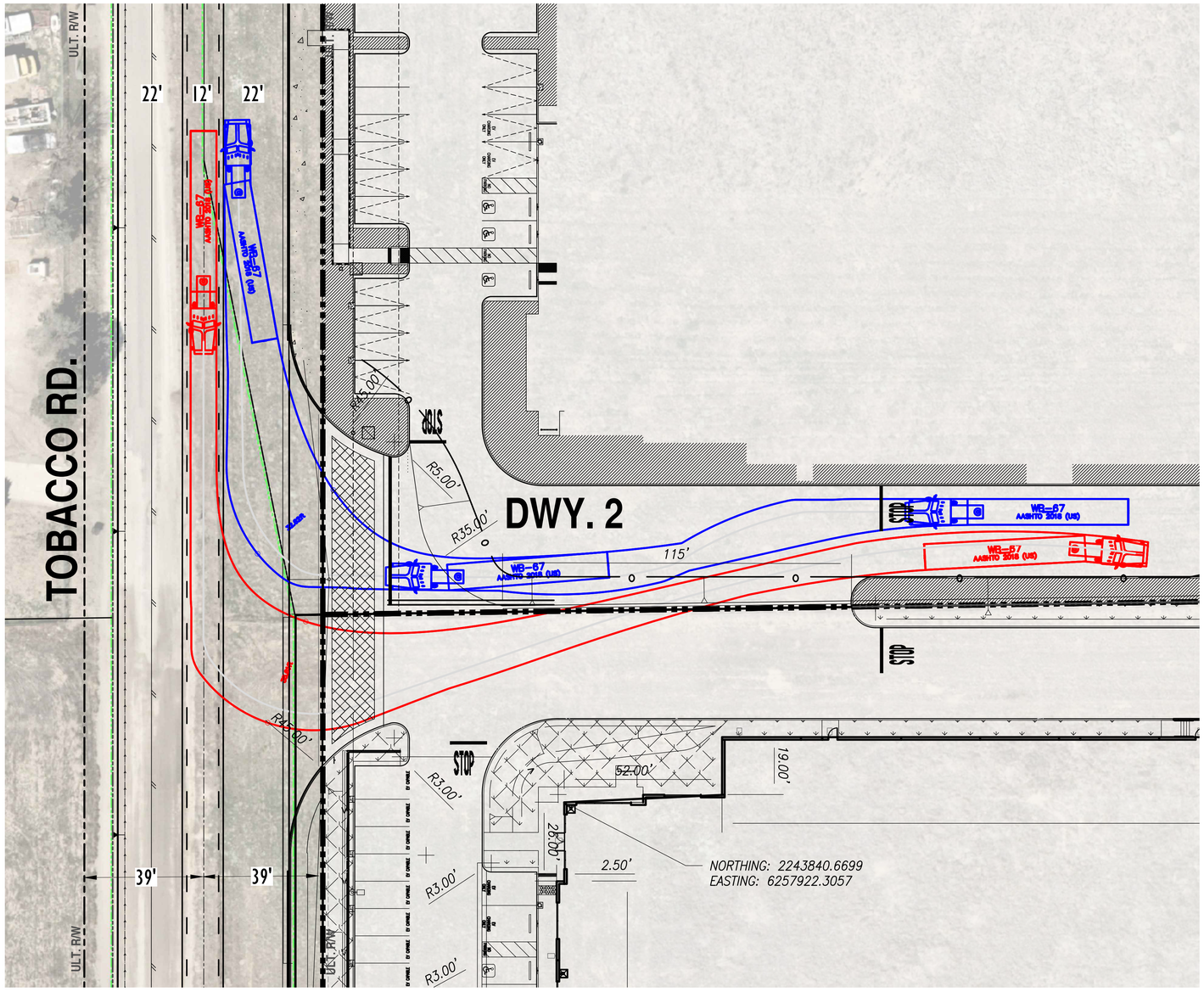
SCALE: 1" = 20' (ON 24" x 36" SHEET)

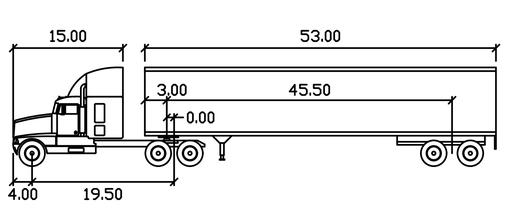
0 10 20 40 60 80

EXHIBIT 8: WB-67 TRUCK TURNING TEMPLATE
OPENING DAY PLACENTIA AVENUE AT PROJECT DRIVEWAY 3

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG





WB-67

	feet		
Tractor Width	8.00	Lock to Lock Time	6.0
Trailer Width	8.50	Steering Angle	28.4
Tractor Track	8.00	Articulating Angle	75.0
Trailer Track	8.50		

SCALE: 1" = 20' (ON 24" x 36" SHEET)

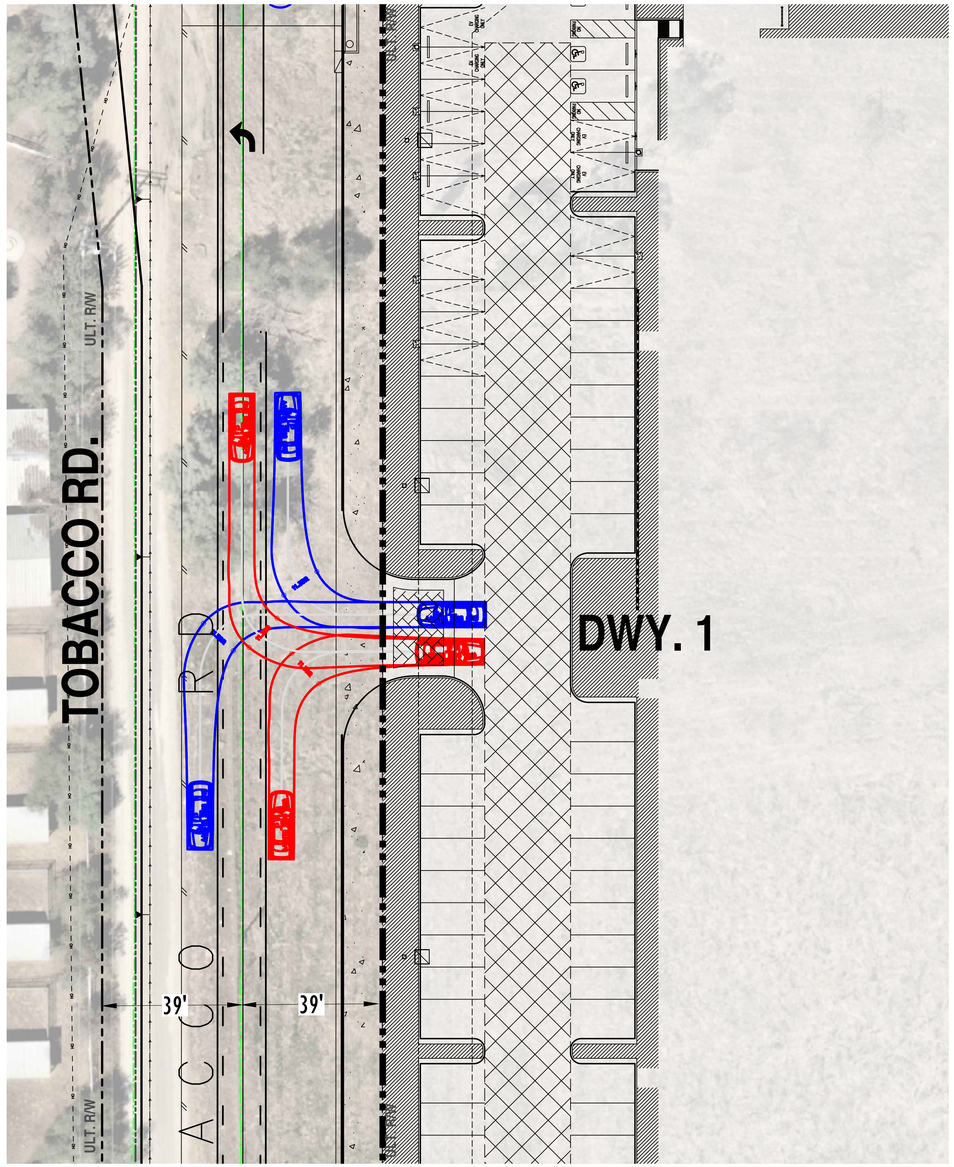
0 10 20 40 60 80

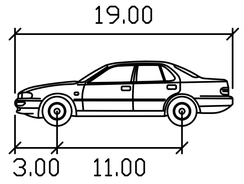
EXHIBIT 10: WB-67 TRUCK TURNING TEMPLATE
ULTIMATE TOBACCO ROAD AT PROJECT DRIVEWAY 2

URBAN CROSSROADS

WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG





P

	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6

SCALE: 1" = 20' (ON 24" x 36" SHEET)

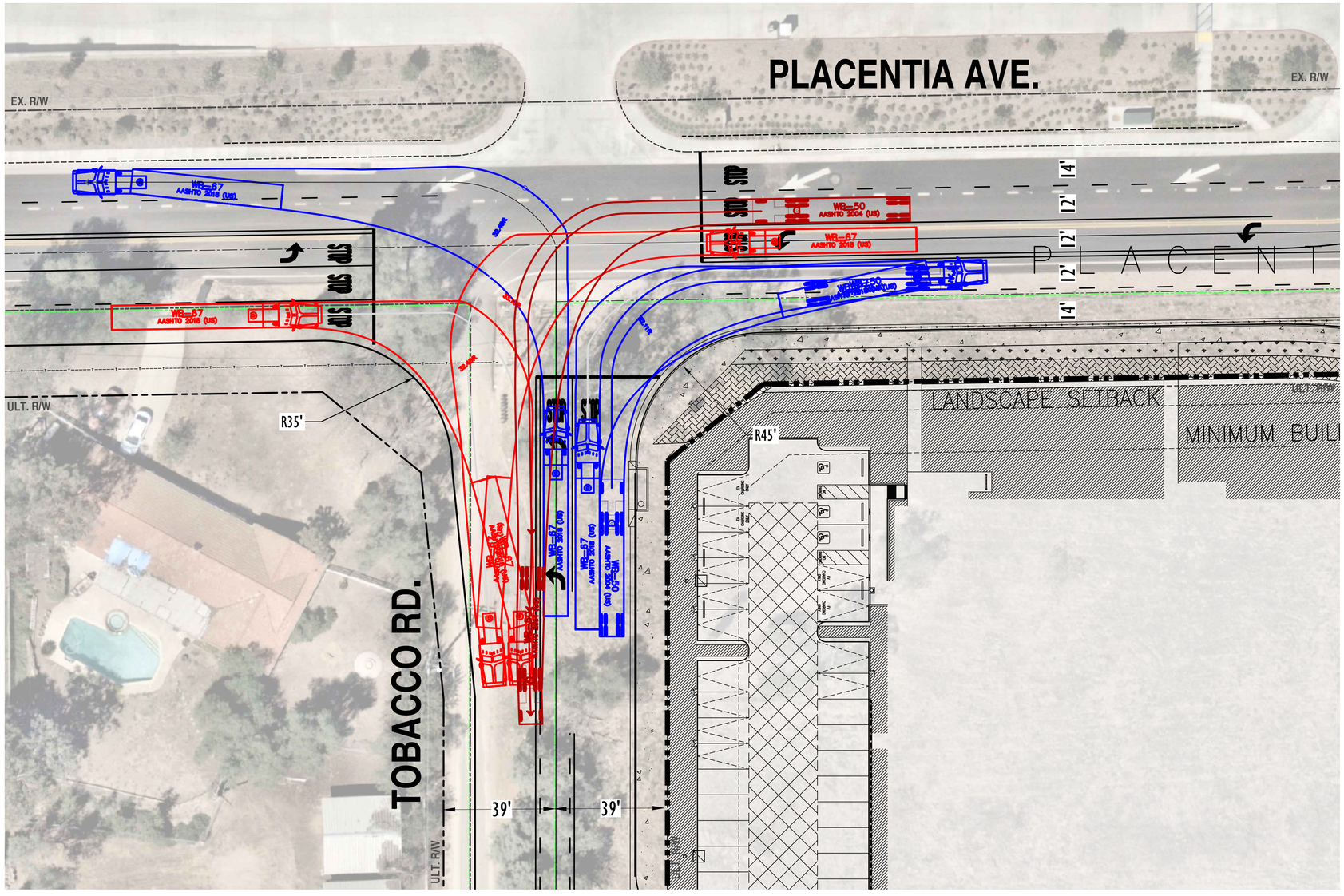
0 10 20 40 60 80

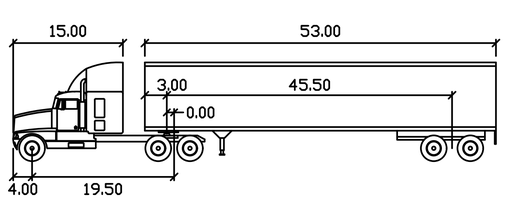
EXHIBIT 9: PASSENGER CAR TURNING TEMPLATE
ULTIMATE TOBACCO ROAD AT PROJECT DRIVEWAY 1

URBAN CROSSROADS

WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG





WB-67

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

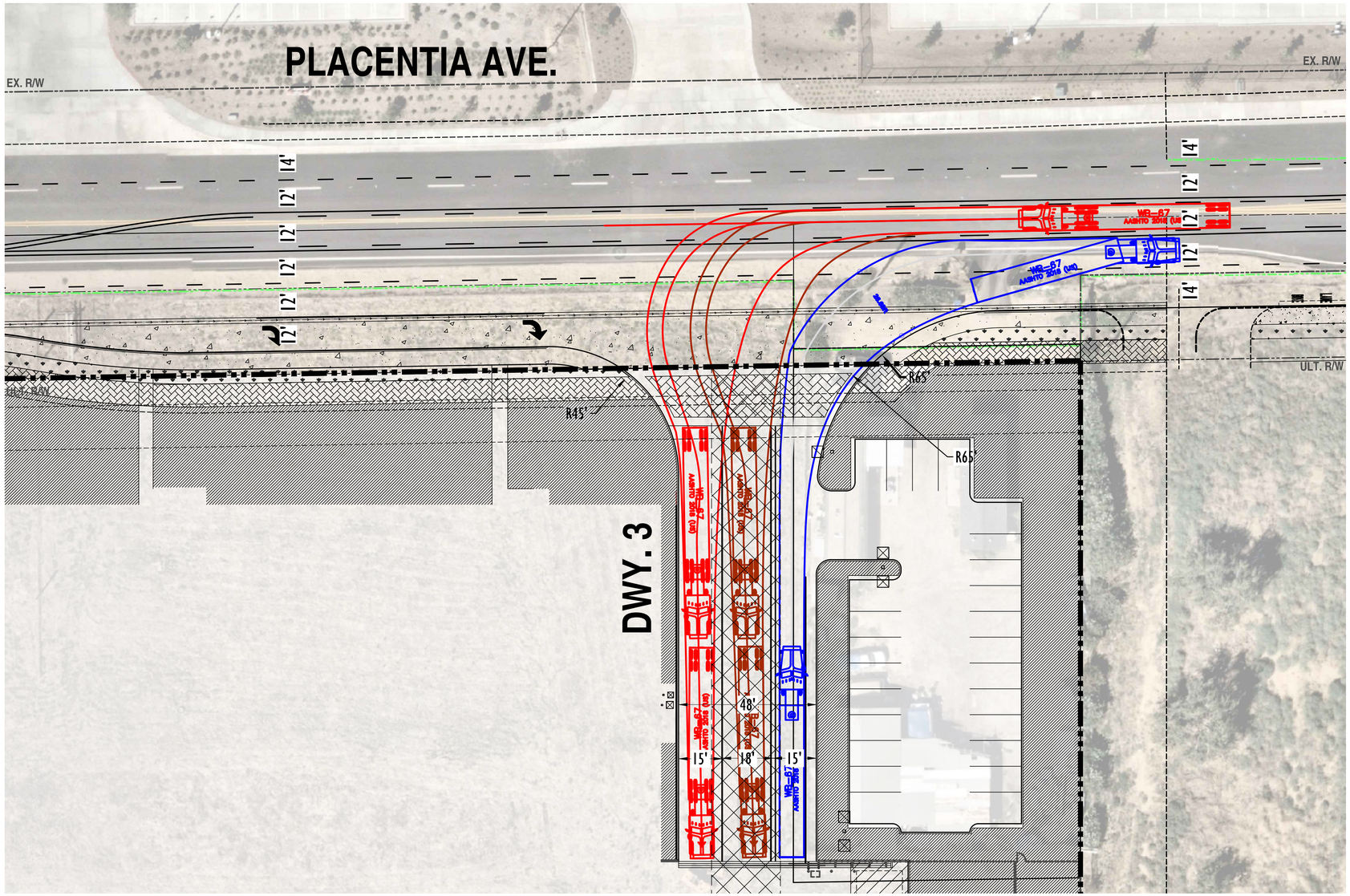
SCALE: 1" = 20' (ON 24" x 36" SHEET)

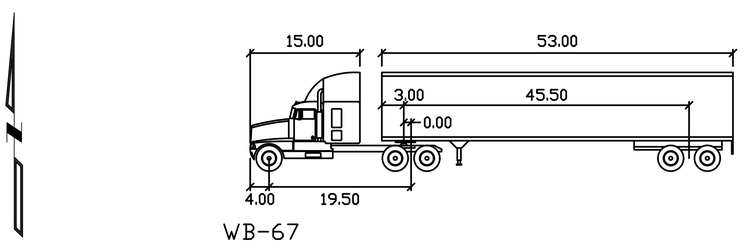
0 10 20 40 60 80

EXHIBIT 11: WB-67 TRUCK TURNING TEMPLATE
ULTIMATE TOBACCO ROAD AT PLACENTIA AVENUE

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG





WB-67

feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

SCALE: 1" = 20' (ON 24" x 36" SHEET)

0 10 20 40 60 80

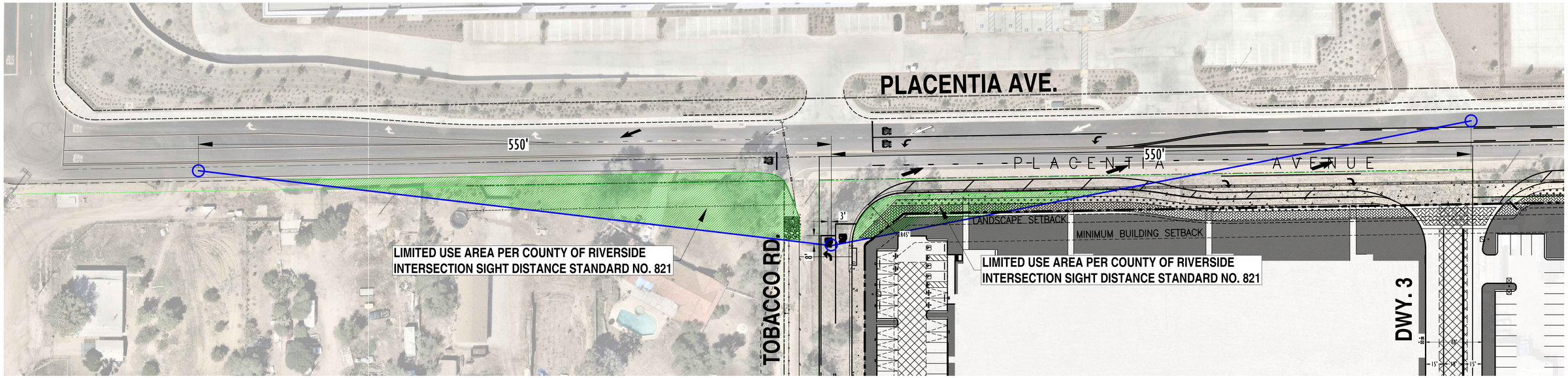
EXHIBIT 12: WB-67 TRUCK TURNING TEMPLATE
ULTIMATE PLACENTIA AVENUE AT PROJECT DRIVEWAY 3

URBAN CROSSROADS

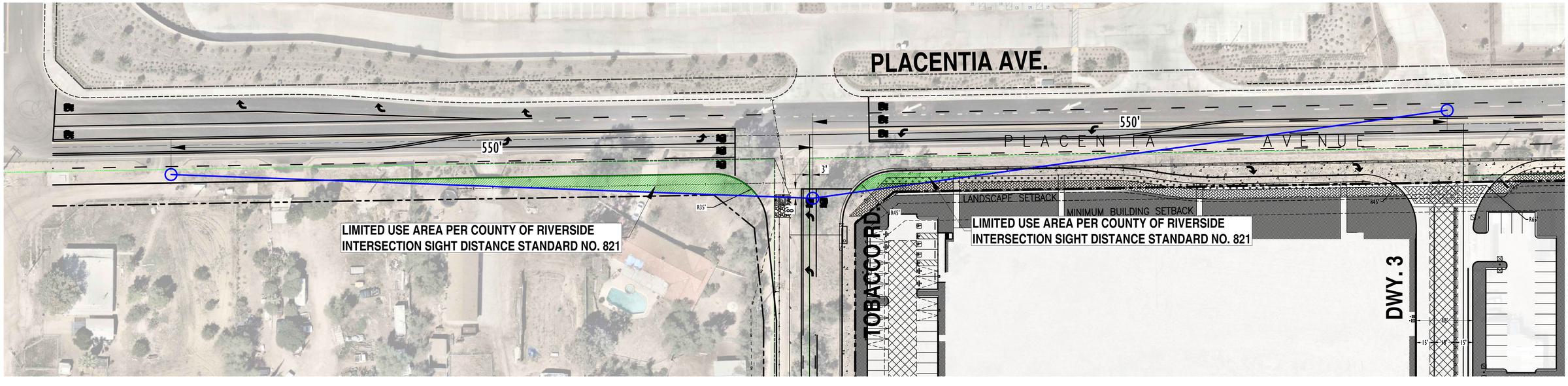
WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG

OPENING DAY



ULTIMATE



SCALE: 1" = 30' (ON 24" x 36" SHEET)

0 15 30 60 90 120

EXHIBIT 13: TOBACCO ROAD AT PLACENTIA AVENUE INTERSECTION SIGHT DISTANCE

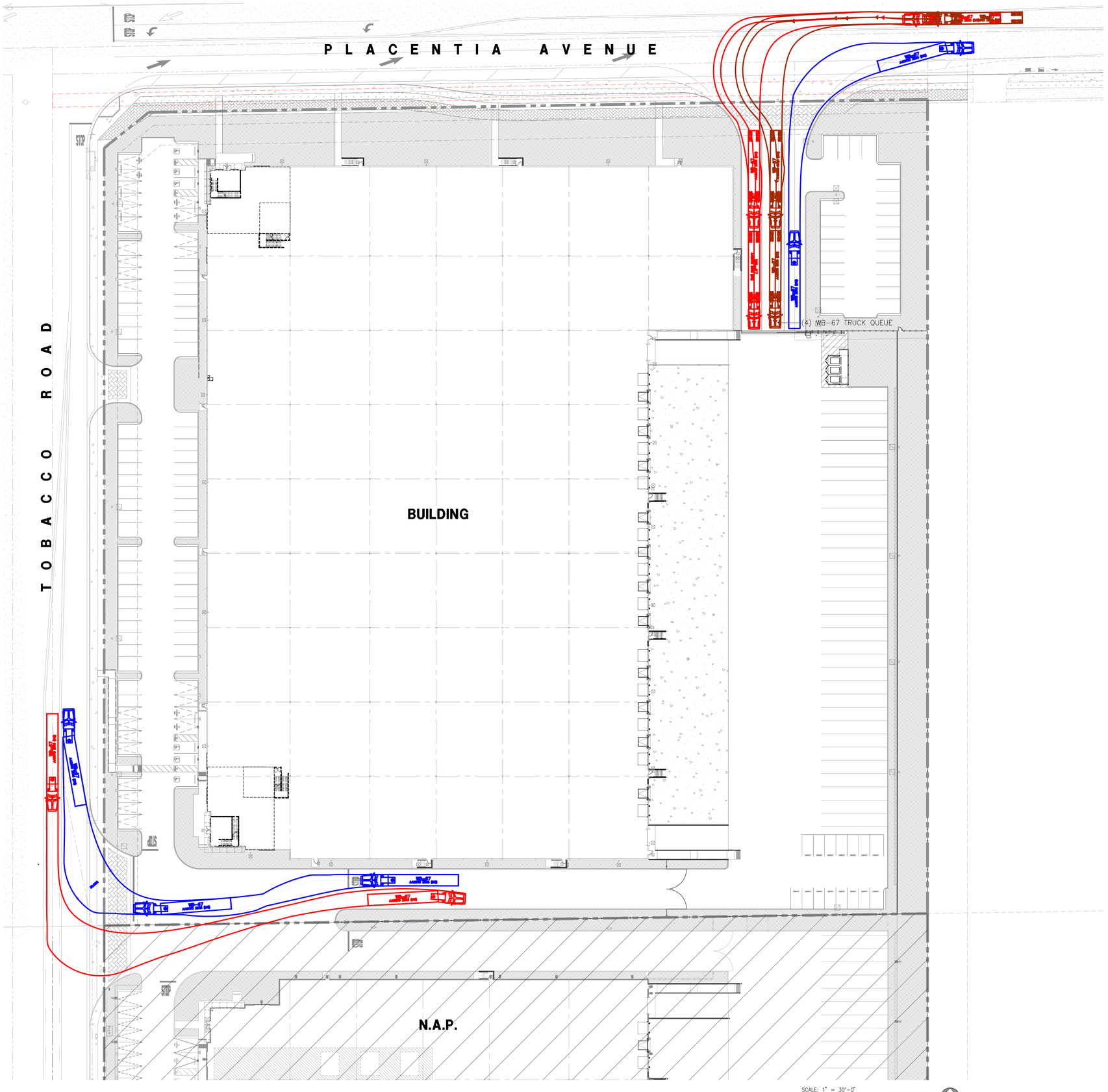
URBAN CROSSROADS

WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

15749 - ACAD\15749_F5.dwg - 4/16/25 - JG

CASE: PPT230048
EXHIBIT: T-Truck Turn
DATE: 6/25/2025
PLANNER: KMason

☐ Meeting ☐ Comment Agenda ☑ Final



TRUCK TURN TEMPLATE scale: 1" = 30'-0" (A)

SCALE: 1" = 30'-0"
0 30' 60' 90'
TRUE NORTH

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

HPA architecture

hpa, inc.
18831 bardeen avenue - ste. #100 irvine, ca 92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

Title: TRUCK TURN TEMPLATE

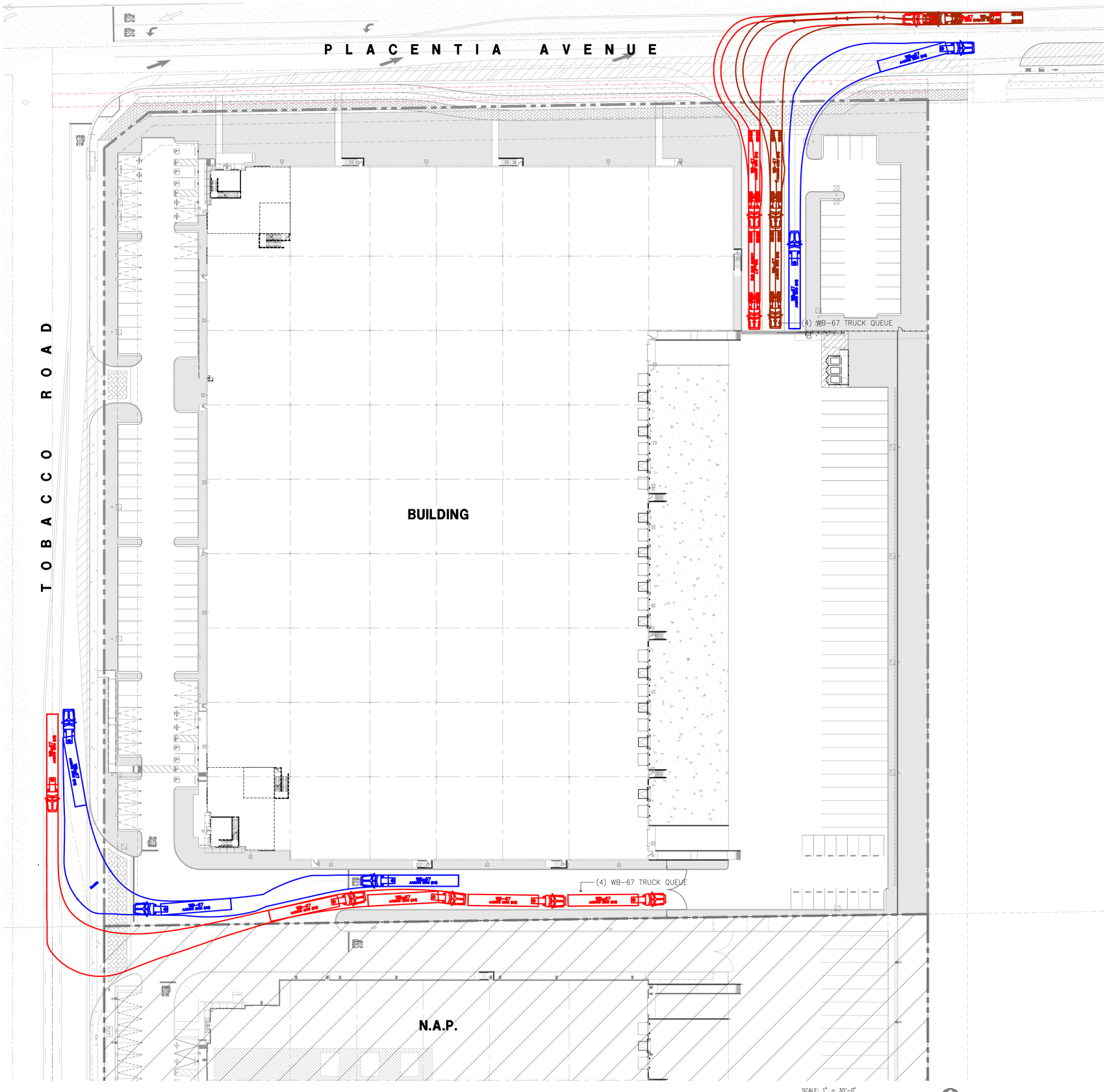
Project Number:	22484
Drawn by:	JK
Date:	

Revision:

DAC 5TH SUBMITTAL	01/13/25

Sheet:

DAB-A1.1B



TRUCK STACKING
scale: 1"=30'-0"

A

SCALE: 1" = 30'-0"
0 30' 60' 90'

N TRUE NORTH

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

HPA architecture

hpa, inc.
18831 bardeen avenue - ste. #100 irvine, ca 92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

Title: TRUCK STACKING

Project Number:	22484
Drawn by:	JK
Date:	

Revision:

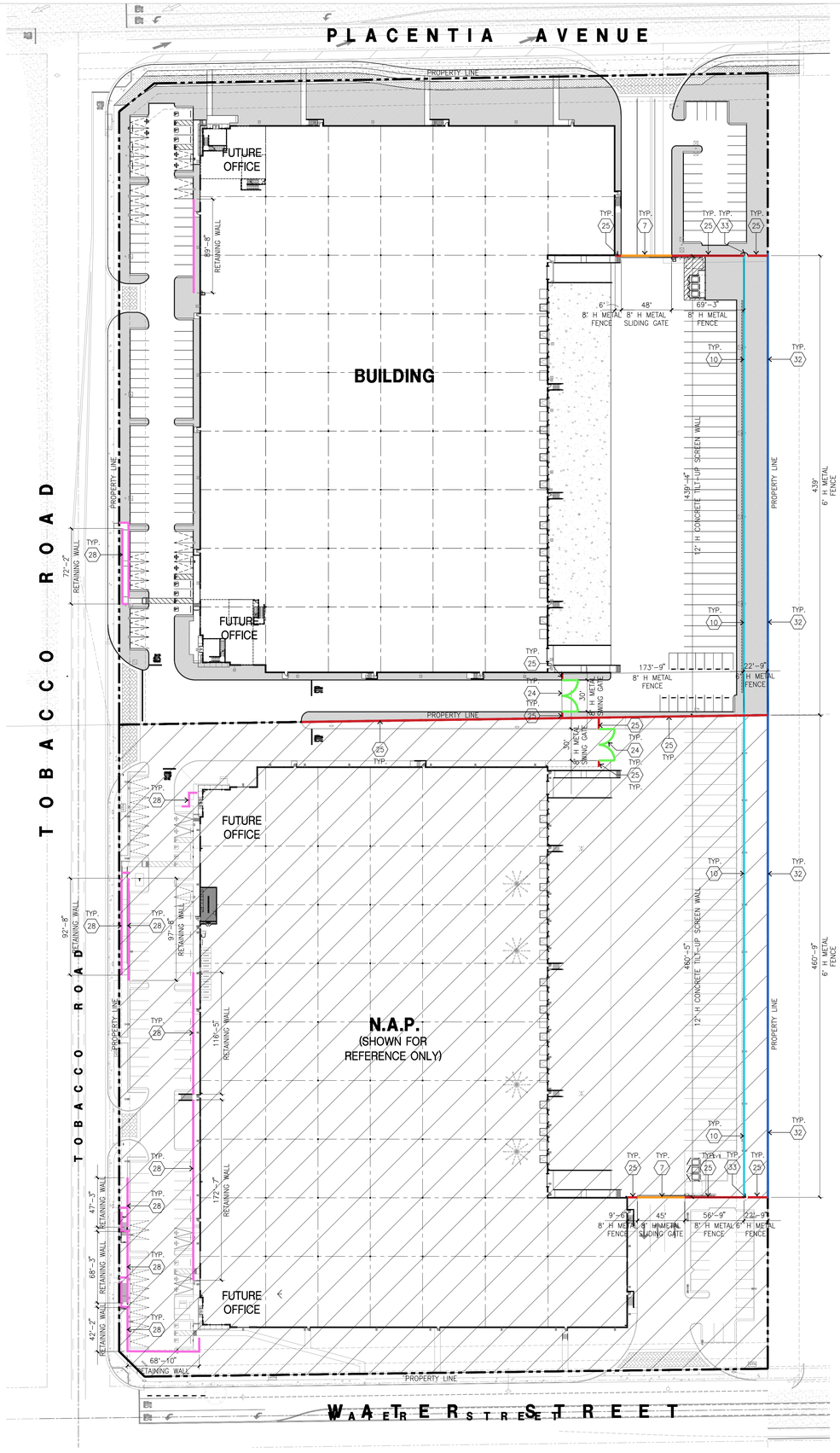
DAC 5TH SUBMITTAL	01/13/25

Sheet:

DAB-A1.1C

CASE: PPT230048
EXHIBIT: W-Wall&Fenc
DATE: 6/25/2025
PLANNER: KMason

☐ Meeting ☐ Comment Agenda ☑ Final

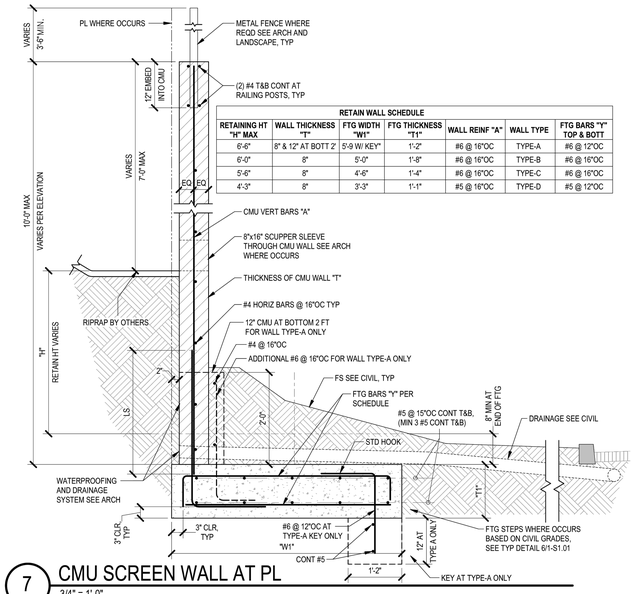


SITE PLAN KEYNOTES

1. PAVEMENT PER CIVIL. SEE CIVIL PLANS
2. NOT USED
3. CONCRETE WALKWAY, MEDIUM BROOM FINISH
4. DRIVEWAY APRONS TO BE CONSTRUCTED. SEE LANDSCAPE DRAWINGS.
5. 5'-6"X4" THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY AS REQ. BY CITY INSPECTOR.
6. APPROXIMATE LOCATION OF TRANSFORMER. CONTRACTOR TO VERIFY WITH S.C.E.,
7. PROVIDE 8' HIGH METAL SLIDING GATES W/ KNOX-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
8. CONCRETE RAMP W/ 42" HIGH CONCRETE WALL.
9. EXTERIOR BIKE RACK TYPICAL.
10. 12' HIGH CONCRETE TILT-UP SCREEN WALL.
11. EXTERIOR CONCRETE STAIR.
12. CONCRETE CURB. SEE CIVIL DRAWINGS.
13. LANDSCAPE. ALL LANDSCAPE AREAS INDICATED BY SHADING.
14. FUTURE GUARD SHACK. PROVIDE CONDUIT.
15. PRE-CAST CONCRETE WHEEL STOP.
16. CONCRETE FILLED GUARD POST "6 DIA. U.N.O. 42" H,
17. TRASH ENCLOSURE PER COUNTY STANDARD.
18. ACCESSIBLE ENTRY SIGN.
19. ACCESSIBLE PARKING STALL SIGN.
20. TRUNCATED DOME.
21. APPROXIMATE LOCATION OF FIRE HYDRANT.
22. WALL MOUNTED LIGHTING FIXTURE.
23. SITE LIGHT POLE W/ CONCRETE BASE.
24. 8' HIGH METAL SWING GATE W/ KNOX-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
25. 8' HIGH METAL FENCE.
26. 2'X2' CONCRETE PAD FOR FUTURE EV CHARGER. PROVIDE CONDUIT.
27. ROOF DRAIN THRU CURB.
28. RETAINING WALL. SEE CIVIL DRAWINGS.
29. 2'X2' CONCRETE PAD WITH EV CHARGER INSTALLED.
30. NOT USED.
31. CONDUIT FOR FUTURE TRUCK EV CHARGERS
32. RETAINING WALL AND GUARDRAIL TO BE CONSTRUCTED BY EAST DEVELOPEMENT. SEE DETAIL BELOW FOR REFERENCE.
33. 3'W X 8'H MAN GATE FOR MAINTENANCE ACCESS.

NOTE: SEE CIVIL PLANS FOR TRAIL FENCING INFORMATION.

REFERENCE GRADING PERMIT: FM 0541-001-2596-0



7 CMU SCREEN WALL AT PL
3/4" = 1'-0"

NOTE: CMU SCREEN WALL DETAIL ABOVE IS DESIGNED BY MIYAMOTO AND SHOWN FOR REFERENCE ONLY.

FENCING PLAN A
scale: 1" = 50'-0"

SCALE: 1" = 50'-0"
0 50' 100' 150'
N TRUE NORTH

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

HPA architecture
hpa, inc.
18831 bardeen avenue - ste. #100 irvine, ca 92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:
THRIFTY OIL CO.
13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:
Perris North
SEC of Tobacco and Placentia
Riverside County CA

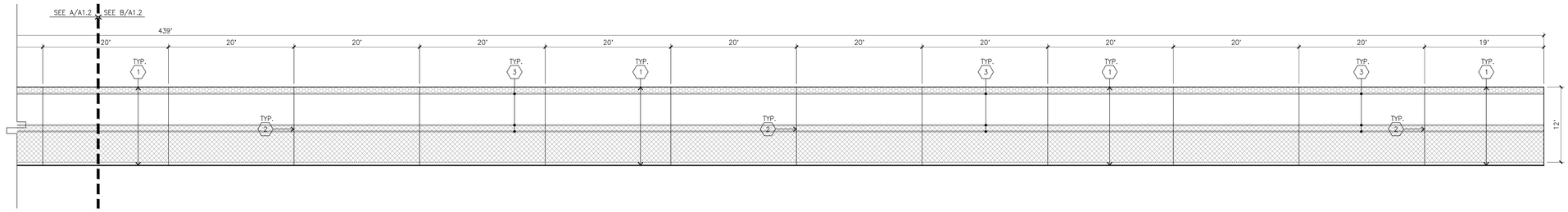
Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

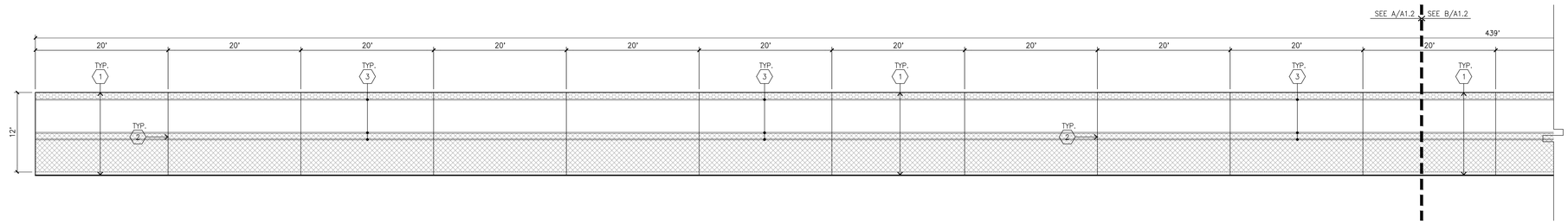
Title: FENCING PLAN

Project Number:	22484
Drawn by:	JK
Date:	
Revision:	
DAC 5TH SUBMITTAL	01/13/25

Sheet:
DAB-A1.0A



SCREEN WALL A
scale: 1/8" = 1'-0"



SCREEN WALL B
scale: 1/8" = 1'-0"

KEYNOTES - SCREEN WALL

1. 10' H CONCRETE TIL-UP SCREEN WALL PAINTED BOTH SIDES, TYPICAL SEE "S" DWG FOR THICKNESS.
2. PANEL JOINT. SEE "S" DRAWINGS. SEE DETAILS 4/AD.3
3. PANEL REVEAL. PAINTED TO MATCH ADJACENT.

GENERAL NOTES - SCREEN WALL

A. CONTRACTOR TO VERIFY ALL GRADES W/ CURRENT "C" PLAN & VERIFY SITE CONDITIONS. VERIFY ALL TYP. TOP OF WALL HEIGHT(T.O.W.) & FINISH SURFACE GRADE.

B. PROVIDE 2" DIA. P.V.C. WEEP HOLES @ 8' O.C. IN SCREEN WALLS @ GRADE LEVEL ON TRUCK SIDE.

C. CONTRACTOR TO PROVIDE WATER-PROOFING MEMBER TO SCREEN WALL AT ALL RETAINING/ BERMING CONDITIONS. PROVIDE WATERPROOFING @ HIGHSIDE OF WALL ONLY. CONTRACTOR TO SUBMIT WATERPROOFING SPECIFICATION TO ARCHITECT PRIOR TO INSTALETION.

D. NOT USED.

E. GATE MANUFACTURER TO PROVIDE DETAILING OF GATES TO WITHSTAND WINDLOAD PER STRUCTURAL PLAN, EXPOSURE "C" AND VERIFY ALL DIMENSIONS, DETAILS AND SITE CONDITION W/ CONTRACTOR.

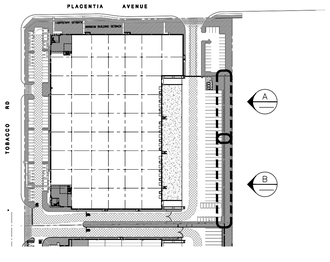
F. ALL GATES TO BE WALL BRACED. SUB-CONTRCTOR TO SUBMIT SHOP DRAWING TO ARCHITECT TO PRIOR TO INSTALLATION.

G. CONTRACTOR TO VERIFY ALL CIVIL AND STRUCTURAL DRAWINGS FOR SCREEN-WALL HEIGHT.

COLOR SCHED. - SCREEN WALL

1	2	3	4
SHERWIN WILLIAMS SW 6070 HERON PLUME	SHERWIN WILLIAMS SW 7040 FAWN BRINDLE	SHERWIN WILLIAMS SW 7075 WEB GRAY	SHERWIN WILLIAMS SW 7051 ANALYTICAL GRAY

KEYMAP



HPA architecture

hpa, inc.
18831 bardeen avenue - ste. #100 irvine, ca 92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

Title: SCREEN WALL ELEVATIONS

Project Number:	22484
Drawn by:	JK
Date:	

Revision:

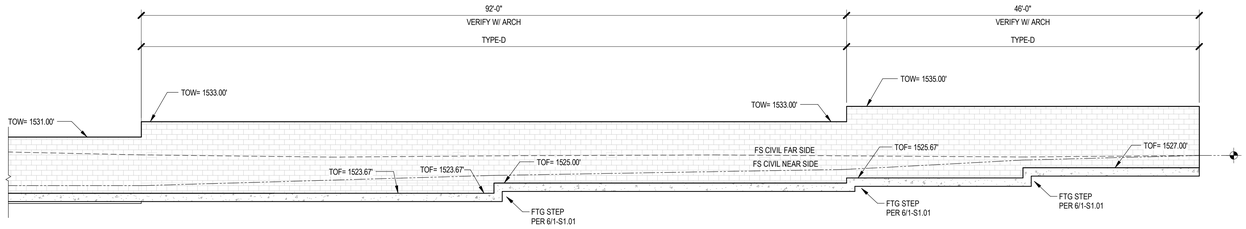
DAC 5TH SUBMITTAL	01/13/25

Sheet:

1-A1.2

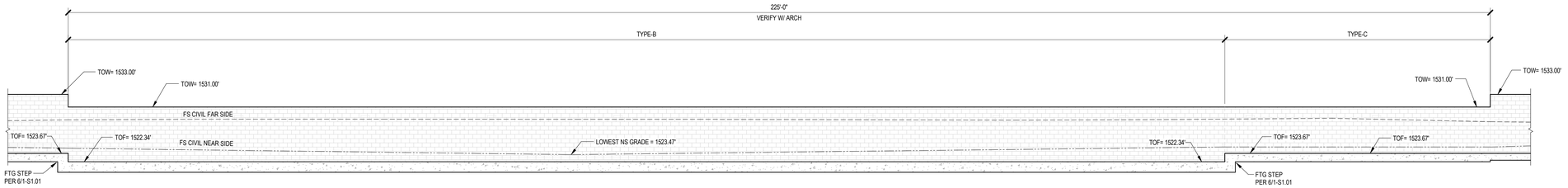
CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

FOR REFERENCE ONLY



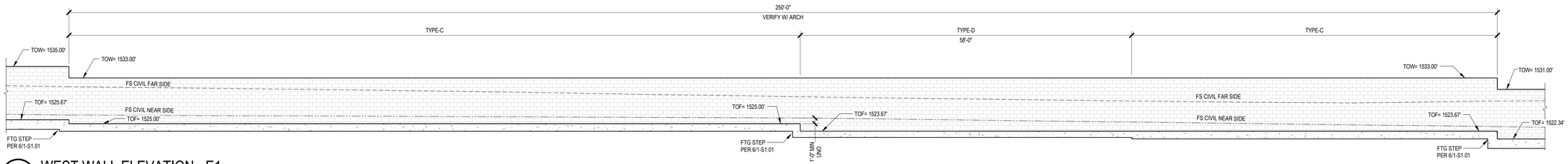
1 WEST WALL ELEVATION - D1

1/8" = 1'-0"



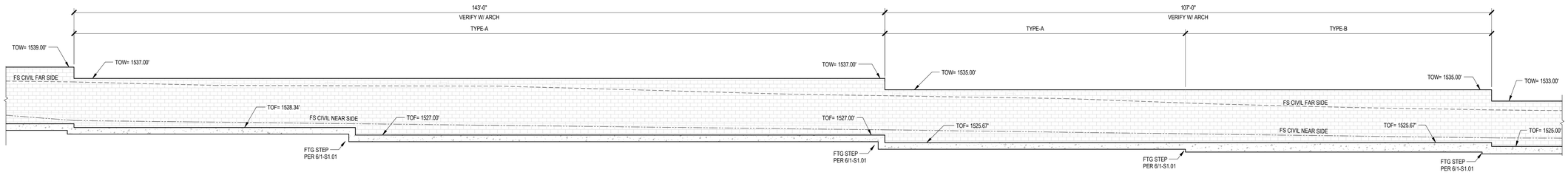
2 WEST WALL ELEVATION - D2

1/8" = 1'-0"



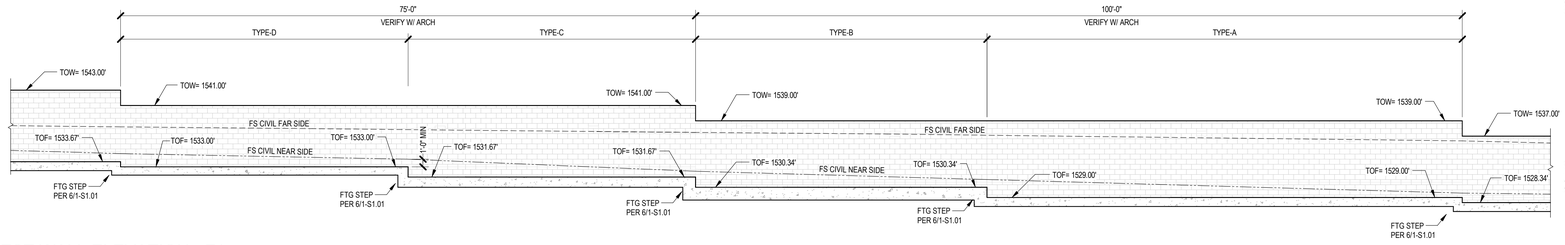
3 WEST WALL ELEVATION - E1

1/8" = 1'-0"



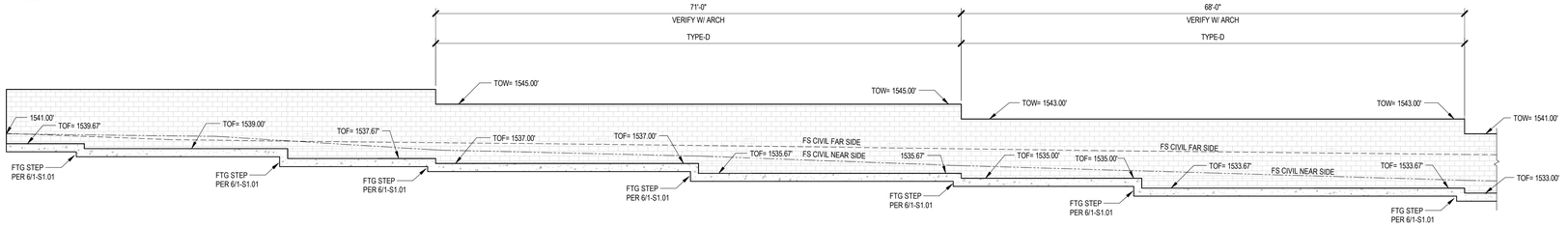
4 WEST WALL ELEVATION - E2

1/8" = 1'-0"



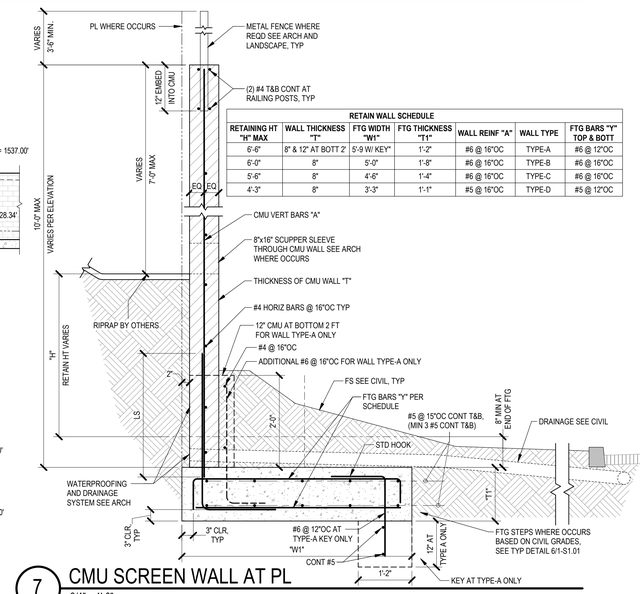
5 WEST WALL ELEVATION - F1

1/8" = 1'-0"



6 WEST WALL ELEVATION - F2

1/8" = 1'-0"



RETAIN WALL SCHEDULE

RETAINING HT "H" MAX	WALL THICKNESS "T"	FTG WIDTH "W1"	FTG THICKNESS "T1"	WALL REINF "A"	WALL TYPE	FTG BARS "Y" TOP & BOTT
6'-6"	8" & 12" AT BOTT 2'	5'-9 W/ KEY"	1'-2"	#6 @ 16"OC	TYPE-A	#6 @ 12"OC
6'-0"	8"	5'-0"	1'-8"	#6 @ 16"OC	TYPE-B	#6 @ 16"OC
5'-6"	8"	4'-6"	1'-4"	#6 @ 16"OC	TYPE-C	#6 @ 16"OC
4'-3"	8"	3'-3"	1'-1"	#5 @ 16"OC	TYPE-D	#5 @ 12"OC

7 CMU SCREEN WALL AT PL

3/4" = 1'-0"

BOULDER ASSOCIATES
300 SPECTRUM CENTER DR, SUITE 730
IRVINE, CALIFORNIA 92618
949.727.9000

REGISTERED PROFESSIONAL ENGINEER
JEFFREY ALAN FLOYD
S3525
CIVIL
STATE OF CALIFORNIA
SIGNED 10/17/2024

miyamoto.
1201 Dove St., Suite 230
Newport Beach, CA 92660
JOB NO. M02004043.00
T: (949) 579-1170
miyamotointernational.com

RIVCO FM#
R_RUHS_BH_HRV_SITE -
FM 0541-001-2596-0

BA PROJECT 225398.01

RUHS WELLNESS VILLAGE - SITE

20533 HARVILL AVENUE,
PERRIS CA 92570

CONSTRUCTION DOCUMENTS

DATE 3/13/2024

REVISIONS

#	DESCRIPTION	DATE
2	BULLETIN #2	09/23/2024
3	BULLETIN #3	10/21/2024

SHEET TITLE

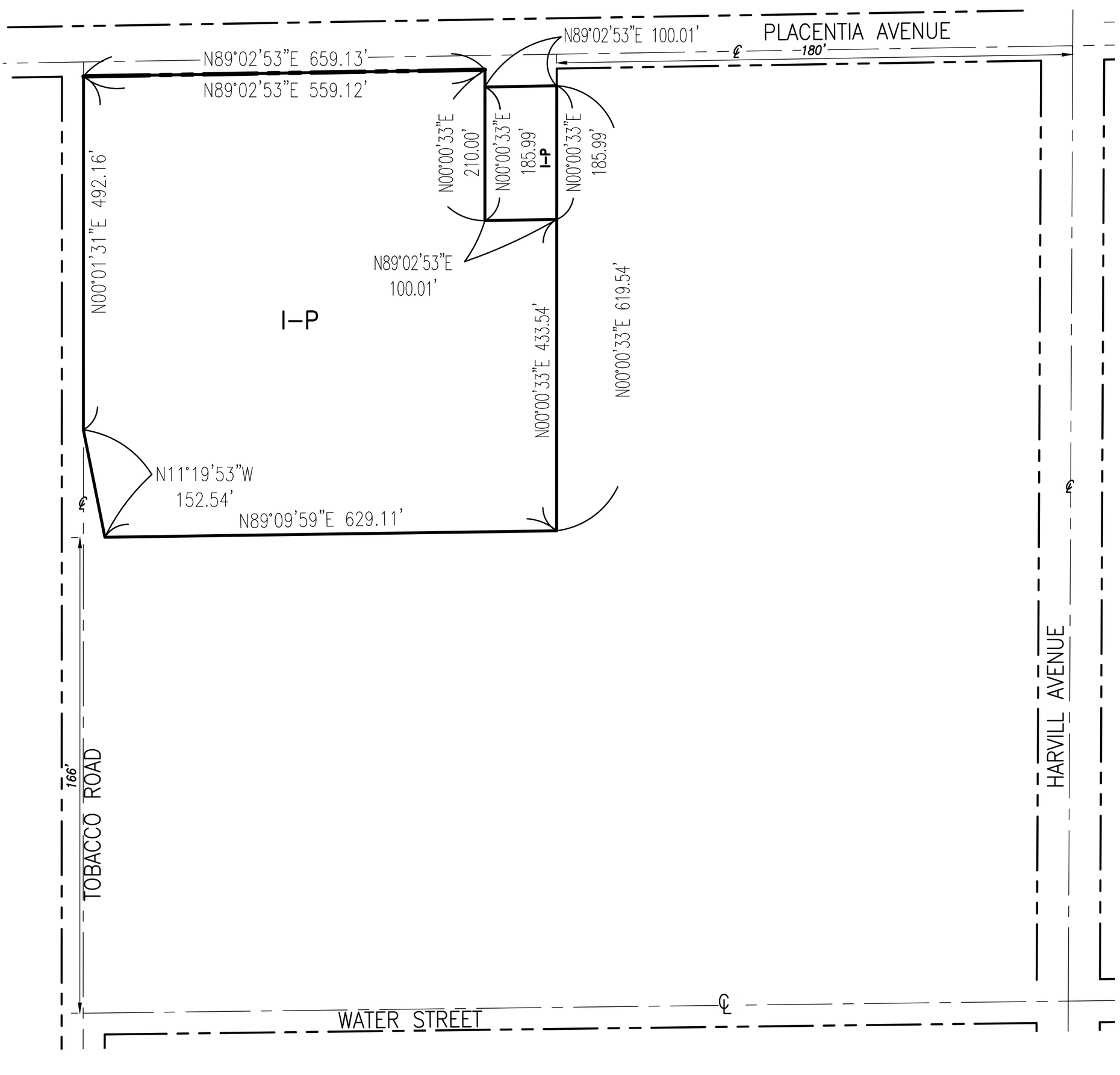
WEST WALL ELEVATIONS

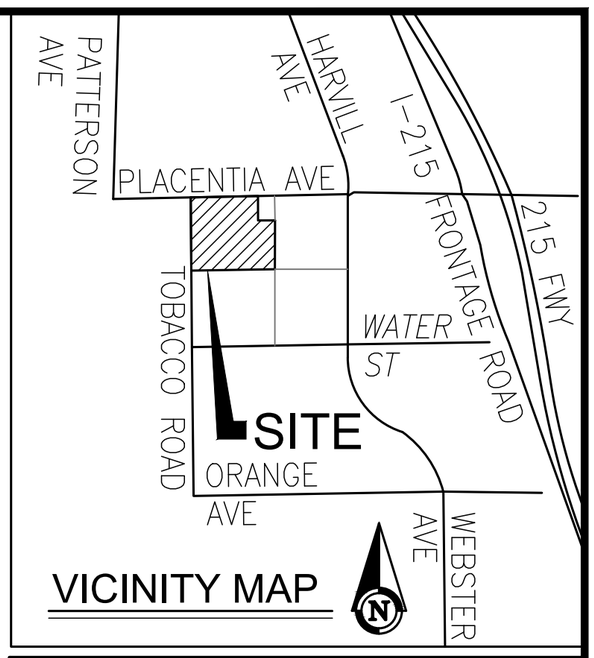
SHEET NUMBER

2 **1-S2.20** 2

©BOULDER ASSOCIATES

TOWNSHIP 4S, RANGE 4W, SECTION 13





APPROXIMATE GROSS LAND AREA:

APN: 317-260-017-9.19 AC APN: 317-260-018-0.429 AC

APPROXIMATE NET LAND AREA:

APN: 317-260-017-8.27 AC APN: 317-260-018-0.406 AC

RECORD OWNER/APPLICANT

THE ORDEN COMPANY.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS, CA 90402
ATTN: STEPHANE WANDEL
EMAIL: SWANDEL@ORDENCOMAPNY.COM

EXHIBIT PREPARER

ARMSTRONG & BROOKS ENG.
1350 E. CHASE DR.
CORONA, CA 92881
ATTN: WILLIAM BROOKS
EMAIL: BILL@ARMSTRONGBROOKS.COM

UTILITY PURVEYORS:

WATER: EASTERN MUNICIPAL WATER DISTRICT
SEWER: EASTERN MUNICIPAL WATER DISTRICT
ELECTRIC: SOUTHERN CALIFORNIA EDISON
GAS: SOUTHERN CALIFORNIA GAS COMPANY
CABLE: CHARTER
TELE: FRONTIER
WASTE: WASTE MANAGEMENT

SCHOOL DISTRICT:

VAL VERDE UNIFIED SCHOOL DISTRICT

EX. ZONING CLASSIFICATION

R-R-1

EX. GENERAL PLAN DESIGNATION

RC:VLDR

PROP. GEN. PLAN DESIGNATION

CD:BP

EX. ZONING AREA

NORTH PERRIS AREA

PROP. ZONING AREA

I-P "INDUSTRIAL PARK"

LEGEND

I-P	INDUSTRIAL PARK

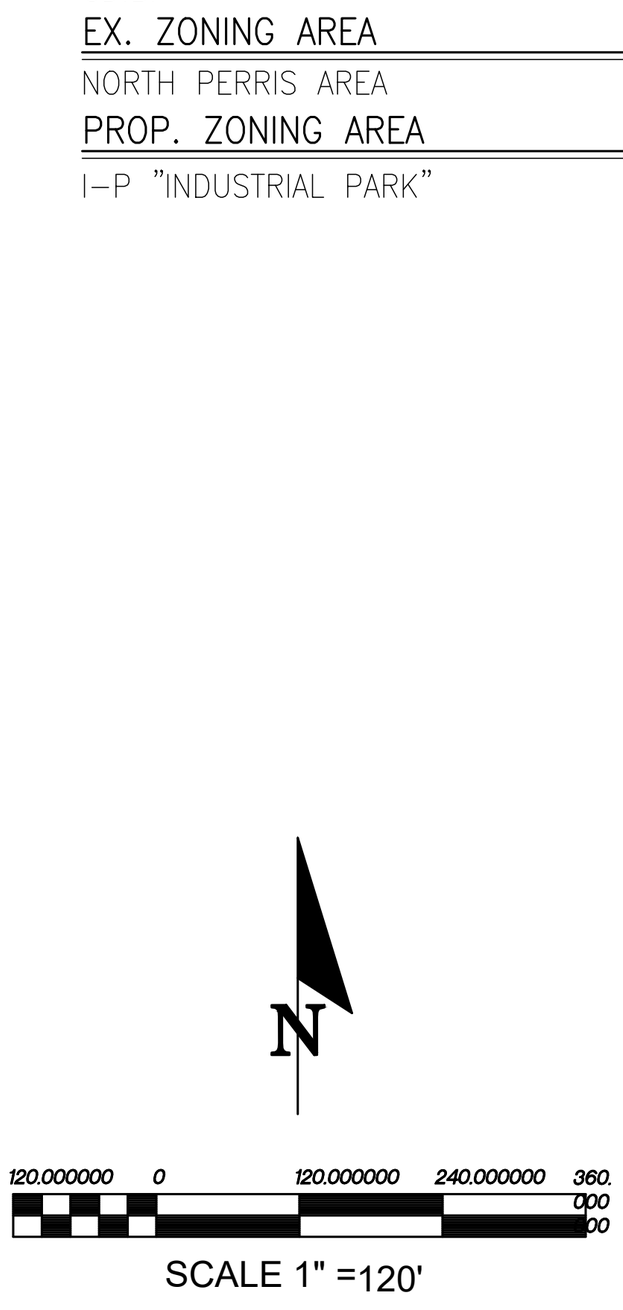
MAP NO. N/A
CHANGE OF OFFICIAL ZONING PLAN
AMENDING
MAP NO. 2 ORDINANCE NO. 348
CHANGE OF ZONE CASE NO. 230008
AMENDING ORDINANCE NO. N/A
ADOPTED BY ORDINANCE NO. N/A
XX/XX/XXXX
RIVERSIDE COUNTY BOARD OF SUPERVISORS

LEGAL DESCRIPTION: APN: 317-260-017

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE UNINCORPORATED AREA OF PERRIS AREA IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:
LOT 3 OF OAKES AND SAWYERS SUBDIVISION, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 1, PAGE 5 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY. EXCEPT THE NORTH 230.00 FEET OF THE EAST 100.00 FEET, SAID 230.00 FEET BEING MEASURED ON THE CENTER LINE OF PLACENTIA AVENUE; ALSO EXCEPT THAT PORTION DESCRIBED IN DEED TO THE COUNTY OF RIVERSIDE, RECORDED FEBRUARY 5, 1962 AS INSTRUMENT NO. 11202 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA, DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 3; THENCE NORTH 00° 30' 04" WEST ALONG THE WEST LINE OF SAID LOT, A DISTANCE OF 150.00 FEET; THENCE SOUTH 11° 50' 30" EAST, A DISTANCE OF 152.54 FEET TO THE SOUTH LINE OF SAID LOT; THENCE SOUTH 88° 39' 22" WEST, ALONG SAID SOUTH LINE, A DISTANCE OF 30.00 FEET TO THE POINT OF BEGINNING. EXCEPTING THEREFROM ANY MOBILE HOME LOCATED OR PLACED THEREON.

LEGAL DESCRIPTION: APN: 317-260-018

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE UNINCORPORATED AREA OF PERRIS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:
THE NORTH 230.00 FEET (MEASURED FROM THE CENTER LINE PLACENTIA AVENUE) OF THE EAST 100.00 FEET OF LOT 3 OAKES AND SAWYER'S SUBDIVISION, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 1, PAGE 5 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY. EXCEPTING THEREFROM, THAT PORTION CONVEYED TO THE COUNTY OF RIVERSIDE BY DEED RECORDED DECEMBER 6, 1974 AS INSTRUMENT NO. 155641, OF OFFICIAL RECORDS.



SCALE 1" =120'

APN: 317-260-017 & 317-260-018

EXHIBIT PREPARED 05/29/2025

COUNTY OF RIVERSIDE
ENVIRONMENTAL ASSESSMENT FORM: INITIAL STUDY

Project Case Type (s) and Number(s): [illegible] t No. 230008 (GPA230008) [illegible] No. 2300030 [illegible] an No. 230048 ([illegible]
Lead Agency Name: [illegible]
Address: [illegible]
Contact Person: [illegible]
Telephone Number: [illegible]
Applicant's Name: [illegible]
Applicant's Address: [illegible]

I. PROJECT INFORMATION

[illegible] *Regional Vicinity* [illegible] *Project Site - Aerial View* [illegible] *Project Site USGS View* [illegible] [1] [illegible]

[illegible]

[illegible]

Concurrent Entitlements:

[illegible]

- [illegible] t No. 230008 (GPA 230008) proposal [illegible]
- [illegible] e No. 230030 ([illegible] proposal to c[illegible] the [illegible]

[1] [illegible]

- [illegible] No. 230048 [illegible] proposal [illegible] construct [illegible] [illegible]

On-Site Improvements

[illegible]

[illegible] [illegible] [illegible] *Site Plan* [illegible]

[illegible] [illegible] [illegible] *Building Colored Elevations* [illegible]

[illegible] [illegible] *Building Elevations and Profiles* [illegible]

[illegible] [illegible] [illegible]

[illegible] [illegible] [illegible] *Landscaping Plan* [illegible]

[illegible] D[illegible] [illegible] *Photometric Plan* [illegible]

[illegible] M[illegible] [illegible] M[illegible] [illegible] [illegible] [

- [illegible] *Off-Site Improvements Exhibit.*
- [illegible]

Construction

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Operations

[illegible] correlates with the “Light Industrial” General Plan Land Use designation. [illegible]

[illegible]

[illegible] *Employment Density Study* [illegible]

may not be in the Project's area of Riverside County).

A. Type of Project: ☒ ☐ ☐ ☐

B. Total Project Area:

Residential Acres:	**Lots:**	**Units:**	**Projected No. of Residents:**
Commercial Acres:	**Lots:**	**Sq. Ft. of Bldg. Area:**	**Est. No. of Employees:**
Industrial Acres:	**Lots:**	**Sq. Ft. of Bldg. Area:**	**Est. No. of Employees:**
Other:	**Lots:**	**Sq. Ft. of Bldg. Area:**	**Est. No. of Employees:**

C. Assessor's Parcel No(s):

Street References:

D. Section, Township & Range Description or reference/attach a Legal Description: *Steele Peek,*

E. Brief description of the existing environmental setting of the project site and its surroundings: *Project Site Zoning*

- **North:**
- **South:**

- **West:** [illegible] 2 [illegible] [illegible] [illegible]

[illegible]

[illegible]

[illegible] “Road Improved Standards and Specifications” by the Riverside County [illegible] D[illegible]

[illegible] According to the County’s traffic study guidelines, the Project generates less than [illegible]

Multipurpose Open Space: [illegible]

[illegible]

[illegible] and the Project’s landscaping plan complies with County Ordinance No. 859.3, “Water Efficient Landscape Requirements”. [illegible]

- **Safety:** [illegible]

□ □□2 □□□□□□□□□□□□□□r□□□□□□d□□r□□□□□□□□□□□□□□□d□□r□□□□□□□□□□□□□□r□□□□□□□□□□□□□□ □r□□□□□□□ r□□□□□□□□□□□□r□□□□□□□□□□□□□□□□□□□□□□□□r□□□□□□r□□□□□□□□□□□□□□□□□□□□□□□□□□□□□r□□□□□□□□□□□□□□□□d□□□□□□□□□□□□□□□d□□□□□□□ □□□□□□□□□□ d□□□□□□□□□ □□□□□□□□ □□□□□□□□□□□□□□□□□□□□

H. Adopted Specific Plan Information

1. Name and Number of Specific Plan, if any:

2. Specific Plan Planning Area, and Policies, if any:

I. Existing Zoning:

J. Proposed Zoning, if any:

K. Adjacent and Surrounding Zoning:

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

[illegible] least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.[illegible]

☐ [illegible]	☐ [illegible]	☐ [illegible]
☐ [illegible]	☐ [illegible]	☐ [illegible]
☐ [illegible]	☐ [illegible]	☒ [illegible]
☒ [illegible]	☐ [illegible]	☐ [illegible]
☒ [illegible]	☐ [illegible]	☐ [illegible]
☐ [illegible]	☒ [illegible]	☐ [illegible]
☐ [illegible]	☐ [illegible]	
☐ [illegible]	☐ [illegible]	

IV. DETERMINATION

[illegible]

A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS NOT PREPARED

☐ [illegible] **COULD NOT** [illegible] **NEGATIVE DECLARATION** [illegible]

☒ [illegible] **A MITIGATED NEGATIVE DECLARATION** [illegible]

☐ [illegible] **ENVIRONMENTAL IMPACT REPORT** [illegible]

A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS PREPARED

☐ [illegible] **NO NEW ENVIRONMENTAL DOCUMENTATION IS REQUIRED** [illegible]

☐ [illegible] **ADDENDUM** [illegible]

☐ [illegible] **SUPPLEMENT TO THE ENVIRONMENTAL IMPACT REPORT** [illegible]

[illegible] [illegible]

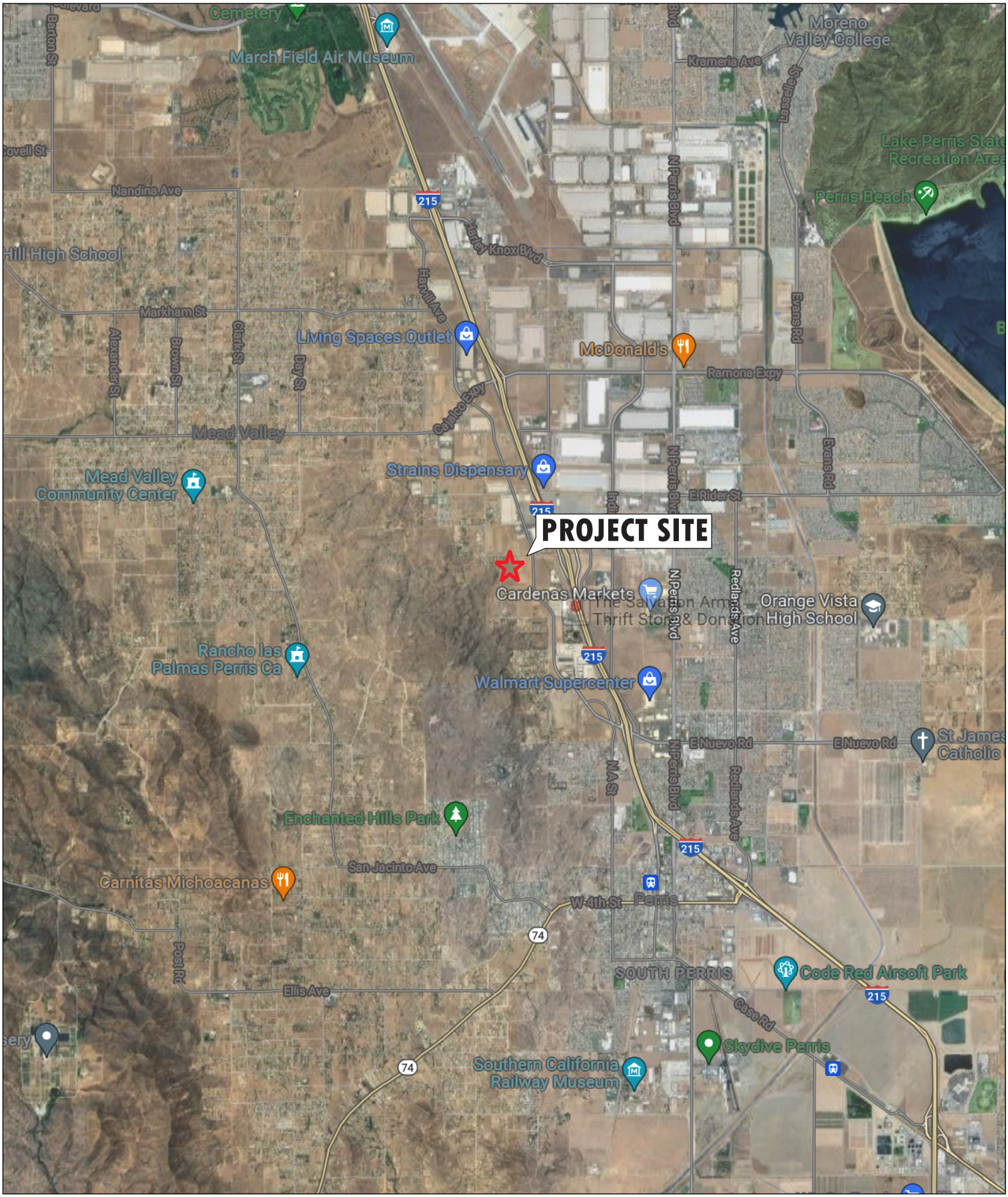
☐ [illegible] **a SUBSEQUENT ENVIRONMENTAL IMPACT REPORT** [illegible]

Krista Mason

04/25/2025

Krista Mason

Planning Director



0 1.00
Mile

LILBURN CORPORATION

REGIONAL LOCATION

Thrifty Oil Speculative Warehouse
23641 Placentia Avenue
Riverside County, California

FIGURE 1

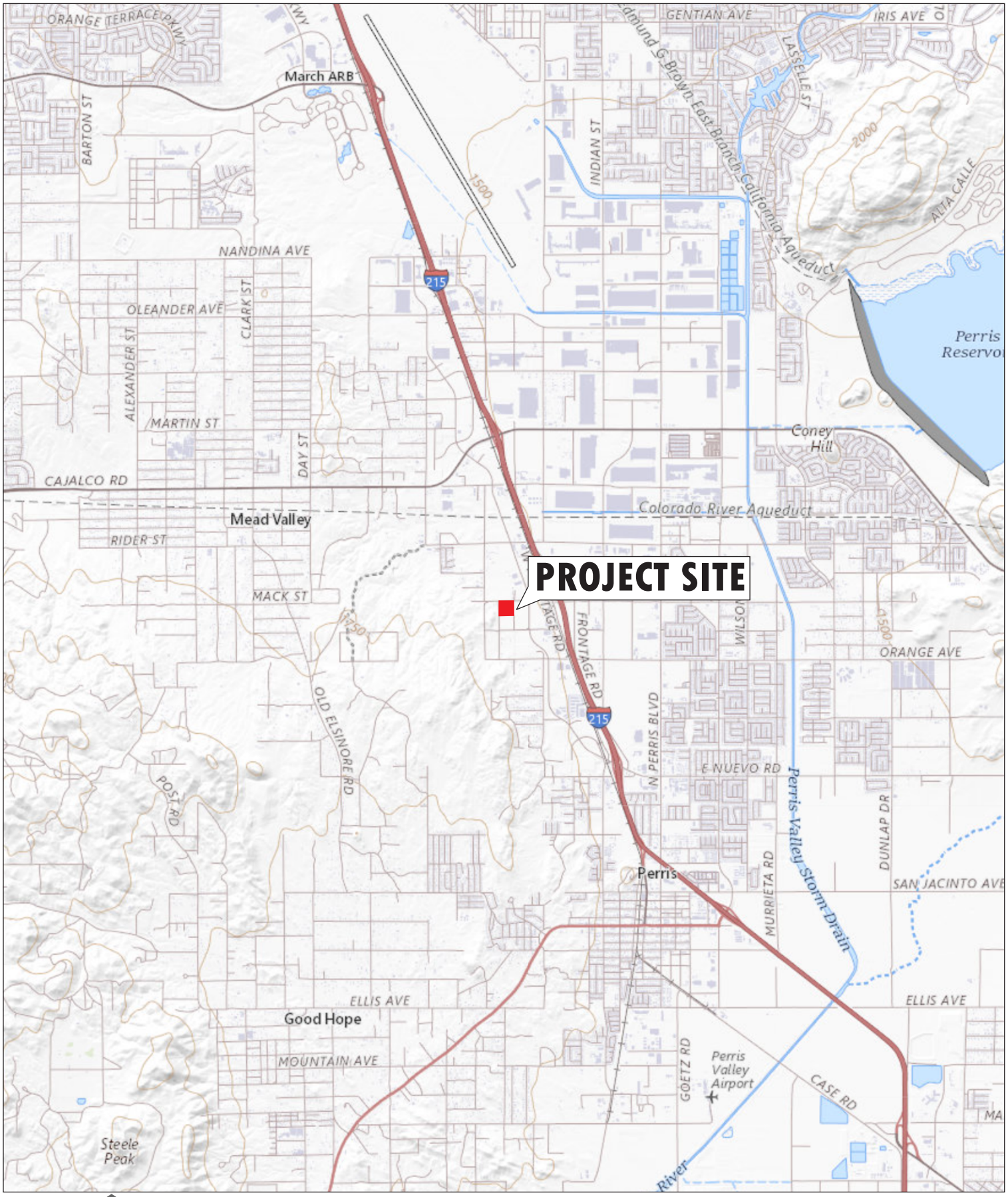


0 160
Feet

LILBURN CORPORATION

PROJECT SITE-AERIAL VIEW

Thrifty Oil Speculative Warehouse
23641 Placentia Avenue
Riverside County, California
FIGURE 2



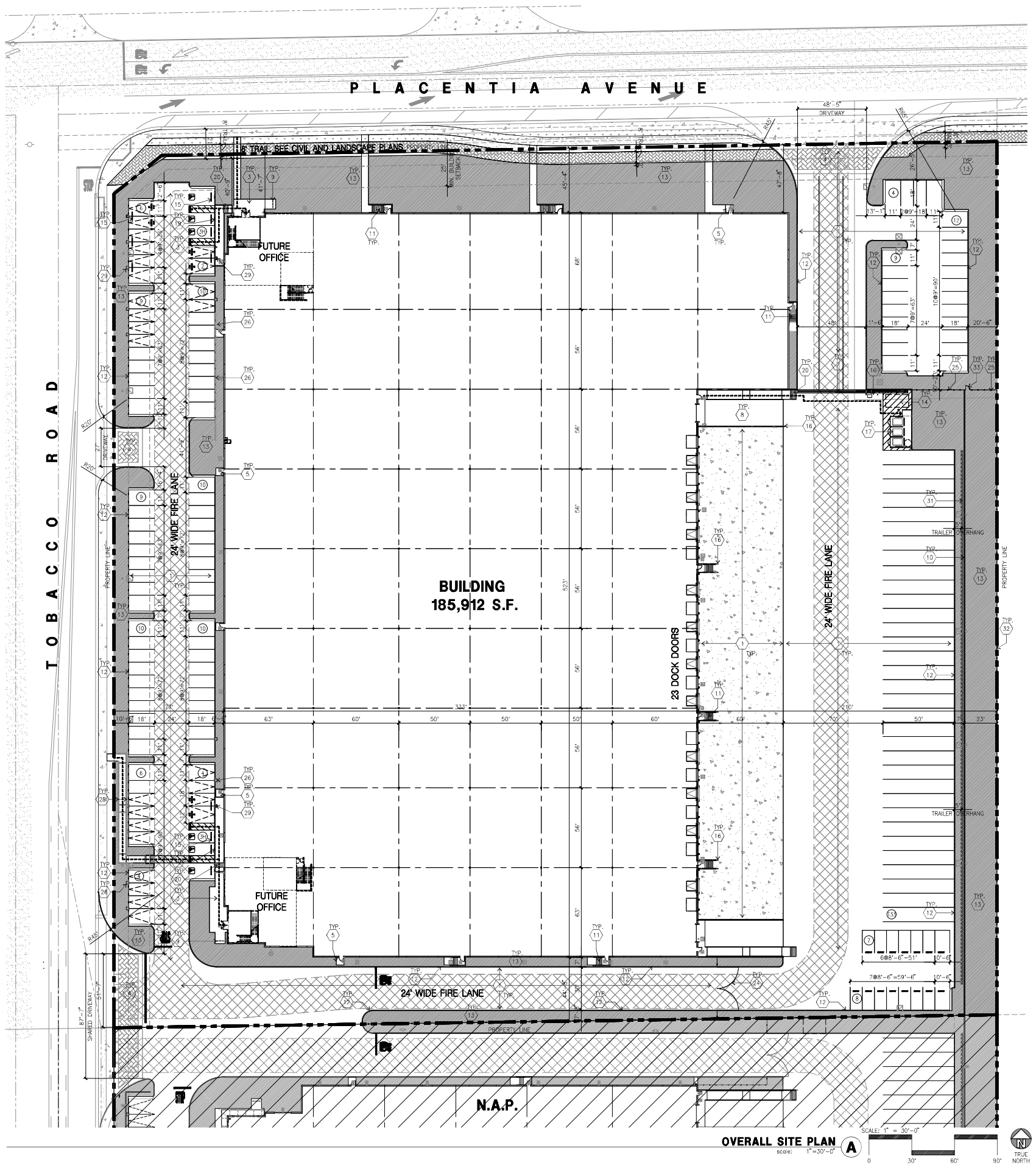
0 1.00
Miles

LILBURN CORPORATION

PROJECT SITE-USGS VIEW

Thrifty Oil Speculative Warehouse
23641 Placentia Avenue
Riverside County, California

FIGURE 3



SITE PLAN KEYNOTES

1. PAVEMENT PER CIVIL. SEE CIVIL PLANS
2. NOT USED
3. CONCRETE WALKWAY, MEDIUM BROOM FINISH
4. DRIVEWAY APRONS TO BE CONSTRUCTED. SEE LANDSCAPE DRAWINGS.
5. 5'-6"X4" THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY AS REQ. BY CITY INSPECTOR.
6. APPROXIMATE LOCATION OF TRANSFORMER. CONTRACTOR TO VERIFY WITH S.C.E.
7. PROVIDE 8' HIGH METAL SLIDING GATES W/ KNOX-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
8. CONCRETE RAMP W/ 42" HIGH CONCRETE WALL.
9. EXTERIOR BIKE RACK TYPICAL.
10. 12' HIGH CONCRETE TILT-UP SCREEN WALL.
11. EXTERIOR CONCRETE STAIR.
12. CONCRETE CURB. SEE CIVIL DRAWINGS.
13. LANDSCAPE. ALL LANDSCAPE AREAS INDICATED BY SHADING.
14. FUTURE GUARD SHACK. PROVIDE CONDUIT.
15. PRE-CAST CONCRETE WHEEL STOP.
16. CONCRETE FILLED GUARD POST "6 DIA. U.N.O. 42" H.
17. TRASH ENCLOSURE PER COUNTY STANDARD.
18. ACCESSIBLE ENTRY SIGN.
19. ACCESSIBLE PARKING STALL SIGN.
20. TRUNCATED DOME.
21. APPROXIMATE LOCATION OF FIRE HYDRANT.
22. WALL MOUNTED LIGHTING FIXTURE.
23. SITE LIGHT POLE W/ CONCRETE BASE.
24. 8' HIGH METAL SWING GATE W/ KNOX-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
25. 8' HIGH METAL FENCE.
26. 2'X2' CONCRETE PAD FOR FUTURE EV CHARGER. PROVIDE CONDUIT.
27. ROOF DRAIN THRU CURB.
28. RETAINING WALL. SEE CIVIL DRAWINGS.
29. 2'X2' CONCRETE PAD WITH EV CHARGER INSTALLED.
30. NOT USED.
31. CONDUIT FOR FUTURE TRUCK EV CHARGERS
32. RETAINING WALL AND GUARDRAIL TO BE CONSTRUCTED BY EAST DEVELOPEMENT. SEE DETAIL BELOW FOR REFERENCE.
33. 3'W X 8'H MAN GATE FOR MAINTENANCE ACCESS.

SITE PLAN GENERAL NOTES

1. THE SITE PLAN BASED ON THE SOILS REPORT PREPARED BY: TBD
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". FINISH TO BE A MEDIUM BROOM FINISH U.N.O.
11. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
12. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
13. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
14. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
15. ALL VERTICAL MOUNTING POLES OF CHAIN LINK FENCING SHALL BE CAPPED.
16. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB.
17. PROVIDE PHOTOVOLTAIC PANELS AS REQUIRED BY APPLICABLE CODES.

SITE LEGEND

- PAVING, SEE "C" DRWGS.
- STANDARD PARKING STALL (9' X 18')
- ACCESSIBLE PARKING STALL (9' X 18') W/ 5' ACCESSIBLE AISLE
- VAN ACCESSIBLE PARKING STALL (12' X 18') W/ 5' ACCESSIBLE AISLE
- STANDARD ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 9'X18' +5' W/ ACCESSIBLE AISLE
- VAN ACCESSIBLE EVCS WITH ISA SIGN AND MARKING "EV CHARGING ONLY", 12'X18'+5' W/ ACCESSIBLE AISLE
- STANDARD EVCS SIZE, 9'X18'
- EV CAPABLE SPACE WITHOUT EVSE SIZE 9'X18'
- LANDSCAPED AREA
- 26' WIDE FIRE LANE
- TRAIL
- PROPERTY LINE
- ACCESSIBLE PATH OF TRAVEL 4' MIN. WIDE, 1:20 MAX. SLOPE & 2% MAX. CROSS SLOPE, EXCEPT FOR PARKING ACCESS AISLES AND DOOR LANDINGS WHERE THE MAX SLOPE IS 2% IN ALL DIRECTIONS AND UNLESS NOTED OTHERWISE.
- LIGHTING FIXTURE
- EV CHARGER
- EV CHARGER FOR FUTURE

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

HPA architecture

hpa, inc.
18831 bardeen avenue - ste.
#100 irvine, ca
92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

Title: OVERALL SITE PLAN

Project Number:	22484
Drawn by:	JK
Date:	
Revision:	
DAC 5TH SUBMITTAL	01/13/25

Sheet:

DAB-A1.1

SITE PLAN

Thrifty Oil Speculative Warehouse
23641 Placentia Avenue
Riverside County, California

FIGURE 4

LILBURN CORPORATION

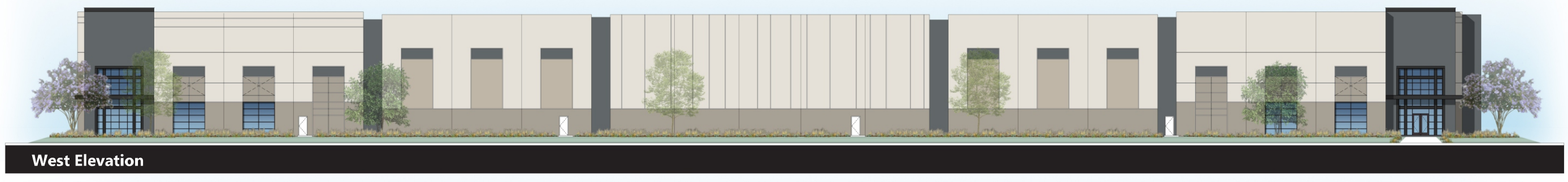
BUILDING COLORED ELEVATIONS

Thrifty Oil Speculative Warehouse
23641 Placentia Avenue
Riverside County, California

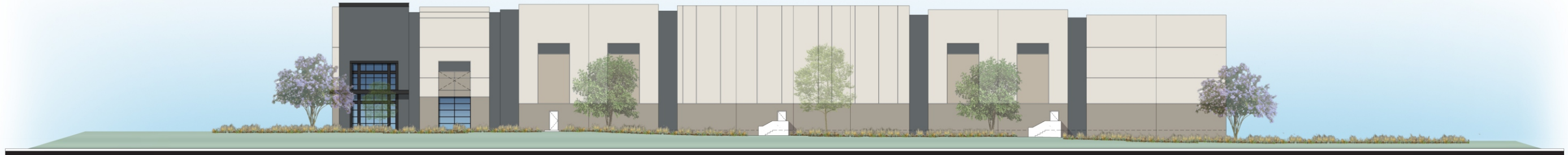
FIGURE 5A



North Elevation



West Elevation



South Elevation



East Elevation

Conceptual Elevations - 36ft Clear

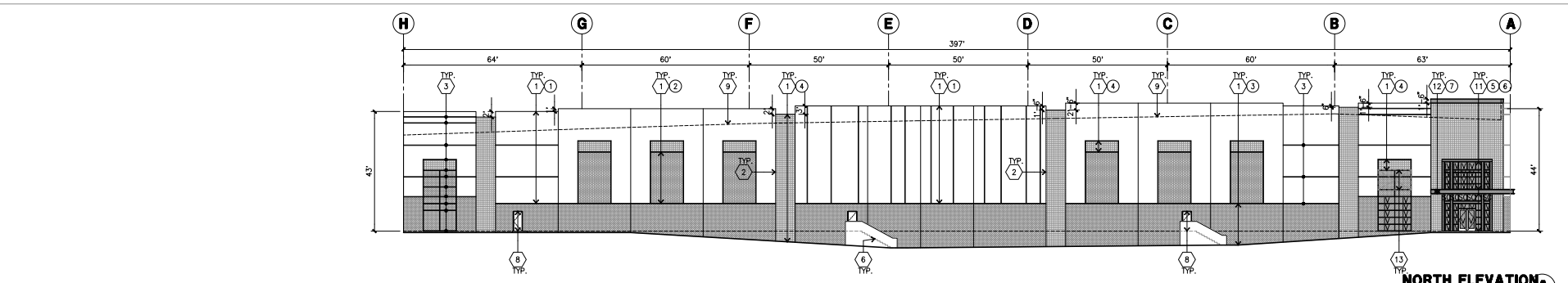
PERRIS NORTH

City of Riverside, California #21226 | 11. 08. 2024

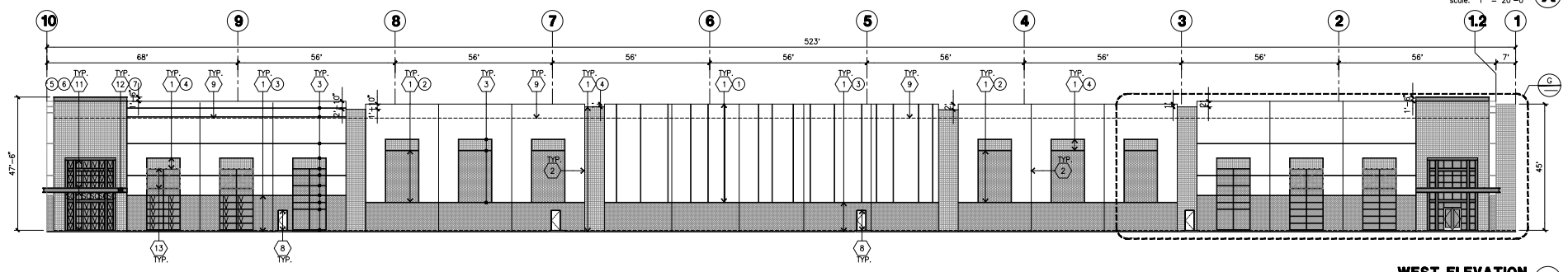
HPA architecture 43 Years

THE ORDEN COMPANY

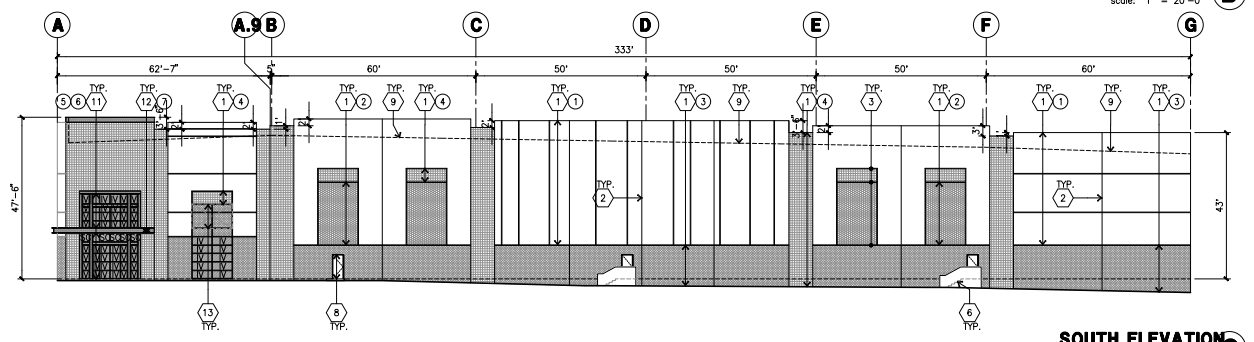
LILBURN CORPORATION



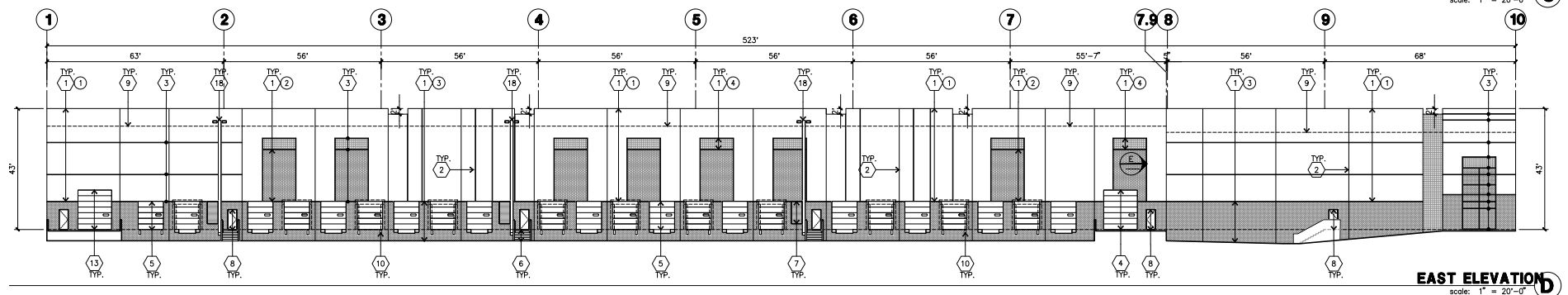
NORTH ELEVATION A
scale: 1" = 20'-0"



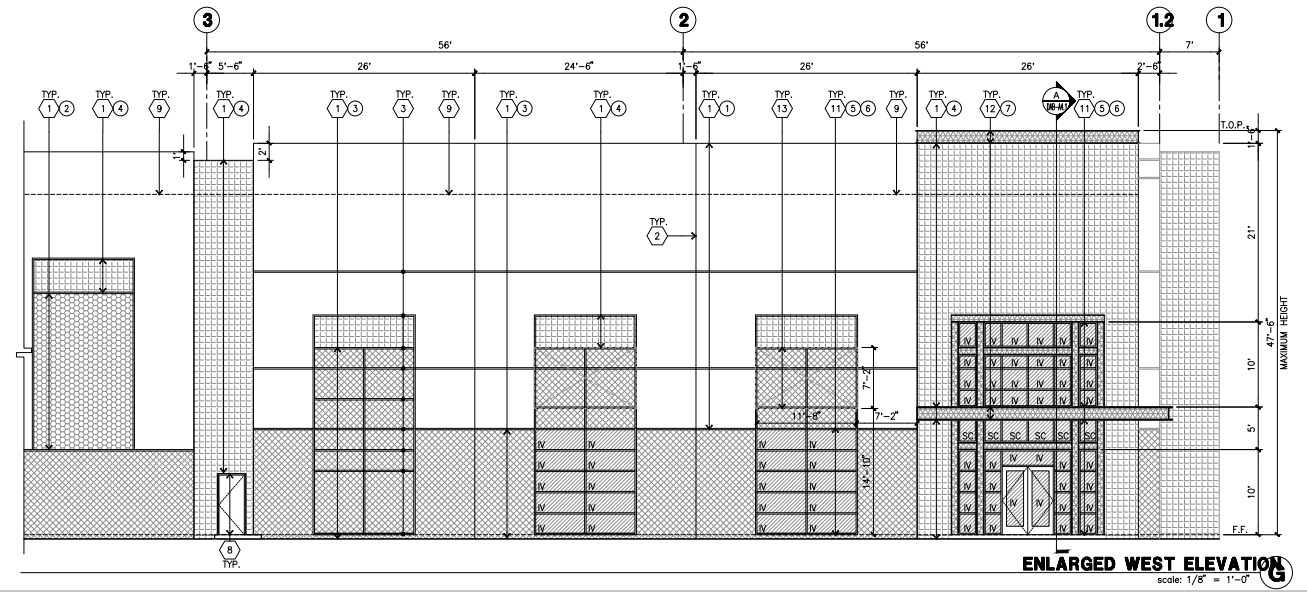
WEST ELEVATION B
scale: 1" = 20'-0"



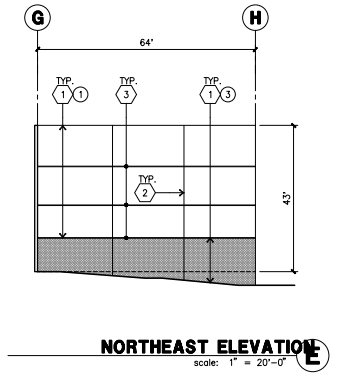
SOUTH ELEVATION C
scale: 1" = 20'-0"



EAST ELEVATION D
scale: 1" = 20'-0"



ENLARGED WEST ELEVATION G
scale: 1/8" = 1'-0"



NORTHEAST ELEVATION E
scale: 1" = 20'-0"

ELEVATION KEYNOTES

1. CONCRETE TILT-UP PANEL.
2. PANEL JOINT.
3. PANEL REVEAL. ALL REVEALS TO HAVE A MAX. OF 3/8" CHAMFER. REVEAL COLOR TO MATCH ADJACENT BUILDING FIELD COLOR. U.N.O.
4. 12' X 14' OVERHEAD DOOR @ DRIVE THRU. PROVIDE COMPLETE WEATHER-STRIPPING PROTECTION ALL AROUND.
5. 9' X 10' OVERHEAD DOOR @ DRIVE THRU. PROVIDE COMPLETE WEATHER-STRIPPING PROTECTION ALL AROUND.
6. CONCRETE STAIR, LANDING AND GUARDRAIL W/ METAL PIPE HANDRAIL. PROVIDE NON SKID NOSING TO MEET ADA REQUIREMENTS. PROVIDE CONTRASTING COLORED 3" WIDE WARNING STRIPE INTEGRAL TO CONCRETE AT TOP LANDING AND BOTTOM TREAD PER ADA REQUIREMENTS.
7. 4' X 8' METAL LOUVER OPENING FOR VENTILATION. PAINT TO MATCH BUILDING COLOR.
8. HOLLOW METAL DOORS. PROVIDE COMPLETE WEATHER STRIPING ALL AROUND DOOR.
9. ROOF LINE BEYOND.
10. DOCK DOOR BUMPER TYPICAL.
11. ALUMINUM STOREFRONT FRAMING WITH TEMPERED GLAZING AT ALL DOORS, SIDELITES ADJACENT TO DOORS AND GLAZING WITH BOTTOMS LESS THAN 18" ABOVE FINISH FLOOR ELEVATION.
12. METAL CANOPY.
13. KNOCK-OUT PANEL.
14. INTERIOR ROOF DRAIN W/ 2 OVERFLOW SCUPPERS.
15. CONC. FILLED GUARD POST. 6" DIA. U.N.O.. 42"H.
16. EXTERIOR LIGHTING FIXTURE.
17. APPROXIMATE LOCATION OF ADDRESS ON WALL.
18. EXTERIOR DOWN SPOUTS W/ 2 OVERFLOW SCUPPERS.

ELEVATION GENERAL NOTES

1. ALL PAINT COLOR CHANGES TO OCCUR AT INSIDE CORNERS UNLESS NOTED OTHERWISE.
2. ALL PAINT FINISHES ARE TO BE FLAT UNLESS NOTED OTHERWISE.
3. T.O.P. EL.= TOP OF PARAPET ELEVATION.
4. F.F. = FINISH FLOOR ELEVATION.
5. STOREFRONT CONSTRUCTION: GLASS, METAL ATTACHMENTS AND LINTELS SHALL BE DESIGNED TO RESIST — MPH. EXPOSURE "C" WINDS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.
6. CONTRACTOR SHALL FULLY PAINT ONE CONCRETE PANEL W/ SELECTED COLORS. ARCHITECT AND OWNER SHALL APPROVE PRIOR TO PAINTING REMAINDER OF BUILDING.
7. BACK SIDE OF PARAPETS TO HAVE SMOOTH FINISH AND BE PAINTED WITH ELASTOMERIC PAINT.
8. FOR SPANDREL GLAZING, ALLOW SPACE BEHIND SPANDREL TO BREATH. PROVIDE 1" DIAMETER HOLES AT CONCRETE WALL.
9. USE ADHESIVE BACK WOOD STRIPS FOR ALL REVEAL FORMS.
10. THE FIRST COAT OF PAINT TO BE ROLLED-ON AND THE SECOND COAT TO BE SPRAYED-ON
11. ALL ROLL-UP DOORS AND SERVICE DOORS TO BE PAINTED TO MATCH BUILDING COLOR.

ELEVATION COLOR LEGEND/SCHED.

1. PAINT. COLOR : SW 6070 HERON PLUME (259-C1)
2. PAINT. COLOR : SW 7051 ANALYTICAL GRAY (246-C2)
3. PAINT. COLOR : SW 7640 FAWN BRINDLE (247-C5)
4. PAINT. COLOR : SW 7075 WEB GRAY (235-C6)
5. MULLIONS COLOR : BLACK MULLION
6. GLAZING COLOR : BLUE GLAZING
7. METAL CANOPY: BLACK I-BEAM

GLAZING LEGEND

NOTE: ALL EXTERIOR AND INTERIOR GLAZING SHALL BE TEMPERED.

IV — INSULATED VISION GLASS

SC — SPANDREL GLASS WITH CONCRETE BEHIND

V — SINGLE LITE VISION GLASS

IV : INSULATED VISION GLASS
1/4" VISTACOOL PACIFICA + 1/4" SOLARBAN 60 CLEAR
1" INSULATED GLASS UNIT WITH 1/2" AIRSPACE AND 1/4" LITES
U: 0.27 SHGC: 0.21 VLT: 26%
MINIMUM VT TO BE 0.42 PER 2016 CEC TABLE 140.3-B

SC : SPANDREL WITH CONCRETE BEHIND
1/4" VISTACOOL PACIFICA WITH HARMONY BLUE OPACICOAT PAINTED ON REFLECTIVE. INSTALLED ON CONCRETE.

V : VISION GLASS
1/4" VISTACOOL PACIFICA

MULLIONS : BLACK ANODIZED.

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

HPA architecture

hpa, inc.
18831 bardeen avenue - ste. #100 irvine, ca 92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	Hunter Landscape
Fire Protection:	-
Soils Engineer:	-

Title: ELEVATIONS

Project Number:	22484
Drawn by:	JK
Date:	
Revision:	
DAC 5TH SUBMITTAL	01/13/25

Sheet:

DAB-A3.1

BUILDING ELEVATIONS AND PROFILES

Thrifty Oil Speculative Warehouse
23641 Placentia Avenue
Riverside County, California

FIGURE 5B

LILBURN CORPORATION

LANDSCAPING PLAN

Thrifty Oil Speculative Warehouse
23641 Placentia Avenue
Riverside County, California

FIGURE 6



RIGHT-OF-WAY LANDSCAPING SHALL BE MAINTAINED BY THE PROPERTY OWNER UNLESS OTHERWISE DIRECTED BY COUNTY OF RIVERSIDE LMD DEPARTMENT STAFF

TRAIL WITHIN RIGHT-OF-WAY AREA SHALL BE MAINTAINED BY PROPERTY OWNER UNLESS OTHERWISE DIRECTED BY COUNTY OF RIVERSIDE LMD STAFF.

PLANTING LEGEND

TREES

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Cercidium 'Desert Museum' Blue Palo Verde	36" Box	9	L	Multi
	Chilopsis linearis Desert Willow	36" Box	2	L	Multi
	Chitalpa tashkentensis Chitalpa	36" Box	16	L	Standard
	Street tree TBD Construction Phase Street tree TBD Construction Phase	36" Box	16	M	Street Tree
	Pinus eldarica Afghan Pine	36" Box	8	L	Standard
	Platanus racemosa California Sycamore	36" Box	11	M	Standard
	Rhus lancea African Sumac	36" Box	12	L	Standard
	Tristania conferta Brisbane Box	36" Box	36	M	Standard
	Cupressus sempervirens Italian Cypress	36" Box	4	L	Standard

SHRUBS

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	SPACING
	Baccharis p. 'Centennial' Coyote Bush	5 Gal	0	L	4' OC 2.5' from hardscape
	Callistemon 'Little John' Dwarf Bottle Brush	5 Gal	0	L	3' OC 2' from hardscape
	Carex pansa Sand Dune Sledge	5 Gal	0	L	3' OC 2' from hardscape
	Carex tumulicola European Grey Sedge	5 Gal	0	M	3' OC 2' from hardscape
	Cistus spp. (except Cistus ladanifer) Rockrose	5 Gal	0	L	3' OC 2' from hardscape
	Dietes bicolor Fortnight Lily	5 Gal	0	M	3' OC 2' from hardscape
	Ligustrum j. Texanum Texas Privet	5 Gal	0	M	3' OC 2' from hardscape
	Pittosporum tobira 'Variegata' Variegated Mock Orange	5 Gal	0	M	3' OC 2' from hardscape
	Pittosporum t. 'Wheeleri' Wheeler's Dwarf	5 Gal	0	M	3' OC 2' from hardscape
	Rhaphiolepis i. 'Clara' Indian Hawthorn 'Clara'	5 Gal	0	M	3' OC 2' from hardscape
	Rhaphiolepis i. 'Springtime' Indian Hawthorn 'Springtime'	5 Gal	0	M	3' OC 2' from hardscape
	Rosmarinus o. 'Tuscan Blue' Rosemary 'Tuscan Blue'	5 Gal	0	L	4' OC 2.5' from hardscape
	Salvia c. 'Allen Chickering' Allen Chickering Sage	5 Gal	0	L	4' OC 2.5' from hardscape
	Salvia greggii Autumn Sage	5 Gal	0	L	3' OC 2' from hardscape
	Salvia leucantha Mexican Sage	5 Gal	0	L	3' OC 2' from hardscape
	Westringia fruticosa Coast Rosemary	5 Gal	0	L	5' OC 3' from hardscape
	Westringia f. 'Grey Box' Dwarf Coast Rosemary	5 Gal	0	L	3' OC 2' from hardscape

ACCENT SHRUBS

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	SPACING
	Agave americana Century Plant	5 Gal	0	L	8' OC 6' from hardscape
	Agave 'Blue Flame' Blue Flame Agave	5 Gal	0	L	3' OC 2' from hardscape
	Agave 'Blue Glow Blue Glow Agave	5 Gal	0	L	3' OC 2' from hardscape
	Agave desmettiana Smooth Agave	5 Gal	0	L	6' OC 3.5' from hardscape
	Aloe maculata Soap Aloe	5 Gal	0	L	3' OC 2' from hardscape
	Aloe striata Coral Aloe	1 Gal	0	L	15" OC 9" from hardscape
	Dasylerion wheeleri Desert Spoon	5 Gal	0	L	5' OC 3' from hardscape
	Hesperaloe parviflora Red Yucca	5 Gal	0	L	3' OC 2' from hardscape

INFILTRATION BASIN PLANT LIST

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QUANTITY	WUCOLS	SPACING
	Carex tumulicola Foothill Sedge	5 Gal	0	L	24" O.C.
	Juncus patens California Grey Rush	5 Gal	0	L	18" O.C.

Moderate water use plants and irrigation in 5' wide planting area between sidewalk and trail.

Public Trail.

3" 3/4" crushed rock decorative rock -Desert Gold or equivalent in 5' truck overhang with 2' EV Future EV space

GROUNDCOVER

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	SPACING
	Baccharis p. 'Pigeon Point' Dwarf Coyote Bush	1 Gal	0	L	6' O.C.
	Carissa m. 'Green Carpet' Prostrate Natal Plum	1 Gal	0	M	36" O.C.
	Hemerocallis hybridus-Yellow Yellow Day Lily	1 Gal	0	M	24" O.C.
	Myoporum parvifolium Myoporum	1 Gal	0	L	36" O.C.
	Rosmarinus o. 'Huntington Carpet' Prostrate Rosemary	1 Gal	0	L	48" O.C.
	Trachelopspermum jasminiodes Star Jasmine	1 Gal	0	M	24" O.C.
	Tulbaghia violacea Society Garlic	1 Gal	0	M	24" O.C.

Parking Lot Area including parking stalls
20,412 sf 10% landscape required 2,041 sf
78.7% landscape provided 16,072 sf

Parking Lot Shading Provided: 10,625 sf 51.8%
Parking Lot Area = 20,412 sf

GENERAL PARKING LOT SHADING CRITERIA
ALL PARKING AREAS EXCLUDING DRIVE AISLES SHALL RECEIVE A MIN. 50% SHADING UTILIZING AN ASSORTMENT OF EVERGREEN AND DECIDUOUS TREES. (CANOPY OF TREES WITH 15 YEARS OF AGE)

CONSTRUCTION CONSERVATION STATEMENT
THE IRRIGATION SYSTEM WILL BE DESIGNED UTILIZING 'STATE OF THE ART' IRRIGATION EQUIPMENT SUCH AS SMART CONTROLLERS, RAIN SHUT OFF DEVICES, MASTER VALVES AND FLOW SENSORS AND WATER EFFICIENT IRRIGATION HEADS.

NO EXISTING MATURE TREE VEGETATION IS PRESENT ON SITE WITHIN PROJECT AREA, CANNOT BE PRESERVED AND INCORPORATED INTO LANDSCAPE PLAN.

NOTES:
1. ALL TREES WITHIN 6' OF HARDSCAPE SHALL LINEAR ROOT BARRIER. BE SURE TO EXTEND 5' (MIN.) ALONG HARDSCAPE IN BOTH DIRECTIONS FROM THE CENTER OF THE TREE.
2. CONTRACTOR TO INSTALL CONCRETE MOW CURB BETWEEN PLANTERS AND ROCK AREAS.
3. ALL PLANTER AREAS TO RECEIVE A 3" LAYER OF SHREDDED ORGANIC MULCH
4. PROJECT INCLUDING ON AND OFF SITE TO BE MAINTAINED BY OWNER.
5. PER ORDINANCE NO. 348, SECTION 18.12, 50% OF PARKING AREA SHALL BE SHADED.
6. IRRIGATION AND PLANTING TO BE IN ACCORDANCE WITH RIVERSIDE COUNTY ORDINANCE NO. 859.
7. PER ORDINANCE 457, SLOPES EXCEEDING 15 FEET IN VERTICAL HEIGHT SHALL BE PLANTED WITH DROUGHT-TOLERANT SHRUBS, SPACED AT NO MORE THAN 10 FEET ON CENTER, OR TREES, SPACED NOT TO EXCEED 20 FEET ON CENTER, OR A COMBINATION OF SUCH SHRUBS AND TREES AT EQUIVALENT SPACINGS, IN ADDITION TO A DROUGHT-TOLERANT GRASS OR GROUND COVER.
8. LANDSCAPE PLAN TO CONFORM TO ORDINANCE NO. 859.3 AND COUNTY OF RIVERSIDE GUIDE TO CA FRIENDLY LANDSCAPING.
9. ALL ABOVE GROUND UTILITES TO BE SCREENED WITH PLANT MATERIAL.
10. HYDROZONES WILL BE PROPERLY DESIGNATED AND METHODS OF IRRIGATION IDENTIFIED.
11. NO OVERHEAD IRRIGATION ALLOWED WITHIN 24" OF NON-PERMEABLE SURFACES. SLOPED AREA WILL BE IRRIGATION WITH ROTARY HEADS AND PLANTING AREAS LESS THAN 10' IN WIDTH WILL BE USING SUBSURFACE DRIP IRRIGATION. DRIP IRRIGATION WILL ALSO BE UTILIZED IN PLANTING AREASUNDER THE LOW WULCOLS ZONE. PROJECT SHALL USE AT LEAST 40% POINT TO POINT DRIP METHOD.
12. SUBSURFACE OR LOW-VOLUME IRRIGATION MUST BE USED FOR IRREGULARLY SHAPED AREAS OR LESS THAN 10 FEET IN WIDTH.
13. ALL PLANTER AREAS PROTECTED BY A 6" HIGH CONCRETE CURB
14. CAR OVERHANG AREAS TO BE MULCHED. SHRUBS OR GROUNDCOVER TO BE PLANTED OUTSIDE THE OVERHANG AREA.
15. PLANT MATERIAL IS RESTRICTED TO A MAXIMUM HEIGHT OF 12" AT MATURITY WITHIN RESTRICTED SIGHTLINE AREA PER COUNTY STANDARD.
16. A 6" HIGH CURB WITH A 12" WIDE CONCRETE WALKWAY SHALL BE CONSTRUCTED ALONG PLANTERS ON END STALLS ADJACENT TO VEHICLE PARKING SPACES.
17. PLANT MATERIAL SHALL BE SEPARATED BY WATER NEEDS IN SEPARATE HYDROZONES.

THERE IS THE PRESENCE OF SEVERAL MULTIPLE SPECIES HABITAT CONSERVATION PLAN (MSHCP) PARCELS WITHIN 1 MILE OF THE PROJECT ALL PART OF THE SU-1 MOTTE/RIMROCK RESERVE - THE APN ARE LISTED BELOW: 317190011, 322240027, 317190008, 322240028, 322240030, 322263049, 322240003, 322240023, 322240025, 322170005

PRIOR TO PROJECT CONSTRUCTION, I AGREE TO SUBMIT A COMPLETE LANDSCAPE CONSTRUCTION DOCUMENT PACKAGE THAT APPLIES WITH THE REQUIREMENTS OF APPLICABLE ORDINANCES, INCLUDING BUT NOT NECESSARILY LIMITED TO ORDINANCE 859.3; ORDINANCE 348, ORDINANCE 461; PROJECT CONDITIONS OF APPROVAL, AND IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED LANDSCAPE CONCEPT PLAN. SHOULD THE ORDINANCES BE REVISED, PLANS MAY BE SUBJECT TO CHANGE.

TRAIL WITHIN RIGHT-OF-WAY AREA SHALL BE MAINTAINED BY PROPERTY OWNER UNLESS OTHERWISE DIRECTED BY COUNTY OF RIVERSIDE LMD STAFF.

RIGHT-OF-WAY LANDSCAPING SHALL BE MAINTAINED BY THE PROPERTY OWNER UNLESS OTHERWISE DIRECTED BY COUNTY OF RIVERSIDE LMD DEPARTMENT STAFF

PLANT MATERIAL PROTECTION NOTE
PLANT MATERIALS SHALL BE PROTECTED FROM VEHICULAR ENCROACHMENT OR OVERHANG.

N

0 15' 30' 60' 120'

Placentia Avenue and Tobacco Road Sheet 1

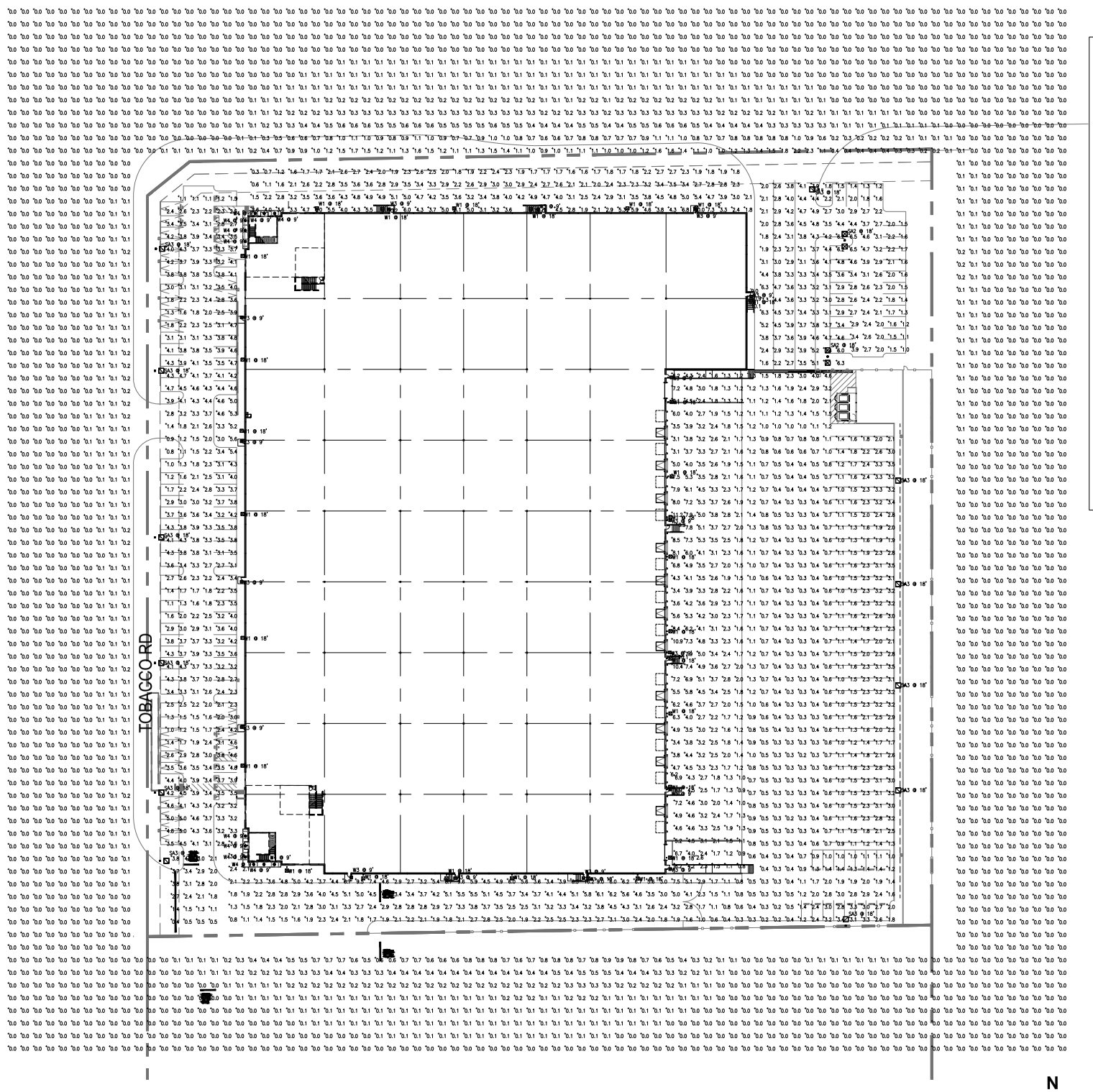
23-09 | 07.03.24 12.24.24
11.27.23 08.06.24 01.13.25 DAC 5th Submittal
03.08.24 10.21.24
03.12.2410.30.24

County of Riverside, California

REGISTERED LANDSCAPE ARCHITECT — RICHARD K. HARRIS — STATE OF CALIFORNIA

HUNTER LANDSCAPE
711 FEE ANA STREET PLACENTIA, CA 92870
714.986.2400 FAX 714.986.2408
Applicant: HPA, Inc. tel: 949.863.1770
18831 Bardeen Ave. Ste 100, Irvine, CA 92612
Owner: Thrifty Oil Co. tel: 562.921.3581
13116 Imp. Highway, Santa Fe Springs, CA 90670

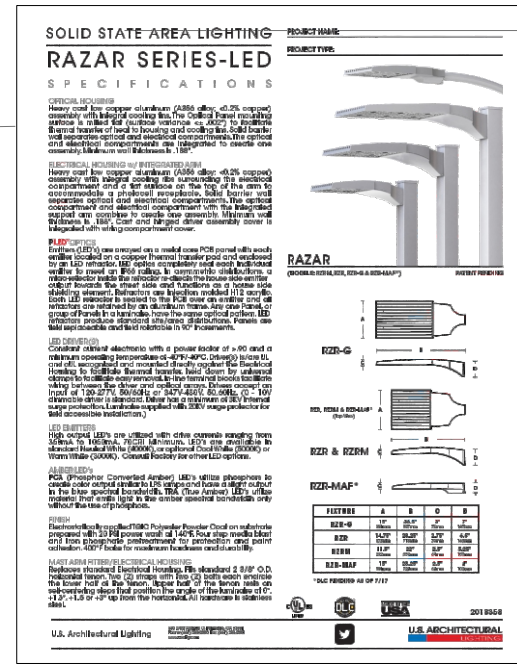
LILBURN CORPORATION

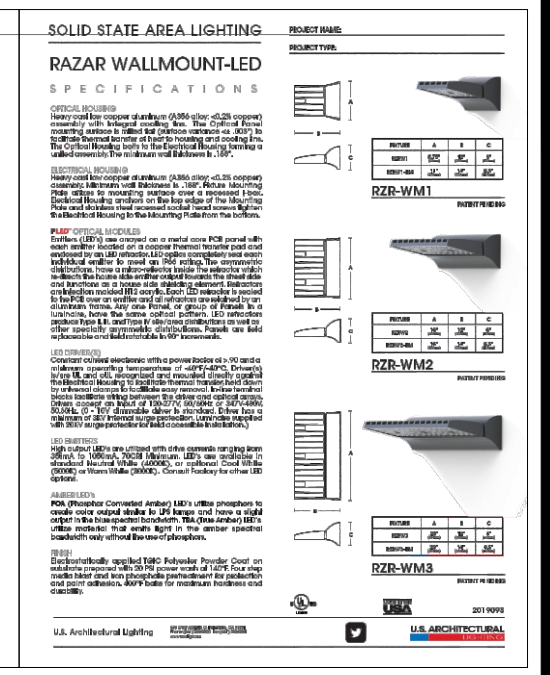


ELECTRICAL SITE PHOTOMETRIC PLAN
SCALE: 1"=40'-0"

1

N





Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
⊠	W3	19	U.S. ARCHITECTURAL LIGHTING	RZR-WM1-PLED-II-W-20LED-350mA-27K EM1 WALL MT AT 9 FT AFG WM511 BUG RATING B1 U0 G1	CAST BLACK PAINTED FINNED METAL HOUSING.	20 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.	20	RZR-WM1-PLED-II-W-20LED-350mA-40K.ies	151	0.9	21.4
⊠	SA3	12	U.S. ARCHITECTURAL LIGHTING	RZR-M-PLED-IV-FT-48LED-1050mA-27K-HS MSF311MW511 POLE MT AT 18 FT AFG BUG RATING B1 U0 G3	CAST BLACK PAINTED FINNED METAL HOUSING.	48 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.	48	RZRM-PLED-IV-FT-48LED-1050mA-27K-HS.ies	256	0.9	159.6
⊠	W1	29	U.S. ARCHITECTURAL LIGHTING	RZR-WM2-PLED-IV-FT-40LED-1050mA-27K MW511 MSF 311 WALL MT AT 18 FT AFG BUG RARING B2 U0 G3	CAST BLACK PAINTED FINNED METAL HOUSING.	40 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.	40	RZR-WM2-PLED-IV-FT-40LED-1050mA-27K.ies	326	0.9	128.2
⊠	SA2	2	U.S. ARCHITECTURAL LIGHTING	RZR-M-PLED-VSQ-W-48LED-1050mA-27K MW511 MSF311 POLE MT AT 18 FT AFG 15.5 FT POLE 30 IN BASE BUG RATING B5 U0 G3	CAST BLACK PAINTED FINNED METAL HOUSING.	48 WHITE LIGHT EMITTING DIODES (LEDS), BASE UP.	48	RZRM-PLED-VSQ-W-48LED-1050mA-27K.ies	358	0.9	319.2
	W4	12	U.S. ARCHITECTURAL LIGHTING	LC6SLEM 27K 6LCSL 14 L EM	6 INCH LBR DOWNLIGHT 1400LM 2700K		1		1641	0.9	18

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	2.5 fc	16.7 fc	0.0 fc	N/A	N/A
Calc Zone #2	+	0.1 fc	9.6 fc	0.0 fc	N/A	N/A
Calc Zone #3	+	3.2 fc	10.0 fc	0.3 fc	33.3:1	10.7:1
Calc Zone #4	+	2.1 fc	3.9 fc	1.0 fc	3.9:1	2.1:1
Calc Zone #5	+	10.0 fc	10.0 fc	10.0 fc	1.0:1	1.0:1
Calc Zone #6	+	10.2 fc	10.2 fc	10.2 fc	1.0:1	1.0:1
Calc Zone #7	+	10.0 fc	10.9 fc	9.0 fc	1.2:1	1.1:1
Calc Zone #8	+	10.9 fc	10.9 fc	10.9 fc	1.0:1	1.0:1
Calc Zone #9	+	11.5 fc	12.9 fc	10.1 fc	1.3:1	1.1:1
Calc Zone #10	+	6.2 fc	6.2 fc	6.2 fc	1.0:1	1.0:1
Calc Zone #11	+	2.6 fc	2.6 fc	2.6 fc	1.0:1	1.0:1
Calc Zone #14	+	3.0 fc	8.9 fc	0.8 fc	11.1:1	3.8:1

RPM
Engineers, Inc.
102 DISCOVERY
Irvine, CA. 92618
Tel: 949-380-3044
Fax: 949-380-1454
Contact: David Du
e-mail: davidd@rpmpe.com

REGISTERED PROFESSIONAL ENGINEER
JAN V. NGUYEN
No. E15596
Ex:12-31-2025
ELECTRICAL
STATE OF CALIFORNIA

CAUTION : IF THIS SHEET IS NOT A 30" X 42" IT IS A REDUCED PRINT

PHOTOMETRIC PLAN

Thrifty Oil Speculative Warehouse
23641 Placentia Avenue
Riverside County, California

FIGURE 7

HPA architecture

hpa, inc.
18831 bardeen avenue - ste.
#100 irvine, ca
92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Perris North

SEC of Tobacco and Placentia
Riverside County CA

Consultants:

Civil:	Armstrong & Brooks
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	-
Fire Protection:	-
Soils Engineer:	-

Title:

SITE PHOTOMETRIC PLAN

Project Number:	22484
Drawn by:	JK.
Date:	
Revision:	
DAC 5TH SUBMITTAL	01/13/25

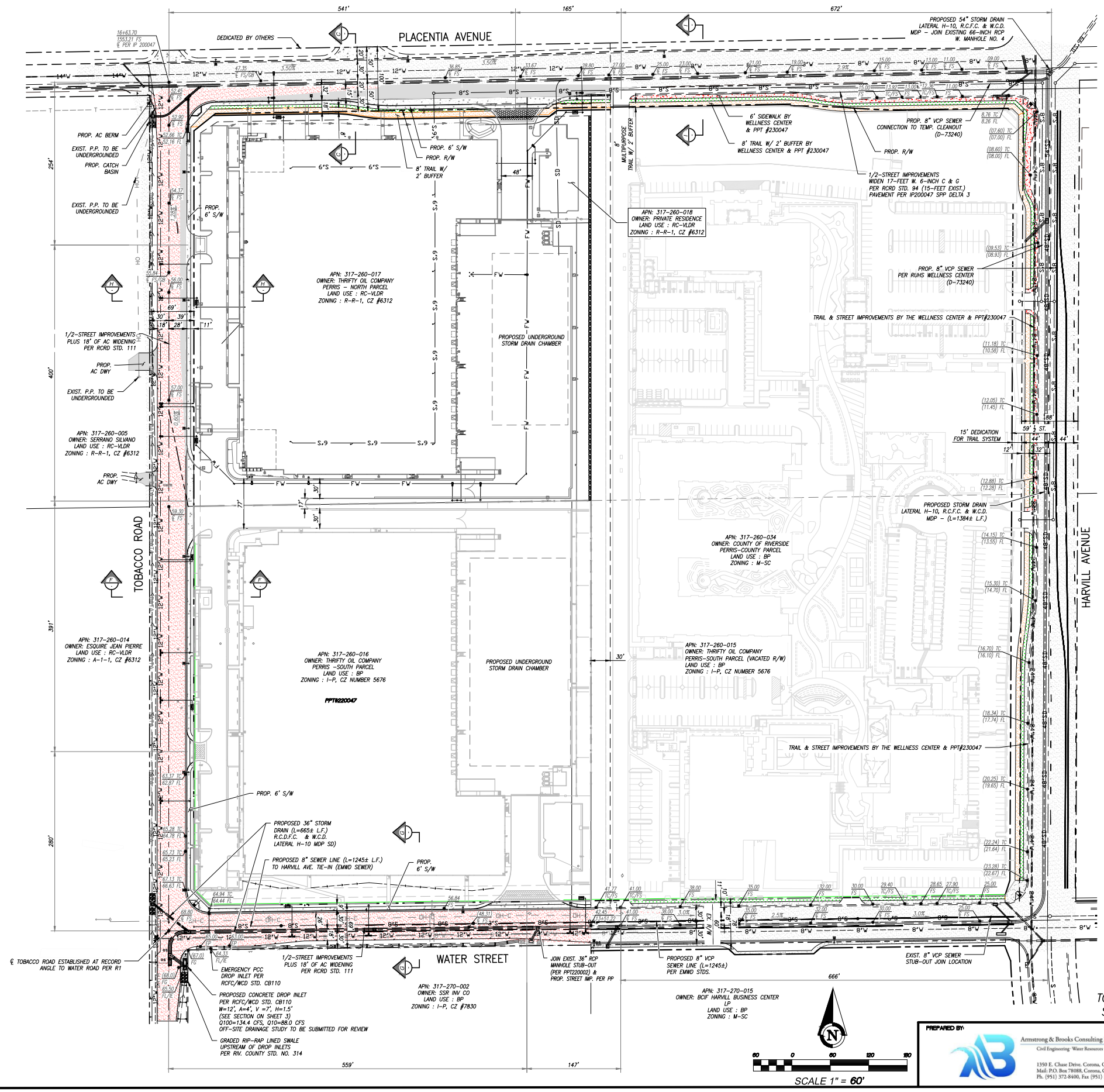
Sheet:

FC-1.0

RPM#23-001#1 01/17/2025

LILBURN CORPORATION

PLOT PLAN : COUNTY OF RIVERSIDE CASE NO: 230048



SCALE 1" = 60'

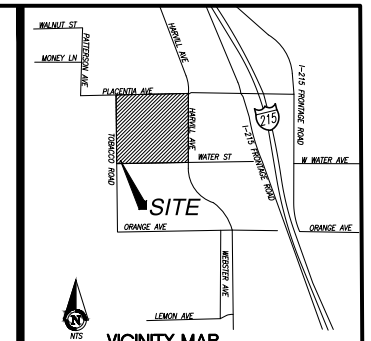
LAND AREA DEDICATION SUMMARY

PARCEL	GROSS ACREAGE	DEDICATED ACREAGE	NET ACREAGE
017	9.19 ACRES	0.92 ACRES	8.27 ACRES
018	0.429 ACRES	0.023 ACRES	0.406 ACRES
TOTAL GROSS ACREAGE = 9.61		TOTAL DEDICATION ACREAGE = 0.943	TOTAL NET ACREAGE = 8.68

TOTAL OFFSITE STREET IMPROVEMENTS (IMPACT AREA) = 0.433 ACRES

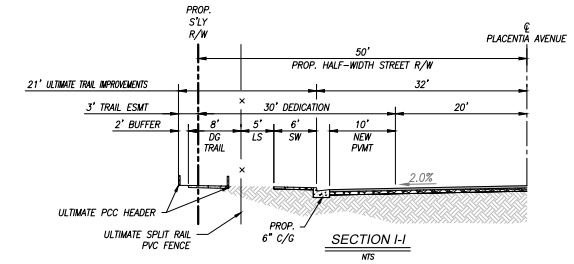
LEGEND

- PROPOSED ASPHALT CONCRETE & BASE (STREET WIDENING)
- EX. ASPHALT CONCRETE & BASE
- PROPOSED PCC SIDEWALK / CURB & GUTTER
- EXISTING D.G. MULTIPURPOSE TRAIL
- EXISTING LANDSCAPE BUFFER
- EX. ASPHALT CONCRETE



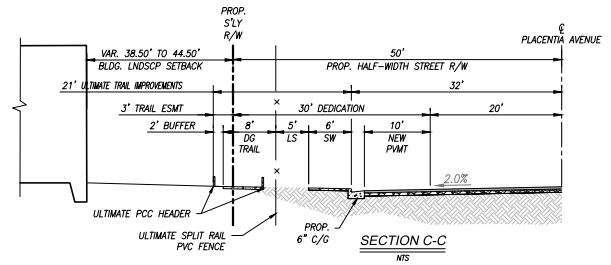
VICINITY MAP

TOWNSHIP 4S, RANGE 4W, SECTION 13



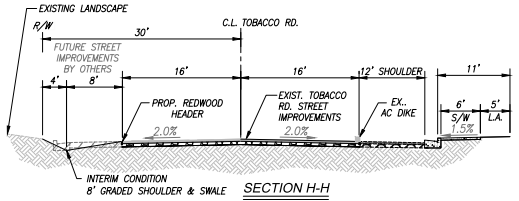
SECTION I-I

NTS



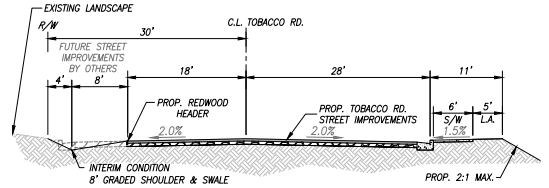
SECTION C-C

NTS



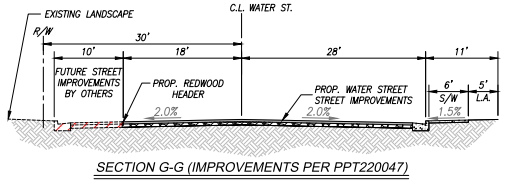
SECTION H-H

NTS



SECTION F-F (IMPROVEMENTS PER PPT 220047)

NTS



SECTION G-G (IMPROVEMENTS PER PPT220047)

NTS

TOBACCO ROAD & PLACENTIA AVENUE IMPROVEMENTS
SEE SHEET NO. 4 FOR TRUCK TURNING MOVEMENTS

PREPARED BY:

Armstrong & Brooks Consulting Engineers, Inc.
Civil Engineering · Water Resources · Surveying
1350 E. Chase Drive, Corona, CA 92881
Mail: P.O. Box 78088, Corona, CA 92877
Ph. (951) 372-8400, Fax (951) 372-8450

REGISTERED PROFESSIONAL ENGINEER — No. 52314 — Exp. 6/30/23 — CIVIL — STATE OF CALIFORNIA

THE ORDEN COMPANY - PERRIS NORTH SITE
OFF-SITE IMPROVEMENT EXHIBIT
INDUSTRIAL BLDG. SCHEME 10
APN'S 317-260-017 AND 317-260-018

SHEET 3 OF 4

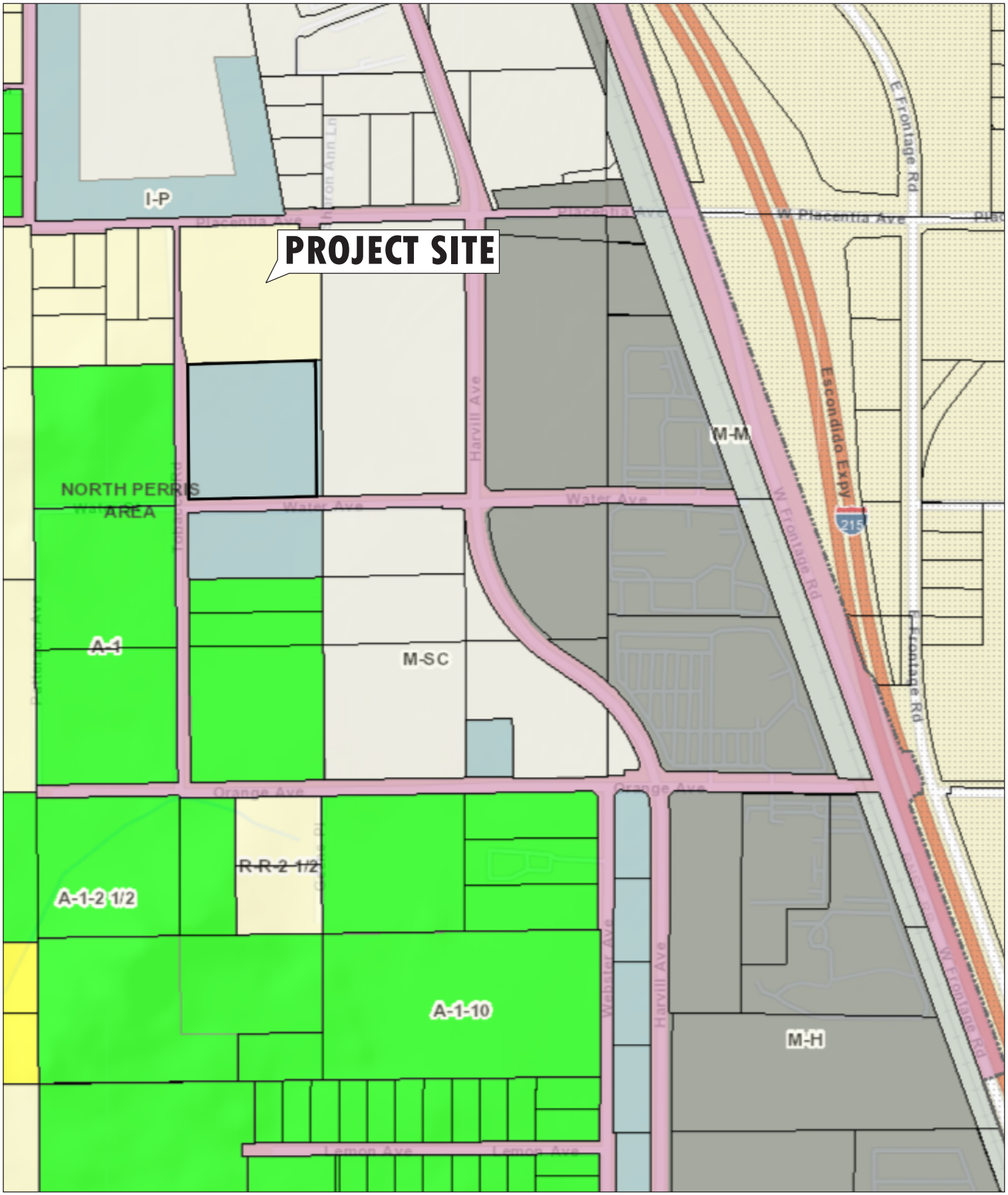
PAC 5TH SUBMITTAL: PPT 230048

OFF-SITE IMPROVEMENT AREAS

Thrifty Oil Speculative Warehouse
23641 Placentia Avenue
Riverside County, California

FIGURE 8

LILBURN CORPORATION



0 1200 Feet

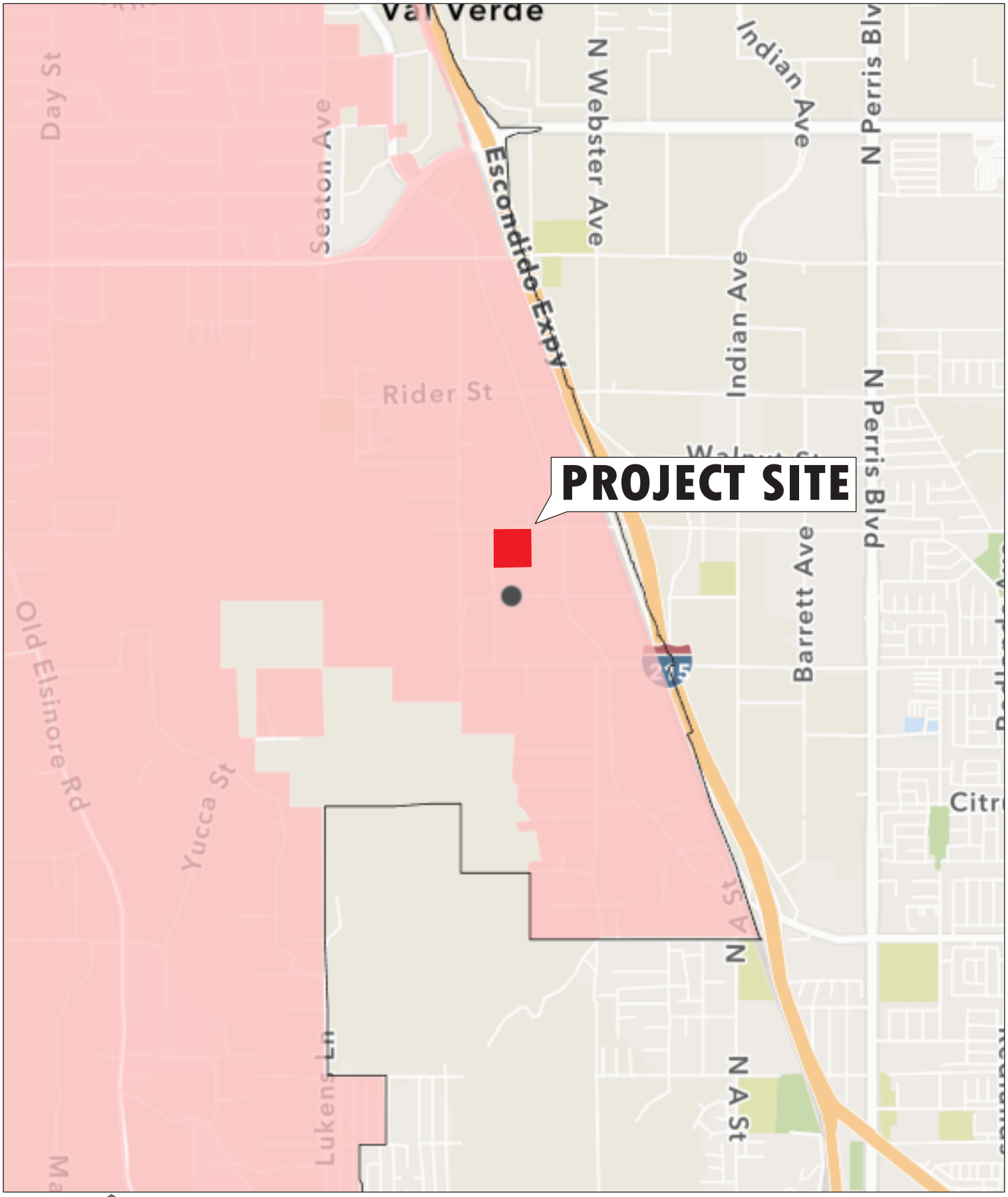
LILBURN CORPORATION

A-1
A-1/2 1/2
A-1-10
I-P
M-H
M-M
M-SC
R-R1
R-R5
R-1 2 1/2

PROJECT SITE ZONING

Thrifty Oil Speculative Warehouse
23641 Placentia Avenue
Riverside County, California

FIGURE 9



0 2.00 Mile

LILBURN CORPORATION

County Supervisorial District Boundary

Environmental Justice Communities

ENVIRONMENTAL JUSTICE COMMUNITIES

Thrifty Oil Speculative Warehouse
23641 Placentia Avenue
Riverside County, California

FIGURE 10

V. ENVIRONMENTAL ISSUES ASSESSMENT

AESTHETICS				
1. Scenic Resources	☐	☐	☐	☒
	☐	☐	☒	☐
	☐	☐	☒	☐

Source(s):

- [illegible]
- [illegible]

2.	**Mt. Palomar Observatory**	☐	☐	☒

Source(s):

Source(s):

3. Other Lighting Issues

	☐	☐	☒	☐
	☐	☐	☒	☐

Source(s):

AGRICULTURE & FOREST RESOURCES				
4. Agriculture	☐	☐	☐	☒
	☐	☐	☐	☒
	☐	☐	☒	☐
	☐	☐	☐	☒

Source(s): *Agricultural Resources*

<u>Discussion/Explanation</u>

is designated “Other Lands” or “Undefined”.

Report identifies the Project parcels as “Not in an Agricultural Preserve”

Ordinance No. 625 provides that "

There are no

d

5. Forest				

Source(s):

Forestry Resources Western Riverside County

AIR QUALITY

6. Air Quality Impacts	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☒	☐

Source(s): Riverside County Climate Action Plan ("CAP"); MD ; *Thrifty Oil Warehouse Project, Air Quality Impact Analysis*; and *Thrifty Oil Warehouse Project Mobile Source Health Risk Assessment,*

□ □□□□

disturbance. Irrespective of the site's land use designation, development of the site to its [illegible]

[illegible]

[illegible] As described by the County's Municipal Code Section [illegible] Project's uses [illegible] consistent with the site's [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Table 1
Estimated Project Construction Emissions

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
2025	0.96	11.11	22.63	0.03	1.35	0.42
Winter						
2025	0.96	41.90	31.03	0.21	10.14	3.56
2026	47.03	19.09	34.63	0.05	1.88	0.63
Maximum Daily Emissions	**47.03**	**41.09**	**34.63**	**0.21**	**10.14**	**3.56**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Table 2
Estimated Peak Operational Emissions

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
Mobile Source	1.05	10.00	13.30	0.11	5.45	1.54
Area Source	5.80	0.07	8.08	0.00	0.01	0.01
Stationary Source	0.98	2.75	2.51	0.00	0.14	0.14
Project Maximum Daily Emissions	**7.83**	**12.82**	**23.89**	**0.11**	**5.60**	**1.96**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile Source	1.01	10.50	11.40	0.11	5.45	1.54
Area Source	4.47	0.00	0.00	0.00	0.00	0.00
Stationary Source	.098	2.75	2.51	0.00	0.14	0.14

Project Maximum Daily Emissions	**6.46**	**13.25**	**13.91**	**0.11**	**5.59**	**1.68**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

- R1: Location R1 represents the existing residence at 20601 Tobacco Road, approximately 165 feet southwest of the Project Site. Since there are no private outdoor living areas (backyards) facing the Project Site, receptor R1 is placed at the building façade.
- R2: Location R2 represents the existing residence at 23551 Placentia Avenue, approximately 90 feet west of the Project Site. Since there are no private outdoor living areas (backyards) facing the Project Site, receptor R2 is placed at the building façade.
- R3: Location R3 represents the Barker Logistics facility located approximately 155 feet north of the Project Site.
- R4: Location R4 represents the FedEx Freight transportation service center located at 20388 Harvill Avenue, approximately 985 feet northeast of the Project Site.
- R5: Location R5 represents the Crafttech Metal Forming, Inc. metal fabricator facility located at 24100-B Water Street, approximately 1,465 feet east of the Project Site.
- R6: Location R6 represents the Star Milling Co. feeding manufacturer building located at 23901 Water Street, approximately 1,253 feet southeast of the Project Site.
- R7: Location R7 represents the existing residence at 20800 Tobacco Road, approximately 1,031 feet south of the Project Site. Since there are no private outdoor living areas (backyards) facing the Project Site, receptor R7 is placed at the building façade.
- R8: Location R8 represents Val Verde Elementary School, located approximately 3,709 feet southeast of the Project Site.

MD determining the Project's potential to cause an individual a cumulatively significant impact.

LST Methodology

[illegible]

Table 3
Localized Significance Summary of Construction

Construction Activity	Year	Emissions (lbs/day)			
		NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	**Maximum Daily Emissions**	**10.72**	**18.36**	**0.26**	**0.18**
	SCAQMD Localized Threshold	120	625	5	3
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Site Preparation	**Maximum Daily Emissions**	**15.69**	**29.96**	**5.77**	**2.79**
	SCAQMD Localized Threshold	222	1,269	12	6
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Grading	**Maximum Daily Emissions**	**10.73**	**19.03**	**2.38**	**1.02**
	SCAQMD Localized Threshold	189	1,032	9	5
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Table 4
Localized Significance Summary of Operations

Scenario	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**4.20**	**12.88**	**0.28**	**0.19**
SCAQMD Localized Threshold	273	1,635	4	2
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

[illegible]

[illegible]

[illegible]

[illegible]

- [illegible] R[illegible] [illegible] R[illegible] [illegible] [illegible] [

BIOLOGICAL RESOURCES

7. Wildlife & Vegetation	☐	☒	☐	☐
	☐	☒	☐	☐
	☐	☒	☐	☐
	☐	☐	☒	☐
	☐	☐	☐	☒
	☐	☐	☐	☒

	☐	☐	☒	☐

Source(s): *Biological Resources Assessment, Jurisdictional Delineation, and MSHCP Consistency Analysis for the Development of APNs: 317-260-017 and 018, Unincorporated Perris, Riverside County, California* *Burrowing Owl Western Riverside MSHCP Protocol Survey Report, Jennings Environmental,*

Criteria Cell Location.

- *Criteria Cell 2529*

6.1.2 - Riverine/Riparian Resources.

6.1.4 - Urban/Wildland Interface [illegible]

6.3.2 - Additional Surveys. [illegible]

[illegible] **BIO-1** [illegible] to "Mitigation" [illegible]

[illegible]

[illegible]

[illegible]

BIO-1

coordination with the CDFW administers the MBTA. CDFW's

BIO-2

Refer to "Mitigation" at the end of

2

2

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

BIO-1 [illegible]

BIO-2 [illegible]

[illegible]

[illegible]

CULTURAL RESOURCES

8. Historic Resources			☒	
			☒	

Source(s): *Phase I Cultural Resources Study for the Thrifty Oil Warehouse Project*

9. Archaeological Resources	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☒	☐

Source(s): *Phase I Cultural Resources Study for the Thrifty Oil Warehouse Project,*

ENERGY

10. Energy Impacts	☐	☐	☒	☐
	☐	☐	☒	☐

Source(s): Riverside County Climate Action Plan ("CAP"); *Thrifty Oil Warehouse Project Energy Analysis*; and *Thrifty Oil Warehouse Project Greenhouse Gas Analysis*

Discussion:

Construction

Discussion: Riverside County Climate Action Plan ("CAP"); *Thrifty Oil Warehouse Project Energy Analysis*; and *Thrifty Oil Warehouse Project Greenhouse Gas Analysis*

Construction

Discussion: Riverside County Climate Action Plan ("CAP"); *Thrifty Oil Warehouse Project Energy Analysis*; and *Thrifty Oil Warehouse Project Greenhouse Gas Analysis*

Construction

Discussion: Riverside County Climate Action Plan ("CAP"); *Thrifty Oil Warehouse Project Energy Analysis*; and *Thrifty Oil Warehouse Project Greenhouse Gas Analysis*

Construction

Operation

[illegible]

[illegible]

[illegible]

GEOLOGY AND SOILS

11. Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones	☐	☐	☒	☐

Source(s): *Seismic Hazards;* *Geotechnical Engineering Exploration and Analysis Proposed Commercial Building 23641 Placentia Avenue Perris, CA*

as "Low" impact in regard to seismic activity.

12. Liquefaction Potential Zone	☐	☐	☒	☐

Source(s): *Liquefaction Zones* *Geotechnical Engineering Exploration and Analysis Proposed Commercial Building 23641 Placentia Avenue Perris, CA,*

13. Ground-shaking Zone ☐ ☐ ☒ ☐

Source(s): [illegible] *Fault Lines* [illegible] *Geotechnical Engineering Exploration and Analysis Proposed Commercial Building 23641 Placentia Avenue Perris, CA* [illegible]

[illegible]

[illegible] However, based on the review of "CGS Seismic Zonation Program" as well [illegible] property is not located within "Liquefiable" area. In addition, review of the Susceptibility map [illegible] condition of approval and verified by the County's review process would ensure that impacts [illegible] the CBC as included as a condition of approval and verified by the County's review process [illegible]

[illegible]

14. Landslide Risk ☐ ☐ ☒ ☐

Source(s): 2 2 2 *Landslide Risk* *Geotechnical Engineering Exploration and Analysis Proposed Commercial Building 23641 Placentia Avenue Perris, CA,* 2 2

Landslides, Rockfall Hazards. *Steep Slopes*

Lateral Spreading.

through the County's permitting process would ensure that settlement related impacts

15. Ground Subsidence	☐	☐	☒	☐

Source(s): *Documented Subsidence Areas* *Geotechnical Engineering Exploration and Analysis Proposed Commercial Building 23641 Placentia Avenue Perris, CA*

16. Other Geologic Hazards	☐	☐	☐	☒

Source(s): *Geotechnical Engineering Exploration and Analysis Proposed Commercial Building 23641 Placentia Avenue Perris, CA,*

17. Slopes	☐	☐	☐	☒
	☐	☐	☐	☒
	☐	☐	☐	☒

Source(s): *Geotechnical Engineering Exploration and Analysis Proposed Commercial Building 23641 Placentia Avenue Perris, CA*

18. Soils	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☐	☒

Source(s): *Geotechnical Engineering Exploration and Analysis Proposed Commercial Building 23641 Placentia Avenue Perris, CA*

19. Wind Erosion and Blowsand from project either on or off site.	☐	☐	☒	☐

Source(s): [illegible] *Wind Erosion Susceptibility Areas* [illegible]

[illegible]

[illegible] did evaluate the potential effects of "severe weather" due to climate change. "Severe weather" was defined as localized storms that bring heavy rain, [illegible] identified "industrial buildings" to have a "moderate vulnerability" to severe weather. [illegible] the County's review process would ensure that impacts related to [illegible]

[illegible]

[illegible]

[illegible]

GREENHOUSE GAS EMISSIONS [illegible]

20. Greenhouse Gas Emissions	☐	☐	☒	☐
[illegible]	☐	☐	☒	☐

Source(s): [illegible] ("CAP") *Thrifty Oil Warehouse Project, Greenhouse Gas Analysis,* [illegible]

[illegible]

[illegible] activity. Without the natural greenhouse gas effect, the earth's average temperature would [illegible] of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

[illegible] Riverside County's Climate Action Plan ([illegible] proposed development projects within the County. To address the state's requirement to [illegible] emissions within the County by 49% below "existing" 2008 levels by the year 2030 and 83% below the 2008 baseline levels by 2050. The County's GHG reduction targets are consi[illegible]

Table 5
Project GHG Emissions

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	Refrigerants	Total CO_2e
Annual construction-related emissions amortized over 30 years	27.09	8.77E-04	1.93E-03	0.02	27.71
Mobile Source	1,427.00	0.03	0.18	1.83	1,483.00
Area Source	3.77	0.00	0.00	0.00	3.78
Energy Source	141.00	0.01	0.00	0.00	142.00
Water Usage	60.30	1.40	0.03	0.00	105.00
Waste	15.60	1.56	0.00	0.00	54.50
Stationary Source	11.40	0.00	0.00	0.00	11.50
Total CO_2e (All Sources)	**1,827.49**				

[illegible]

[illegible] [illegible] [illegible] [

22. Airports	☐	☐	☐	☒
	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☐	☒

Source(s):

HYDROLOGY AND WATER QUALITY				
23. Water Quality Impacts	☐	☐	☒	☐
	☐	☐	☐	☒
	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☐	☒
	☐	☐	☐	☒
	☐	☐	☒	☐

Source(s): *Flood Hazard Zone* *Dam Hazard Inundation* *Hydrology Study for The Orden Company-Perris North Development* *Project Specific Water Quality Management Plan*

(BMPs) for treatment purposes. The site BMP's will consist of pre

LAND USE/PLANNING

24. Land Use	☐	☐	☒	☐
	☐	☐	☐	☒

Source(s):

“Business Park” as “employee intensive uses, including research & development, technology centers, corporate offices, “clean” industry and supporting retail uses,” and
the use of Business Park, and the Project’s FAR is

MINERAL RESOURCES				
25. Mineral Resources	☐	☐	☐	☒
	☐	☐	☐	☒
	☐	☐	☐	☒

Source(s): *Mineral Resources Area*

NOISE

26. Airport Noise	☐	☐	☒	☐
	☐	☐	☐	☒

Source(s): *Airport Locations* *Thrifty Oil Warehouse, Noise and Vibration Analysis*

Riverside County Airport Land Use Compatibility Plan Policy Document[3] *Noise and Vibration Analysis* Project's industrial land uses experience *clearly acceptable*

[3] [illegible]

27. Noise Effects by the Project	☐	☐	☒	☐
	☐	☐	☒	☐

Source(s): *Land Use Compatibility for Community Noise Exposure;* *Thrifty Oil Warehouse, Traffic Study Scoping Agreement,* *Thrifty Oil Warehouse, Noise and Vibration Analysis, Urban Crossroads, February 29, 2024*

R

R

R

(commonly called a “sound level”) measured in dB. An A

Significance Criteria Summary.

Table 6
Significance Criteria Summary

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
			≥ 5 dBA CNEL Project increase	
			≥ 3 dBA CNEL Project increase	
			≥ 1.5 d	
			≥ 3 dBA CNEL Project increase	
			≥ 12 dBA CNEL Project increase	
			d	d
			≥ 5 dBA L	
			≥ 3 dBA L	
			≥ 1.5 dBA L	
			d	d

[1] FICON, 1992.
[2] County of Riverside General Plan Noise Element, Table N-1.
[3] Caltrans Traffic Noise Analysis Protocol, April 2020.
[4] County of Riverside General Plan Municipal Code, Section 9.52.040.
[5] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
[6] Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Ambient Noise Level Measurements

Table 7
Ambient Noise Level Measurements

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]		CNEL
		Daytime	Nighttime	

[1]
[2]
"D

[illegible]

[illegible]

[illegible]

Table 9
Construction Reference Noise Levels

Construction Stage	Reference Construction Equipmnet[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})	Composite Reference Noise Level (dBA L_{eq})[2]	Reference Power Level (dBA L_w)[3]
Site Preparation	Tractor	80	84.0	115.6
	Backhoe	74		
	Grader	81		
Grading	Scraper	80	83.3	114.9
	Excavator	77		
	Dozer	78		
Building Construction	Crane	73	80.6	112.2
	Generator	78		
	Front End Loader	75		
Paving	Paver	74	77.8	109.5
	Dump Truck	72		
	Roller	73		
Architectural Coating	Man Lift	68	76.2	107.8
	Compressor (air)	74		
	Generator (<25kVA)	70		

[1] FHWA Road Construction Noise Model.
[2] Represents the combined noise level for all equipment assuming they operate at the same time consistent with FTA Transit Noise and Vibration Impact Assessment guidance.
[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings.

Noise and Vibration Analysis

Table 10
On-Site Construction Equipment Noise Level Summary

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	67.3	66.6	63.9	61.2	59.5	70.1
R2	68.9	68.2	65.5	62.8	61.1	71.7
R3	58.4	57.7	55.0	52.3	50.6	61.2

[1] Construction noise source and receiver locations are shown on Exhibit 10-A.
[2] Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

[illegible]

[illegible]

[illegible] 2 [illegible] 2 [illegible]

[illegible] R[illegible] [illegible] ng. This zone correlates with the "[illegible] General Plan Land Use designation. [illegible]

[illegible] *Reference Noise Level Measurements* [illegible]

Table 11
Reference Noise Level Measurements

Reference Noise Source	Noise Source Height (Feet)	Min./ Hour[1]		Reference Noise Level (dBA L_{eq}) @ 50 Feet	Sound Power Level (dBA)[2]
		Day	Night		
Loading Dock Activity	8'	60	60	62.8	103.4
Parking Lot Vehicle Movements	5'	60	60	52.6	81.1
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Trash Enclosure Activity	5'	60	30	57.3	89.0
Truck Movements	8'	60	60	59.8	93.2

[1] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

[2] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

Table 12
Daytime Operational Noise Levels
(7:00 a.m. to 10:00 p.m.)

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA Leq)		
	R1	R2	R3
Loading Dock Activity	27.5	27.6	38.3
Parking Lot Vehicle Movements	39.0	41.8	27.6
Roof-Top Air Conditioning Units	39.7	41.8	28.3
Trash Enclosure Activity	14.2	15.0	19.2
Truck Movements	36.3	26.6	28.4
Total (All Noise Sources)	**43.4**	**45.0**	**39.4**

[1] See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1. (see Appendix I)

[illegible]

Table 13
Nighttime Operational Noise Levels
(10:00 p.m. to 7:00 a.m.)

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA Leq)		
	R1	R2	R3
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Total (All Noise Sources)	**42.6**	**44.0**	**39.3**

[illegible]

[illegible]

Off-Site Traffic

considered to occur when the project's predicted noise level exceeds the existing noise

not specifically identify what portion of the residential land use that is considered "noise sensitive." Noise

Table 14
Existing With Project Traffic Noise Level INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				Without Project	With Project	Project Addition	Limit	Exceeded?

[illegible]

[illegible]

[illegible]

Table 15
Vibration Source Levels for Construction Equipment

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089
Vibratory Roller	0.210

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

[illegible]

[illegible]

[illegible]

Table 16
Project Construction Vibration Levels

Location[1]	Distance to Const. Activity (Feet)[2]	Typical Construction Vibration Levels PPV (in/sec)[3]						Thresholds PPV (in/sec)[4]	Thresholds Exceeded?[5]
		Small bulldozer	Jack-hammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level		
R1	115'	0.000	0.004	0.008	0.009	0.021	0.021	0.3	No
R2	188'	0.000	0.002	0.004	0.004	0.010	0.010	0.3	No
R3	1,011'	0.000	0.000	0.000	0.000	0.001	0.001	0.3	No

[1] Construction noise source and receiver locations are shown on Exhibit 10-A.
[2] Distance from receiver building facade to Project construction boundary (Project site boundary).
[3] Based on the Vibration Source Levels of Construction Equipment (Table 10-5).
[4] Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Table 19, p. 38.
[5] Does the peak vibration exceed the acceptable vibration thresholds?
"PPV" = Peak Particle Velocity

Table 17
Summary of CEQA Significance Findings

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	7	*Less Than Significant*	-
Operational Noise	9	*Less Than Significant*	-
Project Construction Noise	10	*Less Than Significant*	-
Nighttime Concrete Pour		*Less Than Significant*	-
Construction Vibration		*Less Than Significant*	-

PALEONTOLOGICAL RESOURCES:

28. Paleontological Resources

☐	☒	☐	☐

Source(s): *Paleontological Sensitivity* *Paleontological Resources Assessment for the Thrifty Oil Warehouse Project*

[illegible]

[illegible] while the eastern portion has a "high" sensitivity for [illegible] Because of the County identified "high" sensitivity on a portion of the Project [illegible] **PAL-1** [illegible] **PAL-1** [illegible]

[illegible]

PAL–1: Paleontological Monitoring.

Portions of this site are mapped in the County's General Plan as having a High potential for [illegible]

[illegible]

2. [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

*Pursuant the County “SABER Policy”, paleontological fossils found in the County shall be signed by the qualified paleontologist responsible for the report’s content. All plans, and all required review applications shall be uploaded to the County’s PLUS

POPULATION AND HOUSING				
29. Housing	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☒	☐

Source(s):

PUBLIC SERVICES

30. Fire Services	☐	☐	☒	☐

Source(s):

Project's increased demand on fire services could impact the RCFD's

31. Sheriff Services ☐ ☐ ☒ ☐

Source(s): [illegible]

[illegible]

[illegible] heriff's D[illegible] Sheriff's Department [illegible]

[illegible]

[illegible]

32. Schools ☐ ☐ ☒ ☐

Source(s): [illegible]

[illegible]

[illegible]

[illegible]

33. Libraries	☐	☐	☒	☐

Source(s):

34. Health Services	☐	☐	☒	☐

Source(s):

Healthcare Facilities nearest Project:

-
-
-
-

RECREATION

35. Parks and Recreation	☐	☐	☒	☐

	☐	☐	☒	☐
	☐	☐	☐	☒

Source(s):

Analysis:

Mitigation:

Mitigation:

36. Recreational Trails	☐	☐	☒	☐

Source(s): *Riverside County Trails and Bikeway System*

Analysis:

TRANSPORTATION

37. Transportation	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☒	☐

Source(s): *Thrifty Oil Warehouse Focused Traffic Assessment, Urban Crossroads, January 30, 2025* *Thrifty Oil Warehouse, Vehicle Miles Traveled Screening Analysis* 2

Area Plan's vision for bikeways and

Essentially a project's environmental impacts can no longer

Transportation Analysis Guidelines for Level of Service, Vehicle Miles Traveled

Truck Access

- [illegible] – [illegible] *Exhibit 7 of Attachment F* [illegible]

- [illegible] – [illegible] *Exhibit 8 of Attachment F* [illegible]

[illegible] Tobacco Road (PPT220047) at the request of County staff, a proposed "joint use" driveway [illegible]

Truck Stacking

[illegible] is well in excess of the anticipated truck activity. Based on the Project's anticipated trip [illegible] *Exhibits 3 and 4 of Attachment F in Appendix J*). A "Tenant Advisory" could be implemented to identify [illegible]

d [illegible]

[illegible] site under all State, federal and local transport regulations along the area's roadways. [illegible]

[illegible]

38. Bike Trails	☐	☐	☒	☐

[illegible]

Source(s): [illegible] *Riverside County Trails and Bikeway System* [illegible] *Trails and Bikeway System.*

[illegible]

[illegible]

[illegible]

TRIBAL CULTURAL RESOURCES

39. Tribal Cultural Resources	☐	☒	☐	☐
	☐	☒	☐	☐

Source(s): *Phase I Cultural Resources Study for the Thrifty Oil Warehouse Project,* *AB52/SB18 Tribal Consultation Notification Letters and Mitigation*

Tribal Notification Summary

SB18

SB 18 amended GC §65560 to "allow the protection of cultural places in open space element of the general plan" and amended Civil Code §815.3 to add "California Native American tribes to the list of places."

AB52

the law's purview. Tribal Cultural Resources are tho
category termed "traditional cultural property" (TCP) which
Documenting Traditional Cultural Properties (Parker and King 1998), "traditional" in this context refers
property plays in a community's
(a) are rooted in that community's history, and (b) are important in maintaining the

Yuhaaviatam of San Manuel Nation

in an email dated January 08, 2024, that stated, "*The proposed project is located outside of Serrano ancestral territory and, as such, YSMN will not be requesting to receive consulting party status with the lead agency or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates"*

Morongo Band of Mission Indians

Tribal cultural resources are non-renewable resources and therefore of high importance to the Morongo Tribe, therefore, tribal participation (a.k.a. tribal monitors) is recommended during all ground disturbing activities. We look forward to working with the Lead Agency to protect these irreplaceable resources out of respect for ancestors of the Morongo people who left them there, and for the people of today and for generations to come. Projects within this area are potentially sensitive for cultural resources regardless of the presence or absence of remaining surface artifacts and features. Our office requests to initiate

government-to-government consultation under Assembly Bill (AB) 52 (California Public Resources Code § 21080.3.1) and Senate Bill (SB) 18 (Government Code § 65352).

[illegible]

Rincon Band of Luiseno Indians

[illegible] letter stated that the project "*within the Traditional Use Area (TUA) of the Luiseño people. As such, the Rincon Band is traditionally and culturally affiliated to the project area*". The tribe requested project [illegible]

Pechanga Band of Luiseno Indians

[illegible] stated: "*The Pechanga Tribe asserts that the Undertaking is a part of 'Atáaxum (Luiseño) territory, and therefore the Tribe's aboriginal territory as evidenced by the existence of cultural features associated with religious practice and an extensive artifact record in the vicinity of the Project. This culturally sensitive area is affiliated with the Pechanga Band of Indians because of the Tribe's cultural ties to this area as well as our extensive history with the County and other projects within the area. The Tribe hereby informs the County that the Project site is located within a Traditional Cultural Property (TCP). We will provide additional information regarding tribal affiliation and the TCP in our consultation as well as provide more specific, confidential information on potential TCRs that may be impacted by the proposed Project. Additionally, the Tribe requests that no Phase II testing or other ground-disturbing archaeological activities be conducted on the site until after the Tribe and the County consult about the TCRs in our government-to-government consultation".*

Agua Caliente Band of Cahuilla Indians

[illegible]

Soboba Band of Luiseno Indians

[illegible] **TCR-1** [illegible] **TCR-3** [illegible]

[illegible]

TCR-1: [illegible] identify the "Most Likely Descendant". The Most Likely Descendant shall then make [illegible]

TCR-2: [illegible]

- [illegible]
- [illegible]
- [illegible]

TCR-3: [illegible]

[illegible]

[illegible]

[illegible]

it has adequate capacity to serve the project's projected demand in addition to the provider's existing	☐	☐	☒	☐

Source(s): *SAN 53-WS20230001350 – APN: 317-260-017, 018*

42. Solid Waste	☐	☐	☒	☐
County Waste Management Department's (RCWMD) Badlands Landfill, located	☐	☐	☒	☐

Source(s):

accounted for in the County's long

Project would be required to comply with the County's recycling regulations where separate

43. Utilities

	☐	☐	☒	☐
	☐	☐	☐	☒
	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☒	☐
	☐	☐	☐	☒

roject's electricity, natural gas, and

2022 "will serve" the project and

WILDFIRE e Responsibility Area ("SRA"),

44. Wildfire Impacts	☐	☐	☒	☐
	☐	☐	☒	☐

	☐	☐	☒	☐
	☐	☐	☐	☒
	☐	☐	☒	☐

Source(s):

Fire Hazard Severity Zone,

Fire Hazard Severity Zone (West County) and Emergency Service Facilities

Wildland-Urban Interface

2 Fire Hazard Severity Zone

Severity Zone. The area west of Tobacco Road is mapped as within a “Very High” Fire

Source(s):

46.				

Source(s):

47.		☐	☒	☐	☐

Source(s):

□ □□□□

IX. SUMMARY OF MITIGATION MEASURES

Mitigation Measure	Monitoring Method
BIO-1: [illegible]	[illegible]
BIO-2: [illegible]	[illegible]

PAL–1: Paleontological Monitoring. Portions of this site are mapped in the County's General Plan as having a high potential for paleontological resources (fossils). Proposed project site grading/earthmoving activities could potentially impact this resource. HENCE: PRIOR TO ISSUANCE OF GRADING PERMITS: 1. The applicant shall retain a qualified paleontologist approved by the County to create and implement a project-specific plan for monitoring site grading/earthmoving activities (project paleontologist). 2. The project paleontologist retained shall review the approved development plan and grading plan and conduct any pre-construction work necessary to render appropriate monitoring and mitigation requirements as appropriate. These requirements shall be documented by the project paleontologist in a Paleontological Resource Impact Mitigation Program (PRIMP). This PRIMP shall be submitted for approval by the County Geologist prior to issuance of a Grading Permit. Information to be contained in the PRIMP, at a minimum and in addition to other industry standards and Society of Vertebrate Paleontology standards, are as follows: a. A corresponding and active County Grading Permit (BGR) Number must be included in the title of the report. PRIMP reports submitted without a BGR number in the title will not be reviewed. b. PRIMP must be accompanied by the final grading plan for the subject project. c. Description of the proposed site and planned grading operations. d. Description of the level of monitoring required for all earth-moving activities in the project area. e. Identification and qualifications of the qualified paleontological monitor to be employed for grading operations monitoring.	M

f. Identification of personnel with authority and responsibility to temporarily halt or divert grading equipment to allow for recovery of large specimens.	
g. Direction for any fossil discoveries to be immediately reported to the property owner who in turn will immediately notify the County Geologist of the discovery.	
h. Means and methods to be employed by the paleontological monitor to quickly salvage fossils as they are unearthed to avoid construction delays.	
i. Sampling of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates.	
j. Procedures and protocol for collecting and processing of samples and specimens.	
k. Fossil identification and curation procedures to be employed.	
l. Identification of the permanent repository to receive any recovered fossil material. *Pursuant the County "SABER Policy", paleontological fossils found in the County should, by preference, be directed to the Western Science Center in the City of Hemet. A written agreement between the property owner/developer and the repository must be in place prior to site grading.	
m. All pertinent exhibits, maps, and references.	
n. Procedures for reporting of findings.	
o. Identification and acknowledgement of the developer for the content of the PRIMP as well as acceptance of financial responsibility for monitoring, reporting and curation fees. The property owner and/or applicant on whose land the paleontological fossils are discovered shall provide appropriate funding for monitoring, reporting, delivery and curating the fossils at the institution where the fossils will be placed and will provide confirmation to the County that such funding has been paid to the institution. All reports shall be signed by the qualified paleontologist responsible for the report's content. All reports shall also be signed by all other parties responsible for the	

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

report's content (eg. Professional Geologist), as necessary A signed electronic copy of the report, project plans, and all required review applications shall be uploaded to the County's PLUS Online System. Please use the following COUNTY OF RIVERSIDE links for this purpose:[illegible] Filing instructions for a Paleontological Report Review - COUNTY OF RIVERSIDE[illegible] Instructions for submitting Paleontological Documents through Riverside County's Plus Online - COUNTY OF RIVERSIDE[illegible] Paleontological Report Review Supplemental Information Form - COUNTY OF RIVERSIDE[illegible] Reports and/or review applications are not to be submitted directly to the County Geologist, Project Planner, Land Use Counter, Plan Check, or any other County office. In addition, the applicant shall submit proof of hiring (i.e., copy of executed contract, retainer agreement, etc.) a project paleontologist for the in-grading implementation of the PRIMP.[illegible] Per the County's SABER (Safeguard Artifacts Being Excavated in Riverside County) Policy, paleontological fossils found in the County of Riverside should, by preference, be directed to the Western Science Center in the City of Hemet.[illegible]	
TCR-1: Human Remains. If human remains are found on this site, the developer/permit holder or any successor in interest shall comply with State Health and Safety Code Section 7050.5. Pursuant to State Health and Safety Code Section 7050.5, if human remains are encountered, no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resources Code Section 5097.98 (b), remains shall be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted by the coroner within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall	[illegible]

identify the "Most Likely Descendant". The Most Likely Descendant shall then make recommendations and engage in consultation with the property owner concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.	
TCR-2: Unanticipated Resource Discovery. The developer/permit holder or any successor in interest shall comply with the following for the life of this permit. If during ground disturbance activities, unanticipated cultural resources* are discovered, the following procedures shall be followed: • All ground disturbance activities within 100 feet of the discovered cultural resource shall be halted and the applicant shall call the Riverside County Planning Department, County Archaeologist, immediately upon discovery of the cultural resource. • A meeting shall be convened between the developer, the project archaeologist**, the Native American tribal representative(s) (or other appropriate ethnic/cultural group representative), the County Archaeologist or appropriate representative from the Riverside County Planning Department to discuss the significance of the find. At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist or appropriate representative from the Riverside County Planning Department, as to the appropriate treatment (avoidance, documentation, recovery, etc.) for the Tribal Cultural Resource. All proposed evaluations shall be limited to nondestructive analysis, and subject to approval by the consulting tribe(s). • Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.	[illegible]
TCR-3: Native American Monitor. American Monitor Prior to the issuance of grading permits, the developer/permit applicant shall enter into agreement(s) with the consulting tribe(s) for the appropriate number of Native American	[illegible]

Monitor(s). In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) shall attend the pre-grading meeting with the contractors to provide Cultural Sensitivity Training for all construction personnel. In addition, an adequate number of Native American Monitor(s) shall be on-site during all initial ground disturbing activities and excavation of soils in each portion of the project site including clearing, grubbing, tree removals, grading and trenching. In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of Tribal Cultural Resources. Activities will be documented in Tribal Monitoring Notes which will be provided to the applicant on a regular basis and required to be submitted as part of the Phase IV Report to the County Archaeologist prior to grading final inspection. The developer/permit applicant shall submit a fully executed copy of the agreement(s) to the County Archaeologist or appropriate representative from Riverside County Planning Department to ensure compliance with this mitigation measure and associated condition of approval. Upon verification, the Archaeologist shall clear this condition. This agreement shall not modify any condition of approval or mitigation measure.	

X. RIVERSIDE COUNTY CONDITIONS OF APPROVAL

60. Prior to Grading Permit Issuance

[illegible]

[illegible]

[illegible]

70. Prior to Grading Final Inspection

[illegible]

[illegible]

[illegible]

□ □□□□

r d , *Thrifty Oil Warehouse Project, Air Quality Impact Analysis* r 2 2 2

r d , *Thrifty Oil Warehouse Project Energy Analysis,* r 2 2 2

r d *Thrifty Oil Warehouse Project Greenhouse Gas Analysis,* r 2 2 2

r d , *Thrifty Oil Warehouse Project Mobile Source Health Risk Assessment,* r 2 2 2

r d *Thrifty Oil Warehouse, Noise and Vibration Analysis* r 2 2 2

r d *Thrifty Oil Warehouse, Focused Traffic Assessment* r r 2 2 2

r d , *Thrifty Oil Placentia Avenue Warehouse Trip Generation Assessment* r r d D r 2 2 2

r d , *Thrifty Oil Warehouse, Vehicle Miles Traveled Screening Evaluation* M r 2 2

r r *Phase 1 Environmental Site Assessment Report* 2 2 22

Thrifty Oil Warehouse Project
(PPT230048, PDA 8407, OAPL2300972)
AIR QUALITY IMPACT ANALYSIS
COUNTY OF RIVERSIDE

PREPARED BY:

Haseeb Qureshi
hqureshi@urbanxroads.com

Alyssa Barnett
abarnett@urbanxroads.com

JANUARY 24, 2024

TABLE OF CONTENTS

TABLE OF CONTENTS ..... **I**
APPENDICES ..... **II**
LIST OF EXHIBITS ..... **II**
LIST OF TABLES ..... **II**
LIST OF ABBREVIATED TERMS ..... **IV**
EXECUTIVE SUMMARY **1**
ES.1 Summary of Findings 1
ES.2 Regulatory Requirements 1
SCAQMD Rules 2
ES.3 Project Mitigation Measures 3
1 INTRODUCTION **3**
1.1 Site Location 3
1.2 Project Description 3
2.1 South Coast Air Basin 7
2.2 Regional Climate 7
2.3 Wind Patterns and Project Location 8
2.4 Criteria Pollutants 9
2.5 Existing Air Quality 16
2.6 Regional Air Quality 19
2.7 Local Air Quality 19
2.8 Regulatory Background 20
2.9 Regional Air Quality Improvement 24
3 PROJECT AIR QUALITY IMPACT **35**
3.1 Introduction 35
3.2 Standards of Significance 35
3.3 Models Employed To Analyze Air Quality 36
3.4 Construction Emissions 36
3.5 Operational Emissions 40
3.6 Localized Significance 43
3.7 Construction-Source Emissions LST Analysis 48
3.8 Operational-Source Emissions LST Analysis 49
3.9 CO “Hot Spot” Analysis 50
3.10 AQMP 52
3.11 Toxic Air Contaminants 54
3.12 Potential Impacts to Sensitive Receptors 54
3.13 Odors 55
3.14 Cumulative Impacts 56
4 REFERENCES **62**
5 CERTIFICATIONS **66**

APPENDICES

APPENDIX 2.1: STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS
APPENDIX 3.1: CALEEMOD PROJECT CONSTRUCTION EMISSIONS MODEL OUTPUTS
APPENDIX 3.2: CALEEMOD PROJECT OPERATIONAL EMISSIONS MODEL OUTPUTS
APPENDIX 3.3: CALEEMOD PROJECT OPERATIONAL LSTS EMISSIONS MODEL OUTPUTS

LIST OF EXHIBITS

EXHIBIT 1-A: LOCATION MAP 4
EXHIBIT 1-B: PRELIMINARY SITE PLAN 5
EXHIBIT 2-A: DPM AND DIESEL VEHICLE MILES TREND 32
EXHIBIT 3-A: RECEPTOR LOCATIONS 47

LIST OF TABLES

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS 1
TABLE 2-1: CRITERIA POLLUTANTS 9
TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (1 OF 2) 17
TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (2 OF 2) 18
TABLE 2-3: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SCAB 19
TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2020-2022 20
TABLE 2-5: SCAB O_3 TREND 25
TABLE 2-6: SCAB AVERAGE 24-HOUR CONCENTRATION PM_{10} TREND (BASED ON FEDERAL STANDARD)[1] 26
TABLE 2-7: SCAB ANNUAL AVERAGE CONCENTRATION PM_{10} TREND (BASED ON STATE STANDARD)[1] 26
TABLE 2-8: SCAB 24-HOUR AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON FEDERAL STANDARD)[1] 27
TABLE 2-9: SCAB ANNUAL AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON STATE STANDARD)[1] 27
TABLE 2-10: SCAB 8-HOUR AVERAGE CONCENTRATION CO TREND[1] 29
TABLE 2-11: SCAB 1-HOUR AVERAGE CONCENTRATION NO_2 TREND (BASED ON FEDERAL STANDARD) 30
TABLE 2-12: SCAB 1-HOUR AVERAGE CONCENTRATION NO_2 TREND (BASED ON STATE STANDARD) 30
TABLE 3-1: MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS 35
TABLE 3-2: CONSTRUCTION TRIP ASSUMPTIONS 37
TABLE 3-3: CONSTRUCTION DURATION 38
TABLE 3-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS 38
TABLE 3-5: OVERALL CONSTRUCTION EMISSIONS SUMMARY – WITHOUT MITIGATION 39
TABLE 3-6: PASSENGER CAR FLEET MIX 41
TABLE 3-7: TRUCK FLEET MIX 42
TABLE 3-8: SUMMARY OF PEAK OPERATIONAL EMISSIONS 43
TABLE 3-9: MAXIMUM DAILY DISTURBED-ACREAGE 44
TABLE 3-10: MAXIMUM DAILY LOCALIZED CONSTRUCTION EMISSIONS THRESHOLDS 48
TABLE 3-11: LOCALIZED CONSTRUCTION-SOURCE EMISSIONS – WITHOUT MITIGATION 48
TABLE 3-12: MAXIMUM DAILY LOCALIZED OPERATIONAL EMISSIONS THRESHOLDS 49
TABLE 3-13: LOCALIZED SIGNIFICANCE SUMMARY OF OPERATIONS 50
TABLE 3-14: CO MODEL RESULTS 51

TABLE 3-15: TRAFFIC VOLUMES 52
TABLE 3-16: GOOD NEIGHBOR POLICY RELEVANT GUIDELINES 58

LIST OF ABBREVIATED TERMS

%	Percent
°F	Degrees Fahrenheit
(1)	Reference
µg/m^3	Microgram per Cubic Meter
1992 CO Plan	*1992 Federal Attainment Plan for Carbon Monoxide*
1993 CEQA Handbook	*SCAQMD's CEQA Air Quality Handbook (1993)*
2016-2040 RTP/SCS	*2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*
AB 2595	California Clean Air Act
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
BC	Black Carbon
Brief	*Brief of Amicus Curiae by the SCAQMD in the Friant Ranch Case*
C_2Cl_4	Perchloroethylene
C_4H_6	1,3-butadiene
C_6H_6	Benzene
C_2H_3Cl	Vinyl Chloride
C_2H_4O	Acetaldehyde
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEQA Guidelines	*2023 CEQA Statute and Guidelines*
CH_2O	Formaldehyde
CO	Carbon Monoxide
COH	Coefficient of Haze
COHb	Carboxyhemoglobin

County	County of Riverside
Cr(VI)	Chromium
CTP	Clean Truck Program
DPM	Diesel Particulate Matter
DRRP	Diesel Risk Reduction Plan
EC	Elemental Carbon
EIR	Environmental Impact Report
EMFAC	Emissions FACtor Model
EPA	Environmental Protection Agency
ETW	Equivalent Test Weight
EV	Electric Vehicle
GHG	Greenhouse Gas
GVWR	Gross Vehicle Weight Rating
H_2S	Hydrogen Sulfide
HDT	Heavy-Duty Trucks
HHDT	Heavy-Heavy-Duty Trucks
HI	Hazard Index
hp	Horsepower
HPLV	High-Pressure-Low-Volume
lbs	Pounds
lbs/day	Pounds Per Day
LDA	Light Duty Auto
LDT1/LDT2	Light-Duty Trucks
LHDT1/LHDT2	Light-Heavy-Duty Trucks
LST	Localized Significance Threshold
LST Methodology	*Final Localized Significance Threshold Methodology*
MATES	Multiple Air Toxics Exposure Study
MCY	Motorcycles
MDV	Medium-Duty Vehicles
MHDT	Medium-Heavy-Duty Trucks
MICR	Maximum Individual Cancer Risk
MM	Mitigation Measures
mph	Miles Per Hour
MWELO	California Department of Water Resources' Model Water Efficient
N_2	Nitrogen
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards

NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
O_2	Oxygen
O_3	Ozone
O_2 Deficiency	Chronic Hypoxemia
OBD-II	On-Board Diagnostic
ODC	Ozone Depleting Compounds
Pb	Lead
PM	Particulate Matter
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
POLA	Port of Los Angeles
POLB	Port of Long Beach
ppm	Parts Per Million
Project	Thrifty Oil Warehouse Project
RECLAIM	Regional Clean Air Incentives Market
RFG-2	Reformulated Gasoline Regulation
ROG	Reactive Organic Gases
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	Square Feet
SIPs	State Implementation Plans
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
Title 24	California Building Code
TITLE I	Non-Attainment Provisions
TITLE II	Mobile Sources Provisions
UFP	Ultrafine Particles
URBEMIS	URBan EMISsions
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
vph	Vehicles Per Hour

This page intentionally left blank

EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Thrifty Oil Warehouse Project Air Quality Impact Analysis* (AQIA) are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the *CEQA Guidelines* (*CEQA Guidelines*) (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA before and after any required mitigation measures (MM) described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Regional Construction Emissions	3.4	*Less Than Significant*	*n/a*
Localized Construction Emissions	3.7	*Less Than Significant*	*n/a*
Regional Operational Emissions	3.5	*Less Than Significant*	*n/a*
Localized Operational Emissions	3.7	*Less Than Significant*	*n/a*
CO "Hot Spot" Analysis	3.9	*Less Than Significant*	*n/a*
Air Quality Management Plan	3.10	*Less Than Significant*	*n/a*
Sensitive Receptors	3.12	*Less Than Significant*	*n/a*
Odors	3.13	*Less Than Significant*	*n/a*
Cumulative Impacts	3.14	*Less Than Significant*	*n/a*

ES.2 REGULATORY REQUIREMENTS

There are numerous requirements that development projects must comply with by law, and that were put in place by federal, State, and local regulatory agencies for the improvement of air quality.

Any operation or activity that might cause the emission of any smoke, fly ash, dust, fumes, vapors, gases, or other forms of air pollution, which can cause damage to human health, vegetation, or

other forms of property, or can cause excessive soiling on any other parcel shall conform to the requirements of the SCAQMD.

SCAQMD RULES

SCAQMD Rules that are currently applicable during construction activity for this Project are described below.

SCAQMD RULE 402

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Odor Emissions. All uses shall be operated in a manner such that no offensive odor is perceptible at or beyond the property line of that use.

SCAQMD RULE 403

This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities.

The contractor shall adhere to the following applicable measures of Rule 403 including, but not limited to:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- All access points to the Project site shall have track out devices installed.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are limited to 15 mph or less.

Dust Control, Operations. Any operation or activity that might cause the emission of any smoke, fly ash, dust, fumes, vapors, gases, or other forms of air pollution, which can cause damage to human health, vegetation, or other forms of property, or can cause excessive soiling on any other parcel, shall conform to the requirements of the SCAQMD.

SCAQMD RULE 1113

This rule serves to limit the VOC content of architectural coatings used on projects in the SCAQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects.

SCAQMD RULE 1301

This rule is intended to provide that pre-construction review requirements to ensure that new or relocated facilities do not interfere with progress in attainment of the National Ambient Air Quality Standards (NAAQS), while future economic growth within the SCAQMD is not unnecessarily restricted. The specific air quality goal is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors. Rule 1301 also limits emission increases of ammonia, and Ozone Depleting Compounds (ODCs) from new, modified or relocated facilities by requiring the use of Best Available Control Technology (BACT).

SCAQMD RULE 1401

A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States (U.S.) Bureau of Mines.

SCAQMD RULE 2305

The SCAQMD adopted Rule 2305, the Warehouse Indirect Source Rule, on May 7, 2021. Owners and operators associated with warehouses 100,000 square feet (sf) or larger are required to directly reduce nitrogen oxides (NO_X) and particulate matter emissions, or to otherwise facilitate emission and exposure reductions of these pollutants in nearby communities. The rule imposes a "Warehouse Points Compliance Obligation" (WPCO) on warehouse operators. Operators satisfy the WPCO by accumulating "Warehouse Actions and Investments to Reduce Emissions Points" (WAIRE Points) in a given 12-month period. WAIRE Points are awarded by implementing measures to reduce emissions listed on the WAIRE Menu, or by implementing a custom WAIRE Plan approved by the SCAQMD.

Although the Project would comply with Rule 2305, it should be noted that there is no way to quantify these reductions in the California Emissions Estimator Model (CalEEMod). The two most pertinent regulatory requirements that could be modeled, are Rule 403 (Fugitive Dust) (2) and Rule 1113 (Architectural Coatings) (3). Credit for Rule 403 and Rule 1113 have been taken in the analysis.

ES.3 PROJECT MITIGATION MEASURES

ES.3.1 CONSTRUCTION-SOURCE MMS

Unmitigated Project construction-source emissions would not exceed SCAQMD regional thresholds, thus implementation of construction mitigation measures is not required.

ES.3.2 OPERATIONAL-SOURCE MMS

Unmitigated Project operational-source emissions would not exceed SCAQMD regional thresholds, thus implementation of operational mitigation measures is not required.

This page intentionally left blank

1 INTRODUCTION

This report presents the results of the AQIA prepared by Urban Crossroads, Inc., for the proposed Thrifty Oil Warehouse Project (Project). The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the Project and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the SCAQMD.

1.1 SITE LOCATION

The proposed project is located on the southeast corner of Tobacco Road and Placentia Avenue at 23641 Placentia Avenue in the County of Riverside, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The Project consists of the development of a 185,785 square foot (sf) warehouse building with 167,785 sf of warehousing use and 18,000 sf of office space (9,000 sf on first and second floors). The total Project site is 8.72 acres on APNs 317-260-017 and 317-261-018. A preliminary site plan for the proposed Project is shown on Exhibit 1-B. The Project is anticipated to have an Opening Year of 2026.

Construction is expected to commence in January 2025 and would last through January 2026. Construction activities will include demolition, site preparation, grading, building construction, paving, and architectural coating. To support the Project development, there will be frontage street improvements as well as offsite sewer improvements for the Project.

The Project site is located within an unincorporated portion of the County of Riverside. As per the General Plan, the unincorporated portions of the County are divided into 19 area plans. These area plans provide more detailed land use and policy direction regarding local issues such as land use, circulation, open space, and other topical areas (4). Per the General Plan, the Project site is located within the Mead Valley Area Plan and is designated for Business Park uses. The Business Park land use designation allows for employee-intensive uses, including research and development, technology centers, corporate and support office uses, clean industry and supporting retail uses (4).

EXHIBIT 1-A: LOCATION MAP

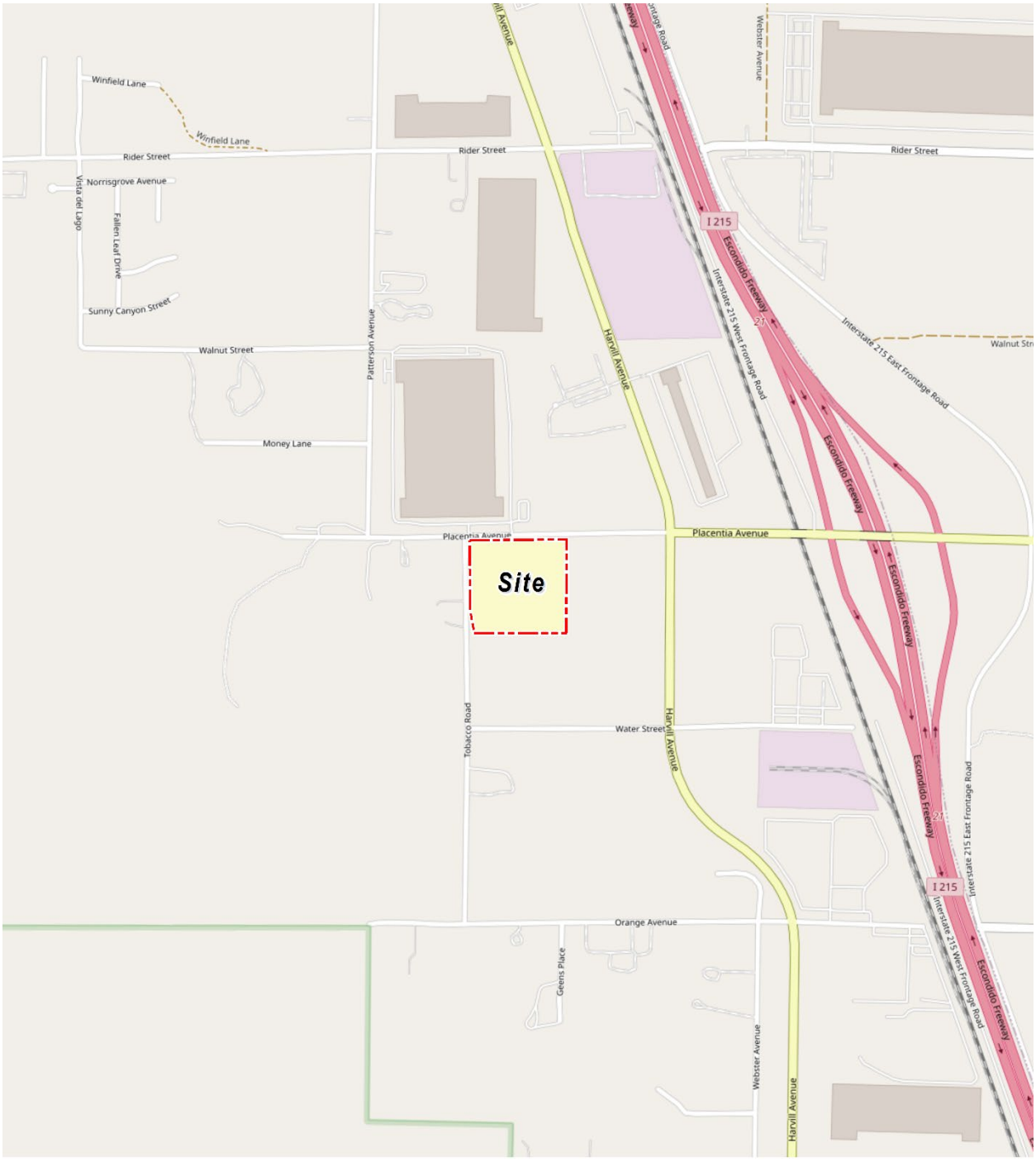
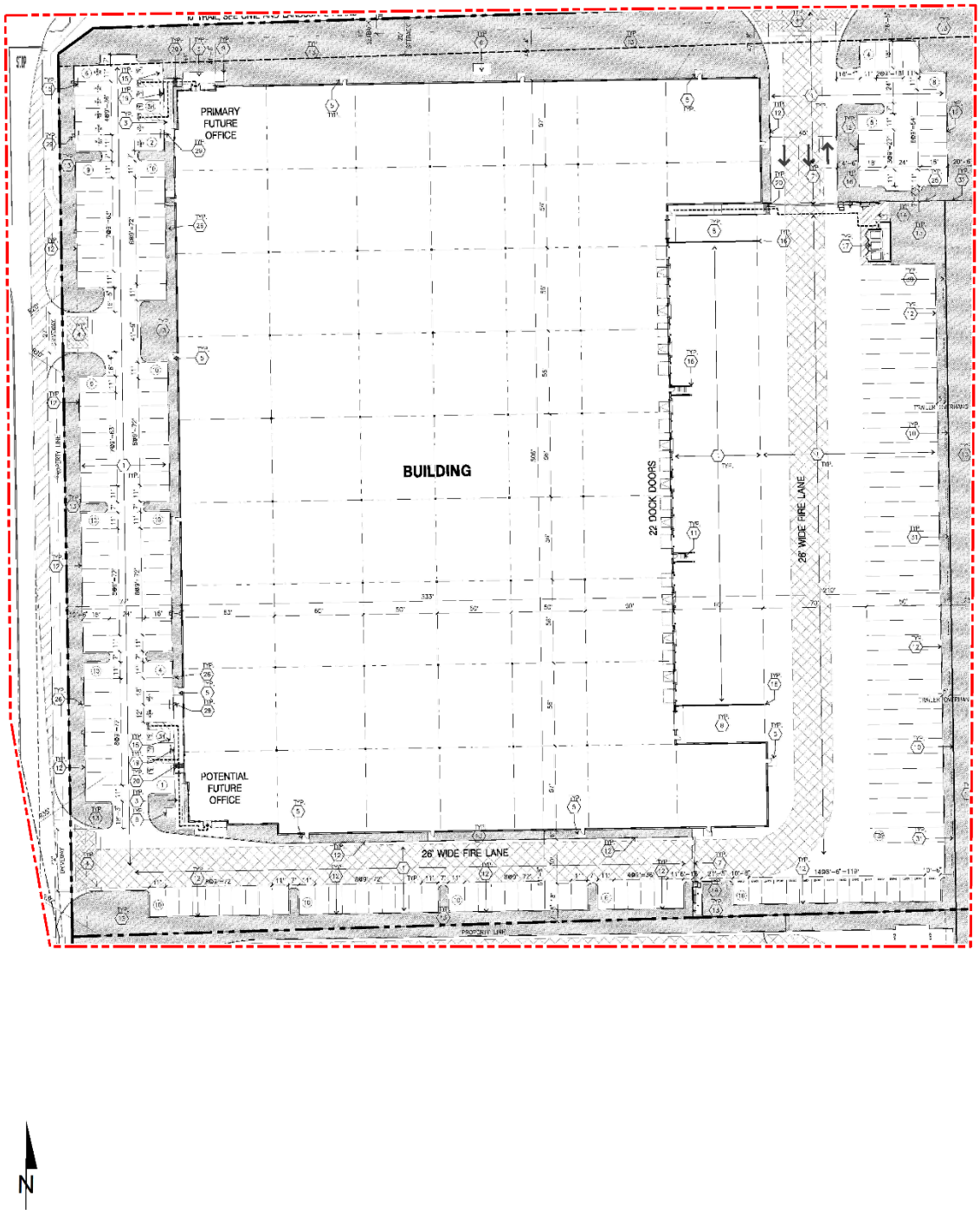


EXHIBIT 1-B: PRELIMINARY SITE PLAN



This page intentionally left blank

2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 SOUTH COAST AIR BASIN

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD (5). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As previously stated, the Project site is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the San Diego Air Basin to the south.

2.2 REGIONAL CLIMATE

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s degrees Fahrenheit (°F). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO_2) to sulfates (SO_4) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71% along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90% of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year, there are approximately 10 hours of possible sunshine, and on the longest day of the year, there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides (NO_X) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

2.4 CRITERIA POLLUTANTS

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (6):

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
CO	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O_3), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O_2) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O_2 transport and competing with O_2 to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O_2 supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O_2 deficiency) as seen at high altitudes.
SO_2	SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant	Coal or oil burning power plants and industries,	A few minutes of exposure to low levels of SO_2 can result in airway constriction in some

Criteria Pollutant	Description	Sources	Health Effects
	mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms SO_4. Collectively, these pollutants are referred to as sulfur oxides (SO_X).	refineries, diesel engines	asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.
NO_X	NO_X consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with O_2. Their lifespan in the atmosphere ranges from	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming	Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is

Criteria Pollutant	Description	Sources	Health Effects
	one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. NO_X is typically created during combustion processes and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitoring station.	equipment and residential heating.	associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. In animals, exposure to levels of NO_2 considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O_3 exposure increases when animals are exposed to a combination of O_3 and NO_2.
O_3	O_3 is a highly reactive and unstable gas that is formed when VOCs and NO_X, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	Formed when reactive organic gases (ROG) and NO_X react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O_3 effects. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased

Criteria Pollutant	Description	Sources	Health Effects
		storage and pesticides.	susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O_3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and live in communities with high O_3 levels. O_3 exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O_3 may be more toxic than exposure to O_3 alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.
Particulate Matter	PM_{10}: A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be	Sources of PM_{10} include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO_X, SO_X, organics). Incomplete combustion of any fuel. $PM_{2.5}$ comes from	A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In

Criteria Pollutant	Description	Sources	Health Effects
	deposited, resulting in adverse health effects. Additionally, it should be noted that PM_{10} is considered a criteria air pollutant. $PM_{2.5}$: A similar air pollutant to PM_{10} consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include SO_4 formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.	fuel combustion in motor vehicles, equipment, and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_X, SO_X, organics).	recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer. Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.
VOC	VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the	Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products. Fuels are made up of organic chemicals. All of these products can release organic	Breathing VOCs can irritate the eyes, nose, and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.

Criteria Pollutant	Description	Sources	Health Effects
	solvents used in paints. Exceptions to the VOC designation include CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.	compounds while you are using them, and, to some degree, when they are stored.	
ROG	Similar to VOC, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_X react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.
Lead (Pb)	Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include operational activities such as metal processing or Pb acid battery manufacturing. As such, the Project is not anticipated to	Metal smelters, resource recovery, leaded gasoline, deterioration of Pb paint.	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be

Criteria Pollutant	Description	Sources	Health Effects
	generate a quantifiable amount of Pb emissions.		stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.
Odor	Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves (7).	Odors can come from many sources including animals, human activities, industry, natures, and vehicles.	Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.5 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (8).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by CARB on May 4, 2016, and are presented in Table 2-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM_{10}, and $PM_{2.5}$ are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the SCAQMD meets the standards set by the EPA or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted by CARB. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area (9).

TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	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 (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page …

For more information please call ARB-PIO at (916) 322-2990 California Air Resources Board (5/4/16)

TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

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 October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. 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.

10. 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.

11. On June 2, 2010, a new 1-hour SO_2 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 SO_2 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.

12. 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.

13. 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.

14. 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.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (5/4/16)**

2.6 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O_3, particulate matter (PM_{10} and $PM_{2.5}$), NO_2, and SO_2 which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the air district (10). On December 28, 2021, CARB posted the proposed 2021 amendments to the state and national area designations. See Table 2-3 for attainment designations for the SCAB (11). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

TABLE 2-3: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SCAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	--
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Attainment	Unclassifiable/Attainment
SO_2	Attainment	Unclassifiable/Attainment
Pb[1]	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the SCAB
"-" = The national 1-hour O_3 standard was revoked effective June 15, 2005.

2.7 LOCAL AIR QUALITY

The SCAQMD has designated general forecast areas and air monitoring areas (referred to as Source Receptor Areas [SRA]) throughout the district in order to provide Southern California residents about the air quality conditions. The Project site is located within SRA 24. The Perris Valley monitoring station within SRA 24 is located approximately 2.50 miles southeast of the Project site. The following stations will be used to report air quality data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$.

- SRA 24 (Perris Valley) – O_3 (for the years 2020 and 2021) and PM_{10} (for the year 2020)
- SRA 25 (Elsinore Valley) – O_3 (for the year 2022), CO, NO_2, PM_{10} (for the years 2021 and 2022)
- SRA 23 (Metropolitan Riverside County 1) – $PM_{2.5}$

Data from the Elsinore Valley and Metropolitan Riverside County 1 monitoring stations were utilized only in instances where data was not available.

[1] The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

The most recent three (3) years of data available is shown on Table 2-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ for 2020 through 2022 was obtained from the SCAQMD Air Quality Data Tables (12). Additionally, data for SO_2 has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO_2 concentrations.

TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2020-2022

Pollutant	Standard	Year		
		2020	2021[A]	2022
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.125	0.117	0.121
Maximum Federal 8-Hour Concentration (ppm)		0.106	0.094	0.091
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	34	25	17
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	74	60	37
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	0.9	0.9	0.9
Maximum Federal 8-Hour Concentration	> 20 ppm	0.7	0.8	0.6
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.044	0.044	0.037
Annual Federal Standard Design Value		0.007	0.007	0.007
PM_{10}				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 150 $\mu g/m^3$	77	89	91
Annual Federal Arithmetic Mean ($\mu g/m^3$)		35.9	21.4	19.8
Number of Days Exceeding Federal 24-Hour Standard	> 150 $\mu g/m^3$	0	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 $\mu g/m^3$	6	4	1
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 35 $\mu g/m^3$	41.00	82.1	38.5
Annual Federal Arithmetic Mean ($\mu g/m^3$)	> 12 $\mu g/m^3$	12.63	12.58	10.80
Number of Days Exceeding Federal 24-Hour Standard	> 35 $\mu g/m^3$	4	10	1

ppm = Parts Per Million
$\mu g/m^3$ = Microgram per Cubic Meter
Source: Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ was obtained from SCAQMD Air Quality Data Tables.
[A]Data for PM_{10} in 2021 was taken from SRA 25, as data for SRA 24 was unavailable.

2.8 REGULATORY BACKGROUND

2.8.1 FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_X, SO_2, PM_{10}, and Pb (13). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer

Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (14). The CAA also mandates that states submit and implement SIPs for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (15) (16). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 2-3 (previously presented) provides the NAAQS within the SCAB.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X. NO_X is a collective term that includes all forms of NO_X which are emitted as byproducts of the combustion process.

2.8.2 CALIFORNIA REGULATIONS

CARB

CARB, which became part of CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO_4, visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (17) (13).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO_X, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

TITLE 24 ENERGY EFFICIENCY STANDARDS AND CALIFORNIA GREEN BUILDING STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted 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 efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that became effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (18). The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. These require, among other items (19):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).

- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty EV supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

2.8.3 AQMP

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMP to meet the state and federal ambient air quality standards (20). AQMPs are updated regularly to ensure an effective reduction in emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.10.

2.9 REGIONAL AIR QUALITY IMPROVEMENT

The Project is within the jurisdiction of the SCAQMD. In 1976, California adopted the Lewis Air Quality Management Act which created SCAQMD from a voluntary association of air pollution control districts in Los Angeles, Orange, Riverside, and San Bernardino counties. The geographic area of which SCAQMD consists of is known as the SCAB. SCAQMD develops comprehensive plans and regulatory programs for the region to attain federal standards by dates specified in federal law. The agency is also responsible for meeting state standards by the earliest date achievable, using reasonably available control measures.

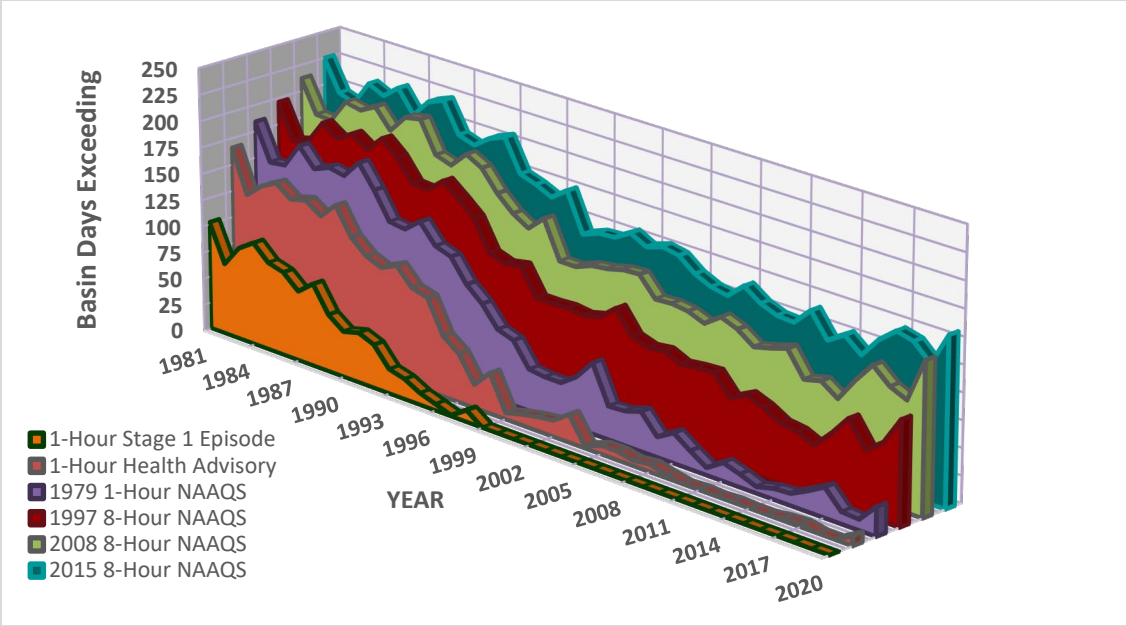
SCAQMD rule development through the 1970s and 1980s resulted in dramatic improvement in SCAB air quality. Nearly all control programs developed through the early 1990s relied on (i) the development and application of cleaner technology; (ii) add-on emission controls, and (iii) uniform CEQA review throughout the SCAB. Industrial emission sources have been significantly reduced by this approach and vehicular emissions have been reduced by technologies implemented at the state level by CARB.

As discussed above, the SCAQMD is the lead agency charged with regulating air quality emission reductions for the entire SCAB. SCAQMD created AQMPs which represent a regional blueprint for achieving healthful air on behalf of the 16 million residents of the SCAB. The 2012 AQMP states, "the remarkable historical improvement in air quality since the 1970's is the direct result

of Southern California's comprehensive, multiyear strategy of reducing air pollution from all sources as outlined in its AQMPs," (21).

Emissions of O_3, NO_X, VOC, and CO have been decreasing in the SCAB since 1975 and are projected to continue to decrease through 2020 (22). These decreases result primarily from motor vehicle controls and reductions in evaporative emissions. Although vehicle miles traveled (VMT) in the SCAB continue to increase, NO_X and VOC levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_X emissions from electric utilities have also decreased due to use of cleaner fuels and renewable energy. O_3 contour maps show that the number of days exceeding the 8-hour NAAQS has generally decreased between 1980 and 2020. For 2020, there was an overall decrease in exceedance days compared with the 1980 period. However, as shown on Table 2-5, O_3 levels have increased in the past three years due to higher temperatures and stagnant weather conditions. Notwithstanding, O_3 levels in the SCAB have decreased substantially over the last 30 years with the current maximum measured concentrations being approximately one-third of concentrations within the late 70's (23).

TABLE 2-5: SCAB O_3 TREND



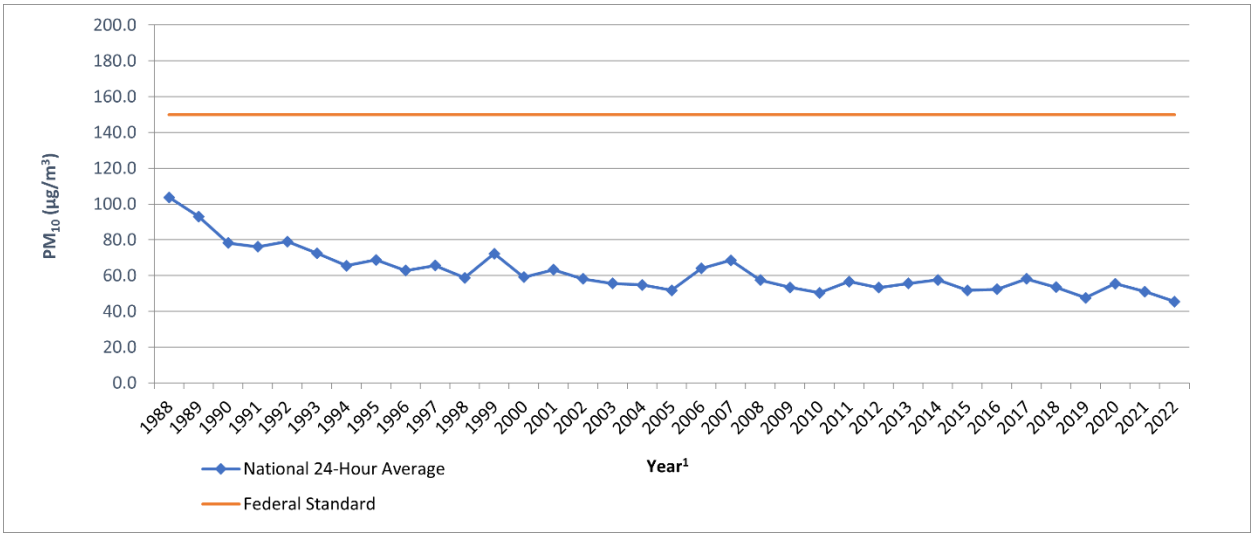
Source: 2020 SCAQMD, Historical O_3 Air Quality Trends (1976-2020)

The overall trends of PM_{10} and $PM_{2.5}$ levels in the air (not emissions) show an overall improvement since 1975. Direct emissions of PM_{10} have remained somewhat constant in the SCAB and direct emissions of $PM_{2.5}$ have decreased slightly since 1975. Area wide sources (fugitive dust from roads, dust from construction, and other sources) contribute the greatest amount of direct particulate matter emissions.

As with other pollutants, the most recent PM_{10} statistics show an overall improvement as illustrated in Tables 2-6 and 2-7. During the period for which data are available, the 24-hour

national annual average concentration for PM_{10} decreased by approximately 56%, from 103.7 microgram per cubic meter (µg/m³) in 1988 to 45.5 µg/m³ in 2022 (24). Although the values are below the federal standard, it should be noted that there are days within the year where the concentrations would exceed the threshold. The 24-hour state annual average for emissions for PM_{10}, have decreased by approximately 64%, from 93.9 µg/m³ in 1989 to 37.3 µg/m³ in 2022 (24). Although data in the late 1990's show some variability, this is probably due to the advances in meteorological science rather than a change in emissions. Similar to the ambient concentrations, the calculated number of days above the 24-hour PM_{10} standards has also shown an overall drop.

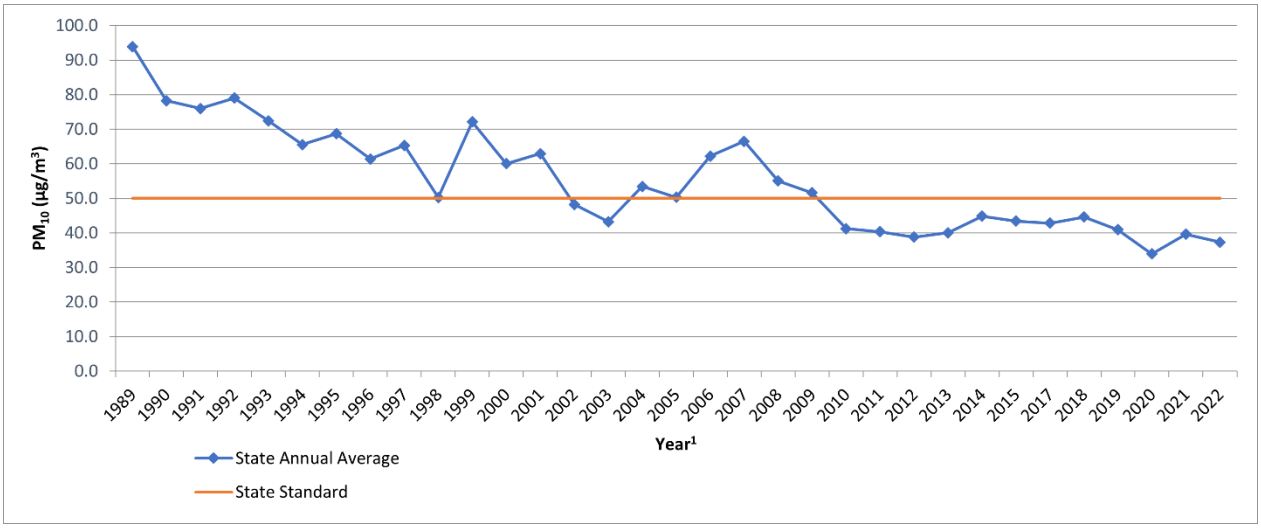
TABLE 2-6: SCAB AVERAGE 24-HOUR CONCENTRATION PM_{10} TREND (BASED ON FEDERAL STANDARD)[1]



Source: 2023 CARB, iADAM: Top Four Summary: PM_{10} 24-Hour Averages (1988-2022)

[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

TABLE 2-7: SCAB ANNUAL AVERAGE CONCENTRATION PM_{10} TREND (BASED ON STATE STANDARD)[1]

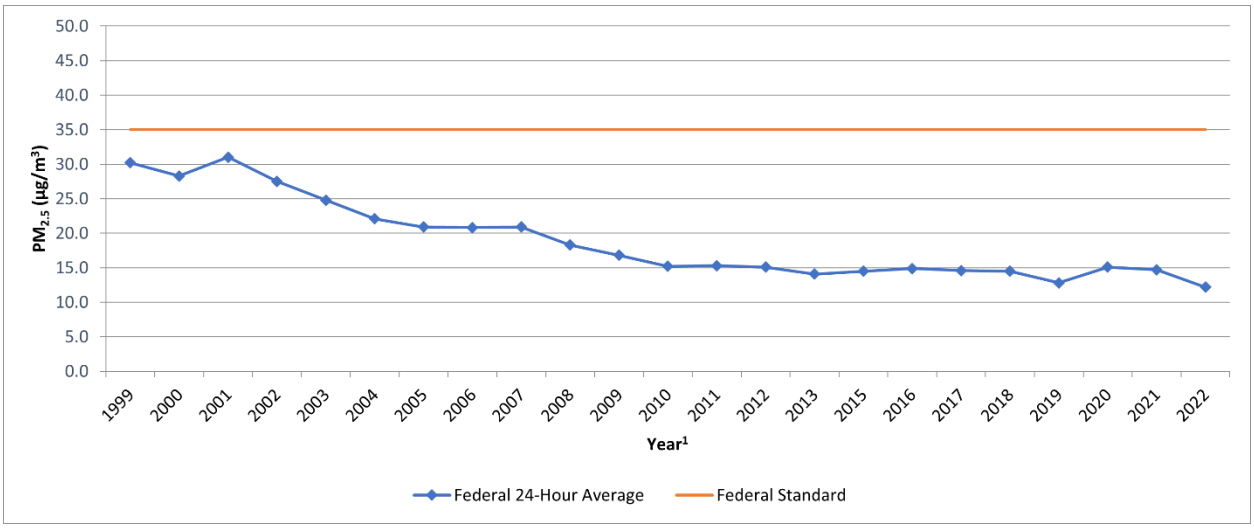


Source: 2023 CARB, iADAM: Top Four Summary: PM_{10} 24-Hour Averages (1988-2022)

[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

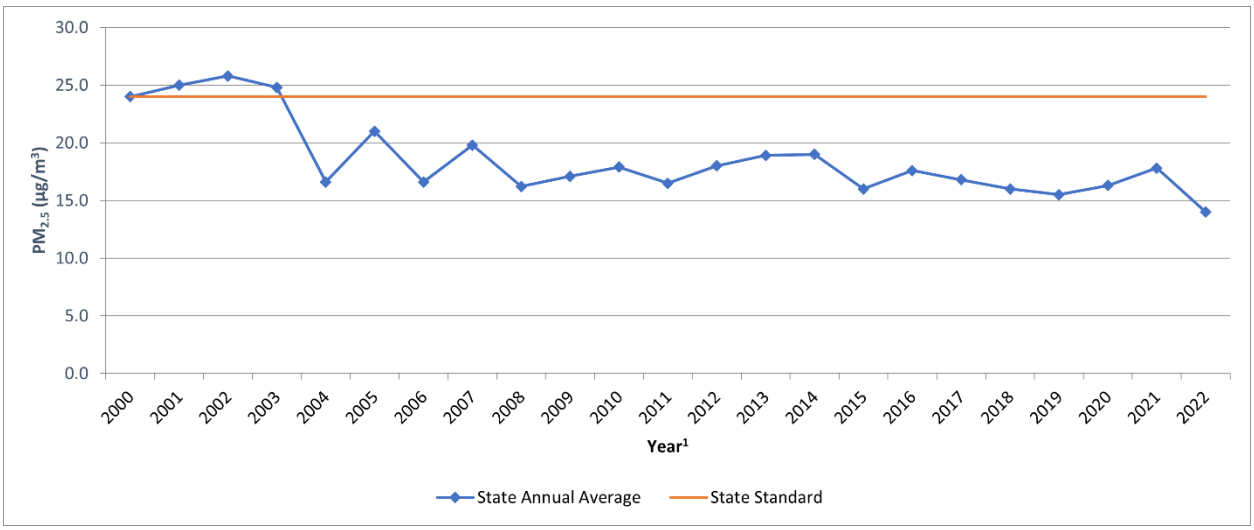
Tables 2-8 and 2-9 shows the most recent 24-hour average $PM_{2.5}$ concentrations in the SCAB from 1999 through 2022. Overall, the national and state annual average concentrations have decreased by almost 60% and 42% respectively (24). It should be noted that the SCAB is currently designated as nonattainment for the state and federal $PM_{2.5}$ standards.

TABLE 2-8: SCAB 24-HOUR AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON FEDERAL STANDARD)[1]



Source: 2023 CARB, iADAM: Top Four Summary: $PM_{2.5}$ 24-Hour Averages (1999-2022)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

TABLE 2-9: SCAB ANNUAL AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON STATE STANDARD)[1]



Source: 2023 CARB, iADAM: Top Four Summary: $PM_{2.5}$ 24-Hour Averages (1999-2022)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

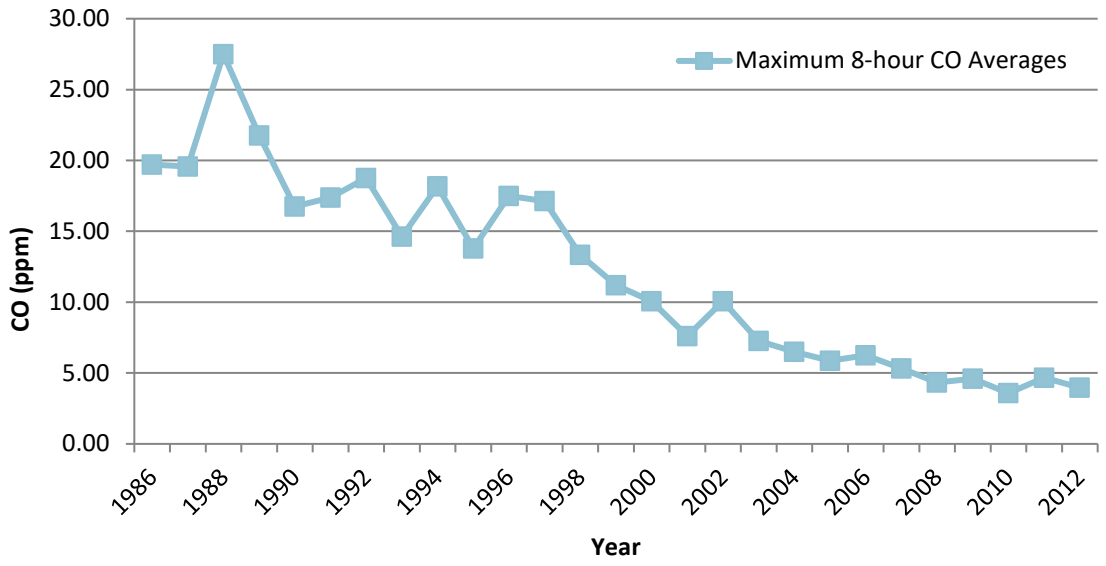
While the 2012 AQMP PM_{10} attainment demonstration and the 2015 associated supplemental SIP submission indicated that attainment of the 24-hour standard was predicted to occur by the end of 2015, it could not anticipate the effect of the ongoing drought on the measured $PM_{2.5}$.

The 2006 to 2010 base period used for the 2012 attainment demonstration had near-normal rainfall. While the trend of $PM_{2.5}$-equivalent emission reductions continued through 2015, the severe drought conditions contributed to the $PM_{2.5}$ increases observed after 2012. As a result of the disrupted progress toward attainment of the federal 24-hour $PM_{2.5}$ standard, SCAQMD submitted a request and the EPA approved, in January 2016, a "bump up" to the nonattainment classification from "moderate" to "serious," with a new attainment deadline as soon as practicable, but not beyond December 31, 2019. As of March 14, 2019, the EPA approved portions of a SIP revision submitted by California to address CAA requirements for the 2006 24-hour $PM_{2.5}$ NAAQS in the Los Angeles-SCAB Serious $PM_{2.5}$ nonattainment area. The EPA also approved 2017 and 2019 motor vehicle emissions budgets for transportation conformity purposes and inter-pollutant trading ratios for use in transportation conformity analyses (25).

In December 2022, the SCAQMD released the Final 2022 AQMP. The 2022 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (26). Similar to the 2016 AQMP, the 2022 AQMP incorporates scientific and technological information and planning assumptions, including the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS) and updated emission inventory methodologies for various source categories (27).

The most recent CO concentrations in the SCAB are shown in Table 2-10 (24). CO concentrations in the SCAB have decreased markedly — a total decrease of more about 80% in the peak 8-hour concentration from 1986 to 2012. It should be noted 2012 is the most recent year where 8-hour CO averages and related statistics are available in the SCAB. The number of exceedance days has also declined. The entire SCAB is now designated as attainment for both the state and national CO standards. Ongoing reductions from motor vehicle control programs should continue the downward trend in ambient CO concentrations.

TABLE 2-10: SCAB 8-HOUR AVERAGE CONCENTRATION CO TREND[1]

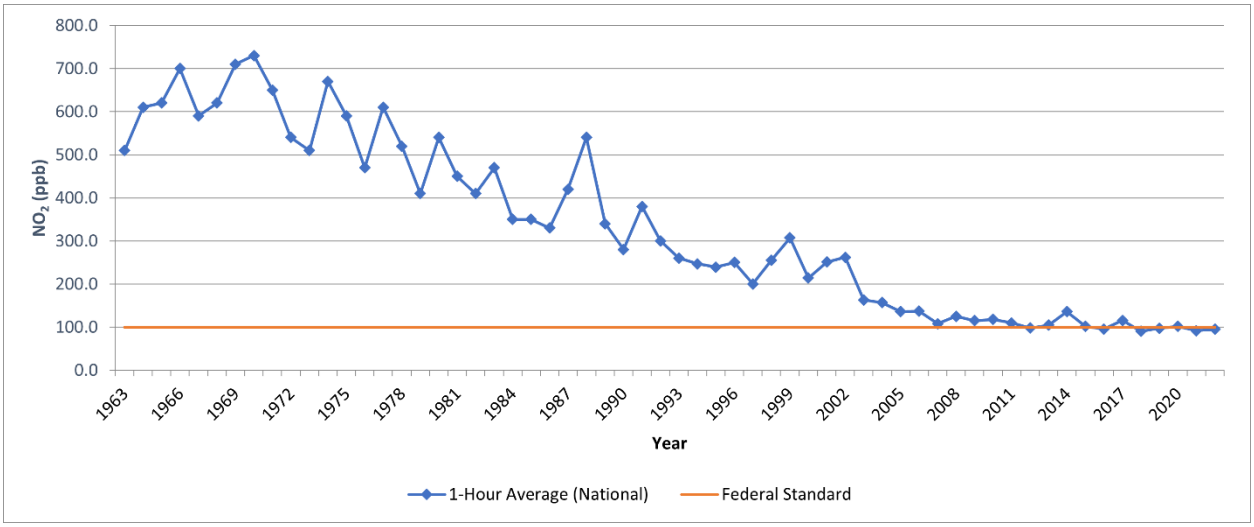


Source: 2020 CARB, iADAM: Top Four Summary: CO 8-Hour Averages (1986-2012)
[1] The most recent year where 8-hour concentration data is available is 2012.

Part of the control process of the SCAQMD's duty to greatly improve the air quality in the SCAB is the uniform CEQA review procedures required by SCAQMD's *CEQA Air Quality Handbook (1993)* (*1993 CEQA Handbook*) (28). The single threshold of significance used to assess Project direct and cumulative impacts has in fact "worked" as evidenced by the track record of the air quality in the SCAB dramatically improving over the course of the past decades. As stated by the SCAQMD, the District's thresholds of significance are based on factual and scientific data and are therefore appropriate thresholds of significance to use for this Project.

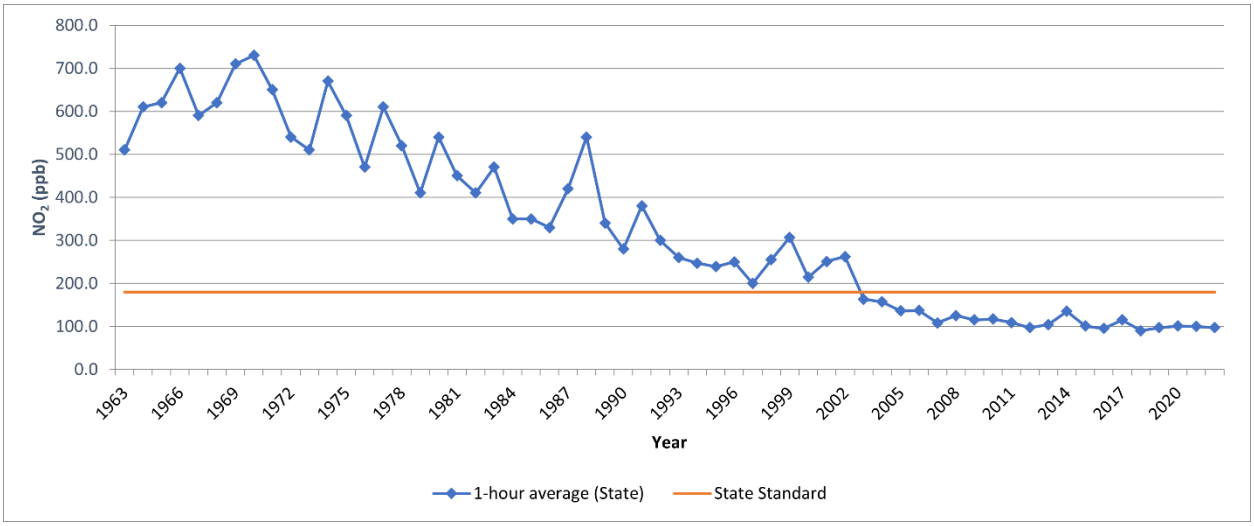
The most recent NO_2 data for the SCAB is shown in Tables 2-11 and 2-12 (24). Over the last 50 years, NO_2 values have decreased significantly; the peak 1-hour national and state averages for 2022 is approximately 81% lower than what it was during 1963. The SCAB attained the State 1-hour NO_2 standard in 1994, bringing the entire state into attainment. A new state annual average standard of 0.030 ppm was adopted by CARB in February 2007 (29). The new standard is just barely exceeded in the SCAQMD. NO_2 is formed from NO_X emissions, which also contribute to O_3. As a result, the majority of the future emission control measures would be implemented as part of the overall O_3 control strategy. Many of these control measures would target mobile sources, which account for more than three-quarters of California's NO_X emissions. These measures are expected to bring the SCAQMD into attainment of the state annual average standard.

TABLE 2-11: SCAB 1-HOUR AVERAGE CONCENTRATION NO_2 TREND (BASED ON FEDERAL STANDARD)



Source: 2023 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (1963-2022)

TABLE 2-12: SCAB 1-HOUR AVERAGE CONCENTRATION NO_2 TREND (BASED ON STATE STANDARD)



Source: 2023 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (1963-2022)

2.9.1 TOXIC AIR CONTAMINANTS (TAC) TRENDS

In 1984, as a result of public concern for exposure to airborne carcinogens, CARB adopted regulations to reduce the amount of TAC emissions resulting from mobile and area sources, such as cars, trucks, stationary sources, and consumer products. According to the *Ambient and Emission Trends of Toxic Air Contaminants in California* journal article (30) which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends for the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined significantly (between 1990 and 2012). The seven TACs studied include

those that are derived from mobile sources: diesel particulate matter (DPM), benzene (C_6H_6), and 1,3-butadiene (C_4H_6); those that are derived from stationary sources: perchloroethylene (C_2Cl_4) and hexavalent chromium (Cr(VI)); and those derived from photochemical reactions of emitted VOCs: formaldehyde (CH_2O) and acetaldehyde (C_2H_4O)[2]. The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk.

MOBILE SOURCE TACS

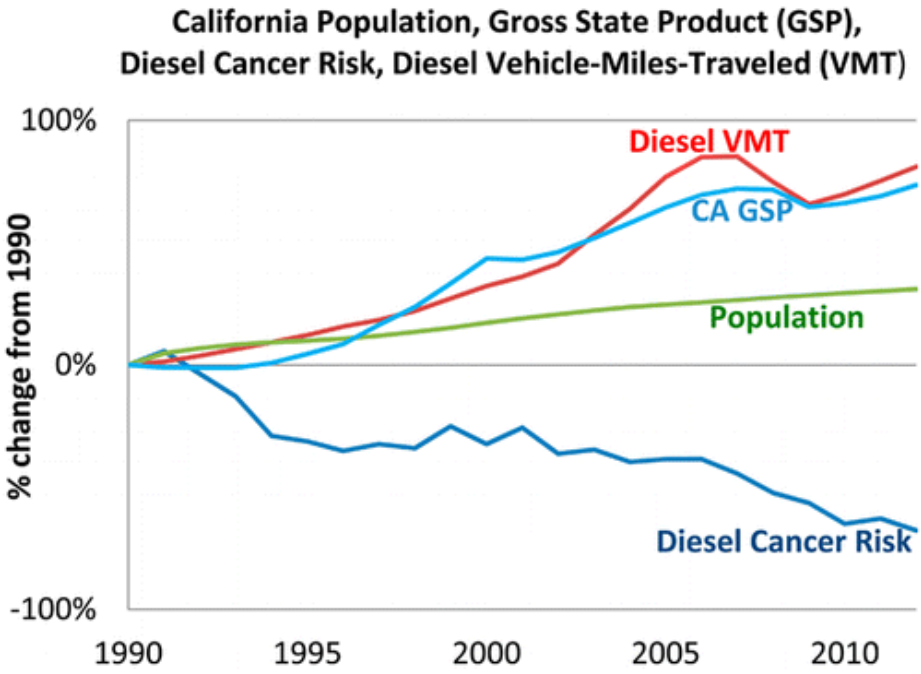
CARB introduced two programs that aimed at reducing mobile emissions for light and medium duty vehicles through vehicle emissions controls and cleaner fuel. In California, light-duty vehicles sold after 1996 are equipped with California's second-generation On-Board Diagnostic (OBD-II) system. The OBD-II system monitors virtually every component that can affect the emission performance of the vehicle to ensure that the vehicle remains as clean as possible over its entire life and assists repair technicians in diagnosing and fixing problems with the computerized engine controls. If a problem is detected, the OBD-II system illuminates a warning lamp on the vehicle instrument panel to alert the driver. This warning lamp typically contains the phrase "Check Engine" or "Service Engine Soon." The system would also store important information about the detected malfunction so that a repair technician can accurately find and fix the problem. CARB has recently developed similar OBD requirements for heavy-duty vehicles over 14,000 pounds (lbs). CARB's phase II Reformulated Gasoline Regulation (RFG-2), adopted in 1996, also led to a reduction of mobile source emissions. Through such regulations, benzene levels declined 88% from 1990-2012. 1,3-Butadiene concentrations also declined 85% from 1990-2012 as a result of the use of reformulated gasoline and motor vehicle regulations (30).

In 2000, CARB's Diesel Risk Reduction Plan (DRRP) recommended the replacement and retrofit of diesel-fueled engines and the use of ultra-low-sulfur (<15 ppm) diesel fuel. As a result of these measures, DPM concentrations have declined 68% since 2000, even though the state's population increased 31% and the amount of diesel vehicles miles traveled increased 81%, as shown on Exhibit 2-B. With the implementation of these diesel-related control regulations, CARB expects a DPM decline of 71% for 2000-2020.

SCAQMD's Multiple Air Toxics Exposure Study (MATES) study, discussed later illustrates the cancer risk trends, which show an approximate 80% reduction in risk from 2000 to 2020, which correlates to the reductions in DPM anticipated by CARB.

[2] It should be noted that ambient DPM concentrations are not measured directly. Rather, a surrogate method using the coefficient of haze (COH) and elemental carbon (EC) is used to estimate DPM concentrations.

EXHIBIT 2-A: DPM AND DIESEL VEHICLE MILES TREND



Source: 2020 CARB

DIESEL REGULATIONS

CARB and the Ports of Los Angeles and Long Beach (POLA and POLB) have adopted several iterations of regulations for diesel trucks that are aimed at reducing DPM. More specifically, CARB Drayage Truck Regulation (31), CARB statewide On-road Truck and Bus Regulation (32), and the Ports of Los Angeles and Long Beach Clean Truck Program (CTP) require accelerated implementation of "clean trucks" into the statewide truck fleet (33). In other words, older more polluting trucks would be replaced with newer, cleaner trucks as a function of these regulatory requirements.

Moreover, the average statewide DPM emissions for Heavy Duty Trucks (HDT), in terms of grams of DPM generated per mile traveled, would dramatically be reduced due to the aforementioned regulatory requirements.

Diesel emissions identified in this analysis would therefore overstate future DPM emissions since not all the regulatory requirements are reflected in the modeling.

CANCER RISK TRENDS

Based on information available from CARB, overall cancer risk throughout the SCAB has had a declining trend since 1990. In 1998, following an exhaustive 10-year scientific assessment process, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. The SCAQMD initiated a comprehensive urban toxic air pollution study called the Multiple Air Toxics Exposure Study (MATES). DPM accounts for more than 70% of the cancer risk.

In January 2018, as part of the overall effort to reduce air toxics exposure in the SCAB, SCAQMD began conducting the MATES V Program. MATES V field measurements were conducted at ten fixed sites (the same sites selected for MATES III and IV) to assess trends in air toxics levels. MATES V also included measurements of ultrafine particles (UFP) and black carbon (BC) concentrations, which can be compared to the UFP levels measured in MATES IV (34). The final report for the MATES V study was published August 2021. In addition to new measurements and updated modeling results, several key updates were implemented in MATES V. First, MATES V estimates cancer risks by taking into account multiple exposure pathways, which includes inhalation and non-inhalation pathways. This approach is consistent with how cancer risks are estimated in South Coast AQMD's programs such as permitting, Air Toxics Hot Spots (AB2588), and CEQA. Previous MATES studies quantified the cancer risks based on the inhalation pathway only. Second, along with cancer risk estimates, MATES V includes information on the chronic non-cancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic non-cancer risks from MATES II through IV measurements have been re-examined using current Office of Environmental Health Hazard Assessment (OEHHA) and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time (35).

MATES-V calculated cancer risks based on monitoring data collected at ten fixed sites within the SCAB. None of the fixed monitoring sites are within the local area of the Project site. However, MATES-V has extrapolated the excess cancer risk levels throughout the SCAB by modeling the specific grids. The Project is located within a quadrant of the geographic grid of the MATES-V model which predicted a cancer risk of 293 in one million for the area containing the Project site. DPM is included in this cancer risk along with all other TAC sources. As in previous MATES iterations, DPM is the largest contributor to overall air toxics cancer risk. However, the average levels of DPM in MATES V are 53% lower at the 10 monitoring sites compared to MATES IV. Cumulative Project generated TACs are limited to DPM.

This page intentionally left blank

3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

This study quantifies air quality emissions generated by construction and operation of the Project and addresses whether the Project conflicts with implementation of the SCAQMD's AQMP and Lead Agency planning regulations. The analysis of Project-generated air emissions determines whether the Project would result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is in non-attainment under an applicable NAAQS and CAAQS. Additionally, the Project has been evaluated to determine whether the Project would expose sensitive receptors to substantial pollutant concentrations and the impacts of odors. The significance of these potential impacts is described in the following sections.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the *CEQA Guidelines* (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (1):

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SCAQMD has also developed regional significance thresholds for other regulated pollutants, as summarized at Table 3-1 (36). The SCAQMD's *CEQA Air Quality Significance Thresholds* (March 2023) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3-1: MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS

Pollutant	Regional Construction Threshold	Regional Operational Thresholds
NO_X	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Pb	3 lbs/day	3 lbs/day

lbs/day = Pounds Per Day

3.3 MODELS EMPLOYED TO ANALYZE AIR QUALITY

3.3.1 CALEEMOD

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

In May 2022, the SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the CalEEMod Version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (37). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 through 3.3.

3.4 CONSTRUCTION EMISSIONS

3.4.1 CONSTRUCTION ACTIVITIES

Construction activities associated with the Project would result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Demolition
- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

DEMOLITION ACTIVITIES

The site is currently developed with existing uses/structures which total approximately 2,810 sf that will be demolished. Demolished material associated with demolition will be hauled off-site.

SITE PREPARATION AND GRADING ACTIVITIES

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions”. Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Per client provided data, this analysis assumes that earthwork activities are expected to require 62,025 cubic yards of import. For purposes of analysis, site preparation and grading activities are modeled as sequential phases.

BUILDING CONSTRUCTION, PAVING, AND ARCHITECTURAL COATING ACTIVITIES

Building construction and paving emissions are primarily associated with exhaust emissions from on-site equipment and vehicular trips to the site by construction workers and vendor trips. Architectural coating emissions include worker trips as well, but the primary pollutant emission of concern during this phase is ROG/VOC. CalEEMod default emission rates include the effects of Rule 1113 to limit ROG/VOC emissions. To present a reasonable worst-case scenario, the building construction, paving, and architectural coating activities are modeled as overlapping phases.

OFF-SITE UTILITY AND INFRASTRUCTURE IMPROVEMENTS

To support the Project development, there will be frontage street improvements as well as offsite sewer improvements for the Project. It is expected that the off-site construction activities would not take place at one location for the entire duration of construction. Impacts associated with these activities are not expected to exceed the emissions identified for Project-related construction activities since the off-site construction areas would have physical constraints on the amount of daily activity that could occur. The physical constraints would limit the amount of construction equipment that could be used, and any off-site and utility infrastructure construction would not use equipment totals that would exceed the equipment totals on Table 3-4. As such, no impacts beyond what has already been identified in this report are expected to occur.

ON-ROAD TRIPS

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul trucks commuting to and from the site. The number of worker, vendor, and hauling trips are presented below in Table 3-2. Worker trips are based on CalEEMod defaults. It should be noted that for vendor trips, specifically, CalEEMod only assigns vendor trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for vendor trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

TABLE 3-2: CONSTRUCTION TRIP ASSUMPTIONS

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Demolition	15	3	2
Site Preparation	18	2	0
Grading	15	3	388
Building Construction	78	24	0
Paving	15	0	0
Architectural Coating	16	0	0

3.4.2 CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in January 2025 and would last through February 2026. The construction schedule utilized in the analysis, shown in Table 3-3, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent[3]. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (1).

3.4.3 CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3-4 would operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the County Code. In accordance with the County of Riverside Good Neighbor Policy for Logistics and Warehouse/Distribution uses, it was assumed that equipment greater than 50 horsepower would meet at least CARB Tier 4 Interim emissions standards.

TABLE 3-3: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Working Days
Demolition	1/7/2025	2/4/2025	20
Site Preparation	2/5/2025	2/19/2025	10
Grading	2/20/2025	3/20/2025	20
Building Construction	3/21/2025	2/6/2026	230
Paving	1/10/2026	2/6/2026	20
Architectural Coating	1/10/2026	2/6/2026	20

TABLE 3-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment[1]	Amount	Hours Per Day
Demolition	Rubber Tired Dozers	2	8
	Excavators	3	8
	Concrete/Industrial Saws	1	8
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8

[3] As shown in the CalEEMod User's Guide Version 2022.1, Section 4.3 "Off-Road Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

Construction Activity	Equipment[1]	Amount	Hours Per Day
Grading	Graders	1	8
	Excavators	1	8
	Rubber Tired Dozers	1	8
	Crawler Tractors	3	8
Building Construction	Forklifts	3	8
	Generator Sets	1	8
	Cranes	1	8
	Welders	1	8
	Tractors/Loaders/Backhoes	3	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

[1] In order to account for fugitive dust emissions, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes during the site preparation and grading phases of Project construction.

3.4.4 CONSTRUCTION EMISSIONS SUMMARY

IMPACTS WITHOUT MITIGATION

The estimated maximum daily construction emissions without mitigation are summarized on Table 3-5. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction would not exceed criteria pollutant thresholds established by the SCAQMD.

TABLE 3-5: OVERALL CONSTRUCTION EMISSIONS SUMMARY – WITHOUT MITIGATION

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
2025	0.96	11.11	22.63	0.03	1.35	0.42
Winter						
2025	0.96	41.90	31.03	0.21	10.14	3.56
2026	47.03	19.09	34.63	0.05	1.88	0.63
Maximum Daily Emissions	**47.03**	**41.90**	**34.63**	**0.21**	**10.14**	**3.56**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendix 3.1.

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the Project would result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Operational emissions are expected from the following primary sources:

- Area Source Emissions
- Mobile Source Emissions
- Stationary Source Emissions

3.5.1 AREA SOURCE EMISSIONS

ARCHITECTURAL COATINGS

Over a period of time the buildings that are part of this Project would require maintenance and would therefore produce emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings. The emissions associated with architectural coatings were calculated using CalEEMod.

CONSUMER PRODUCTS

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within CalEEMod.

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that as October 9, 2021, Governor Gavin Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by 2024. For purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.5.2 ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH ELECTRICITY

Criteria pollutant emissions are emitted through the generation of electricity. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity are excluded from the evaluation of significance. Based on information provided by the Project applicant, the site is also not expected to utilize natural gas for the building envelope, and therefore would not generate any emissions from direct energy consumption. Electricity usage associated with the Project was calculated

based on CalEEMod defaults and includes 20% of the building user's electric power from renewable sources.

3.5.3 MOBILE SOURCE EMISSIONS

The Project related operational air quality emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the *Thrifty Oil Warehouse Project (PPT220047) Trip Generation Assessment* were utilized in this analysis (38).

PASSENGER VEHICLES

To determine emissions from passenger car vehicles, the CalEEMod defaults were utilized for trip length and trip purpose for the proposed industrial land use.

This analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1[4] & LDT2[5]), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. In order to account for emissions generated by passenger cars, the fleet mix in Table 3-6 was utilized.

TABLE 3-6: PASSENGER CAR FLEET MIX

Land Use	% Vehicle Type				
	LDA	LDT1	LDT2	MDV	MCY
Warehousing	53.90%	4.13%	22.26%	17.20%	2.51%

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicle types.

TRUCKS

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated the SCAQMD recommended truck trip length of 15.3 miles for 2-axle (LHDT1, LHDT2), 14.2 miles for 3-axle (MHDT) trucks, and 39.9 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages. The trip length function for the proposed industrial building use has been calculated to 30.17 miles for warehousing and an assumption of 100% primary trips. This trip length assumption is higher than the CalEEMod defaults for trucks. In order to be consistent with the *Thrifty Oil Warehouse Project (PAR220087) Traffic Study Scoping Agreement*, trucks are broken down by truck type. The truck fleet mix is estimated by rationing the trip rates for each truck type based on information provided by the SCAQMD recommended truck mix, by axle type. Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1[6] & LHDT2 [7])/2-axle, Medium-Heavy-Duty Trucks (MHDT)/3-axle,

[4] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[5] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

[6] Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

[7] Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

and Heavy-Heavy-Duty Trucks (HHDT)/4+-axle. To account for emissions generated by trucks, the fleet mix in Table 3-7 was utilized.

TABLE 3-7: TRUCK FLEET MIX

Land Use	% Vehicle Type			
	LHDT1	LHDT2	MHDT	HHDT
Warehousing	13.65%	3.89%	21.05%	61.40%

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips.

FUGITIVE DUST RELATED TO VEHICULAR TRAVEL

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of brake and tire wear particulates. The emissions estimate for travel on paved roads were calculated using CalEEMod.

3.5.4 ON-SITE CARGO HANDLING EQUIPMENT SOURCE EMISSIONS

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this Project, on-site modeled operational equipment includes up to one (1) 75 horsepower (hp), electric-powered cargo handling equipment – port tractor operating 4 hours a day[8] for 365 days of the year. Per the County of Riverside Good Neighbor Guidelines, all on-site equipment (cargo handling equipment, yard goats, forklifts) utilized for the operation of the proposed Project will be electric powered and charging stations will be provided on-site.

3.5.5 STATIONARY SOURCE EMISSIONS

The proposed Project was conservatively assumed to include installation of a 300-horsepower diesel-powered emergency generator/fire pump. The emergency generator/fire pump was estimated to operate for up to 1 hour per day, 1 day per week for up to 50 hours per year for maintenance and testing purposes. Emissions associated with the stationary emergency diesel-powered emergency generator/fire pump were calculated using CalEEMod.

3.5.6 OPERATIONAL EMISSIONS SUMMARY

As previously stated, CalEEMod utilizes summer and winter EMFAC2021 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season. The estimated operational-source emissions are summarized on Table 3-8. Detailed operation model outputs for the Project are presented in Appendix 3.2. Project operational activities would not exceed the numerical thresholds of significance established by the SCAQMD for emissions of any criteria pollutant. As such, operational impacts would be considered less-than-significant.

[8] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

TABLE 3-8: SUMMARY OF PEAK OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
Mobile Source	1.05	10.00	13.30	0.11	5.45	1.54
Area Source	5.80	0.07	8.08	0.00	0.01	0.01
Stationary Source	0.98	2.75	2.51	0.00	0.14	0.14
Project Maximum Daily Emissions	**7.83**	**12.82**	**23.89**	**0.11**	**5.60**	**1.69**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile Source	1.01	10.50	11.40	0.11	5.45	1.54
Area Source	4.47	0.00	0.00	0.00	0.00	0.00
Stationary Source	0.98	2.75	2.51	0.00	0.14	0.14
Project Maximum Daily Emissions	**6.46**	**13.25**	**13.91**	**0.11**	**5.59**	**1.68**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod operational-source emissions are presented in Appendix 3.2.

3.6 LOCALIZED SIGNIFICANCE

BACKGROUND ON LST DEVELOPMENT

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4[9]. LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

[9] The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "…equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the *LST Methodology* (39).

EMISSIONS CONSIDERED

Based on SCAQMD's *LST Methodology*, emissions for concern during construction activities are on-site NO_X, CO, $PM_{2.5}$, and PM_{10}. The *LST Methodology* clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs (40)." As such, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

MAXIMUM DAILY DISTURBED-ACREAGE

The "acres disturbed" for analytical purposes are based on specific equipment type for each subcategory of construction activity and the estimated maximum area a given piece of equipment can pass over in an 8-hour workday (as shown on Table 3-9). The equipment-specific grading rates are summarized in the SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* and CalEEMod User's Guide *Appendix A: Calculation Details for CalEEMod* (41) (42). The disturbed area per day is representative of a piece of equipment making multiple passes over the same land area. In other words, one Rubber Tired Dozer can make multiple passes over the same land area totaling 0.5 acres in a given 8-hour day. Based on Table 3-9, the Project's construction activities could actively disturb approximately 1 acre per day during demolition, 3.5 acre per day during site preparation, and 2.5 acres per day during grading activities.

TABLE 3-9: MAXIMUM DAILY DISTURBED-ACREAGE

Construction Activity	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Demolition	Rubber Tired Dozers	2	0.5	8	1
Total acres disturbed per day during Demolition					1
Site Preparation	Crawler Tractors	4	0.5	8	2
	Rubber Tired Dozers	3	0.5	8	1.5
Total acres disturbed per day during Site Preparation					3.5
Grading	Crawler Tractors	3	0.5	8	1.5
	Graders	1	0.5	8	0.5
	Rubber Tired Dozers	1	0.5	8	0.5
Total acres disturbed per day during Grading					2.5

Source: Maximum daily disturbed acreage based on equipment list presented in Appendix 3.1.

RECEPTORS

As previously stated, LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable NAAQS and CAAQS at the nearest residence or sensitive receptor. Receptor locations are off-site locations where individuals may be exposed to emissions from Project activities.

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, and individuals with pre-existing respiratory or cardiovascular illness. Structures that house these persons or places where they gather are defined as "sensitive receptors". These structures typically include uses such as residences, hotels, and hospitals where an individual can remain for 24 hours. Consistent with the LST Methodology, the nearest land use where an individual could remain for 24 hours to the Project site has been used to determine construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$, since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time.

LSTs apply, even for non-sensitive land uses, consistent with *LST Methodology* and SCAQMD guidance. Per the *LST Methodology*, commercial and industrial facilities are not included in the definition of sensitive receptor because employees and patrons do not typically remain onsite for a full 24 hours but are typically onsite for 8 hours or less. However, *LST Methodology* explicitly states that "*LSTs based on shorter averaging periods, such as the NO_2 and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours* (40)." Therefore, any adjacent land use where an individual could remain for 1 or 8-hours, that is located at a closer distance to the Project site than the receptor used for PM_{10} and $PM_{2.5}$ analysis, must be considered to determine construction and operational LST air impacts for emissions of NO_2 and CO since these pollutants have an averaging time of 1 and 8-hours.

PROJECT-RELATED RECEPTORS

Receptors in the Project study area are described below and shown on Exhibit 3-A. Localized air quality impacts were evaluated at sensitive receptor land uses nearest the Project site. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site.

- R1: Location R1 represents the existing residence at 20601 Tobacco Road, approximately 165 feet southwest of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R1 is placed at the building façade.
- R2: Location R2 represents the existing residence at 23551 Placentia Avenue, approximately 90 feet west of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R2 is placed at the building façade.
- R3: Location R3 represents the Barker Logistics facility located approximately 155 feet north of the Project site.
- R4: Location R4 represents the FedEx Freight transportation service center located at 20388 Harvill Avenue, approximately 985 feet northeast of the Project site.

R5: Location R5 represents the Crafttech Metal Forming, Inc. metal fabricator facility located at 24100-B Water Street, approximately 1,465 feet east of the Project site.

R6: Location R6 represents the Star Milling Co. feeding manufacturer building located at the 23901 Water Street, approximately 1,253 feet southeast of the Project site.

R7: Location R7 represents the existing residence at 20800 Tobacco Road, approximately 1,031 feet south of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R7 is placed at the building façade.

R8: Location R8 represents Val Verde Elementary School, located approximately 3,709 feet southeast of the Project site.

The SCAQMD recommends that the nearest sensitive receptor be considered when determining the Project's potential to cause an individual a cumulatively significant impact. The nearest land use where an individual could remain for 24 hours to the Project site has been used to determine localized construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$ (since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time). The nearest receptors used for evaluation of localized impacts of PM_{10} and $PM_{2.5}$ are the existing residences at 23551 Placentia Avenue, represented by R2, approximately 90 feet (27 meters) west of the Project site. As such a 27-meter receptor distance will be used for evaluation of localized PM_{10} and $PM_{2.5}$.

As previously stated, and consistent with *LST Methodology*, the nearest commercial/industrial use to the Project site is used to determine construction and operational LST air impacts for emissions of NO_X and CO as the averaging periods for these pollutants are shorter (8 hours or less) and it is reasonable to assumed that an individual could be present at these sites for periods of one to 8 hours. It should be noted that the existing residence R2 is located at a closer distance than the nearest industrial/commercial use. As such, the same receptor will be used for evaluation of localized NO_X and CO.

EXHIBIT 3-A: RECEPTOR LOCATIONS



3.7 CONSTRUCTION-SOURCE EMISSIONS LST ANALYSIS

3.7.1 LOCALIZED THRESHOLDS FOR CONSTRUCTION ACTIVITY

Since the total acreage disturbed is less than five acres per day for demolition, site preparation and grading activities, the SCAQMD's screening look-up tables were utilized to determine impacts for phases. It should be noted that since the look-up tables identify thresholds at only 1 acre, 2 acres, and 5 acres, linear regression has been utilized to determine localized significance thresholds. Consistent with SCAQMD guidance, the thresholds presented in Table 3-10 were calculated by interpolating the threshold values for the Project's disturbed acreage.

TABLE 3-10: MAXIMUM DAILY LOCALIZED CONSTRUCTION EMISSIONS THRESHOLDS

Construction Activity	Construction Localized Thresholds			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	120 lbs/day	625 lbs/day	5 lbs/day	3 lbs/day
Site Preparation	222 lbs/day	1,269 lbs/day	12 lbs/day	6 lbs/day
Grading	189 lbs/day	1,032 lbs/day	9 lbs/day	5 lbs/day

Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008

3.7.2 CONSTRUCTION-SOURCE LOCALIZED EMISSIONS

IMPACTS WITHOUT MITIGATION

Table 3-11 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. For analytical purposes, emissions associated with peak demolition, site preparation and grading activities are considered for purposes of LSTs since these phases represent the maximum localized emissions that would occur. Any other construction phases of development that overlap would result in lesser emissions and consequently lesser impacts than what is disclosed herein. Without mitigation, localized construction emissions would not exceed the applicable SCAQMD LSTs for emissions of any criteria pollutant. Outputs from the model runs for unmitigated construction LSTs are provided in Appendix 3.1.

TABLE 3-11: LOCALIZED CONSTRUCTION-SOURCE EMISSIONS – WITHOUT MITIGATION

Construction Activity	Year	Emissions (lbs/day)			
		NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	**Maximum Daily Emissions**	**10.72**	**18.36**	**0.26**	**0.18**
	SCAQMD Localized Threshold	120	625	5	3
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Site Preparation	**Maximum Daily Emissions**	**15.69**	**29.96**	**5.77**	**2.79**
	SCAQMD Localized Threshold	222	1,269	12	6
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Construction Activity	Year	Emissions (lbs/day)			
		NO_X	CO	PM_{10}	$PM_{2.5}$
Grading	**Maximum Daily Emissions**	**10.73**	**19.03**	**2.38**	**1.02**
	SCAQMD Localized Threshold	189	1,032	9	5
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod unmitigated localized construction-source emissions are presented in Appendix 3.1.

3.8 OPERATIONAL-SOURCE EMISSIONS LST ANALYSIS

As previously stated, the Project is located on an approximately 8.72-acre parcel. As noted previously, the *LST Methodology* provides look-up tables for sites with an area with daily disturbance of 5 acres or less. For projects that exceed 5 acres, the 5-acre LST look-up tables can be used as a screening tool to determine whether pollutants require additional detailed analysis. This approach is conservative as it assumes that all on-site emissions associated with the Project would occur within a concentrated 5-acre area. This screening method would therefore over-predict potential localized impacts, because by assuming that on-site operational activities are occurring over a smaller area, the resulting concentrations of air pollutants are more highly concentrated once they reach the smaller site boundary than they would be for activities if they were spread out over a larger surface area. On a larger site, the same amount of air pollutants generated would disperse over a larger surface area and would result in a lower concentration once emissions reach the project-site boundary. As such, LSTs for a 5-acre site during operations are used as a screening tool to determine if further detailed analysis is required.

The LST analysis generally includes on-site sources (area, energy, mobile, on-site cargo handling equipment, and stationary equipment – are previously discussed in Section 4.5 of this report). However, it should be noted that the CalEEMod outputs do not separate on-site and off-site emissions from mobile sources. As such, in an effort to establish a maximum potential impact scenario for analytic purposes, the emissions shown on Table 3-13 represent all on-site Project-related stationary (area) sources and Project-related mobile sources. It should be noted that the longest on-site distance is roughly 0.50 mile for both trucks and passenger cars. Modeling based on these assumptions demonstrates that even within broad encompassing parameters, Project operational-source emissions would not exceed applicable LSTs.

3.8.1 LOCALIZED THRESHOLDS FOR OPERATIONAL ACTIVITY

As previously stated, LSTs for a 5-acre site during operations are used as a screening tool to determine if further detailed analysis is required.

TABLE 3-12: MAXIMUM DAILY LOCALIZED OPERATIONAL EMISSIONS THRESHOLDS

Operational Localized Thresholds			
NO_X	CO	PM_{10}	$PM_{2.5}$
273 lbs/day	1,635 lbs/day	4 lbs/day	2 lbs/day

Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008

3.8.2 OPERATIONAL-SOURCE LOCALIZED EMISSIONS

IMPACTS WITHOUT MITIGATION

As shown on Table 3-13 operational emissions would not exceed the LST thresholds for the nearest sensitive receptor. Therefore, the Project would have a less than significant localized impact during operational activity. Outputs from the model runs for operation LSTs are provided in Appendix 3.3.

TABLE 3-13: LOCALIZED SIGNIFICANCE SUMMARY OF OPERATIONS

Scenario	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**4.20**	**12.88**	**0.28**	**0.19**
SCAQMD Localized Threshold	273	1,635	4	2
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod unmitigated localized construction-source emissions are presented in Appendix 3.3.

3.9 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods[10]. This "hot spot" analysis did not predict any exceedance e of the 1-hour (20.0 ppm) or 8-hour (9.0 ppm) CO standards, as shown on Table 3-14.

[10] The CO "hot spot" analysis conducted in 2003 is the most current study used for CO "hot spot" analysis in the SCAB.

TABLE 3-14: CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire Boulevard/Veteran Avenue	4.6	3.5	3.7
Sunset Boulevard/Highland Avenue	4	4.5	3.5
La Cienega Boulevard/Century Boulevard	3.7	3.1	5.2
Long Beach Boulevard/Imperial Highway	3	3.1	8.4

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations
Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (*1992 CO Plan*), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, of the 8.4 ppm 8-hr CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (i.e., the highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (43). In contrast, an adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur.

The ambient 1-hr and 8-hr CO concentration within the Project study area is estimated to be 0.9 ppm and 0.6 ppm, respectively (data from Lake Elsinore Area station for 2022). Therefore, even if the traffic volumes for the proposed Project were ten times the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, due to the on-going improvements in ambient air quality and vehicular emissions controls, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections. As noted above, only 0.7 ppm were attributable to the traffic volumes and congestion at one of the busiest intersections in the SCAB. Therefore if these traffic volumes were multiplied by ten times, it could be expected that the CO attributable to traffic would increase tenfold as well, resulting in 7 ppm – even if this were added to either the 1-hour or 8-hour CO concentrations within the Project study area, this would result in 7.9 ppm and 7.6 ppm for the 1-hr and 8-hr timeframes, respectively. Neither of which would exceed the applicable 1-hr standard of 20 ppm or the 8-hr standard of 9 ppm.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph)—or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (44). Traffic volumes generating the CO concentrations for the "hot spot" analysis is shown on Table 3-15. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which had AM/PM traffic volumes of 8,062 vph and 7,719 vph respectively (43).

TABLE 3-15: TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Boulevard/Veteran Avenue	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Boulevard/Highland Avenue	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Boulevard/Century Boulevard	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Boulevard/Imperial Highway	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Source: 2003 AQMP

3.10 AQMP

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the SCAG, county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In December 2022, the SCAQMD released the *Final 2022 AQMP* (*2022 AQMP*). The *2022 AQMP* continues to evaluate current integrated strategies and control measures to meet the CAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (45). Similar to the 2016 AQMP, the *2022 AQMP* incorporates scientific and technological information and planning assumptions, including the *2020-2045 RTP/SCS*, a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements (27). The Project's consistency with the AQMP will be determined using the *2022 AQMP* as discussed below. The Project's consistency with the AQMP will be determined using the 2022 AQMP as discussed below.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the *1993 CEQA Handbook* (46). These indicators are discussed below:

3.10.1 CONSISTENCY CRITERION NO. 1

The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The violations that Consistency Criterion No. 1 refer to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

Construction Impacts – Consistency Criterion 1

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if localized or regional significance thresholds were exceeded. As evaluated, the Project's localized and regional construction-source emissions would not exceed applicable regional significance threshold and LST thresholds. As such, a less than significant impact is expected.

Operational Impacts – Consistency Criterion 1

As evaluated, the Project would not exceed the applicable regional and localized significance thresholds for operational activity. Therefore, the Project would not conflict with the AQMP according to this criterion.

On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

3.10.2 CONSISTENCY CRITERION NO. 2

The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The *2022 AQMP* demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in County of Riverside General Plan is considered to be consistent with the AQMP***.***

Construction Impacts – Consistency Criterion 2

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. As such, when considering that no emissions thresholds will be exceeded, a less than significant impact would result.

Operational Impacts – Consistency Criterion 2

The Project site is located within an unincorporated portion of the County of Riverside. As per the General Plan, the unincorporated portions of the County are divided into 19 area plans. These area plans provide more detailed land use and policy direction regarding local issues such as land use, circulation, open space, and other topical areas (4). Per the General Plan, the Project site is located within the Mead Valley Area Plan and is designated for Business Park uses. The Business Park land use designation allows for employee-intensive uses, including research and development, technology centers, corporate and support office uses, clean industry and supporting retail uses (4).

As previously stated, the Project consists of the development of a 185,785-sf warehouse building with 167,785 sf of warehousing use and 18,000 sf of office space (9,000 sf on first and second floors). As such, the Project's proposed uses are generally consistent with the site's land use and zoning designations.

On the basis of the preceding discussion, the Project is determined to be consistent with the second criterion.

AQMP CONSISTENCY CONCLUSION

The Project would not result in or cause NAAQS or CAAQS violations. Additionally, the proposed Project is consistent with the land use and growth intensities reflected in the adopted General Plan. Furthermore, the Project would not exceed any applicable regional or local thresholds. As such, the Project is therefore considered to be consistent with the AQMP.

3.11 TOXIC AIR CONTAMINANTS

CONSTRUCTION AND OPERATIONAL

Based on the results of the *Thrifty Oil Warehouse Project Mobile Source Health Risk Assessment* (47), emissions generated from the Project during short-term construction and long-term operation will not exceed SCAQMD significance thresholds for cancer and non-cancer health risks. As such, a less than significant impact is expected.

3.12 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Results of the LST analysis indicate that the Project would not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during Project construction.

The Project would not exceed the SCAQMD localized significance thresholds during operational activity. Further Project traffic would not create or result in a CO "hotspot." Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project operations.

Additionally, results of the Health Risk Assessment determined that at the land use with the greatest potential exposure to Project construction-source and operational-source DPM

emissions, also known as the maximally exposed individual receptor (MEIR), the maximum incremental cancer risk attributable to Project construction-source and operational-source DPM emissions is estimated at 1.77 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. All other receptors during construction and operational activity would experience less risk than what is identified for this location.

3.12.1 FRIANT RANCH CASE

In December 2018, in the case of *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, the California Supreme Court held that an Environmental Impact Report's (EIR) air quality analysis must meaningfully connect the identified air quality impacts to the human health consequences of those impacts, or meaningfully explain why that analysis cannot be provided.

Most local agencies, including the County of Riverside, lack the data to do their own assessment of potential health impacts from criteria air pollutant emissions, as would be required to establish customized, locally-specific thresholds of significance based on potential health impacts from an individual development project. The use of national or "generic" data to fill the gap of missing local data would not yield accurate results because such data does not capture local air patterns, local background conditions, or local population characteristics, all of which play a role in how a population experiences air pollution. Because it is impracticable to accurately isolate the exact cause of a human disease (for example, the role a particular air pollutant plays compared to the role of other allergens and genetics in causing asthma), existing scientific tools cannot accurately estimate health impacts of the Project's air emissions without undue speculation. Instead, readers are directed to the Project's air quality impact analysis above, which provides extensive information concerning the quantifiable and non-quantifiable health risks related to the Project's construction and long-term operation.

Notwithstanding, this AQIA does evaluate the proposed Project's localized impact to air quality for emissions of CO, NO_X, PM_{10}, and $PM_{2.5}$ by comparing the proposed project's on-site emissions to the SCAQMD's applicable LST thresholds. The LST analysis above determined that the Project would not result in emissions exceeding SCAQMD's LSTs. Therefore, the proposed Project would not be expected to exceed the most stringent applicable federal or state ambient air quality standards for emissions of CO, NO_X, PM_{10}, and $PM_{2.5.}$

As the Project's emissions would comply with federal, state, and local air quality standards, the proposed Project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level and would not provide a reliable indicator of health effects if modeled.

3.13 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with current solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors and other emissions (such as those leading to odors) associated with construction and operations activities of the proposed Project would be less than significant and no mitigation is required (48).

3.14 CUMULATIVE IMPACTS

As previously shown in Table 2-3, the CAAQS designate the Project site as nonattainment for O_3 PM_{10}, and $PM_{2.5}$ while the NAAQS designates the Project site as nonattainment for O_3 and $PM_{2.5}$.

The SCAQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (49). In this report the SCAQMD clearly states (Page D-3):

> *"…the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same*

> *significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.*
>
> *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."*

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which SCAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

CONSTRUCTION IMPACTS

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed Project construction-source emissions would be considered less than significant on a Project-specific and cumulative basis.

OPERATIONAL IMPACTS

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project operational-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

COUNTY OF RIVERSIDE GOOD NEIGHBOR POLICY

The County of Riverside adopted the Good Neighbor Policy for Logistics and Warehouse/Distribution Uses (Policy Number F-3) on November 19, 2019. (50) The goal of this policy is to provide a framework through which large-scale logistics and warehouse projects can be designed and operated in a way that lessens any impacts on surrounding communities and the environment.

Specifically, Table 3-16 identifies the following relevant guidelines that have been reviewed for consistency:

TABLE 3-16: GOOD NEIGHBOR POLICY RELEVANT GUIDELINES

Measure		Project Consistency
1.1	An "Air Quality" study shall be prepared in accordance with the Air Quality Management District (AQMD) guidelines which includes both project specific and cumulative impact analysis.	The analysis presented here conforms with applicable analytic guidelines and requirements. The analysis substantiates that all potential air quality impacts, including potential health risk impacts would be less-than-significant.
1.2	A "Health Risk Assessment" shall be prepared when a proposed warehouse/distribution facility is located within 1,000 feet of a sensitive receptor, in accordance with AQMD guidelines.	A health risk assessment has been prepared for the proposed Project in accordance with SCAQMD guidelines and is presented under a separate cover.
2.1	During construction of the warehouse/distribution facility, all heavy-duty haul trucks accessing the site shall have CARB-Compliant 2010 engines or newer approved CARB engine standards.	All heavy-duty haul trucks accessing the Project site during construction will be in compliance with the CARB Truck and Bus regulation, which requires that heavy duty trucks utilize CARB-Compliant 2010 or newer engines by January 1, 2023.
2.2	All diesel fueled off-road construction equipment greater than 50 horsepower, including but not limited to excavators, graders, rubber-tired dozers, and similar "off-road" construction equipment shall be equipped with CARB Tier 4 Compliant engines. If the operator lacks Tier 4 equipment, and it is not available for lease or short-term rental within 50 miles of the project site, Tier 3 or cleaner off-road construction equipment may be utilized subject to County approval.	All diesel-fueled off-road construction equipment rated greater than 50 horsepower will meet CARB Tier 4 standards.
2.3	The maximum daily disturbance area (actively graded area) shall not exceed 10 acres per day. Non-Grading construction activity in areas greater than 10 acres is allowed.	The maximum daily disturbance area will not exceed 10 acres per day during demolition, site preparation and grading. It is anticipated that no more than 9 acres would be graded per day.
2.7	Appropriate dust control measures that meet the SCAQMD standards shall be implemented for grading and construction activity.	The Project would comply with all applicable dust control measures, including SCAQMD Rules 401, 402, and 403.
2.8	Construction equipment maintenance records and data sheets, which includes equipment design specifications and equipment emission control tier classifications, as well as any other records necessary to verify compliance, shall be kept onsite and furnished to the County upon request.	The Project will maintain records on-site during construction to demonstrate compliance with the above requirements.
2.9	Construction Contractors shall prohibit truck drivers from idling more than five (5) minutes and require operators to turn off engines when not in use, in compliance with the California Air Resources Board regulations.	The Project would be required to comply with statewide anti-idling rules. Compliance with anti-idling rules diminishes the potential for localized emissions concentrations and reduces potential adverse effects at sensitive receptors.

Measure		Project Consistency
3.1	Warehouse/distribution facilities should be generally designed so that truck bays and loading docks are a minimum of 300 feet, measured from the property line of the sensitive receptor to the nearest dock door using a direct straight-line method. This distance may be reduced if the site design includes berms or other similar features to appropriately shield and buffer the sensitive receptors from the active truck operations areas. Other setbacks appropriate to the site's zoning classification shall be incorporated in the design.	As designed, the proposed Project's loading docks would not be located within 300 feet of any nearby sensitive receptors.
3.2	Warehouse/distribution facilities shall be designed to provide adequate on-site parking for commercial trucks and passenger vehicles and on-site queuing for trucks that is away from sensitive receptors. The general queuing and spill-over of trucks onto surrounding public streets shall be prevented. Commercial trucks shall not be parked in the public road right-of-way or nearby residential areas.	The site has been designed such that trucks would not need to queue on streets or elsewhere outside the proposed industrial building they serve. The Project design as approved by the County would act to limit on-site queuing, diminishing the potential for localized emissions concentrations and reduces potential adverse effects at sensitive receptors.
3.11	Warehouse/distribution facilities shall install electrical panels and conduit to facilitate future electrical connections, to eliminate idling of main and auxiliary engines during the loading and unloading process. At all cold storage facilities electrical connections shall be provided to each dock.	Loading docks would be wired for electrical hook-ups, allowing future users to seamlessly integrate electric charging for trucks, when such technology becomes readily available.
4.1	Facility operators shall maintain records of their facility owned and operated fleet equipment and ensure that all diesel-fueled Medium-Heavy Duty Trucks ("MHDT") and Heavy-Heavy Duty ("HHD") trucks with a gross vehicle weight rating greater than 19,500 pounds accessing the site use year CARB compliant 2010 or newer engines. The records should be maintained on-site and be made available for inspection by the County.	The proposed Project will comply with the CARB Truck and Bus regulation, which requires the use of CARB compliant 2010 or newer engines.
4.2	Facility operators shall prohibit truck drivers from idling more than five (5) minutes and require operators to turn off engines when not in use, in compliance with the California Air Resources Board regulations.	The Project would be required to comply with statewide anti-idling rules. Compliance with anti-idling rules diminishes the potential for localized emissions concentrations and reduces potential adverse effects at sensitive receptors.
4.4	Facility operators shall coordinate with CARB and SCAQMD to obtain the latest information about regional air quality concentrations, health risks, and trucking regulations.	The operator of the proposed facility will be required to remain in compliance with applicable air quality, health risk, and trucking regulations.

Measure		Project Consistency
4.5	On-site equipment, such as forklifts, shall be electric with the necessary electrical charging stations provided.	All on-site equipment utilized for the operation of the proposed Project will be electrically powered and charging stations will be provided on-site.
4.6	Facility operators shall establish specific truck routes between the facility and regular destinations, identifying the most direct routes to the nearest highway/freeway and avoid traveling near sensitive receptors.	The operator of the proposed facility will be required to provide this information to drivers accessing the facility.
4.9	A minimum of 5% or as required by the Cal Green Code, whichever is greater of employee parking spaces shall be designated for electric or other alternative fueled vehicles.	As designed, the proposed Project would meet or exceed California Green Building code requirements and provide parking spaces designated for EV charging at a minimum of 5% of the total auto parking stalls.
5.5	Each Facility shall designate a Compliance Officer responsible for implementing the measures described herein and/or in the project conditions of approval and mitigation measures. Contact information should be provided to the County and updated annually, and signs should be posted in visible locations providing the contact information for the Compliance Officer to the surrounding community. These signs shall also identify the website and contact information for the SCAQMD.	A designated Compliance Officer will be appointed for the facility to ensure compliance with these and other applicable requirements and contact information will be provided to the County on an annual basis. Signs will be posted in order to identify the Compliance Officer's contact information, as well as contact information for the SCAQMD.

This page intentionally left blank

4 REFERENCES

1. **State of California.** *2023 CEQA California Environmental Quality Act.* 2023.
2. **South Coast Air Quality Management District.** RULE 403. FUGITIVE DUST. [Online] https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4.
3. —. RULE 1113. Architectural Coatings. [Online] http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf.
4. **County of Riverside.** County of Riverside General Plan: Land Use Element. [Online] 2021. https://planning.rctlma.org/Portals/14/genplan/2021/Ch03_Land%20Use_06.29.21.pdf.
5. **South Coast Air Quality Management District.** Southern California Air Basins. [Online] https://www.arb.ca.gov/msprog/onroad/porttruck/maps/scabc7map.pdf.
6. —. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning.* 2005.
7. **St. Croix Sensory, Inc.** *The "Gray Line" Between Odor Nuisance and Health Effects.* 2000.
8. **California Air Resources Board.** Ambient Air Quality Standards (AAQS). [Online] 2016. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.
9. **United State Environmental Protection Agency.** Frequent Questions about General Conformity . *EPA.* [Online] https://www.epa.gov/general-conformity/frequent-questions-about-general-conformity#8.
10. **South Coast Air Quality Management District.** Annual Air Quality Monitoring Network Plan. [Online] July 2018. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/annual-air-quality-monitoring-network-plan-v2.pdf?sfvrsn=2.
11. **Air Resources Board.** State and National Ambient Air Quality Standards. [Online] https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/sad20/appc.pdf.
12. **District, South Coast Air Quality Management.** Air Quality Data Tables. [Online] https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year.
13. **Environmental Protection Agency.** National Ambient Air Quality Standards (NAAQS). [Online] 1990. https://www.epa.gov/environmental-topics/air-topics.
14. —. Air Pollution and the Clean Air Act. [Online] http://www.epa.gov/air/caa/.
15. **United States Environmental Protection Agency.** 1990 Clean Air Act Amendment Summary: Title I. [Online] https://www.epa.gov/clean-air-act-overview/1990-clean-air-act-amendment-summary-title-i.
16. —. 1990 Clean Air Act Amendment Summary: Title II. [Online] https://www.epa.gov/clean-air-act-overview/1990-clean-air-act-amendment-summary-title-ii.
17. **Air Resources Board.** California Ambient Air Quality Standards (CAAQS). [Online] 2009. [Cited: April 16, 2018.] http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm.
18. **California Energy Commission.** Energy Commission Adopts Updated Building Standards to Improve Efficiency, Reduce Emissions from Homes and Businesses. [Online] August 11, 2021. https://www.energy.ca.gov/news/2021-08/energy-commission-adopts-updated-building-standards-improve-efficiency-reduce-0.
19. **California Department of General Services.** 2022 CALGreen Code. *CALGreen.* [Online] https://codes.iccsafe.org/content/CAGBC2022P1.

20. **Southern California Association of Governments.** 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. [Online] April 2016. https://scag.ca.gov/sites/main/files/file-attachments/f2016rtpscs.pdf?1606005557.

21. **South Coast Air Quality Management District.** *Air Quality Management Plan.* 2012.

22. **California Air Resources Board.** *The California Almanac of Emissions and Air Quality.* 2013.

23. **South Coast AQMD.** South Coast Air Basin Ozone Trend. [Online] https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historic-ozone-air-quality-trends.

24. **California Air Resources Board.** iADAM: Air Quality Data Statistics. *California Air Resources Board.* [Online] https://arb.ca.gov/adam/topfour/topfour1.php.

25. **Environmental Protection Agency.** Approval and Promulgation of Implementation Plans; California; South Coast Serious Area Plan for the 2006 PM2.5. [Online] 2019. https://www.federalregister.gov/documents/2019/02/12/2019-01922/approval-and-promulgation-of-implementation-plans-california-south-coast-serious-area-plan-for-the.

26. **South Coast Air Quality Management District.** Final 2016 Air Quality Management Plan. *South Coast Air Quality Management District.* [Online] March 2017. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf.

27. **Southern California Association of Governments.** 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy. [Online] September 2020. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176.

28. **South coast Air Quality Management District.** *CEQA Air Quality Handbook (1993).* 1993.

29. **California Environmental Protection Agency Air Resources Board.** Nitrogen Dioxide- Overview. [Online] http://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm.

30. **Ralph Propper, Patrick Wong, Son Bui, Jeff Austin, William Vance, Alvaro Alvarado, Bart Croes, and Dongmin Luo.** Ambient and Emission Trends of Toxic Air Contaminants in California. *American Chemical Society: Environmental Science & Technology.* 2015.

31. **Air Resources Board.** ARB's Drayage Truck Regulatory Activities. [Online] http://www.arb.ca.gov/msprog/onroad/porttruck/porttruck.htm.

32. —. Truck and Bus Regulation. *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation.* [Online] http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.

33. **The Port of Los Angeles.** Clean Truck Program. [Online] http://www.portoflosangeles.org/ctp/idx_ctp.asp.

34. **South Coast Air Quality Management District.** Transfer Funds, Appropriate Funding, Execute Purchase Orders, Execute Contrat and Authorize Release of RFQs for the Fifth Multiple Air Toxics Exposure Study. *South Coast Air Quality Management District.* [Online] 2017. http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-jul7-009.pdf?sfvrsn=7.

35. —. Executive Summary. *MATES V Final Report.* [Online] 2021. http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report-9-24-21.pdf?sfvrsn=6.

36. **South Coast Air Quality Management District (SCAQMD).** SCAQMD Air Quality Significance Thresholds. [Online] https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf.

37. **California Air Pollution Control Officers Association (CAPCOA).** California Emissions Estimator Model (CalEEMod). [Online] May 2023. www.caleemod.com.

38. **Urban Crossroads, Inc.** *Thrifty Oil Warehouse Trip Generation Assessment.* 2023.

39. **Lake Environmental.** US EPA Models. *Lake Environmental.* [Online] http://www.weblakes.com/download/us_epa.html.

40. **South Coast Air Quality Management District.** *Localized Significance Thresholds Methodology.* s.l. : South Coast Air Quality Managment District, 2008.

41. —. Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. [Online] http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf.

42. **California Air Pollution Control Officers Association (CAPCOA).** Appendix A: Calculation Details for CalEEMod. *CalEEMod.* [Online] October 2017. http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6.

43. **South Coast Air Quality Management District.** 2003 Air Quality Management Plan. [Online] 2003. https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp.

44. **Bay Area Air Quality Management District.** [Online] http://www.baaqmd.gov/.

45. **South Coast Air Quality Management District.** Final 2016 Air Quality Management Plan (AQMP). [Online] March 2017. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=11.

46. **South coast Air Quality Management District.** *CEQA Air Quality Handbook (1993).* 1993.

47. **Urban Crossroads, Inc.** *Thrifty Oil Warehouse Mobile Source Health Risk Assessment.* 2023.

48. **South Coast Air Quality Management District.** RULE 402 NUISANCE. [Online] http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf.

49. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003. http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf.

50. **County of Riverside.** *Good Neighbor Policy for Logistics and Warehouse/Distribution Uses.* November 19, 2019.

This page intentionally left blank

5 CERTIFICATIONS

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Thrifty Oil Warehouse Project. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com

Haseeb Qureshi
Principal
URBAN CROSSROADS, INC.
hqureshi@urbanxroads.com

EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June, 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – CARB • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

This page intentionally left blank

APPENDIX 2.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

This page intentionally left blank

APPENDIX 3.1:

CALEEMOD PROJECT CONSTRUCTION EMISSIONS MODEL OUTPUTS

This page intentionally left blank

APPENDIX 3.2:

CALEEMOD PROJECT OPERATIONAL EMISSIONS MODEL OUTPUTS

This page intentionally left blank

APPENDIX 3.3:

CALEEMOD PROJECT OPERATIONAL LSTS EMISSIONS MODEL OUTPUTS

This page intentionally left blank

Thrifty Oil Warehouse Project
(PPT230048, PDA 8407, OAPL2300972)
MOBILE SOURCE HEALTH RISK ASSESSMENT
COUNTY OF RIVERSIDE

PREPARED BY:

Haseeb Qureshi
hqureshi@urbanxroads.com

Alyssa Barnett
abarnett@urbanxroads.com

JANUARY 24, 2024

TABLE OF CONTENTS

TABLE OF CONTENTS I
APPENDICES I
LIST OF EXHIBITS II
LIST OF TABLES II
LIST OF ABBREVIATED TERMS III
EXECUTIVE SUMMARY 1
1 INTRODUCTION 5
1.1 Site Location 5
1.2 Project Description 6
2 BACKGROUND 10
2.1 Background on Recommended Methodology 10
2.2 Construction Health Risk Assessment 10
2.3 Operational Health Risk Assessment 13
2.4 Exposure Quantification 19
2.5 Carcinogenic Chemical Risk 21
2.6 Non-carcinogenic Exposures 22
2.7 Potential Project DPM-Source Cancer and Non-Cancer Risks 23
3 REFERENCES 28
4 CERTIFICATIONS 30

APPENDICES

APPENDIX 2.1: CALEEMOD OUTPUTS
APPENDIX 2.2: EMFAC EMISSIONS SUMMARY
APPENDIX 2.3: AERMOD MODEL INPUT/OUTPUT
APPENDIX 2.4: RISK CALCULATIONS
APPENDIX 2.5: MODELED RECEPTORS

LIST OF EXHIBITS

EXHIBIT 1-A: LOCATION MAP 7
EXHIBIT 1-B: PRELIMINARY SITE PLAN 8
EXHIBIT 2-A: MODELED CONSTRUCTION EMISSION SOURCES 12
EXHIBIT 2-B: MODELED ON-SITE EMISSION SOURCES 16
EXHIBIT 2-C: MODELED OFF-SITE EMISSION SOURCES 17
EXHIBIT 2-D: RECEPTOR LOCATIONS 25

LIST OF TABLES

TABLE ES-1: SUMMARY OF CONSTRUCTION CANCER AND NON-CANCER RISKS 2
TABLE ES-2: SUMMARY OF OPERATIONAL CANCER AND NON-CANCER RISKS 3
TABLE ES-3: SUMMARY OF CONSTRUCTION AND OPERATIONAL CANCER AND NON-CANCER RISKS 4
TABLE 2-1: CONSTRUCTION DURATION 11
TABLE 2-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS 11
TABLE 2-3: 2026 WEIGHTED AVERAGE DPM EMISSIONS FACTORS 14
TABLE 2-4: DPM EMISSIONS FROM PROJECT TRUCKS (2026 ANALYSIS YEAR) 18
TABLE 2-5: AERMOD MODEL PARAMETERS 19
TABLE 2-6: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (CONSTRUCTION ACTIVITY) 20
TABLE 2-7: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (30 YEAR RESIDENTIAL) 20
TABLE 2-8: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (25 YEAR WORKER) 20
TABLE 2-9: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (9 YEAR SCHOOL CHILD) 21

LIST OF ABBREVIATED TERMS

(1)	Reference
µg	Microgram
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AQMD	Air Quality Management District
ARB	Air Resources Board
ASF	Age Sensitivity Factor
CEQA	California Environmental Quality Act
CPF	Cancer Potency Factor
DPM	Diesel Particulate Matter
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
FAH	Fraction of Time at Home
HHD	Heavy Heavy-Duty
HI	Hazard Index
HRA	Health Risk Assessment
LHD	Light Heavy-Duty
MEIR	Maximally Exposed Individual Receptor
MEIW	Maximally Exposed Individual Worker
MHD	Medium Heavy-Duty
NAD	North American Datum
OEHHA	Office of Environmental Health Hazard Assessment
PM_{10}	Particulate Matter 10 microns in diameter or less
Project	Thrifty Oil Warehouse Project
REL	Reference Exposure Level
SCAQMD	South Coast Air Quality Management District
TAC	Toxic Air Contaminant
TA	Traffic Analysis
URF	Unit Risk Factor
UTM	Universal Transverse Mercator
VMT	Vehicle Miles Traveled

This page intentionally left blank

EXECUTIVE SUMMARY

This report evaluates the potential health risk impacts to sensitive receptors (which are residents) and adjacent workers associated with the development of the Project, more specifically, health risk impacts as a result of exposure to Toxic Air Contaminants (TACs) including diesel particulate matter (DPM) as a result of heavy-duty diesel trucks accessing the site. This section summarizes the significance criteria and Project health risks.

The results of the health risk assessment from Project-generated DPM emissions are provided in Table ES-1, ES-2, and ES-3 below for the Project.

CONSTRUCTION IMPACTS

The land use with the greatest potential exposure to Project construction-source DPM emissions is Location R2 which is located approximately 90 feet west of the Project site at an existing residence located at 23551 Placentia Avenue. Since there are no private outdoor living areas (backyards) facing the Project site, R2 is placed at the building façade. At the maximally exposed individual receptor (MEIR), the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at 1.03 in one million, which is less than the South Coast Air Quality Management District (SCAQMD) significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. Although Location R2 is not the nearest receptor to the Project site, due to meteorological conditions in the vicinity of the Project site (wind speed and direction) it would experience the highest concentrations of DPM during Project construction. Because all other modeled receptors would experience lower concentrations of DPM during Project construction, all other receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location.

OPERATIONAL IMPACTS

Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project operational-source DPM emissions is Location R2 which is located approximately 90 feet west of the Project site at an existing residence located at 23551 Placentia Avenue. Since there are no private outdoor living areas (backyards) facing the Project site, R2 is placed at the building façade. At the MEIR, the maximum incremental cancer risk attributable to Project operational-source DPM emissions is estimated at 1.18 in one million, which is less than the SCAQMD significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Although Location R2 is not the nearest receptor to the Project site, it is the location that would experience the highest concentrations of DPM during project operation due to meteorological conditions (wind speed and direction) in the vicinity of the Project site. All other receptors would experience lower concentrations of DPM

and thus less risk during operation of the proposed Project than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project operational activity. All other receptors would experience less risk than what is identified for this location.

Worker Exposure Scenario[1]*:*

The worker receptor land use with the greatest potential exposure to Project operational -source DPM emissions is Location R3, which represents the potential worker receptor located approximately 155 feet north of the Project site. At the maximally exposed individual worker (MEIW), the maximum incremental cancer risk impact is 0.23 in one million which is less than the SCAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Location R3 is the worker receptor that would experience the highest concentrations of DPM during Project operation due to meteorological conditions (wind speed and direction) in the vicinity of the Project site. All other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby workers.

School Child Exposure Scenario:

The nearest school is Val Verde Elementary School, located approximately 3,700 feet southeast of the Project site and represented by Location R8. At the maximally exposed individual school child (MEISC), the maximum incremental cancer risk impact attributable to the Project is calculated to be 0.01 in one million, which is less than the significance threshold of 10 in one million. At this same location, non-cancer risks attributable to the Project were calculated to be <0.01, which would not exceed the applicable significance threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to nearby school children.

CONSTRUCTION AND OPERATIONAL IMPACTS

The land use with the greatest potential exposure to Project construction-source and operational-source DPM emissions is Location R2. At the MEIR, the maximum incremental cancer risk attributable to Project construction-source and operational-source DPM emissions is estimated at 1.88 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to nearby residents.

TABLE ES-1: SUMMARY OF CONSTRUCTION CANCER AND NON-CANCER RISKS

1 SCAQMD guidance does not require assessment of the potential health risk to on-site workers. Excerpts from the document OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines—The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2003), also indicate that it is not necessary to examine the health effects to on-site workers unless required by RCRA (Resource Conservation and Recovery Act) / CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) or the worker resides on-site.

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
1.08 Year Exposure	Maximum Exposed Sensitive Receptor (Location R2)	1.03	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor (Location R2)	<0.01	1.0	NO

TABLE ES-2: SUMMARY OF OPERATIONAL CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure	Maximum Exposed Sensitive Receptor (Location R2)	1.18	10	NO
25 Year Exposure	Maximum Exposed Worker Receptor (Location R3)	0.23	10	NO
9 Year Exposure	Maximum Exposed Individual School Child (Location R8)	0.01	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor (Location R2)	<0.01	1.0	NO
Annual Average	Maximum Exposed Worker Receptor (Location R3)	<0.01	1.0	NO
Annual Average	Maximum Exposed Individual School Child (Location R8)	<0.01	1.0	NO

TABLE ES-3: SUMMARY OF CONSTRUCTION AND OPERATIONAL CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure	Maximum Exposed Sensitive Receptor (Location R2)	1.88	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor (Location R2)	<0.01	1.0	NO

1 INTRODUCTION

This HRA has been prepared in accordance with the document Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (1) and is comprised of all relevant and appropriate procedures presented by the United States Environmental Protection Agency (U.S. EPA), California EPA and SCAQMD. Cancer risk is expressed in terms of expected incremental incidence per million population. The SCAQMD has established an incidence rate of ten (10) persons per million as the maximum acceptable incremental cancer risk due to TAC exposure from a project such as the proposed Project. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulatively considerable impact.

The AQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (2). In this report the AQMD states (Page D-3):

"…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

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."

The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Non-carcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). A REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. In this HRA, non-carcinogenic exposures of less than 1.0 are considered less-than-significant. Both the cancer risk and non-carcinogenic risk thresholds are applied to the nearest sensitive receptors below.

1.1 SITE LOCATION

The proposed project is located on the southeast corner of Tobacco Road and Placentia Avenue at 23641 Placentia Avenue in the County of Riverside, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The Project consists of the development of a 185,785 square foot (sf) warehouse building with 167,785 sf of warehousing use and 18,000 sf of office space (9,000 sf on first and second floors). The total Project site is 8.72 acres on APNs 317-260-017 and 317-261-018. A preliminary site plan for the proposed Project is shown on Exhibit 1-B. The Project is anticipated to have an Opening Year of 2026.

Construction is expected to commence in January 2025 and would last through January 2026. Construction activities will include demolition, site preparation, grading, building construction, paving, and architectural coating. To support the Project development, there will be frontage street improvements as well as offsite sewer improvements for the Project.

The Project site is located within an unincorporated portion of the County of Riverside. As per the General Plan, the unincorporated portions of the County are divided into 19 area plans. These area plans provide more detailed land use and policy direction regarding local issues such as land use, circulation, open space, and other topical areas (3). Per the General Plan, the Project site is located within the Mead Valley Area Plan and is designated for Business Park uses. The Business Park land use designation allows for employee-intensive uses, including research and development, technology centers, corporate and support office uses, clean industry and supporting retail uses (3).

EXHIBIT 1-A: LOCATION MAP

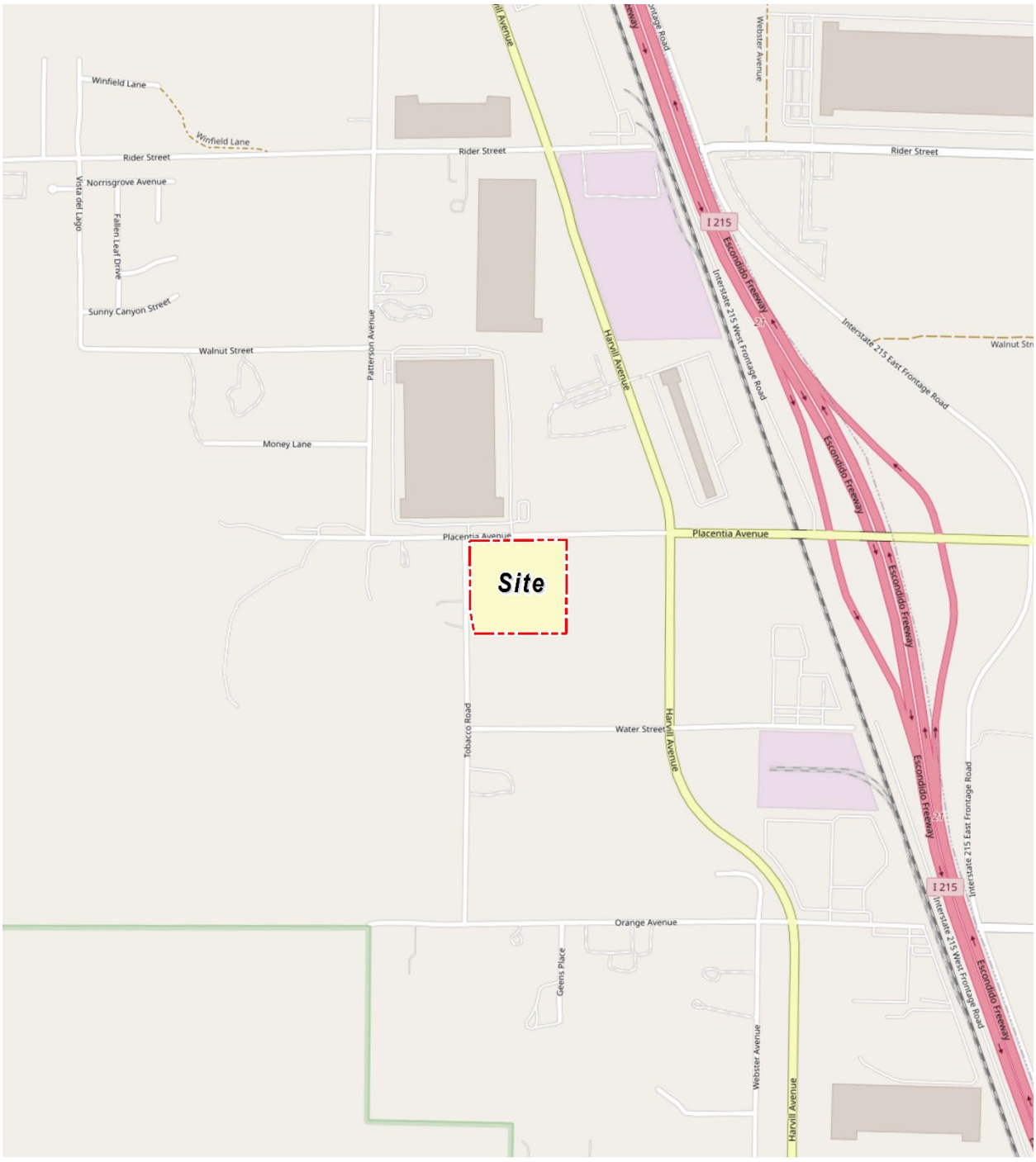
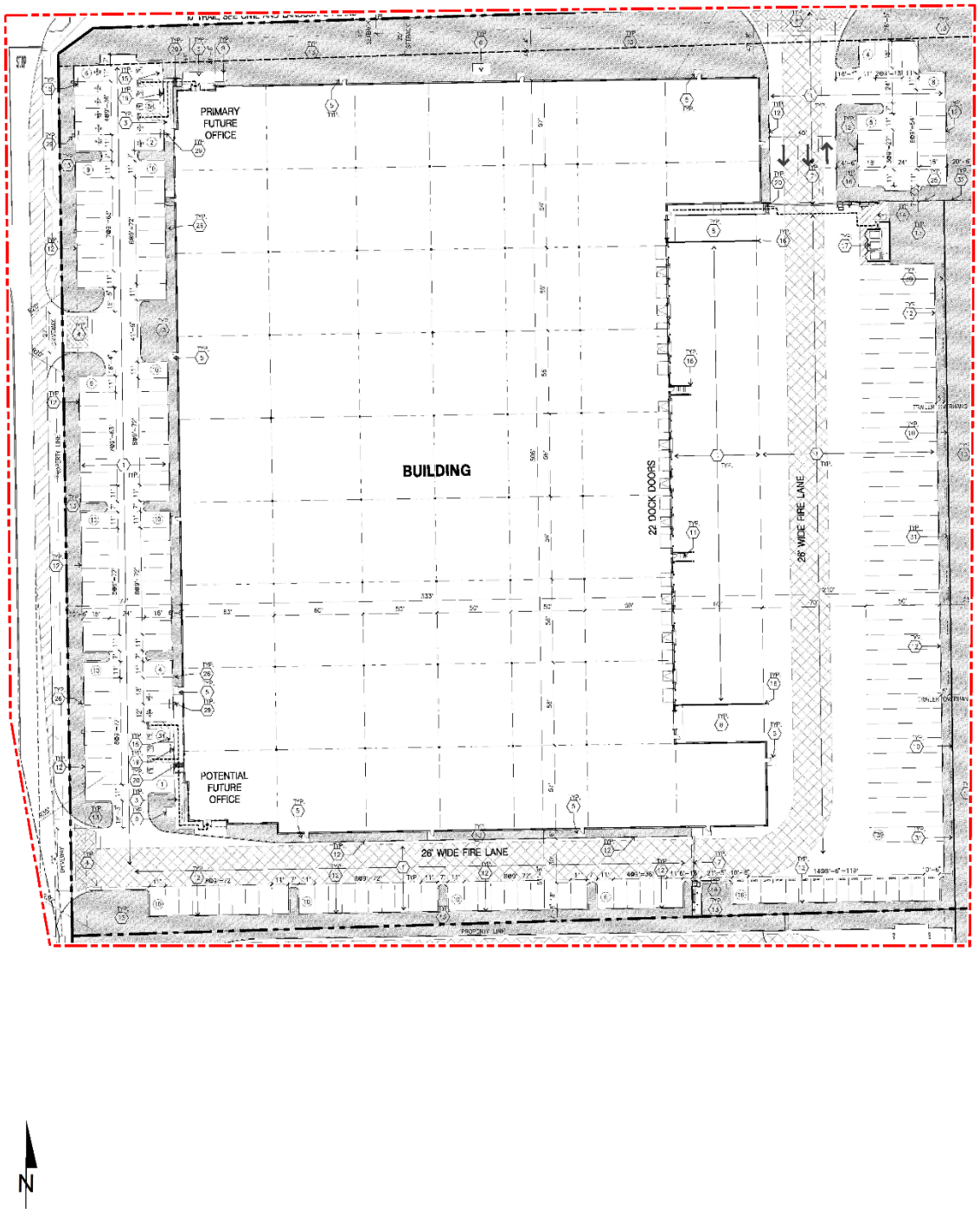


EXHIBIT 1-B: PRELIMINARY SITE PLAN



This page intentionally left blank

2 BACKGROUND

2.1 BACKGROUND ON RECOMMENDED METHODOLOGY

This HRA is based on applicable guidelines to produce conservative estimates of human health risk posed by exposure to DPM. The conservative nature of this analysis is due primarily to the following factors:

- The ARB-adopted diesel exhaust Unit Risk Factor (URF) of 300 in one million per $\mu g/m^3$ is based upon the upper 95 percentile of estimated risk for each of the epidemiological studies utilized to develop the URF. Using the 95th percentile URF represents a very conservative (health-protective) risk posed by DPM because it represents breathing rates that are high for the human body.
- The emissions derived assume that every truck accessing the Project site will idle for 15 minutes under the unmitigated scenario, and this is an overestimation of actual idling times and thus conservative.[2] The California Air Resources Board (CARB's) anti-idling requirements impose a 5-minute maximum idling time and therefore the analysis conservatively overestimates DPM emissions from idling by a factor of 3.

2.2 CONSTRUCTION HEALTH RISK ASSESSMENT

2.2.1 EMISSIONS CALCULATIONS AND MODELING

The emissions calculations for the construction HRA component are based on an assumed mix of construction equipment and hauling activity as presented in the *Thrifty Oil Warehouse Project (PPT2200047) Air Quality Impact Analysis* ("technical study") prepared by Urban Crossroads, Inc. (4).

Construction related DPM emissions are expected to occur primarily as a function of the operation of heavy-duty construction equipment.

As discussed in the technical study, the Project would result in approximately 324 total working-days of construction activity. The construction duration by phase is shown on Table 2-1. A detailed summary of construction equipment assumptions by phase is provided at Table 2-2. The CalEEMod emissions outputs are presented in Appendix 2.1. The modeled emission sources for construction activity are illustrated on Exhibit 2-A. Consistent with SCAQMD's Localized Significance Threshold Methodology (5), DPM emissions from construction equipment were modeled using adjacent volume sources with a release height of 5 meters and an initial vertical dimension of 1.4 meters. On-road truck emissions were modeled as a line source (made up of multiple adjacent volume sources).

[2] Although the Project is required to comply with ARB's idling limit of 5 minutes, staff at SCAQMD recommends that the on-site idling emissions should be estimated for 15 minutes of truck idling (personal communication, in person, with Jillian Wong, December 22, 2016), which would take into account on-site idling which occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc.

TABLE 2-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Working Days
Demolition	1/7/2025	2/4/2025	20
Site Preparation	2/5/2025	2/19/2025	10
Grading	2/20/2025	3/20/2025	20
Building Construction	3/21/2025	2/6/2026	230
Paving	2/7/2026	3/7/2026	20
Architectural Coating	3/8/2026	4/5/2026	20

TABLE 2-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Amount	Hours Per Day
Demolition	Rubber Tired Dozers	2	8
	Excavators	3	8
	Concrete/Industrial Saws	1	8
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Graders	1	8
	Excavators	1	8
	Rubber Tired Dozers	1	8
	Crawler Tractors	3	8
Building Construction	Forklifts	3	8
	Generator Sets	1	8
	Cranes	1	8
	Welders	1	8
	Tractors/Loaders/Backhoes	3	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

EXHIBIT 2-A: MODELED CONSTRUCTION EMISSION SOURCES



2.3 OPERATIONAL HEALTH RISK ASSESSMENT

2.3.1 ON-SITE AND OFF-SITE TRUCK ACTIVITY

Vehicle DPM emissions were calculated using emission factors for particulate matter less than 10µm in diameter (PM_{10}) generated with the 2021 version of the EMission FACtor model (EMFAC) developed by the CARB. EMFAC 2021 is a mathematical model that CARB developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the ARB to project changes in future emissions from on-road mobile sources (6). The most recent version of this model, EMFAC 2021, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day.

Several distinct emission processes are included in EMFAC 2021. Emission factors calculated using EMFAC 2021 are expressed in units of grams per vehicle miles traveled (g/VMT) or grams per idle-hour (g/idle-hr), depending on the emission process. The emission processes and corresponding emission factor units associated with diesel particulate exhaust for this Project are presented below.

For this Project, annual average PM_{10} emission factors were generated by running EMFAC 2021 in EMFAC Mode for vehicles in the Riverside County jurisdiction. The EMFAC Mode generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of temperature, relative humidity, and vehicle speed. The model was run for speeds traveled in the vicinity of the Project. The vehicle travel speeds for each segment modeled are summarized below.

- Idling – on-site loading/unloading at building loading docks
- 5 miles per hour – on-site vehicle movement including driving and maneuvering
- 25 miles per hour – off-site vehicle movement including driving and maneuvering.

It is expected that minimal idling would occur at nearby intersections during truck travel on study area roadways (e.g., at an intersection during a red light, or yielding to make a turn). Notwithstanding, the analysis conservatively utilizes a reduced off-site average speed of 25 miles per hour (below the posted speed limit) for travel on study area roadways, use of a lower average speed for off-site travel results in a higher emission factor and therefore any negligible idling that would occur during truck travel along the study area is accounted for.

Calculated emission factors are shown at Table 2-3. As a conservative measure, a 2026 EMFAC 2021 run was conducted and a static 2026 emissions factor data set was used for the entire duration of analysis herein (e.g., 30 years). Use of 2026 emission factors would overstate potential impacts since this approach assumes that emission factors remain “static” and do not change over time due to fleet turnover or cleaner technology with lower emissions that would be incorporated into vehicles after 2026. Additionally, based on EMFAC 2021, Light-Heavy-Duty Trucks are comprised of 59.8% diesel, Medium-Heavy-Duty Trucks are comprised of 91.9% diesel, and Heavy-Heavy-Duty Trucks are comprised of 94.9% diesel. Trucks fueled by diesel are

accounted for by these percentages accordingly in the emissions factor generation. Appendix 2.2 includes additional details on the emissions estimates from EMFAC.

The vehicle DPM exhaust emissions were calculated for running exhaust emissions. The running exhaust emissions were calculated by applying the running exhaust PM_{10} emission factor (g/VMT) from EMFAC over the total distance traveled. The following equation was used to estimate off-site emissions for each of the different vehicle classes comprising the mobile sources (7):

$$Emissions_{Speed\ A} = EF_{Run\ Exhaust} \times Distance \times \frac{Number\ of\ Trips\ per\ Day}{Seconds\ per\ Day}$$

Where:

$Emissions_{Speed\ A}$ = Vehicle emissions at a given speed A (g/s)

$EF_{Run\ Exhaust}$ = EMFAC running exhaust PM_{10} emission factor at speed A (g/vmt)

$Distance$ = Total distance traveled per trip (miles)

Similar to off-site traffic, on-site vehicle running emissions were calculated by applying the running exhaust PM_{10} emission factor (g/VMT) from EMFAC and the total vehicle trip number over the length of the driving path using the same formula presented above for on-site emissions. In addition, on-site vehicle idling exhaust emissions were calculated by applying the idle exhaust PM_{10} emission factor (g/idle-hr) from EMFAC and the total truck trip over the total assumed idle time (15 minutes). The following equation was used to estimate the on-site vehicle idling emissions for each of the different vehicle classes (7):

$$Emissions_{Idle} = EF_{Idle} \times Number\ of\ Trips \times Idling\ Time \times \frac{60\ minutes\ per\ hour}{seconds\ per\ day}$$

Where:

$Emissions_{Idle}$ = Vehicle emissions during Idling (g/s)

EF_{Idle} = EMFAC idle exhaust PM_{10} emission factor (g/s)

$Number\ of\ Trips$ = Number of trips per day

$Idling\ Time$ = Idling time (minutes per trip)

TABLE 2-3: 2026 WEIGHTED AVERAGE DPM EMISSIONS FACTORS

Speed	Weighted Average
0 (idling)	0.08855 (g/idle-hr)
5	0.02101 (g/mile)
25	0.00899 (g/mile)

Each roadway was modeled as a line source (made up of multiple adjacent volume sources). Due to the large number of volume sources modeled for this analysis, the corresponding coordinates

of each volume source have not been included in this report but are included in Appendix 2.3. The DPM emission rate for each volume source was calculated by multiplying the emission factor (based on the average travel speed along the roadway) by the number of trips and the distance traveled along each roadway segment and dividing the result by the number of volume sources along that roadway, as illustrated on Table 2-4. The modeled emission sources are illustrated on Exhibit 2-B for on-site sources and Exhibit 2-C for off-site sources. The modeling domain is limited to the Project's primary truck route and includes off-site sources in the study area for more than ¾ mile. This modeling domain is more inclusive and conservative than using only a ¼ mile modeling domain which is the distance supported by several reputable studies which conclude that the greatest potential risks occur within a ¼ mile of the primary source of emissions (8) (in the case of the Project, the primary source of emissions is the on-site idling and on-site travel).

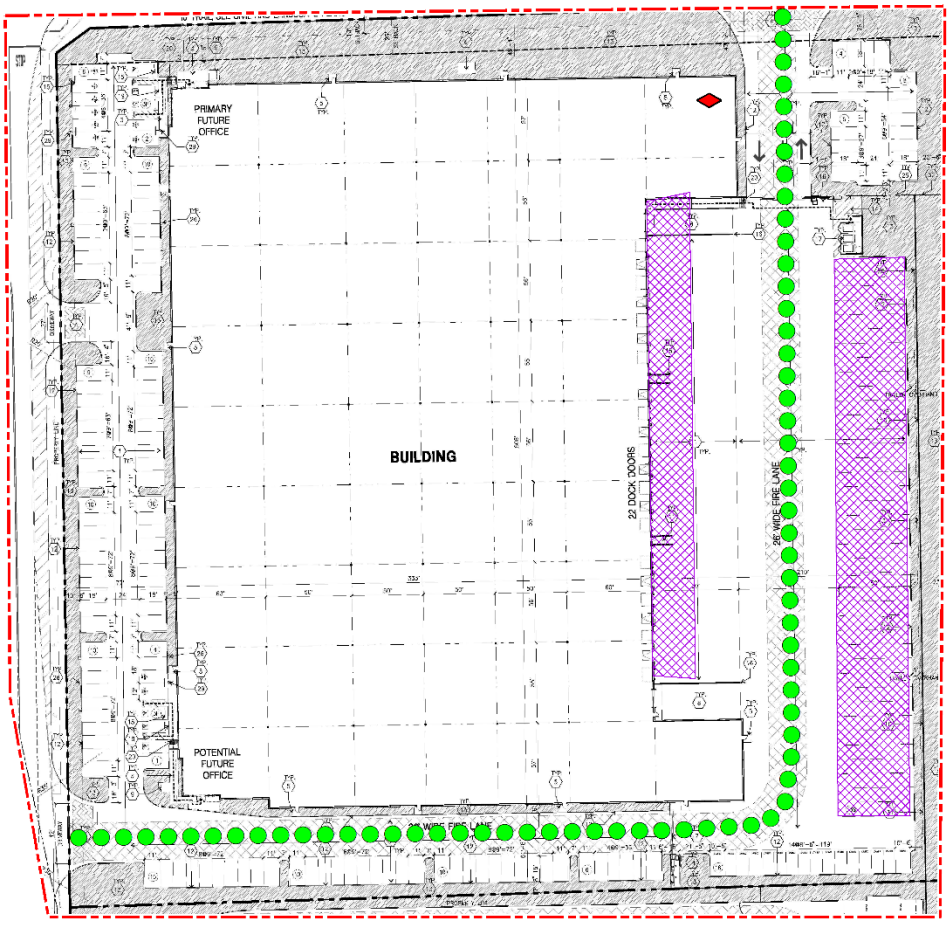
On-site truck idling was estimated to occur at building loading docks and at truck trailer parking areas. Although the Project's diesel-fueled truck and equipment operators will be required by State law to comply with CARB's idling limit of 5 minutes, staff at SCAQMD recommends that the on-site idling emissions be calculated assuming 15 minutes of truck idling (9), which would take into account on-site idling which occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc. As such, this analysis calculates truck idling at 15 minutes, consistent with SCAQMD's recommendation. Idling emissions at building loading docks and truck trailer parking areas were modeled in AERMOD as line sources, which consist of multiple adjacent volume sources.

As summarized in the *Thrifty Oil Warehouse Project (PPT2200047) Trip Generation* prepared by Urban Crossroads, Inc., the Project is expected to generate a total of approximately 320 actual vehicular trip-ends per day (160 vehicles inbound + 160 vehicles outbound) which includes 206 passenger vehicle trips (103 passenger vehicles inbound + 103 passenger vehicles outbound) and 114 two-way truck trips (57 trucks inbound per day + 57 trucks outbound) per day (10).

2.3.4 EMERGENCY FIRE PUMPS

The proposed Project was conservatively assumed to include installation of a 300-horsepower diesel-powered emergency fire pump. The emergency fire pump was estimated to operate for up to 1 hour per day, 1 day per week for up to 50 hours per year for maintenance and testing purposes. Emissions associated with the stationary emergency diesel-powered emergency fire pumps were calculated using CalEEMod. The emergency fire pump was modeled in AERMOD as point source, and because specific engine specifications is not known at this time, release parameters from the California Air Pollution Control Officers Association Facility Prioritization Guidelines were utilized (11).

EXHIBIT 2-B: MODELED ON-SITE EMISSION SOURCES



N

LEGEND:

Site Boundary | Idling Activity | Truck Movements | Fire Pump

EXHIBIT 2-C: MODELED OFF-SITE EMISSION SOURCES

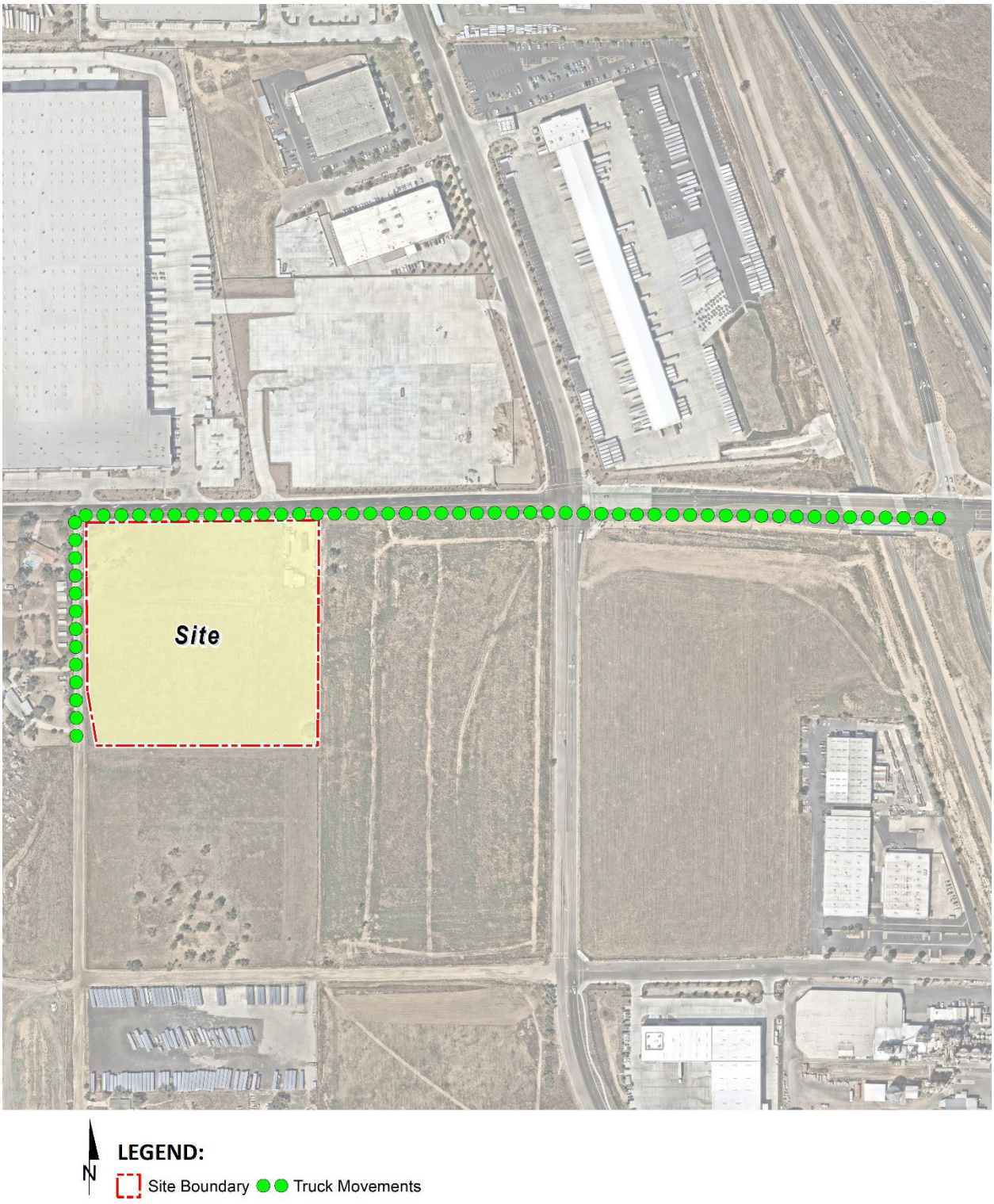


TABLE 2-4: DPM EMISSIONS FROM PROJECT TRUCKS (2026 ANALYSIS YEAR)

Truck Emission Rates						
Source		VMT [a] (miles/day)	Truck Emission Rate [b] (grams/mile)	Truck Emission Rate [b] (grams/idle-hour)	Daily Truck Emissions [c] (grams/day)	Modeled Emission Rates (g/second)
Idling - Loading Docks	57			0.0885	1.26	1.460E-05
Idling - Truck Trailer Parking	57			0.0885	1.26	1.460E-05
Onsite North	114	10.28	0.0210		0.22	2.501E-06
Onsite South	114	20.29	0.0210		0.43	4.935E-06
Off-Site Travel - Placentia 50%	57	8.60	0.0090		0.08	8.945E-07
Off-Site Travel - Tobacco 50%	57	21.31	0.0090		0.19	2.217E-06
Off-Site Travel - Placentia Avenue 100%	114	54.19	0.0090		0.49	5.640E-06

[a] Vehicle miles traveled are for modeled truck route only.

[b] Emission rates determined using EMFAC 2021. Idle emission rates are expressed in grams per idle hour rather than grams per mile.

[c] This column includes the total truck travel and truck idle emissions. For idle emissions this column includes emissions based on the assumption that each truck idles for 15 minutes.

2.4 EXPOSURE QUANTIFICATION

The analysis herein has been conducted in accordance with the guidelines in the Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (1). The Environmental Protection Agency's (U.S. EPA's) AERMOD model has been utilized. For purposes of this analysis, the Lakes AERMOD View (Version 12.0.0) was used to calculate annual average particulate concentrations associated with site operations. Lakes AERMOD View was utilized to incorporate the U.S. EPA's latest AERMOD Version 23132 (12).

The model offers additional flexibility by allowing the user to assign an initial release height and vertical dispersion parameters for mobile sources representative of a roadway. For this HRA, the roadways were modeled as adjacent volume sources. Roadways were modeled using the U.S. EPA's haul route methodology for modeling of on-site and off-site truck movement. More specifically, the Haul Road Volume Source Calculator in Lakes AERMOD View has been utilized to determine the release height parameters. Based on the US EPA methodology, the Project's modeled sources would result in a release height of 3.49 meters and an initial lateral dimension of 4.0 meters, and an initial vertical dimension of 3.25 meters.

Model parameters are presented in Table 2-5 (13). The model requires additional input parameters including emission data and local meteorology. Meteorological data from the SCAQMD's Perris monitoring station was used to represent local weather conditions and prevailing winds (14).

TABLE 2-5: AERMOD MODEL PARAMETERS

Dispersion Coefficient (Urban/Rural)	Urban (population 2,189,641)
Terrain (Flat/Elevated)	Elevated (Regulatory Default)
Averaging Time	1 year (5-year Meteorological Data Set)
Receptor Height	0 meters (Regulatory Default)

Universal Transverse Mercator (UTM) coordinates for World Geodetic System (WGS) 84 were used to locate the Project site boundaries, each volume source location, and receptor locations in the Project vicinity. The AERMOD dispersion model summary output files for the Project are presented in Appendix 2.3. Modeled sensitive receptors were placed at residential and non-residential locations.

Receptors may be placed at applicable structure locations for residential and worker property and not necessarily the boundaries of the properties containing these uses because the human receptors (residents and workers) spend a majority of their time at the residence or in the workplace's building, and not on the property line. It should be noted that the primary purpose of receptor placement is focused on long-term exposure. For example, the HRA evaluates the potential health risks to residents, workers, and school children over a period of 30, 25, or 9 years of exposure, respectively. Notwithstanding, as a conservative measure, receptors were placed at either the outdoor living area or the building façade, whichever is closer to the Project site.

For purposes of this HRA, receptors include both residential and non-residential (worker and school child) land uses in the vicinity of the Project. These receptors are included in the HRA since residents and workers may be exposed at these locations over a long-term duration of 30, 25, and 9 years, respectively. This methodology is consistent with SCAQMD and OEHHA recommended guidance.

Any impacts to residents or workers located further away from the Project site than the modeled residential and workers would have a lesser impact than what has already been disclosed in the HRA at the MEIR, MEIW, and MEISC because concentrations dissipate with distance.

All receptors were set to existing elevation height so that only ground-level concentrations are analyzed. United States Geological Survey (USGS) Digital Elevation Model (DEM) terrain data based on a 7.5-minute topographic quadrangle map series using AERMAP was utilized in the HRA modeling to set elevations (15).

Discrete variants for daily breathing rates, exposure frequency, and exposure duration were obtained from relevant distribution profiles presented in the 2015 OEHHA Guidelines. Tables 2-6 through 2-9 summarize the Exposure Parameters for residents, workers, and school children based on 2015 OEHHA Guidelines. Appendix 2.4 includes the detailed risk calculation.

TABLE 2-6: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (CONSTRUCTION ACTIVITY)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
0 to 2	1,090	10	1.08	1.00	260	8

TABLE 2-7: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (30 YEAR RESIDENTIAL)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
-0.25 to 0	361	10	0.25	0.85	350	24
0 to 2	1,090	10	2	0.85	350	24
2 to 16	572	3	14	0.72	350	24
16 to 30	261	1	14	0.73	350	24

TABLE 2-8: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (25 YEAR WORKER)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency (days/year)	Exposure Time (hours/day)
16 to 41	230	1	25	250	12

TABLE 2-9: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (9 YEAR SCHOOL CHILD)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency (days/year) [a]	Exposure Time (hours/day)
4 to 13	631	3	9	180	12

[a] To represent the unique characteristics of the school-based population, the assessment employed the U.S. Environmental Protection Agency's guidance to develop viable dose estimates based on reasonable maximum exposures (RME). RME's are defined as the "highest exposure that is reasonably expected to occur" for a given receptor population. As a result, lifetime risk values for the student population were adjusted to account for an exposure duration of 180 days per year for nine (9) years. The 9 year exposure duration is also consistent with OEHHA Recommendations and consistent with the exposure duration utilized in school-based risk assessments for various schools within the Los Angeles County Unified School District (LAUSD) that have been accepted by the SCAQMD.

2.5 CARCINOGENIC CHEMICAL RISK

Excess cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens over a specified exposure duration. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). A risk level of 10 in one million implies a likelihood that up to 10 people, out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of toxic air contaminants over a specified duration of time.

Guidance from CARB and the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA) recommends a refinement to the standard point estimate approach when alternate human body weights and breathing rates are utilized to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose. Once determined, contaminant dose is multiplied by the cancer potency factor (CPF) in units of inverse dose expressed in milligrams per kilogram per day $(mg/kg/day)^{-1}$ to derive the cancer risk estimate. Therefore, to assess exposures, the following dose algorithm was utilized.

$$DOSE_{AIR} = \left(C_{AIR} \times \frac{BR}{BW} \times A \times EF\right) \times (1 \times 10^{-6})$$

Where:

$DOSE_{AIR}$ = chronic daily intake (mg/kg/day)

C_{AIR} = concentration of contaminant in air ($\mu g/m^3$)

$\frac{BR}{BW}$ = daily breathing rate normalized to body weight (L/kg BW-day)

A = inhalation absorption factor

EF	=	exposure frequency (days/365 days)
BW	=	body weight (kg)
1×10^{-6}	=	conversion factors (µg to mg, L to m^3)

$$RISK_{AIR} = DOSE_{AIR} \times CPF \times ASF \times FAH \times \frac{ED}{AT}$$

Where:

$DOSE_{AIR}$	=	chronic daily intake (mg/kg/day)
CPF	=	cancer potency factor
ASF	=	age sensitivity factor
FAH	=	fraction of time at home
ED	=	number of years within particular age group
AT	=	averaging time

2.6 NON-CARCINOGENIC EXPOSURES

An evaluation of the potential noncarcinogenic effects of chronic exposures was also conducted. Adverse health effects are evaluated by comparing a compound's annual concentration with its toxicity factor or Reference Exposure Level (REL). The REL for diesel particulates was obtained from OEHHA for this analysis. The chronic reference exposure level (REL) for DPM was established by OEHHA as 5 µg/m^3 (16).

Non-cancer health effects are expressed as a hazard index (HI), which is calculated using the following equation:

$$HI_{DPM} = \frac{C_{DPM}}{REL_{DPM}}$$

Where:

HI_{DPM}	=	Hazard index (unitless)
C_{DPM}	=	Annual average DPM concentration (µg/m^3)
REL_{DPM}	=	REL for DPM (the DPM concentration at which no adverse health effects are anticipated).

2.7 POTENTIAL PROJECT DPM-SOURCE CANCER AND NON-CANCER RISKS

CONSTRUCTION IMPACTS

The land use with the greatest potential exposure to Project construction-source DPM emissions is Location R2 which is located approximately 90 feet west of the Project site at an existing residence located at 23551 Placentia Avenue. Since there are no private outdoor living areas (backyards) facing the Project site, R2 is placed at the building façade. At the MEIR, the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at 1.03 in one million, which is less than the South Coast Air Quality Management District (SCAQMD) significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. Although Location R2 is not the nearest receptor to the Project site, due to meteorological conditions in the vicinity of the Project site (wind speed and direction) it would experience the highest concentrations of DPM during Project construction. Because all other modeled receptors would experience lower concentrations of DPM during Project construction, all other receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location.

OPERATIONAL IMPACTS

Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project operational-source DPM emissions is Location R2 which is located approximately 90 feet west of the Project site at an existing residence located at 23551 Placentia Avenue. Since there are no private outdoor living areas (backyards) facing the Project site, R2 is placed at the building façade. At the MEIR, the maximum incremental cancer risk attributable to Project operational-source DPM emissions is estimated at 1.18 in one million, which is less than the SCAQMD significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Although Location R2 is not the nearest receptor to the Project site, it is the location that would experience the highest concentrations of DPM during project operation due to meteorological conditions (wind speed and direction) in the vicinity of the Project site. All other receptors would experience lower concentrations of DPM and thus less risk during operation of the proposed Project than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project operational activity. All other receptors would experience less risk than what is identified for this location.

Worker Exposure Scenario[3]*:*

3 SCAQMD guidance does not require assessment of the potential health risk to on-site workers. Excerpts from the document OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines—The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2003), also indicate that it is not necessary to examine the health effects to on-site workers unless required by RCRA

The worker receptor land use with the greatest potential exposure to Project operational -source DPM emissions is Location R3, which represents the potential worker receptor located approximately 155 feet north of the Project site. At the MEIW, the maximum incremental cancer risk impact is 0.23 in one million which is less than the SCAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Location R3 is the worker receptor that would experience the highest concentrations of DPM during Project operation due to meteorological conditions (wind speed and direction) in the vicinity of the Project site. All other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby workers.

School Child Exposure Scenario:

The nearest school is Val Verde Elementary School, located approximately 3,700 feet southeast of the Project site and represented by Location R8. At the maximally exposed individual school child (MEISC), the maximum incremental cancer risk impact attributable to the Project is calculated to be 0.01 in one million, which is less than the significance threshold of 10 in one million. At this same location, non-cancer risks attributable to the Project were calculated to be <0.01, which would not exceed the applicable significance threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to nearby school children.

CONSTRUCTION AND OPERATIONAL IMPACTS

The land use with the greatest potential exposure to Project construction-source and operational-source DPM emissions is Location R2. At the MEIR, the maximum incremental cancer risk attributable to Project construction-source and operational-source DPM emissions is estimated at 1.88 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to nearby residents.

It should be noted that for clarity purposes, the receptors presented in Exhibit 2-D do not represent all modeled receptors and instead presents the nearest receptors that would experience the highest pollutant concentrations. A total of 10 receptors were modeled in the analysis. Appendix 2.5 presents a figure detailing the locations of all receptors as modeled in AERMOD.

(Resource Conservation and Recovery Act) / CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) or the worker resides on-site.

EXHIBIT 2-D: RECEPTOR LOCATIONS


Site
R1
R2
R3
R4
R5
R6
R7
R8
90'
155'
985'
165'
1,465'
3,709'
1,253'
1,031'
N
LEGEND:
Site Boundary
Distance from receptor to Project site boundary (in feet)
Receptor Locations

This page intentionally left blank

3 REFERENCES

1. **South Coast Air Quality Managment District.** Mobile Source Toxics Analysis. [Online] 2003. http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html.
2. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003. [Cited: June 6, 2019.] http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf?sfvrsn=2.
3. **County of Riverside.** County of Riverside General Plan: Land Use Element. [Online] 2021. https://planning.rctlma.org/Portals/14/genplan/2021/Ch03_Land%20Use_06.29.21.pdf.
4. **Urban Crossroads, Inc.** *Thrifty Oil Warehouse Air Quality Impact Analysis.* 2024.
5. **South Coast Air Quality Management District.** *Final Localized Significance Threshold Methodology.* 2008.
6. **California Air Resources Board.** EMFAC 2021. [Online] https://arb.ca.gov/emfac/.
7. **California Department of Transportation.** EMFAC Software. [Online] http://www.dot.ca.gov/hq/env/air/pages/emfac.htm.
8. **Air Resources Board.** *Air Quality and Land Use Handbook: A Community Health Perspective.* 2005.
9. **South Coast Air Quality Management District.** Final 2016 Air Quality Management Plan (AQMP). [Online] March 2017. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=11.
10. **Urban Crossroads, Inc.** *Thrifty Oil Warehouse Trip Generation.* 2023.
11. **CAPCOA.** *Facility Prioritization Guidelines.* 2016.
12. **Environmental Protection Agency.** User's Guide for the AMS/EPA Regulatory Model (AERMOD). [Online] June 2022. https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/aermod_userguide.pdf.
13. —. User's Guide for the AMS/EPA Regulatory Model (AERMOD). [Online] April 2018. https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf.
14. **South Coast Air Quality Management District.** Data for AERMOD. [Online] [Cited: May 9, 2022.] https://www.aqmd.gov/home/air-quality/air-quality-data-studies/meteorological-data/data-for-aermod.
15. **Environmental Protection Agency.** User's Guide for the AERMOD Terrain Preprocessor (AERMAP). [Online] 2018. https://gaftp.epa.gov/Air/aqmg/SCRAM/models/related/aermap/aermap_userguide_v18081.pdf.
16. **Office of Environmental Health Hazard Assessment.** Chemical Toxicity Database. [Online] https://oehha.ca.gov/chemicals.

This page intentionally left blank

4 CERTIFICATIONS

The contents of this health risk assessment represent an accurate depiction of the impacts to sensitive receptors associated with the proposed Thrifty Oil Warehouse Project Project. The information contained in this health risk assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me at (949) 660-1994.

Haseeb Qureshi
Principal
URBAN CROSSROADS, INC.
(949) 660-1994
hqureshi@urbanxroads.com

EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Professionals
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June 2013
Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

This page intentionally left blank

APPENDIX 2.1:

CALEEMOD OUTPUTS

This page intentionally left blank

APPENDIX 2.2:

EMFAC EMISSIONS SUMMARY

This page intentionally left blank

APPENDIX 2.3:

AERMOD MODEL INPUT/OUTPUT

This page intentionally left blank

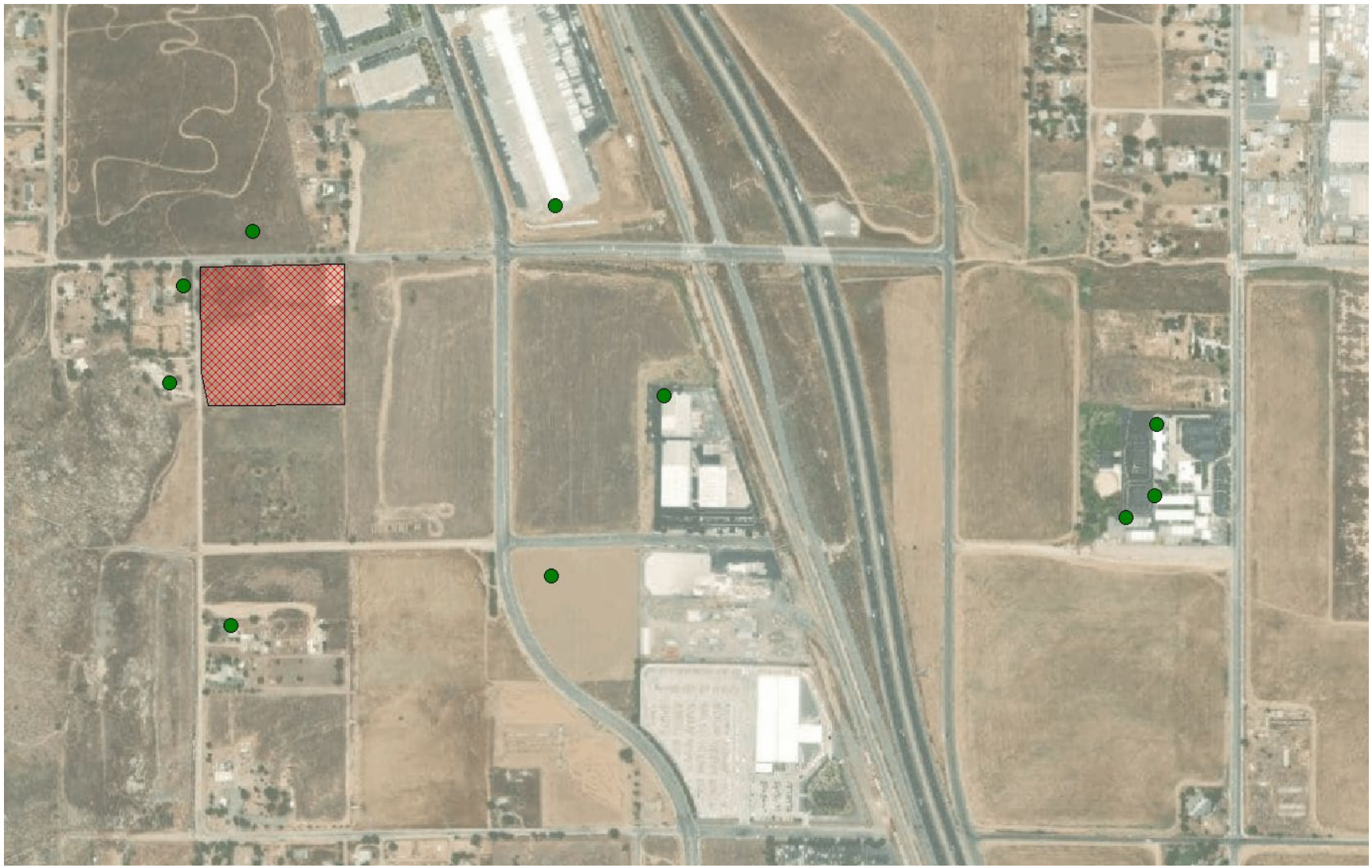
APPENDIX 2.4:

RISK CALCULATIONS

This page intentionally left blank

APPENDIX 2.5:

MODELED RECEPTORS



This page intentionally left blank

BIOLOGICAL RESOURCES ASSESSMENT, JURISDICTIONAL DELINEATION, AND MSHCP CONSISTENCY ANALYSIS FOR THE DEVELOPMENT OF APNs: 317-260-017 and -18, IN UNINCORPORATED PERRIS, RIVERSIDE COUNTY, CALIFORNIA

Prepared for:

Lilburn Corporation
1905 Business Center Drive
San Bernardino, CA 92408
909-890-1818

Prepared by:

Jennings Environmental, LLC
35414 Acacia Ave.
Yucaipa, CA 92399
909-534-4547

April 2024 / Updated November 2024

BIOLOGICAL RESOURCES ASSESSMENT, JURISDICTIONAL DELINEATION, AND MSHCP CONSISTENCY ANALYSIS FOR THE DEVELOPMENT OF APN: 317-260-017, and -18, IN UNINCORPORATED PERRIS, RIVERSIDE COUNTY, CALIFORNIA

Contents

SECTION 1.0 - INTRODUCTION 4
1.1 PROJECT LOCATION 4
1.2 PROJECT DESCRIPTION 4
2.0 – METHODOLOGY 5
2.1 LITERATURE REVIEW 5
2.2 SOILS 5
2.3 BIOLOGICAL RECONNAISSANCE-LEVEL SURVEY 5
2.4 JURISDICTIONAL FEATURES 5
2.5 WESTERN RIVERSIDE MULTIPLE SPECIES HABITAT CONSERVATION PLAN 6
2.6 VEGETATION 6
2.7 WILDLIFE 6
2.8 WILDLIFE CORRIDORS 7
SECTION 3.0 – RESULTS 7
3.1 LITERATURE REVIEW RESULTS 7
3.1.1 SOILS 7
3.1.2 SPECIAL STATUS SPECIES BACKGROUND 8
3.1.3 DESIGNATED CRITICAL HABITAT 9
3.1.4 JURISDICTIONAL WATERS 9
3.1.5 HYDROLOGY AND HYDROLOGIC CONNECTIVITY 9
3.1.6 MSHCP 9
3.2 FIELD STUDY RESULTS 10
3.2.1 HABITAT 10
3.2.2 WILDLIFE 11
3.2.3 SPECIAL STATUS SPECIES 11
3.2.4 NESTING BIRDS 11
3.2.5 JURISDICTIONAL WATERS 12
3.2.6 WETLANDS 12
3.3 MSHCP CONSISTENCY ANALYSIS 13
3.3.1 PUBLIC QUASI-PUBLIC LANDS (PQP) AND COVERED ROADS 13
3.3.2 SUBUNIT AREA/CELL CRITERIA 13

3.3.3 NARROW ENDEMIC PLANT SPECIES 15
3.3.4 ADDITIONAL SURVEY NEEDS AND PROCEDURES 15
3.3.5 RIPARIAN/RIVERINE AREAS AND VERNAL POOLS 15
3.3.6 INFORMATION ON OTHER SPECIES 17
3.3.7 URBAN/ WILDLANDS INTERFACE 18
3.3.7 BEST MANAGEMENT PRACTICES (VOLUME I, APPENDIX C) 19
SECTION 4.0 - CONCLUSIONS AND RECOMMENDATIONS 22
Section 5 – REFERENCES 25
Appendix A - Figures 27
Appendix B - Photos 35
Appendix C – Regulatory Framework 39
Appendix D – Tables 46

SECTION 1.0 - INTRODUCTION

Jennings Environmental, LLC (Jennings) was retained by Lilburn Corporation (Lilburn) to conduct a literature review and site survey for the proposed Thrifty Oil Co. Development Project (Project) within Assessor Parcel Numbers (APNs) 317-260-017 and -18, in unincorporated Perris, Riverside County, California. The survey identified vegetation communities, the potential for the occurrence of special status species, or habitats that could support special status wildlife species, and recorded all plants and animals observed or detected within the Project boundary. This biological resources assessment is designed to address the potential effects of the proposed project on designated critical habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA) or species designated as sensitive by the California Department of Fish and Wildlife (CDFW) or the California Native Plant Society (CNPS).

Information contained in this document is in accordance with accepted scientific and technical standards that are consistent with the requirements of the United States Fish and Wildlife Service (USFWS) and CDFW. Additionally, the site was surveyed for any drainage features that would meet the definition of the Waters of the US (WOUS), Waters of the State (WOS), or CDFW jurisdiction. Additionally, the project is located within the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). As such, this report also contains the results of the consistency analysis performed for the project.

1.1 PROJECT LOCATION

The Project is generally located within Section 13, Township 3 South, Range 4 West, and is depicted on the *Perris and Steele Peak* U.S. Geological Survey's (USGS) 7.5-minute topographic maps. More specifically the project is located within APNs 317-260-017 and -18, within unincorporated Perris, Riverside County, California. The Project site is located on the southeast corner of the intersection of Placentia Ave. and Tobacco Road. The site is surrounded by commercial development to the north, residential developments to the west and vacant land to the east and south. The Project site itself does contain one rural residence. (Figures 1 and 2 in Appendix A).

1.2 PROJECT DESCRIPTION

The proposed Project is to construct one 167,785 square foot (SF) concrete tilt-up, non-refrigerated warehouse on a 9.99-acres (net) of vacant land. The impacts include 9.64 acres of on-site impacts and 0.35 acres of off-site impacts The proposed Project is designed to house one or more tenant(s), which have not been designated at this time, and will include one 167,785 SF warehouse with 9 bays, two grade level docks, 22 high docks and two, 9,000 SF office spaces with mezzanines for a total square footage of 185,785, with related site landscaping, drainage basin, and parking.

These impacts will be permanent and are included in the assessment below. There will be no off-site staging or storing of equipment associated with this Project. Additionally, there are no fuel modification zones required.

2.0 – METHODOLOGY

2.1 LITERATURE REVIEW

Prior to performing the field survey, existing documentation relevant to the Project site was reviewed. The most recent records were reviewed for the following quadrangle containing and surrounding the Project site: *Perris and Steele Peak,* USGS 7.5-minute quadrangles. These databases contain records of reported occurrences of federal- or state-listed endangered or threatened species, California Species of Concern (SSC), or otherwise special status species or habitats that may occur within or in the immediate vicinity of the Project site. These sources include:

- California Natural Diversity Database (CNDDB) managed by CDFW (CDFW, 2024);
- USFWS Critical Habitat Mapper (USFWS 2024);
- California Native Plant Society's Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California (CNPS, 2024), responsible for the California Rare Plank Rankings;
- U.S. Fish and Wildlife (USFWS) threatened and endangered species occurrence GIS overlay;
- USDA Natural Resources Conservation Service (NRCS) Web Soil Survey;
- USGS National Map;
- Calwater Watershed Maps;
- Environmental Protection Agency (EPA) Water Program "My Waters";
- USFWS Designated Critical Habitat Maps;
- California Essential Habitat Connectivity Areas (CEHC, 2024);
- Western Riverside Multiple Species Habitat Conservation Plan (MSHCP), Volume 1, The Plan
- MSHCP Information Map, Version 2.0

2.2 SOILS

Before conducting the surveys, soil maps for Riverside County were referenced online to determine the types of soil found within the Project site. Soils were determined in accordance with categories set forth by the United States Department of Agriculture (USDA) Soil Conservation Service and by referencing the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2024).

2.3 BIOLOGICAL RECONNAISSANCE-LEVEL SURVEY

Jennings biologist, Gene Jennings, conducted the general reconnaissance survey within the Project site to identify the potential for the occurrence of special status species, vegetation communities, or habitats that could support special status wildlife species. The surveys were conducted on foot, throughout the Project site between 0745 and 0930 hours on December 17, 2023. Weather conditions during the survey included temperatures ranging from 45 - 50, Fahrenheit with winds ranging from 0.00 – 1.3 miles-per-hour. Photographs of the Project site were taken to document existing conditions (Appendix B).

2.4 JURISDICTIONAL FEATURES

A general assessment of jurisdictional waters regulated by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW was conducted for the proposed Project area. Pursuant to Section 404 of the Clean Water Act, USACE regulates the discharge of dredged

and/or fill material into waters of the United States. The State of California (State) regulates the discharge of material into waters of the State pursuant to Section 401 of the Clean Water Act and the California Porter- Cologne Water Quality Control Act (California Water Code, Division 7, §13000 et seq.). Pursuant to Division 2, Chapter 6, Sections 1600-1602 of the California Fish and Game Code, CDFW regulates all substantial diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. The initial assessment was conducted by a desktop survey through the USGS National Hydrography Dataset for hydrological connectivity. Additional assessment findings are discussed in Sections 3.1.2 and 3.2.4. A discussion of the regulatory framework is provided in Appendix C.

2.5 WESTERN RIVERSIDE MULTIPLE SPECIES HABITAT CONSERVATION PLAN

The MSHCP is intended to balance the demands of the growth of western Riverside County with the need to preserve open space and protect species of plants and animals that are threatened with extinction. The MSHCP addresses incidental take of "covered" species. Of the 146 species addressed in the Western Riverside County MSHCP, 118 are adequately conserved simply by implementing the conservation program. Incidental take of these 118 species is permitted by the Western Riverside County MSHCP. The remaining 28 species are partially conserved. They would be adequately conserved when certain additional conservation requirements are implemented. The additional requirements are identified in the species-specific conservation objectives for those 28 species. The Regional Conservation Authority (RCA) is the governing body that administers the MSHCP. Their database was researched prior to conducting the filed visit.

2.6 VEGETATION

All plant species observed within the Project site were recorded. Vegetation communities within the Project site were identified and qualitatively described. Plant communities were determined in accordance with the *Manual of California Vegetation*, *Second Edition* (Sawyer et al. 2009). Plant nomenclature follows that of *The Jepson Manual, Second Edition* (Baldwin et al. 2012). A comprehensive list of the plant species observed during the survey is provided in Appendix D.

All vegetation was mapped and documented in Appendix A and D, respectively. Vegetation mapping was completed by determining the dominant species found within each vegetation group. As described in the *Manual of California Vegetation*, *Second Edition* (Sawyer et al. 2009).

2.7 WILDLIFE

All wildlife and wildlife signs observed and detected, including tracks, scat, carcasses, burrows, excavations, and vocalizations, were recorded. Additional survey time was spent in those habitats most likely to be utilized by wildlife (native vegetation, wildlife trails, etc.) or in habitats with the potential to support state- and/or federally listed or otherwise special-status species. Notes were made on the general habitat types, species observed, and the conditions of the Project site. A comprehensive list of the wildlife species observed during the survey is provided in Appendix D.

2.8 WILDLIFE CORRIDORS

According to the California Essential Habitat Connectivity Project, the Project site is not mapped within an area for wildlife movement. Therefore, the proposed Project will not have an impact on any current wildlife corridors.

SECTION 3.0 – RESULTS

3.1 LITERATURE REVIEW RESULTS

According to the CNDDB, CNPSEI, and other relevant literature and databases, 55 sensitive species including 11 listed species, and 3 sensitive habitats, have been documented in the *Perris and Steele Peak* quads. This list of sensitive species and habitats includes any State and/or federally-listed threatened or endangered species, CDFW-designated Species of Special Concern (SSC), and otherwise Special Animals. "Special Animals" is a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special status species." The CDFW considers the taxa on this list to be those of greatest conservation need.

An analysis of the likelihood for the occurrence of all CNDDB-sensitive species documented in the *Perris and Steele Peak* quads is provided in Table 2, in Appendix D. This analysis takes into account species range as well as documentation within the vicinity of the project area and includes the habitat requirements for each species and the potential for their occurrence on the site, based on required habitat elements and range relative to the current site conditions. According to the databases, no USFWS-designated critical habitat occurs within or adjacent to the project site.

3.1.1 SOILS

After a review of the USDA Soil Conservation Service and by referencing the USDA NRCS Web Soil Survey (USDA 2024), it was determined that the Project site is located within the Western Riverside Area, California area CA679. The Project site contains four (4) soil types (Figure 3 in Appendix A):

Cieneba rocky sandy loam, 15 to 50 percent slopes (CkF2). This soil is somewhat excessively drained with a very low to moderately low capacity to transmit water. This soil consists of residuum weathered from igneous rock, typically ranges in elevation from 500 to 4,000 feet above mean sea level (amsl), and is not considered prime farmland.

Greenfield sandy loam, 2 to 8 percent slopes (GyC2). This soil is well-drained with a moderately high to high capacity to transmit water. This soil consists of alluvium derived from granite, typically ranges in elevation from 100 to 3,500 feet amsl, and is considered prime farmland if irrigated.

Hanford coarse sandy loam, 2 to 8 percent slopes (HcC). This soil is well-drained with a high capacity to transmit water. This soil consists of alluvium derived from granite, typically ranges in elevation from 680 to 2,930 feet (amsl), and is considered prime farmland if irrigated.

Monserate sandy loam, 5 to 8 percent slopes (MmC2). This soil is well-drained with a very low capacity to transmit water. This soil consists of alluvium derived from granite, typically ranges in elevation from 700 to 2,500 feet (amsl), and is farmland of statewide importance.

None of the observed soil types are hydric soils.

3.1.2 SPECIAL STATUS SPECIES BACKGROUND

Of the 55 species found within the *Perris and Steele Peak* quads, 11 have a special designation of either: federally listed or state-listed. The discussion below provides the background information on those species that have the potential to occur within the Project site.

Burrowing Owl – SSC

The burrowing owl (BUOW) is a state and federal Species of Special Concern (SSC). This owl is a mottled, brownish, sand-colored, dove-sized raptor, with large, yellow eyes, a rounded head lacking ear tufts, white eyebrows, and long legs compared to other owl species. It is a ground-dwelling owl typically found in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. The BUOW is heavily dependent upon the presence of mammal burrows, with ground squirrel burrows being a common choice, in its habitat to provide shelter from predators, and inclement weather, and to provide a nesting place. They are also known to make use of human-created structures, such as cement culverts and pipes, for burrows.

BUOW spends a great deal of time standing on dirt mounds at the entrance to a burrow or perched on a fence post or other low-to-the-ground perch from which they hunt for prey. BUOWs frequently hunt by hovering in place above the ground and dropping on their prey from above. They feed primarily on insects such as grasshoppers, June beetles, and moths, but will also take small rodents, birds, and reptiles. They are active during the day and night but are considered a crepuscular owl; generally observed in the early morning hours or at twilight. [The breeding season for BUOW is February 1 through August 31. Up to 11, but typically 7 to 9, eggs are laid in a burrow, abandoned pipe, or other subterranean hollows where incubation is complete in 28-30 days. Young BUOW fledges in 44 days. The BUOW is considered a migratory species in portions of its range, which includes western North America from Canada to Mexico, and east to Texas and Louisiana. BUOW populations in California are considered to be sedentary or locally migratory.

Throughout its range, the BUOW is vulnerable to habitat loss, predation, vehicular collisions, and destruction of burrow sites and the poisoning of ground squirrels. BUOW has disappeared from significant portions of their range in the last 15 years and, overall, nearly 60% of the breeding groups of owls known to have existed in California during the 1980s had disappeared by the early 1990s (Burrowing Owl Consortium 1993). The BUOW is not listed under the state or federal Endangered Species Act but is considered both a federal [The USFWS doesn't have a formal finding on the burrowing owl, except as a MBTA species] and state Species of Special Concern. The BUOW is a migratory bird protected by the international treaty under the Migratory Bird Treaty Act of 1918 (as amended) and by State law under the California Fish and Game Code (CDFG Code #3513 & #3503.5).

3.1.3 DESIGNATED CRITICAL HABITAT

The site is not located within or adjacent to any USFWS-designated Critical Habitat. No further action is required.

3.1.4 JURISDICTIONAL WATERS

Aerial imagery of the site was examined and compared with the surrounding USGS 7.5-minute topographic quadrangle maps to identify drainage features within the survey area as indicated by topographic changes, blue-line features, or visible drainage patterns. The U.S. Fish and Wildlife Service National Wetland Inventory and Environmental Protection Agency (EPA) Water Program "My Waters" data layers were also reviewed to determine whether any hydrologic features and wetland areas had been documented within the vicinity of the site. Similarly, the Soil maps from the U.S. Department of Agriculture (USDA) - Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2024) were reviewed to identify the soil series on-site and to check if they have been identified regionally as hydric soils. Upstream and downstream connectivity of waterways (if present) was reviewed in the field, on aerial imagery, and topographic maps to determine jurisdictional status. No obvious signs of jurisdictional features were observed during the literature review.

3.1.5 HYDROLOGY AND HYDROLOGIC CONNECTIVITY

Hydrologically, the project site is located within the Perris Valley Hydrologic Sub-Area (HSA 802.11) which comprises a 106,456-acre drainage area within the larger Lower San Jacinto River Hydrologic Area (Hydrologic Unit Code [HUC10] 1807020203) (CalTrans, 2024). The Lower San Jacinto River watershed in Perris is bordered to the north by the Middle Santa Ana River and San Timoteo Wash watershed, to the east by the Middle San Jacinto River watersheds, to the south by the Murrieta Creek watershed, and to the west by the Temescal Wash watershed (Figure 4 in Appendix A).

3.1.6 MSHCP

Prior to the field visit the Regional Conservation Authority's website and databases were searched. This includes the MSHCP plan itself and any relevant protocol survey requirements. The database also includes a mapping program that contains site-specific information related to criteria cell location, special survey areas for plants and animals, and vegetation mapping.

A summary of the MSHCP Conservation Goals and Policies as they relate to this Project is provided below in Table 1.

Table 1: MSHCP Conservation Goals for Project Area

Conservation Goals	Within /Adjacent	Not Within /Adjacent
Proposed Constrained Linkages: **None**		X
Core Areas: **None**		X

Conservation Goals	Within /Adjacent	Not Within /Adjacent
Linkages: **None**		X
Constrained Linkage:		X
Habitat Block:		X
Core: **None**		X
Criteria Cell**: 2529**	X	
Pre-existing conservation Area		X
Riparian/Riverine or Vernal Pool Habitat		X
Narrow Endemic Plant Survey Area		X
Criteria Species Survey Area		X
Urban/Wildlife Interface		X
Mammal Survey Area		X
Amphibian Survey Area		X
Burrowing Owl Survey Area	X	

3.2 FIELD STUDY RESULTS

3.2.1 HABITAT

The habitat on-site consists of a mix of bare ground and *Brassica nigra – Centaurea* (*solstitialis*, *melitensis*) Herbaceous Semi-Natural Alliance (Upland Mustards or star-thistle fields). The site shows signs of vegetation management in the form of mowing or weed whacking. Additionally, there was a previous development within the northwest corner of the site that was removed sometime after 2016. Figure 5 in Appendix A shows the vegetation communities present onsite while Table 1 in Appendix D contains a list of all plants found on-site. Surrounding land uses include residential developments and commercial developments. Table 2 below shows the habitats on-site and their acreage.

The site also contains an existing development within the northeast corner. The northeast corner contains a residential building and associated infrastructure.

Table 2 – Vegetation Communities and Their Proposed Impacts

Habitat Type	On-Site (Within Cell) (Acres)	Off-Site (Within Cell) (Acres)	On-Site (Outside Cell) (Acres)	Off-Site (Outside Cell) (Acres)
Developed/Disturbed	0.40	0.03	0.08	0.02
Brassica nigra – Centaurea (*solstitialis*, *melitensis*) Herbaceous Semi-Natural Alliance (Upland Mustards or star-thistle fields)	9.16	0.0.30	0.00	0.00
TOTAL	9.56	0.33	0.08	0.02

3.2.2 WILDLIFE

Species observed or otherwise detected on or in the vicinity of the project site during the surveys included; yellow-rumped warbler (*Setophaga coronata*), house finch (*Haemorhous mexicanus*), and European starling (*Sturnus vulgaris*). A complete list of all wildlife observed is included in Table 1 of Appendix D.

3.2.3 SPECIAL STATUS SPECIES

No State and/or federally listed threatened or endangered species or other sensitive species were observed on-site during surveys.

Burrowing Owl – SSC

Although the site showed evidence of past disturbance, the conditions present onsite are suitable for BUOW. The assessment survey was structured, in part, to detect BUOW, which has been observed in the near vicinity of the Project site (within 5 miles). The survey consisted of walking transects spaced to provide 100% visual coverage of the Project site and a 500-foot buffer (Figure 6 in Appendix A). The result of the focused survey was that no evidence of BUOW was found in the survey area. No BUOW pellets, feathers, or whitewash were found. No burrowing owl individuals were observed.

Although no BUOW individuals were observed on the survey date, the Project site and adjacent area does contain some habitat that would be considered suitable for BUOW. The site does contain suitable soils for this species and California ground squirrel (*Otospermophilus beecheyi*) was present on-site. California ground squirrel is a burrow surrogate species for BUOW. Therefore, focused surveys using the MSHCP BUOW Protocol were completed. Section 3.3.4 contains the results of the protocol surveys.

3.2.4 NESTING BIRDS

Portions of the Project site and the immediate surrounding area provide suitable habitats for nesting birds. There are mature trees and shrubs within and adjacent to the site that provide bird nesting habitat. As such the Project site is subject to the following nesting bird regulations. Recommendations for avoidance and minimization are in Section 4.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (as amended). This Act implements four international conservation treaties that the U.S. entered into with Canada in 1916, Mexico in 1936, Japan in 1972, and Russia in 1976. It is intended to ensure the sustainability of populations of all protected migratory bird species. The Act has been amended with the signing of each treaty, as well as when any of the treaties were amended, such as with Mexico in 1976 and Canada in 1995. The Act 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.

California Fish and Game Code

The Project site is also subject to Sections 3503 and 3503.5 of the Fish and Game Code. Section 3503 states, "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto". Section 3503.5 states, "It is unlawful to take, possess, or destroy any birds in the orders 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".

3.2.5 JURISDICTIONAL WATERS

Waters of the United States and Waters of the State

The USACE has the authority to permit the discharge of dredged or fill material in the Waters of the U.S. under Section 404 CWA. The Regional Water Quality Board has authority over the permitted discharge of dredged or fill material in the Waters of the State under Section 401 CWA as well as the Porter-Cologne Water Quality Control Act. The Project area was surveyed with 100 percent visual coverage and no drainage features were present on site. As such, the subject parcel does not contain any wetlands, Waters of the U.S., or Waters of the State.

Fish and Game Code Section 1602 - State Lake and/or Streambed

The CDFW asserts jurisdiction over any drainage feature that contains a definable bed and bank or associated riparian vegetation. The Project area was surveyed with 100 percent visual coverage and no definable bed or bank features exist on the project site. There is an outlet structure that deposits water onto the site from the surrounding parcels, however, it appears that the amount of water that is discharged does not stay within a defined location or channel. It is either absorbed into the soil or lost to sheet flow within the parcel. As such, the subject parcel does not contain any areas under CDFW jurisdiction.

3.2.6 WETLANDS

NWI maps did not identify portions within the Project site as a Riverine/Riparian system. The site does not contain hydric vegetation, hydric soils, or wetland hydrology. In order to be classified as a wetland all three criteria must be present within the project site. As such, there are no wetlands currently present on site.

3.3 MSHCP CONSISTENCY ANALYSIS

The Project is located within The Mead Valley Area Plan of the MSHCP. The target conservation acreage range for The Mead Valley Area Plan is 4,980 – 6,730 acres; it is composed of approximately 3,095 acres of existing Public/Quasi-Public Lands and 1,885 – 3,635 acres of Additional Reserve Lands.

The MSHCP Conservation Area comprises a variety of existing and proposed Cores, Linkages, Constrained Linkages, and Noncontiguous Habitat Blocks (referred to herein generally as "Cores and Linkages"). The Cores and Linkages within the Mead Valley Area Plan include:

- Contains a portion of Proposed Constrained Linkage 19
- Contains a portion of Proposed Core 1
- Contains a portion of Proposed Extension of Existing Core 4
- Contains a small portion of Proposed Linkage 3
- Contains a portion of Proposed Linkage 7
- Contains a portion of Proposed Noncontiguous Habitat Block 4

3.3.1 PUBLIC QUASI-PUBLIC LANDS (PQP) AND COVERED ROADS

Pursuant to Sections 3.2.1 PQP Lands are a Subset of MSHCP Conservation Area lands totaling approximately 347,000 acres of lands known to be in public/private ownership and expected to be managed for open space value and/or in a manner that contributes to the Conservation of Covered Species (including lands contained in existing reserves), as generally depicted in Figure 3-1 of the MSHCP, Volume I. Section 7.2.1 Existing Roads within Existing PQP Lands are existing roadways within existing Public/Quasi-Public Lands, including interstates, freeways, State highways, city and county maintained roadways, as well as local roads, which are not city, or county maintained that provide property access. This latter category of other maintained roadways is generally maintained by the adjacent property owners, either individually or collectively. Table 7-1, of the MSHCP, provides an estimate summarizing the extent of these various types of existing roadways which are permitted to remain within Public/Quasi-Public Lands.

Although the Project site is located adjacent to PQP Lands, the proposed Project does not impact PQP Lands. The majority of PQP Lands in this area are within Lake Elsinore.

➢ *No further discussion on this subject is made in this analysis*

3.3.2 SUBUNIT AREA/CELL CRITERIA

Pursuant to Section 3.3.12, Subunits are areas within an area plan that contain target conservation acreages along with a description of the planning species, biological issues, and considerations. The Project site is within Subunit 1: Motte/Rimrock of the Mead Valley Area Plan and is also located within Criteria Cell 2529 which will contribute to the proposed noncontiguous Habitat Block 4. As stated in the MSHCP the conservation goals for Criterial Cell 2529 are:

> *Criteria Cell 2529*: Conservation within this Cell will contribute to assembly of Proposed Noncontiguous Habitat Block 4. Conservation within this Cell will focus on assembly of coastal

sage scrub habitat. Areas conserved within this Cell will be connected to coastal sage scrub habitat proposed for conservation in Cell Group B to the west. Conservation within this Cell will range from 5%-15% of the Cell focusing in the western portion of the Cell.

Table 3 below contains an analysis of the land conservation goals for Cell 2529 with Figure 7 in Appendix A showing the current land uses within the Criteria Cell and the surrounding Cells.

Table 3 – Criteria Cell 2529 Land Conservation Analysis

Criteria Cell 2529		
Feature	**Acres**	**Comments**
Total Area of Cell 2529	**161.55**	**Described for 5-15 percent conservation, focusing on the western portion.**
Proposed Project Impact	9.89	The on-site improvements and a portion of the offsite improvements are within Cell 2529
Existing Development	35.66	Developed Area within the Cell
Future Covered Roads	0	No covered roads within the Cell
Public/Quasi Public Lands	0	None
Easement/Rights-of-Way	0	None
Exempt Lands	0	None
Undeveloped Lands that would not Contribute	0	None
Subtotal – Development within Cell 2529	45.24	
ARL Conserved Lands (Existing and Pending)		
RCA Owned/Managed Lands	0	None
Other Existing Conserved Lands (MOU with RCA)	0	None
Subtotal – ARL Conserved Lands	0	None
Undeveloped Lands Potentially Available for Conservation within Cell 2529		
Undeveloped Lands	125.89	Total area of Cell 2529 (161.55 acres) Total area of development (35.66 acres) Total ARL Conserved Lands (0 acres)
Conclusion		
[illegible] **16.155 acres** [illegible]		

As detailed above the proposed Project is consistent with the MSHCP because there are sufficient lands within Criteria Cell 2529 to meet the conservation goals. Additionally, the main conservation goals of Criteria Cell 2529 are to conserve coastal sage scrub habitat, mostly within the western edge of the Cell. The proposed Project is located in the center portion of the Cell and does not contain coastal sage scrub habitat. Therefore, this Project is consistent with Section 3.3.12 of the MSHCP

- *No further discussion on this subject is made in this analysis*

3.3.3 NARROW ENDEMIC PLANT SPECIES

Pursuant to Section 6.1.3 of the MSHCP, focused surveys for narrow endemic plant species are required for properties within the mapped areas if the appropriate habitat is present. The survey area maps have been reviewed and assessed, and the proposed project is not located within a Narrow Endemic Plant Species Survey Area based on Figure 6-1 of the MSHCP.

- *No further discussion on this subject is made in this analysis*

3.3.4 ADDITIONAL SURVEY NEEDS AND PROCEDURES

Based on Figures 6-2 (Criteria Area Species Survey Areas), 6-3 (Amphibian Species Survey Areas), 6-4 (BUOW Survey Areas), and 6-5 (Mammal Species Survey Areas) of the MSHCP and the MSHCP Mapping Program, the site is located in an area where additional surveys are needed for BUOW in conjunction with MSHCP implementation in order to achieve coverage for these species.

BUOW: Pursuant to MSHCP Section 6.3.2, surveys shall be conducted within suitable habitat for BUOW, according to accepted protocols.

- Survey Results: Based on the 2023/2024 field surveys which are detailed in the BUOW Protocol Survey Report, the site does contain suitable habitat for this species, although the property is continually maintained. No burrowing owls were observed during the site visit. No portion of the project site showed any evidence of past or present BUOW activity. No feathers, whitewash, or castings were found. The site does contain suitable burrow surrogate species California ground squirrel (Otospermophilus beecheyi) are present on-site. Non-Breeding and breeding season surveys were conducted as per the MSHCP Survey Protocol for this species.

- BUOW is considered absent from the Project site. However, because the site does contain suitable habitat for this species, Pre-Construction surveys are required. Section 4 below contains the survey recommendations for this species.

3.3.5 RIPARIAN/RIVERINE AREAS AND VERNAL POOLS

The MSHCP describes the protection of Riparian/Riverine Areas and Vernal Pools within the MSHCP Plan Area as important to the conservation of certain amphibian, avian, fish, invertebrate and plant species. The MSHCP describes guidelines to ensure that the biological functions and values for species inside the MSHCP Conservation Area are maintained, as outlined in Volume 1, Section 6.1.2.

Riparian/ Riverine

Pursuant to Section 6.1.2 of the MSHCP, Riparian/Riverine areas are lands which contain habitat dominated by trees, shrubs, persistent emergent vegetation, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from nearby freshwater sources, or areas with freshwater flow during all or a portion of the year. Riverine habitat includes all wetlands and deepwater

habitats contained in natural or artificial channels periodically or continuously containing flowing water or which forms a connecting link between the two bodies of standing water. Riverine habitat is bounded on the landward side by upland, by the channel bank (including natural and man-made levees), or by wetlands dominated by trees, shrubs, persistent emergents, mosses, or lichens. In braided streams, the system is bounded by the banks forming the outer limits of the depression within which the braiding occurs. Springs discharging into a channel are considered part of the riverine habitat. The term riparian is used to define the type of wildlife habitat found along the banks of a river, stream, lake, or other body of water. Riparian habitats are ecologically diverse and can be found in many types of environments including grasslands, wetlands, and forests.

The Project site does not contain any areas that meet the definition of Riparian/Riverine. Although the Project site does contain two *Tamarix spp.* trees near the corner of the intersection Tobacco Road and Placentia Ave., these two individuals do not offer sufficient canopy size and understory density for any riparian bird species. Additionally, the entire Project site does not contain hydric soils or the necessary hydrology to create a riparian/riverine system. None of the soils on-site are listed as hydric and there was no evidence of ponding. The texture of the soils on site are sandy in nature and do not retain water. Additionally, the Project site lacks the necessary hydrology as there are no drainages or streams that traverse the area. Any rainfall that occurs within the site will be absorbed into the ground and funneled to Lake Elsinore.

- *No further discussion on this subject is made in this analysis*

Vernal Pools

Pursuant to Section 6.1.2 of the MSHCP, Vernal Pools are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The determination that an area exhibits vernal pool characteristics should consider (1) the length of time the area exhibits upland and wetland characteristics, and (2) the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses to which it has been subjected, and weather and hydrologic records.

The Project site does not contain the appropriate soils, vegetation, or hydrology to allow for vernal pools. There was no evidence such as mud cracks, fine-soil deposition, water-stain rings or other characteristics of water ponding for a sufficient period of time to allow for the development of vernal pools.

- *No further discussion on this subject is made in this analysis*

Fairy Shrimp

The MSHCP contains coverage for three species of fairy shrimp (Riverside, vernal pool, and Santa Rosa fairy shrimps). As mentioned in the Vernal Pool discussion, the site does not contain suitable pool habitats. Additionally, the primary constituent elements for fairy shrimps are:

> Small to large pools with moderate to deep depths that hold water for sufficient lengths of time necessary for fairy shrimp incubation and reproduction, but not necessarily every year; the associated watershed(s) and other hydrologic features that support pool basins and their related pool complexes; flat or gently sloping topography; and any soil type with a clay component and/or an impermeable surface or subsurface layer known to support vernal pool habitat. All proposed critical habitat areas contain one or more of the primary constituent elements for the Riverside fairy shrimp.

As described above the soils on-site are sandy loam in nature and no areas with sufficient ponding for fairy shrimp incubation were observed during the site visit. Additionally, the Project site does not contain the necessary hydrology to support vernal pools. As such, they are considered absent from the Project site.

- ☐ *No further discussion on this subject is made in this analysis*

Riparian Birds

The MSCHP includes coverage for many riparian birds, including least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo. As mentioned above in the Riparian/Riverine section, the site does not contain any riparian or riverine habitats which are a required constituent element for the riparian bird species. As such, these species are considered absent from the Project site.

- ☐ *No further discussion on this subject is made in this analysis*

3.3.6 INFORMATION ON OTHER SPECIES

Delhi sands flower-loving fly

The Delhi Sands flower-loving fly is found at low numbers and is narrowly distributed within the Plan Area. This species is restricted by the distribution and availability of open Habitats within the fine, sandy Delhi series soils. USFWS has identified three main population areas are known to currently or to have at one time existed in the Plan Area. One is located in the northwestern corner of the Plan Area, a second is located in the Jurupa Hills, and the third is located in the Agua Mansa Industrial Center area. Because the Delhi Sands flower-loving fly requires a specific Habitat type, this species will require site-specific considerations, protection and enhancement of this limited Habitat type, and species-specific management to maintain the Habitat and populations.

The Project site does not contain the appropriate soils for this species and is not within or near known areas for this species.

- ☐ *No further discussion on this subject is made in this analysis*

Species Not Adequately Conserved

As described in Section 2.1.4, of the 146 Covered Species addressed in the MSHCP, 118 species are considered to be adequately conserved. The remaining 28 Covered Species will be considered to be adequately conserved when certain conservation requirements are met as identified in the species-specific conservation objectives for those species. For 16 of the 28 species, particular species-specific

conservation objectives, which are identified in Table 9-3 in Volume 1 of the MSHCP must be satisfied to shift those particular species to the list of Covered Species Adequately Conserved. For the remaining 12 species, a Memorandum of Understanding must be executed with the Forest Service that addresses management for these species on Forest Service Land in order to shift these species to the list of Covered Species Adequately Conserved.

The Project site does not contain the appropriate habitats for any of these species. There is no occurrence potential for any of these species to occur within the Project site.

- ☐ *No further discussion on this subject is made in this analysis*

3.3.7 URBAN/ WILDLANDS INTERFACE

Section 6.1.4 of the MSHCP presents guidelines to minimize the indirect effects of projects in proximity to the MSCHP Conservation areas. This section provides mitigation measures for impacts associated with Drainage, Toxics, Lighting, Noise, Invasives, Barriers, and Grading/Land Development.

The site is in the vicinity of the western portion of the Criteria Cell, which is the area with the primary goal of conservation. As such the following discussion for Urban/Wildlands interface is provided.

Drainage

The Project's stormwater should be directed to a stormwater basin on the project site. The basin shall be designed in accordance with all federal, state, regional, and local standards and regulations concerning water quality. These measures will assure that the project stormwater discharges are no greater in volume and velocity than current undeveloped conditions and that the water leaving the site complies with all applicable water quality standards.

Toxics

According to the MSHCP, measures shall be incorporated to ensure that application of chemicals do not result in discharge to the MSHCP Conservation Area. During the construction of the project, construction activities have the potential to cause release of toxics that could impact the MSHCP Conservation Area. To address these potential short-term impacts, the project is required to stage construction operations as far away from Lake Elsinore to the maximum extent feasible. These mitigation measures will be imposed by the County of Riverside.

Lighting

The proposed Project is not anticipated to significantly increase lighting and glare. All light sources will be designed with internal baffles to direct the lighting towards the ground and the developed areas and have a zero-side angle cut off to the horizon. All lighting will be consistent with County of Riverside's Light Pollution Ordinance and the MSHCP.

Noise

The proposed Project is not anticipated to have a significant increase in noise. All noise levels will be in compliance with County of Riverside's Standards.

- *No further discussion on this subject is made in this analysis*

Invasives

The proposed Project will have minimal landscaping around the site and will not plant invasive species in accordance with Section 6.1.4 of the MSHCP and Riverside County Ordinance No. 859.

- *No further discussion on this subject is made in this analysis*

Barriers

The proposed Project will be walled off and include landscaping around the Project site. However, Tobacco Road is between the Project site and the desired conservation area. As such, the proposed Project can do nothing to further secure the desired area as there is a public roadway between the two and the Project applicant does not own the parcels on the opposite side of the road.

- *No further discussion on this subject is made in this analysis*

Grading/Land Development

The proposed Project will be walled off and include landscaping around the Project site. However, Tobacco Road is between the Project site and the desired conservation area. As such, the proposed Project does not propose any grading or land development directly adjacent to the desired conservation area.

- *No further discussion on this subject is made in this analysis*

3.3.7 BEST MANAGEMENT PRACTICES (VOLUME I, APPENDIX C)

Appendix C of the MSHCP details Best Management Practices (BMPs) that should be implemented. County and Cities have the following obligations under the MSHCP and the Implementing Agreement. As such,the following BMPs are required for this project which will be implemented prior to construction:

1. A condition shall be placed on grading permits requiring a qualified biologist to conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and project site boundaries within which the project activities must be accomplished.
2. Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements.
3. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.
4. The upstream and downstream limits of projects disturbance plus lateral limits of disturbance on either side of the stream shall be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work.

5. Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.
6. Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian identified in MSHCP Global Species Objective No. 7.
7. When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing of other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments offsite. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.
8. Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional city, FWS, and CDFG, RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.
9. Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.
10. The qualified project biologist shall monitor construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project footprint.
11. The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to pre-existing contours and revegetated with appropriate native species.
12. Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.
13. To avoid attracting predators of the species of concern, the project site shall be kept as clean of debris as possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from the site(s).
14. Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Construction limits will be fenced with an orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.
15. The Permittee shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs.

Additionally, in accordance with the MSHCP the Counties and Cities have agreed to following long-term obligations.

A. Adopt and maintain ordinances or resolutions as necessary, and amend their General Plans as appropriate, to implement the requirements and to fulfill the purposes of the Permits, the MSHCP and the IA for private and public Development projects. Such requirements include: ***(1)*** *the collection of Local Development Mitigation Fees and other relevant fees as set forth in Section 8.5 of this document;* ***(2)*** *compliance with the HANS process or equivalent process to ensure application of the Criteria and thus, satisfaction of the local acquisition obligation;* ***(3)*** *compliance with the policies for the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, set forth in Section 6.1.2 of this document;* ***(4)*** *compliance with the policies for the Protection of Narrow Endemic Plant Species set forth in Section 6.1.3 of this document;* ***(5)*** *compliance with survey requirements as set forth in Section 6.3.2 of this document;* ***(6)*** *require Urban/Wildlands Interface Guidelines compliance as set forth in Section 6.1.4 of this document; and* ***(7)*** *compliance with the Best Management Practices and the siting and design criteria as set forth in Section 7.0 and Appendix C of this document. The County and the Cities shall transmit to the RCA and the Wildlife Agencies relevant documents showing adoption and/or execution of the Implementation Mechanisms and any subsequent amendments thereto.*

B. Transmit any collected Local Development Mitigation Fees, other appropriate fees and associated interest as described in Section 8.5 of this document to the RCA at least quarterly.

C. Contribute to Plan implementation and Reserve Assembly as determined appropriate by the affected Permittee for County and City public projects, including but not limited to any one or any combination of the following: 1) acquisition of replacement Habitat at a 1:1 ratio that is Biologically Equivalent or Superior to the property being disturbed; or 2) payment of the Local Development Mitigation Fees as established for commercial and industrial Development. Such contribution shall occur prior to impacts to Covered Species and their Habitats.

D. Participate as a member agency in the RCA as set forth in Section 6.6.2 of this document.

E. Notify the RCA, through the Joint Project/Acquisition Review Process set forth in Section 6.6.2 of this document, of proposed Discretionary Projects within the Criteria Area and participate in any further requirements imposed by that section.

F. Take all necessary and appropriate actions, following applicable land use permit enforcement procedures and practices, to enforce the terms of project approvals for public and private projects, including compliance with the MSHCP, the Permits and the IA.

G. Carry out all other applicable requirements of the MSHCP, the IA and the Permits. Notwithstanding the foregoing, nothing within the MSHCP or the IA shall be construed to require any local government to provide funding, or any other form of compensation, beyond the fees collection, dedicated lands required pursuant to the IA and the MSHCP or other mitigation agreed to by the appropriate Parties, consistent with the terms and conditions of the MSHCP.

H. Manage MSHCP Conservation Area property or conservation easements owned or leased by the County or respective City pursuant to Sections 5.0 and 8.0 of this document.

I. Participate as a member of the RMOC as set forth in Section 6.6.4 of this document.

As such, the Project will be required to implement these standard procedures.

SECTION 4.0 – CONCLUSIONS,RECOMMENDATIONS, AND MITIGATION MEASURES

Based on the literature review and personal observations made in the project site and immediate vicinity, no State and/or federally listed threatened or endangered species are documented/or expected to occur within the Project site. Additionally, no plant species with the California Rare Plant Rank (CRPR) of 1 or 2 were observed on-site or documented/expected to occur on-site. No other sensitive species were observed within the project area or buffer area.

Jurisdictional Delineation

There are no streams, channels, washes, or swales that meet the definitions of Section 1600 of the State of California Fish and Game Code (FGC) under the jurisdiction of the CDFW, Section 401 ("Waters of the State") of the Clean Water Act (CWA) under the jurisdiction of the Regional Water Quality Control Board (RWQCB), or "Waters of the United States" (WoUS) as defined by Section 404 of the CWA under the jurisdiction of the U.S. Army Corps of Engineers (Corps) within the subject parcel. Therefore, no permit from any regulatory agency will be required.

MSHCP Consistency

The site is mapped within a criteria cell. However, the Project is consistent with the MSHCP policies found in Section 6 which include Riparian/Riverine Areas/Vernal Pools; Narrow Endemic Plant Species; Urban/Wildlands Interface; and Surveys for Special Status Species. As described above the Project will not conflict with the conservation goals of the criteria cell or the MSHCP. Therefore, the Project is consistent with MSCHP policies and conditions.

Burrowing Owl

Since there is some habitat within the Project site and adjacent area that is suitable for BUOW in general, the following mitigation measure should be implemented:

> A Pre-Construction Burrowing Owl Survey shall be conducted by a qualified biologist no more than 30-days prior to any ground disturbance activities. Surveys shall be completed following the recommendationsand guidelines provided within the Burrowing Owl Survey Instructions for the Western Riverside MSHCP (RCA, 2006). Surveys should be conducted during weather that is conducive to observing owls outside their burrows and detecting burrowing owl sign. Surveys will not be accepted if they are conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. Surveys should be conducted in the morning one hour before sunrise to two hours after sunrise or in the early evening two hours before sunset to one hour after sunset. Count and map all burrowing owl sightings, occupied burrows, and burrows with owl sign. Record the location of all owls including numbers of pairs and juveniles and any behavior such as courtship and mating. Map the extent of all suitable habitat. It should be noted that owl sign may not be detectable if surveys are conducted within 5 days following rain. If burrowing owls have colonized the project site prior to the initiation of ground-disturbing activities, the project

proponent will need to immediately inform the RCA and the Wildlife Agencies, and will need to coordinate further with RCA and the Wildlife Agencies, including the possibility of preparing a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance.

Nesting Birds

Since there is some habitat within and adjacent to the Project site that is suitable for nesting birds in general, the following mitigation measure should be implemented.

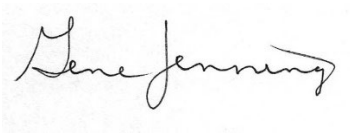
> Nesting bird nesting season generally extends from February 1 through September 15 in southern California and specifically, March 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist will conduct pre-construction Nesting Bird Surveys (NBS) prior to Project-related disturbance to nestable vegetation to identify any active nests. If no active nests are found, no further action will be required. If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage, and expected types, intensity, and duration of the disturbance. The nests and buffer zones shall be field-checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

Certification

I hereby certify that the statements furnished herein, and in the attached exhibits present data and information required for this analysis to the best of my ability, and the facts, statements, and information presented are true and correct to the best of my knowledge and belief. This report was prepared in accordance with professional requirements and standards. Fieldwork conducted for this assessment was performed by me. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project proponent and that I have no financial interest in the project.

Please do not hesitate to contact me at 909-534-4547 should you have any questions or require further information.

Sincerely,



Gene Jennings
Principal/Regulatory Specialist

Appendices:

Appendix A – Figures

Appendix B – Site Photos
Appendix C – Regulatory Framework
Appendix D – Tables

Section 5 – REFERENCES

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, and T.J. Rosatti, and D.H. Wilken (editors)
2012 *The Jepson Manual: Vascular Plants of California, Second Edition.* University of California Press, Berkeley, CA.

Barbour, M.G., J.H. Burk, W.D. Pitts, F.S. Gilliam, and M.W. Schwartz.
1999 *Terrestrial Plant Ecology, Third Edition.* Addison Wesley Longman, Inc. Menlo Park, CA.

California Department of Fish and Wildlife (CDFW)
2021 California Natural Diversity Database (CNDDB). RareFind Version 3.1.0. Database Query. Wildlife and Habitat Data Analysis Branch. [Accessed January 2024]

California Department of Fish and Game. 1995. Staff report on burrowing owl mitigation. Memo from C.F. Raysbrook, Interim Director to Biologist, Environmental Services Division, Department of Fish and Game. Sacramento, CA.

California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation. State of California Natural Resources Agency. March 7, 2012.

California Department of Transportation. Water Quality Planning Tool.
http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx (Accessed January 2024)

California Native Plant Society (CNPS)
2020 Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). Rare Plant Scientific Advisory Committee, California Native Plant Society, Sacramento, California. Website http://www.rareplants.cnps.org; [Accessed January 2024].

California Department of Transportation, Water Quality Planning Tool, http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx (Accessed January 2023)

Sawyer, J.O., Jr., T. Keeler-Wolf, J. Evens
2009 *A Manual of* California *Vegetation, Second Edition*. California Native Plant Society, Sacramento, CA.

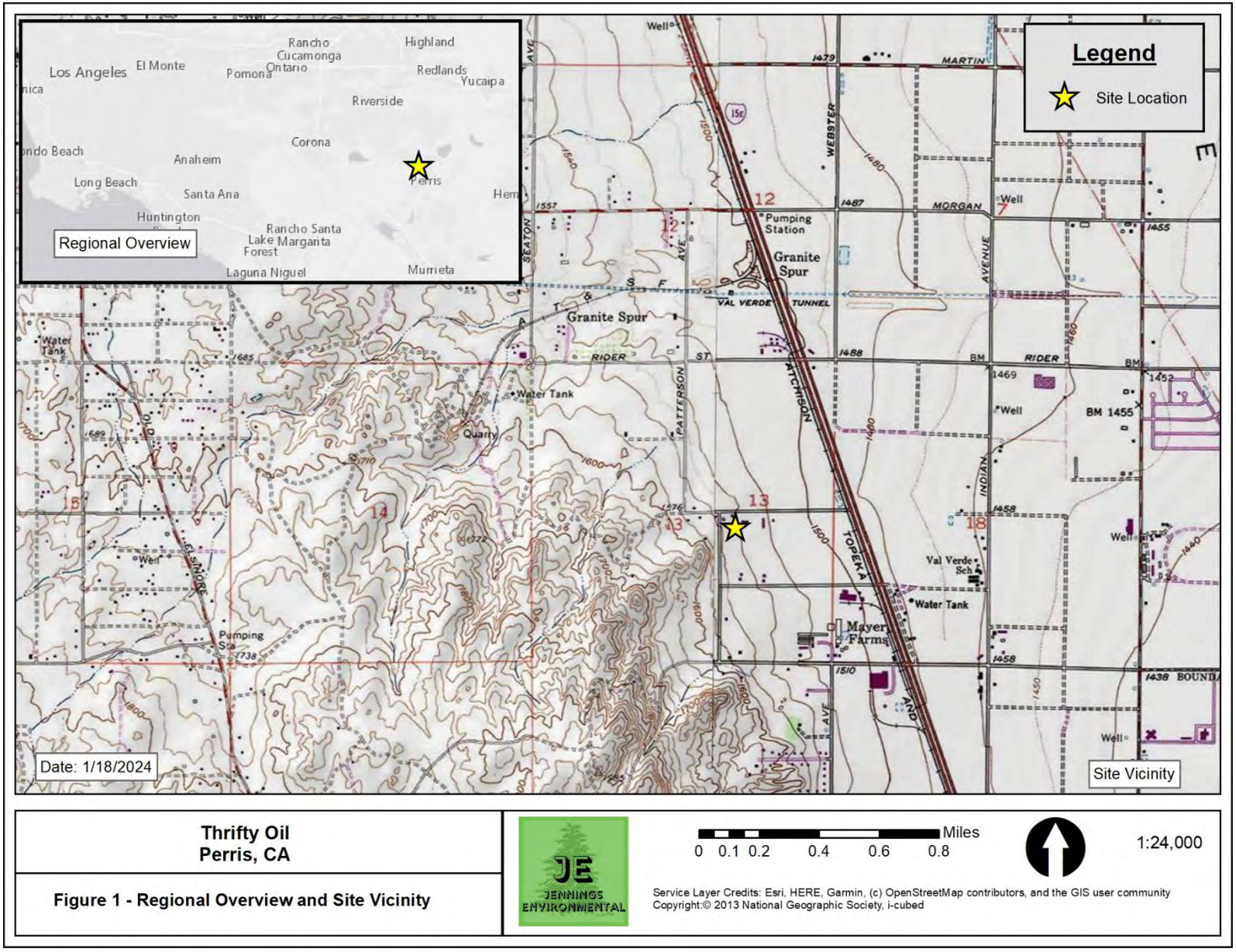
U.S. Department of Agriculture (USDA)
2022 Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Official Soil Series Descriptions [Online Edition]. Website https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx [Accessed January 2024].

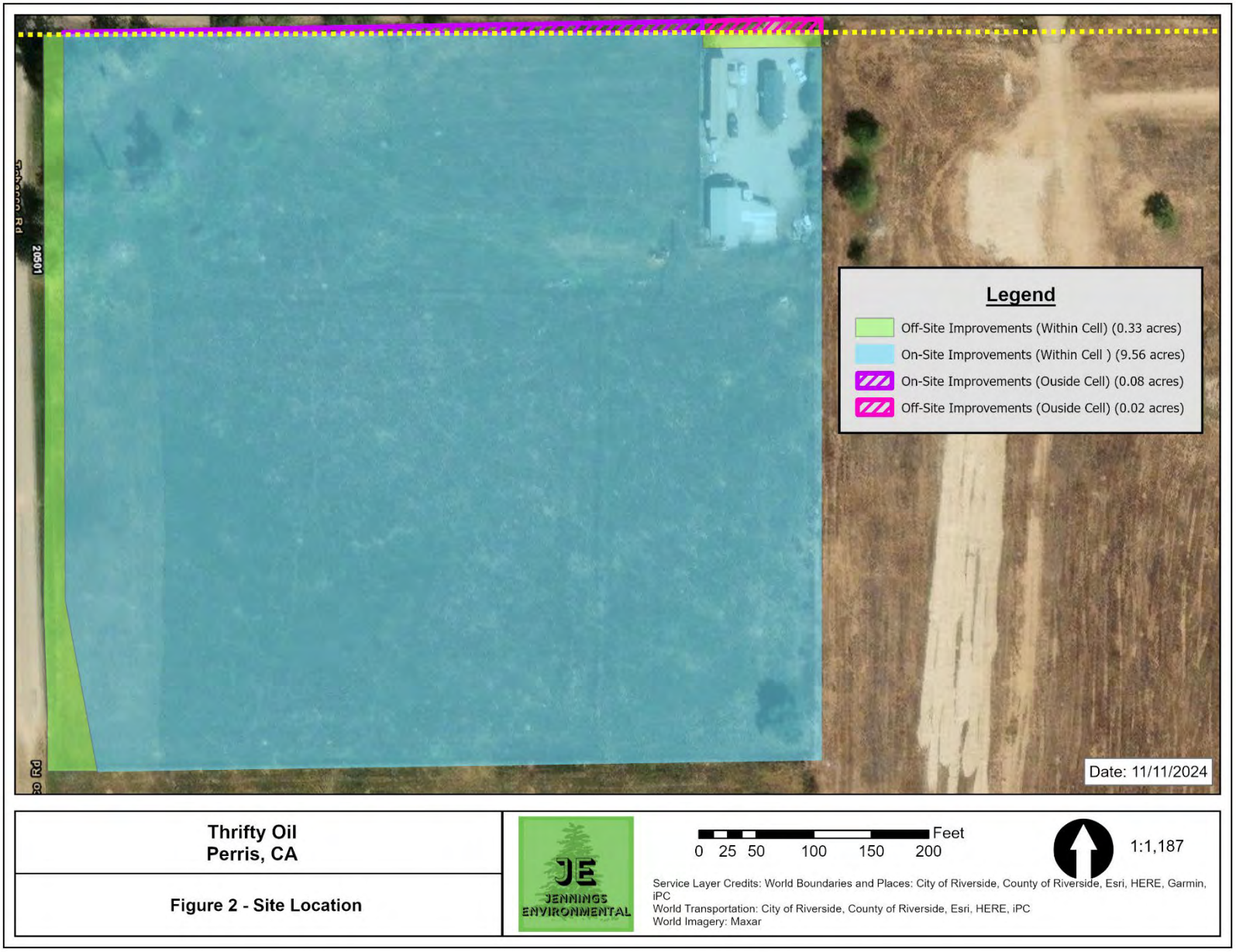
U.S. Department of Agriculture (USDA)
1999, Natural Resources Conservation Service, United States Department of Agriculture. Hydric Soils List [Online Edition]. Website https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316620.html [Accessed January 2024

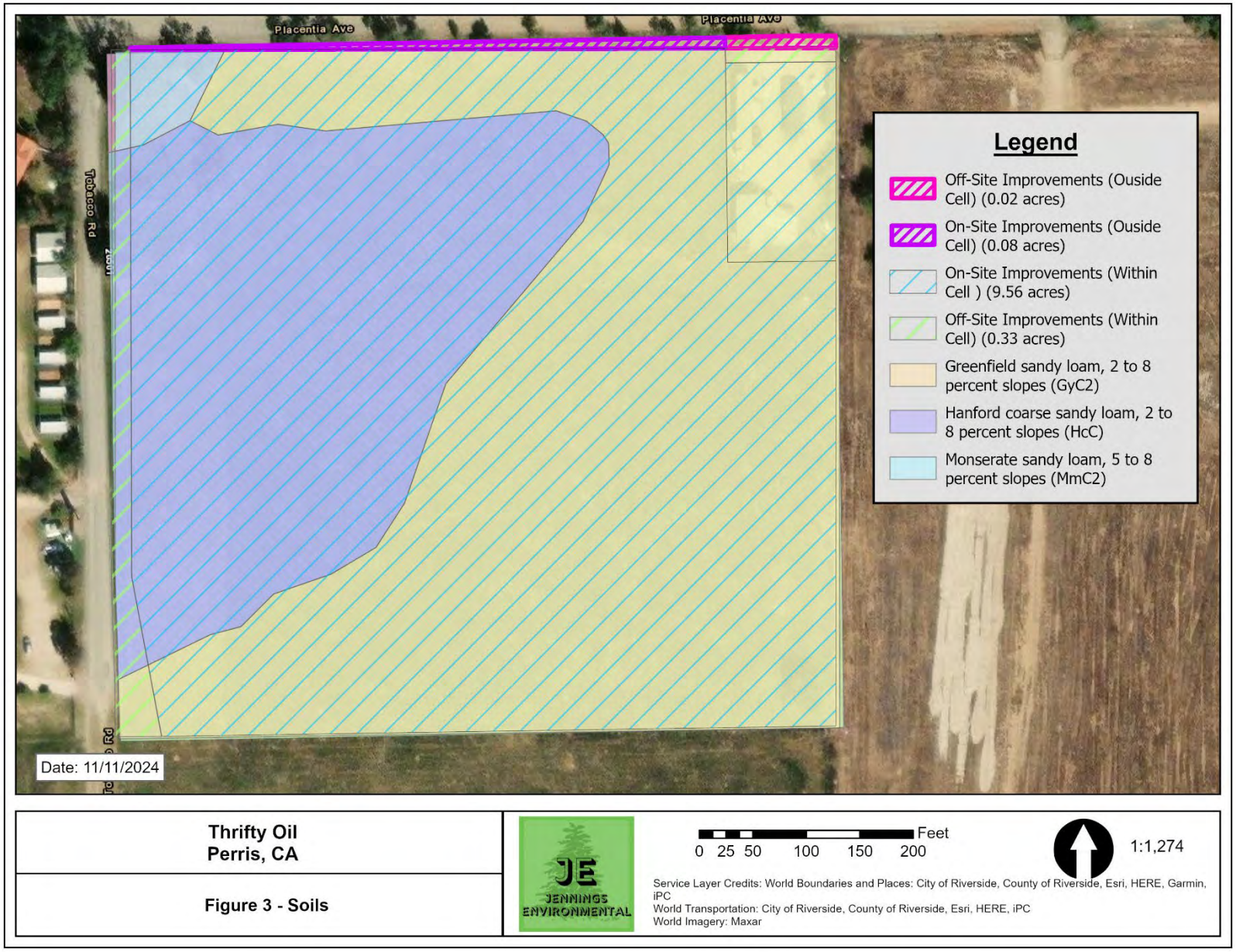
Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Volume 1 – The Plan (2003). https://www.wrc-rca.org/Permit_Docs/MSHCP/MSHCP-Volume%201.pdf Western

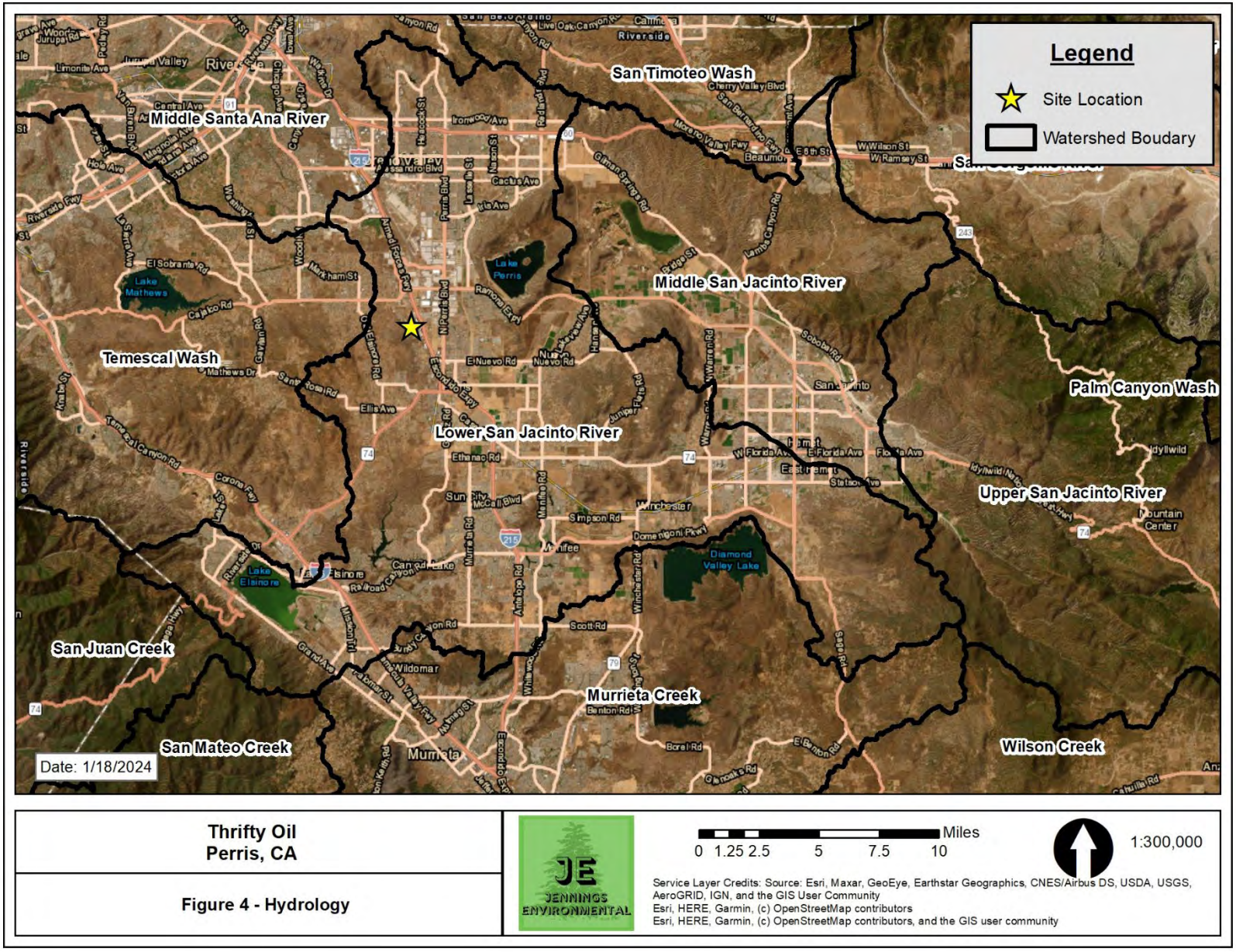
Riverside County Multiple Species Habitat Conservation Plan Burrowing Owl Survey Instructions https://www.wrc-rca.org/species/survey_protocols/burrowing_owl_survey_instructions.pdf

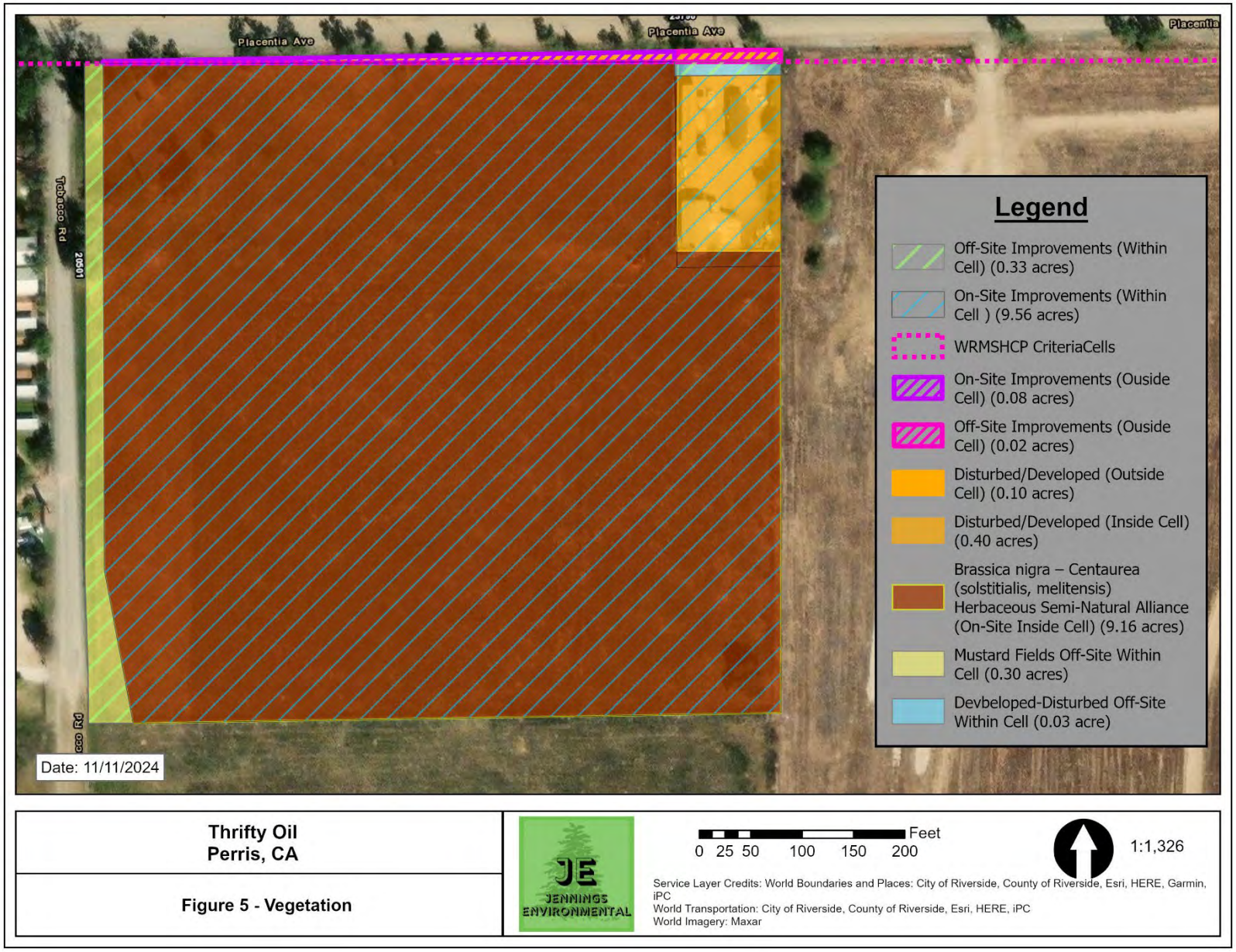
Appendix A - Figures

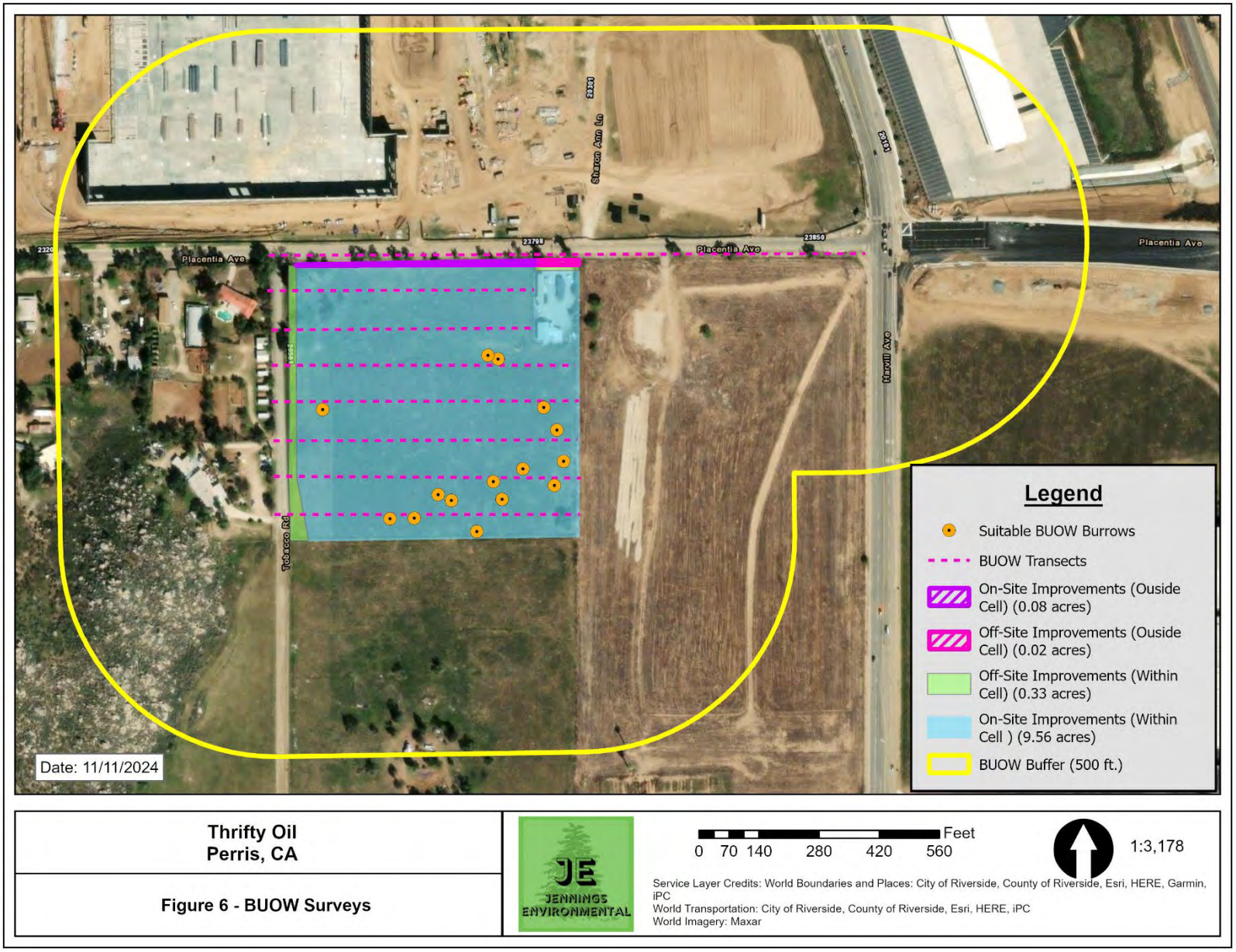

Legend
Site Location
Regional Overview
Los Angeles
El Monte
Pomona
Rancho Cucamonga
Ontario
Highland
Redlands
Yucaipa
Riverside
Corona
Anaheim
Long Beach
Santa Ana
Perris
Huntington
Rancho Santa Lake Margarita Forest
Laguna Niguel
Murrieta
Granite Spur
Pumping Station
Water Tank
Quarry
Val Verde Sch
Mayer Farms
Well
BM 1455
Date: 1/18/2024
Site Vicinity
Thrifty Oil
Perris, CA
Figure 1 - Regional Overview and Site Vicinity
JE
JENNINGS ENVIRONMENTAL
Miles
0 0.1 0.2 0.4 0.6 0.8
1:24,000
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Copyright:© 2013 National Geographic Society, i-cubed

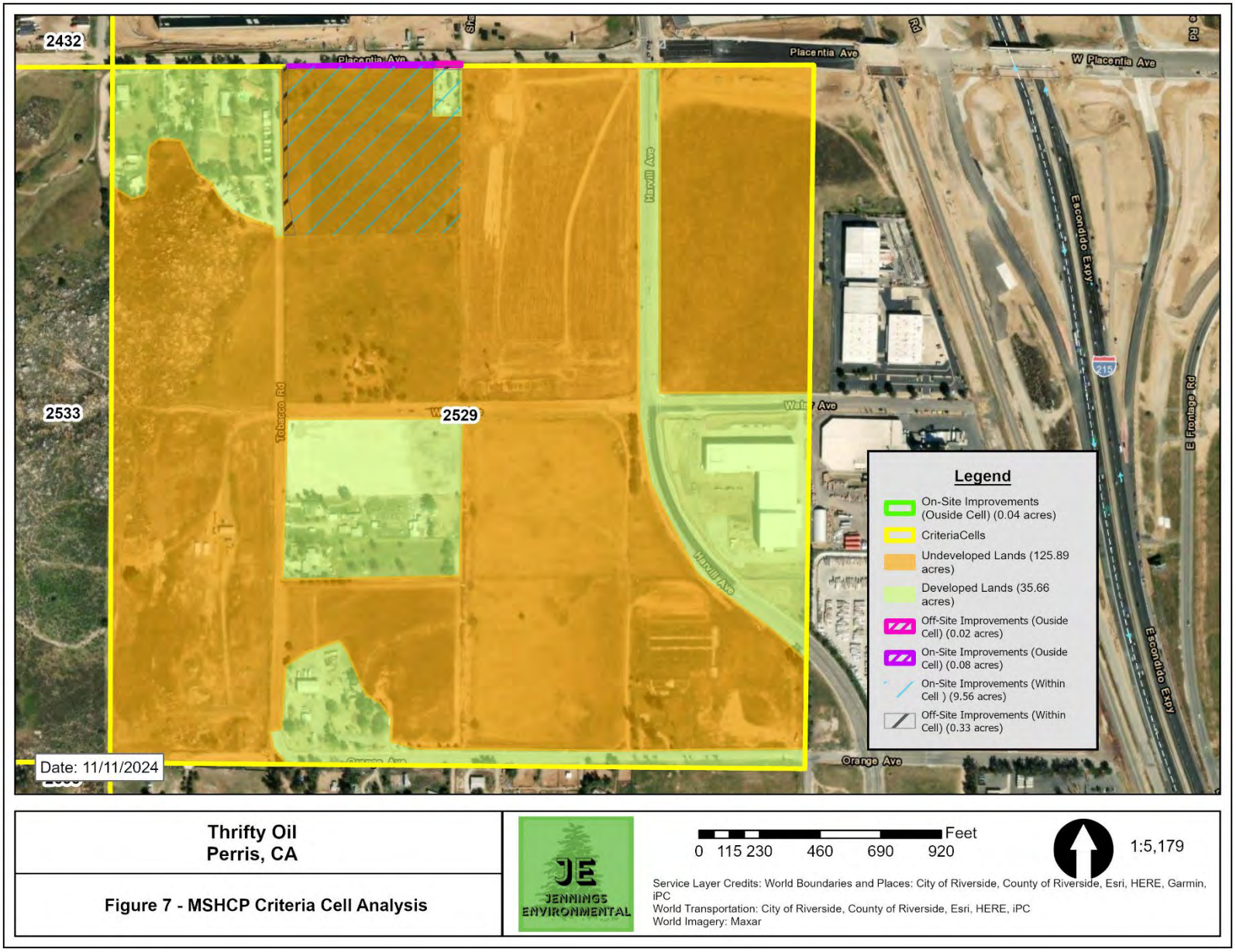

Legend
Off-Site Improvements (Within Cell) (0.33 acres)
On-Site Improvements (Within Cell) (9.56 acres)
On-Site Improvements (Ouside Cell) (0.08 acres)
Off-Site Improvements (Ouside Cell) (0.02 acres)
Date: 11/11/2024
Thrifty Oil
Perris, CA
Figure 2 - Site Location
JE
JENNINGS ENVIRONMENTAL
0 25 50 100 150 200
Feet
1:1,187
Service Layer Credits: World Boundaries and Places: City of Riverside, County of Riverside, Esri, HERE, Garmin, iPC
World Transportation: City of Riverside, County of Riverside, Esri, HERE, iPC
World Imagery: Maxar


Placentia Ave
Placentia Ave
Tobacco Rd
Legend
Off-Site Improvements (Ouside Cell) (0.02 acres)
On-Site Improvements (Ouside Cell) (0.08 acres)
On-Site Improvements (Within Cell) (9.56 acres)
Off-Site Improvements (Within Cell) (0.33 acres)
Greenfield sandy loam, 2 to 8 percent slopes (GyC2)
Hanford coarse sandy loam, 2 to 8 percent slopes (HcC)
Monserate sandy loam, 5 to 8 percent slopes (MmC2)
Date: 11/11/2024
Thrifty Oil
Perris, CA
Figure 3 - Soils
JE
JENNINGS ENVIRONMENTAL
Feet
0 25 50 100 150 200
1:1,274
Service Layer Credits: World Boundaries and Places: City of Riverside, County of Riverside, Esri, HERE, Garmin, iPC
World Transportation: City of Riverside, County of Riverside, Esri, HERE, iPC
World Imagery: Maxar


Legend
Site Location
Watershed Boudary
San Timoteo Wash
Middle Santa Ana River
Middle San Jacinto River
Temescal Wash
Lower San Jacinto River
Palm Canyon Wash
Upper San Jacinto River
San Juan Creek
Murrieta Creek
San Mateo Creek
Wilson Creek
Lake Perris
Lake Mathews
Lake Elsinore
Diamond Valley Lake
Date: 1/18/2024
Thrifty Oil
Perris, CA
Figure 4 - Hydrology
JE
JENNINGS ENVIRONMENTAL
Miles
0 1.25 2.5 5 7.5 10
1:300,000
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Esri, HERE, Garmin, (c) OpenStreetMap contributors
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community


Placentia Ave
Placentia Ave
Placentia
Tobacco Rd
Legend
Off-Site Improvements (Within Cell) (0.33 acres)
On-Site Improvements (Within Cell) (9.56 acres)
WRMSHCP CriteriaCells
On-Site Improvements (Ouside Cell) (0.08 acres)
Off-Site Improvements (Ouside Cell) (0.02 acres)
Disturbed/Developed (Outside Cell) (0.10 acres)
Disturbed/Developed (Inside Cell) (0.40 acres)
Brassica nigra – Centaurea (solstitialis, melitensis) Herbaceous Semi-Natural Alliance (On-Site Inside Cell) (9.16 acres)
Mustard Fields Off-Site Within Cell (0.30 acres)
Devbeloped-Disturbed Off-Site Within Cell (0.03 acre)
Date: 11/11/2024
Thrifty Oil
Perris, CA
Figure 5 - Vegetation
JE
JENNINGS ENVIRONMENTAL
0 25 50 100 150 200 Feet
1:1,326
Service Layer Credits: World Boundaries and Places: City of Riverside, County of Riverside, Esri, HERE, Garmin, iPC
World Transportation: City of Riverside, County of Riverside, Esri, HERE, iPC
World Imagery: Maxar


Placentia Ave
Placentia Ave
Placentia Ave
Sharon Ann Ln
Harvill Ave
Tobacco Rd
23708
23850
Date: 11/11/2024
Legend
Suitable BUOW Burrows
BUOW Transects
On-Site Improvements (Ouside Cell) (0.08 acres)
Off-Site Improvements (Ouside Cell) (0.02 acres)
Off-Site Improvements (Within Cell) (0.33 acres)
On-Site Improvements (Within Cell) (9.56 acres)
BUOW Buffer (500 ft.)
Thrifty Oil
Perris, CA
Figure 6 - BUOW Surveys
JE
JENNINGS ENVIRONMENTAL
0 70 140 280 420 560
Feet
1:3,178
Service Layer Credits: World Boundaries and Places: City of Riverside, County of Riverside, Esri, HERE, Garmin, iPC
World Transportation: City of Riverside, County of Riverside, Esri, HERE, iPC
World Imagery: Maxar


2432
2533
2529
Placentia Ave
W Placentia Ave
Harvill Ave
Tobacco Rd
Escondido Expy
215
E Frontage Rd
Orange Ave
Date: 11/11/2024
Legend
On-Site Improvements (Ouside Cell) (0.04 acres)
CriteriaCells
Undeveloped Lands (125.89 acres)
Developed Lands (35.66 acres)
Off-Site Improvements (Ouside Cell) (0.02 acres)
On-Site Improvements (Ouside Cell) (0.08 acres)
On-Site Improvements (Within Cell) (9.56 acres)
Off-Site Improvements (Within Cell) (0.33 acres)
Thrifty Oil
Perris, CA
Figure 7 - MSHCP Criteria Cell Analysis
JE
JENNINGS ENVIRONMENTAL
0 115 230 460 690 920
Feet
1:5,179
Service Layer Credits: World Boundaries and Places: City of Riverside, County of Riverside, Esri, HERE, Garmin, iPC
World Transportation: City of Riverside, County of Riverside, Esri, HERE, iPC
World Imagery: Maxar

Appendix B - Photos

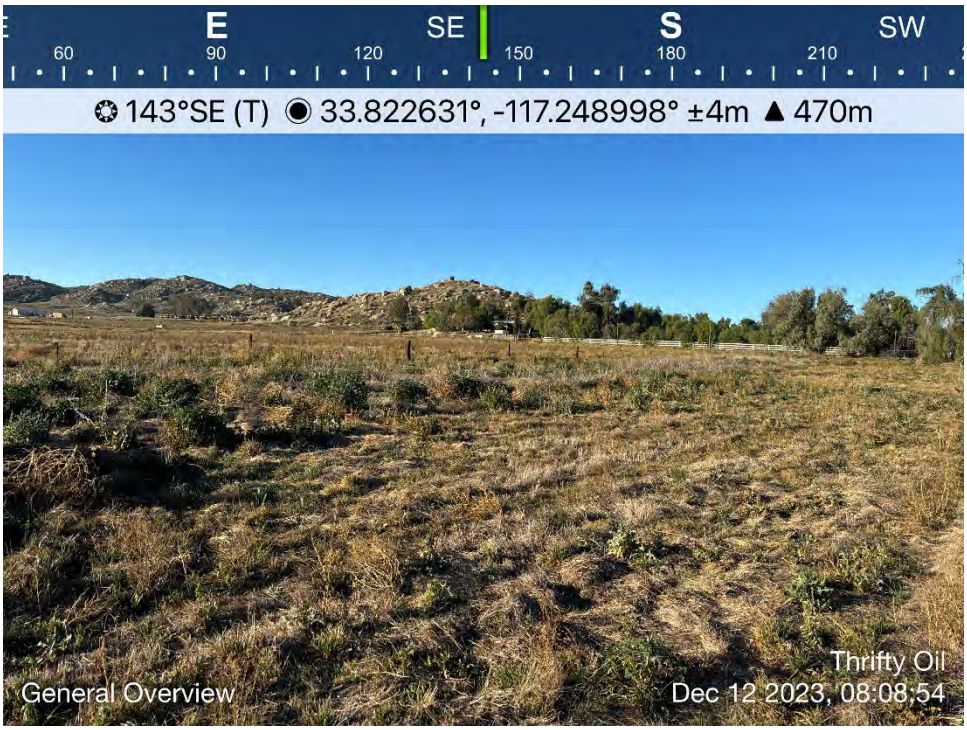
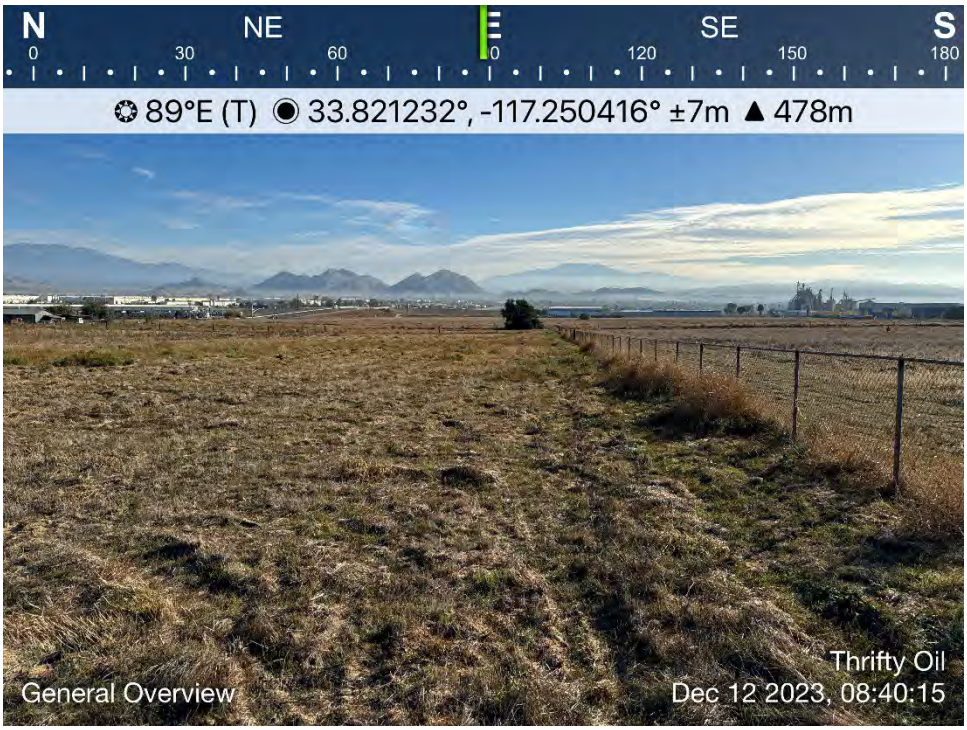
	Photo 1 – Northwest Corner
	Photo 2 – Northeast Corner

	Photo 3 – Eastern edge of site
	Photo 4 – Eastern edge of site

	Photo 5 – Southwest corner
	Photo 6 – Southwest corner

Appendix C – Regulatory Framework

1.1 FEDERAL JURISDICTION

1.1.1 United States Army Corps of Engineers

Activities within inland streams, wetlands, and riparian areas in California are regulated by agencies at the federal, state, and regional levels. At the federal level, the U.S. Army Corps of Engineers (USACE) Regulatory Program regulates activities within wetlands and waters of the US pursuant to Section 404 of the Federal Clean Water Act (CWA).

At the state level, the California Department of Fish and Wildlife (CDFW) regulates activities within the bed, bank, and associated habitat of a stream under the Fish and Game Code §§ 1600–1616. The California State Water Resources Board (SWRB) delegates authority at the regional level to Regional Water Quality Control Boards (RWQCB) that are responsible for regulating discharge into waters of the US under Section 401 of the federal CWA and waters of the State under the California Porter-Cologne Water Quality Act.

The CWA was implemented to maintain and restore the chemical, physical, and biological integrity of the Waters of the United States (33 Code of Federal Regulations [CFR] Part 328 Section 328.3). "Waters of the US" are defined as follows:

> **§ 328.3 Definitions.**
> For the purpose of this regulation these terms are defined as follows:
> (a) *Waters of the United States* means:
> (1) Waters which are:
> (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
> (ii) The territorial seas; or
> (iii) Interstate waters, including interstate wetlands;
> (2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;
> (3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section:
> (i) That are relatively permanent, standing or continuously flowing bodies of water; or
> (ii) That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section;
> (4) Wetlands adjacent to the following waters:
> (i) Waters identified in paragraph (a)(1) of this section; or

(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3)(i) of this section and with a continuous surface connection to those waters; or

(iii) Waters identified in paragraph (a)(2) or (3) of this section when the wetlands either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section;

(5) Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4) of this section:

(i) That are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3)(i) of this section; or

(ii) That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section.

(b) The following are not ‘‘waters of the United States’’ even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area’s status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (*e.g.,* gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(c) In this section, the following definitions apply:

(1) *Wetlands* means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically

adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

(2) *Adjacent* means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes, and the like are ''adjacent wetlands.''

(3) *High tide line* means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such at those accompanying a hurricane or other intense storm.

(4) *Ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

(5) *Tidal waters* means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

(6) *Significantly affect* means a material influence on the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section. To determine whether waters, either alone or in combination with similarly situated waters in the region, have a material influence on the chemical, physical, or biological integrity of waters identified in paragraph (a)(1) of this section, the

functions identified in paragraph (c)(6)(i) of this section will be assessed and the factors identified in paragraph (c)(6)(ii) of this section will be considered:

(i) Functions to be assessed:

(A) Contribution of flow;

(B) Trapping, transformation, filtering, and transport of materials (including nutrients, sediment, and other pollutants);

(C) Retention and attenuation of floodwaters and runoff;

(D) Modulation of temperature in waters identified in paragraph (a)(1) of this section; or

(E) Provision of habitat and food resources for aquatic species located in waters identified in paragraph (a)(1) of this section;

(ii) Factors to be considered:

(A) The distance from a water identified in paragraph (a)(1) of this section;

(B) Hydrologic factors, such as the frequency, duration, magnitude, timing, and rate of hydrologic connections, including shallow subsurface flow;

(C) The size, density, or number of waters that have been determined to be similarly situated;

(D) Landscape position and geomorphology; an

(E) Climatological variables such as temperature, rainfall, and snowpack.

1.2 STATE JURISDICTION

The State of California (State) regulates discharge of material into waters of the State pursuant to Section 401 of the CWA as well as the California Porter-Cologne Water Quality Control Act (Porter-Cologne; California Water Code, Division 7, §13000 et seq.). Waters of the State are defined by Porter-Cologne as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code Section 13050(e)). Waters of the State broadly includes all waters within the State's boundaries (public or private), including waters in both natural and artificial channels.

1.2.1 Regional Water Quality Control Board

Under Porter-Cologne, the State Water Resources Control Board (SWRCB) and the local Regional Water Quality Control Boards (RWQCB) regulate the discharge of waste into waters of the State. Discharges of waste include "fill, any material resulting from human activity, or any other 'discharge' that may directly or indirectly impact 'waters of the state.'" Porter-Cologne reserves the right for the State to regulate activities that could affect the quantity and/or quality of surface

and/or groundwaters, including isolated wetlands, within the State. Wetlands were defined as waters of the State if they demonstrated both wetland hydrology and hydric soils. Waters of the State determined to be jurisdictional for these purposes require, if impacted, waste discharge requirements (WDRs).

When an activity results in fill or discharge directly below the OHWM of jurisdictional waters of the United States (federal jurisdiction), including wetlands, a CWA Section 401 Water Quality Certification is required. If a proposed project is not subject to CWA Section 401 certification but involves activities that may result in a discharge to waters of the State, the project may still be regulated under Porter-Cologne and may be subject to waste discharge requirements. In cases where waters apply to both CWA and Porter-Cologne, RWQCB may consolidate permitting requirements to one permit.

1.2.2 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1602 of the California Fish and Game Code, the California Department of Fish and Wildlife (CDFW) regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation" (California Code of Regulations, Title 14, Section 1.72). The jurisdiction of CDFW may include areas in or near intermittent streams, ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams that are indicated on USGS maps, watercourses that may contain subsurface flows, or within the flood plain of a water body. CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." CDFW limits of jurisdiction typically include the maximum extents of the uppermost bank-to-bank distance and/or the outermost extent of riparian vegetation dripline, whichever measurement is greater.

In a CDFW guidance of stream processes and forms in dryland watersheds (Vyverberg 2010), streams are identified as having one or more channels that may all be active or receive water only during some high flow event. Subordinate features, such as low flow channels, active channels, banks associated with secondary channels, floodplains, and stream-associated vegetation, may occur within the bounds of a single, larger channel. The water course is defined by the topography or elevations of land that confine a stream to a definite course when its waters rise to their highest level. A watercourse is defined as a stream with boundaries defined by the maximal extent or expression on the landscape even though flow may otherwise be intermittent or ephemeral.

Artificial waterways such as ditches (including roadside ditches), canals, aqueducts, irrigation ditches, and other artificially created water conveyance systems also may be under the

jurisdiction of CDFW. CDFW may claim jurisdiction over these features based on the presence of habitat characteristics suitable to support aquatic life, riparian vegetation, and/or stream-dependent terrestrial wildlife. As with natural waterways, the limit of CDFW jurisdiction of artificial waterways includes the uppermost bank-to-bank distance and/or the outermost extent of riparian vegetation dripline, whichever measurement is greater.

CDFW does not have jurisdiction over wetlands but has jurisdiction to protect against a net loss of wetlands. CDFW supports the wetland criteria recognized by USFWS; one or more indicators of wetland conditions must exist for wetlands conditions to be considered present. The following is the USFWS accepted definition of a wetland:

> Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports hydrophytes, (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year (Cowardin et al. 1979).

In A Clarification of the U.S. Fish and Wildlife Service's Wetland Definition (Tiner 1989), the USFWS definition was further clarified "that in order for any area to be classified as wetland by the Service, the area must be periodically saturated or covered by shallow water, whether wetland vegetation and/or hydric soils are present or not; this hydrologic requirement is addressed in the first sentence of the definition." When considering whether an action would result in a net loss of wetlands, CDFW will extend jurisdiction to USFWS-defined wetland conditions where such conditions exist within the riparian vegetation that is associated with a stream or lake and does not depend on whether those features meet the three-parameter USACE methodology of wetland determination. If impacts to wetlands under the jurisdiction of CDFW are unavoidable, a mitigation plan will be implemented in coordination with CDFW to support the CDFW policy of "no net loss" of wetland habitat.

Appendix D – Tables

Table 1. Species Observed On-Site

Common Name	Scientific Name
Plants	
Lemon scented gum	*Corymbia citriodora*
Cheese weed	*Malva parviflora*
Peruvian pepper tree	*Schinus molle*
Nettle-leaved goosefoot	*Chenopodiastrum murale*
Short-pod mustard	*Hirschfeldia incana*
London rocket	*Sisymbrium irio*
Chinese pistache	*Pistacia chinensis*
Common fiddleneck	*Amsinckia intermedia*
Brittlebush	*Encelia farinosa*
Common stork's bill	*Erodium cicutarium*
Wall barley	*Hordeum murinum*
Stinknet	*Oncosiphon piluliferum*
Tree tobacco	*Nicotiana glauca*
Prickley lettuce	*Lactuca serriola*
Tumble weed	*Kali tragus*
Olive tree	*Olea europaea*
Dove weed	*Croton setiger*
Tamarisk	*Tamarix ssp.*
Birds	
Yellow-rumped warbler	*Setophaga coronata*
House finch	*Haemorhous mexicanus*
European starling	*Sturnus vulgaris*
House sparrow	*Passer domesticus*
White crowned sparrow	*Zonotrichia leucophrys*
Cassin's kingbird	*Tyrannus vociferans*
Killdeer	*Charadrius vociferus*
Ruby crowned kinglet	*Corthylio calendula*
Lesser goldfinch	*Spinus psaltria*
Northern mockingbird	*Mimus polyglottos*
Mourning dove	*Zenaida macroura*

Common raven	*Corvus corax*
Anna's hummingbird	*Calypte anna*
Red-tailed hawk	*Buteo jamaicensis*

Table 2 – CNDDB Potential to Occur for the *Perris and Steele Peak* Quadrangle

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Abronia villosa var. aurita	chaparral sand-verbena	None, None	G5T2?, S2, 1B.1	Chaparral, coastal scrub, desert dunes. Sandy areas. -60-1570 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Accipiter cooperii	Cooper's hawk	None, None	G5, S4, CDFW-WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Agelaius tricolor	tricolored blackbird	None, Threatened	G1G2, S2, CDFW-SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	None, None	G5T3, S4, CDFW-WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Allium munzii	Munz's onion	Endangered, Threatened	G1, S1, 1B.1	Chaparral, coastal scrub, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Heavy clay soils; grows in grasslands and openings within shrublands or woodlands. 375-1040 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Anniella stebbinsi	Southern California legless lizard	None, None	G3, S3, CDFW-SSC	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Arizona elegans occidentalis	California glossy snake	None, None	G5T2, S2, CDFW-SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Artemisiospiza belli belli	Bell's sparrow	None, None	G5T2T3, S3, CDFW-WL	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Asio otus	long-eared owl	None, None	G5, S3?, CDFW-SSC	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Aspidoscelis hyperythra	orange-throated whiptail	None, None	G5, S2S3, CDFW-WL	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Aspidoscelis tigris stejnegeri	coastal whiptail	None, None	G5T5, S3, CDFW-SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Athene cunicularia	burrowing owl	None, None	G4, S2, CDFW-SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Suitable habitat for this species does occur on-site. **Pre-Construction Surveys are required.**
Atriplex coronata var. notatior	San Jacinto Valley crownscale	Endangered, None	G4T1, S1, 1B.1	Playas, valley and foothill grassland, vernal pools. Alkaline areas in the San Jacinto River Valley. 35-460 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Atriplex parishii	Parish's brittlescale	None, None	G1G2, S1, 1B.1	Vernal pools, chenopod scrub, playas. Usually on drying alkali flats with fine soils. 4-1420 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Atriplex serenana var. davidsonii	Davidson's saltscale	None, None	G5T1, S1, 1B.2	Coastal bluff scrub, coastal scrub. Alkaline soil. 0-480 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Bombus crotchii	Crotch bumble bee	None, Candidate Endangered	G2, S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Bombus pensylvanicus	American bumble bee	None, None	G3G4, S2,	Long-tongued; forages on a wide variety of flowers including vetches (Vicia), clovers (Trifolium), thistles (Cirsium), sunflowers (Helianthus), etc. Nests above ground under long grass or underground. Queens overwinter in rotten wood or underground.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Brodiaea filifolia	thread-leaved brodiaea	Threatened, Endangered	G2, S2, 1B.1	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 15-1030 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Caulanthus simulans	Payson's jewelflower	None, None	G4, S4, 4.2	Chaparral, coastal scrub. Frequently in burned areas, or in disturbed sites such as streambeds; also on rocky, steep slopes. Sandy, granitic soils. 90-2200 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Centromadia pungens ssp. laevis	smooth tarplant	None, None	G3G4T2, S2, 1B.1	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None, None	G5T3T4, S3S4	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego, Riverside, San Bernardino, and Los Angeles Counties, inclusive of Orange County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Chorizanthe parryi var. parryi	Parry's spineflower	None, None	G3T2, S2, 1B.1	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Chorizanthe polygonoides var. longispina	long-spined spineflower	None, None	G5T3, S3, 1B.2	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Gabbroic clay. 30-1630 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Crotalus ruber	red-diamond rattlesnake	None, None	G4, S3, CDFW-SSC	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Diadophis punctatus modestus	San Bernardino ringneck snake	None, None	G5T2T3, S2?	Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous veg.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Dipodomys merriami parvus	San Bernardino kangaroo rat	Endangered, Candidate Endangered	G5T1, S1, CDFW-SSC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Dipodomys stephensi	Stephens' kangaroo rat	Threatened, Threatened	G2, S3	Primarily annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Elanus leucurus	white-tailed kite	None, None	G5, S3S4, CDFW-FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Emys marmorata	western pond turtle	Proposed Threatened, None	G3G4, S3, CDFW-SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Eremophila alpestris actia	California horned lark	None, None	G5T4Q, S4, CDFW-WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Eumops perotis californicus	western mastiff bat	None, None	G4G5T4, S3S4, CDFW-SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Euphydryas editha quino	quino checkerspot butterfly	Endangered, None	G4G5T1T2, S1S2	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. Hills and mesas near the coast. Need high densities of food plants Plantago erecta, P. insularis, and Orthocarpus purpurescens.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Haliaeetus leucocephalus	bald eagle	Delisted, Endangered	G5, S3, CDFW-FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Harpagonella palmeri	Palmer's grapplinghook	None, None	G4, S3, 4.2	Chaparral, coastal scrub, valley and foothill grassland. Clay soils; open grassy areas within shrubland. 20-955 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Lasiurus xanthinus	western yellow bat	None, None	G4G5, S3, CDFW-SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	None, None	G4T2, S2, 1B.1	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1375 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	None, None	G5T3, S3, 4.3	Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None, None	G5T3T4, S3S4	Intermediate canopy stages of shrub habitats and open shrub / herbaceous and tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Myosurus minimus ssp. apus	little mousetail	None, None	G5T2Q, S2, 3.1	Vernal pools, valley and foothill grassland. Alkaline soils. 20-640 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Navarretia fossalis	spreading navarretia	Threatened, None	G2, S2, 1B.1	Vernal pools, chenopod scrub, marshes and swamps, playas. San Diego hardpan and San Diego claypan vernal pools; in swales and vernal pools, often surrouded by other habitat types. 15-850 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Neolarra alba	white cuckoo bee	None, None	GH, SH	Known only from localities in Southern California. Cleptoparasitic in the nests of perdita bees.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Neotoma lepida intermedia	San Diego desert woodrat	None, None	G5T3T4, S3S4, CDFW-SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Nyctinomops femorosaccus	pocketed free-tailed bat	None, None	G5, S3, CDFW-SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Onychomys torridus ramona	southern grasshopper mouse	None, None	G5T3, S3, CDFW-SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None, None	G5T2, S1S2, CDFW-SSC	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Phrynosoma blainvillii	coast horned lizard	None, None	G4, S4, CDFW-SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Polioptila californica californica	coastal California gnatcatcher	Threatened, None	G4G5T3Q, S2, CDFW-SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Southern Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	None, None	G4, S4	Riparian forest	This habitat type is **absent** form the Project site.
Southern Cottonwood Willow Riparian Forest	Southern Cottonwood Willow Riparian Forest	None, None	G3, S3.2	Riparian forest	This habitat type is **absent** form the Project site.
Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland	None, None	G4, S4	Riparian woodland	This habitat type is **absent** form the Project site.
Spea hammondii	western spadefoot	Proposed Threatened, None	G2G3, S3S4, CDFW-SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Taxidea taxus	American badger	None, None	G5, S3, CDFW-SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Texosporium sancti-jacobi	woven-spored lichen	None, None	G3, S2, 3	Chaparral. Open sites; in California with Adenostoma fasciculatum, Eriogonum, Selaginella. Found on soil, small mammal pellets, dead twigs, and on Selaginella. 60-870 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	None, None	G4T3, S1, 2B.1	Marshes and swamps, riparian forest, meadows and seeps, vernal pools. Mud flats of vernal lakes, drying river beds, alkali meadows. 5-435 m.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.
Vireo bellii pusillus	least Bell's vireo	Endangered, Endangered	G5T2, S3	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	Suitable habitat for this species does not occur on site. As such, this species is considered **absent** from the Project site.

Coding and Terms

E = Endangered T = Threatened C = Candidate FP = Fully Protected SSC = Species of Special Concern R = Rare

State Species of Special Concern: An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited acreages, and/or continuing threats. Raptor and owls are protected under section 3502.5 of the California Fish and Game code: "It is unlawful to take, possess or destroy any birds in the orders Falconiformes or Strigiformes or to take, possess or destroy the nest or eggs of any such bird."

State Fully Protected: The classification of Fully Protected was the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians and reptiles. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Global Rankings (Species or Natural Community Level):

G1 = Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2 = Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3 = Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4 = Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5 = Secure – Common; widespread and abundant.
? = Uncertainty in the exact status of an element (could move up or down one direction from current rank)

Subspecies Level: Taxa which are subspecies or varieties receive a taxon rank (T-rank**)** attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies. For example: the Point Reyes mountain beaver, *Aplodontia rufa* ssp. *phaea* is ranked G5T2. The G-rank refers to the whole species range i.e., *Aplodontia rufa.* The T-rank refers only to the global condition of ssp. *phaea*.

State Ranking:

S1 = Critically Imperiled – Critically imperiled in the State because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.
S2 = Imperiled – Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the State.
S3 = Vulnerable – Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the State.
S4 = Apparently Secure – Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors.
S5 = Secure – Common, widespread, and abundant in the State.

California Rare Plant Rankings (CNPS List):

1A = Plants presumed extirpated in California and either rare or extinct elsewhere.
1B = Plants rare, threatened, or endangered in California and elsewhere.
2A = Plants presumed extirpated in California, but common elsewhere.
2B = Plants rare, threatened, or endangered in California, but more common elsewhere.
3 = Plants about which more information is needed; a review list.
4 = Plants of limited distribution; a watch list.

Threat Ranks:

.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

35414 Acacia Ave.
Yucaipa, CA 92399
(909) 534-4547
www.jennings-environmental.com

June 16, 2024

Lilburn Corporation
Attn: Cheryl Tubbs
1905 Business Center Drive
San Bernardino, CA 92408
909-890-1818

RE: BURROWING OWL WESTERN RIVERSIDE MSHCP PROTOCOL SURVEY REPORT FOR THE DEVELOPMENT OF APNs: 317-260-017 and -18, IN UNINCORPORATED PERRIS, RIVERSIDE COUNTY, CALIFORNIA

Dear Ms. Tubbs:

Jennings Environmental, LLC (Jennings) is pleased to provide this letter report of findings for a pre-construction burrowing owl (BUOW) and nesting bird survey. This survey was conducted using the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) protocol for BUOW.

Summary information:

- *Date report prepared: June 16, 2024*
- *Project site location USGS – (Perris and Steele Peak 7.5 Minute Series Quadrangles) Section 13, Township 3 South, Range 4 West*
- *Assessor's Parcel Numbers: 317-260-017 and -18*
- *Owner/Applicant: Thrifty Oil*
- *Principal Investigators: Gene Jennings*
- *Name of person preparing the report: Gene Jennings*
- *Address: 35414 Acacia Ave., Yucaipa, CA 92399*
- *Phone: (909) 534-4547*
- *Report Summary: No active burrows or burrowing owl individuals were found on the site.*

Project Location

The Project is generally located within Section 13, Township 3 South, Range 4 West, and is depicted on the *Perris and Steele Peak* U.S. Geological Survey's (USGS) 7.5-minute topographic maps. More specifically the project is located within APNs 317-260-017 and -18, within unincorporated Perris, Riverside County, California. The Project site is located on the southeast corner of the intersection of Placentia Ave. and Tobacco Road. The site is surrounded by commercial development to the north, residential developments to the west and vacant land to the east and south. The Project site itself does contain one rural residence. (Figures 1 and 2 in Appendix A).

Project Understanding

The Project area is located within Western Riverside County and is subject to the Multi-Species Habitat Conservation Plan (MSHCP). The MSHCP requires that a project complies with the MSHCP policies identified in Section 6 of the MSHCP. The biological assessment completed in January 2023 determined that the site was suitable for BUOW. Therefore, Jennings has completed BUOW Protocol Surveys.

Riverside MSHCP BUOW Survey Requirements

Surveys should be conducted during weather that is conducive to observing owls outside their burrows and detecting burrowing owl sign. Surveys will not be accepted if they are conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. Subsequent surveys should be conducted in the morning one hour before sunrise to two hours after sunrise or in the early evening two hours before sunset to one hour after sunset. Count and map all burrowing owl sightings, occupied burrows, and burrows with owl sign. Record the location of all owls including numbers of pairs and juveniles and any behavior such as courtship and mating. Map the extent of all suitable habitat. It should be noted that owl sign may not be detectable if surveys are conducted within 5 days following rain. Absence of burrowing owl sign cannot be used to confirm absence of the species if the focused burrow survey is conducted within 5 days of rain.

BUOW Background

The BUOW is a small, ground-dwelling owl that is protected under the Migratory Bird Treaty Act (MBTA) and by CDFW as a Species of Special Concern. In southern California, BUOW can be found in grassland, shrub-steppe, and desert habitat types consisting of short, sparse vegetation with few shrubs, level to gentle topography, and well-drained soils. They can also be found in agricultural areas, ruderal grassy fields, vacant lots and pastures, and flood control facilities. Most importantly, BUOWs require underground burrows or other cavities for nesting, roosting, and shelter. Burrows used by the owls are usually dug by other species, termed host burrowers. In California, California ground squirrel (*Spermophilus beecheyi*) burrows are frequently used by BUOW but they may use dens or holes dug by other fossorial species or man-made structures such as pipes and culverts. They are active during the day, generally observed in the early morning hours or at twilight. The breeding season for BUOW is February 1 through August 31.

Site Characteristics

The habitat on-site consists of a mix of bare ground and *Brassica nigra – Centaurea* (*solstitialis*, *melitensis*) Herbaceous Semi-Natural Alliance (Upland Mustards or star-thistle fields). The site shows signs of vegetation management in the form of mowing or weed whacking. Additionally, there was a previous development within the northwest corner of the site that was removed sometime after 2016. Figure 5 in Appendix A shows the vegetation communities present onsite while Table 1 in Appendix D contains a list of all plants found on-site. Surrounding land uses include residential developments and commercial developments.

Methods

The first step in the assessment process is to walk the property to identify the presence of burrowing owl habitat on the project site. If habitat is found on the site, then walk a 150 meter (approximately 500 feet) buffer zone around the project boundary. If permission to access the buffer area cannot be obtained, do not trespass on adjacent property but visually inspect the adjacent habitat areas with binoculars and/or spotting scopes. Habitat assessments that do not include walking the property will not be accepted. Driving by a site and reporting it as disturbed or under agricultural/dairy use is not acceptable.

If burrowing owl habitat occurs on-site, both Step II (focused surveys, census, and mapping) and Preconstruction Surveys are required. If burrows are found during the habitat assessment then suitable habitat is present and Step II is required. However, lack of identifying burrows during the habitat assessment does not negate the need for the systematic search for burrows included as part of the Step II survey instructions. If burrowing owl habitat is not present on-site (i.e. if the site is completely covered by chaparral, cement or asphalt) Step II of the survey is not necessary. No Pre-construction surveys are necessary if there is no suitable habitat on-site.

Prior to performing the field surveys, available databases and documentation, such as the USFWS threatened and endangered species occurrence data overlay as well as the most recent versions of the California Natural Diversity Database (CNDDB) – BIOS, were reviewed for documented occurrences of BUOW in the local vicinity within the *Perris and Steele Peak* USGS 7.5-minute series quadrangles.

The field surveys were conducted by Jennings Biologist Gene Jennings, who has a degree in Biology and over 10 years of experience in conducting biological surveys throughout Riverside County. The surveys were conducted on calm weather days, during peak BUOW activity (one hour before sunrise and two hours after, and two hours before sunset and one hour after), in accordance with “Burrowing Owl Survey Instructions” required by the Western Riverside MSHCP.

Jennings Biologists conducted a comprehensive survey with complete coverage of the entire site and adjacent areas (when appropriate and feasible). The site was assessed for soil type, level of friability as well as habitat type, and habitat structure.

As per protocol, the site was systematically searched by walking transects spaced at approximately 100 feet (30 meters) which provided 100 percent visual coverage of the ground surface. Including a 500-foot buffer, where feasible. During the site visit, Jennings Biologists inspected all-natural and non-natural substrates and searched for signs of BUOW including, burrows, molted feathers, cast pellets, prey remains, and owl white-wash. They logged date time and weather conditions and used hand-held, global positioning system (GPS) units to survey straight transects, identify project boundaries, and for other pertinent information. A digital camera was used to take representative photographs, and ArcMap was accessed to provide recent aerial photographs of the project site and surrounding area.

Results

No limitations significantly affected the results and conclusions given herein. Surveys were conducted

during the appropriate season to observe the target species, in good weather conditions, by a qualified biologist who followed all pertinent protocols. The buffer area was surveyed using bionoculars as site access was not granted. Table 1 below details the conditions during the surveys and the results of each survey.

Table 1 – Non-Breeding Season BUOW Survey Results

Date	Sunrise/Sunset	Survey Time	Weather	Temperature °F	Observations
Habitat Assessment, Part A, and 1 Survey of Part B					
December 18, 2023	6:48 AM / 4:43 PM	0730 – 0830	Clear, 0 – 2 MPH wind	52 – 54	No BUOW Observed
Part B Surveys 2-4					
December 20, 2023	6:49 AM / 4:44 PM	0700 – 0800	Cloudy, 0 – 2 MPH Wind	54 – 57	No BUOW Observed
January 3, 2024	6:54 AM / 4:53 PM	0730 – 0800	Clear, No Wind	52 – 54	No BUOW Observed
January 18, 2024	6:53 AM / 5:06 PM	0700 – 0730	Clear, Light Wind, 0 – 2 MPH	45 – 47	No BUOW Observed

Table 2 – Breeding Season BUOW Survey Results

Date	Sunrise/Sunset	Survey Time	Weather	Temperature °F	Observations
Habitat Assessment, Part A, and 1 Survey of Part B					
May 27, 2024	5:41 AM / 7:52 PM	0630 – 0745	Clear, 0 – 2 MPH wind	58 – 59	No BUOW Observed
Part B Surveys 2-4					
May 30, 2024	5:40 AM / 7:54 PM	0700 – 0800	Clear, 0 – 2 MPH Wind	59 – 61	No BUOW Observed
June 2, 2024	5:39 AM / 7:56 PM	0645 – 0745	Pt. Cloudy, No Wind	60 – 61	No BUOW Observed
June 7, 2024	5:38 AM / 7:58 PM	0645 – 0745	Clear, 0 – 2 MPH wind	62 – 63	No BUOW Observed

Both non-breeding season and breeding season surveys were completed and no BUOW individuals were found on site. Additionally, no molted feathers, cast pellets, prey remains, or owl whitewash were observed.

Conclusions

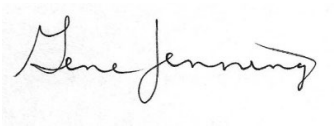
Based on the results of this Protocol survey, BUOW are absent from the site and no impacts to BUOW are anticipated to occur. Prior to construction, pre-construction surveys are warranted or recommended.

Since there is some habitat within the Project site and adjacent area that is suitable for BUOW in general, the following mitigation measure should be implemented:

A Pre-Construction Burrowing Owl Survey shall be conducted by a qualified biologist no more than 30-days prior to any ground disturbance activities. Surveys shall be completed following the recommendationsand guidelines provided within the Burrowing Owl Survey Instructions for the Western Riverside MSHCP (RCA, 2006). Surveys should be conducted during weather that is conducive to observing owls outside their burrows and detecting burrowing owl sign. Surveys will not be accepted if they are conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. Surveys should be conducted in the morning one hour before sunrise to two hours after sunrise or in the early evening two hours before sunset to one hour after sunset. Count and map all burrowing owl sightings, occupied burrows, and burrows with owl sign. Record the location of all owls including numbers of pairs and juveniles and any behavior such as courtship and mating. Map the extent of all suitable habitat. It should be noted that owl sign may not be detectable if surveys are conducted within 5 days following rain. If burrowing owls have colonized the project site prior to the initiation of ground-disturbing activities, the project proponent will need to immediately inform the RCA and the Wildlife Agencies, and will need to coordinate further with RCA and the Wildlife Agencies, including the possibility of preparing a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance.

Please do not hesitate to contact me at 909-534-4547 should you have any questions or require further information.

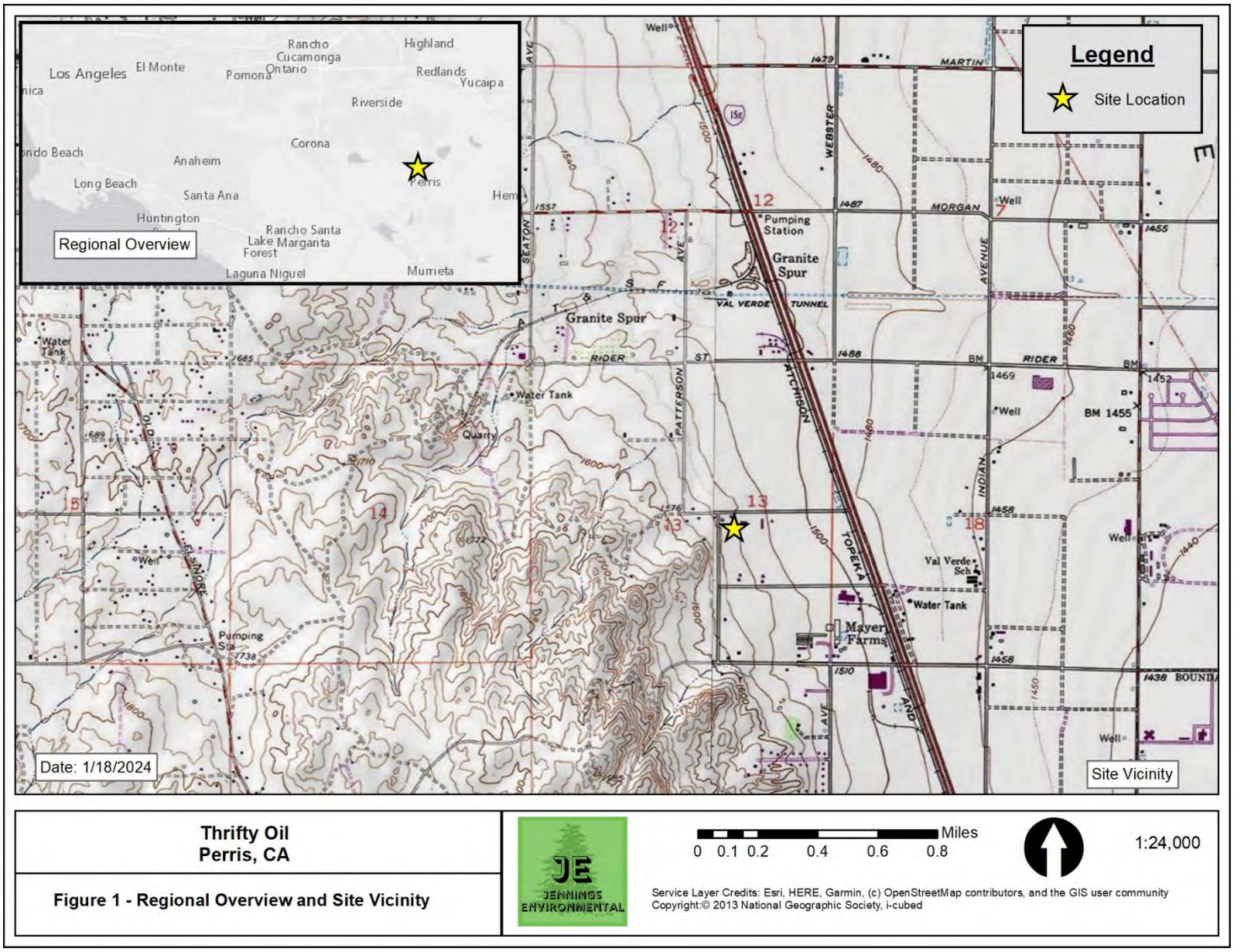
Sincerely,

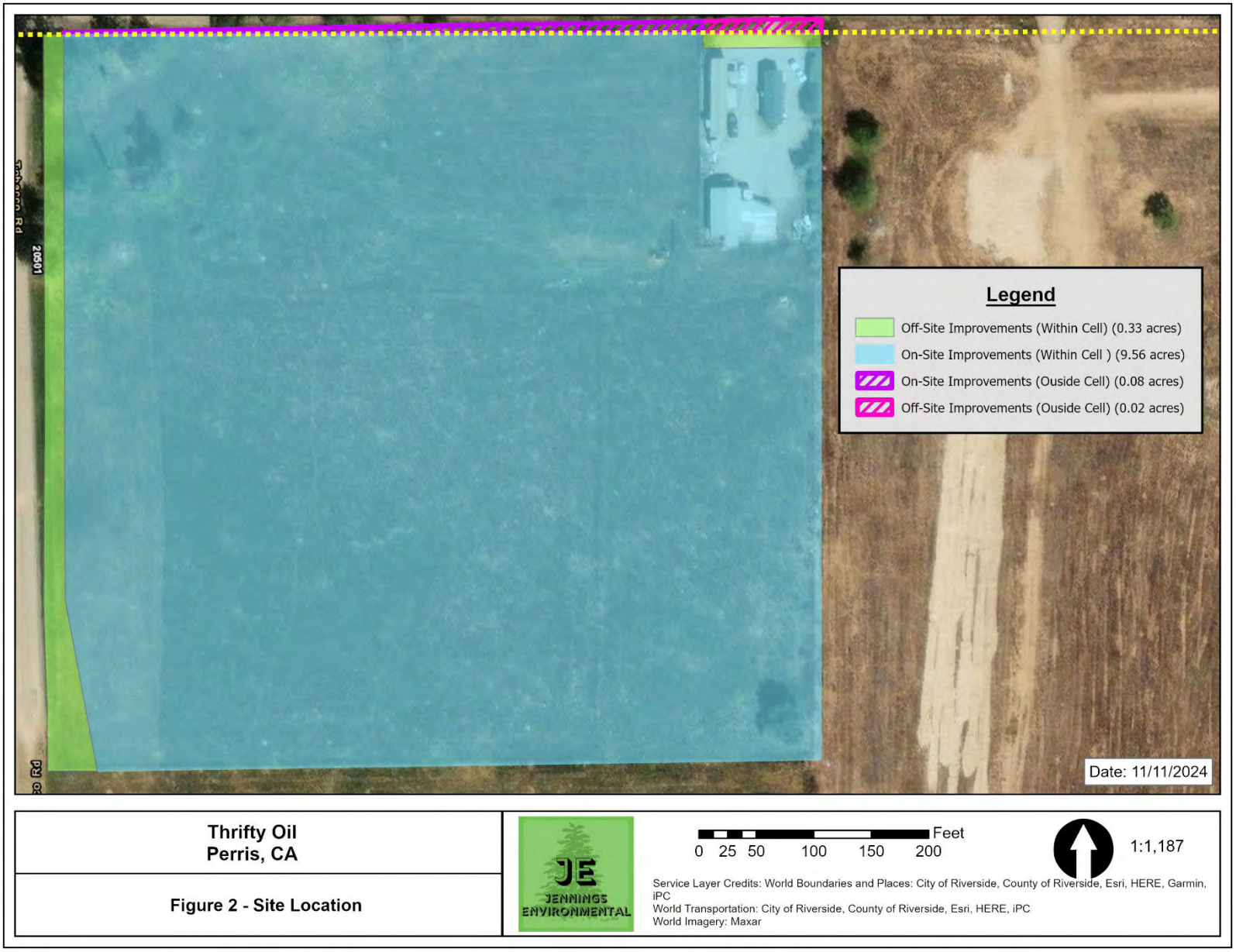


Gene Jennings,
Principal/Regulatory Specialist

Attachments:

Attachment 1 – Figures
Attachment 2 – Site Photos
Attachment 3 – Species Observed


Legend
Site Location
Regional Overview
Los Angeles
El Monte
Pomona
Rancho Cucamonga
Ontario
Highland
Redlands
Yucaipa
Riverside
Corona
Anaheim
Long Beach
Santa Ana
Perris
Huntington
Rancho Santa Lake Margarita Forest
Laguna Niguel
Murrieta
Granite Spur
Pumping Station
Water Tank
Quarry
Val Verde Sch
Mayer Farms
Well
BM 1455
Date: 1/18/2024
Site Vicinity
Thrifty Oil
Perris, CA
Figure 1 - Regional Overview and Site Vicinity
JE
JENNINGS ENVIRONMENTAL
Miles
0 0.1 0.2 0.4 0.6 0.8
1:24,000
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Copyright:© 2013 National Geographic Society, i-cubed


Legend
Off-Site Improvements (Within Cell) (0.33 acres)
On-Site Improvements (Within Cell) (9.56 acres)
On-Site Improvements (Ouside Cell) (0.08 acres)
Off-Site Improvements (Ouside Cell) (0.02 acres)
Date: 11/11/2024
Thrifty Oil
Perris, CA
Figure 2 - Site Location
JE
JENNINGS ENVIRONMENTAL
0 25 50 100 150 200
Feet
1:1,187
Service Layer Credits: World Boundaries and Places: City of Riverside, County of Riverside, Esri, HERE, Garmin, iPC
World Transportation: City of Riverside, County of Riverside, Esri, HERE, iPC
World Imagery: Maxar

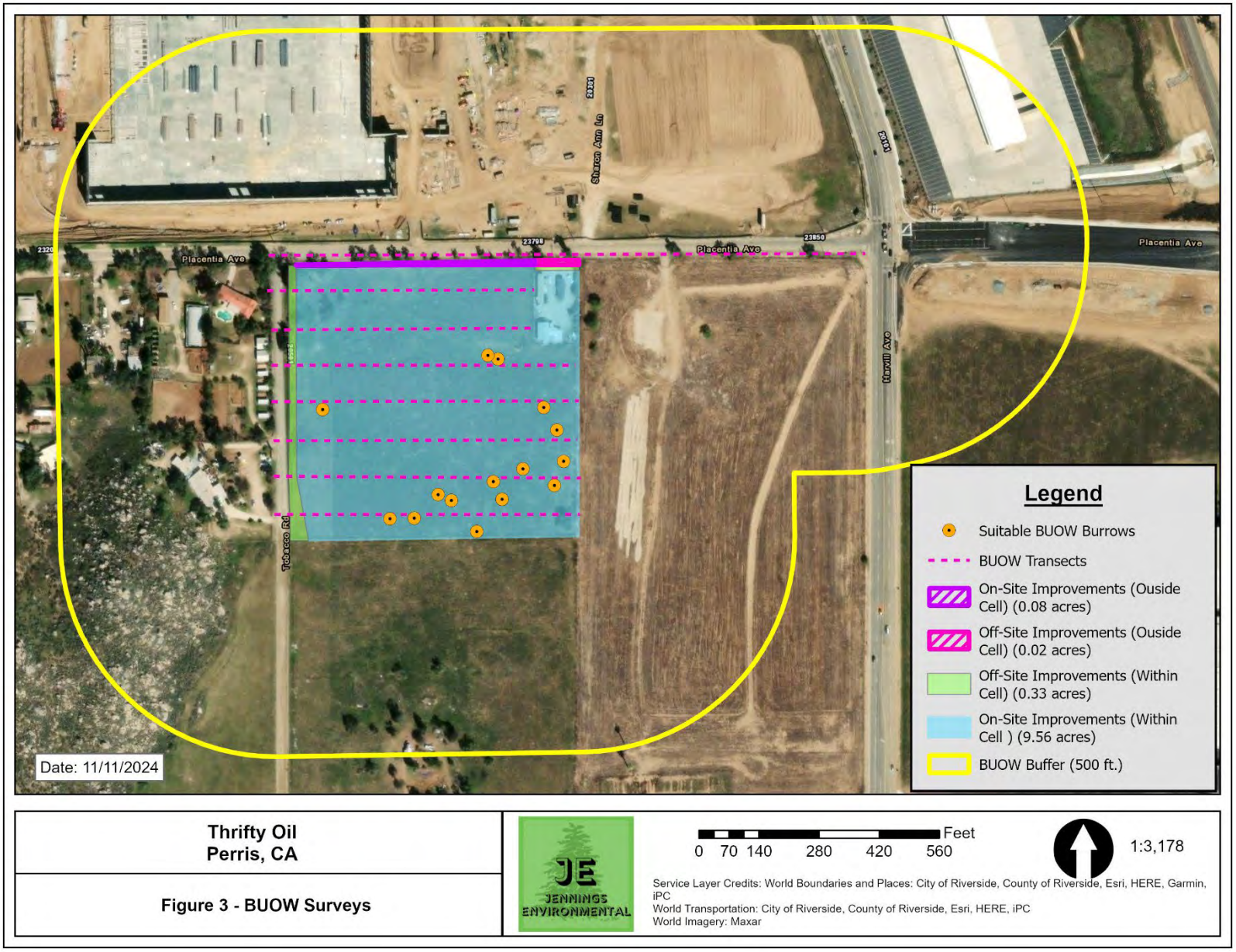
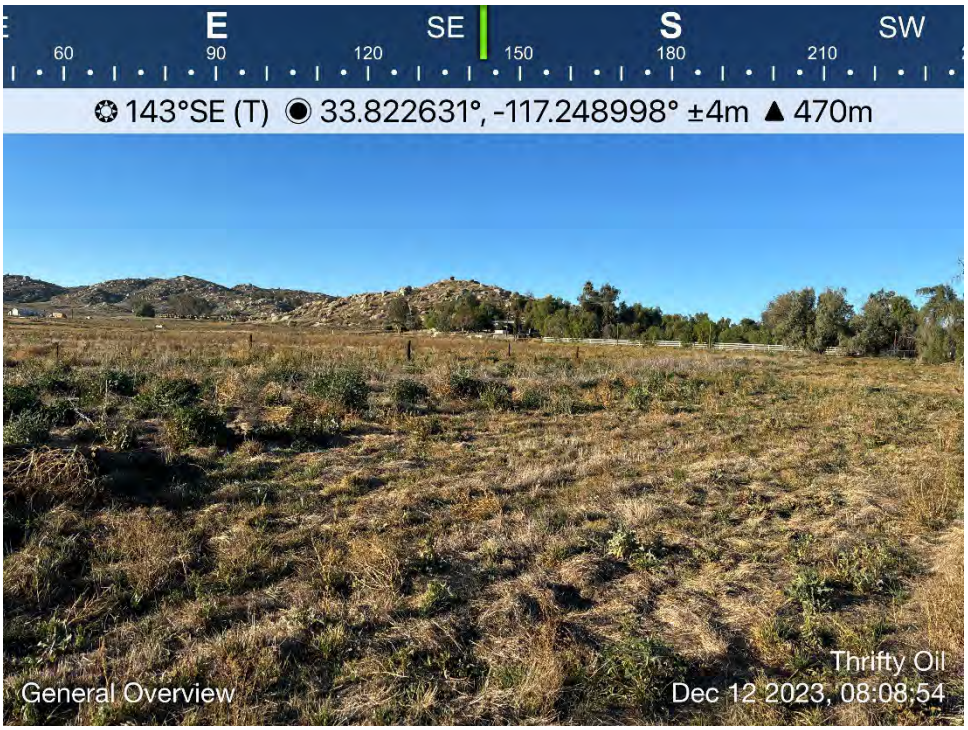
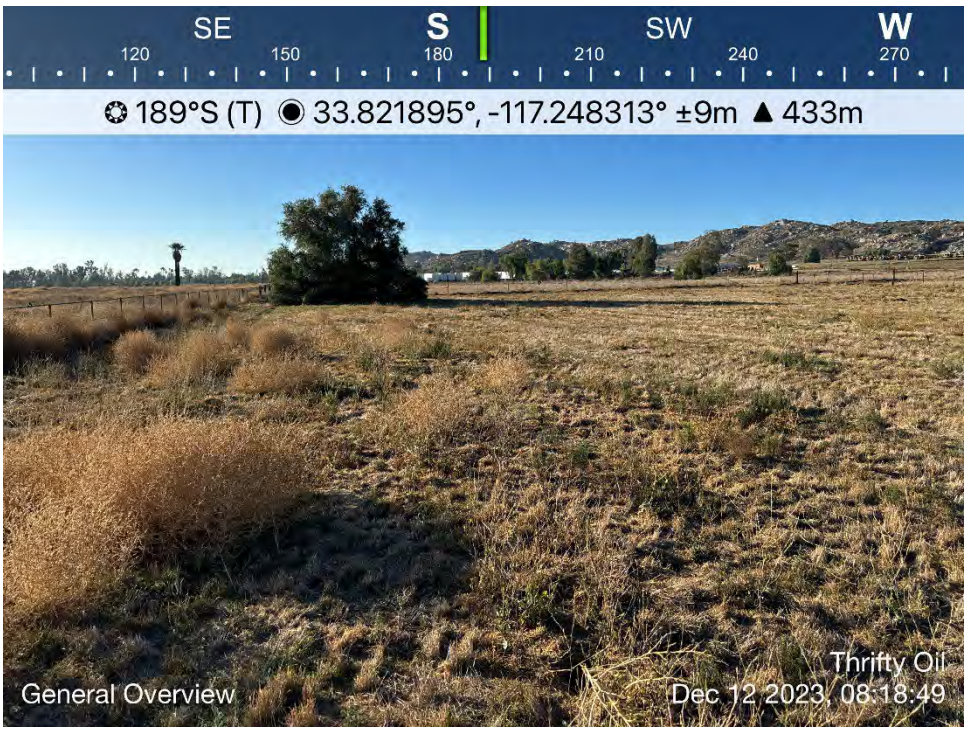

Placentia Ave
Placentia Ave
Placentia Ave
Sharon Ann Ln
Harvill Ave
Tobacco Rd
23708
23850
Date: 11/11/2024
Legend
Suitable BUOW Burrows
BUOW Transects
On-Site Improvements (Ouside Cell) (0.08 acres)
Off-Site Improvements (Ouside Cell) (0.02 acres)
Off-Site Improvements (Within Cell) (0.33 acres)
On-Site Improvements (Within Cell) (9.56 acres)
BUOW Buffer (500 ft.)
Thrifty Oil
Perris, CA
Figure 3 - BUOW Surveys
JE
JENNINGS ENVIRONMENTAL
0 70 140 280 420 560
Feet
1:3,178
Service Layer Credits: World Boundaries and Places: City of Riverside, County of Riverside, Esri, HERE, Garmin, iPC
World Transportation: City of Riverside, County of Riverside, Esri, HERE, iPC
World Imagery: Maxar

	Photo 1 – Northwest Corner
	Photo 2 – Northeast Corner

Attachment 2 - Photos

	Photo 3 – Eastern edge of site
	Photo 4 – Eastern edge of site

Attachment 2 - Photos

	Photo 5 – Southwest corner
	Photo 6 – Southwest corner

Attachment 2 - Photos



Photo 7



Photo 8

Attachment 2 - Photos



Photo 9



Photo 10

Attachment 2 - Photos

	Photo 11
	Photo 12

Attachment 2 - Photos

	Photo 13
	Photo 14

Attachment 2 - Photos

	Photo 15
	Photo 16

Attachment 2 - Photos

	Photo 17
	Photo 18

Attachment 2 - Photos

	Photo 20
	Photo 21

Attachment 2 - Photos

	Photo 22
	Photo 23

Animal Species Observed

Birds	
Yellow-rumped warbler	*Setophaga coronata*
House finch	*Haemorhous mexicanus*
European starling	*Sturnus vulgaris*
House sparrow	*Passer domesticus*
White crowned sparrow	*Zonotrichia leucophrys*
Cassin's kingbird	*Tyrannus vociferans*
Killdeer	*Charadrius vociferus*
Ruby crowned kinglet	*Corthylio calendula*
Lesser goldfinch	*Spinus psaltria*
Northern mockingbird	*Mimus polyglottos*
Mourning dove	*Zenaida macroura*
Common raven	*Corvus corax*
Anna's hummingbird	*Calypte anna*
Red-tailed hawk	*Buteo jamaicensis*

A PHASE I CULTURAL RESOURCES STUDY FOR THE THRIFTY OIL WAREHOUSE PROJECT

PPT230048, PDA 8407, OAPL2300972
RIVERSIDE COUNTY, CALIFORNIA

APN 317-260-017 and -018

Project Site Location: Section 13, Township 4 South, Range 4 West of the San Bernardino Base and Meridian, as shown on the *Perris* USGS Quadrangle Topographic Map

Prepared on Behalf of:

Lilburn Corporation
1905 Business Center Drive
San Bernardino, California 92408

Prepared for:

Riverside County Planning Department
4080 Lemon Street, 12th Floor
P.O. Box 1409
Riverside, California 92502-1409
(951) 955-3200

Prepared by:

Andrew J. Garrison, M.A., RPA
BFSA Environmental Services, a Perennial Company
14010 Poway Road, Suite A
Poway, California 92064
(858) 484-0915

January 5, 2024; Revised January 16, 2024

BFSA Environmental Services
A Perennial Company

Fieldwork Performed: December 6, 2023
Key Words: Approximately 9.5 acres; archaeological survey; negative results; monitoring of grading recommended

Archaeological Report Summary Information

Author:	Andrew J. Garrison, M.A., RPA
Prepared by:	BFSA Environmental Services, a Perennial Company 14010 Poway Road, Suite A Poway, California 92064 (858) 484-0915
Report Date:	January 5, 2024; Revised January 16, 2024
Report Title:	A Phase I Cultural Resources Study for the Thrifty Oil Warehouse Project, PPT230048, PDA 8407, OAPL2300972, Riverside County, California
Prepared on Behalf of:	Lilburn Corporation 1905 Business Center Drive San Bernardino, California 92408
Prepared for:	Riverside County Planning Department 4080 Lemon Street, 12th Floor P.O. Box 1409 Riverside, California 92502-1409 (951) 955-3200
Assessor's Parcel Numbers:	317-260-017 and -018
USGS Quadrangle:	Section 13, Township 4 South, Range 4 West, San Bernardino Base and Meridian, as shown on the *Perris* USGS Quadrangle
Study Area:	Approximately 9.5 acres
Key Words:	Archaeological survey; 9.5 acres; negative results; County of Riverside; *Perris* USGS topographic quadrangle; monitoring of grading recommended.

Table of Contents

Section **Page**

1.0 MANAGEMENT SUMMARY / ABSTRACT 1.0–1
1.1 Purpose of Investigation 1.0–1
1.2 Major Findings 1.0–1
1.3 Recommendation Summary 1.0–2
2.0 INTRODUCTION 2.0–1
2.1 Previous Work 2.0–1
2.2 Project Setting 2.0–5
2.3 Cultural Setting 2.0–5
2.3.1 Introduction 2.0–6
2.3.2 Paleo Indian Period (Late Pleistocene: 11,500 to circa 9,000 YBP) 2.0–6
2.3.3 Archaic Period (Early and Middle Holocene: circa 9,000 to 1,300 YBP) 2.0–7
2.3.4 Late Prehistoric Period (Late Holocene: 1,300 YBP to 1790) 2.0–9
2.3.5 Protohistoric Period (Late Holocene: 1790 to Present) 2.0–10
2.3.6 Ethnohistoric Period (1769 to Present) 2.0–17
2.3.7 General History of the Val Verde Region 2.0–20
2.4 Research Goals 2.0–21
3.0 METHODOLOGY 3.0–1
3.1 Archaeological Records Search 3.0–1
3.2 Field Methodology 3.0–1
3.3 Report Preparation and Recordation 3.0–1
3.4 Native American Consultation 3.0–2
3.5 Applicable Regulations 3.0–2
3.5.1 California Environmental Quality Act 3.0–2
4.0 RESULTS 4.0–1
4.1 Records Search Results 4.0–1
4.2 Results of the Field Survey 4.0–2
5.0 RECOMMENDATIONS 5.0–1
6.0 CERTIFICATION 6.0–1
7.0 REFERENCES 7.0–1

Appendices

Appendix A – Qualifications of Key Personnel
Appendix B – Archaeological Records Search Results*
Appendix C – NAHC Sacred Lands File Search Results*
Appendix D – Tables 4.1–1 and 4.1–2
**Deleted for public review and bound separately in the Confidential Appendix*

List of Figures

Section **Page**

Figure 2.0–1 General Location Map 2.0–2
Figure 2.0–2 Project Location Map.....2.0–3
Figure 2.0–3 Site Plan 2.0–4

List of Plates

Section **Page**

Plate 4.2–1 Overview of the property, facing northeast 4.0–3
Plate 4.2–2 Overview of the property, facing southwest 4.0–3
Plate 4.2–3 The residence and prefabricated manufactured home located in the northeast corner of the project, facing southwest 4.0–4
Plate 4.2–4 Ancillary structure in the northeast corner of the project, facing south.....4.0–4

1.0 MANAGEMENT SUMMARY/ABSTRACT

The following report describes the results of the cultural resources survey conducted by BFSA Environmental Services, a Perennial Company (BFSA), for the Thrifty Oil Warehouse Project. The approximately 9.5-acre property is located southeast of the intersection of Placentia Avenue and Tobacco Road, west of the city of Perris, within unincorporated Riverside County, California. As proposed, the project includes the construction of an industrial warehouse along with associated infrastructure within the subject property (Plot Plan OAPL2300972). The project includes Assessor's Parcel Numbers (APNs) 317-260-017 and -018, which are situated within Section 13, Township 4 South, Range 4 West of the San Bernardino Baseline and Meridian, as shown on the U.S. Geological Survey (USGS) (7.5-minute) *Perris, California* topographic quadrangle map. BFSA conducted this assessment to locate and record any cultural resources identified within the project in compliance with the California Environmental Quality Act (CEQA) and following County of Riverside Cultural Resource Guidelines (Draft).

1.1 Purpose of Investigation

The purpose of this investigation was to determine if any cultural resources would be affected by the proposed land development. This study consisted of the processing of a records search of previously recorded archaeological sites on or near the property and the completion of an archaeological survey of the project. The archaeological records search results from the Eastern Information Center (EIC) at the University of California, Riverside (UCR), indicate that 88 resources are located within a one-mile radius of the current project area, none of which are recorded within the subject property. Further, the search identified 37 previous studies within one mile, none of which included the subject property. In addition, the Native American Heritage Commission (NAHC) was contacted for a Sacred Lands File (SLF) search. In accordance with the recommendations of the NAHC, BFSA contacted all Native American consultants listed in the NAHC response letter at least two weeks prior to the initiation of the field survey. BFSA specifically contacted the Pechanga Band of Indians (Pechanga) and the Soboba Band of Luiseño Indians (Soboba) to invite them to voluntarily participate in the survey. Representatives from both tribes were present during the survey.

1.2 Major Findings

The records search results and a review of historic maps and aerial photographs show that the property contained structures as early as 1938 and historically was utilized for agriculture. Structures were added to the property throughout the twentieth century. However, all but three structures, which were added after 1977, have been removed from the project. Ground visibility during the survey was characterized as fair, due to areas of dense, non-native vegetation. During the survey, impacts associated with past clearing and agricultural use were observed. Further, modern trash was noted throughout the property. No cultural resources were identified during the survey.

1.3 Recommendation Summary

The Phase I Cultural Resources Study did not identify any cultural resources within the project. However, the property is located in proximity to multiple prehistoric and historic resources and has been impacted by agricultural use, partial development, and clearing. These impacts typically remove evidence of surface scatters of cultural artifacts. Therefore, given the past impacts to the property, as well as the frequency of resources within one mile, the obstructed ground visibility during the survey, and the noted historic occupation of the property, there still remains the potential for the inadvertent discovery of archaeological resources during grading. Therefore, it is recommended that all earthwork required for development be monitored by a qualified archaeologist and a Native American representative. The recommended protocols to be followed for the mitigation monitoring of the property are presented within this report. Any archaeological sites that may be discovered during the monitoring of grading should be treated following the recommendations listed in the mitigation monitoring program. A copy of this report will be permanently filed with the EIC at UCR. All notes, photographs, and other materials related to this project will be curated at the archaeological laboratory of BFSA in Poway, California.

2.0 INTRODUCTION

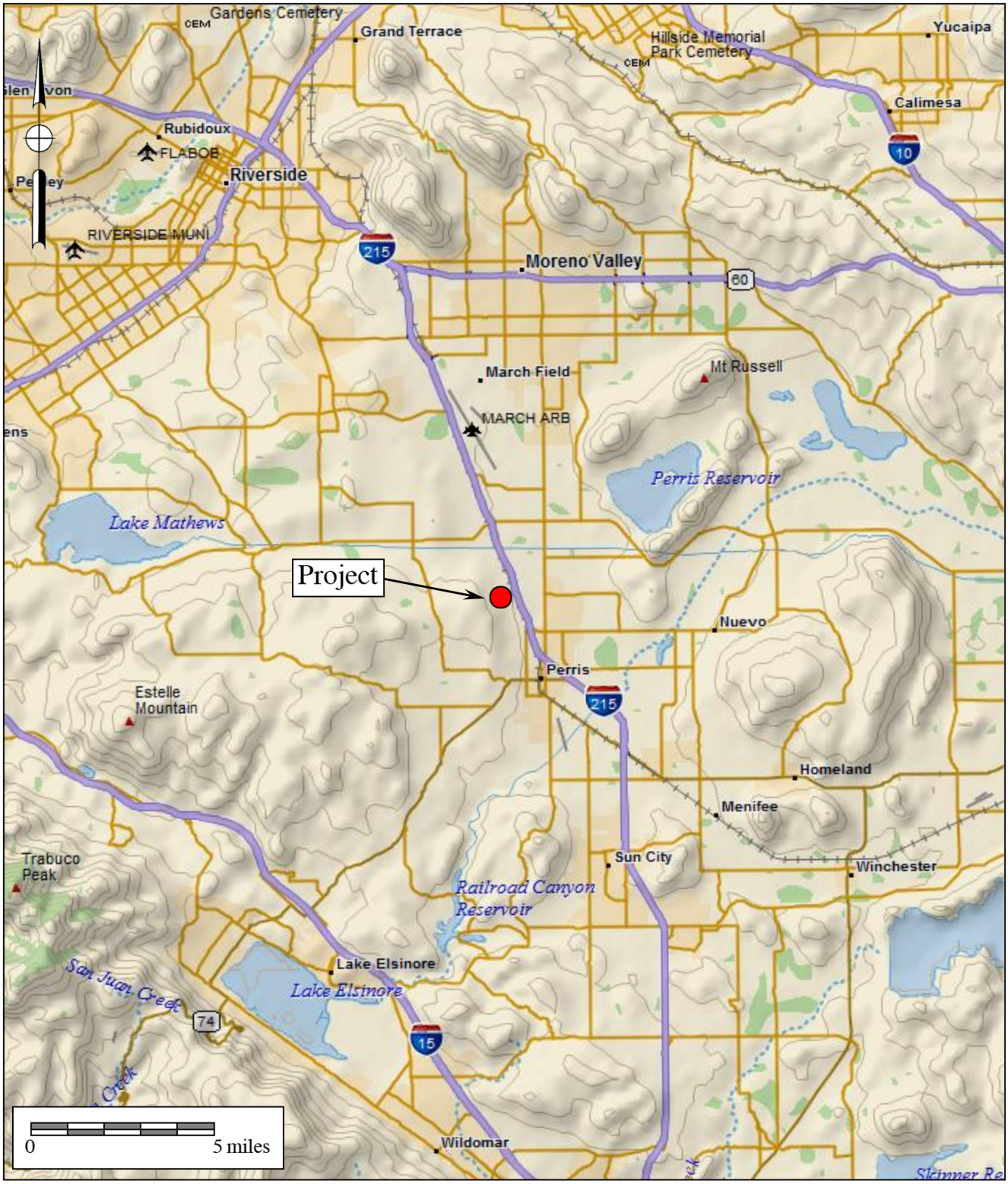
BFSA was retained by the applicant to conduct a cultural resources survey for the Thrifty Oil Warehouse Project (Plot Plan OAPL2300972). The archaeological survey was conducted in order to comply with the requirements of CEQA and County of Riverside Cultural Resource Guidelines with regard to development-generated impacts to cultural resources. The project is located in an area of moderate cultural resource sensitivity, as suggested by known site density. Sensitivity for cultural resources in a given area is usually indicated by known settlement patterns, which in Riverside County are focused around environments with accessible food and water.

The approximately 9.5-acre project (APNs 317-260-017 and -018) is located southeast of the intersection of Placentia Avenue and Tobacco Road, west of the city of Perris, within unincorporated Riverside County, California (Figure 2.0–1). The subject property is situated within Section 13, Township 4 South, Range 4 West of the San Bernardino Base and Meridian, as shown on the USGS (7.5-minute) *Perris, California* topographic quadrangle map (Figure 2.0–2). As proposed, the project includes the construction of an industrial warehouse along with associated infrastructure within the subject property (Figure 2.0–3).

Principal Investigator Tracy A. Stropes, M.A., RPA, directed the cultural resources study for the project. BFSA archaeologist Sabrina Corcoran, along with representatives from Soboba and Pechanga conducted the pedestrian survey of the project on December 6, 2023. The survey was conducted in 15-meter interval transects. Visibility of the natural ground surface was fair. Project Archaeologist Andrew J. Garrison M.A., RPA, prepared the technical report. Emily T. Soong created the report graphics and Shawna M. Krystek conducted technical editing and report production. Qualifications of key personnel are provided in Appendix A.

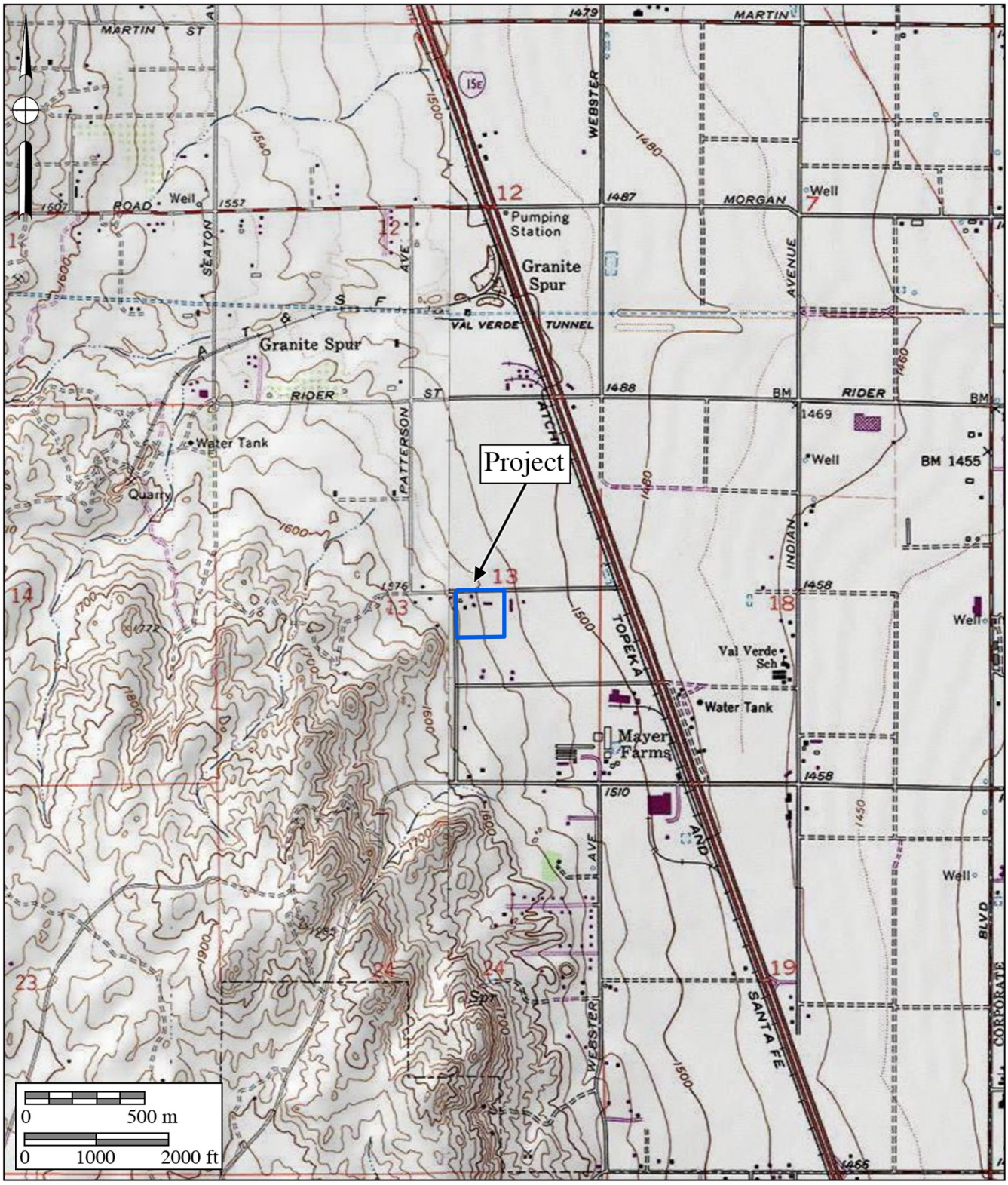
2.1 Previous Work

An archaeological records search for the project and the surrounding area within a one-mile radius was conducted by BFSA at the EIC at UCR (Appendix B). The search identified 88 resources within a one-mile radius of the current project area, none of which are recorded within the subject property. In addition, the search results identified 37 previous studies within one mile, none of which included the subject property.



BFSA Environmental Services
A Perennial Company

Figure 2.0–1
General Location Map
The Thrifty Oil Warehouse Project
DeLorme (1:250,000 series)

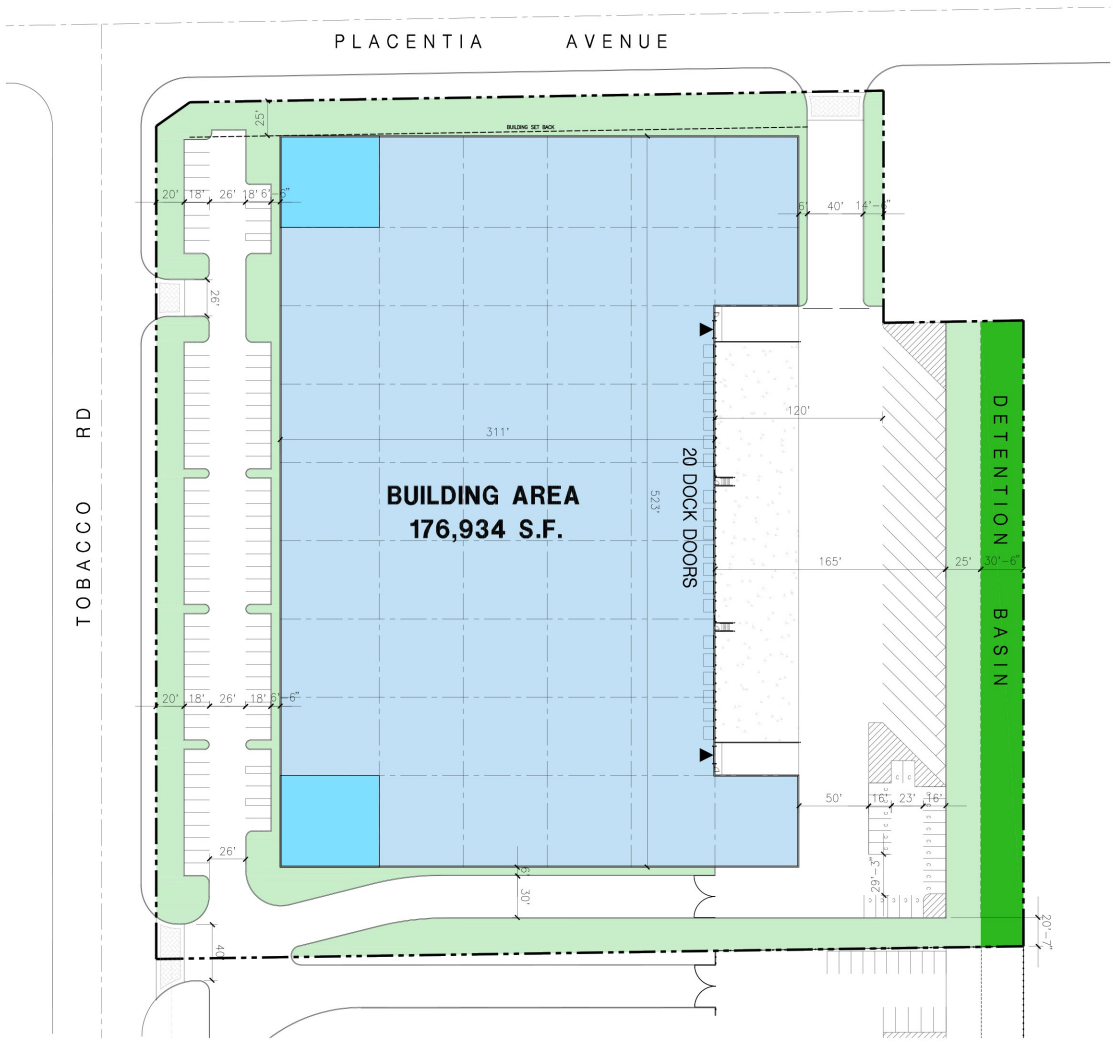


BFSA Environmental Services
A Perennial Company

Figure 2.0–2
Project Location Map

The Thrifty Oil Warehouse Project

USGS *Perris* and *Steele Peak* Quadrangles (7.5-minute series)



Tabulation

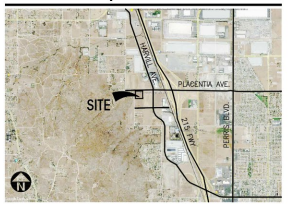
SITE AREA		
In s.f.		363,217 s.f.
In acres		8.34 ac
BUILDING AREA		
Office - 1st floor		3,000 s.f.
Office - 2nd floor		3,000 s.f.
Warehouse		170,934 s.f.
TOTAL		176,934 s.f.
FAR		0.49
COVERAGE		47.9%
CLEAR HEIGHT		30'
AUTO PARKING REQUIRED		
Office:	1/250 s.f.	24 stalls
Whse:	1/2000 s.f.	86 stalls
TOTAL		110 stalls
AUTO PARKING PROVIDED		
Standard (9' x 18')		88 stalls
Compact (8.5'x16')		22 stalls
Total		**110** stalls
TRAILER PARKING PROVIDED		
Trailer (10' x 53')		20 stalls
ZONING ORDINANCE FOR CITY		
Zoning Designation - Light Industrial		
Mead Valley Plan		
MAXIMUM BUILDING HEIGHT ALLOWED		
Height - 35' (1' additional height every 2' additional set back)		
MAXIMUM FLOOR AREA RATIO		
FAR - 0.25-0.60		
LANDSCAPE REQUIREMENT		
Percentage - 15 %		
LANDSCAPE PROVIDED		
In percentage -		19.6%
In s.f. -		71,184 s.f.
SETBACKS		
Building	Parking/Landscape	
Front -25', 50' if abuts R zone		20'
Side/Rear - 0'		0

Legend

- POTENTIAL OFFICE
- WAREHOUSE
- ▼ DRIVE THRU DOOR

Note: This is a conceptual plan. It is based on preliminary information which is not fully verified and may be incomplete. It is meant as a comparative aid in examining alternate development strategies and any quantities indicated are subject to revision as more reliable information becomes available.

Aerial Map



north

1" = 30'
0 30 60 90

BFSA Environmental Services
A Perennial Company

Figure 2.0–3
Site Plan
The Thrifty Oil Warehouse Project

2.2 Project Setting

The subject property is located west of the city of Perris, California, in the Val Verde area of Riverside County. The project lies within Riverside County, which is situated in the Peninsular Ranges Geologic Province of southern California. The mountain range, which lies in a northwest to southeast trend through the county, extends approximately 1,000 miles from the Raymond-Malibu Fault Zone in western Los Angeles County, to the southern tip of Baja California, Mexico.

Geologically, the property is within the central part of the Perris tectonic block and is underlain by lower Pleistocene (approximately 1.8 million- to perhaps 200,000- to 300,000-year-old) sandy, very old alluvial fan deposits (Wirths 2023). According to Woodford et al. (1971), the thickness of the alluvial deposits overlying the granitic bedrock basement beneath the project may be as much as 100 feet at the project's eastern boundary. The granitic basement occurs as extensive outcrops west of the project. The specific soil types within the subject property are mapped as Hanford coarse sandy loam, 2 to 8 percent slopes (HcC) and Greenfield sandy loam, 2 to 8 percent slopes, eroded (GyC2) (NRCS 2023). The property is relatively flat with elevations ranging between approximately 1,535 and 1,555 feet above mean sea level in the northwestern and southeastern corners respectively.

Vegetation on the property consists primarily of non-native weeds and grasses. In prehistoric times, the natural vegetation was likely dominated by winter annual grasses, forbs, and shrubs. Historically, mammals within the region include mule deer, coyote, bobcat, mountain lion, rabbit, hare, ground squirrel, kangaroo rat, and a variety of other small rodents. Birds include raptor, quail, mourning dove, geese and duck, heron, crow, finch, and sparrow.

2.3 Cultural Setting

The archaeological perspective seeks to reconstruct past cultures based upon the material remains left behind. This is done by using a range of scientific methodologies, almost all of which draw from evolutionary theory as the base framework. Archaeology allows one to look deeper into history or prehistory to see where the beginnings of ideas manifest via analysis of material culture, allowing for the understanding of outside forces that shape social change. Thus, the archaeological perspective allows one to better understand the consequences of the history of a given culture upon modern cultures. Archaeologists seek to understand the effects of past contexts of a given culture upon *this* moment in time, not culture in context *in* the moment.

Despite this, a distinction exists between "emic" and "etic" ways of understanding material culture, prehistoric lifeways, and cultural phenomena in general (Harris 1991). While "emic" perspectives serve the subjective ways in which things are perceived and interpreted by the participants within a culture, "etic" perspectives are those of an outsider looking in hoping to attain a more scientific or "objective" understanding of the given phenomena. Archaeologists, by definition, will almost always serve an etic perspective as a result of the very nature of their work. As indicated by Laylander et al. (2014), it has sometimes been suggested that an etic understanding and, therefore, an archaeological understanding, is an imperfect and potentially ethnocentric attempt to arrive at emic understanding. In contrast to this, however, an etic understanding of

material culture, cultural phenomena, and prehistoric lifeways can address significant dimensions of culture that lie entirely beyond the understanding or interest of those solely utilizing an emic perspective. As Harris (1991:20) appropriately points out, "Etic studies often involve the measurement and juxtaposition of activities and events that native informants find inappropriate or meaningless." This is also likely true of archaeological comparisons and juxtapositions of material culture. However, culture as a whole does not occur in a vacuum and is the result of several millennia of choices and consequences influencing everything from technology to religions, to institutions. Archaeology allows for the ability to not only see what came before, but to see how those choices, changes, and consequences affect the present. Where possible, archaeology should seek to address both emic and etic understandings to the extent that they may be recoverable from the archaeological record as manifestations of patterned human behavior (Laylander et al. 2014).

To that point, the culture history offered herein is primarily based upon archaeological (etic) and ethnographic (partially emic and partially etic) information. It is understood that the ethnographic record and early archaeological records were incompletely and imperfectly collected. In addition, in most cases, more than a century of intensive cultural change and cultural evolution had elapsed since the terminus of the prehistoric period. Coupled with the centuries and millennia of prehistoric change separating the "ethnographic present" from the prehistoric past, this has affected the emic and etic understandings of prehistoric cultural settings. Regardless, there remains a need to present the changing cultural setting within the region under investigation. As a result, both archaeological and Native American perspectives are offered when possible.

2.3.1 Introduction

Paleo Indian, Archaic Period Milling Stone Horizon, and the Late Prehistoric Takic groups are the three general cultural periods represented in Riverside County. The following discussion of the cultural history of Riverside County references the San Dieguito Complex, Encinitas Tradition, Milling Stone Horizon, La Jolla Complex, Pauma Complex, and San Luis Rey Complex, since these culture sequences have been used to describe archaeological manifestations in the region. The Late Prehistoric component present in the Riverside County area was primarily represented by the Cahuilla, Gabrielino, and Luiseño Indians.

Absolute chronological information, where possible, will be incorporated into this archaeological discussion to examine the effectiveness of continuing to interchangeably use these terms. Reference will be made to the geological framework that divides the archaeologically-based culture chronology of the area into four segments: the late Pleistocene (20,000 to 10,000 years before the present [YBP]), the early Holocene (10,000 to 6,650 YBP), the middle Holocene (6,650 to 3,350 YBP), and the late Holocene (3,350 to 200 YBP).

2.3.2 Paleo Indian Period (Late Pleistocene: 11,500 to circa 9,000 YBP)

Archaeologically, the Paleo Indian Period is associated with the terminus of the late Pleistocene (12,000 to 10,000 YBP). The environment during the late Pleistocene was cool and

moist, which allowed for glaciation in the mountains and the formation of deep, pluvial lakes in the deserts and basin lands (Moratto 1984). However, by the terminus of the late Pleistocene, the climate became warmer, which caused the glaciers to melt, sea levels to rise, greater coastal erosion, large lakes to recede and evaporate, extinction of Pleistocene megafauna, and major vegetation changes (Moratto 1984; Martin 1967, 1973; Fagan 1991). The coastal shoreline at 10,000 YBP, depending upon the particular area of the coast, was near the 30-meter isobath, or two to six kilometers further west than its present location (Masters 1983).

Paleo Indians were likely attracted to multiple habitat types, including mountains, marshlands, estuaries, and lakeshores. These people likely subsisted using a more generalized hunting, gathering, and collecting adaptation utilizing a variety of resources including birds, mollusks, and both large and small mammals (Erlandson and Colten 1991; Moratto 1984; Moss and Erlandson 1995).

2.3.3 Archaic Period (Early and Middle Holocene: circa 9,000 to 1,300 YBP)

Archaeological data indicates that between 9,000 and 8,000 YBP, a widespread complex was established in the southern California region, primarily along the coast (Warren and True 1961). This complex is locally known as the La Jolla Complex (Rogers 1939; Moriarty 1966), which is regionally associated with the Encinitas Tradition (Warren 1968) and shares cultural components with the widespread Milling Stone Horizon (Wallace 1955). The coastal expression of this complex appeared in southern California coastal areas and focused upon coastal resources and the development of deeply stratified shell middens that were primarily located around bays and lagoons. The older sites associated with this expression are located at Topanga Canyon, Newport Bay, Agua Hedionda Lagoon, and some of the Channel Islands. Radiocarbon dates from sites attributed to this complex span a period of over 7,000 years in this region, beginning over 9,000 YBP.

The Encinitas Tradition is best recognized for its pattern of large coastal sites characterized by shell middens, grinding tools that are closely associated with the marine resources of the area, cobble-based tools, and flexed human burials (Shumway et al. 1961; Smith and Moriarty 1985). While ground stone tools and scrapers are the most recognized tool types, coastal Encinitas Tradition sites also contain numerous utilized flakes, which may have been used to pry open shellfish. Artifact assemblages at coastal sites indicate a subsistence pattern focused upon shellfish collection and nearshore fishing. This suggests an incipient maritime adaptation with regional similarities to more northern sites of the same period (Koerper et al. 1986). Other artifacts associated with Encinitas Tradition sites include stone bowls, doughnut stones, discoidals, stone balls, and stone, bone, and shell beads.

The coastal lagoons in southern California supported large Milling Stone Horizon populations circa 6,000 YBP, as shown by numerous radiocarbon dates from the many sites adjacent to the lagoons. The ensuing millennia were not stable environmentally and, by 3,000 YBP, many of the coastal sites in central San Diego County had been abandoned (Gallegos 1987, 1992). The abandonment of the area is usually attributed to the sedimentation of coastal lagoons

and the resulting deterioration of fish and mollusk habitat. This is a well-documented situation at Batiquitos Lagoon, where over a 2,000-year period, dominant mollusk species occurring in archaeological middens shift from deep-water mollusks (*Argopecten* sp.) to species tolerant of tidal flat conditions (*Chione* sp.), indicating water depth and temperature changes (Miller 1966; Gallegos 1987).

This situation likely occurred for other small drainages (Buena Vista, Agua Hedionda, San Marcos, and Escondido creeks) along the central San Diego coast where low flow rates did not produce sufficient discharge to flush the lagoons they fed (Buena Vista, Agua Hedionda, Batiquitos, and San Elijo lagoons) (Byrd 1998). Drainages along the northern and southern San Diego coastline were larger and flushed the coastal hydrological features they fed, keeping them open to the ocean and allowing for continued human exploitation (Byrd 1998). Peñasquitos Lagoon exhibits dates as late as 2,355 YBP (Smith and Moriarty 1985) and San Diego Bay showed continuous occupation until the close of the Milling Stone Horizon (Gallegos and Kyle 1988). Additionally, data from several drainages in U.S. Marine Corps Base Camp Pendleton indicate a continued occupation of shell midden sites until the close of the period, indicating that coastal sites were not entirely abandoned during this time (Byrd 1998).

By 5,000 YBP, an inland expression of the La Jolla Complex is evident in the archaeological record, exhibiting influences from the Campbell Tradition from the north. These inland Milling Stone Horizon sites have been termed "Pauma Complex" (True 1958; Warren et al. 1961; Meighan 1954). By definition, Pauma Complex sites share a predominance of grinding implements (manos and metates), lack mollusk remains, have greater tool variety (including atlatl dart points, quarry-based tools, and crescentics), and seem to express a more sedentary lifestyle with a subsistence economy based upon the use of a broad variety of terrestrial resources. Although originally viewed as a separate culture from the coastal La Jolla Complex (True 1980), it appears that these inland sites may be part of a subsistence and settlement system utilized by the coastal peoples. Evidence from the 4S Ranch Project in inland San Diego County suggests that these inland sites may represent seasonal components within an annual subsistence round by La Jolla Complex populations (Raven-Jennings et al. 1996). Including both coastal and inland sites of this time period in discussions of the Encinitas Tradition, therefore, provides a more complete appraisal of the settlement and subsistence system exhibited by this cultural complex.

More recent work by Sutton has identified a more localized complex known as the Greven Knoll Complex. The Greven Knoll Complex is a redefined northern inland expression of the Encinitas Tradition first put forth by Mark Sutton and Jill Gardner (2010). Sutton and Gardner (2010:25) state that "[t]he early millingstone archaeological record in the northern portion of the interior southern California was not formally named but was often referred to as 'Inland Millingstone,' 'Encinitas,' or even 'Topanga.'" Therefore, they proposed that all expressions of the inland Milling Stone in southern California north of San Diego County be grouped together in the Greven Knoll Complex.

The Greven Knoll Complex, as postulated by Sutton and Gardner (2010), is broken into three phases and obtained its name from the type-site Greven Knoll located in Yucaipa, California.

Presently, the Greven Knoll Site is part of the Yukaipa't Site (SBR-1000) and was combined with the adjacent Simpson Site. Excavations at Greven Knoll recovered manos, metates, projectile points, discoidal cogged stones, and a flexed inhumation with a possible cremation (Kowta 1969:39). It is believed that the Greven Knoll Site was occupied between 5,000 and 3,500 YBP. The Simpson Site contained mortars, pestles, side-notched points, and stone and shell beads. Based upon the data recovered at these sites, Kowta (1969:39) suggested that "coastal Milling Stone Complexes extended to and interdigitated with the desert Pinto Basin Complex in the vicinity of the Cajon Pass."

Phase I of the Greven Knoll Complex is generally dominated by the presence of manos and metates, core tools, hammerstones, large dart points, flexed inhumations, and occasional cremations. Mortars and pestles are absent from this early phase, and the subsistence economy emphasized hunting. Sutton and Gardner (2010:26) propose that the similarity of the material culture of Greven Knoll Phase I and that found in the Mojave Desert at Pinto Period sites indicates that the Greven Knoll Complex was influenced by neighbors to the north at that time. Accordingly, Sutton and Gardner (2010) believe that Greven Knoll Phase I may have appeared as early as 9,400 YBP and lasted until about 4,000 YBP.

Greven Knoll Phase II is associated with a period between 4,000 and 3,000 YBP. Artifacts common to Greven Knoll Phase II include manos and metates, Elko points, core tools, and discoidals. Pestles and mortars are present; however, they are only represented in small numbers. Finally, there is an emphasis upon hunting and gathering for subsistence (Sutton and Gardner 2010:8).

Greven Knoll Phase III includes manos, metates, Elko points, scraper planes, choppers, hammerstones, and discoidals. Again, small numbers of mortars and pestles are present. Greven Knoll Phase III spans from approximately 3,000 to 1,000 YBP and shows a reliance upon seeds and yucca. Hunting is still important, but bones seem to have been processed to obtain bone grease more often in this later phase (Sutton and Gardner 2010:8).

The shifts in food processing technologies during each of these phases indicate a change in subsistence strategies; although people were still hunting for large game, plant-based foods eventually became the primary dietary resource (Sutton 2011a). Sutton's (2011b) argument posits that the development of mortars and pestles during the middle Holocene can be attributed to the year-round exploitation of acorns as a main dietary provision. Additionally, the warmer and drier climate may have been responsible for groups from the east moving toward coastal populations, which is archaeologically represented by the interchange of coastal and eastern cultural traits (Sutton 2011a).

2.3.4 Late Prehistoric Period (Late Holocene: 1,300 YBP to 1790)

Many Luiseño hold the worldview that, as a population, they were created in southern California. Archaeological and anthropological data, however, proposes a scientific archaeological perspective, suggesting that at approximately 1,350 YBP, Takic-speaking groups from the Great Basin region moved into Riverside County, marking the transition to the Late

Prehistoric Period. An analysis of the Takic expansion by Sutton (2009) indicates that inland southern California was occupied by "proto-Yuman" populations before 1,000 YBP. The comprehensive, multi-phase model offered by Sutton (2009) employs linguistic, ethnographic, archaeological, and biological data to solidify a reasonable argument for population replacement of Takic groups to the north by Penutians (Laylander 1985). As a result, it is believed that Takic expansion occurred starting around 3,500 YBP moving toward southern California, with the Gabrielino language diffusing south into neighboring Yuman (Hokan) groups around 1,500 to 1,000 YBP, possibly resulting in the Luiseño dialect.

Based upon Sutton's model, the final Takic expansion would not have occurred until about 1,000 YBP, resulting in Vanyume, Serrano, Cahuilla, and Cupeño dialects. The model suggests that the Luiseño did not simply replace Hokan speakers, but were rather a northern San Diego County/southern Riverside County Yuman population who adopted the Takic language. This period is characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversified and intensified during this period with the continued elaboration of trade networks, the use of shell-bead currency, and the appearance of more labor-intensive, yet effective, technological innovations. Technological developments during this period included the introduction of the bow and arrow between A.D. 400 and 600 and the introduction of ceramics. Atlatl darts were replaced by smaller arrow darts, including Cottonwood series points. Other hallmarks of the Late Prehistoric Period include extensive trade networks as far-reaching as the Colorado River Basin and cremation of the dead.

2.3.5 Protohistoric Period (Late Holocene: 1790 to Present)

Ethnohistoric and ethnographic evidence indicates that three Takic-speaking groups occupied portions of Riverside County: the Cahuilla, the Gabrielino, and the Luiseño. The geographic boundaries between these groups in pre- and proto-historic times are difficult to place, but the project is located well within the borders of ethnographic Luiseño territory. This group was a seasonal hunting and gathering people with cultural elements that were very distinct from Archaic Period peoples. These distinctions include cremation of the dead, the use of the bow and arrow, and exploitation of the acorn as a main food staple (Moratto 1984). Along the coast, the Luiseño made use of available marine resources by fishing and collecting mollusks for food. Seasonally available terrestrial resources, including acorns and game, were also sources of nourishment for Luiseño groups. Elaborate kinship and clan systems between the Luiseño and other groups facilitated a wide-reaching trade network that included trade of Obsidian Butte obsidian and other resources from the eastern deserts, as well as steatite from the Channel Islands.

According to Charles Handley (1967), the primary settlements of Late Prehistoric Luiseño Indians in the San Jacinto Plain were represented by Ivah and Soboba near Soboba Springs, Jusipah near the town of San Jacinto, Ararah in Webster's Canyon en route to Idyllwild, Pahsitha near Big Springs Ranch southeast of Hemet, and Corova in Castillo Canyon. These locations share features such as the availability of food and water resources. Features of this land use include petroglyphs and pictographs, as well as widespread milling, which is evident in bedrock and portable

implements. Groups in the vicinity of the project, neighboring the Luiseño, include the Cahuilla and the Gabrielino. Ethnographic data for the three groups is presented below.

Luiseño: An Archaeological and Ethnographic Perspective

When contacted by the Spanish in the sixteenth century, the Luiseño occupied a territory bounded on the west by the Pacific Ocean, on the east by the Peninsular Ranges mountains at San Jacinto (including Palomar Mountain to the south and Santiago Peak to the north), on the south by Agua Hedionda Lagoon, and on the north by Aliso Creek in present-day San Juan Capistrano. The Luiseño were a Takic-speaking people more closely related linguistically and ethnographically to the Cahuilla, Gabrielino, and Cupeño to the north and east rather than the Kumeyaay who occupied territory to the south. The Luiseño differed from their neighboring Takic speakers in having an extensive proliferation of social statuses, a system of ruling families that provided ethnic cohesion within the territory, a distinct worldview that stemmed from the use of datura (a hallucinogen), and an elaborate religion that included the creation of sacred sand paintings depicting the deity Chingichngish (Bean and Shipek 1978; Kroeber 1976).

Subsistence and Settlement

The Luiseño occupied sedentary villages most often located in sheltered areas in valley bottoms, along streams, or along coastal strands near mountain ranges. Villages were located near water sources to facilitate acorn leaching and in areas that offered thermal and defensive protection. Villages were comprised of areas that were publicly and privately (by family) owned. Publicly owned areas included trails, temporary campsites, hunting areas, and quarry sites. Inland groups had fishing and gathering sites along the coast that were intensively used from January to March when inland food resources were scarce. During October and November, most of the village would relocate to mountain oak groves to harvest acorns. The Luiseño remained at village sites for the remainder of the year, where food resources were within a day's travel (Bean and Shipek 1978; Kroeber 1976).

The most important food source for the Luiseño was the acorn, six different species of which were used (*Quercus californica, Quercus agrifolia, Quercus chrysolepis, Quercus dumosa, Quercus engelmannii,* and *Quercus wislizenii*). Seeds, particularly of grasses, flowering plants, and mints, were also heavily exploited. Seed-bearing species were encouraged through controlled burns, which were conducted at least every third year. A variety of other stems, leaves, shoots, bulbs, roots, and fruits were also collected. Hunting augmented this vegetal diet. Animal species taken included deer, rabbit, hare, woodrat, ground squirrel, antelope, quail, duck, freshwater fish from mountain streams, marine mammals, and other sea creatures such as fish, crustaceans, and mollusks (particularly abalone, or *Haliotis* sp.). In addition, a variety of snakes, small birds, and rodents were eaten (Bean and Shipek 1978; Kroeber 1976).

Social Organization

Social groups within the Luiseño nation consisted of patrilinear families or clans, which

were politically and economically autonomous. Several clans comprised a religious party, or nota, which was headed by a chief who organized ceremonies and controlled economics and warfare. The chief had assistants who specialized in particular aspects of ceremonial or environmental knowledge and who, with the chief, were part of a religion-based social group with special access to supernatural power, particularly that of Chingichngish. The positions of chief and assistants were hereditary, and the complexity and multiplicity of these specialists' roles likely increased in coastal and larger inland villages (Bean and Shipek 1978; Kroeber 1976; Strong 1929).

Marriages were arranged by the parents, often made to forge alliances between lineages. Useful alliances included those between groups of differing ecological niches and those that resulted in territorial expansion. Residence was patrilocal (Bean and Shipek 1978; Kroeber 1976). Women were primarily responsible for plant gathering and men principally hunted, but at times, particularly during acorn and marine mollusk harvests, there was no division of labor. Elderly women cared for children and elderly men participated in rituals, ceremonies, and political affairs. They were also responsible for manufacturing hunting and ritual implements. Children were taught subsistence skills at the earliest age possible (Bean and Shipek 1978; Kroeber 1976).

Material Culture

House structures were conical, partially subterranean, and thatched with reeds, brush, or bark. Ramadas were rectangular, protected workplaces for domestic chores such as cooking. Ceremonial sweathouses were important in purification rituals; these were round and partially subterranean thatched structures covered with a layer of mud. Another ceremonial structure was the wámkis (located in the center of the village, serving as the place of rituals), where sand paintings and other rituals associated with the Chingichngish religious group were performed (Bean and Shipek 1978; Kroeber 1976).

Clothing was minimal; women wore a cedar-bark and netted twine double apron, and men wore a waist cord. In cold weather, cloaks or robes of rabbit fur, deerskin, or sea otter fur were worn by both sexes. Footwear included deerskin moccasins and sandals fashioned from yucca fibers. Adornments included bead necklaces and pendants made of bone, clay, stone, shell, bear claw, mica, deer hooves, and abalone shell. Men wore ear and nose piercings made from cane or bone, which were sometimes decorated with beads. Other adornments were commonly decorated with semiprecious stones including quartz, topaz, garnet, opal, opalite, agate, and jasper (Bean and Shipek 1978; Kroeber 1976).

Hunting implements included the bow and arrow. Arrows were tipped with either a carved, fire-hardened wood tip or a lithic point, usually fashioned from locally available metavolcanic material or quartz. Throwing sticks fashioned from wood were used in hunting small game, while deer head decoys were used during deer hunts. Coastal groups fashioned dugout canoes for nearshore fishing and harvested fish with seines, nets, traps, and hooks made of bone or abalone shell (Bean and Shipek 1978; Kroeber 1976).

The Luiseño had a well-developed basket industry. Baskets were used in resource gathering, food preparation, storage, and food serving. Ceramic containers were shaped by paddle

and anvil and fired in shallow, open pits to be used for food storage, cooking, and serving. Other utensils included wood implements, steatite bowls, and ground stone manos, metates, mortars, and pestles (Bean and Shipek 1978; Kroeber 1976). Additional tools such as knives, scrapers, choppers, awls, and drills were also used. Shamanistic items include soapstone or clay smoking pipes and crystals made of quartz or tourmaline (Bean and Shipek 1978; Kroeber 1976).

Cahuilla: An Archaeological and Ethnographic Perspective

At the time of Spanish contact in the sixteenth century, the Cahuilla occupied territory that included the San Bernardino Mountains, Orocopia Mountain, and the Chocolate Mountains to the west, Salton Sea and Borrego Springs to the south, Palomar Mountain and Lake Mathews to the west, and the Santa Ana River to the north. The Cahuilla are a Takic-speaking people closely related to their Gabrielino and Luiseño neighbors, although relations with the Gabrielino were more intense than with the Luiseño. They differ from the Luiseño and Gabrielino in that their religion is more similar to the Mohave tribes of the eastern deserts than the Chingichngish religious group of the Luiseño and Gabrielino. The following is a summary of ethnographic data regarding this group (Bean 1978; Kroeber 1976).

Subsistence and Settlement

Cahuilla villages were typically permanent and located upon low terraces within canyons in proximity to water sources. These locations proved to be rich in food resources and also afforded protection from prevailing winds. Villages had areas that were publicly owned and areas that were privately owned by clans, families, or individuals. Each village was associated with a particular lineage and series of sacred sites that included unique petroglyphs and pictographs. Villages were occupied throughout the year; however, during a several-week period in the fall, most of the village members relocated to mountain oak groves to take part in acorn harvesting (Bean 1978; Kroeber 1976).

The Cahuilla's use of plant resources is well documented. Plant foods harvested by the Cahuilla included valley oak acorns and single-leaf pinyon pine nuts. Other important plant species included bean and screw mesquite, agave, Mohave yucca, cacti, palm, chia, quail brush, yellowray goldfield, goosefoot, manzanita, catsclaw, desert lily, mariposa lily, and several other species such as grass seed. Several agricultural domesticates were acquired from the Colorado River tribes including corn, bean, squash, and melon grown in limited amounts. Animal species taken included deer, bighorn sheep, pronghorn antelope, rabbit, hare, rat, quail, dove, duck, roadrunner, and a variety of rodents, reptiles, fish, and insects (Bean 1978; Kroeber 1976).

Social Organization

The Cahuilla was not a political nation, but rather a cultural nationality with a common language. Two non-political, non-territorial patrimoieties were recognized: the Wildcats (túktem) and the Coyotes (?ístam). Lineage and kinship were memorized at a young age among the Cahuilla, providing a backdrop for political relationships. Clans were comprised of three to 10

lineages; each lineage owned a village site and specific resource areas. Lineages within a clan cooperated in subsistence activities, defense, and rituals (Bean 1978; Kroeber 1976).

A system of ceremonial hierarchy operated within each lineage. The hierarchy included the lineage leader, who was responsible for leading subsistence activities, guarding the sacred bundle, and negotiating with other lineage leaders in matters concerning land use, boundary disputes, marriage arrangements, trade, warfare, and ceremonies. The ceremonial assistant to the lineage leader was responsible for organizing ceremonies. A ceremonial singer possessed and performed songs at rituals and trained assistant singers. The shaman cured illnesses through supernatural powers, controlled natural phenomena, and was the guardian of ceremonies, keeping evil spirits away. The diviner was responsible for finding lost objects, telling future events, and locating game and other food resources. Doctors were usually older women who cured various ailments and illnesses with their knowledge of medicinal herbs. Finally, certain Cahuilla specialized as traders, who ranged as far west as Santa Catalina and as far east as the Gila River (Bean 1978; Kroeber 1976).

Marriages were arranged by parents from opposite moieties. When a child was born, an alliance formed between the families, which included frequent reciprocal exchanges. The Cahuilla kinship system extended to relatives within five generations. Important economic decisions, primarily the distribution of goods, operated within this kinship system (Bean 1978; Kroeber 1976).

Material Culture

Cahuilla houses were dome-shaped or rectangular, thatched structures. The home of the lineage leader was the largest, located near the ceremonial house with the best access to water. Other structures within the village included the men's sweathouse and granaries (Bean 1978; Kroeber 1976).

Cahuilla clothing, like other groups in the area, was minimal. Men typically wore a loincloth and sandals; women wore skirts made from mesquite bark, animal skin, or tules. Babies wore mesquite bark diapers. Rabbit skin cloaks were worn in cold weather (Bean 1978; Kroeber 1976).

Hunting implements included the bow and arrow, throwing sticks, and clubs. Grinding tools used in food processing included manos, metates, and wood mortars. The Cahuilla were known to use long grinding implements made from wood to process mesquite beans; the mortar was typically a hollowed log buried in the ground. Other tools included steatite arrow shaft straighteners (Bean 1978; Kroeber 1976).

Baskets were made from rush, deer grass, and skunkbush. Different species and leaves were chosen for different colors in the basket design. Coiled-ware baskets were either flat (for plates, trays, or winnowing), bowl-shaped (for food serving), deep, inverted, and cone-shaped (for transporting), or rounded and flat-bottomed for storing utensils and personal items (Bean 1978; Kroeber 1976).

Cahuilla pottery was made from a thin, red-colored ceramic ware that was often painted

and incised. Four basic vessel types are known for the Cahuilla: small-mouthed jars, cooking pots, bowls, and dishes. Additionally, smoking pipes and flutes were fashioned from ceramic (Bean 1978; Kroeber 1976).

Gabrielino: An Archaeological and Ethnographic Perspective

The territory of the Gabrielino at the time of Spanish contact covers much of present-day Los Angeles and Orange counties. The southern extent of this culture area is bounded by Aliso Creek, the eastern extent is located east of present-day San Bernardino along the Santa Ana River, the northern extent includes the San Fernando Valley, and the western extent includes portions of the Santa Monica Mountains. The Gabrielino also occupied several Channel Islands including Santa Barbara Island, Santa Catalina Island, San Nicholas Island, and San Clemente Island. Because of their access to certain resources, including a steatite source from Santa Catalina Island, this group was among the wealthiest and most populous aboriginal groups in all of southern California. Trade of materials and resources controlled by the Gabrielino extended as far north as the San Joaquin Valley, as far east as the Colorado River, and as far south as Baja California (Bean and Smith 1978; Kroeber 1976).

Subsistence and Settlement

The Gabrielino lived in permanent villages and occupied smaller resource-gathering camps at various times of the year depending upon the seasonality of the resource. Larger villages were comprised of several families or clans, while smaller, seasonal camps typically housed smaller family units. The coastal area between San Pedro and Topanga Canyon was the location of primary subsistence villages, while secondary sites were located near inland sage stands, oak groves, and pine forests. Permanent villages were located along rivers and streams and in sheltered areas along the coast. As previously mentioned, the Channel Islands were also the locations of relatively large settlements (Bean and Smith 1978; Kroeber 1976).

Resources procured along the coast and on the islands were primarily marine in nature and included tuna, swordfish, ray, shark, California sea lion, Stellar sea lion, harbor seal, northern elephant seal, sea otter, dolphin, porpoise, various waterfowl species, numerous fish species, purple sea urchin, and mollusks, such as rock scallop, California mussel, and limpet. Inland resources included oak acorn, pine nut, Mohave yucca, cacti, sage, grass nut, deer, rabbit, hare, rodent, quail, duck, and a variety of reptiles such as western pond turtle and numerous snake species (Bean and Smith 1978; Kroeber 1976).

Social Organization

Little is known about the social structure of the Gabrielino; however, there appears to have been at least three social classes: 1) the elite, which included the rich, chiefs, and their immediate family; 2) a middle class, which included people of relatively high economic status or long-established lineages; and 3) a class of people that included most other individuals in the society. Villages were politically autonomous units comprised of several lineages. During times of the

year when certain seasonal resources were available, the village would divide into lineage groups and move out to exploit them, returning to the village between forays (Bean and Smith 1978; Kroeber 1976).

Each lineage had its own leader, with the village chief coming from the dominant lineage. Several villages might be allied under a paramount chief. Chiefly positions were of an ascribed status, most often passed to the eldest son. Chiefly duties included providing village cohesion, leading warfare and peace negotiations with other groups, collecting tribute from the village(s) under his jurisdiction, and arbitrating disputes within the village(s). The status of the chief was legitimized by his safekeeping of the sacred bundle, a representation of the link between the material and spiritual realms and the embodiment of power (Bean and Smith 1978; Kroeber 1976).

Shamans were leaders in the spirit realm. The duties of the shaman included conducting healing and curing ceremonies, guarding the sacred bundle, locating lost items, identifying and collecting poisons for arrows, and making rain (Bean and Smith 1978; Kroeber 1976).

Marriages were made between individuals of equal social status and, in the case of powerful lineages, marriages were arranged to establish political ties between the lineages (Bean and Smith 1978; Kroeber 1976).

Men conducted the majority of the heavy labor, hunting, fishing, and trading with other groups. Women's duties included gathering and preparing plant and animal resources, and making baskets, pots, and clothing (Bean and Smith 1978; Kroeber 1976).

Material Culture

Gabrielino houses were domed, circular structures made of thatched vegetation. Houses varied in size and could house from one to several families. Sweathouses (semicircular, earth-covered buildings) were public structures used in male social ceremonies. Other structures included menstrual huts and a ceremonial structure called a yuvar, an open-air structure built near the chief's house (Bean and Smith 1978; Kroeber 1976).

Clothing was minimal; men and children most often went naked, while women wore deerskin or bark aprons. In cold weather, deerskin, rabbit fur, or bird skin (with feathers intact) cloaks were worn. Island and coastal groups used sea otter fur for cloaks. In areas of rough terrain, yucca fiber sandals were worn. Women often used red ochre upon their faces and skin for adornment or protection from the sun. Adornment items included feathers, fur, shells, and beads (Bean and Smith 1978; Kroeber 1976).

Hunting implements included wood clubs, sinew-backed bows, slings, and throwing clubs. Maritime implements included rafts, harpoons, spears, hooks and lines, and nets. A variety of other tools included deer scapulae saws, bone and shell needles, bone awls, scrapers, bone or shell flakers, wedges, stone knives and drills, metates, mullers, manos, shell spoons, bark platters, and wood paddles and bowls. Baskets were made from rush, deer grass, and skunkbush. Baskets were fashioned for hoppers, plates, trays, and winnowers for leaching, straining, and gathering. Baskets were also used for storing, preparing, and serving food, and for keeping personal and ceremonial items (Bean and Smith 1978; Kroeber 1976).

The Gabrielino had exclusive access to soapstone, or steatite, procured from Santa Catalina Island quarries. This highly prized material was used for making pipes, animal carvings, ritual objects, ornaments, and cooking utensils. The Gabrielino profited well from trading steatite since it was valued so much by groups throughout southern California (Bean and Smith 1978; Kroeber 1976).

2.3.6 Ethnohistoric Period (1769 to Present)

Traditionally, the history of the state of California has been divided into three general periods: the Spanish Period (1769 to 1821), the Mexican Period (1822 to 1846), and the American Period (1848 to present) (Caughey 1970). The American Period is often further subdivided into additional phases: the nineteenth century (1848 to 1900), the early twentieth century (1900 to 1950), and the Modern Period (1950 to present). From an archaeological standpoint, all of these phases can be referred to together as the Ethnohistoric Period. This provides a valuable tool for archaeologists, as ethnohistory is directly concerned with the study of indigenous or non-Western peoples from a combined historical/anthropological viewpoint, which employs written documents, oral narrative, material culture, and ethnographic data for analysis.

European exploration along the California coast began in 1542 with the landing of Juan Rodríguez Cabrillo and his men at San Diego Bay. Sixty years after the Cabrillo expeditions, an expedition under Sebastián Vizcaíno made an extensive and thorough exploration of the Pacific coast. Although the voyage did not extend beyond the northern limits of the Cabrillo track, Vizcaíno had the most lasting effect upon the nomenclature of the coast. Many of his place names have survived, whereas practically every one of the names created by Cabrillo have faded from use. For instance, Cabrillo named the first (now) United States port he stopped at “San Miguel”; 60 years later, Vizcaíno changed it to “San Diego” (Rolle 1969). The early European voyages observed Native Americans living in villages along the coast but did not make any substantial, long-lasting impact. At the time of contact, the Luiseño population was estimated to have ranged from 4,000 to as many as 10,000 individuals (Bean and Shipek 1978; Kroeber 1976).

The historic background of the project area began with the Spanish colonization of Alta California. The first Spanish colonizing expedition reached southern California in 1769 with the intention of converting and civilizing the indigenous populations, as well as expanding the knowledge of and access to new resources in the region (Brigandi 1998). As a result, by the late eighteenth century, a large portion of southern California was overseen by Mission San Luis Rey (San Diego County), Mission San Juan Capistrano (Orange County), and Mission San Gabriel (Los Angeles County), who began colonizing the region and surrounding areas (Chapman 1921).

Up until this time, the only known way to feasibly travel from Sonora to Alta California was by sea. In 1774, Juan Bautista de Anza, an army captain at Tubac, requested and was given permission by the governor of the Mexican State of Sonora to establish an overland route from Sonora to Monterey (Chapman 1921). In doing so, Juan Bautista de Anza passed through Riverside County and described the area in writing for the first time (Caughey 1970; Chapman 1921). In 1797, Father Fermín de Lasuén (of Mission San Diego de Alcalá), Father Norberto de

Santiago, and Corporal Pedro Lisalde (of Mission San Juan Capistrano) led an expedition through southwestern Riverside County in search of a new mission site to establish a presence between San Diego and San Juan Capistrano (Engelhardt 1921). Their efforts ultimately resulted in the establishment of Mission San Luis Rey in Oceanside, California.

Each mission gained power through the support of a large, subjugated Native American workforce. As the missions grew, livestock holdings increased and became increasingly vulnerable to theft. In order to protect their interests, the southern California missions began to expand inland to try and provide additional security (Beattie and Beattie 1939; Caughey 1970). In order to meet their needs, the Spaniards embarked upon a formal expedition in 1806 to find potential locations within what is now the San Bernardino Valley. As a result, by 1810, Father Francisco Dumetz of Mission San Gabriel had succeeded in establishing a religious site, or capilla, at a Cahuilla rancheria called Guachama (Beattie and Beattie 1939). San Bernardino Valley received its name from this site, which was dedicated to San Bernardino de Siena by Father Dumetz. The Guachama rancheria was located in present-day Bryn Mawr in San Bernardino County.

These early colonization efforts were followed by the establishment of estancias at Puente (circa 1816) and San Bernardino (circa 1819) near Guachama (Beattie and Beattie 1939). These efforts were soon mirrored by the Spaniards from Mission San Luis Rey, who in turn established a presence in what is now Lake Elsinore, Temecula, and Murrieta (Chapman 1921). The indigenous groups who occupied these lands were recruited by missionaries, converted, and put to work in the missions (Pourade 1961). Throughout this period, the Native American populations were decimated by introduced diseases, a drastic shift in diet resulting in poor nutrition, and social conflicts due to the introduction of an entirely new social order (Cook 1976).

Mexico achieved independence from Spain in 1822 and became a federal republic in 1824. As a result, both Baja and Alta California became classified as territories (Rolle 1969). Shortly thereafter, the Mexican Republic sought to grant large tracts of private land to its citizens to begin to encourage immigration to California and to establish its presence in the region. Part of the establishment of power and control included the desecularization of the missions circa 1832. These same missions were also located on some of the most fertile land in California and, as a result, were considered highly valuable. The resulting land grants, known as "ranchos," covered expansive portions of California and, by 1846, more than 600 land grants had been issued by the Mexican government. Rancho Jurupa was the first rancho to be established and was issued to Juan Bandini in 1838. Although Bandini primarily resided in San Diego, Rancho Jurupa was located in what is now Riverside County (Pourade 1963). A review of Riverside County place names quickly illustrates that many of the ranchos in Riverside County lent their names to present-day locations, including Jurupa, El Rincon, La Sierra, El Sobrante de San Jacinto, La Laguna (Lake Elsinore), Santa Rosa, Temecula, Pauba, San Jacinto Nuevo y Potrero, and San Jacinto Viejo (Gunther 1984). As was typical of many ranchos, these were all located in the valley environments within western Riverside County.

The treatment of Native Americans grew worse during the Rancho Period. Most of the

Native Americans were forced off of their land or put to work on the now privately-owned ranchos, most often as slave labor. In light of the brutal ranchos, the degree to which Native Americans had become dependent upon the mission system is evident when, in 1838, a group of Native Americans from Mission San Luis Rey petitioned government officials in San Diego to relieve suffering at the hands of the rancheros:

> We have suffered incalculable losses, for some of which we are in part to be blamed for because many of us have abandoned the Mission … We plead and beseech you … to grant us a Rev. Father for this place. We have been accustomed to the Rev. Fathers and to their manner of managing the duties. We labored under their intelligent directions, and we were obedient to the Fathers according to the regulations, because we considered it as good for us. (Brigandi 1998:21)

Native American culture had been disrupted to the point where they could no longer rely upon prehistoric subsistence and social patterns. Not only does this illustrate how dependent the Native Americans had become upon the missionaries, but it also indicates a marked contrast in the way the Spanish treated the Native Americans compared to the Mexican and United States ranchers. Spanish colonialism (missions) is based upon utilizing human resources while integrating them into their society. The Mexican and American ranchers did not accept Native Americans into their social order and used them specifically for the extraction of labor, resources, and profit. Rather than being incorporated, they were either subjugated or exterminated (Cook 1976).

By 1846, tensions between the United States and Mexico had escalated to the point of war (Rolle 1969). In order to reach a peaceful agreement, the Treaty of Guadalupe Hidalgo was put into effect in 1848, which resulted in the annexation of California to the United States. Once California opened to the United States, waves of settlers moved in searching for gold mines, business opportunities, political opportunities, religious freedom, and adventure (Rolle 1969; Caughey 1970). By 1850, California had become a state and was eventually divided into 27 separate counties. While a much larger population was now settling in California, this was primarily in the central valley, San Francisco, and the Gold Rush region of the Sierra Nevada mountain range (Rolle 1969; Caughey 1970). During this time, southern California grew at a much slower pace than northern California and was still dominated by the cattle industry that was established during the earlier rancho period. However, by 1859, the first United States Post Office in what would eventually become Riverside County was set up at John Magee's store on the Temecula Rancho (Gunther 1984).

During the same decade, circa 1852, the Native Americans of southern Riverside County, including the Luiseño and the Cahuilla, thought they had signed a treaty resulting in their ownership of all lands from Temecula to Aguanga east to the desert, including the San Jacinto Valley and the San Gorgonio Pass. The Temecula Treaty also included food and clothing provisions for the Native Americans. However, Congress never ratified these treaties, and the

promise of one large reservation was rescinded (Brigandi 1998).

With the completion of the Southern Pacific Railroad in 1869, southern California saw its first major population expansion. The population boom continued circa 1874 with the completion of connections between the Southern Pacific Railroad in Sacramento to the transcontinental Central Pacific Railroad in Los Angeles (Rolle 1969; Caughey 1970). The population influx brought farmers, land speculators, and prospective developers to the region. As the Jurupa area became more and more populated, circa 1870, Judge John Wesley North and a group of associates founded the city of Riverside on part of the former rancho.

Although the first orange trees were planted in Riverside County circa 1871, it was not until a few years later when a small number of Brazilian navel orange trees were established that the citrus industry truly began in the region (Patterson 1971). The Brazilian navel orange was well suited to the climate of Riverside County and thrived with assistance from several extensive irrigation projects. At the close of 1882, an estimated half a million citrus trees were present in California. It is estimated that nearly half of that citrus tree population was in Riverside County. Population growth and 1880s tax revenue from the booming citrus industry prompted the official formation of Riverside County in 1893 out of portions of what was once San Bernardino County (Patterson 1971).

Shortly thereafter, with the start of World War I, the United States began to develop a military presence in Riverside County with the construction of March Air Reserve Base. During World War II, Camp Anza and Camp Haan were constructed, with the former located in the western part of the city of Riverside and the latter in what is now the current location of the National Veteran's Cemetery. In the decades that followed, populations spread throughout the county into Lake Elsinore, Corona, Norco, Murrieta, and Wildomar. However, a significant portion of the county remained largely agricultural well into the 1970s (Patterson 1971). Following the 1970s, Riverside saw a period of dramatic population increase as the result of new development, more than doubling the population of the county to a population of over 1.3 million residents.

2.3.7 General History of the Val Verde Region

The project is located within an area traditionally known as Val Verde, which has historically been associated with the nearby city of Perris. In 1881, the California Southern Railroad laid the tracks for the transcontinental route of the Santa Fe Railway through the plains east of the project. At this time, the area where the railroad was placed was referred to as the San Jacinto Plains. Surveying and construction of the railroad route was led by Patrick Thomas Perris, for whom the city of Perris was named. The railroad was completed in 1882, which allowed hundreds of settlers to enter the area for homesteading, most of them settling in Pinacate to the south (City of Perris 2013).

While still part of San Diego County, Rancho San Jacinto Nuevo y Portrero was patented to T.W. Sutherland, guardian of Miguel Pedrorena's children, in 1883 (Robinson 1997). In 1885, the citizens of Pinacate gathered together to create a more conveniently located station along the

railroad route and, in 1886, after much hard work, the town site of Perris was established (City of Perris 2013). In 1911, Perris became an incorporated city, relying heavily upon dry grain farming and citrus groves (City of Perris 2013).

The Val Verde Tract was platted in 1893 about five miles northwest of Perris. One of the owners of the tract, J.R. Nance, was also instrumental in promoting the city of Perris and the Riverside Tract to the north of the current project (Gunther 1984). The community briefly flourished due to the establishment of a railway siding and station. The area was dominated by agricultural properties focused upon grain, grapes, potatoes, melons, alfalfa, and green vegetables. The community had a post office between 1894 and 1904, and again from 1918 through 1930. The post office was discontinued twice, and mail was forwarded to Perris (Gunther 1984).

A portion of the Colorado River Aqueduct was constructed in the community in 1939 to transport water from the river to nearby Lake Mathews. The alignment of the aqueduct within Val Verde was named the Val Verde Cut and the Val Verde Tunnel. The Val Verde Cut was the only portion of the aqueduct that was unlined, running for approximately one mile (Gunther 1984). Due to the aqueduct and availability of water in the region, the Val Verde community continued to be dominated by agriculture throughout the twentieth century.

2.4 Research Goals

The primary goal of the research design is to attempt to understand the way in which humans have used the land and resources within the project area through time, as well as to aid in the determination of resource significance. For the current project, the study area under investigation is the western portion of Riverside County. The scope of work for the archaeological program conducted for the Thrifty Oil Warehouse Project included an intensive pedestrian survey of the entire approximately 9.5-acre project. Given the area involved and the narrow focus of the cultural resources study, the research design for this project was necessarily limited and general in nature. Since the main objective of the investigation was to identify the presence of and potential impacts to cultural resources, the goal is not necessarily to answer wide-reaching theories regarding the development of early southern California, but to investigate the role and importance of the identified resources. Although survey-level investigations are limited in terms of the amount of information available, several specific research questions were developed that could be used to guide the initial investigations of any observed cultural resources. The following research questions take into account the size and location of the project discussed above.

Research Questions:

- Can located cultural resources be associated with a specific time period, population, or individual?
- Do the types of located cultural resources allow a site activity/function to be determined from a preliminary investigation? What are the site activities? What is the site function? What resources were exploited?

- How do the located sites compare to others reported from different surveys conducted in the area?
- How do the located sites fit existing models of settlement and subsistence for valley environments of the region?

Data Needs

At the survey level, the principal research objective is a generalized investigation of changing settlement patterns in both the prehistoric and historic periods within the study area. The overall goal is to understand settlement and resource procurement patterns of the project area occupants. Therefore, adequate information on site function, context, and chronology from an archaeological perspective is essential for the investigation. The fieldwork and archival research were undertaken with these primary research goals in mind:

1) To identify cultural resources occurring within the project;
2) To determine, if possible, site type and function, context of the deposit, and chronological placement of each cultural resource identified;
3) To place each cultural resource identified within a regional perspective; and
4) To provide recommendations for the treatment of each of the cultural resources identified.

3.0 METHODOLOGY

The archaeological program for the Thrifty Oil Warehouse Project consisted of an institutional records search, a SLF search, an intensive pedestrian survey of the approximately 9.5-acre project, and the preparation of this technical study. This archaeological study conformed to County of Riverside Cultural Resource Guidelines. Statutory requirements of CEQA and subsequent legislation (Section 15064.5) were followed in evaluating the significance of cultural resources. Specific definitions for archaeological resource type(s) used in this report are those established by the State Historic Preservation Office (SHPO; March 1995).

3.1 Archaeological Records Search

An archaeological records search for the project and the surrounding area within a one-mile radius was conducted by BFSA at the EIC at UCR on December 4, 2023 (Appendix B). A detailed discussion of the records search results is presented within Section 4.1 and the complete records search results are provided in Appendix B.

BFSA also reviewed the National Register of Historic Places (NRHP) index, historic USGS data, and aerial photographs (1938 through 2023). In addition, land patent records, held by the Bureau of Land Management (BLM) and accessible through the BLM General Land Office website, were reviewed for pertinent project information and the BFSA research library was consulted for any relevant historical information.

3.2 Field Methodology

In accordance with County of Riverside CEQA review requirements, an intensive pedestrian reconnaissance was conducted that employed a series of parallel survey transects spaced at 15-meter intervals to locate archaeological sites within the project. The archaeological survey of the project was conducted on December 6, 2023. The entire project was covered by the survey process and photographs were taken to document project conditions during the survey (see Section 4.2).

3.3 Report Preparation and Recordation

This report contains information regarding previous studies, statutory requirements for the project, a brief description of the setting, research methods employed, and the overall results of the survey. The report includes all appropriate illustrations and tabular information needed to make a complete and comprehensive presentation of these activities, including the methodologies employed and the personnel involved. A copy of this report will be placed at the EIC at UCR. Any newly recorded sites, or sites requiring updated information, will be recorded on the appropriate Department of Parks and Recreation (DPR) site forms, which will be filed at the EIC.

3.4 Native American Consultation

BFSA requested a review of the SLF by the NAHC, to determine if any recorded Native American sacred sites or locations of religious or ceremonial importance are present within one mile of the project. The search was returned with positive results for the project vicinity. In accordance with previous recommendations of the NAHC, BFSA contacted all Native American consultants listed in previous NAHC response letters at least two weeks prior to the initiation of the field survey. This request is not part of any Assembly Bill 52 Native American consultation.

No responses were received during the two-week interim period. However, representatives from both Pechanga and Soboba were invited to participate in the field survey. Cameron Linton from the Pechanga Band of Indians and William Swan from the Soboba Band of Luiseño Indians accompanied BFSA during the survey process. All correspondence is provided in Appendix C.

3.5 Applicable Regulations

Resource importance is assigned to districts, sites, buildings, structures, and objects that possess exceptional value or quality illustrating or interpreting the heritage of Riverside County in history, architecture, archaeology, engineering, and culture. Criteria outlined in CEQA provide the guidance for making such a determination. Provided below is the CEQA criteria that a resource must meet in order to be determined important.

3.5.1 California Environmental Quality Act

According to CEQA (§ 15064.5a), the term "historical resource" includes the following:

1) A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the CRHR [California Register of Historical Resources (Public Resources Code [PRC] SS5024.1, Title 14 CCR. Section 4850 et seq.).
2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3) Any object, building, structure, site, area, place, record, or manuscript, which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (PRC SS5024.1, Title 14, Section 4852) including the following:

a) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
b) Is associated with the lives of persons important in our past;
c) 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; or
d) Has yielded, or may be likely to yield, information important in prehistory or history.

4) The fact that a resource is not listed in, or determined eligible for listing in, the CRHR, or not included in a local register of historical resources (pursuant to Section 5020.1[k] of the PRC), or not identified in an historical resources survey (meeting the criteria in Section 5024.1[g] of the PRC), does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Section 5020.1(j) or 5024.1.

According to CEQA (§15064.5b), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect upon the environment. CEQA defines a substantial adverse change as:

1) Substantial adverse change in the significance of an historical resource 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.
2) The significance of an historical resource is materially impaired when a project:

a) 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 CRHR; or
b) 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 PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, 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,
c) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

Section 15064.5(c) of CEQA applies to effects upon archaeological sites and contains the following additional provisions regarding archaeological sites:

1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).
2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the PRC and Section 15126.4 of the guidelines, and the limits contained in Section 21083.2 of the PRC do not apply.
3) If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the PRC, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in PRC Section 21083.2 (c to f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.
4) If an archaeological resource is neither a unique archaeological nor historical resource, the effects of the project upon those resources shall not be considered a significant effect upon the environment. It shall be sufficient that both the resource and the effect upon it are noted in the Initial Study or Environmental Impact Report, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 15064.5 (d) and (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides:

(d) When an Initial Study identifies the existence of, or the probable likelihood of, Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the NAHC as provided in PRC SS5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the NAHC. Action implementing such an agreement is exempt from:

    1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
    2) The requirement of CEQA and the Coastal Act.

4.0 RESULTS

4.1 Records Search Results

An archaeological records search for the project and the surrounding area within a one-mile radius was conducted by BFSA at the EIC at UCR (Appendix B). The archaeological records search results from the EIC identified 88 resources within a one-mile radius of the current project area, none of which are recorded within the subject property. These resources include 68 prehistoric resources, one multicomponent site, and 19 historic resources (Table 4.1–1 in Appendix D). The prehistoric resources include two pictograph sites, 65 bedrock milling sites, and one isolate. The multicomponent site is a prehistoric bedrock milling site and historic trash scatter. The historic resources are characterized as seven single family properties, four trash scatters, one ranch complex remnant, two sets of foundational remains, a railroad grade, relocated Camp Haan barracks, one quarry, and two isolates. Based upon the records search results, the most common prehistoric resources in the region are bedrock milling sites, while historic resources are primarily focused on the built environment.

The records search results also identified 37 previous studies which have been conducted within a one-mile radius of the project, none of which included the subject property (Table 4.1–2 in Appendix D).

BFSA also reviewed the following sources to help facilitate a better understanding of the historic use of the property:

- The NRHP Index
- The Office of Historic Preservation Built Environment Resources Directory
- Bureau of Land Management (BLM) General Land Office (GLO) records
- The 1901 *Elsinore, California* (30-minute) quadrangle map
- The 1942 *Perris, California* (15-minute) USGS quadrangle map
- The 1953 and 1967 *Perris, California* (7.5-minute) USGS quadrangle maps
- Historic photographs (1938 through 2023)

The BLM GLO records search identified a single 1891 patent for the property indicating the project location was originally granted to the Southern Pacific Railroad Company as part of a large 98,330.04-acre grant. The 1901 *Elsinore* 30-minute map shows structures within the project vicinity; however, at that scale it is not clear if any are located within the property. Conversely, the 1942 *Perris* 15-minute map does show structures within the northwest corner of the property. These structures are not visible on the 1953 7.5-minute map but are visible on the subsquent 1967 7.5-minute map. The aerial photographs show a ranch complex within the northwest corner of the property as early as 1938. This complex appears to be confined to the northwestern corner of the property through 1967. By 1974, additoinal ancillary structures are visible across the northern one-third of the property while the remainder of the property appears to be used for agricultural purposes. By 1977, additional structures are visible in the northern portion of the property

including a possible new residence in the northeast corner of the project. Between 1977 and 1985, two additional structures were added to the northeast corner of the property. Starting in 2003, structures start being removed form the property, with subsquent photographs showing the removal of all structures by 2018, except for three located within the northeast corner.

BFSA also requested a SLF search from the NAHC. The SLF search results were positive for Native American sacred sites or locations of religious or ceremonial importance within the vicinity of the project. In accordance with the recommendations of the NAHC, BFSA contacted all Native American consultants listed in the NAHC response letter at least two weeks prior to the initiation of the field survey. In addition, representatives from the Pechanga Band of Indians and the Soboba Band of Luiseño Indians were invited to participate in the survey process. All correspondence is provided in Appendix C.

4.2 Results of the Field Survey

BFSA archaeologist Sabrina Corcoran conducted the pedestrian survey of the project on December 6, 2023. Aerial photographs, maps, and a compass facilitated the orientation and location of project boundaries. Cameron Linton from the Pechanga Band of Indians and William Swan from the Soboba Band of Luiseño Indians actively participated in the survey. The entire property was surveyed in 15-meter transects. All exposed ground surfaces were carefully inspected, including rodent burrows and disturbed areas. A survey form, field notes, and photographs documented the survey work undertaken.

During the survey, ground visibility was fair due to areas of dense vegetation. The vegetation found within the property consisted primarily of non-native weeds and grasses, although various trees, primarily eucalyptus and pepper, were observed in the northwest corner of the property (Plates 4.2–1 and 4.2–2). Further, limited residential landscaping was observed in the northeast corner within APN 317-260-018. The property appears to have been previously impacted by past development and subsequent clearing, which was observed on the aerial photographs. During the survey, impacts associated with this clearing and agricultural use were observed. Further, modern trash was noted throughout the property. A residence, a prefabricated manufactured home, and a corrugated metal ancillary structure were located within the northeastern corner of the property at APN 317-260-018 (Plates 4.2–3 and 4.2–4). However, all existing structures and improvements within the project correspond with additions to the property which occurred after 1977 and, therefore, do not qualify as eligible for CRHR evaluation. The survey did not identify any cultural resources within the project.



Plate 4.2–1: Overview of the property, facing northeast.



Plate 4.2–2: Overview of the property, facing southwest.



Plate 4.2–3: The residence and prefabricated manufactured home located in the northeast corner of the project, facing southwest.



Plate 4.2–4: Ancillary structure in the northeast corner of the project, facing south.

5.0 RECOMMENDATIONS

The Phase I cultural resources assessment for the Thrifty Oil Warehouse Project did not identify any cultural resources. However, the property is located in proximity to multiple prehistoric and historic resources and has been impacted by agricultural use, partial development, and clearing. These impacts typically remove evidence of surface scatters of cultural artifacts. Therefore, given the past impacts to the property coupled with the frequency of resources within the one mile, the obstructed ground visibility during the survey, and the noted historic occupation of the property, there still remains potential for the inadvertent discovery of archaeological resources during grading. As such, a cultural resources Mitigation Monitoring and Reporting Program (MMRP) is recommended as a condition of approval for this property, which should include the monitoring of all ground-disturbing activities within the property by an archaeologist and Native American monitor.

Recommended Mitigation Monitoring and Reporting Program

As a condition of project approval, a MMRP is recommended to identify any cultural resources that may be uncovered during grading and, subsequently, to mitigate potential impacts to any discovered archaeological resources evaluated as significant. This program shall include, but not be limited to, the following actions:

1) Prior to issuance of a grading permit, the applicant shall provide written verification that a certified archaeologist has been retained to implement the monitoring program. This verification shall be presented in a letter from the project archaeologist to Riverside County.
2) The project applicant shall contact the appropriate Native American tribe to conduct monitoring in conjunction with the archaeological observation of grading. A preconstruction agreement with the Native American tribe shall be forwarded to the County. The certified cultural resources consultant and Native American monitor shall attend the pregrading meeting with the contractors to explain and coordinate the requirements of the monitoring program.
3) During the original cutting of previously undisturbed deposits, the archaeological and Native American monitors shall be on-site full time to perform periodic inspections of the excavations. The frequency of inspections will depend on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features.
4) Isolates and clearly non-significant deposits will be minimally documented in the field so the monitored grading can proceed.
5) In the event that previously unidentified cultural resources are discovered, the archaeologist shall have the authority to divert or temporarily halt ground disturbance in the area of discovery to allow for the evaluation of potentially significant cultural resources. The archaeologist shall contact the lead agency at the time of discovery.

The archaeologist, in consultation with the lead agency and the Native American representative, shall determine the significance of the discovered resources. The lead agency must concur with the evaluation before construction activities will be allowed to resume in the affected area. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the consulting archaeologist and approved by the lead agency before being carried out using professional archaeological methods. If any human remains are discovered, the County coroner and lead agency shall be contacted. In the event that the remains are determined to be of Native American origin, the most likely descendant, as identified by the NAHC, shall be contacted in order to determine proper treatment and deposition of the remains.

6) Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods. The archaeological monitor(s) shall determine the amount of material to be recovered for an adequate artifact sample for analysis.
7) In the event cultural resources are identified during ground disturbing activities, the landowner(s) shall relinquish ownership of all cultural resources, (with the exception of sacred items, burial goods, and human remains) and provide evidence to the satisfaction of the County Archaeologist that all archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), have been handled through one of the following methods:

    a. A fully executed reburial agreement with the appropriate culturally affiliated Native American tribe(s) or band(s). This shall include measures and provisions to protect the reburial area from any future impacts. Reburial shall not occur until all cataloging, analysis and special studies have been completed on the cultural resources. Details of contents and location of the reburial shall be included in the Phase IV Report.
    b. Curation at a Riverside County Curation facility that meets federal standards per 36 CFR [Code of Federal Regulations] Part 79 and therefore will be professionally curated and made available to other archaeologists/researchers and tribal members for further study. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility identifying that archaeological materials have been received and that all fees have been paid.
    c. If more than one Native American Group is involved with the project and cannot come to a consensus as to the disposition of cultural resources, the landowner(s) shall then proceed with curation at the Western Science Center.

The details of any disposition of artifacts shall be documented in the Phase IV report.

8) A report documenting the field and analysis results and interpreting the artifact and research data within the research context shall be completed and submitted to the satisfaction of the lead agency prior to the issuance of any building permits. The report will include DPR Primary and Archaeological Site Forms, if any are required.

6.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this archaeological report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.



January 16, 2024

Tracy A. Stropes, M.A., RPA
Principal Investigator
County of Riverside Registration #257

Date

7.0 REFERENCES

Bean, Lowell John
1978 Cahuilla. In *California*, edited by Robert F. Heizer, pp. 575–587. Handbook of North American Indians, Vol. 8. William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Bean, Lowell John and Charles R. Smith
1978 Gabrielino. In *California*, edited by R.F. Heizer, pp. 538–549. Handbook of North American Indians, Vol. 8. William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Bean, Lowell John and Florence C. Shipek
1978 Luiseño. In *California*, edited by R.F. Heizer, pp. 550–563. Handbook of North American Indians, Vol. 8. William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Beattie, George W. and Helen P. Beattie
1939 Heritage of the Valley: San Bernardino's First Century. Biobooks: Oakland.

Brigandi, Phil
1998 *Temecula: At the Crossroads of History*. Heritage Media Corporation, Encinitas, California.

Byrd, Brian F.
1998 Harvesting the Littoral Landscape During the Late Holocene: New Perspectives from Northern San Diego County. *Journal of California and Great Basin Anthropology* 20(2):195-218.

Caughey, John W.
1970 *California, A Remarkable State's Life History*. Prentice-Hall Inc., Englewood Cliffs, New Jersey.

Chapman, Charles E.
1921 *A History of California: The Spanish Period*. The Macmillan Company, New York.

City of Perris
2013 About Perris. Electronic document, http://www.cityofperris.org, accessed August 2014.

Cook, Sherburne F.
1976 *The Conflict Between the California Indian and White Civilization*. University of California Press, Berkeley and Los Angeles, California.

Engelhardt, Zephyrin
1921 *San Luis Rey Mission, The King of the Missions*. James M. Barry Company, San Francisco, California.

Erlandson, Jon M. and Roger H. Colten (editors)
1991 An Archaeological Context for Early Holocene Sites on the California Coast. In *Hunter-Gatherers of Early Holocene Coastal California*, edited by Jon M. Erlandson and Roger H. Colten, pp. 101–111. Perspectives in California Archaeology, Vol. 1. Institute of Archaeology, University of California, Los Angeles.

Fagan, B.
1991 *Ancient North America: The Archaeology of a Continent*. Thames and Hudson. London.

Gallegos, Dennis
1987 A Review and Synthesis of Environmental and Cultural Material for the Batiquitos Lagoon Region. In *San Dieguito-La Jolla: Chronology and Controversy*, editor. San Diego County Archaeological Society Research Paper No. 1.

1992 Patterns and Implications of Coastal Settlement in San Diego County: 9000 to 1300 Years Ago. In *Essays on the Prehistory of Maritime California*, edited by Terry Jones. Center for Archaeological Research, Davis, California.

Gallegos, Dennis R. and Carolyn E. Kyle
1988 Five Thousand Years of Maritime Subsistence at Ballast Point Prehistoric Site SDI-48 (W-164) San Diego, California. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Gunther, Jane Davies
1984 *Riverside County, California, Place Names: Their Origins and Their Stories.* Rubidoux Printing, Riverside, California.

Harris, Marvin
1991 *Cultural Anthropology*. HarperCollins Publishers Inc., New York, New York.

Koerper, Henry, C., Jonathan E. Ericson, Christopher E. Drover, and Paul E. Langenwalter, II
1986 Obsidian Exchange in Prehistoric Orange County. *Pacific Coast Archaeological Society Quarterly* 22 (1):33–69.

Kowta, Makoto
1969 The Sayles Complex: A Late Milling Stone Assemblage from Cajon Pass and the Ecological Implications of Its Scraper Planes. *University of California Publications in Anthropology* No. 6.

Kroeber, A.L.
1976 *Handbook of the Indians of California*. Reprinted. Dover Editions, Dover Publications, Inc., New York. Originally published 1925, Bulletin No. 78, U.S. Government Printing Office, Washington, D.C.

Laylander, Don (editor)
1985 Some Linguistic Approaches to Southern California's Prehistory. *Cultural Resource Management Casual Papers* 2(1):14–58. Department of Anthropology, San Diego State University, San Diego, California.

Laylander, Don, Jerry Schaefer, Nick Doose, Jessica Hennessey, and Ian Scharlotta
2014 A Regional Synthesis of Prehistoric Archaeological Landscapes in the Jacumba/McCain Valley Region, San Diego and Imperial Counties, California. Prepared for the Bureau of Land Management and San Diego Gas & Electric by ASM Affiliates, Carlsbad, California.

Martin, P.S.
1967 Prehistoric Overkill. *Pleistocene Extinctions: The Search for a Cause*, edited by P. Martin and H.E. Wright. Yale University Press: New Haven.

1973 The Discovery of America. *Science* 179(4077):969–974.

Masters, Patricia M.
1983 Detection and Assessment of Prehistoric Artifact Sites off the Coast of Southern California. In: *Quaternary Coastlines and Marine Archaeology: Towards the Prehistory of Land Bridges and Continental Shelves*, edited by P.M. Masters and N.C. Flemming, pp. 189–213. Academic Press, London.

Meighan, Clement W.
1954 A Late Complex in Southern California Prehistory. *Southwestern Journal of Anthropology* 10(2).

Miller, J.
1966 *The Present and Past Molluscan Faunas and Environments of Four Southern California Coastal Lagoons*. Master's thesis. University of California, San Diego.

Moratto, Michael J.
1984 *California Archaeology*. Academic Press, New York.

Moriarty, James R., III
1966 Culture Phase Divisions Suggested by Topological Change Coordinated with Stratigraphically Controlled Radiocarbon Dating in San Diego. *Anthropological Journal of Canada* 4(4):20–30.

Moss, M.L. and J. Erlandson
1995 Reflections on North American Coast Prehistory. *Journal of World Prehistory* 9(1):1–46.

National Resources Conservation Service (NRCS)
2023 An online soil survey browser. Electronic document, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, accessed March, 2023.

Patterson, Tom
1971 *A Colony for California: Riverside's First Hundred Years.* Press-Enterprise, Riverside, California.

Pourade, Richard F.
1961 *Time of the Bells*. The History of San Diego Volume 2. Union-Tribune Publishing Company, San Diego, California.
1963 *The Silver Dons*. The History of San Diego Volume 3. Union-Tribune Publishing Company, San Diego, California.

Raven-Jennings, Shelly, Brian F. Smith and Johnna L. Buysse
1996 The Results of a Cultural Resource Study at the 4S Ranch, Rancho Bernardo, County of San Diego. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Robinson, John W.
1997 Rancho San Jacinto Viejo and the Estudillo Family. *Rancho Days in Southern California: An Anthology with New Perspectives.* Brand Book No. 20: The Westerners – Los Angeles Corral Series, edited by Kenneth E. Pauley. Studio City, Los Angeles.

Rogers, Malcolm J.
1939 Early Lithic Industries of the Lower Basin of the Colorado River and Adjacent Desert Areas. In *San Diego Museum Papers* (No. 3 – 1989 printing). San Diego Museum of Man, San Diego, California.

Rolle, Andrew F.
1969 *California: A History* (Second Edition). Thomas Y. Crowell Company, New York.

Shumway, George, Carl L. Hubbs, and James R. Moriarty, III
1961 Scripps Estate Site, San Diego, California: A La Jollan Site Dated 5,460-7,370 Years Before the Present. *Annals of the New York Academy of Sciences* 93(3).

Smith, Brian F. and James R. Moriarty, III
1985 The Archaeological Excavations at Batiquitos Pointe and Batiquitos Bluffs. Unpublished report on file at the City of Carlsbad, Carlsbad, California.

State Historic Preservation Office (SHPO)
1995 Instructions for Recording Historical Resources. Office of Historic Preservation, Sacramento.

Strong, William Duncan
1929 Aboriginal Society in Southern California. *University of California Publications in American Archaeology and Ethnology* 26(1).

Sutton, Mark Q.
2009 People and Language: Defining the Takic Expansion into Southern California. *Pacific Coast Archaeological Society Quarterly* 41(2&3):33–93.

2011a The Palomar Tradition and Its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly* 44(4):1–74.

2011b *A Prehistory of North America.* Routledge, New York.

Sutton, Mark Q. and Jill K. Gardner
2010 Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly* 42(4):1–64.

True, Delbert L.
1958 An Early Complex in San Diego County, California. *American Antiquity* 23(3).

1980 The Pauma Complex in Northern San Diego County. *The Journal of New World Archaeology* 3(4):1–39.

Wallace, William J.
1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214–230.

Warren, Claude N. (editor)
1968 Cultural Tradition and Ecological Adaptation on the Southern Coast, In: Archaic Prehistory in the Western United States. In *Eastern New Mexico University Contributions in Anthropology* 1(3):1–14.

Warren, Claude N. and D.L. True
1961 The San Dieguito Complex and its Place in California Prehistory. In *Archaeological Survey Annual Report 1960-1961*. University of California Press, Los Angeles, California.

Warren, Claude N., D.L. True, and Ardith A. Eudey
1961 Early Gathering Complexes of Western San Diego County: Results and Interpretations of an Archaeological Survey. *Archaeological Survey Annual Report 1960-1961*. University of California, Los Angeles.

Wirths, Todd A.
2023 Paleontological Resources Assessment for the Thrifty Oil Warehouse Project, Riverside County, California, PAR230068. Prepared for and on file at BFSA Environmental Services, a Perennial Company, Poway, California. Report in progress.

Woodford, A.O., Shelton, J.S., Doehring, D.O., and Morton, R.K.
1971 Pliocene-Pleistocene history of the Perris Block, southern California. Geological Society of America Bulletin, v. 82, p. 3421–3448, 18 figs.

APPENDIX A

Qualifications of Key Personnel

Andrew J. Garrison, M.A., RPA

Project Archaeologist

BFSA Environmental Services, a Perennial Company
14010 Poway Road • Suite A •
Phone: (858) 679-8218 • Fax: (858) 679-9896 • E-Mail: agarrison@bfsa.perennialenv.com

Education

Master of Arts, Public History, University of California, Riverside **2009**

Bachelor of Science, Anthropology, University of California, Riverside **2005**

Bachelor of Arts, History, University of California, Riverside **2005**

Professional Memberships

Register of Professional Archaeologists
Society for California Archaeology
Society for American Archaeology
California Council for the Promotion of History
Society of Primitive Technology
Lithic Studies Society
California Preservation Foundation
Pacific Coast Archaeological Society

Experience

Project Archaeologist **June 2017–Present**
BFSA Environmental Serives, A Perennial Company **Poway, California**

Project management of all phases of archaeological investigations for local, state, and federal agencies including National Register of Historic Places (NRHP) and California Environmental Quality Act (CEQA) level projects interacting with clients, sub-consultants, and lead agencies. Supervise and perform fieldwork including archaeological survey, monitoring, site testing, comprehensive site records checks, and historic building assessments. Perform and oversee technological analysis of prehistoric lithic assemblages. Author or co-author cultural resource management reports submitted to private clients and lead agencies.

Senior Archaeologist and GIS Specialist **2009–2017**
Scientific Resource Surveys, Inc. **Orange, California**

Served as Project Archaeologist or Principal Investigator on multiple projects, including archaeological monitoring, cultural resource surveys, test excavations, and historic building assessments. Directed projects from start to finish, including budget and personnel hours proposals, field and laboratory direction, report writing, technical editing, Native American consultation, and final report submittal. Oversaw all GIS projects including data collection, spatial analysis, and map creation.

Preservation Researcher **2009**
City of Riverside Modernism Survey **Riverside, California**

Completed DPR Primary, District, and Building, Structure and Object Forms for five sites for a grant-funded project to survey designated modern architectural resources within the City of Riverside.

Information Officer **2005, 2008–2009**
Eastern Information Center (EIC), University of California, Riverside **Riverside, California**

Processed and catalogued restricted and unrestricted archaeological and historical site record forms. Conducted research projects and records searches for government agencies and private cultural resource firms.

Reports/Papers

2019 A Class III Archaeological Study for the Tuscany Valley (TM 33725) Project National Historic Preservation Act Section 106 Compliance, Lake Elsinore, Riverside County, California. Contributing author. Brian F. Smith and Associates, Inc.

2019 A Phase I and II Cultural Resources Assessment for the Jack Rabbit Trail Logistics Center Project, City of Beaumont, Riverside County, California. Brian F. Smith and Associates, Inc.

2019 A Phase I Cultural Resources Assessment for the 10575 Foothill Boulevard Project, Rancho Cucamonga, California. Brian F. Smith and Associates, Inc.

2019 Cultural Resources Study for the County Road and East End Avenue Project, City of Chino, San Bernardino County, California. Brian F. Smith and Associates, Inc.

2019 Phase II Cultural Resource Study for the McElwain Project, City of Murrieta, California. Contributing author. Brian F. Smith and Associates, Inc.

2019 A Section 106 (NHPA) Historic Resources Study for the McElwain Project, City of Murrieta, Riverside County, California. Brian F. Smith and Associates, Inc.

2018 Cultural Resource Monitoring Report for the Sewer Group 818 Project, City of San Diego. Brian F. Smith and Associates, Inc.

2018 Phase I Cultural Resource Survey for the Stone Residence Project, 1525 Buckingham Drive, La Jolla, California 92037. Brian F. Smith and Associates, Inc.

2018 A Phase I Cultural Resources Assessment for the Seaton Commerce Center Project, Riverside County, California. Brian F. Smith and Associates, Inc.

2017 A Phase I Cultural Resources Assessment for the Marbella Villa Project, City of Desert Hot Springs, Riverside County, California. Brian F. Smith and Associates, Inc.

2017 Phase I Cultural Resources Survey for TTM 37109, City of Jurupa Valley, County of Riverside. Brian F. Smith and Associates, Inc.

2017 A Phase I Cultural Resources Assessment for the Winchester Dollar General Store Project, Riverside County, California. Brian F. Smith and Associates, Inc.

2016 John Wayne Airport Jet Fuel Pipeline and Tank Farm Archaeological Monitoring Plan. Scientific Resource Surveys, Inc. On file at the County of Orange, California.

2016 Historic Resource Assessment for 220 South Batavia Street, Orange, CA 92868 Assessor's Parcel Number 041-064-4. Scientific Resource Surveys, Inc. Submitted to the City of Orange as part of Mills Act application.

2015 Historic Resource Report: 807-813 Harvard Boulevard, Los Angeles. Scientific Resource Surveys, Inc. On file at the South Central Coastal Information Center, California State University, Fullerton.

2015 Exploring a Traditional Rock Cairn: Test Excavation at CA-SDI-13/RBLI-26: The Rincon Indian Reservation, San Diego County, California. Scientific Resource Surveys, Inc.

2014 Archaeological Monitoring Results: The New Los Angeles Federal Courthouse. Scientific Resource Surveys, Inc. On file at the South Central Coastal Information Center, California State University, Fullerton.

2012 Bolsa Chica Archaeological Project Volume 7, Technological Analysis of Stone Tools, Lithic Technology at Bolsa Chica: Reduction Maintenance and Experimentation. Scientific Resource Surveys, Inc.

Presentations

2017 "Repair and Replace: Lithic Production Behavior as Indicated by the Debitage Assemblage from CA-MRP-283 the Hackney Site." Presented at the Society for California Archaeology Annual Meeting, Fish Camp, California.

2016 "Bones, Stones, and Shell at Bolsa Chica: A Ceremonial Relationship?" Presented at the Society for California Archaeology Annual Meeting, Ontario, California.

2016 "Markers of Time: Exploring Transitions in the Bolsa Chica Assemblage." Presented at the Society for California Archaeology Annual Meeting, Ontario, California.

2016 "Dating Duress: Understanding Prehistoric Climate Change at Bolsa Chica." Presented at the Society for California Archaeology Annual Meeting, Ontario, California.

2014 "New Discoveries from an Old Collection: Comparing Recently Identified OGR Beads to Those Previously Analyzed from the Encino Village Site." Presented at the Society for California Archaeology Annual Meeting, Visalia, California.

2012 Bolsa Chica Archaeology: Part Seven: Culture and Chronology. Lithic demonstration of experimental manufacturing techniques at the April meeting of The Pacific Coast Archaeological Society, Irvine, California.

Tracy A. Stropes, MA, RPA

Director/Principal Investigator

BFSA Environmental Services, A Perennial Company
14010 Poway Road • Suite A •
Phone: (858) 679-8218 • Fax: (858) 679-9896 • E-Mail: tstropes@bfsa.perennialenv.com

Education

Master of Arts, Anthropology, San Diego State University, California **2007**

Bachelor of Science, Anthropology, University of California, Riverside **2000**

Professional Memberships

Register of Professional Archaeologists
Society for California Archaeology
Archaeological Institute of America

Experience

Director/Principal Investigator **March 2009–Present**
BFSA Environmental Services, a Perennial Company **Poway, California**

Project Management of all phases of archaeological investigations for local, state, and federal agencies, field supervision, lithic analysis, National Register of Historic Places (NRHP) and California Environmental Quality Act (CEQA) site evaluations, and authoring/coauthoring of cultural resource management reports.

Archaeological Principal Investigator **June 2008–February 2009**
TRC Solutions **Irvine, California**

Cultural resource segment of Natural Sciences and Permitting Division; management of archaeological investigations for private companies and local, state, and federal agencies, personnel management, field and laboratory supervision, lithic analysis, Native American consultation and reporting, MRHP and CEQA site evaluations, and authoring/coauthoring cultural resource management reports.

Principal Investigator and Project Archaeologist **June 2006–May 2008**
Archaeological Resource Analysts **Oceanside, California**

As a sub consultant, served as Principal Investigator and Project Archaeologist for several projects for SRS Inc., including field direction, project and personnel management, lab analysis, and authorship of company reports.

Project Archaeologist **September 1996–June 2006**
Gallegos & Associates **Carlsbad, California**

Project management, laboratory management, lithic analysis, field direction, Native American consultation, report authorship/technical editing, and composition of several data recovery/preservation programs for both CEQA and NEPA level compliance.

Project Archaeologist **September 1993–September 1996**
Macko Inc. **Santa Ana, California**

Project management, laboratory management, lithic analysis, field supervision, and report authorship/technical editing.

Archaeological Field Technician **January 1993–September 1993**
Chambers Group Inc. **Irvine, California**

Archaeological excavation, surveying, monitoring, wet screen facilities management, and project logistics.

Archaeological Field Technician **May 1992–September 1992**
John Minch and Associates **San Juan Capistrano, California**

Archaeological excavation, surveying, monitoring, wet screen facilities management, and project logistics.

Professional Accomplishments

Mr. Stropes is a professional archaeologist with over 30 years of experience in cultural resource management. His experience includes over ten years in project management, report authorship, lithic analysis, laboratory management, Native American consultation, and editing for several technical reports for numerous projects throughout southern California. Mr. Stropes has conducted cultural resource surveys, archaeological site testing and evaluations for National Register eligibility and California Environmental Quality Act (CEQA) compliance, mitigation of resources through data recovery for archaeological sites, budget and report preparation, and direction of crews of all sizes for projects ranging in duration from a single day site visit to one year. Mr. Stropes is a Registered Professional Archaeologist and on the list of archaeological consultants qualified to conduct archaeological investigations southern California and the County of San Diego. He has served as project archaeologist for numerous projects and composed data recovery and preservation programs for sites throughout California for both CEQA and NEPA level compliance. He has acted as teaching assistant for archaeological field classes at several sites in Orange (Cypress College), Los Angeles (Cypress College), and San Diego Counties (San Diego State University). In addition, Mr. Stropes was employed to teach discussion sessions for introduction to cultural anthropology classes at SDSU. Internationally, Mr. Stropes has acted as field surveyor for the Natural History Foundation of Orange County & Institucion Nacional de Antropologia y Historia surveying and relocating several sites in northern Baja California. Mr. Stropes has served as the senior project archaeologist on the following select projects.

1900 and 1912 Spindrift Drive: An extensive data recovery and mitigation monitoring program at the Spindrift Site, an important prehistoric archaeological habitation site stretching across the La Jolla area. The project resulted in the discovery of over 20,000 artifacts and nearly 100,000 grams of bulk faunal remains and marine shell, indicating a substantial occupation area (2013-2014).

Ocean Breeze Ranch: An extensive CEQA and Section 106 archaeological investigation of 1,400 acres and 20 cultural resources, both prehistoric and historic, within the Bonsall neighborhood of the county of San Diego. The project included an assessment of sites for eligibility for listing on the California Register of Historical Resources, the County of San Diego Resource Protection Ordinance, and the National Register of Historic Places, which resulted in the identification of four CRHR-eligible, RPO-significant, and NRHP-eligible sites.

Citracado Parkway Extension: An ongoing project in the city of Escondido to mitigate impacts to an important archaeological occupation site. Various archaeological studies have been conducted by BFSA, including CEQA-level survey and testing programs and Section 106 historic resources studies, resulting in the identification of a significant cultural deposit within the project area (2009-present).

Otay Ranch Village 13: An extensive archaeological investigation of nearly 2,000 acres and 84 archaeological sites, both prehistoric and historic, within the county of San Diego, which included prehistoric habitation sites, quarry sites, resource processing sites, and extensive lithic scatters. The project included an assessment of sites for eligibility for listing on the National Register of Historic Places (2016-2018).

Westin Hotel and Timeshare (Grand Pacific Resorts): Data recovery and mitigation monitoring program in the city of Carlsbad consisted of the excavation of 176 one-square-meter archaeological data recovery units which produced thousands of prehistoric artifacts and ecofacts, and resulted in the preservation of a significant prehistoric habitation site. The artifacts recovered from the site presented important new data about the prehistory of the region and Native American occupation in the area (2017).

Cantarini Ranch: A Section 106 archaeological assessment and evaluation for the NRHP of 15 archaeological sites and three isolates, including NRHP-significant prehistoric temporary camp/habitation sites, in the city of Carlsbad (2015-2017).

Citracado Business Park West: An archaeological survey and testing program at a significant prehistoric archaeological site and historic building assessment for a 17-acre project in the city of Escondido. The project resulted in the identification of 82 bedrock milling features, two previously recorded loci and two additional and distinct loci, and approximately 2,000 artifacts (2018).

College Boulevard: A Section 106 archaeological assessment and evaluation for the NRHP of seven archaeological sites, including prehistoric temporary camp/habitation sites, bedrock milling feature sites, and both prehistoric and historic artifact scatters in the city of Carlsbad (2015).

The Everly Subdivision Project: Data recovery and mitigation monitoring program in the city of El Cajon resulted in the identification of a significant prehistoric occupation site from both the Late Prehistoric and Archaic Periods, as well as producing historic artifacts that correspond to the use of the property since 1886. The project produced an unprecedented quantity of artifacts in comparison to the area encompassed by the site, but lacked characteristics that typically reflect intense occupation, indicating that the site was used intensively for food processing (2014-2015).

APPENDIX B

Archaeological Records Search Results

(Deleted for Public Review; Bound Separately)

APPENDIX C

NAHC Sacred Lands File Search Results

(Deleted for Public Review; Bound Separately)

APPENDIX D

Tables 4.1–1 and 4.1–2

Table 4.1–1

Cultural Resources Located Within One Mile of the Thrifty Oil Warehouse Project

Site	Description	Distance from the Project (m)
P-33-000114	Prehistoric pictographs, rock shelters, lithic scatter, and bedrock milling features	1,154.09
P-33-000984	Prehistoric pictograph and rock shelter	1,379.99
P-33-000990	Prehistoric bedrock milling feature site	977.93
P-33-016382		60.91
P-33-016383		153.45
P-33-016385		399.99
P-33-016386		515.32
P-33-016387		535.54
P-33-016389		717.17
P-33-016390		661.56
P-33-016391		653.96
P-33-016392		670.33
P-33-016394		671.43
P-33-016395		570.78
P-33-016396		436.15
P-33-016398		344.20
P-33-016399		318.44
P-33-016400		266.57
P-33-016401		233.61
P-33-016402		220.21
P-33-016403		772.94
P-33-016404		769.19
P-33-016405		364.09
P-33-016406		425.71
P-33-016407		432.81
P-33-016409		612.05
P-33-016410		850.39
P-33-016411		831.04
P-33-016412		797.71
P-33-016413		761.24
P-33-016414		842.14
P-33-016415		870.01

Site	Description	Distance from the Project (m)
P-33-016416	Prehistoric bedrock milling feature site	927.48
P-33-016417		1,216.39
P-33-016419		1,605.98
P-33-016420		1,600.04
P-33-016433		1,544.11
P-33-016434		1,568.21
P-33-016436		1,461.13
P-33-016437		1,435.07
P-33-016448		1,131.83
P-33-016449		1,156.61
P-33-016452		1,555.82
P-33-016454		1,505.50
P-33-016455		1,538.70
P-33-016456		1,467.84
P-33-016457		1,491.67
P-33-016458		1,537.73
P-33-016459		1,493.23
P-33-016460		1,105.05
P-33-016462		1,287.90
P-33-016463		1,494.17
P-33-016464		1,511.80
P-33-016465		1,417.76
P-33-016472		850.09
P-33-016473		817.90
P-33-016474		689.50
P-33-016475		715.54
P-33-016509		1,473.09
P-33-016527		1,608.51
P-33-016530		1,544.74
P-33-016528		1,495.20
P-33-016532		1,454.57
P-33-016535		1,559.25
P-33-016679		1,377.22
P-33-017924		648.79
P-33-016680		617.22
P-33-029765	Prehistoric isolate	960.55

Site	Description	Distance from the Project (m)
P-33-016408	Multicomponent site with prehistoric bedrock milling features, a prehistoric lithic scatter, and a historic trash scatter	605.19
P-33-007628	Historic single-family property	647.74
P-33-007629		1,199.85
P-33-007640		1,550.58
P-33-007646		985.36
P-33-007676		714.81
P-33-029195		663.58
P-33-029196		477.26
P-33-007648	Historic Camp Haan Barracks	1,353.61
P-33-016529	Historic railroad grade	1,446.55
P-33-016388	Historic trash scatter	371.06
P-33-016397		392.57
P-33-019869		980.50
P-33-016461		1,043.10
P-33-016041	Historic isolate	890.42
P-33-026720		427.57
P-33-016531	Historic foundational remnants	1,607.47
P-33-029857		10.00
P-33-029443	Historic ranch complex remnants	585.90
P-33-016466	Historic quarry	1,382.53

Table 4.1–2

Previous Studies Conducted Within One Mile
of the Thrifty Oil Warehouse Project

Belcourt, Tria

2017 Phase I Cultural Resources Assessment: Cado Industrial Center Project Unincorporated Riverside County, California. Material Cultural Consulting, Inc. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Brunzell, David

2019a Phase I Cultural Resources Assessment for the Star Milling Project, Unincorporated Riverside County, California. BCR Consulting, LLC. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

2019b Phase I Cultural Resources Assessment of the Barker Logistics Project, Unincorporated Riverside County, California. BCR Consulting, LLC. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

2019c Phase I Cultural Resources Assessment, Baker East Project, Unincorporated Riverside County, California. BCR Consulting, LLC. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

2022 Phase IV Cultural Resources Monitoring Report, Star Milling Project, Assessor Parcel Number 317-270-017-6, Unincorporated Riverside County, California. BCR Consulting, LLC. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Clifford, James

2005 A Cultural Resources Survey for the Meehan Project, Riverside County, California. Brian F. Smith and Associates, Inc., Poway, California. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Daly, Ken

1980 Environmental Impact Evaluation: An Archaeological Assessment of 20 Acres of Land Located in the SE 1/4 of Section 13, T4S, R4W, SBBM, Val Verde of Riverside County, California. Archaeological Research Unit, University of California at Riverside. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

De Munck, Victor

1987 An Archaeological Assessment of TP 22539 Located in the Perris Area of Riverside County, California. Archaeological Research Unit, University of California at Riverside. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Demcak, Carol R.
1991 Archaeological Assessment of Tentative Parcel 26672, A 26.07 Acre Property Located Near Perris (Perris Quadrangle), County of Riverside. Archaeological Resource Management Corp., Fullerton, CA. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Fulton, Phil
2014 Discovery and Monitoring Plan for the Mid County Parkway. LSA Associates, Inc. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Garrison, Andrew J. and Brian F. Smith
2020 A Phase I Cultural Resources Assessment for the Harvill and Rider Project, Riverside County, California. Brian F. Smith and Associates, Inc. Poway, California. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Gillette, Donna, Nadra McClain, David Mottola, Laurie Pares, and Richard Shepard
1991 Motte Rimrock Reserve, CA-RIV-114, A Possible Luiseno Girls' Puberty Rite Site. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Goodwin, Riordan
2013 Cultural Resources Record Search, Site Survey, and Native American Scoping Assistance for the Riverside County Transportation Yard Complex, Riverside County, California (LSA Project No. RCT1303). LSA Associates, Inc. Irvine, California. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Greenwood, Roberta S. and Michael J. McIntyre
1979 Cultural Resource Reconnaissance Tentative Parcel Map 13788 Near Perris Valley, Riverside County, California. Greenwood and Associates, Pacific Palisades, California. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Hammond, Stephen R.
1977 Cultural Resources Survey of the Proposed Freeway Conversion of Route 194 (15E) Between Nuevo Road and Van Buren Boulevard in Riverside County. Department of Transportation. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Harrison, Jim

2003 Letter Report: Biological and Cultural Resources Due Diligence Regarding the 500-Acre Watson Land Company-Perris Property in Riverside County, California. LSA Associates, Inc., Irvine, Ca. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Jones and Stokes Associates, Inc.

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. Jones and Stokes Associates, Inc. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Keller, Jean A.

1991 An Archaeological Assessment of Tentative Parcel Map 26836, 8.99 Acres of Land near Perris, Riverside County, California, USGS Perris, California Quadrangle, 7.5' Series. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

1992a An Archaeological Assessment of Tentative Tract Map 27098, 4.94 Acres of Land Near Perris, Riverside County, California. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

1992b An Archaeological Assessment of Tentative Tract Map 27098, 4.95 Acres of Land Near Perris, Riverside County, California. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

1994 A Phase I Cultural Resource Assessment of Tentative Tract Map 27997, 19.75 Acres of Land near Perris, Riverside County, California. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

McCarthy, Daniel F.

1981 Archaeological Survey of the Motte Rimrock Reserve, Riverside County, California. Archaeological Research Unit, University of California at Riverside. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

McLean, Roderic

2006 Letter Report: Cultural Resources Study for the Replacement of Four Deteriorated Southern California Edison Wooden Utility Poles on the Corsair 12 kV Circuit, the Sprague 12 kV Ciscuit, and the Carbine 12 kV Circuit, California. LSA Associates, Inc. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Momyer, George R.
1937 Indian Picture Writing in Southern California (COPY). Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Pallette, Drew M.
1987 Two Luiseno Rock Art Sites. Anthropology Department at the California State University at Long Beach, California. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Peak and Associates
1990 Part III, Addendum To: Cultural Resources Assessment of AT&T's Proposed San Bernardino To San Diego Fiber Optic Cable, San Bernardino, Riverside, and San Diego Counties, California. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Peak and Associates and Brian F. Mooney Associates
1990 Cultural Resources Assessment of AT&T's Proposed San Bernardino to San Diego Fiber Optic Cable, San Bernardino, Riverside and San Diego Counties, California. Peak and Associates & Brian F. Mooney Associates. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Shepard, Richard Starr
1996 Luiseno Rock Art and Sacred Landscape in Late Prehistoric Southern California. University of California, Los Angeles. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Smith, Brian F. and James Clifford
2007 Cultural Resources Survey for the Patterson Avenue Project, Riverside County, California, APNs 317-140-016 and -047. Brian F. Smith and Associates, Inc. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Swope, Karen K.
1989 An Archaeological Assessment of a 32 Acre Parcel (AP# 317-240-001) Located Near Perris in Riverside County, California. Archaeological Research Unit. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Tang, Bai "Tom," Michael Hogan, Casey Tibbet, and Daniel Ballester
2004 Historical/Archaeological Resources Survey Report: Harvill Distribution Center, Assessor's Parcel Numbers 317-260-007 and -033, near the City of Perris, Riverside County, California. CRM Tech. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Tang, "Tom" Bai, Michael Hogan, Clarence Bodmer, Josh Smallwood, and Melissa Hernandez
2007 Cultural Resources Technical Report, North Perris Industrial Specific Plan, City of Perris, Riverside County, California. CRM Tech. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Tang, "Tom" Bai, Michael Hogan, Thomas Shackford, and John J. Eddy
2006 Historical/Archaeological Resources Survey Report, Rados-Perris Distribution Center, Assessor's Parcel No. 30-050-002, in the City of Perris, Riverside County, California. CRM Tech. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Tang, "Tom" Bai, Thomas Shackford, Terri Jacquemain, and John Eddy
2010 Historical / Archaeological Resources Survey Report: Rados-Perris Distribution Center, Assessor's Parcel Number 303-050-002, in the City of Perris, County of Riverside, California. CRM TECH. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Taniguchi, Christeen
2004 Letter Report: Records Search and Site Visit Results for Cingular Telecommunications Facility Candidate SC-248-02 (Harvill Avenue), 20281 Harvill Avenue, Perris, Riverside County, CA. Michael Brandman Associates. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

Wells, Helen
1975 Archaeological Impact Report: Eastern Municipal Water District, Riverside County, California: PL 984 Water Systems Addition. Archaeological Research Unit, University of California, Riverside. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

White, Robert S. and Laura S. White
2006 A Cultural Resources Assessment of the 12.35-Acre Expo, Industrial Park Site as Shown on TPM 34128 Located Adjacent to Harvill Avenue, Near Perris, Incorporated Riverside County. Archaeological Associates, Sun City, Inc. Unpublished report on file at the Eastern Information Center at the University of California at Riverside, Riverside, California.

PALEONTOLOGICAL RESOURCES ASSESSMENT FOR THE THRIFTY OIL WAREHOUSE PROJECT

PAR230068
RIVERSIDE COUNTY, CALIFORNIA

APNs 317-260-017 and -018

Prepared on Behalf of:

Lilburn Corporation
1905 Business Center Drive
San Bernardino, California 92408

Prepared for:

Riverside County Planning Department
4080 Lemon Street, 12th Floor
Riverside, California 92501
(951) 955-3200

Prepared by:

BFSA Environmental Services,
a Perennial Company
14010 Poway Road, Suite A
Poway, California 92064
(858) 484-0915

January 5, 2024

BFSA Environmental Services
A Perennial Company

Paleontological Database Information

Author:	Todd A. Wirths, M.S., Senior Paleontologist, California Professional Geologist No. 7588
Consulting Firm:	BFSA Environmental Services, a Perennial Company 14010 Poway Road, Suite A Poway, California 92064 (858) 484-0915
Report Date:	January 5, 2024
Report Title:	Paleontological Resources Assessment for the Thrifty Oil Warehouse Project, Riverside County, California, PAR230068
Prepared on Behalf of:	Lilburn Corporation 1905 Business Center Drive San Bernardino, California 92408 (909) 890-1818
Prepared for:	Riverside County Planning Department 4080 Lemon Street, 12th Floor Riverside, California 92501 (951) 955-3200
USGS Quadrangle:	Section 13, Township 4 South, Range 4 West, USGS *Steele Peak, California* (7.5 minute) topographic quadrangle.
Assessor's Parcel Numbers:	317-260-017 and -018
Study Area:	197 acres
Key Words:	High paleontological resource sensitivity; Pleistocene alluvial deposits; vertebrate fossils; monitoring recommended.

Table of Contents

Section **Page**

I. INTRODUCTION AND LOCATION....1
II. REGULATORY SETTING....1
State of California....1
County of Riverside Guidelines....4
III. GEOLOGY....5
IV. PALEONTOLOGICAL RESOURCES....7
Definition....7
Paleontological Locality Records Search....7
Project Survey....7
V. PALEONTOLOGICAL SENSITIVITY....8
Overview....8
Professional Standards....8
Riverside County Sensitivity....9
VI. CONCLUSION AND RECOMMENDATIONS....11
VII. CERTIFICATION....12
VIII. REFERENCES....12

Appendices

Appendix A – Qualifications of Key Personnel
Appendix B – Paleontological Records Seach Letter

List of Figures

Figure **Page**

Figure 1 General Location Map....2
Figure 2 Project Location Map....3
Figure 3 Geologic Map....6
Figure 4 Paleontological Sensitivity Map....10

I. INTRODUCTION AND LOCATION

This paleontological resources assessment report has been completed for the Thrifty Oil Warehouse Project located southeast of the intersection of Tobacco Road and Placentia Avenue, in an unincorporated area west of Perris in Riverside County, California (Figures 1 and 2). The project is situated within Section 13, Township 4 South, Range 4 West on the U.S. Geological Survey (USGS) (7.5-minute) *Steele Peak, California* topographic quadrangle map (see Figure 2). The project consists of one 8.72-acre parcel (Assessor's Parcel Number [APN] 317-260-017). The project may also include the 0.4-acre easterly neighboring residential property (APN 317-260-018), so it is also included in this assessment. A 171,270-square-foot warehouse facility is being proposed for construction.

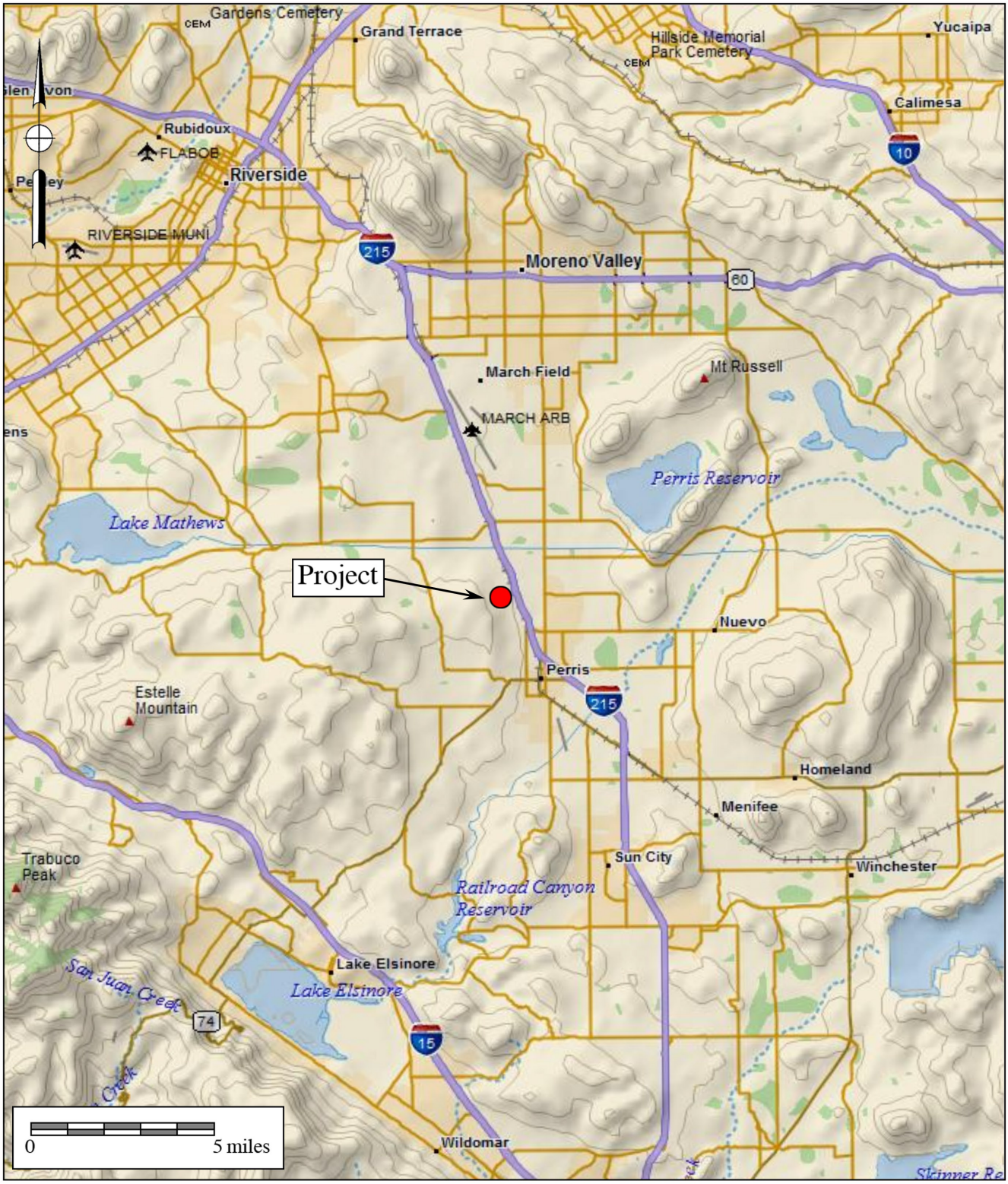
As the lead agency, the County of Riverside has required the preparation of a paleontological assessment to evaluate the project's potential to yield paleontological resources. The paleontological assessment of the project included a review of paleontological literature and fossil locality records for a previous project in the area, a review of the underlying geology, and recommendations to mitigate impacts to potential paleontological resources, if necessary.

II. REGULATORY SETTING

The California Environmental Quality Act (CEQA), which is patterned after the National Environmental Policy Act, is the overriding environmental regulation that sets the requirement for protecting California's paleontological resources. CEQA mandates that governing permitting agencies (lead agencies) set their own guidelines for the protection of nonrenewable paleontological resources under their jurisdiction.

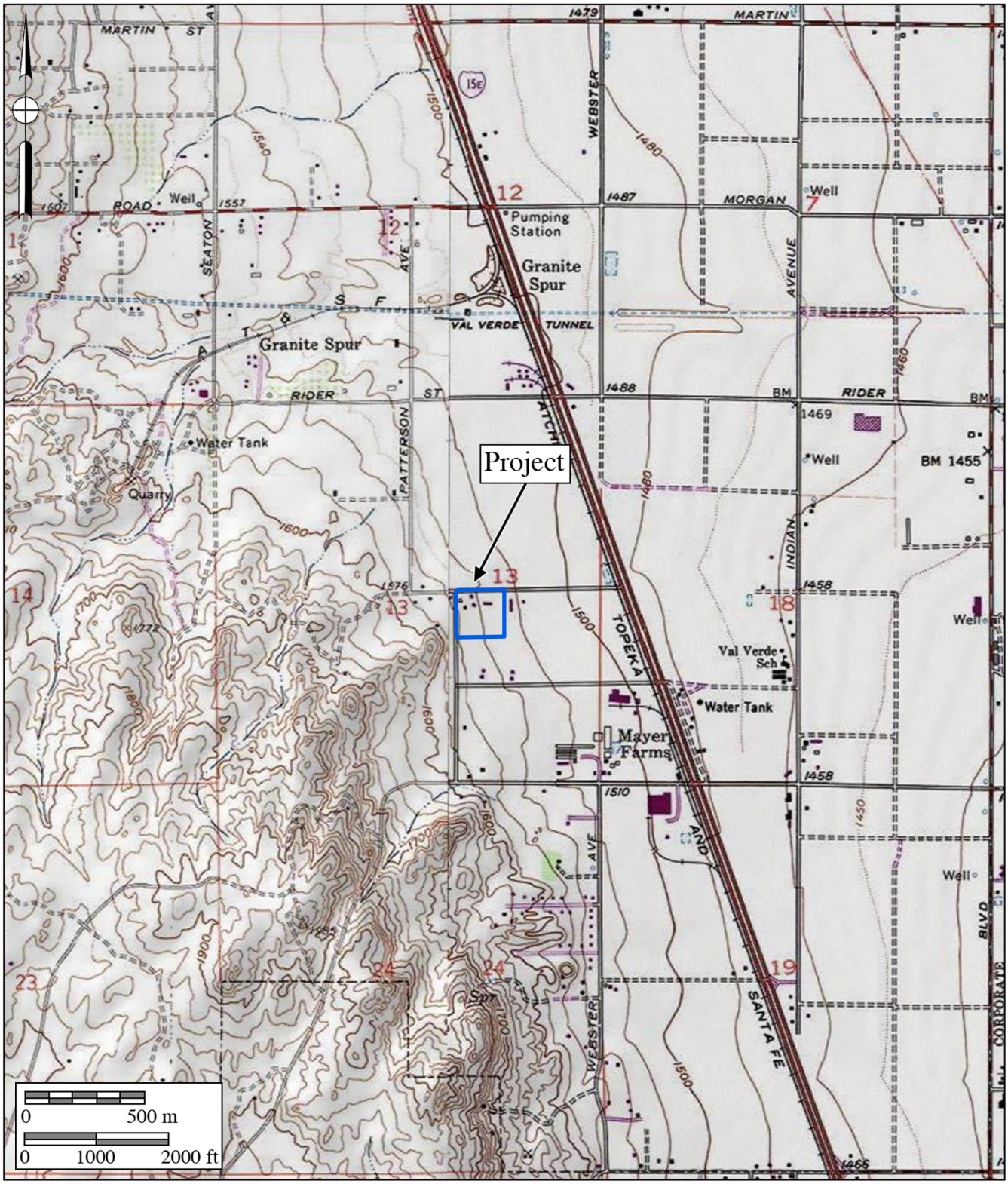
State of California

Under "Guidelines for Implementation of the California Environmental Quality Act," as amended in December 2018 (California Code of Regulations [CCR] Title 14, Division 6, Chapter 3, Sections 15000 et seq.), procedures define the types of activities, persons, and public agencies required to comply with CEQA. Section 15063 of the CCR provides a process by which a lead agency may review a project's potential impact to the environment, whether the impacts are significant, and provide recommendations, if necessary.



BFSA Environmental Services
A Perennial Company

Figure 1
General Location Map
The Thrifty Oil Warehouse Project
DeLorme (1:250,000 series)



BFSA Environmental Services
A Perennial Company

Figure 2
Project Location Map

The Thrifty Oil Warehouse Project

USGS *Perris and Steele Peak* Quadrangles (7.5-minute series)

In CEQA's Environmental Checklist Form, a question to respond to is, "Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" (Appendix G, Section VII, Part f). This is to ensure compliance with California Public Resources Code Section 5097.5, the law that protects nonrenewable resources including fossils, which is shown below:

a) A person shall not 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.
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.
c) A violation of this section is a misdemeanor.

County of Riverside Guidelines

For Riverside County, policies concerning paleontological resources are addressed under the 2015 Multipurpose Open Space Element of the Riverside County General Plan, and are as follows:

OS 19.6 Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8, a paleontological resource impact mitigation program (PRIMP) shall be filed with the County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.

OS 19.7 Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown on Figure OS-8, no direct mitigation is required unless a fossil is encountered during site development. Should a fossil be encountered, the County Geologist shall be notified and a paleontologist shall be retained by the project proponent. The paleontologist shall document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.

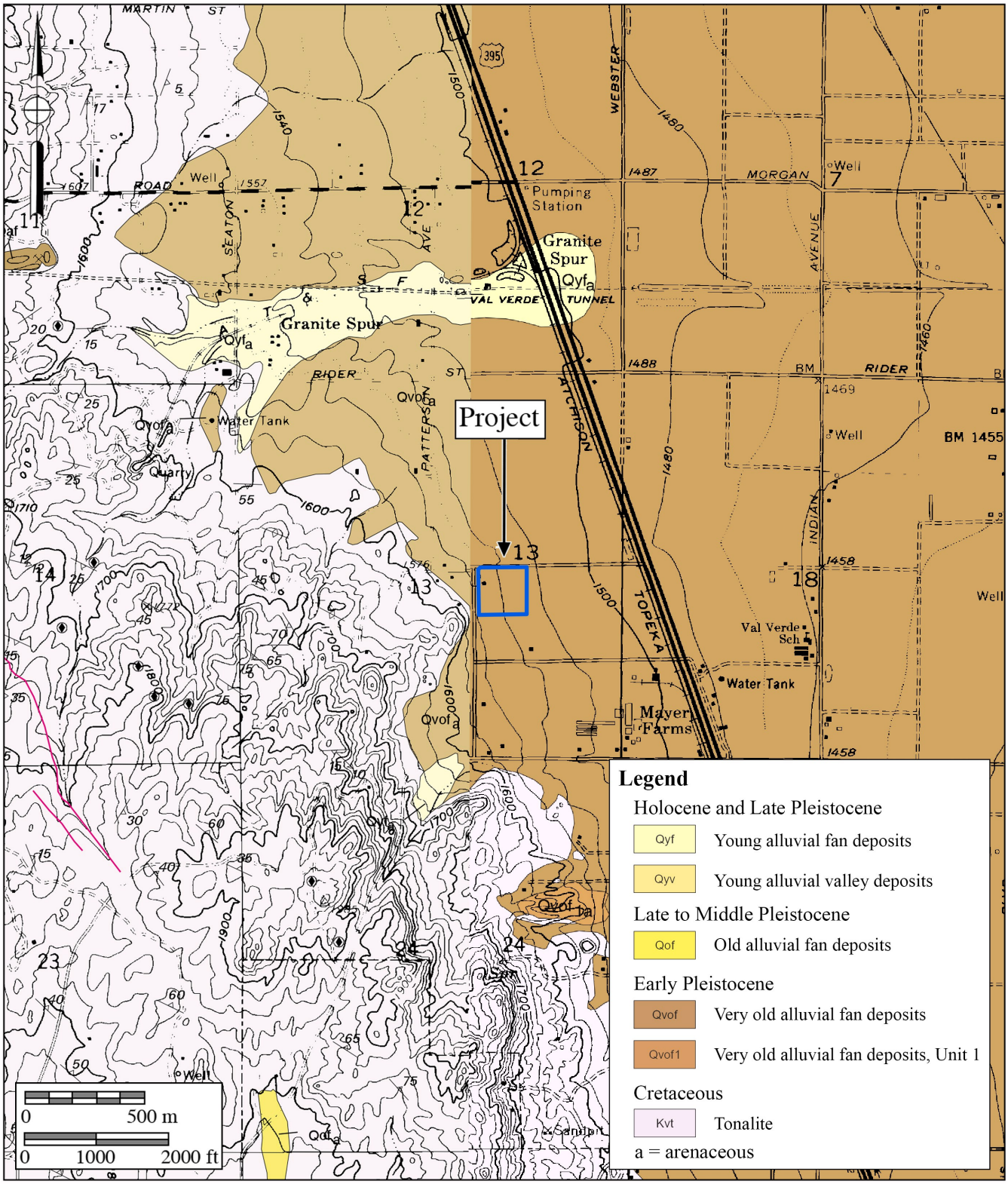
OS 19.8 Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.

OS 19.9 Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet. (County of Riverside 2015a)

A comprehensive review of paleontological resources, including regulatory background, permitting conditions, significance thresholds, and procedures for the treatment of discovered resources, can be found in the County's Draft Environmental Impact Report (County of Riverside 2015b).

III. GEOLOGY

Geomorphically, the project is mostly flat with a gentle eastward gradient, situated along the western edge of the Perris Valley, on the eastern slopes of the northern part of the Peninsular Ranges. The geology of the project and immediate vicinity is shown on Figure 3 (after Morton 2001, 2003). The maps show that the project is within the central part of the Perris tectonic block and is underlain by lower Pleistocene (approximately 1.8 million- to perhaps 200,000- to 300,000-year-old) sandy, very old alluvial fan deposits (brown areas labeled "$Qvof_a$" on Figure 3). According to Woodford et al. (1971), the thickness of the alluvial deposits overlying the granitic bedrock basement beneath the project may be as much as 100 feet at the project's eastern boundary. The granitic basement occurs as extensive outcrops west of the project (light gray areas labeled "Kvt" on Figure 3).



BFSA Environmental Services
A Perennial Company

Figure 3
Geologic Map
The Thrifty Oil Warehouse Project
Geology after Morton (2001 and 2003)

IV. PALEONTOLOGICAL RESOURCES

Definition

Paleontological resources are the remains of prehistoric life that have been preserved in geologic strata. These remains are called fossils and include bones, shells, teeth, and plant remains (including their impressions, casts, and molds) in the sedimentary matrix, as well as trace fossils such as footprints and burrows. Fossils are considered older than 5,000 years of age (Society of Vertebrate Paleontology [SVP] 2010) but may include younger remains (subfossils) when viewed in the context of local extinction of the organism or habitat, for example. Fossils are considered a non-renewable resource under state and local guidelines (Section II of this report).

Paleontological Locality Records Search

A paleontological locality records search was recently conducted for another, nearby project by the Western Science Center (WSC) in Hemet, called the Harvest Landing Specific Plan Amendment Project (Stoneburg 2023; attached). The Harvest Landing Specific Plan Amendment Project is located approximately one-half mile southeast of the current project, in the city of Perris, across Interstate 215, and is geologically mapped with the same very old alluvial fan deposits as the Thrifty Oil Warehouse Project. The records search found that no fossil localities are known by the WSC in the area of the either project, however, "Pleistocene alluvial units are considered to be highly paleontologically sensitive." In addition, Stoneburg (2023) indicated "Any fossils recovered from the Harvest Landing Specific Plan Project area would be scientifically significant. Excavation activity associated with development of the area has the potential to impact the paleontologically sensitive Pleistocene sediments and it is the recommendation of the Western Science Center that a paleontological resource mitigation plan be put in place to monitor, salvage, and curate any recovered fossils associated with the current study area."

From prior projects by BFSA Environmental Services, a Perennial Company (BFSA; formerly Brian F. Smith and Associates, Inc.), the nearest-known fossil localities housed by the San Bernardino County Museum (SBCM) are located approximately five miles to the east in the Lakeview Hot Springs area, consisting of the fossil remains of mammoths, horses, and bison from late Pleistocene old alluvial deposits (Scott 2013). The closest fossils held by the Los Angeles County Museum of Natural History from Pleistocene alluvial deposits are located east of Lake Elsinore, far to the south.

Project Survey

On December 6, 2023, BFSA staff, under the supervision of Principal Investigator Todd A. Wirths, conducted an intuitive review of the property to determine if any paleontological resources were visible. The field methodology employed for the project consisted of a series of parallel transects spaced at approximately 15-meter intervals that covered all areas of the project.

Approximately 80 percent of the project area consisted of a plowed or tilled surface that was densely overgrown with weeds, while the remainder was of developed structures and associated driveway pavement. No paleontological resources, or evidence of the presence of paleontological resources, were observed.

V. PALEONTOLOGICAL SENSITIVITY

Overview

The degree of paleontological sensitivity of any particular area is based upon a number of factors which include: the documented presence of fossiliferous resources on a site or in nearby areas, the presence of documented fossils within a particular geologic formation or lithostratigraphic unit, and whether or not the original depositional environment of the sediments may have been conducive to the accumulation and fossilization of organic remains over time. Holocene alluvium is generally considered to be geologically too young to contain significant nonrenewable paleontological resources (*i.e.,* fossils), and is therefore typically assigned a low paleontological sensitivity. Pleistocene (greater than 11,700 years old) alluvial and alluvial fan deposits in western Riverside County and the Inland Empire can yield important Ice Age terrestrial vertebrate fossils, such as extinct mammoths, mastodons, giant ground sloths, extinct species of horse, bison, and camel, saber-toothed cats, and others (Jefferson 1991). Therefore, these Pleistocene sediments are accorded a high paleontological resource sensitivity.

Professional Standards

The SVP (2010) has drafted guidelines that include four categories of paleontological sensitivity for geologic units (formations) that might be impacted by a proposed project, as listed below:

- *High Potential:* Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered.
- *Undetermined Potential:* Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment, and that further study is needed to determine the potential of the rock unit.
- *Low Potential:* Rock units that are poorly represented by fossil specimens in institutional collections or based upon a general scientific consensus that only preserve fossils in rare circumstances.
- *No Potential:* Rock units that have no potential to contain significant paleontological resources, such as high-grade metamorphic rocks and plutonic igneous rocks.

Using these criteria, based upon the fossil record of the geologic formation at the project and the distribution of nearby fossil localities, the project can be considered to have an undetermined to high potential to yield significant paleontological resources.

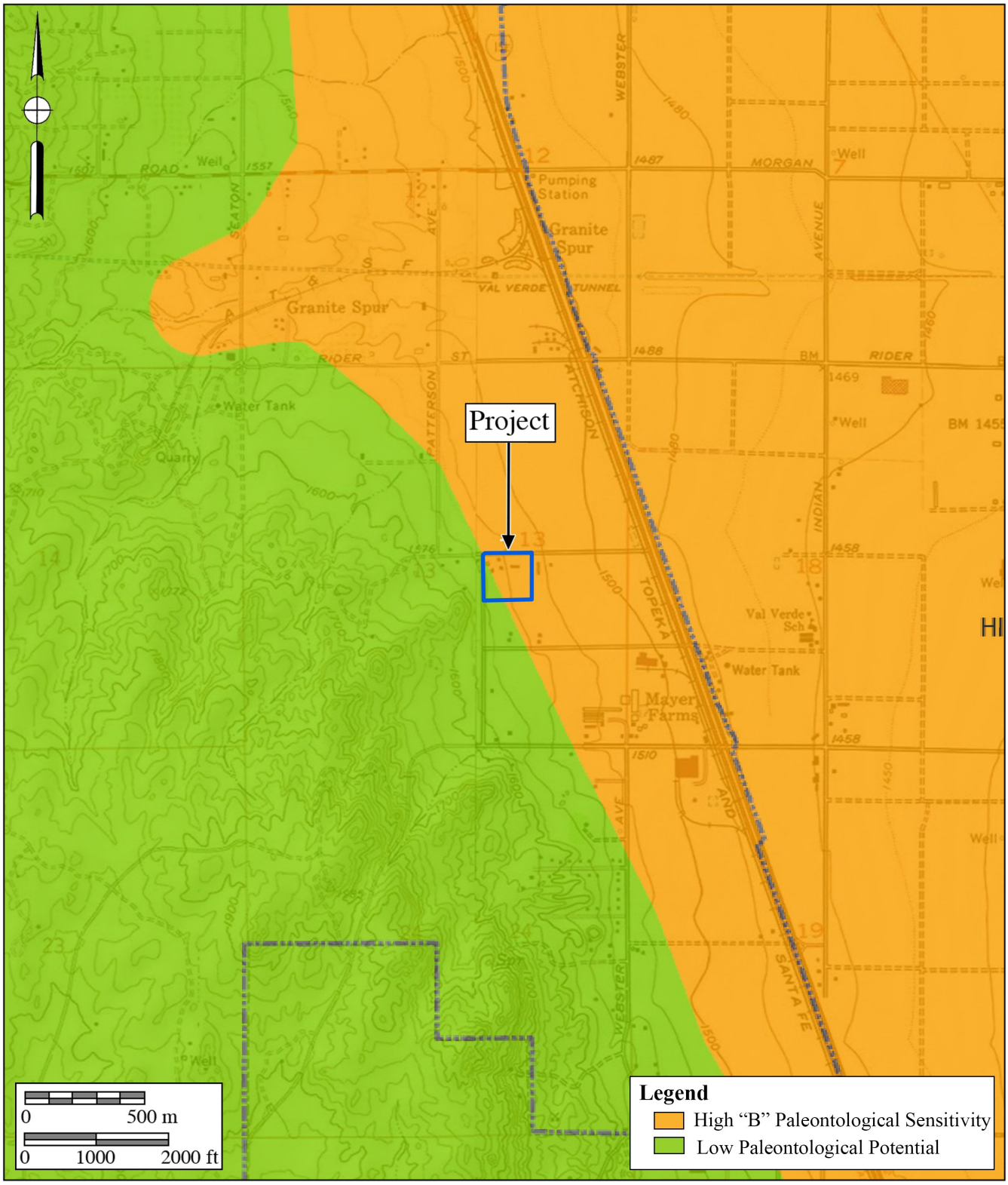
Riverside County Sensitivity

A paleontological sensitivity map generated by the County of Riverside Land Information System ranks the lower Pleistocene-aged very old alluvial fan deposits at most of the project as having a "High B" paleontological sensitivity (shown in yellow tint on Figure 4). Riverside County defines geologic formations with a "High B" potential to yield paleontological resources as:

> [E]quivalent to High A, but is based on the occurrence of fossils at a specified depth below the surface. The category High B indicates that fossils are likely to be encountered at or below four feet of depth, and may be impacted during excavation by construction activities. (County of Riverside Land Information System 2023)

The category "High B" indicates that fossils are likely to be encountered four feet below the surface and may be impacted during excavation by construction activities. Typically, sediments mapped as Pleistocene older alluvial fan sediments in western Riverside County are assigned a high ("High A" or "High B") paleontological sensitivity, based on the well documented record of yielding important Pleistocene-age fossils, such as bison, mammoth, mastodon, horse, camel, giant ground sloth, short-faced bear, saber-toothed cat, and others (Jefferson 1991). The WSC regards Pleistocene very old alluvial fan sediments, such as those that underlie the project, as having a high potential to contain significant paleontological resources and, therefore, typically recommends that a monitoring program be implemented to mitigate impacts to potential nonrenewable paleontological resources.

The southwestern area of the project is indicated in a green tint, indicating a low paleontological potential. This is an error, as this designation is usually applied to Holocene-aged sediments, which rarely yield fossils, and plutonic igneous rocks, which never contain fossils.



BFSA Environmental Services
A Perennial Company

Figure 4

Paleontological Sensitivity Map

The Thrifty Oil Warehouse Project

After County of Riverside Land Information System (2024)

VI. CONCLUSION AND RECOMMENDATIONS

Research has confirmed the existence of potentially fossiliferous Pleistocene very old alluvial fan deposits mapped across the project ("$Qvof_a$" on Figure 3). Although the paleontological locality search did not indicate the presence of any known fossil localities within the project, the occurrence of terrestrial vertebrate fossils at shallow depths from Pleistocene older alluvial fan sediments across the Inland Empire of western Riverside County is well documented. These Pleistocene older alluvial fan sediments are typically assigned a "High" paleontological sensitivity rating for yielding paleontological resources. Full-time monitoring of undisturbed Pleistocene very old alluvial fan deposits at the project is recommended starting at four feet below the surface (County of Riverside 2015b). Monitoring of artificial fill or disturbed soils is not warranted.

The submittal and approval of a Paleontological Resource Impact Mitigation Program (PRIMP) is required prior to the issuance of grading permits when requested by the Riverside County Planning Department. The requirement for the submittal and approval of a PRIMP would be based upon the conclusions stated above. The specific guidelines contained within a PRIMP are listed below, which are consistent with the provisions of CEQA, the County of Riverside, and the guidelines of the Society of Vertebrate Paleontology (2010) for any mass grading and excavation-related activities, including utility trenching, during construction within the project. Paleontological monitoring may be reduced based upon the observations and recommendations of the County-approved project paleontologist. The following list provides the required items typically expanded upon in PRIMPs submitted to the County of Riverside:

1. Description of the proposed site and planned grading operations.
2. Description of the level of monitoring required for all earthmoving activities in the project area.
3. Identifications and qualifications of the qualified paleontological monitor to be employed for grading operations monitoring.
4. Identification of personnel with authority and responsibility to temporarily halt or divert grading equipment to allow for the recovery of large specimens.
5. Direction for any fossil discoveries to be immediately reported to the property owner, who in turn, will immediately notify the County of Riverside of the discovery.
6. Means and methods to be employed by the paleontological monitor to quickly salvage fossils as they are unearthed to avoid construction delays.
7. Sampling of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates.
8. Procedures and protocol for collecting and processing samples and specimens.
9. Fossil identification and curation procedures to be employed.
10. Identification of the permanent repository to receive any recovered fossil material.
11. All pertinent exhibits, maps, and references.

12. Procedures for reporting findings.
13. Identification and acknowledgement of the developer for the content of the PRIMP, as well as acceptance of financial responsibility for monitoring, reporting, and curation fees.
14. All reports shall be signed by the project paleontologist.

VII. CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this paleontological report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief and have been compiled in accordance with CEQA criteria.



January 5, 2024

Todd A. Wirths
Senior Paleontologist
California Professional Geologist No. 7588

Date

VIII. REFERENCES

County of Riverside. 2015a. County of Riverside General Plan, Chapter 5: Multipurpose Open Space Element.

County of Riverside. 2015b. Environmental Impact Report No. 521. Public Review Draft.

County of Riverside Land Information System. 2023. Map My County; Paleontological Sensitivity: https://gis1.countyofriverside.us/Html5Viewer/?viewer=MMC_Public. Accessed December 15, 2023.

Jefferson, G.T. 1991. A catalogue of late Quaternary vertebrates from California: Part two, mammals. Natural History Museum of Los Angeles County, Technical Reports, no. 7: i-v + 1-129.

Morton, D.M. 2001. Geologic map of the Steele Peak 7.5' quadrangle, Riverside County, California: U. S. Geological Survey Open-File Report 01-449, scale 1:24,000.

Morton, D.M. 2003. Preliminary geologic map of the Perris 7.5' quadrangle, Riverside County, California: U. S. Geological Survey Open-File Report 03-270, scale 1:24,000.

Scott, E. 2013. Paleontology literature and records review, Ecos Nuevo Project, Lakeview Hot Springs Region, Riverside County, California. Unpublished letter prepared for Brian F. Smith and Associates, Poway California, by the San Bernardino County Museum, Redlands, California.

Society of Vertebrate Paleontology. 2010. Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources; by the SVP Impact Mitigation Guidelines Revision Committee. https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines-1.pdf.

Stoneburg, B.E. 2023. Paleontological locality record search letter for the Harvest Landing Specific Plan. Unpublished letter prepared for BFSA Environmental Services, Poway, California, by the Western Science Center, Hemet, California. (Appendix B)

Woodford, A.O., Shelton, J.S., Doehring, D.O., and Morton, R.K. 1971. Pliocene-Pleistocene history of the Perris Block, southern California. Geological Society of America Bulletin, v. 82, p. 3421–3448, 18 figs.

APPENDIX A

Qualifications of Key Personnel

Todd A. Wirths, MS, PG No. 7588

Senior Paleontologist

BFSA Environmental Services, A Perennial Company
14010 Poway Road • Suite A •
Phone: (858) 679-8218 • Fax: (858) 679-9896 • E-Mail: twirths@bfsa.perennialenv.com

BFSA Environmental Services
A Perennial Company

Education

Master of Science, Geological Sciences, San Diego State University, California **1995**

Bachelor of Arts, Earth Sciences, University of California, Santa Cruz **1992**

Professional Certifications

California Professional Geologist #7588, 2003
Riverside County Approved Paleontologist
San Diego County Qualified Paleontologist
Orange County Certified Paleontologist
OSHA HAZWOPER 40-hour trained; current 8-hour annual refresher

Professional Memberships

Board member, San Diego Geological Society
San Diego Association of Geologists; past President (2012) and Vice President (2011)
South Coast Geological Society
Southern California Paleontological Society

Experience

Mr. Wirths has more than a dozen years of professional experience as a senior-level paleontologist throughout southern California. He is also a certified California Professional Geologist. At BFSA, Mr. Wirths conducts on-site paleontological monitoring, trains and supervises junior staff, and performs all research and reporting duties for locations throughout Los Angeles, Ventura, San Bernardino, Riverside, Orange, San Diego, and Imperial Counties. Mr. Wirths was formerly a senior project manager conducting environmental investigations and remediation projects for petroleum hydrocarbon-impacted sites across southern California.

Selected Recent Reports

2019 *Paleontological Assessment for the 10575 Foothill Boulevard Project, City of Rancho Cucamonga, San Bernardino County, California*. Prepared for T&B Planning, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Assessment for the MorningStar Marguerite Project, Mission Viejo, Orange County, California.* Prepared for T&B Planning. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Monitoring Report for the Nimitz Crossing Project, City of San Diego.* Prepared for Voltaire 24, LP. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Resource Impact Mitigation Program (PRIMP) for the Jack Rabbit Trail Logistics Center Project, City of Beaumont, Riverside County, California.* Prepared for JRT BP 1, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Monitoring Report for the Oceanside Beachfront Resort Project, Oceanside, San California.* Prepared for S.D. Malkin Properties. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Resource Impact Mitigation Program for the Nakase Project, Lake Forest, Orange County, San California.* Prepared for Glenn Lukos Associates, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Resource Impact Mitigation Program for the Sunset Crossroads Project, Banning, Riverside County*. Prepared for NP Banning Industrial, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Assessment for the Ortega Plaza Project, Lake Elsinore, Riverside County*. Prepared for Empire Design Group. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Resource Record Search Update for the Green River Ranch III Project, Green River Ranch Specific Plan SP00-001, City of Corona, California*. Prepared for Western Realco. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Assessment for the Cypress/Slover Industrial Center Project, City of Fontana, San Bernardino County, California*. Prepared for T&B Planning, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Monitoring Report for the Imperial Landfill Expansion Project (Phase VI, Segment C-2), Imperial County, California*. Prepared for Republic Services, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Assessment for the Manitou Court Logistics Center Project, City of Jurupa Valley, Riverside County, California*. Prepared for Link Industrial. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Resource Impact Mitigation Program for the Del Oro (Tract 36852) Project, Menifee, Riverside County*. Prepared for D.R. Horton. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Assessment for the Alessandro Corporate Center Project (Planning Case PR-2020-000519), City of Riverside, Riverside County, California*. Prepared for OZI Alessandro, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Monitoring Report for the Boardwalk Project, La Jolla, City of San Diego*. Prepared for Project Management Advisors, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

APPENDIX B

Paleontological Records Search Letter

WESTERN SCIENCE CENTER

December 5th, 2023

BFSA Environmental Services
Todd Wirths
14010 Poway Road, Suite A
Poway, California 92064

Dear Mr. Wirths,

This letter presents the results of a record search conducted for the Harvest Landing Specific Plan Project located in the City of Perris, Riverside County, California. The project site is located between Interstate 215 and N Perris Blvd in Township 4 South, Range 3 West, Sections 18 and 19 on the *Perris, CA* USGS 7.5 minute quadrangle.

The geologic units underlying this project are mapped primarily as very old Pleistocene-aged alluvial fan deposits (Morton, 2003). Pleistocene alluvial units are considered to be highly paleontologically sensitive. The Western Science Center does not have any localities within one mile of the project area.

Any fossils recovered from the Harvest Landing Specific Plan Project area would be scientifically significant. Excavation activity associated with development of the area has the potential to impact the paleontologically sensitive Pleistocene sediments and it is the recommendation of the Western Science Center that a paleontological resource mitigation plan be put in place to monitor, salvage, and curate any recovered fossils associated with the current study area.

If you have any questions, or would like further information, please feel free to contact me at bstoneburg@westerncentermuseum.org.

Sincerely,

Brittney Elizabeth Stoneburg, MSc
Collections Manager

Thrifty Oil Warehouse Project
(PPT230048, PDA 8407, OAPL2300972)
ENERGY ANALYSIS
COUNTY OF RIVERSIDE

PREPARED BY:

Haseeb Qureshi
hqureshi@urbanxroads.com

Alyssa Barnett
abarnett@urbanxroads.com

JANUARY 24, 2024

TABLE OF CONTENTS

TABLE OF CONTENTS ..... **I**
APPENDICES ..... **II**
LIST OF EXHIBITS ..... **II**
LIST OF TABLES ..... **II**
LIST OF ABBREVIATED TERMS ..... **III**
EXECUTIVE SUMMARY **1**
ES.1 Summary of Findings 1
ES.2 Project Requirements 1
1 INTRODUCTION **3**
1.1 Site Location 3
1.2 Project Description 3
2 EXISTING CONDITIONS **7**
2.1 Overview 7
2.2 Electricity 10
2.3 Natural Gas 11
2.4 Transportation Energy Resources 14
3 REGULATORY BACKGROUND **17**
3.1 Federal Regulations 17
3.2 California Regulations 17
4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES **23**
4.1 Evaluation Criteria 23
4.2 Methodology 23
4.3 Construction Energy Demands 24
4.4 Operational Energy Demands 32
4.5 Summary 34
5 CONCLUSIONS **38**
6 REFERENCES **42**
7 CERTIFICATIONS **45**

APPENDICES

APPENDIX 4.1: CALEEMOD PROJECT CONSTRUCTION EMISSIONS MODEL OUTPUTS
APPENDIX 4.2: CALEEMOD PROJECT OPERATIONAL EMISSIONS MODEL OUTPUTS
APPENDIX 4.3: EMFAC2021

LIST OF EXHIBITS

EXHIBIT 1-A: LOCATION MAP 4
EXHIBIT 1-B: SITE PLAN 5

LIST OF TABLES

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS 1
TABLE 2-1: TOTAL ELECRICITY SYSTEM POWER (CALIFORNIA 2022) 9
TABLE 2-2: SCE 2022 POWER CONTENT MIX 11
TABLE 4-1: CONSTRUCTION DURATION 24
TABLE 4-2: CONSTRUCTION POWER COST 25
TABLE 4-3: CONSTRUCTION ELECTRICITY USAGE 25
TABLE 4-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS 26
TABLE 4-5: CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES 27
TABLE 4-6: CONSTRUCTION TRIPS AND VMT 28
TABLE 4-7: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES 29
TABLE 4-8: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES 30
TABLE 4-9: TOTAL PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION 32
TABLE 4-10: PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY 33

LIST OF ABBREVIATED TERMS

%	Percent
(1)	Reference
AQIA	*Thrifty Oil Warehouse Project Air Quality Impact Analysis*
BACM	Best Available Control Measures
BTU	British Thermal Units
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
County	County of Riverside
CPEP	Clean Power and Electrification Pathway
CPUC	California Public Utilities Commission
DMV	Department of Motor Vehicles
EIA	Energy Information Administration
EPA	Environmental Protection Agency
EMFAC	EMissions FACtor
FERC	Federal Energy Regulatory Commission
Final EIR	Renaissance Specific Plan Final Environmental Impact Report
GHG	Greenhouse Gas
GWh	Gigawatt Hour
HHD	Heavy-Heavy Duty Trucks
hp-hr-gal	Horsepower Hours Per Gallon
IEPR	Integrated Energy Policy Report
ISO	Independent Service Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
kBTU	Thousand-British Thermal Units
kWh	Kilowatt Hour
LDA	Light Duty Auto
LDT1/LDT2	Light-Duty Trucks
LHD1/LHD2	Light-Heavy Duty Trucks
MDV	Medium Duty Trucks
MHD	Medium-Heavy Duty Trucks

MMcfd	Million Cubic Feet Per Day
mpg	Miles Per Gallon
MPO	Metropolitan Planning Organization
PG&E	Pacific Gas and Electric
Project	Thrifty Oil Warehouse Project
PV	Photovoltaic
RSP	Renaissance Specific Plan
SCAB	South Coast Air Basin
SCE	Southern California Edison
SDAB	San Diego Air Basin
sf	Square Feet
SoCalGas	Southern California Gas
TEA-21	Transportation Equity Act for the 21st Century
U.S.	United States
VMT	Vehicle Miles Traveled

This page intentionally left blank

EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Thrifty Oil Warehouse Project Energy Analysis* is summarized below based on the significance criteria in Section 5 of this report consistent with Appendix G of the *CEQA Guidelines* (*CEQA Guidelines*) (1). Table ES-1 shows the findings of significance for potential energy impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Energy Impact #1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	5.0	*Less Than Significant*	*n/a*
Energy Impact #2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	5.0	*Less Than Significant*	*n/a*

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the federal and state agencies that regulate energy use and consumption through various means and programs. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of energy usage include:

- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)
- The Transportation Equity Act for the 21st Century (TEA-21
- Integrated Energy Policy Report (IEPR)
- State of California Energy Plan
- California Code Title 24, Part 6, Energy Efficiency Standards
- California Code Title 24, Part 11, California Green Building Standards Code (CALGreen)
- AB 1493 Pavley Regulations and Fuel Efficiency Standards
- California's Renewable Portfolio Standard (RPS)
- Clean Energy and Pollution Reduction Act of 2015 (SB 350)
- County of Riverside Climate Action Plan (CAP) Measure R2-CE1

Consistency with the above regulations is discussed in detail in section 5 of this report.

This page intentionally left blank

1 INTRODUCTION

This report presents the results of the energy analysis prepared by Urban Crossroads, Inc., for the proposed Thrifty Oil Warehouse Project Project (Project). The purpose of this report is to ensure that energy implication is considered by the County of Riverside (Lead Agency), as the lead agency, and to quantify anticipated energy usage associated with construction and operation of the proposed Project, determine if the usage amounts are efficient, typical, or wasteful for the land use type, and to emphasize avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

1.1 SITE LOCATION

The proposed project is located on the southeast corner of Tobacco Road and Placentia Avenue at 23641 Placentia Avenue in the County of Riverside, as shown on Exhibit 1-A.

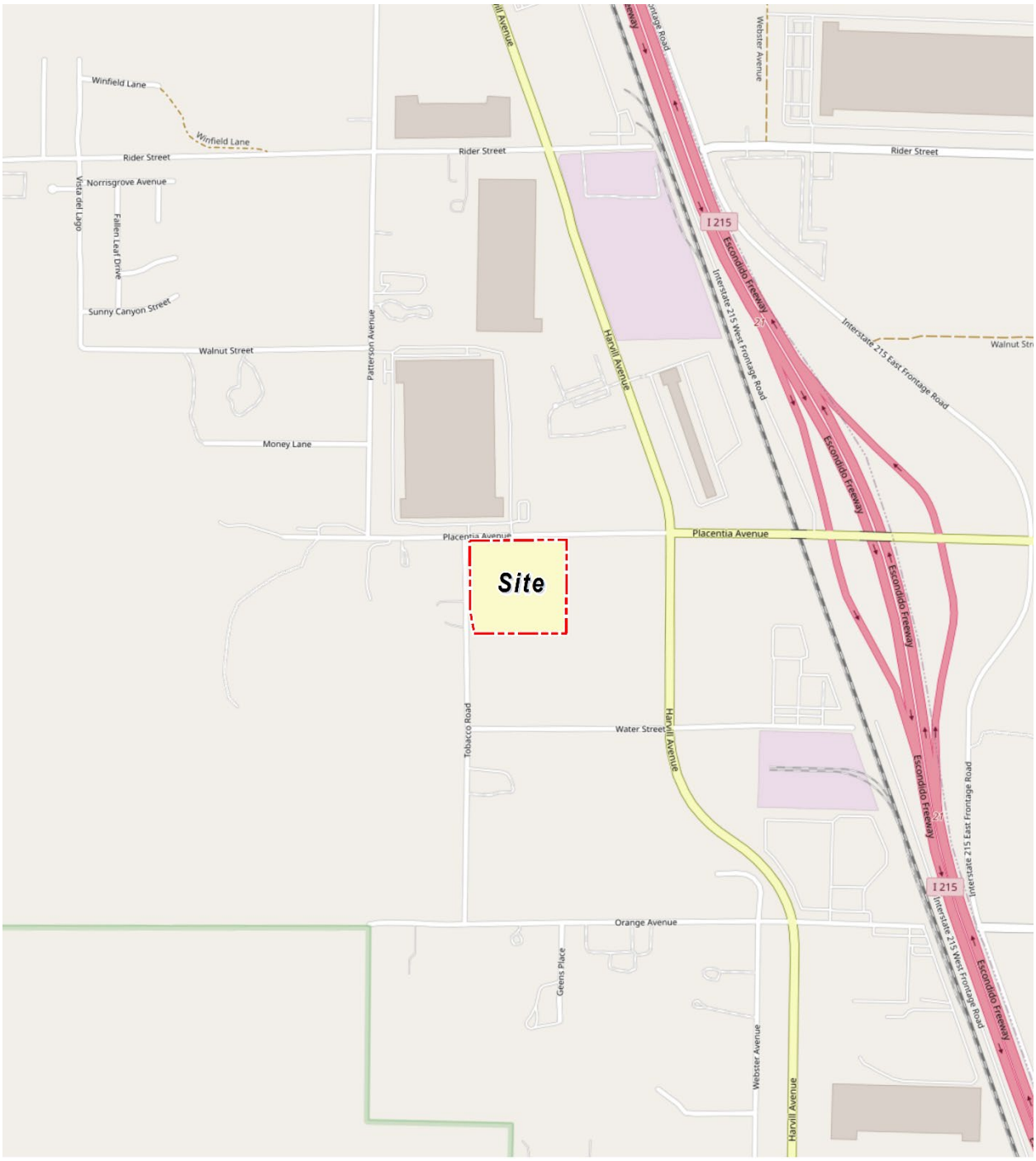
1.2 PROJECT DESCRIPTION

The Project consists of the development of a 185,785-sf warehouse building with 167,785 sf of warehousing use and 18,000 sf of office space (9,000 sf on first and second floors). The total Project site is 8.72 acres on APNs 317-260-017 and 317-261-018. A preliminary site plan for the proposed Project is shown on Exhibit 1-B. The Project is anticipated to have an Opening Year of 2026.

Construction is expected to commence in January 2025 and would last through January 2026. Construction activities will include demolition, site preparation, grading, building construction, paving, and architectural coating. To support the Project development, there will be frontage street improvements as well as offsite sewer improvements for the Project.

The Project site is located within an unincorporated portion of the County of Riverside. As per the General Plan, the unincorporated portions of the County are divided into 19 area plans. These area plans provide more detailed land use and policy direction regarding local issues such as land use, circulation, open space, and other topical areas (2). Per the General Plan, the Project site is located within the Mead Valley Area Plan and is designated for Business Park uses. The Business Park land use designation allows for employee-intensive uses, including research and development, technology centers, corporate and support office uses, clean industry and supporting retail uses (2).

EXHIBIT 1-A: LOCATION MAP

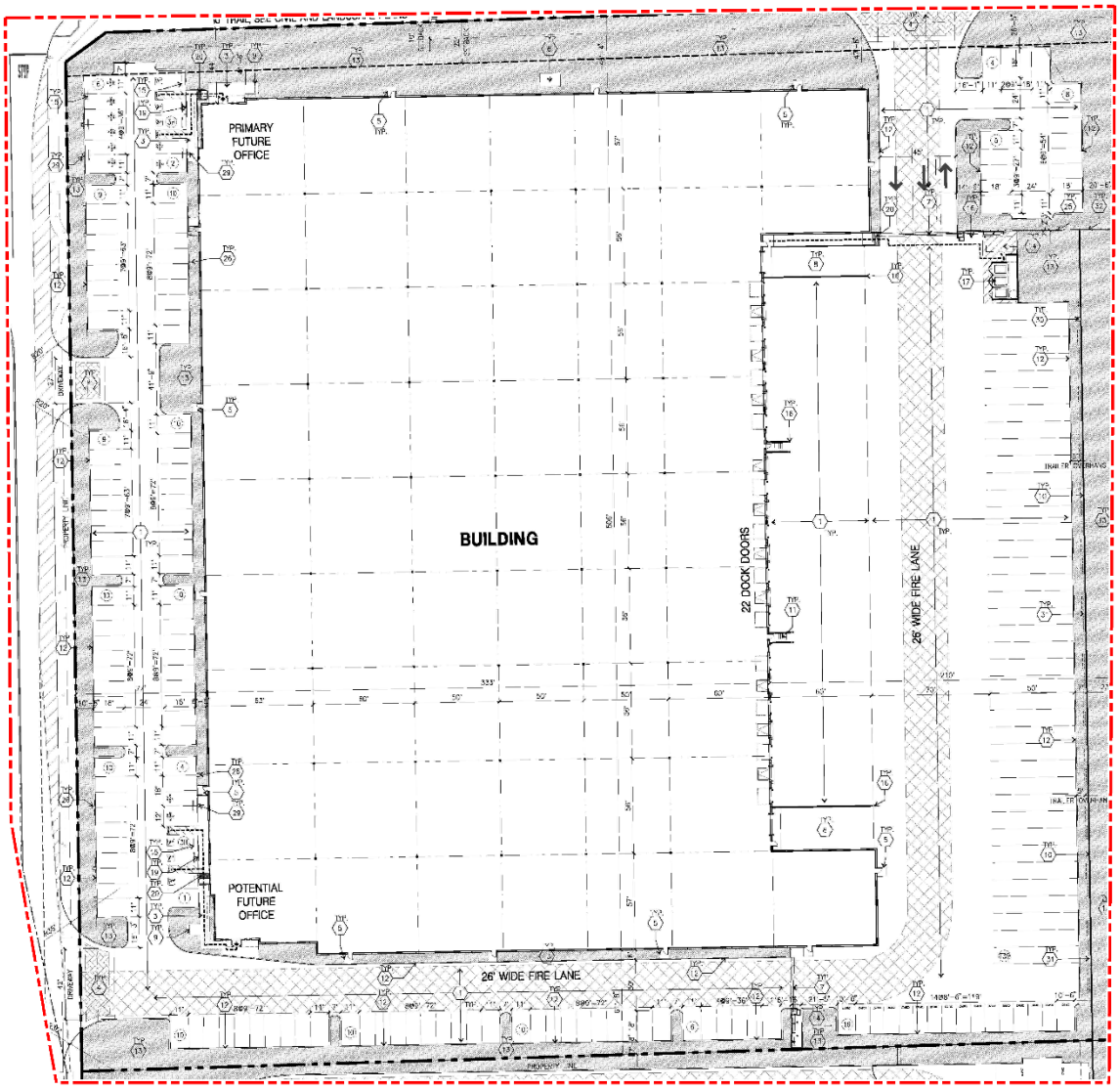


N

LEGEND:

Site Boundary

EXHIBIT 1-B: SITE PLAN



This page intentionally left blank

2 EXISTING CONDITIONS

This section provides an overview of the existing energy conditions in the Project region.

2.1 OVERVIEW

The most recent data for California's estimated total energy consumption and natural gas consumption is from 2021, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates in 2021 and included (3):

- As of 2021, approximately 7,359 trillion British Thermal Unit (BTU) of energy was consumed
- As of 2021, approximately 605 million barrels of petroleum
- As of 2021, approximately 2,101 billion cubic feet of natural gas
- As of 2021, approximately 1 million short tons of coal

According to the EIA, in 2022 the U.S. petroleum consumption comprised about 90% of all transportation energy use, excluding fuel consumed for aviation and most marine vessels (4). In 2022, about 251,923 million gallons (or about 5.99 million barrels) of finished petroleum products were consumed in the U.S., an average of about 690 million gallons per day (or about 16.4 million barrels per day) (5). In 2021, California consumed approximately 12,157 million gallons in motor gasoline (33.31 million per day) and approximately 3,541 million gallons of diesel fuel (9.7 million per day) (6).

The most recent data provided by the EIA for energy use in California is reported from 2021 and provided by demand sectors as follows:

- Approximately 37.8% transportation sector
- Approximately 23.2% industrial sector
- Approximately 20.0% residential sector
- Approximately 19.0% commercial sector (7)

According to the EIA, California used approximately 247,250 gigawatt hours of electricity in 2021 (8). By sector in 2021, residential uses utilized 36.5% of the state's electricity, followed by 43.9% for commercial uses, 19.2% for industrial uses, and 0.3% for transportation. Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building (8).

According to the EIA, California used approximately 200,871 million therms of natural gas in 2021 (9). In 2021 (the most recent year for which data is available), by sector, industrial uses utilized 33% of the state's natural gas, followed by 30% used as fuel in the electric power sector, 21% from residential, 11% from commercial, 1% from transportation uses and the remaining 3% was utilized for the operations, processing and production of natural gas itself (9). While the supply of natural gas in the United States and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 90% of its supply of natural gas (9).

In 2022, total system electric generation for California was 287,220 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 203,257 GWh which accounted for approximately 71% of the electricity it uses; the rest was imported from the Pacific Northwest (12%) and the U.S. Southwest (17%) (10). Natural gas is the main source for electricity generation at 47.46% of the total in-state electric generation system power as shown in Table 2-1.

An updated summary of, and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below (11):

- In 2022, California was the seventh-largest producer of crude oil among the 50 states, and, as of January 2022, the state ranked third in crude oil refining capacity.
- California is the largest consumer of jet fuel and second-largest consumer of motor gasoline among the 50 states.
- In 2020, California was the second-largest total energy consumer among the states, but its per capita energy consumption was less than in all but three other states.
- In 2022, renewable resources, including hydroelectric power and small-scale, customer-sited solar power, accounted for 49% of California's in-state electricity generation. Natural gas fueled another 42%. Nuclear power supplied almost all the rest.
- In 2022, California was the fourth-largest electricity producer in the nation. The state was also the nation's third-largest electricity consumer, and additional needed electricity supplies came from out-of-state generators.

As indicated below, California is one of the nation's leading energy-producing states, and California's per capita energy use is among the nation's most efficient. Given the nature of the Project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the Project—namely, electricity, natural gas, and transportation fuel for vehicle trips associated with the uses planned for the Project.

TABLE 2-1: TOTAL ELECRICITY SYSTEM POWER (CALIFORNIA 2022)

Fuel Type	California In-State Generation (GWh)	% of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Total California Energy Mix (GWh)	Total California Power Mix
Coal	273	0.13%	181	5,716	5,897	6,170	2.15%
Natural Gas	96,457	47.46%	44	7,994	8,038	104,495	36.38%
Oil	65	0.03%	-	-	-	65	0.2%
Other (Waste Heat/Petroleum Coke)	315	0.15%	-	-	-	315	0.11%
Unspecified	-	0.0%	12,485	7,943	20,428	20,428	7.11%
Total Thermal and Unspecified	**97,110**	**47.78%**	**12,710**	**21,653**	**34,363**	**121,473**	**45.77%**
Nuclear	17,627	8.67%	397	8,342	8,739	26,366	9.18%
Large Hydro	14,607	7.19%	10,803	1,118	11,921	26,528	9.24%
Biomass	5,366	2.64%	771	25	797	6,162	2.15%
Geothermal	11,110	5.47%	253	2,048	2,301	13,412	4.67%
Small Hydro	3,005	1.48%	211	13	225	3,230	1.12%
Solar	40,494	19.92%	231	8,225	8,456	48,950	17.04%
Wind	13,938	6.86%	8,804	8,357	17,161	31,099	10.83%
Total Non-GHG and Renewables	**106,147**	**52.22%**	**21,471**	**28,129**	**49,599**	**155,747**	**54.23%**
SYSTEM TOTALS	***203,257***	***100.0%***	***34,180***	***49,782***	***83,962***	***287,220***	***100.0%***

Source: CECs 2022 Total System Electric Generation

2.2 ELECTRICITY

The usage associated with electricity use were calculated using CalEEMod Version 2022.1.1.12. The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station (San Onofre). While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the State Water Resources Control Board's once-through cooling policy, the retirement of San Onofre complicated the situation. California Independent Service Operator (ISO) studies revealed the extent to which the South Coast Air Basin (SCAB) and the San Diego Air Basin (SDAB) region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues was detailed in the 2013 Integrative Energy Policy Report (IEPR) after a collaborative process with other energy agencies, utilities, and air districts (12). Similarly, the subsequent 2022 IEPR's provides information and policy recommendations on advancing a clean, reliable, and affordable energy system.

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California ISO is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that enough power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities (13).

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, utilities file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Electricity is currently provided to the Project site by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons in 15 counties and in 180 incorporated cities, within a service area encompassing approximately 50,000 square miles. Based on SCE's 2022 Power Content Label Mix, SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers (14).

Table 2-2, SCE's specific proportional shares of electricity sources in 2022. As indicated in Table 2-2, the 2022 SCE Power Mix has renewable energy at 33.2% of the overall energy resources.

Geothermal resources are at 5.7%, wind power is at 9.8%, large hydroelectric sources are at 3.4%, solar energy is at 17.0%, and coal is at 0% (15).

TABLE 2-2: SCE 2022 POWER CONTENT MIX

Energy Resources	2022 SCE Power Mix
Eligible Renewable	**33.2%**
Biomass & Waste	0.1%
Geothermal	5.7%
Eligible Hydroelectric	0.5%
Solar	17.0%
Wind	9.8%
Coal	**0.0%**
Large Hydroelectric	**3.4%**
Natural Gas	**24.7%**
Nuclear	**8.3%**
Other	**0.1%**
Unspecified Sources of power*	30.3%
Total	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

2.3 NATURAL GAS

The following summary of natural gas customers and volumes, supplies, delivery of supplies, storage, service options, and operations is excerpted from information provided by the California Public Utilities Commission (CPUC).

> *"The CPUC regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.*
>
> *California's natural gas utilities provide service to over 11 million gas meters. SoCalGas and PG&E provide service to about 5.9 million and 4.3 million customers, respectively, while SDG&E provides service to over 800, 000 customers. In 2018, California gas utilities forecasted that they would deliver about 4740 million cubic feet per day (MMcfd) of gas to their customers, on average, under normal weather conditions.*
>
> *The overwhelming majority of natural gas utility customers in California are residential and small commercials customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers*

consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.

A significant amount of gas (about 19%, or 1131 MMcfd, of the total forecasted California consumption in 2018) is also directly delivered to some California large volume consumers, without being transported over the regulated utility pipeline system. Those customers, referred to as "bypass" customers, take service directly from interstate pipelines or directly from California producers.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, i.e., they receive deliveries of gas from SoCalGas and in turn deliver that gas to their own customers. (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area.) Similarly, West Coast Gas, a small gas utility, is a wholesale customer of PG&E. Some other wholesale customers are municipalities like the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California gas utilities are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora. Another pipeline, the North Baja - Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, and authorizes rates for that service, the California Public Utilities Commission may participate in FERC regulatory proceedings to represent the interests of California natural gas consumers.

The gas transported to California gas utilities via the interstate pipelines, as well as some of the California-produced gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipelines systems (commonly referred to as California's "backbone" pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered to the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large volume noncore customers take natural gas delivery directly off the high-pressure backbone and local transmission pipeline systems, while core customers and other noncore customers take delivery off the utilities' distribution pipeline systems. The state's natural gas utilities operate over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines.

Bypass customers take most of their deliveries directly off the Kern/Mojave pipeline system, but they also take a significant amount of gas from California production.

PG&E and SoCalGas own and operate several natural gas storage fields that are located within their service territories in northern and southern California, respectively. These storage fields, and four independently owned storage utilities - Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage - help meet peak seasonal and daily natural gas demand and allow California natural gas customers to secure

natural gas supplies more efficiently. PG&E is a 25% owner of the Gill Ranch Storage field. These storage fields provide a significant amount of infrastructure capacity to help meet California's natural gas requirements, and without these storage fields, California would need much more pipeline capacity in order to meet peak gas requirements .

Prior to the late 1980s, California regulated utilities provided virtually all natural gas services to all their customers. Since then, the Commission has gradually restructured the California gas industry in order to give customers more options while assuring regulatory protections for those customers that wish to, or are required to, continue receiving utility-provided services.

The option to purchase natural gas from independent suppliers is one of the results of this restructuring process. Although the regulated utilities procure natural gas supplies for most core customers, core customers have the option to purchase natural gas from independent natural gas marketers, called "core transport agents" (CTA). Contact information for core transport agents can be found on the utilities' web sites. Noncore customers, on the other hand, make natural gas supply arrangements directly with producers or with marketers.

Another option resulting from the restructuring process occurred in 1993, when the Commission removed the utilities' storage service responsibility for noncore customers, along with the cost of this service from noncore customers' transportation rates. The Commission also encouraged the development of independent storage fields, and in subsequent years, all the independent storage fields in California were established. Noncore customers and marketers may now take storage service from the utility or from an independent storage provider (if available), and pay for that service, or may opt to take no storage service at all. For core customers, the Commission assures that the utility has adequate storage capacity set aside to meet core requirements, and core customers pay for that service.

In a 1997 decision, the Commission adopted PG&E's "Gas Accord", which unbundled PG&E's backbone transmission costs from noncore transportation rates. This decision gave customers and marketers the opportunity to obtain pipeline capacity rights on PG&E's backbone transmission pipeline system, if desired, and pay for that service at rates authorized by the Commission. The Gas Accord also required PG&E to set aside a certain amount of backbone transmission capacity in order to deliver gas to its core customers. Subsequent Commission decisions modified and extended the initial terms of the Gas Accord. The "Gas Accord" framework is still in place today for PG&E's backbone and storage rates and services and is now simply referred to as PG&E Gas Transmission and Storage (GT&S).

In a 2006 decision, the Commission adopted a similar gas transmission framework for Southern California, called the "firm access rights" system. SoCalGas and SDG&E implemented the firm access rights (FAR) system in 2008, and it is now referred to as the backbone transmission system (BTS) framework. As under the PG&E backbone transmission system, SoCalGas backbone transmission costs are unbundled from noncore

transportation rates. Noncore customers and marketers may obtain, and pay for, firm backbone transmission capacity at various receipt points on the SoCalGas system. A certain amount of backbone transmission capacity is obtained for core customers to assure meeting their requirements.

Many if not most noncore customers now use a marketer to provide for several of the services formerly provided by the utility. That is, a noncore customer may simply arrange for a marketer to procure its supplies, and obtain any needed storage and backbone transmission capacity, in order to assure that it will receive its needed deliveries of natural gas supplies. Core customers still mainly rely on the utilities for procurement service, but they have the option to take procurement service from a CTA. Backbone transmission and storage capacity is either set aside or obtained for core customers in amounts to assure very high levels of service.

In order properly operate their natural gas transmission pipeline and storage systems, PG&E and SoCalGas must balance the amount of gas received into the pipeline system and delivered to customers or to storage fields. Some of these utilities' storage capacity is dedicated to this service, and under most circumstances, customers do not need to precisely match their deliveries with their consumption. However, when too much or too little gas is expected to be delivered into the utilities' systems, relative to the amount being consumed, the utilities require customers to more precisely match up their deliveries with their consumption. And, if customers do not meet certain delivery requirements, they could face financial penalties. The utilities do not profit from these financial penalties - the amounts are then returned to customers as a whole. If the utilities find that they are unable to deliver all the gas that is expected to be consumed, they may even call for a curtailment of some gas deliveries. These curtailments are typically required for just the largest, noncore customers. It has been many years since there has been a significant curtailment of core customers in California." (16)

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The CPUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

Based on information provided by the Project applicant, no natural gas would be used as a result of the Project, and as such use of natural gas is not considered in the analysis.

2.4 TRANSPORTATION ENERGY RESOURCES

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. The Department of Motor Vehicles (DMV) identified 36.2 million registered vehicles in California (7), and those vehicles consume an