

**Western Riverside County
Multiple Species Habitat Conservation Plan
Consistency Analysis**

The Cubes at Placentia

Prepared for:

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300-170-003, 300-170-004, 300-170-005, 300-170-006 and 300-170-010

MSHCP Consistency Analysis

Contents

1	EXECUTIVE SUMMARY	4
2	INTRODUCTION.....	5
2.1	Project Area.....	6
2.2	Project Description.....	6
2.3	Covered Roads.....	6
2.4	Covered Public Access Activities	6
2.5	General Setting.....	6
3	RESERVE ASSEMBLY ANALYSIS.....	7
3.1	Public Quasi-Public Lands.....	8
3.1.1	Public Quasi-Public Lands in Reserve Assembly Analysis	8
3.1.2	Project Impacts to Public Quasi-Public Lands.....	9
4	VEGETATION MAPPING	9
5	PROTECTION OF SPECIES ASSOCIATED WITH RIPARIAN/RIVERINE AREAS AND VERNAL POOLS (SECTION 6.1.2)	10
5.1	Riparian/Riverine.....	Error! Bookmark not defined.
5.1.1	Methods.....	11
5.1.2	Existing Conditions and Results	11
5.1.3	Impacts.....	12
5.1.4	Mitigation.....	13
5.2	Vernal Pools.....	13
5.2.1	Methods.....	13
5.2.2	Existing Conditions and Results	14
5.2.3	Impacts.....	14
5.2.4	Mitigation.....	14
5.3	Fairy Shrimp.....	15
5.4	Riparian Birds	15
6	PROTECTION OF NARROW ENDEMIC PLANT SPECIES (SECTION 6.1.3).....	15
7	ADDITIONAL SURVEY NEEDS AND PROCEDURES (SECTION 6.3.2)	17
7.1	MSHCP Criteria Area Sensitive Plant Species.....	17
7.2	Burrowing Owl.....	21
7.2.1	Methods.....	22
7.2.2	Existing Conditions and Results	22
7.2.3	Impacts.....	22
7.2.4	Mitigation.....	22
8	INFORMATION ON OTHER SPECIES	23
8.1	Delhi Sands Flower Loving Fly	23
8.2	Species Not Adequately Conserved	23
9	GUIDELINES PERTAINING TO THE URBAN/WILDLANDS INTERFACE (SECTION 6.1.4)	23
10	BEST MANAGEMENT PRACTICES (VOLUME I, APPENDIX C)	25

MSHCP Consistency Analysis

11	CERTIFICATION.....	27
12	REFERENCES.....	29

List of Figures

Figure 1	Regional Location Map
Figure 2	Site Vicinity Map
Figure 3	MSHCP Criteria Cells
Figure 4	MSHCP Cores, Linkages and Conserved Lands
Figure 5a	MSHCP Species Survey Areas
Figure 5b	MSHCP Species Survey Areas
Figure 6	RCA MSHCP Vegetation 2012
Figure 7	Vegetation Communities/Land Cover Types
Figure 8	Soils Map
Figure 9	Literature Review
Figure 10	Critical Habitat
Figure 11	National Wetland Inventory

List of Tables

Table 1.	Vegetation Community/Land Cover Types	10
Table 2.	Summary of MSHCP Riparian/Riverine Resources Inside Criteria Cells.....	12
Table 3.	Summary of MSHCP Riparian/Riverine Resources Outside Criteria Cells.....	12
Table 4.	MSHCP Narrow Endemic Plant Species Assessment	16
Table 5.	MSHCP Criteria Area Sensitive Plant Species Assessment.....	18
Table 6.	MSHCP Best Management Practices Applicability (Volume 1, Appendix C).....	25

Appendices

Appendix A	Site Plan
Appendix B	Plant Species Observed Within the Study Area
Appendix C	Wildlife Species Observed Within the Study Area
Appendix D	Special-Status Species and Their Potential to Occur Within the Project Site
Appendix E	Burrowing Owl Survey Report
Appendix F	Photographic Log
Appendix G	Delineation of Wetlands & Waterways
Appendix H	Project GIS Files (provided separately)

MSHCP Consistency Analysis

1 EXECUTIVE SUMMARY

NOREAS, Inc. (NOREAS) has prepared this report to document the consistency of The Cubes at Placentia (the “Project”) with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) - including its relationship to Reserve Assembly, Covered Roads, Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), Section 6.1.3 (Protection of Narrow Endemic Plant Species), Section 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface), and Section 6.3.2 (Additional Survey Needs and Procedures). The proposed Project consists of the construction of an industrial building and associated landscaping, parking, and drive aisles on an unimproved piece of land. The Project is located north of Placentia Avenue and east of Wilson Avenue - in Riverside County, California. (Assessor's Parcel Numbers [APN's] 300-170-003, 300-170-004, 300-170-005, 300-170-006 and 300-170-010, Figures 1 and 2). For the purposes of this document, the “study area” includes the Project's proposed ground disturbance footprint (hereafter referred to as the Project Site), and a buffer (Figure 2). The Project occurs inside Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) boundaries, within the Mead Valley Area Plan, and the San Jacinto Habitat Management Unit. The Project Site is not within the borders of any MSHCP established Subunit, Cell Group, Criteria Cell, Linkages/Cores, Conserved Lands, or Regional Conservation Authority (RCA) Easements (Figures 3 and 4).

The Project limits of work include 29.85-acres of ruderal land cover (Figure 7). The study area for the Project extended beyond its 29.85-acre permanent disturbance footprint, and included roughly 108-acres. According to the RCA MSHCP Information Map, the Project Site lies partially - or completely, within predetermined survey areas for the Burrowing Owl (*Athene cunicularia*), narrow endemic and criteria area sensitive plant species. But the Project is not within a designated survey area for invertebrates, amphibians or mammals.

In 2012 the MSHCP mapped the vegetation within the Project Site as Urban and Cropland, Orchard - Vineyard (GISD 2022, Figure 6). In 2022 and 2023, no Burrowing Owl, no narrow endemic and no criteria area sensitive plant species were observed within the study area. To that end, only a ruderal vegetation community was detected within the Project Site. Also, based on the results of the 2022 and 2023 habitat assessments and field surveys, potential habitat is not present within the study area for MSHCP narrow endemic, or criteria area sensitive plant species.

No federal- or state-listed flora or fauna were observed within the Project Site during the 2022 and 2023 field surveys. The Project's 29.85-acre permanent disturbance footprint (Project Site) is comprised of disturbed and non-native land cover. It is not collocated with any United States Fish and Wildlife Service (USFWS) designated critical habitat (Figure 10), nor were any special status species detected during the field surveys. No nesting birds, remnant raptor nests, or bat guano have been detected within the Project Site either. Also, the Project's 29.85-acre permanent disturbance footprint has little value as suitable breeding, nesting, and foraging habitat for native species. Furthermore, the Project Site has limited – if any, worth as a low-quality migration corridor or overland dispersal habitat for wildlife either. As the Project Site is

MSHCP Consistency Analysis

severely movement constrained by the surrounding residential, industrial / commercial developments, and public infrastructure. The Project Site does not contain vernal pools or other ephemeral ponds with the potential to support listed fairy shrimp either.

However, the Project Site does include a negligible amount of MSHCP riparian/riverine resources - associated with the upper earthen western exterior boundaries, of the Perris Valley Storm Drain. This area is void of vegetation and is regularly maintained to allow access to the structure. Nonetheless, this location is coincident with a discernable bank line with topographic relief, and contributes – albeit in a limited capacity, to water conveyance and connectivity downstream to Canyon Lake. Therefore, a separate *Determination of Biological Equivalent or Superior Preservation Report* (DBESP) report will be provided to address the unavoidable permanent impacts to 0.002 acres of MSHCP riparian/riverine resources.

The target conservation acreage range for the Mead Valley Area Plan is 4,980 to 6,730 acres - composed of approximately 3,095 acres of existing Public/Quasi-Public Lands and 1,885 - 3,635 acres of Additional Reserve Lands. The City of Perris is located entirely within the Mead Valley Area Plan. Notably, the conservation within the Mead Valley Area Plan is centered around Proposed Constrained Linkage 19, Proposed Core 1, the Proposed Extension of Existing Core 4, Proposed Linkage 3, Proposed Linkage 7, and Proposed Noncontiguous Habitat Block 4. The Project Site's 29.85-acre permanent disturbance footprint includes no lands within - or immediately adjacent to, MSHCP Proposed Constrained Linkage 19, Proposed Core 1, Proposed Extension of Existing Core 4, Proposed Linkage 3, Proposed Linkage 7, and Proposed Noncontiguous Habitat Block 4, Cell Groups, Criteria Cells or Subunits.

As such, the Project is not anticipated to adversely affect any of the MSHCP Mead Valley Area Plan's Planning Species, Biological Issues and Considerations, and Criteria for its Subunits. The data presented herein is conclusive that there is no potential for "Take" (i.e., meaning that the Project has no potential to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of federally or state listed threatened and endangered species as a result of Project implementation. Nonetheless, Lake Creek Industrial will commit to a pre-construction Burrowing Owl survey that will be conducted prior to initiation of ground disturbance. If Burrowing Owls are observed, a Burrowing Owl Protection, Management and Relocation Plan will be prepared.

2 INTRODUCTION

The purpose of this *Consistency Analysis Report (Analysis)* is to summarize the biological data for Cubes at Placentia Project and to document its consistency with the goals and objectives of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). In a general sense, the Project involves the construction of an industrial building and associated landscaping, parking, and drive aisles.

MSHCP Consistency Analysis

2.1 Project Area

The Project's study area is defined as its proposed physical ground disturbance footprint (Project Site), plus a buffer (Figures 1 and 2). The Project includes Assessor Parcel Numbers (APNs) 300-170-003, 300-170-004, 300-170-005, 300-170-006 and 300-170-010. The Project's "study area" includes all lands to be affected directly and/or indirectly by the Project, and are not merely the immediate lands involved in the action itself. The APNs associated with the Project's "study area" include 300170006, 300170010, 300170009, 300090002, 300090006, 300090008, 300110001, 300210025, 300210017, 300210018, 300210019, 300210020, 300210021, 300220019, 300220046, 300180038, 300180041, 300180042, 300180043, 300180010, 300180011, 300180012, 300180013, 300180018, 300180044, 300180019, 300180020, 300180024, 300180030, 300180025, 300180026, 300180027 and 300180028.

The Project can be found on the Perris United States Geological Survey (USGS) 7.5-Minute Topographic Quadrangle Map (USGS 1981) - Section 17, of Township 4 South and Range 3 West. The Project occurs at an approximate elevation of 1,440 ft. above mean sea level (MSL). Land use in the surrounding vicinity includes commercial, agriculture, residential and industrial endeavors. Lands to be impacted by the Project include no MSHCP established Subunits, Cell Groups, Criteria Cells, Linkages/Cores, Conserved Lands, or RCA Easements (Figures 3 and 4). The Project's construction limit is 29.85-acres (Figure 2). The study area consists of Ruderal (46.36-acres), Developed/Disturbed (46.96-acres) and River Wash (15.30-acres) land cover types. Representative photos of the study area are provided in Appendix F.

2.2 Project Description

The Project consists of the construction of an industrial building and associated landscaping, parking, and drive aisles. The Project includes no off-site features, or staging areas. The Project does not include any temporary impacts. A construction Site Plan is included within Appendix A. This Project doesn't include regular weed abatement and fuel modification zones, as the entire 29.85-acre disturbance footprint will be built out.

2.3 Covered Roads

The Project is located within the City of Perris, north of Placentia Avenue and east of Wilson Avenue (Figures 1 and 2). Wilson Avenue and Placentia Avenue are not identified by the RCA as Covered Roads. Therefore, MSHCP Covered Operations and Maintenance Activities – are not applicable. As described, the Project does not entail the construction of - or improvements to, Wilson Avenue or Placentia Avenue.

2.4 Covered Public Access Activities

The Project does not entail the construction of - or improvements to, Covered Public Access Activities. The Project involves no construction or improvements to trails - or other public access facility, referenced within MSHCP Section 7.4.2. Therefore, this MSHCP Section is not applicable.

2.5 General Setting

The Web Soil Survey is an online Geographic Information System (GIS) that provides the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) with online soil data

MSHCP Consistency Analysis

(NRCS 2023). This website was used to assess soil characteristics and soil types within the Project Site. This database was also used to determine if the Project Site's mapped soils were likely to include any hydrologically influenced areas.

According to the USDA NRCS, the Project Site consists of the following soil complexes (Appendix, Figure 4):

- Domino silt loam;
- Domino silt loam, saline-alkali; and
- Exeter sandy loam, 0 to 2 percent slopes.

Of the above referenced soil types, Domino silt loam, saline-alkali is formally classified as hydric. But please note that the NRCS Soil mapped units do not provide precise information, about the locations of soil types - or their inclusions. NRCS Soil Survey data users are cautioned that due to the limitations of mapping – primarily through aerial photo interpretation, a percentage of unique soil types may have gone unidentified, or misidentified.

Land use in the surrounding vicinity includes commercial, agriculture, residential and industrial endeavors. In 2012 the MSHCP mapped the vegetation within the Project Site as Urban and Cropland, Orchard - Vineyard (GISD 2022, Figure 6). In 2022 and 2023, three land cover types were consistently detected within the study area: Ruderal (46.36-acres), Developed/Disturbed (46.96-acres), and River Wash (15.30-acres) (Figure 7). The Project's 29.85-acre permanent disturbance footprint (Project Site) is comprised almost entirely of disturbed and non-native land cover types (Figure 2). The Project is not collocated with any USFWS designated critical habitat (Figure 10), nor were any special status species detected during field surveys. No nesting birds, no Burrowing Owls, no remnant raptor nests, and no bat guano have been detected within the Project Site either. Special-status species known to occur within several miles of the Project, and their potential for occurrence within it, are detailed within Appendix D and Figure 9.

Wildlife species observed within the study area consisted of commonly-occurring species - including, but not limited to, rock pigeon (*Columba livia*), Red-tailed hawk (*Buteo jamaicensis*), common raven (*Corvus corax*), and Side-blotched Lizard (*Uta stansburiana*). A complete list of wildlife species detected within and adjacent to the study area during the field surveys are provided in Appendix C.

3 RESERVE ASSEMBLY ANALYSIS

The Project is located within the Mead Valley Area Plan. But not within the boundaries of any MSHCP established Subunit, Cell Group, Criteria Cell, Linkages/Cores, Conserved Lands, or RCA Easements. The target conservation acreage range for the Mead Valley Area Plan is 4,980 to 6,730 acres - composed of approximately 3,095 acres of existing Public/Quasi-Public Lands and 1,885 - 3,635 acres of Additional Reserve Lands.

The Project's 29.85-acre permanent disturbance footprint does not impact any of the Mead Valley Area Plan's 4 Subunits. The Project is not anticipated to adversely affect any of the MSHCP Mead Valley Area Plan's *Planning Species, Biological Issues and Considerations, and Criteria* for

MSHCP Consistency Analysis

the aforesaid Subunits either. As stated above, the Project Site includes no land, nor is it connected, or adjacent to any Cell Groups, Criteria Cells, habitat proposed for conservation, locales proposed for additional reserve assembly, cores or linkages within the MSHCP. Conservation within the Mead Valley Area Plan is centered around Proposed Constrained Linkage 19, Proposed Core 1, the Proposed Extension of Existing Core 4, Proposed Linkage 3, Proposed Linkage 7, and Proposed Noncontiguous Habitat Block 4. The Project Site includes no lands within or immediately adjacent to MSHCP Proposed Constrained Linkage 19, Proposed Core 1, Proposed Extension of Existing Core 4, Proposed Linkage 3, Proposed Linkage 7, and Proposed Noncontiguous Habitat Block 4, Cell Groups or Criteria Cells.

According to the RCA MSHCP Information Map, the Project Site lies partially - or completely within, predetermined survey areas for the Burrowing Owl, narrow endemic, and criteria area sensitive plant species. But the Project is not within a survey area for invertebrates, amphibians or mammals. Therefore, a Burrowing Owl habitat suitability assessment was conducted in accordance with the MSHCP Burrowing Owl survey instructions. Since suitable habitat was present, surveys were performed. Similarly - per the MSHCP, lands that occur within a survey area for narrow endemic, and criteria area sensitive plant species, must have a habitat evaluation as well. The Project Site only includes ruderal vegetation communities. No special status species were observed within the Project Site during the field survey events. Also, the Project is not collocated with any USFWS designated critical habitat (Figure 10).

Based on the results of the 2022 and 2023 habitat assessments and field surveys, potential habitat is not present within the study area for MSHCP narrow endemic or criteria area sensitive plant species. According to the MSHCP guidelines, focused surveys are not required if suitable habitat is not present - even if the Project is located within a predetermined MSHCP Survey Area (MSHCP 2004). In 2012 the MSHCP mapped the vegetation within the Project Site as Urban Lands and Cropland, Orchard - Vineyard (GISD 2023, and Figure 6). During the field surveys, no Burrowing Owls, narrow endemic or criteria area sensitive plant species were observed within - or adjacent to, the Project Site.

3.1 Public Quasi-Public Lands

The majority of the cities in western Riverside County, have contributed open space/land to help establish the MSHCP Conservation Area. These lands are described in the MSHCP as Public/Quasi-Public (PQP) Lands.

3.1.1 Public Quasi-Public Lands in Reserve Assembly Analysis

PQP Lands are a subset of MSHCP Conservation Area lands that are known to be in public/private ownership and expected to be managed for open space value in a manner that contributes to the conservation of covered species (including lands contained in existing reserves). The Project's 29.85-acre permanent disturbance footprint includes a negligible amount of PQP Land - associated with the upper earthen western exterior boundaries, of the Perris Valley Storm Drain. This area is void of vegetation and is regularly maintained to allow access to the structure. Nonetheless, this location is coincident with PQP boundaries.

MSHCP Consistency Analysis

3.1.2 Project Impacts to Public Quasi-Public Lands

The Project's 29.85-acre permanent disturbance footprint is located within a negligible amount of known PQP lands. The Project will directly impact 0.002 acres of PQP lands.

Notably, the impacts will be limited to the upper earthen western exterior boundaries of the Perris Valley Storm Drain, where there is no native vegetation and it is regularly maintained to allow access to the structure. Therefore, the lands proposed for impact do not provide any biological function to the MSHCP Section 6.1.2 species, or Planning Species identified within the Mead Valley Area Plan. No habitat for the plants identified in Section 6.1.2 were detected in associated with this area either, including any Narrow Endemic Plants or Criteria Area Plants. This location does not provide suitable habitat for the Burrowing Owl either. In summary, the biological functions of area – with the exception of water conveyance, are virtually indistinguishable from the surrounding uplands.

4 VEGETATION MAPPING

In February, March and April 2022 and June 2023 pedestrian-based field surveys were performed by NOREAS Inc. (NOREAS) to define general and dominant land cover, vegetation, plant community sizes, habitat types, and species present within communities. Type descriptions were based on observed dominant cover and vegetation composition; and were derived from the criteria and definitions of widely accepted land classification systems (Holland 1986; and Sawyer et al. 2009). Plants were identified in the field to the lowest taxonomic level sufficient to determine whether the species detected were non-native, native, or special-status. Plants of uncertain identity were subsequently identified from taxonomic keys (Baldwin et al. 2012). Scientific and common species names were recorded according to *The Jepson Manual* (Baldwin et al. 2012) and those detailed in Sections 2.1.3 and 6.1.2 of the MSHCP. The aforesaid method of floristic survey was conducted to safeguard that special-status plant species were not inadvertently overlooked, because they were not targeted during surveys.

Three land cover types were observed within the study area: Ruderal, Developed/Disturbed and River Wash (Table 1 and Figure 7). Cover types are described in detail below.

- **Developed/Disturbed**
Disturbed/Developed lands within the study area include locales that have been developed, paved, cleared, graded, or otherwise altered by anthropogenic activities (i.e., industrial warehouses, access roads, ornamental landscaping, residential houses, industrial facilities, commercial enterprises, etc.). Common non-native plants species detected within this type include ripgut brome (*Bromus diandrus*), black mustard (*Brassica nigra*) and Schismus (*Schismus barbatus*).
- **Ruderal**
The ruderal community includes locales that have been subject to recent grading, clearing, or other physical human modification of soils and/or vegetation. These lands also include areas with exposed soils with minimal vegetation, and moderate cover by various non-native annual grasses, and weeds (adapted for growth on substrates subject to disturbance).

MSHCP Consistency Analysis

Common non-native plants species detected within this type included Maltese star-thistle (*Centaurea melitensis*), stinknet (*Oncosiphon piluliferum*), bur clover (*Medicago polymorpha*), and slender oat (*Avena barbata*).

- **River Wash**

The River Wash type within the study area includes the Perris Valley Storm Drain. This storm drain has an earthen substrate and is a maintained flood control facility - dominated by low growing Bermuda grass (*Cynodon dactylon*). Other vegetation observed includes Baltic rush (*Juncus balticus*), narrow leaf plantain (*Plantago lanceolata*), red-stem filaree (*Erodium cicutarium*), and red brome (*Bromus madritensis*). Please note that this type does not occur within the Project Site.

Table 1. Vegetation Community/Land Cover Types

Vegetation Community/Land Cover Type	Study Area Acres	Project Site Acres	Permanent Impact Acres	Permanent Impact Acres Inside a Subunit, Cell Group, Criteria Cell, PQP Lands, Linkages/Cores, Conserved Lands, or RCA Conservation Easements	Permanent Impact Acres Outside a Subunit, Cell Group, Criteria Cell, PQP Lands, Linkages/Cores, Conserved Lands, or RCA Conservation Easements.
Disturbed /Developed	46.96	1.80	1.80	0	1.80
Ruderal	46.36	28.03	28.03	0	28.03
River Wash	15.30	0.00	0.0	0.002 ¹	0.0
Total	108.61	29.85	29.85	0.002	29.84

In general terms, the plants observed in the study area included a range of native and non-native species common to disturbed habitats, etc. Commonly-occurring species included: Maltese star-thistle, stinknet, riggut brome, black mustard, and Schismus, among others. Notably in 2012, the MSHCP mapped the vegetation within the Project Site as Urban Lands and Cropland, Orchard - Vineyard (GISD 2021; Figure 6). A comprehensive list of plant species observed during the field surveys is presented in Appendix B.

5 PROTECTION OF SPECIES ASSOCIATED WITH RIPARIAN/RIVERINE AREAS AND VERNAL POOLS (SECTION 6.1.2)

Section 6.1.2 of the MSHCP establishes procedures through which the protection of Riparian/Riverine Areas and Vernal Pools occurs. The purpose of these procedures is to ensure

¹ The Project's permanent disturbance footprint is located within a negligible amount of known PQP lands. Notably, the impacts will be limited to the upper earthen western exterior boundaries of the Perris Valley Storm Drain, where there is no native vegetation and it is regularly maintained to allow access to the structure.

MSHCP Consistency Analysis

that the biological functions and values of the riparian/riverine and vernal pool habitat areas throughout the MSHCP Plan Area are maintained such that habitat values for species inside the MSHCP Conservation Area are maintained.

5.1.1 Methods

The MSHCP defines Riparian/Riverine Areas as *lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source, or areas with fresh water flow during all or a portion of the year.* Regarding artificially created features, the MSHCP states “with the exception of wetlands created for the purpose of providing wetlands Habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.”

Per the RCA’s Consistency Analysis template, riverine features include any feature that is natural in origin as well as past natural features that have been heavily modified and/or redirected and can include features indirectly created through human manipulation of the landscape, including channelization of a historic riverine feature. If these features connect to nearby downstream resources that are either existing or described conservation lands, they would be considered riverine.

Subject matter experts evaluated the Project Site in February of 2022 and again in June of 2023 to assess MSHCP riparian/riverine resources. This evaluation was completed using data acquired from current and historic imagery, hydrologic and soils databases, analytic tools, physical on the ground analyses and measurements. Historic and current aerial photography of the Project Components were reviewed, prior to and during the field assessments. Aerial photography was informative with deference to the state and function of land resources in both the present, and historic context. As, inundation and vegetative signatures on aerial images can imply the presence - or absence, of waters, or a stream system within a discrete location.

The U.S. Environmental Protection Agency (EPA) WATERS GeoViewer tool also provided access to spatial data sets - such as interactive Upstream/Downstream search capabilities, to assist in determining the status of potential riparian / riverine resources within the region (epa.maps.arcgis.com/apps/webappviewer) (Appendix G). Additionally, the Federal Emergency Management Agency (FEMA) flood zone was reviewed, in addition to the National Wetland Inventory (Figure 11) – which is maintained by the U.S. Fish and Wildlife Service (USFWS). This was done to support with the identification of potential aquatic resources within the Project Site, Offsite and Conservation areas.

5.1.2 Existing Conditions and Results

The Project Site contains MSHCP riparian / riverine resources (Appendix G), outside Criteria Cells. Riparian / Riverine resources are limited to the Perris Valley Storm Drain’s upper earthen western exterior boundaries. This area is void of vegetation and is regularly maintained to allow access to the structure. Nonetheless, this location is coincident with a discernable bank line with

MSHCP Consistency Analysis

topographic relief, and contributes – albeit in a limited capacity, to water conveyance and connectivity downstream to Canyon Lake. Therefore, the Project Site includes 0.002-acres of non-riparian riverine resources which constitute a total of 13 linear feet (Appendix G). Tables 2 and 3 summarize riparian/riverine resources within the Project Site, followed by descriptions of feature.

Table 2. Summary of MSHCP Riparian/Riverine Resources Inside Criteria Cells

Feature	Permanent Impacts – Project Site	Temporary Impacts – Project Site	Total
	(Acres)	(Acres)	(Acres)
Perris Valley Storm Drain	0.00	0.00	0.00
Total	0.00	0.00	0.00

Table 3. Summary of MSHCP Riparian/Riverine Resources Outside Criteria Cells

Feature	Permanent Impacts – Project Site	Temporary Impacts – Project Site	Total
	(Acres)	(Acres)	(Acres)
Perris Valley Storm Drain	0.002	0.00	0.002
Total	0.002	0.00	0.002

Perris Valley Storm Drain

The Perris Valley Storm Drain is a water conveyance feature within the Project Site’s eastern boundary. The drainage is intermittent, includes a low flow channel and is approximately 250 feet wide. There is also evidence of water marks, sediment deposits, drainage patterns and debris. This drainage facility has been constructed, but has earthen exterior banks which are void of vegetation and are regularly maintained to allow access to the structure. This engineered drainage includes discernable bank line with topographic relief, and contributes – albeit in a limited capacity, to water conveyance and connectivity downstream to Canyon Lake. Vegetation within and along the banks of the Perris Valley Storm Drain are dominated by Bermuda grass (*Cynodon dactylon*) and English plantain (*Plantago lanceolata*). Bermuda grass is a perennial species widely used for lawns, pastures, and sports fields in warmer climates. The English plantain is also a perennial, but it is commonly found in grasslands, meadows, and other disturbed areas. That said, trace amounts of Baltic rush (*Juncus balticus*), were observed within the low flow channel. Baltic rush is a perennial which is typically found in wet habitats, including marshes, wet meadows, and along the edges of ponds and streams.

Detailed field survey methods and results for the Project Delineation of Wetlands, Waterways, & Riparian/Riverine Resources are provided in Appendix G.

5.1.3 Impacts

Based on the mapping of riparian/riverine resources described above, the Project Site will permanently impact 0.002 acre of riverine areas associated with Perris Valley Storm Drain

MSHCP Consistency Analysis

(Appendix G). The functions of the upper earthen western exterior bank that is void of vegetation and is regularly maintained to allow access to the structure that is to be impacted are limited to conveying water to downstream areas within Canyon Lake, and the top of bank provides limited - if any function relative to flood storage, sediment trapping and transport, and chemical factors such as nutrient retention and transformation, toxicant trapping and pollutant loading.

The exterior top of bank provides no biological function to the MSHCP *Section 6.1.2* species. None of the plants identified in *Section 6.1.2* were detected in associated with the man-made drainage facilities, including any Narrow Endemic Plants or Criteria Area Plants. The exterior bank does not provide suitable habitat for the Burrowing Owl, least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo, or for special-status reptiles or amphibians. The biological functions of the bank – with the exception of water conveyance, are virtually indistinguishable from the surrounding uplands.

5.1.4 Mitigation

A separate DEBESP report will be provided addressing the unavoidable permanent impacts to 0.002 acres of MSHCP riparian/riverine resources. Impacts will be offset through the purchase of rehabilitation and/or re-establishment credits at the Riverpark Mitigation Bank, or an equivalent intuition/organization. Furthermore, it is presumed that these credits/biological functions for *Section 6.1.2* species are superior compared with the lack of biological functions associated with the non-vegetated and regularly maintained western bank of the Perris Valley Storm Drain, detailed above. As such, the proposed mitigation would be at least equivalent, if not superior, to avoidance of the ditches. Proof of purchase of credits will be provided to the RCA and Wildlife Agencies prior to any impacts to riverine resources.

5.2 Vernal Pools

5.2.1 Methods

Vernal pools are seasonally inundated, ponded areas that only form in regions where specialized soil and climatic conditions exist. During fall and winter rains typical of Mediterranean climates, water collects in shallow depressions where downward percolation of water is prevented by the presence of a hard pan or clay pan layer (duripan) below the soil surface. Later in the spring when rains decrease and the weather warms, the water evaporates, and the pools generally disappear by May. The shallow depressions remain relatively dry until late fall and early winter with the advent of greater precipitation and cooler temperatures.

Vernal pools provide unusual "flood and drought" habitat conditions to which certain plant and wildlife species have specifically adapted - as well as, invertebrate species such as fairy shrimp. One of the factors for determining the suitability of the habitat for fairy shrimp would be demonstrable evidence of seasonal ponding in an area of topographic depression that is not subject to flowing waters. These astatic pools are typically characterized as vernal pools. More specifically, vernal pools are seasonal wetlands that occur in depression areas without a continual source of water. They have wetland indicators of all 3 parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators

MSHCP Consistency Analysis

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.

The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology is made on a case-by-case basis. Such determinations consider the length of time the area exhibits upland and wetland characteristics, and the way the area fits into the overall ecological system as a wetland. The seasonal hydrology of vernal pools provides for a unique environment, which supports plants and invertebrates specifically adapted to a regime of winter inundation, followed by an extended period when the pool soils are dry. The MSHCP lists two general classes of soils known to be associated with special-status plant species; clay soils and Traver-Domino Willow association soils. Without the appropriate soils to create the impermeable restrictive layer, none of the special-status species associated with vernal pools can occur. Methods included a review of recent and historic aerial photographs (2017-2023) of the Project Components and their immediate vicinity, a review of soils data, and 100% visual coverage pedestrian evaluation. The team also looked for signs of clayey soils, ponding, cracking, mottling, etc.

5.2.2 Existing Conditions and Results

A review of recent and historic aerial photographs of the study area and its immediate vicinity did not provide visual evidence of an astatic or vernal pool conditions – on, or in the vicinity of the Project Site. Three soil types occur within the Project Site based on USDA-NRCS Soil Survey data (Figure 8):

- Domino silt loam
- Domino silt loam, saline-alkali; and
- Exeter sandy loam, 0 to 2 percent slopes.

Of the above referenced soil types, none are the appropriate soils to support vernal pools, nor are they known to support seasonal wetlands, or special status invertebrates in Western Riverside County. No ponding was observed within the Project Site and the hydrologic regime associated with it does not support vernal pools, or astatic ponds. From the review of historic aerial photographs, and observations during the field investigations, it is concluded no vernal pools or suitable fairy shrimp habitat occur within the Project's permanent disturbance footprint. Further, no special status plant species associated with vernal pools were observed during the field visits either.

5.2.3 Impacts

There are no impacts to vernal pools, because none occur within the Project Site. As the soil types within the Project Site do not support the potential for vernal pools.

5.2.4 Mitigation

No mitigation is required because no vernal pools exist within the Project Site.

MSHCP Consistency Analysis

5.3 Fairy Shrimp

Fairy shrimp can be found in non-vernal pool features such as stock ponds, ephemeral pools, road ruts, human-made depressions, or other depressions that may pond water. No habitat features suitable for fairy shrimp exist within the Project Site. Therefore, evaluations for the presence of fairy shrimp were not warranted - or required. No further discussion on fairy shrimp is made in this report.

5.4 Riparian Birds

Riparian Birds covered under the MSHCP- such as the Least Bell's vireo (*Vireo bellii pusillus*) [LBVI], Southwestern willow flycatcher (*Empidonax trallii extimus*) [SWWF] and Yellow-billed cuckoo (*Coccyzus americanus*) [YBCU] are typically found only in well-developed riparian habitats. No habitat features suitable for any riparian birds exist within the Project Site. Therefore, evaluations for the presence of riparian birds were not warranted - or required. No further discussion on riparian birds is made in this report.

6 PROTECTION OF NARROW ENDEMIC PLANT SPECIES (SECTION 6.1.3)

The Project lies within a predetermined survey area (Figure 5b) for the following MSHCP Narrow Endemic Plant Species:

- San Diego ambrosia (*Ambrosia pumila*);
- Spreading navarretia (*Navarretia fossalis*);
- California Orcutt grass (*Orcuttia californica*); and
- Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*).

The MSHCP states that habitat suitability assessments may be undertaken year-round, with few exceptions. Based on the results of pedestrian-based surveys conducted on February, March, April of 2022 and June of 2023 potential habitat is not present within the Project Site for the aforementioned MSHCP Narrow Endemic Plant Species (Table 4). According to the MSHCP guidelines, focused surveys are not required for MSHCP Narrow Endemic Plant Species when suitable habitat is not present within the Project Site. Even though a Project is located within a predetermined MSHCP Narrow Endemic Plant Species Survey Area (MSHCP 2004).

MSHCP Consistency Analysis

Table 4. MSHCP Narrow Endemic Plant Species Assessment

Species Name (<i>Scientific Name</i>)	Habitat Description	Habitat Assessment Results
San Diego ambrosia (<i>Ambrosia pumila</i>)	San Diego ambrosia is known from Baja California, Mexico, and San Diego and Riverside counties in the United States. It blooms May to September. San Diego ambrosia occurs primarily on upper terraces of rivers and drainages as well as in open grasslands, openings in coastal sage scrub, and occasionally in areas adjacent to vernal pools.	Habitat Not Present: Potential to Occur – None This perennial species was not detected within the Project Site and is not expected to be present. No <i>Ambrosia</i> species were observed onsite during 2022 and 2023 rare plant assessments. This species is perennial and would have been detected during field efforts, if present. Furthermore, this species occurs in vernal pools (disturbed) - which are absent from the Project Site. Given the severely disturbed nature of the Project Site, no habitat occurs there for this species.
Spreading navarretia (<i>Navarretia fossalis</i>)	Spreading navarretia is a member of the phlox family, and is found in vernal pools, chenopod scrub, edge of marshes, and playas on saline-alkali soils. It occasionally grows in ditches and depressions associated with degraded habitat or old stock ponds (Consortium 2012). Spreading navarretia is a small prostrate to occasionally erect annual. Spreading navarretia blooms April to June.	Habitat Not Present: Potential to Occur – None The species is not expected to occur within the Project Site based on a lack of suitable habitat, and the highly disturbed and previously developed conditions documented there. The species was not detected during 2022 and 2023 rare plant assessments. No habitat (e.g., vernal pools and freshwater marsh) for this species occurs within the Project Site. No <i>Navarretia</i> species were observed onsite during field surveys. Given the severely disturbed nature of the Project Site, no habitat occurs within it for this species.
California Orcutt grass (<i>Orcuttia californica</i>)	California Orcutt grass is a small, unique grass that occurs primarily in vernal pool habitats. It is known from Orange (recently reported occurrence), Los Angeles, Riverside, Ventura, and San Diego Counties, and continues south into Baja California, Mexico. California Orcutt grass blooms April to August. In Riverside County, this species is found in southern basaltic claypan vernal pools at the Santa Rosa Plateau.	Habitat Not Present: Potential to Occur – None The species is not expected to occur within the Project Site based on a lack of suitable habitat, and the highly disturbed and previously developed conditions documented there. The species was not detected during 2022 and 2023 rare plant assessments. No habitat (e.g., vernal pools) for this species occurs within the Project Site. No <i>Orcuttia</i> species were observed onsite during surveys. Given the severely disturbed nature of the Project Site, no habitat occurs within it for this species.

MSHCP Consistency Analysis

Species Name (Scientific Name)	Habitat Description	Habitat Assessment Results
Wright's trichocoronis (<i>Trichocoronis wrightii</i> var. <i>wrightii</i>)	The historic known range of Wright's trichocoronis includes the Great Valley of central California, western Riverside County, and south Texas and adjacent northeast Mexico. This plant grows in meadows and seeps, marshes, riparian scrub, and vernal pools. Wright's trichocoronis blooms May to September.	Habitat Not Present: Potential to Occur – None The species is not expected to occur within the Project Site based on a lack of suitable habitat, and the highly disturbed and previously developed conditions documented there. The species was not detected during 2022 and 2023 rare plant assessments. No habitat (e.g., riparian, meadows, marsh, and vernal pools) for this species occurs within the Project Site. No <i>Trichocoronis</i> species were observed onsite during surveys. Given the severely disturbed nature of the Project Site, no habitat occurs within it for this species.

No further discussion is made in this document with deference to MSHCP Narrow Endemic Plant Species.

7 ADDITIONAL SURVEY NEEDS AND PROCEDURES (SECTION 6.3.2)

The Project Site is not mapped in a Criteria Survey Area for mammals or amphibians. It is however, mapped in a Criteria Survey Area for plants and Burrowing Owl. Surveys must be conducted within suitable habitat for these species according to accepted protocols. Under the MSHCP, Burrowing Owl is considered an adequately conserved covered species that requires focused surveys in certain areas as designated in Figure 6-4 of the MSHCP.

7.1 MSHCP Criteria Area Sensitive Plant Species

The Project lies within a predetermined survey area (Figure 5b) for the following MSHCP Criteria Area Plant Species as well:

- San Jacinto Valley crownscale (*Atriplex coronata* var. *natatior*);
- Parish's brittlebush (*Atriplex parishii*);
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*);
- Thread-leaved brodiaea (*Brodiaea filifolia*);
- Smooth tarplant (*Centromadia pungens* ssp. *Laevis*);
- Round-leaved filaree (*Erodium macrophyllum*);
- Coulter goldfields (*Lasthenia glabrata* ssp. *Couteri*);
- Little mousetail (*Myosurus minimus*); and
- Mud nama (*Nama stenocarpum*).

The MSHCP states that habitat suitability assessments may be undertaken year-round, with few exceptions. Based on the results of the pedestrian-based surveys conducted on February, March

MSHCP Consistency Analysis

and April 2022, and June of 2023 potential habitat is not present within the Project Site for the aforementioned MSHCP Criteria Area Sensitive Plant Species (Table 5). According to the MSHCP guidelines, focused surveys are not required for MSHCP Criteria Area Plant Species when suitable habitat is not present within the Project Site. Even though the Project is located within a predetermined MSHCP Criteria Area Plant Species Survey Area (MSHCP 2004).

Table 5. MSHCP Criteria Area Sensitive Plant Species Assessment

Species Name (<i>Scientific Name</i>)	Habitat Description	Habitat Assessment Results
San Jacinto Valley crownscale (<i>Atriplex coronata</i> var. <i>notatior</i>)	The San Jacinto Valley crownscale occurs primarily in floodplains that support alkali scrub, alkali playas, vernal pools, and occasionally alkali grasslands (Bramlet 1993).	<p>Habitat Not Present: Potential to Occur – None</p> <p>The species is not expected to occur within the Project Site based on a lack of suitable habitat, and the highly disturbed and previously developed conditions documented there.</p> <p>The species was not detected during 2022 and 2023 rare plant assessments. No habitat (e.g., alkaline scrub, playa, vernal pools, and alkaline grasslands) for this species occurs within the Project Site. Although historically this habitat may have occurred within the study area (alkaline-saline soils), it has long since been removed and regularly disked. No <i>Atriplex</i> species were observed within the Project Site during rare plant assessments. Given the severely disturbed nature of the Project Site, no habitat occurs for this species within it.</p>
Parish’s brittlebush (<i>Atriplex parishii</i>)	Parish’s brittlescale is a small prostrate to decumbent annual, white scaly, and is often much less than eight inches in length. It blooms May to October. This species occurs on alkali or saline flats, alkali meadows, and in or along the margins of vernal pools or playa depressions.	<p>Habitat Not Present: Potential to Occur – None</p> <p>The species is not expected to occur within the Project Site based on a lack of suitable habitat, and the highly disturbed and previously developed conditions documented there.</p> <p>The species was not detected during 2022 and 2023 rare plant assessments. No habitat (e.g., alkaline flats, playa, vernal pools, and alkaline meadows) for this species occurs within the Project Site. Although historically this habitat may have occurred within the study area (alkaline-saline soils) it has long since been removed and regularly disked. No <i>Atriplex</i> species were observed within the Project Site during rare plant assessments. Given the severely disturbed nature of the Project Site, no habitat occurs within it for this species.</p>

MSHCP Consistency Analysis

Species Name (Scientific Name)	Habitat Description	Habitat Assessment Results
Davidson's saltscare (<i>Atriplex serenana</i> var. <i> davidsonii</i>)	Davidson's saltscare is a decumbent to ascending annual that is sparsely scaly. It blooms April to October. It grows on coastal bluffs and alkaline alluvial terraces, and on alkali or saline flats in interior areas such as western Riverside County.	Habitat Not Present: Potential to Occur – None The species is not expected to occur within the Project Site based on a lack of suitable habitat, and the highly disturbed and previously developed conditions documented there. The species was not detected during 2022 and 2023 rare plant assessments. No habitat (e.g., alkaline-saline flats, or terraces) for this species occurs within the Project Site. Although historically this habitat may have occurred within the study area (alkaline-saline soils) it has long since been removed and regularly disked. No <i>Atriplex</i> species were observed within the Project Site during rare plant assessments. Given the severely disturbed nature of the Project Site, no habitat occurs within it for this species.
Thread-leaved brodiaea (<i>Brodiaea filifolia</i>)	Thread-leaved brodiaea is a geophyte, which produces leaves and flower stalks that sprout from corms (underground bulb-like storage stems), it blooms March to June, and typically occurs on gentle hillsides, valleys, and floodplains in semi-alkaline flats of riparian areas, vernal pools, mesic southern needlegrass grassland, mixed native-annual grassland, and alkali grassland plant communities in association with clay, clay loam, or alkaline silty-clay soils.	Habitat Not Present: Potential to Occur – None The species is not expected to occur within the Project Site based on a lack of suitable habitat, and the highly disturbed and previously developed conditions documented there. The species was not detected during 2022 and 2023 rare plant assessments. No <i>Brodiaea</i> species were observed within the Project Site. This species is perennial and would have been detected during survey efforts - if present. Furthermore, the constant disking that occurs within the Project Site would remove this species (perennial bulb) - if present.
Smooth Tarplant (<i>Centromadia pungens</i> ssp. <i> laevis</i>)	Smooth tarplant is an annual member of the sunflower family (Asteraceae) that occurs in vernal pools, alkali playas and scrub, alkali grasslands, riparian areas, along watercourses and disturbed sites. It blooms April to September.	Habitat Not Present: Potential to Occur – None The species was not detected within the Project Site. The species was not detected during 2022 and 2023 rare plant assessments. No <i>Centormadia</i> species were observed onsite during surveys. This species would have been detected during survey efforts - if present.

MSHCP Consistency Analysis

Species Name (Scientific Name)	Habitat Description	Habitat Assessment Results
Round-leaved filaree (<i>Erodium macrophyllum</i>)	Habitats include open areas in cismontane woodland and valley and foothill grasslands, which are often associated with heavy clay soils below 3,600 feet elevation.	Habitat Not Present: Potential to Occur – None The species is not expected to occur within the Project Site based on a lack of suitable habitat, and the highly disturbed and previously developed conditions documented there. The species was not detected during 2022 and 2023 rare plant assessments. Given the disturbed nature of the Project Site, no habitat occurs within it for this
Coulter’s goldfields (<i>Lasthenia glabrata ssp. coulteri</i>)	Coulter’s goldfields is associated with low-lying alkali and saline habitats along the coast and inland valleys. The majority of the populations are associated with coastal salt marsh. In Riverside County, Coulter’s goldfields primarily grow in highly alkaline, silty clays associated with the Traver-Domino-Willows soils, and usually in the wet areas in the alkali vernal plain community.	Habitat Not Present: Potential to Occur – None The species is not expected to occur within the Project Site based on a lack of suitable habitat, and the highly disturbed and previously developed conditions documented there. The species was not detected during 2022 and 2023 rare plant assessments. No habitat (e.g., alkaline-saline wetlands) for this species occurs within the Project Site. Although historically this habitat may have occurred within the study area (alkaline-saline soils) it has long since been removed and regularly disked. No <i>Lasthenia</i> species were observed within the Project Site. Given the severely disturbed nature of the Project Site, no habitat occurs within it for this species
Little mousetail (<i>Myosurus minimus ssp. apus</i>)	Little mousetail is widespread in California. It occurs in alkaline vernal pools, and vernal alkali plains and grasslands, and blooms March to June.	Habitat Not Present: Potential to Occur – None The species is not expected to occur within the Project Site based on a lack of suitable habitat and the highly disturbed and previously developed conditions documented there. The species was not detected during 2022 and 2023 rare plant assessments. No habitat (e.g., alkaline wetlands) for this species occurs within the Project Site. Although historically this habitat may have occurred within the study area (alkaline-saline soils) it has long since been removed and regularly disked. No <i>Myosurus</i> species were observed within the Project Site. Given the severely disturbed nature of the Project Site, no habitat occurs within it for this species.

MSHCP Consistency Analysis

Species Name (<i>Scientific Name</i>)	Habitat Description	Habitat Assessment Results
Mud nama (<i>Nama stenocarpum</i>)	Mud nama grows on muddy embankments of marshes and swamps, lake margins, riverbank, meadow, playa, and vernal pools. In western Riverside County, it is known only from the north shore of Mystic Lake (Roberts et al. 2004).	<p>Habitat Not Present: Potential to Occur – None</p> <p>The species is not expected to occur within the Project Site based on a lack of suitable habitat, and the highly disturbed and previously developed conditions documented there.</p> <p>The species was not detected during 2022 and 2023 rare plant assessments. No habitat (e.g., riparian, lake margins and streambanks) for this species occurs within the Project Site. No <i>Nama</i> species were observed during surveys. Given the severely disturbed nature of the Project Site, no habitat occurs within it for this species.</p>

No further discussion is made in this document with deference to MSHCP Criteria Area Plant Species.

7.2 Burrowing Owl

The Project Site is within a mapped survey area for Burrowing Owl, pursuant to MSHCP Figure 6-4, and a recent review of the RCA MSHCP Information GIS map (Figure 5a). The Burrowing Owl is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing Owls use a wide variety of arid and semi-arid environments with level to gently sloping areas characterized by open vegetation and bare ground. The western Burrowing Owl, which occurs throughout the western United States including California, rarely digs its own burrows and is instead dependent upon the presence of burrowing mammals (i.e., California ground squirrels [*Otospermophilus beecheyi*], coyotes [*Canis latrans*], and badgers [*Taxidea taxus*]) whose burrows are often used for roosting and nesting.

The presence - or absence, of colonial mammal burrows is often a major factor that limits the Burrowing Owls distribution. Where mammal burrows are scarce, Burrowing Owls have been found occupying manmade cavities, such as buried and non-functioning drainpipes, stand-pipes, and dry culverts. They also require low growth or open vegetation allowing line-of-sight observation of the surrounding habitat to forage and watch for predators. In California, the Burrowing Owl breeding season extends from the beginning of February through the end of August. Under the MSHCP, Burrowing Owl is considered an adequately conserved covered species, that still requires focused surveys in certain areas as designated in Figure 6-4 of the MSHCP. The survey for Burrowing Owl requires a systematic survey of areas that provide suitable habitat - plus an approximately 500-foot zone of influence on all sides of suitable habitat, to the greatest extent practical.

MSHCP Consistency Analysis

7.2.1 Methods

A Burrowing Owl habitat suitability assessment and burrow survey was conducted on February 17, 2022 in accordance with the March 29, 2006 Western Riverside County MSHCP Burrowing Owl survey instructions. Since suitable habitat was detected for Burrowing Owls within the study area, six (6) additional survey events were performed. Targeted owl surveys were conducted on 08 and 15 March, 01 and 21 April 2022, and 21 June and 06 July 2023. Surveys were performed from approximately 1 hour before sunrise to 2 hours after sunrise, and from approximately 2 hours before sunset to 1 hours after sunset (when weather conditions were conducive to observing owls outside of burrows).

Natural and non-natural substrates were examined for potential burrows. Potential burrows encountered were examined for shape, size, molted feathers, whitewash, cast pellets and/or prey remains. Disturbance characteristics and other animal sign encountered within the study area were recorded. A hand-held, global positioning system (GPS) with sub meter accuracy was used to survey transects that were prepared within a Geographic Information System (GIS) prior to the start of field surveys, to identify study area boundaries, and for other pertinent information. Representative photographs of the study area were taken, and recent aerial photographs were evaluated. Detailed survey methods are provided in Appendix E.

7.2.2 Existing Conditions and Results

Habitat in the vicinity of the Project consists of non-native grasses, developed, and disturbed land cover types. No Burrowing Owls were detected nesting, foraging, or dispersing during pedestrian-based field surveys. Numerous low quality potential burrows were observed within the study area. The burrows detected lacked any evidence of owl tracks, molted feathers, cast pellets, prey remains, egg shell fragments, owl white wash, nest burrow decoration materials, or other items.

Detailed field survey results are provided in Appendix E. Burrowing Owls are absent from the Project Site.

7.2.3 Impacts

No impacts can be identified, because no Burrowing Owl or Burrowing Owl sign were observed within the Project Site.

7.2.4 Mitigation

To safeguard there will be no impact to Burrowing Owl, a pre-construction survey is warranted. The suggested mitigation is as follows:

“Prior to issuance of a grading permit, the applicant shall perform a preconstruction survey that shall be conducted within 30 days prior to ground disturbance to avoid direct take of Burrowing Owls. If the results of the survey indicate that no Burrowing Owls are present within the ground disturbance footprint, then the project may move forward with grading - upon Planning Department approval. If Burrowing Owls are found to be present - or nesting

MSHCP Consistency Analysis

within the ground disturbance footprint during the preconstruction survey, then the following recommendations must be adhered to: Exclusion and relocation activities may not occur during the breeding season, which is defined as March 1 through August 31, with the following exception: From March 1 through March 15 and from August 1 through August 31 exclusion and relocation activities may take place if egg laying or chick rearing is not taking place. This determination must be made by a qualified biologist."

8 INFORMATION ON OTHER SPECIES

8.1 Delhi Sands Flower Loving Fly

The Project Site does not fall within MSHCP mapped Delhi soils.

8.2 Species Not Adequately Conserved

MSHCP Table 9-3 identifies 28 species where requirements must be met for those to be considered not adequately conserved. None of the species listed in the MSHCP Table 9-3 occur on or near the Project Site. Therefore, there is no further action required.

9 GUIDELINES PERTAINING TO THE URBAN/WILDLANDS INTERFACE (SECTION 6.1.4)

The MSHCP Urban/Wildlands Interface Guidelines (*Section 6.1.4*) are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. As the MSHCP Conservation Area is assembled, development is expected to occur adjacent to the Conservation Area. Future development in proximity to the MSHCP Conservation Area, and in this instance PQP Lands, may result in edge effects with the potential to adversely affect biological resources within the Conservation Area. To minimize such edge effects, the guidelines shall be implemented in proximity to the MSHCP Conservation Area and PQP Lands to address the following:

- Drainage;
- Toxics;
- Lighting;
- Noise;
- Invasives;
- Barriers; and
- Grading/Land Development.

9.1 Drainage

The MSHCP states that proposed developments in proximity to the MSHCP Conservation Area shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharged to the MSHCP Conservation Area is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into the MSHCP Conservation Area.

MSHCP Consistency Analysis

Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the MSHCP Conservation Area. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

The Project will not adversely affect areas downstream. Notably, any location within the Perris Valley Storm Drain bearing signs of an ordinary high-water mark have been specifically circumvented by the design of the Project's disturbance footprint. It's important to mention that while flows from the Perris Valley Storm Drain do eventually merge with Canyon Lake, all impacts to main channel are being deliberately avoided. But the Project Site does extend into the upper earthen western exterior boundaries of the aforesaid man-made storm drainage facility. This area is void of vegetation and is consistently maintained to allow access to the drainage structure so drainage flows are preserved and mimic pre-project conditions, after construction and in perpetuity.

9.2 Toxics

The MSHCP states that land uses proposed in proximity to the MSHCP Conservation Area that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife species, habitat or water quality shall incorporate measures to ensure that application of such chemicals does not result in discharge to the MSHCP Conservation Area.

The Project has been designed to treat surface and stormwater runoff prior to delivering water to the Perris Valley Storm Drain, and PQP Lands.

9.3 Lighting

The MSHCP requires that night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be incorporated in project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased. All night lighting associated with the Project shall be designed, including shielding and the use of low-intensity fixtures, such that the Project will result in zero illumination of the adjacent Conservation Area and PQP Land.

9.4 Noise

The MSHCP requires that proposed noise generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards.

MSHCP Consistency Analysis

Construction is expected to generate noise that may exceed residential noise standards. Construction would be limited to daytime hours and would not affect the use of adjacent conserved and PQP lands by nocturnal wildlife.

9.5 Invasives

When approving landscape plans for Development that is proposed adjacent to the MSHCP Conservation Area, Permittees shall consider the invasive, non-native plant species listed in MSHCP *Table 6-2* and shall require revisions to landscape plans (subject to the limitations of their jurisdiction) to avoid the use of invasive species for the portions of development that are adjacent to the MSHCP Conservation Area. Considerations in reviewing the applicability of this list shall include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography, and other features.

9.6 Barriers

The MSHCP states that proposed land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in the MSHCP Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage, and/or other appropriate mechanisms.

9.7 Grading/Land Development

The MSHCP requires that manufactured slopes associated with proposed site development shall not extend into the MSHCP Conservation Area. The proposed Project will not result in the placement of manufactured slopes in PQP Lands or a Conservation Area.

10 BEST MANAGEMENT PRACTICES (MSHCP VOLUME I, APPENDIX C)

This section of the report is designed to describe and comment on the necessity of implementation of the BMPs identified in MSHCP Volume 1, Appendix C. The BMPs and their applicability to the Project is identified in Table 6.

Table 6. MSHCP Best Management Practices Applicability (Volume 1, Appendix C)

BMP	Applicable Yes or No	Comment
No. 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	No	There are no special status species within - or near the Project Site. The data presented herein suggests that there is no potential for “Take” to federally listed threatened and endangered species as a result of Project implementation.

MSHCP Consistency Analysis

BMP	Applicable Yes or No	Comment
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 boundaries within which the Project activities must be accomplished.		
No. 2 – Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements.	Yes	The Project will include grading and paving.
No. 3 – The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via preexisting access routes to the greatest extent possible.	Yes	The Project Site is < 29.85-acres, and is accessible from Placentia Avenue.
No. 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.	Yes	The upstream and downstream limits of Projects disturbance plus lateral limits of disturbance on either side of the Perris Valley Storm Drain be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work.
No. 5 – Project 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.	Yes	The Project has been designed to avoid the placement of equipment and personnel within the Perris Valley Storm Drain or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.
No. 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.	No	The Project has been designed to avoid the placement of equipment and personnel within the Perris Valley Storm Drain or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.
No. 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.	Yes	When the Perris Valley Storm Drain flows, no work will occur.
No. 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 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,	Yes	All Equipment storage, fueling, and staging areas will be located on upland areas.

MSHCP Consistency Analysis


BMP	Applicable Yes or No	Comment
RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.		
No. 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.	Yes	Erodible fill material will not be deposited into the Perris Valley Storm Drain. Brush, loose soils, or other similar debris material shall not be stockpiled within Perris Valley Storm Drain or on its banks.
No. 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 Site	No (But available as needed)	The Project Site consists of ruderal land cover.
No. 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.	No	Project includes no temporary impacts, and the Project Site consists of ruderal land cover.
No. 12 – Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.	Yes	The Project Site removes ruderal land cover from Riverside County.
No. 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).	Yes	Standard Measure
No. 14 – Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed Project Site 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 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.	Yes	Standard Measure
No. 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.	Yes	Standard Measure

11 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

MSHCP Consistency Analysis

DATE: October 09, 2022

SIGNED: 

DRAFT

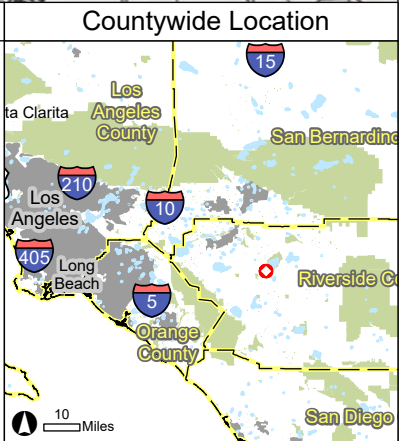
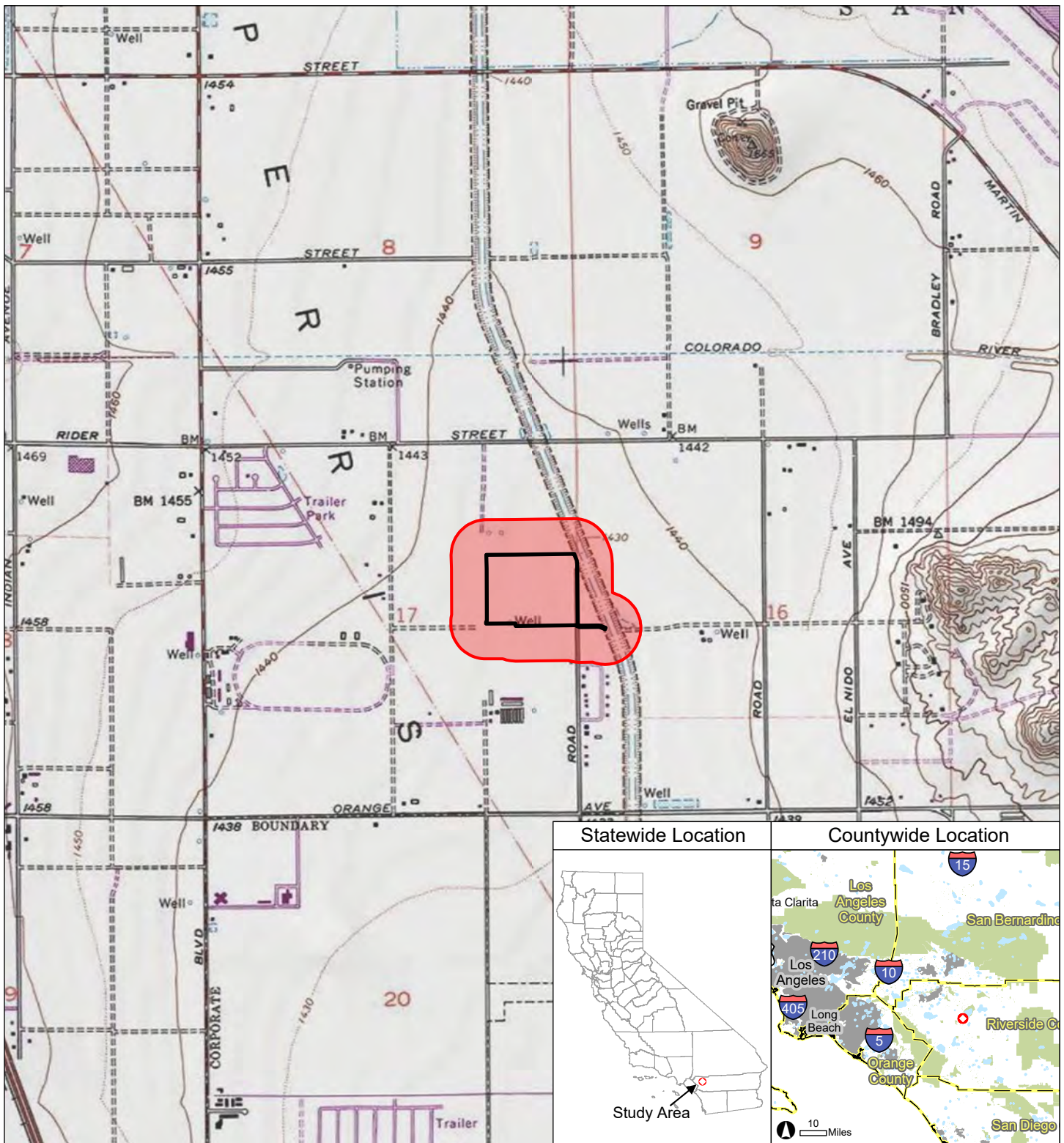
MSHCP Consistency Analysis

12 REFERENCES

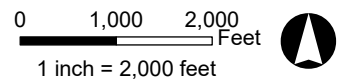
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- USFWS (United States Fish and Wildlife Service). 2023a. Critical Habitat Portal. USFWS
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FIGURES

DRAFT



- Study Area
- Project Site
- County Boundary (inset)
- Urban Area (inset)
- Interstate or State Highway (inset)
- Water Body (inset)
- Park or National Forest (inset)



Data Sources:
 - Bureau of Land Management Cadastral GIS 2015
 - USGS 7.5-minute quadrangle map
 - ESRI US Topo Maps accessed Aug 2023
 Map Prepared: 8-17-23

Prepared by:

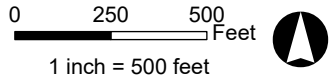
 Environmental Engineering and Science

The Study Area is located in San Bernardino County on the Perris USGS 7.5-minute quadrangle map; San Bernardino Meridian, Township 4 South, Range 3 West, in Section 17: Center coordinate (WGS 1984): Latitude 33.824, Longitude -117.211

Figure 1. Regional Location



- Project Site (29.85 ac)
- Study Area (108.59 ac)

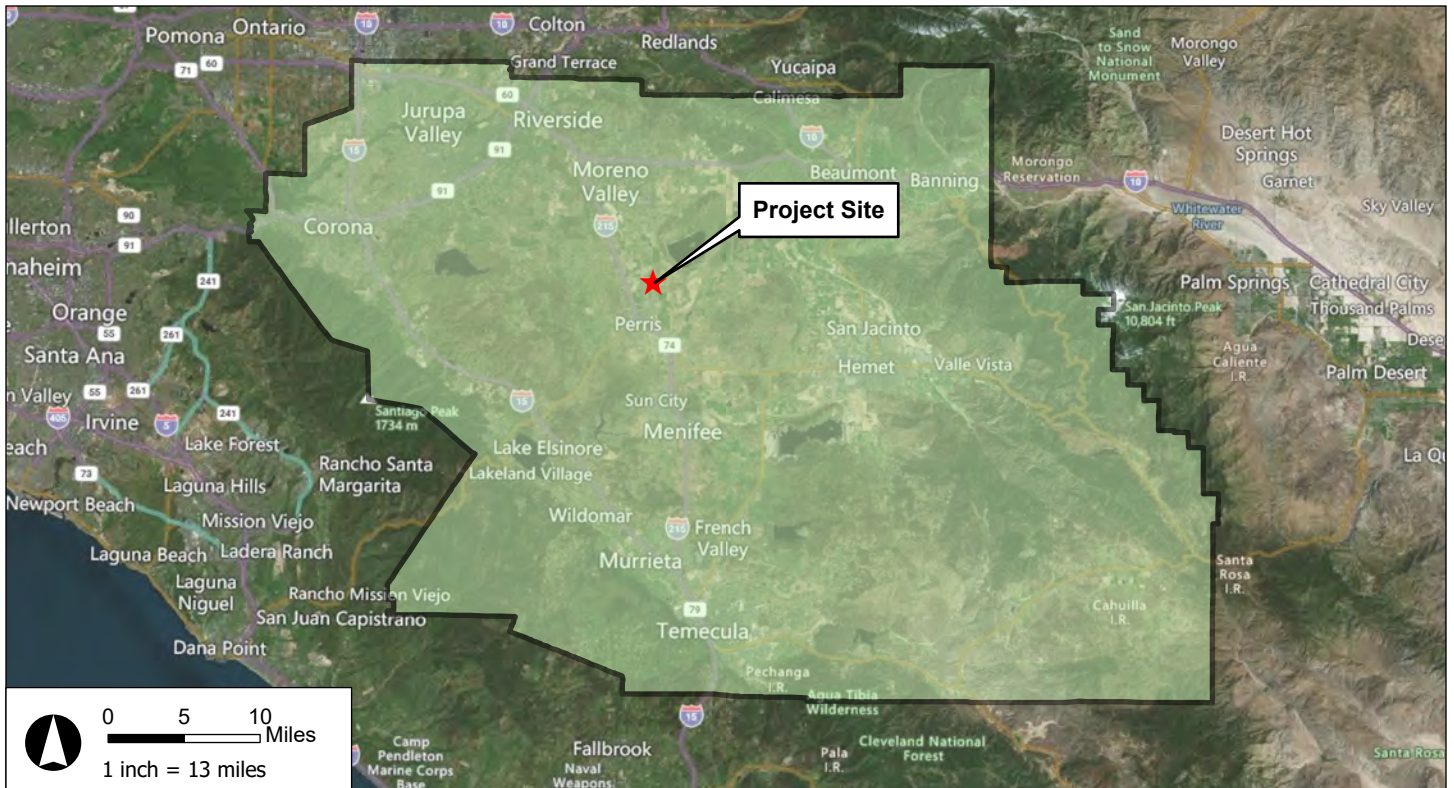


Data Sources:
 - ESRI World Imagery accessed Aug 2023,
 imagery date: 2/26/2022

Map Prepared: 8-17-23

Prepared by:
NOREAS
 Environmental Engineering and Science

Figure 2. Site Vicinity



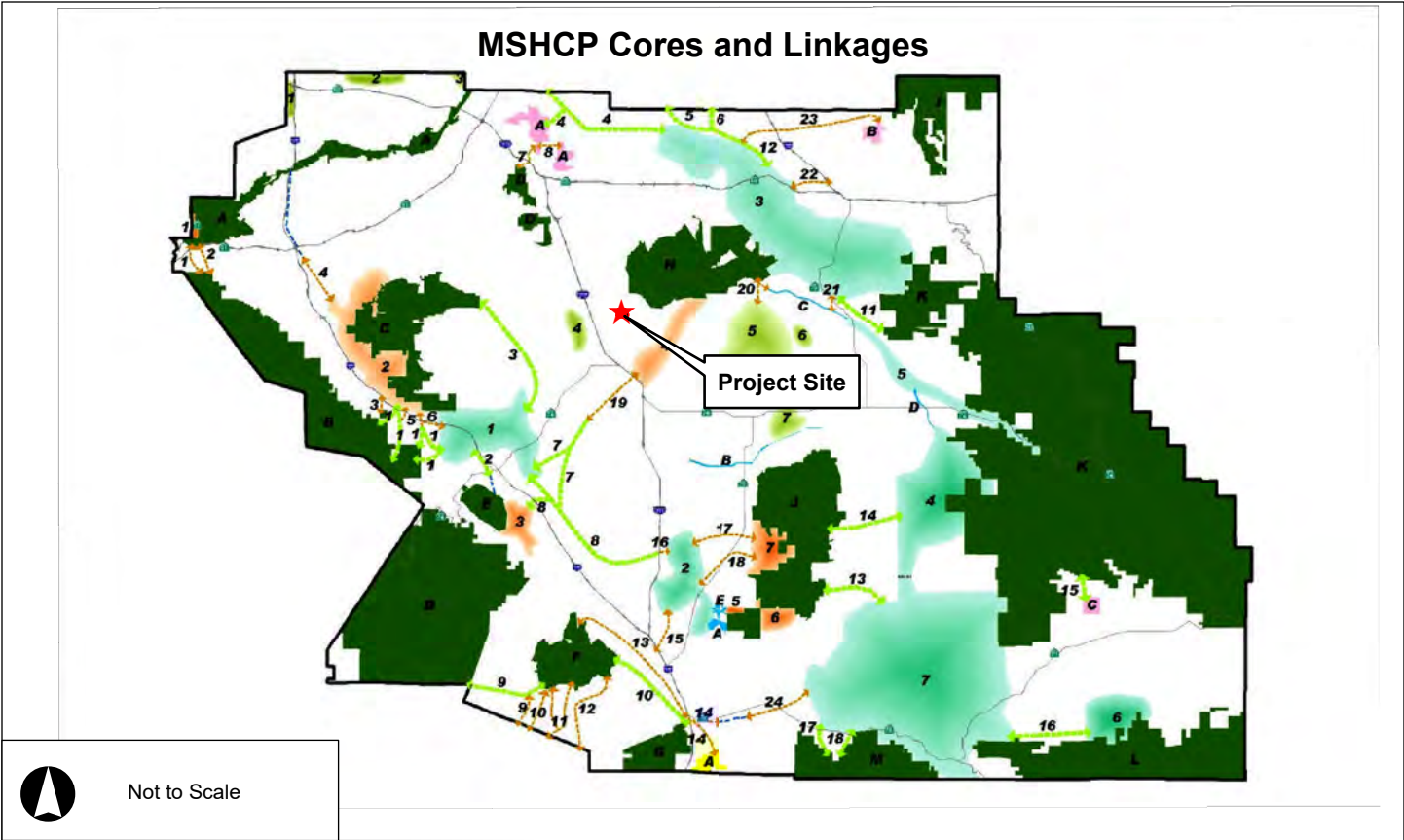
- Project Site
- MSHCP Plan Area
- Study Area
- MSHCP Criteria Cells

Data Sources:
 - Bing Maps Hybrid accessed Aug 2023
 - Western Riverside MSHCP accessed Aug 2023, data date: 2020

Map Prepared: 8-17-23

Prepared by:
NOREAS
 Environmental Engineering and Science



Figure 3. MSHCP Criteria Cells




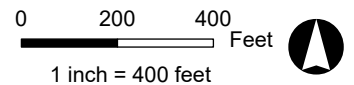
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Figure 4. Cores, Linkages, and Conserved Lands



 Project Site
 Study Area

Species Survey Areas
 Burrowing Owls

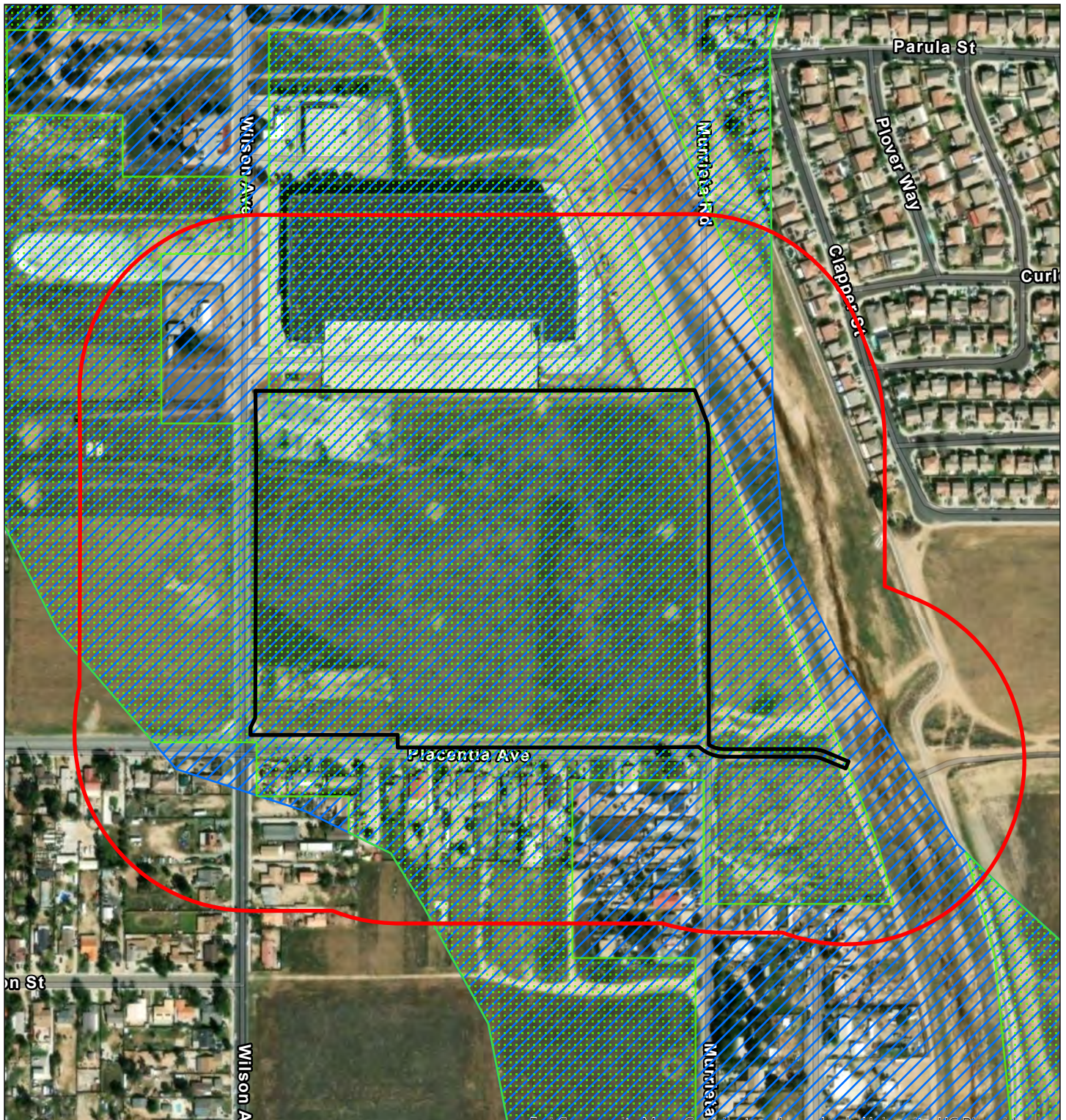



Data Sources:
 - ESRI World Imagery accessed Aug 2023, imagery date: 2/26/2022
 - Western Riverside Co Regional Conservation Authority accessed Aug 2023
 Map Prepared: 8-17-23

Prepared by:

 Environmental Engineering and Science


Figure 5a. MSHCP Species Survey Areas




 Project Site
 Study Area

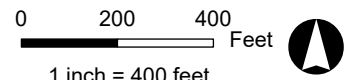
Species Survey Areas

Narrow Endemic Plants

 San Diego ambrosia, spreading navarretia, California Orcutt grass, Wright's trichocoronis

Criteria Area Species

 San Jacinto Valley crownscale, Parish's brittlescale, Davidson's saltscale, Thread-leaved brodiaea, Round-leaved filaree, Smooth tarplant, Coulter's goldfields, Little mousetail, Mud nama



Data Sources:
 - ESRI World Imagery accessed Aug 2023, imagery date: 2/26/2022
 - Western Riverside Co Regional Conservation Authority accessed Aug 2023
 Map Prepared: 8-17-23

Prepared by:

 Environmental Engineering and Science

Figure 5b. MSHCP Species Survey Areas



Project Site

Study Area

RCA MSHCP Vegetation 2012

Cropland, Orchard - Vineyard

Urban

0 200 400 Feet

1 inch = 400 feet

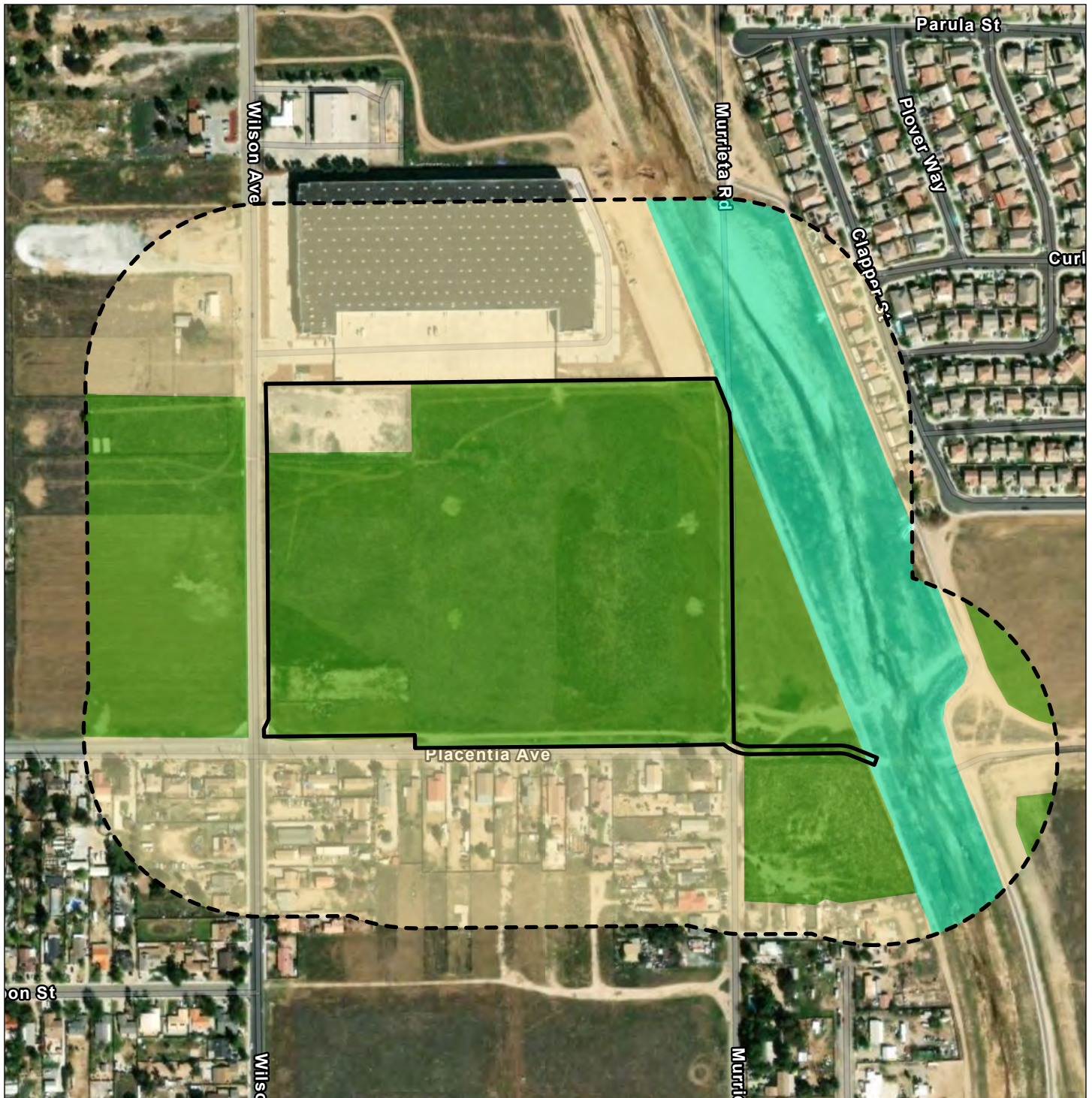



Data Sources:
 - ESRI World Imagery accessed Aug 2023, imagery date: 2/26/2022
 - Western Riverside Co Regional Conservation Authority accessed Aug 2023
 Map Prepared: 8-17-23


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NOREAS
 Environmental Engineering and Science


Figure 6. RCA MSHCP Vegetation 2012



 Project Site (29.85 ac)

 Study Area (108.59 ac)

Vegetation Communities

 Developed/Disturbed (46.96 ac)

 River Wash (15.30 ac)

 Ruderal (46.36 ac)

0 200 400 Feet

1 inch = 400 feet



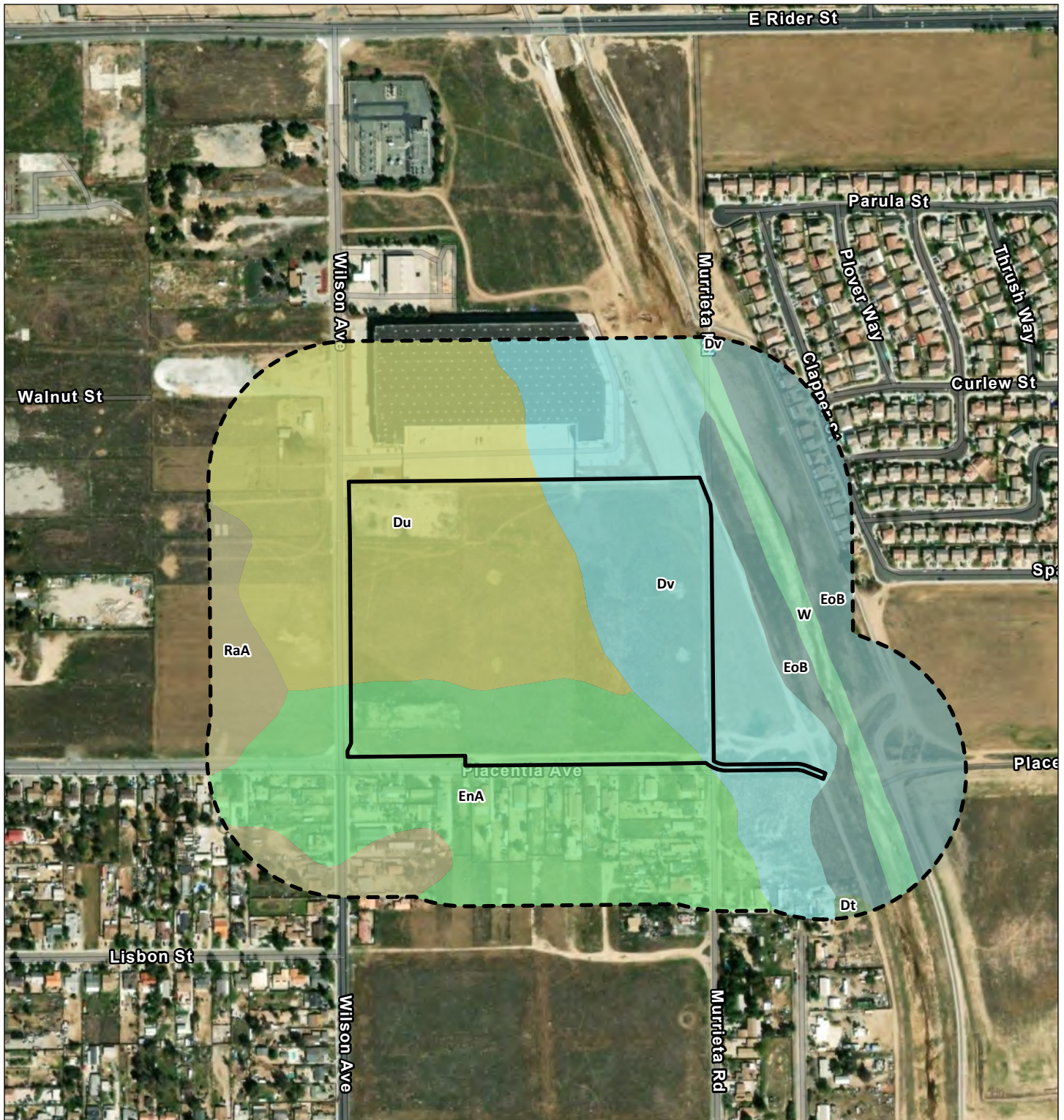
Data Sources:
- ESRI World Imagery accessed Aug 2023,
imagery date: 2/26/2022

Map Prepared: 8-17-23

Prepared by:



Figure 7. Vegetation Communities and Land Cover Types



Project Site

Study Area

Soil Types

Dt - Domino fine sandy loam, saline-alkali

Du - Domino silt loam

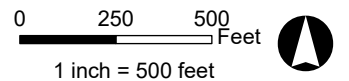
Dv - Domino silt loam, saline-alkali

EnA - Exeter sandy loam, 0 to 2 percent slopes

EoB - Exeter sandy loam, slightly saline-alkali, 0 to 5 percent slopes

RaA - Ramona sandy loam, 0 to 2 percent slopes, MLRA 19

W - Water



Data Sources:
 - ESRI World Imagery accessed 8/17/2023, imagery date: 2/26/2022
 - NRCS Web Soil Survey accessed 8/17/2023
 Map Prepared: 8-17-23

Prepared by:
 NOREAS
 Environmental Engineering and Science

Figure 8. Soils Map

Special-Status Species Occurrences

Map Code	Common Name (Scientific Name)
Plants	
P1	California Orcutt grass <i>Orcuttia californica</i>
P2	California screw moss <i>Tortula californica</i>
P3	chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>
P4	Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>
P5	Davidson's saltscale <i>Atriplex serenana</i> var. <i>dauidsonii</i>
P6	little mousetail <i>Myosurus minimus</i> ssp. <i>apus</i>
P7	long-spined spineflower <i>Chorizanthe polygonoides</i> var. <i>longispina</i>
P8	mud nama <i>Nama stenocarpa</i>
P9	Munz's onion <i>Allium munzii</i>
P10	Palmer's grapplinghook <i>Harpagonella palmeri</i>
P11	Parish's brittlescale <i>Atriplex parishii</i>
P12	Parry's spineflower <i>Chorizanthe parryi</i> var. <i>parryi</i>
P13	Payson's jewelflower <i>Caulanthus simulans</i>
P14	Plummer's mariposa-lily <i>Calochortus plummerae</i>
P15	Robinson's pepper-grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>
P16	San Diego ambrosia <i>Ambrosia pumila</i>
P17	San Jacinto Valley crownscale <i>Atriplex coronata</i> var. <i>notator</i>
P18	smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>
P19	Southern Coast Live Oak Riparian Forest <i>Southern Coast Live Oak Riparian Forest</i>
P20	Southern Cottonwood Willow Riparian Forest <i>Southern Cottonwood Willow Riparian Forest</i>
P21	Southern Riparian Scrub <i>Southern Riparian Scrub</i>
P22	Southern Sycamore Alder Riparian Woodland <i>Southern Sycamore Alder Riparian Woodland</i>
P23	spreading navarretia <i>Navarretia fossalis</i>
P24	thread-leaved brodiaea <i>Brodiaea filifolia</i>
P25	woven-spored lichen <i>Texosporium sancti-jacobi</i>
P26	Wright's trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>
Invertebrates	
I1	Crotch bumble bee <i>Bombus crotchii</i>
I2	Ioengle's socialchemmis spider <i>Socalchemmis ioenglei</i>
I3	quino checkerspot butterfly <i>Euphydryas editha quino</i>
I4	Riverside fairy shrimp <i>Streptocephalus woottoni</i>
I5	white cuckoo bee <i>Neolarra alba</i>
Mammals	
M1	American badger <i>Taxidea taxus</i>
M10	Stephens' kangaroo rat <i>Dipodomys stephensi</i>
M11	western mastiff bat <i>Eumops perotis californicus</i>
M12	western yellow bat <i>Lasiurus xanthinus</i>
M2	Dulzura pocket mouse <i>Chaetodipus californicus femoralis</i>
M3	Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>
M4	northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>
M5	pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>
M6	San Bernardino kangaroo rat <i>Dipodomys merriami parvus</i>
M7	San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>
M8	San Diego desert woodrat <i>Neotoma lepida intermedia</i>
M9	southern grasshopper mouse <i>Onychomys torridus ramona</i>
Birds	
B1	bald eagle <i>Haliaeetus leucocephalus</i>
B2	Bell's sage sparrow <i>Artemisospiza belli belli</i>
B3	burrowing owl <i>Athene cucularia</i>
B4	California horned lark <i>Eremophila alpestris actia</i>
B5	coastal California gnatcatcher <i>Poliotilia californica californica</i>
B6	Cooper's hawk <i>Accipiter cooperii</i>
B7	ferruginous hawk <i>Buteo regalis</i>
B8	golden eagle <i>Aquila chrysaetos</i>
B9	Lawrence's goldfinch <i>Spinus lawrencei</i>
B10	least Bell's vireo <i>Vireo bellii pusillus</i>
B11	loggerhead shrike <i>Lanius ludovicianus</i>
B12	long-eared owl <i>Asio otus</i>
B13	southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>
B14	tricolored blackbird <i>Agelaius tricolor</i>
B15	western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>
B16	white-faced ibis <i>Plegadis chihi</i>
B17	white-tailed kite <i>Elanus leucurus</i>
B18	yellow-breasted chat <i>Icteria virens</i>
B19	yellow warbler <i>Setophaga petechia</i>
Reptiles	
R1	California glossy snake <i>Arizona elegans occidentalis</i>
R2	coast horned lizard <i>Phrynosoma blainvillii</i>
R3	coastal whiptail <i>Aspidoscelis tigris stejnegeri</i>
R4	orange-throated whiptail <i>Aspidoscelis hyparythra</i>
R5	red-diamond rattlesnake <i>Crotalus ruber</i>
R6	San Bernardino ringneck snake <i>Diadophis punctatus modestus</i>
R7	Southern California legless lizard <i>Anniella stebbinsi</i>
R8	western pond turtle <i>Emys marmorata</i>
Amphibians	
A1	western spadefoot <i>Spea hammondi</i>

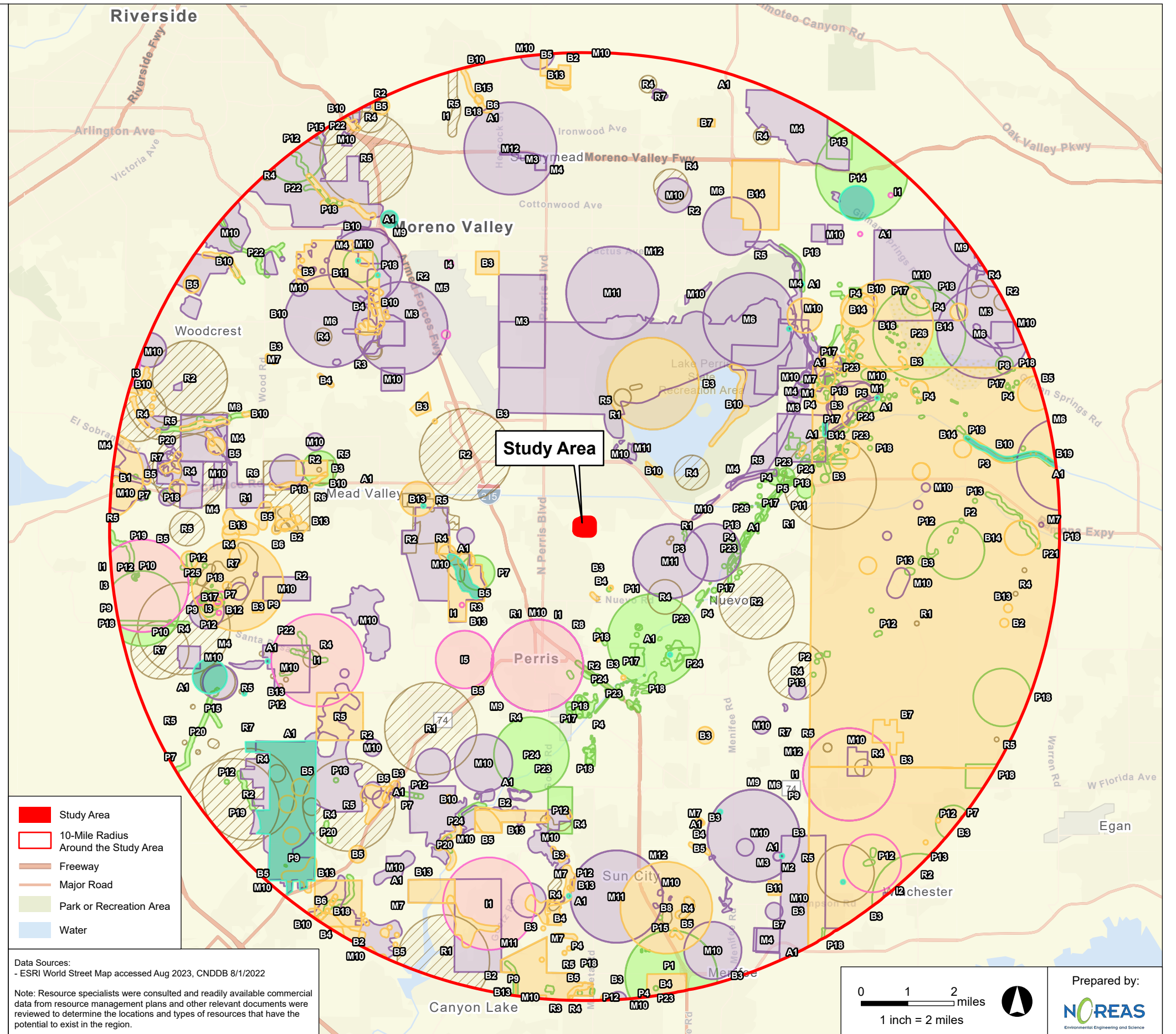
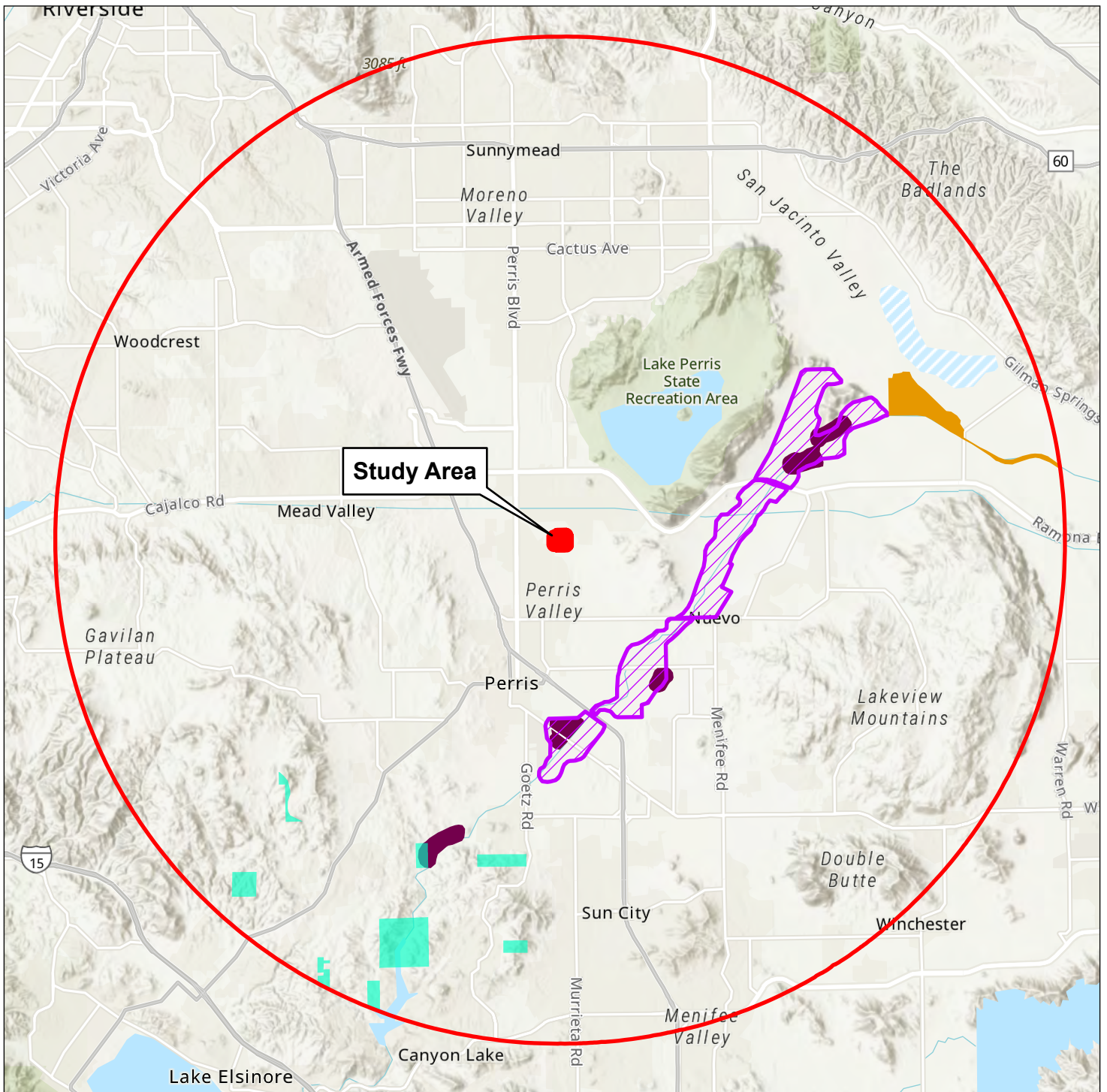
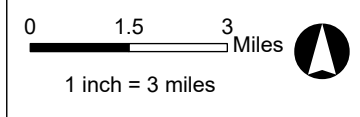


Figure 9. Literature Review



- Study Area
 - 10-Mile Radius Around the Study Area
- Critical Habitat**
- Coastal California gnatcatcher (*Catostomus santaanae*)
 - San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*)
 - Spreading navarretia (*Navarretia fossalis*)
 - Thread-leaved brodiaea (*Brodiaea filifolia*)



Data Sources:
 - ESRI World Topographic Map accessed Aug 2023
 - US Fish and Wildlife Service Critical Habitat accessed Aug 2023



Map Prepared: 8-17-23

Prepared by:

 Environmental Engineering and Science

Figure 10. Critical Habitat



 Project Site
 Study Area

USA Wetlands
 River

0 200 400
 Feet
 1 inch = 400 feet



Data Sources:
 - ESRI World Imagery accessed Aug 2023,
 imagery date: 2/26/2022
 - US Fish and Wildlife Service National
 Wetland Inventory accessed Aug 2023
 Map Prepared: 8-17-23

Prepared by:

 Environmental Engineering and Science

Figure 11. National Wetland Inventory

APPENDICES

DRAFT

Appendix A Site Plan

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PVCCSP Development Standards for LI	Required	Provided
Minimum Lot Size	15,000 SF	1,187,139 SF
Lot Coverage by Structure	50 % Max	48.29%
Floor Area Ratio (FAR)	0.75 Max	48.71%
Structure Height	50' Max	
Front Setback - Local/Collector (10' + 5' per 10' of struct. Over 20')	20'	166'-0"
Side Setback (10' + 5' per 10' of struct. Over 20')	20'	150'-0"
Rear Setback	30'	84'-5"
Perimeter Landscape (PMC 19.02 and 19.44.000)	5'	6' Min.
Entries, Parking, Loading	Required	NW & SW corner
Site Landscape Coverage	12%	14.32%

SITE LEGEND:

- ON-SITE LANDSCAPED AREA
- OFF-SITE LANDSCAPED AREA
- DECORATIVE AUTO / TRUCK DRIVEWAYS
- SITE PROPERTY LINES
- CITY CURB AND GUTTER LINES
- STREET CENTERLINES
- ON-SITE CURB LINES
- ON-SITE PARKING AND TRAILER STRIPPING

PROJECT DATA

SITE AREA:
GROSS SITE AREA: 000 SF / 0.00 AC
CHANNEL DEDICATION: 28,428 SF / 0.65 AC
STREET DEDICATION: 000 SF / 0.00 AC
NET SITE AREA: 1,187,139 SF / 27.25 AC

BUILDING AREA:
FOOTPRINT: 573,265 SF
FIRE PUMP HOUSE: 0 SF
MEZZANINE: 5,000 SF
GUARD HOUSE: 0 SF
TOTAL: 578,265 SF

TOTAL INCLUDED PLANNED OFFICE AREA: 10,000 SF

LOT COVERAGE: (50% MAX): 48.29 %
FAR COVERAGE: 48.71 %

AUTO PARKING REQUIRED: (HIGH CUBE PARKING STANDARDS)
10,000 OFFICE PARKING (LESS THAN 10%)
WAREHOUSE:
0-20,000 SF (1/1000 SF): 20 STALLS
20K + 40K (1/2000 SF): 10 STALLS
ABOVE 40K (1/5000 SF): 108 STALLS
TOTAL: 138 STALLS

AUTO PARKING PROVIDED:
ACCESSIBLE STALLS: 6 STALLS
STANDARD STALLS: 143 STALLS
FUTURE STALLS: 0 STALLS
TOTAL PROVIDED: 201 STALLS

REQUIRED BICYCLE PARKING (5% OF REQUIRED AUTO PARKING): 7 BIKE LOCATIONS

TRUCK DOCK POSITIONS: 104 DOCKS

GRADE DOORS PROVIDED: 3 DOOR

LANDSCAPE AREA PROVIDED ON DEVELOPED SITE: 170,049 SF / 14.32 %

ASSESSOR'S PARCEL NUMBERS
300-170-003, 004, 005, 006, 011, 012, 013, 014, 015, 016, 017

APPLICATION TYPE
DEVELOPMENT PLAN REVIEW 00-00-0000
ZONING: LIGHT INDUSTRIAL - PVCC SP - PERRIS VALLEY COMMERCE CENTER
PERMITTED LAND USE: WAREHOUSE, OFFICE AS PERMITTED

PROJECT DESCRIPTION
NEW INDUSTRIAL WAREHOUSE BUILDING WITH AUTO AND TRAILER PARKING AREAS, PROVIDING FUTURE GUARD SHACK LOCATION ON BOTH TRUCK COURT ENTRIES.

LAND OWNER
LAKE CREEK INDUSTRIAL LLC
13681 NEWPORT AVENUE, SUITE 8301
TUSTIN, CA 92780

APPLICANT
LAKE CREEK INDUSTRIAL LLC
13681 NEWPORT AVENUE, SUITE 8301
TUSTIN, CA 92780
786-200-9681 CONTACT: MICHAEL JOHNSON

PLAN PREPARER
RGA, OFFICE OF ARCHITECTURAL DESIGN, INC.
15231 ALTON PARKWAY, SUITE 100
IRVINE, CA 92618
CONTACT: MIKE GILL

UTILITIES & SERVICES
SEE CIVIL DRAWINGS

LEGAL DESCRIPTION
THE LAND REFERRED TO HEREIN IS SITUATED IN THE CITY OF PERRIS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:
AS SHOWN BY PARCEL MAP NO. 31743, IN THE CITY OF PERRIS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 210 PAGE 43 and 44 OF PARCEL MAPS, RECORDS OF RIVERSIDE COUNTY

KEYNOTES (000)

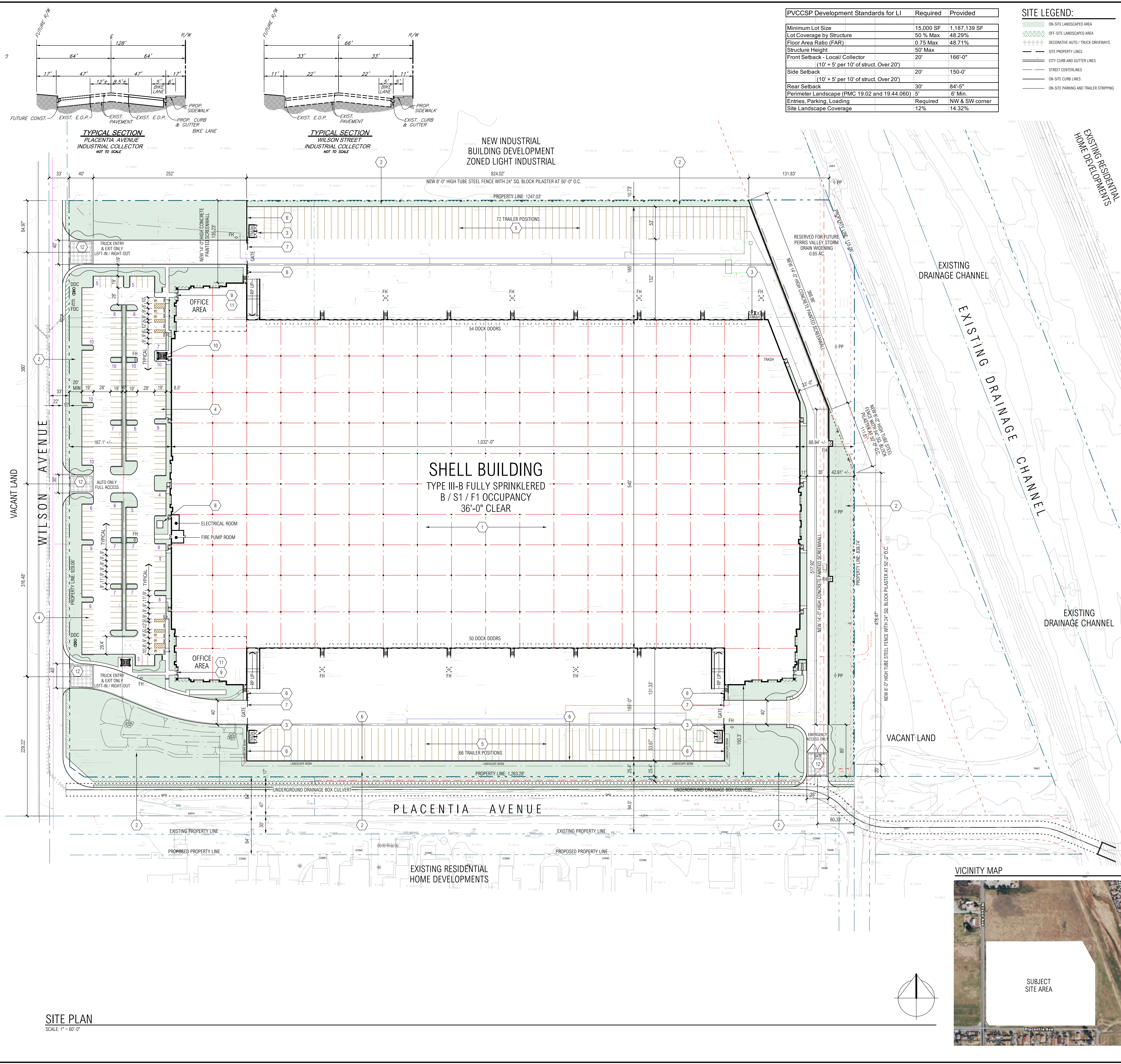
- PAINTED CONCRETE TILT-UP WAREHOUSE / OFFICE / MANUFACTURING FACILITY.
- SHADED AREA: PROPOSED IRRIGATED LANDSCAPING PER CC&R GUIDELINES WITH MIN 6" CONCRETE CURBS AT ALL PERIMETERS.
- PAINTED CONCRETE TRASH ENCLOSURE. SCREEN WALLS SHALL BE MIN. 6'-0" HIGH WITH CANOPY TOP. SEE SHEET A2-1P FOR ELEVATIONS AND SECTIONS
- TYPICAL STANDARD PARKING STALL MIN. 9' X 19' - STRIPE PER CITY STANDARDS.
- TRUCK TRAILER PARKING
- NEW 14'-0" CONCRETE TILT-UP SCREEN WALLS AT TRUCK YARD. SEE PLAN FOR MINIMUM HEIGHTS AS MEASURED FROM INSIDE THE TRUCK YARD. PROVIDE ANTIGRAFFITI COATING ON EXTERIOR SIDE ONLY.
- ROLLING / SWINGING 8'-0" HIGH WROUGHT IRON FENCE INTO THE TRUCK COURT.
- TRANSFORMER PAD LOCATION.
- ACCESSIBLE PRIMARY ENTRANCE TO THE BUILDING WITH BIKE RACKS.
- CONCRETE COVERED LUNCH PATIO WITH LANDSCAPE FURNITURE. SEE SHEET A3-1P
- CALGREEN REQUIRED BIKE RACKS. SEE TABULATIONS FOR NUMBER OF BIKE RACKS
- DECORATIVE PAVING AT ENTRY DRIVEWAY.
- EXTERIOR BOCCO COURT. SEE LANDSCAPE PLANS

GENERAL NOTES

- THE PROPOSED PROJECT SHALL COMPLY WITH THE PROVISIONS OF THE COUNTY RIVERSIDE, CITY OF PERRIS PLANNING PLAN
- A LANDSCAPING PLAN SHALL BE SUBMITTED TO THE PLANNING DEPARTMENT FOR APPROVAL PRIOR TO ISSUANCE OF BUILDING PERMITS AND SHALL BE IMPLEMENTED PRIOR TO OCCUPANCY.
- THE PROJECT DOES NOT PROPOSE ANY TENANT SIGNAGE AT THIS TIME.
- THERE ARE NO PROTECTED PLANTS ON SITE.
- ALL ROOF DRAINS AT STREET FRONTAGES SHALL BE IN THE INTERIOR OF THE BUILDING ENVELOPE.
- ALL LANDSCAPE SHALL BE BOUND BY A 6" HIGH CONCRETE CURB.
- A LIGHT PLAN SHALL BE SUBMITTED SHOWING CONFORMANCE WITH MINIMUM FOOTCANDLE LEVELS AND MARCH AIR BASE STANDARDS. FIXTURES SHALL BE SHIELDED HIGH PRESSURE SODIUM.
- A SIGN PROGRAM SHALL BE DEVELOPED IN ACCORDANCE WITH MUNICIPAL CODE 19.75.190 FOR APPROVAL BY THE PLANNING DIVISION. THE SIGN PROGRAM SHALL BE INCLUDED AS PART OF THE CC&R'S.
- FUTURE TENANT OFFICE BUILD-OUTS TO INCLUDE INDOOR EMPLOYEE AMENITY AREAS PER CITY GUIDELINES.
- PROJECT WILL BE DESIGNED WITH LEED IN MIND, BUT WILL NOT REQUIRED CERTIFICATION.

SUBSTAINABILITY FEATURES

- PROVIDE LIGHT COLORED ROOFING OVER THE OFFICE AREAS.
- BUILDING WILL BE DESIGN TO ACHIEVE LEED POTENTIAL CERTIFICATION.
- PROVIDE UP TO (2) ELECTRIC VEHICLE CHARGING FACILITIES
- PROVIDE "TURN-OFF ENGINE" SIGNS WITHIN THE TRUCK COURT.
- FORKLIFTS WITHIN THE BUILDING SHALL BE ELECTRIC OR COMPRESSED NATURAL GAS-POWERED.



SITE PLAN
SCALE: 1" = 60'-0"

CONSULTANT

PROFESSIONAL SEALS

PLACENTIA AVENUE DEVELOPMENT

0000 PLACENTIA AVENUE
CITY OF PERRIS, CA

LAKE CREEK INDUSTRIAL LLC
13681 NEWPORT AVENUE, SUITE 8301
TUSTIN, CA 92780
PHONE: 786-200-9681
OWNER: MICHAEL JOHNSON
EMAIL: mj@lakecreekindustrial.com

MARK	DATE	DESCRIPTION
CD		
BID		
PC		
DD		
SD	09/20/2023	SCHEMATIC DESIGN
MARK		

RG	PROJECT NO:	21011.00
OW	OWNER PROJECT NO:	00000.00
CA	CAD FILE NAME:	21011-00-A1-1P
DR	DRAWN BY:	MG
CHK	CHKD BY:	CS
CP	COPYRIGHT:	RG, OFFICE OF ARCHITECTURAL DESIGN
SH	SHEET TITLE:	SITE PLAN

SITE LEGEND:

- ON-SITE LANDSCAPED AREA
- OFF-SITE LANDSCAPED AREA
- DECORATIVE AUTO / TRUCK DRIVEWAYS
- SITE PROPERTY LINES
- CITY CURB AND GUTTER LINES
- STREET CENTERLINES
- ON-SITE CURB LINES
- ON-SITE PARKING AND TRAILER STRIPPING

PROJECT DATA

SITE AREA:
 GROSS SITE AREA: 000 SF / 000 AC
 CHANNEL DEDICATION: 28,428 SF / 0.65 AC
 STREET DEDICATION: 000 SF / 000 AC
 NET SITE AREA: 1,187,139 SF / 27.25 AC

BUILDING AREA:
 FOOTPRINT: 573,265 SF
 FIRE PUMP HOUSE: 0 SF
 MEZZANINE: 5,000 SF
 GUARD HOUSE: 0 SF
 TOTAL: 578,265 SF

TOTAL INCLUDED PLANNED OFFICE AREA: 10,000 SF

LOT COVERAGE: (50% MAX) 48.29 %
 FAR COVERAGE: 48.71 %

AUTO PARKING REQUIRED: (HIGH CUBE PARKING STANDARDS)
 10,000 OFFICE PARKING (LESS THAN 10%) 0 STALLS
 WAREHOUSE
 0-20,000 SF (1/1000 SF) 20 STALLS
 20K + 40K (1/2000 SF) 10 STALLS
 ABOVE 40K (1/5000 SF) 108 STALLS
 TOTAL 138 STALLS

AUTO PARKING PROVIDED
 ACCESSIBLE STALLS 6 STALLS
 STANDARD STALLS 143 STALLS
 FUTURE STALLS 0 STALLS
 TOTAL PROVIDED 201 STALLS

REQUIRED BICYCLE PARKING (5% OF REQUIRED AUTO PARKING) 7 BIKE LOCATIONS

TRUCK DOCK POSITIONS 104 DOCKS

GRADE DOORS PROVIDED 3 DOOR

LANDSCAPE AREA PROVIDED ON DEVELOPED SITE 170,049 SF / 14.32 %

ASSESSOR'S PARCEL NUMBERS
 300-170-003, 004, 005, 006, 011, 012, 013, 014, 015, 016, 017

APPLICATION TYPE
 DEVELOPMENT PLAN REVIEW 00-00-0000
 ZONING: LIGHT INDUSTRIAL - PUCO; SP - PERRIS VALLEY COMMERCE CENTER
 PERMITTED LAND USE: WAREHOUSE, OFFICE AS PERMITTED

PROJECT DESCRIPTION
 NEW INDUSTRIAL WAREHOUSE BUILDING WITH AUTO AND TRAILER PARKING AREAS, PROVIDING FUTURE GUARD SHACK LOCATION ON BOTH TRUCK COURT ENTRIES.

LAND OWNER
 LAKE CREEK INDUSTRIAL LLC
 13681 NEWPORT AVENUE, SUITE 8301
 TUSTIN, CA 92780

APPLICANT
 LAKE CREEK INDUSTRIAL LLC
 13681 NEWPORT AVENUE, SUITE 8301
 TUSTIN, CA 92780
 786-200-9681 CONTACT: MICHAEL JOHNSON

PLAN PREPARER
 RGA, OFFICE OF ARCHITECTURAL DESIGN, INC.
 15231 ALTON PARKWAY, SUITE 100
 IRVINE, CA 92618
 CONTACT: MIKE GILL

UTILITIES & SERVICES
 SEE CIVIL DRAWINGS

LEGAL DESCRIPTION
 THE LAND REFERRED TO HEREIN IS SITUATED IN THE CITY OF PERRIS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:
 AS SHOWN BY PARCEL MAP NO. 31743, IN THE CITY OF PERRIS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 210 PAGE 43 AND 44 OF PARCEL MAPS, RECORDS OF RIVERSIDE COUNTY

CONSULTANT

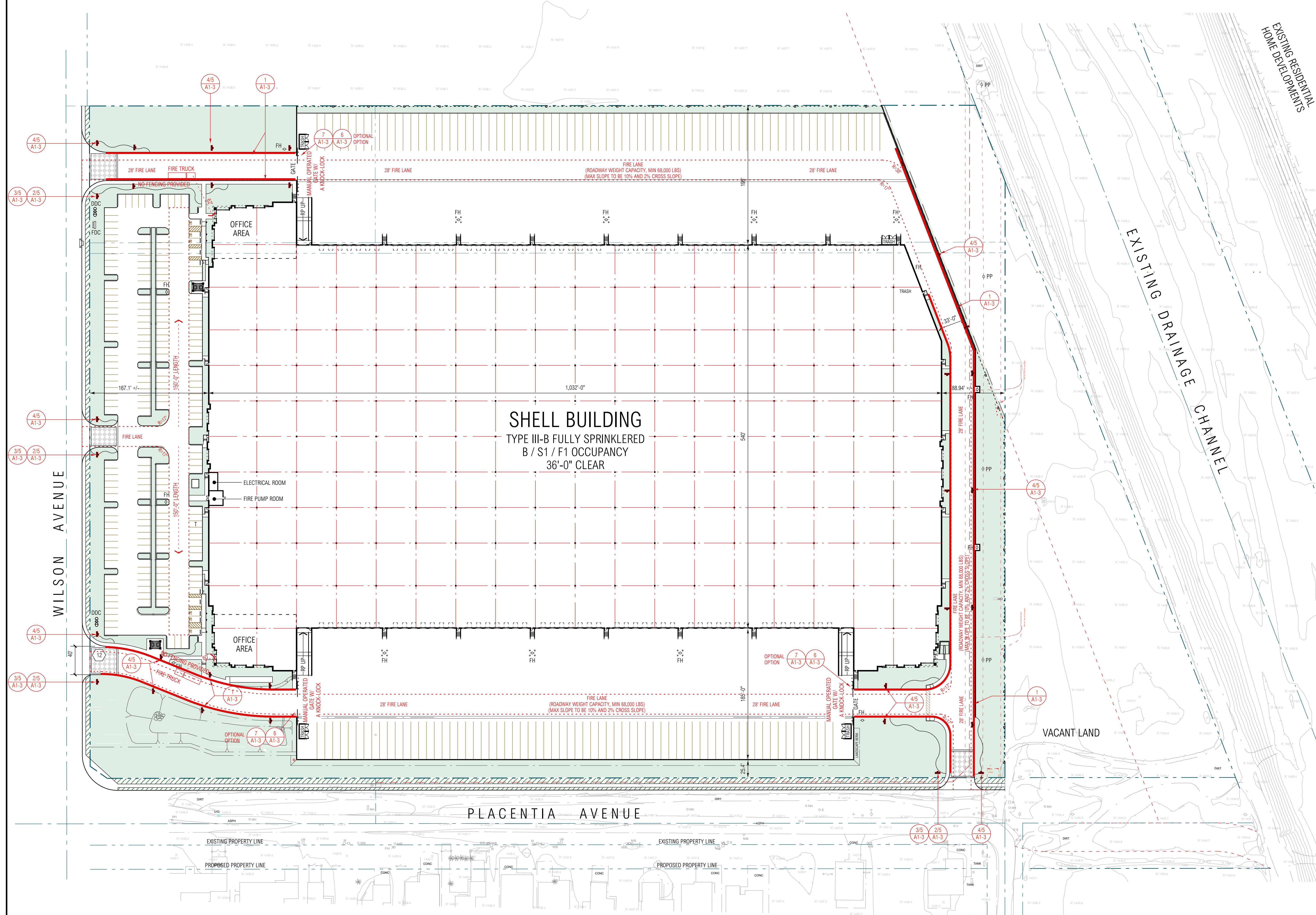
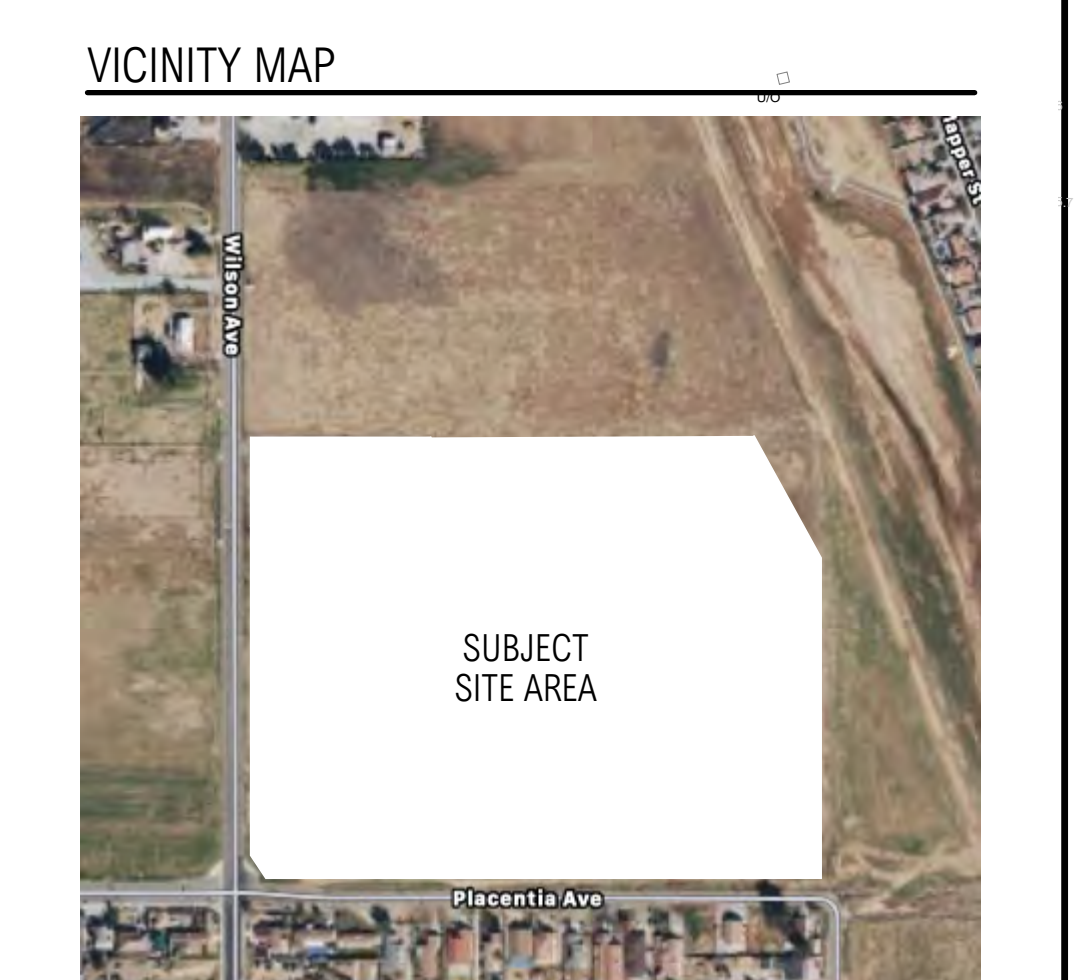
PROFESSIONAL SEALS

PLACENTIA AVENUE DEVELOPMENT
 0000 PLACENTIA AVENUE
 CITY OF PERRIS, CA

LAKE CREEK INDUSTRIAL LLC
 13681 NEWPORT AVENUE, SUITE 8301
 TUSTIN, CA 92780
 PHONE: 786-200-9681
 OWNER: MICHAEL JOHNSON
 EMAIL: mj@lakecreekindustrial.com

MARK	DATE	DESCRIPTION
CD		
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SD	09/20/2023	SCHEMATIC DESIGN

RG	PROJECT NO:	21011.00
OW	OWNER PROJECT NO:	00000.00
CA	FILE NAME:	21011-00-A1-2P
DR	DRAWN BY:	MG
CHK	CHECKED BY:	CS
CO	COPYRIGHT:	RG, OFFICE OF ARCHITECTURAL DESIGN
SH	SHEET TITLE:	FIRE ACCESS PLAN



SITE PLAN
 SCALE: 1" = 60'-0"

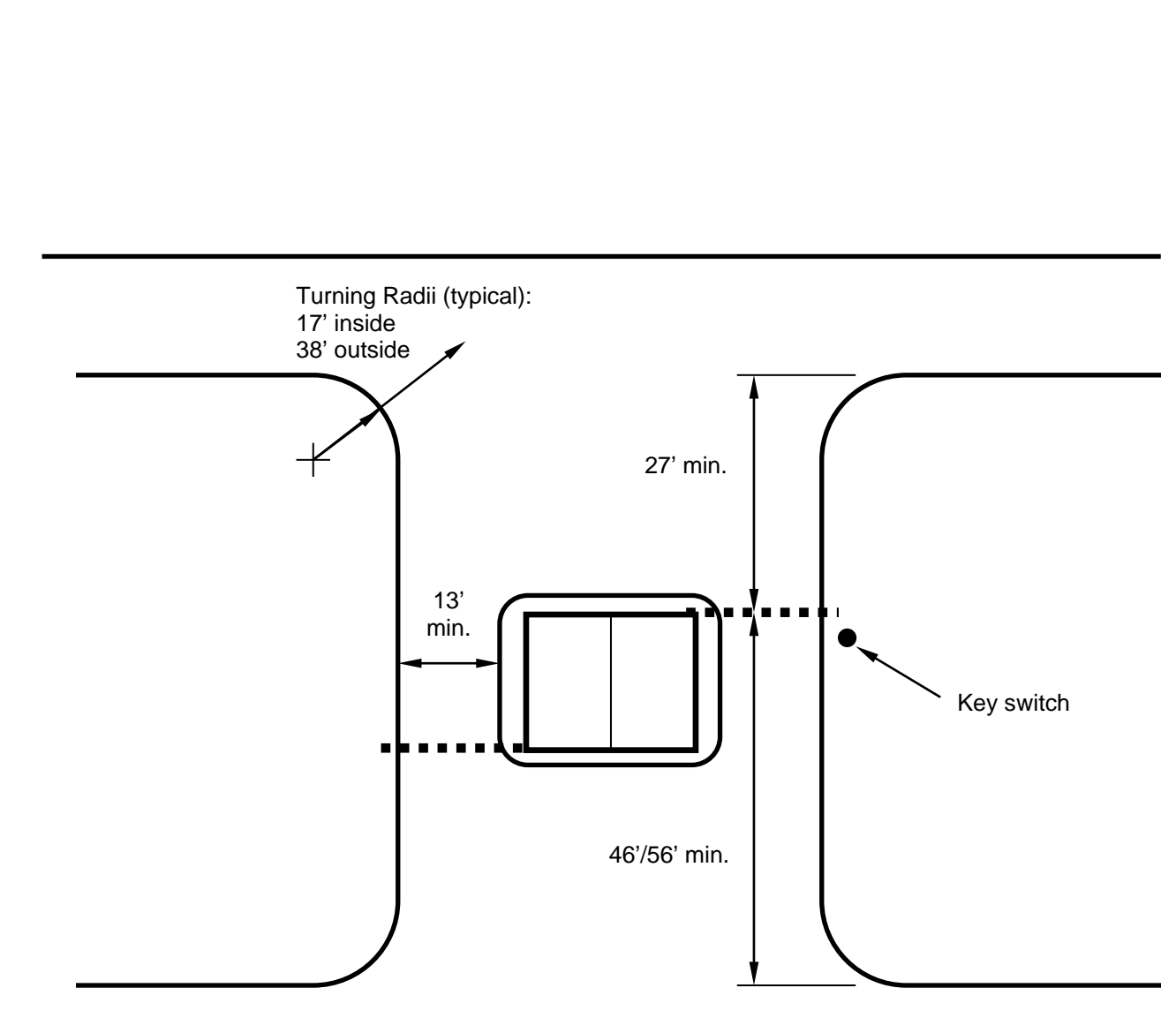
ATTACHMENT 1
Perris Fire Department Access & Water Plan Notes
All of the notes listed in the INSPECTION REQUIREMENTS and GENERAL REQUIREMENTS sections shall be placed, verbatim, on the plan under the heading "FIRE DEPARTMENT ACCESS & WATER NOTES."

- INSPECTION REQUIREMENTS**
- Perris site inspections are required for this project. Please schedule all field inspections at least 48 hours in advance. Inspections canceled after 1 p.m. on the day before the scheduled date will be subject to a re-inspection fee. Call (951) 443-1029 to schedule an inspection.
 - A lumber drop inspection shall be performed prior to bringing combustible materials (or combustible fixtures and finishes for structures of non-combustible construction). All-weather access roads capable of supporting 68,000 lbs., topped with asphalt, concrete, or equivalent shall be in place and hydrants operational at time of lumber drop inspection.
 - For projects with fuel modification, a vegetation clearance inspection is required prior to a lumber drop inspection. Use the fuel modification plan service request number to schedule the vegetation clearance inspection.
 - Phased installation of fire access roads requires additional inspections not covered by the fees paid at plan submittal. Contact (951) 443-1029 to arrange for additional inspections that may be needed and any fees that may be due.
 - An original approved, signed, wet-stamped Perris fire access & water plan shall be available on-site at time of inspection.
 - Access roads and hydrants shall be maintained and remain clear of obstructions at all times during and after construction. Areas where parking is not permitted shall be clearly identified at all times. Obstruction of fire lanes and hydrants may result in cancellation or suspension of inspections.
 - Temporary fuel tanks of 60 or more gallons shall be reviewed, inspected, and permitted by the Office of the Fire Marshal, City of Perris prior to use.
 - The project address shall be clearly posted and visible from the public road during construction.
 - All gates in construction fencing shall be equipped with either a Knox or breakaway padlock.
 - Buildings of four or more stories shall be provided with stairs and a standpipe before reaching 40 feet in height.

- GENERAL REQUIREMENTS**
- Fire lane widths shall be measured from top face of the curb to top face of the curb for fire lanes with standard curbs and gutters and from flow-line to flow-line for fire lanes with modified curb designs (e.g., rolled, ramped, etc.). The developer is responsible to verify that all approved public works or grading department street improvement plans or precise grading plans conform to the minimum street width measurements per the approved Perris fire department access & water plan and standards identified in Perris Fire Department Access & Water Guideline for all portions of the fire access roads.
 - Permanent, temporary, and phased emergency access roads shall be designed and maintained to support an imposed load of 68,000 lbs. and surfaced to provide all-weather driving capabilities.
 - Fire lane signs and red curbs shall meet the specifications shown in Perris Fire Department Access & Water Guideline and shall be installed as described therein. Additional fire lane markings may be required at the time of inspection depending on field conditions.
 - All fire hydrants shall have a "Blue Reflective Pavement Marker" indicating their location per the Perris standard. On private property markers are to be maintained in good condition by the property owner.
 - Address numbers shall be located and be of a color and size so as to be plainly visible and legible from the roadway from which the building is addressed in accordance with Perris Fire Department Access & Water Guideline.
 - Access gates shall be approved prior to installation and shall be in compliance with Chapter 5 of the CFC and Perris Fire Department Access & Water Guideline.
 - Approved access walkways shall be provided to all required openings and all rescue windows.

- Rev 01/17 26
- City of Perris
Fire Master Plans for Commercial & Residential Development
- Revised
January 2017
- Vegetation shall be selected and maintained in such a manner as to allow immediate access to all hydrants, valves, fire department connections, pull stations, extinguishers, sprinkler risers, alarm control panels, rescue windows, and other devices or areas used for firefighting purposes. Vegetation or building features shall not obstruct address numbers or inhibit the functioning of alarm bells, horns, or strobes.
 - Dumpsters and trash containers larger than 1.5 cubic yards shall not be stored in buildings or placed within 5 feet of combustible walls, openings or combustible roof eave lines unless protected by an approved sprinkler system.
 - Any future modification to the approved Fire Department Access & Water Plan or approved site plan, including but not limited to road width, grade, speed humps, turning radii, gates or other obstructions, shall require review, inspection, and approval by the Office of the Fire Marshal, City of Perris.
 - Approval of this plan shall not be construed as approval of any information or project conditions other than those items and requirements identified in Perris Fire Department Access & Water Guideline and related portions of the CFC and CBC. This project may be subject to additional requirements not stated herein upon examination of actual site and project conditions or disclosure of additional information.

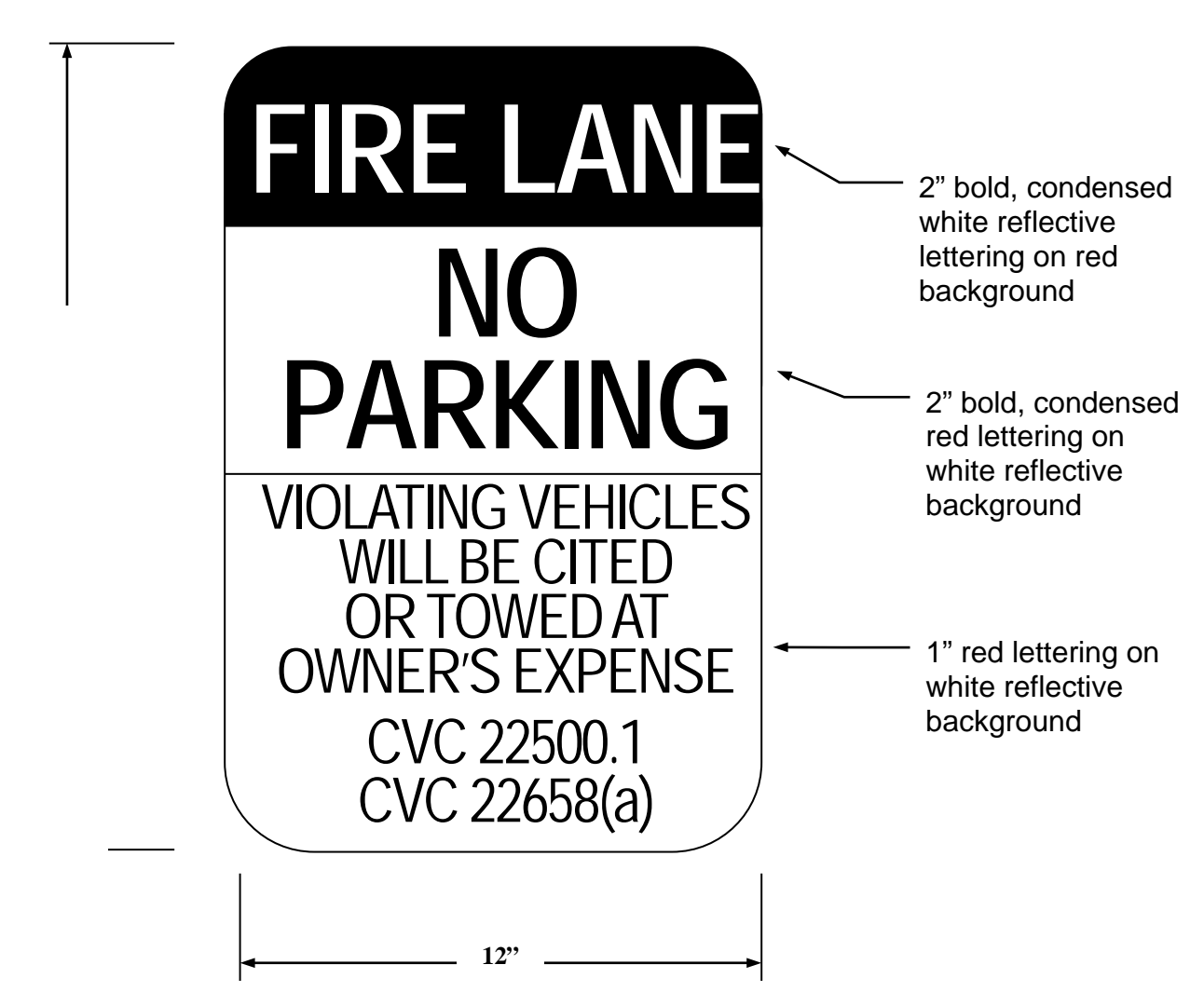
ATTACHMENT 15
Minimum Gate Setbacks



All sign and lettering dimensions shown are *minimums*. "Arial Narrow" font used is used in sample above though other legible sans-serif fonts may be acceptable.

Signs shall be securely mounted facing the direction of travel and clearly visible to oncoming traffic entering the designated area. Signs shall be made of durable material and installed per Attachments 13 and 14.

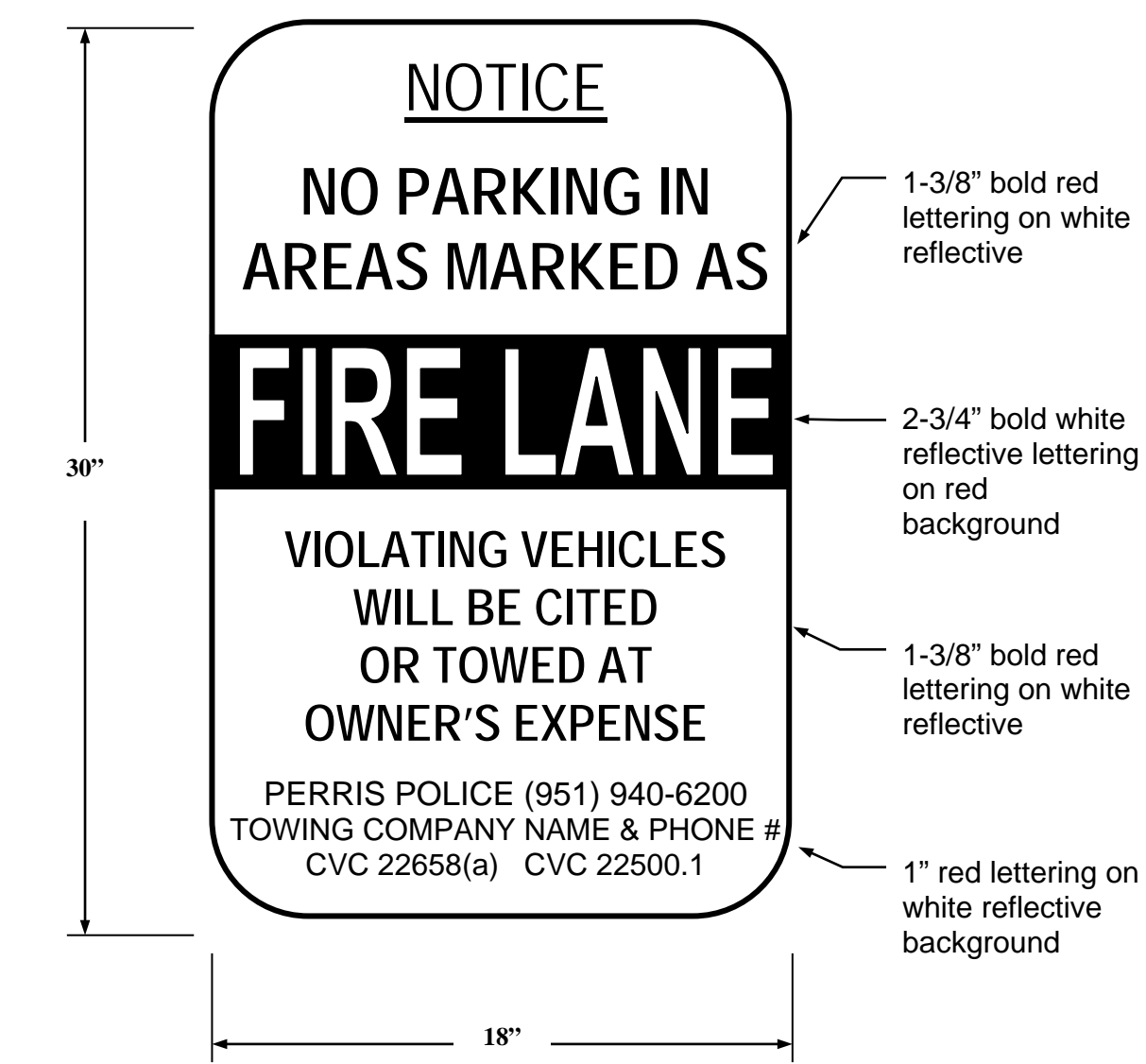
ATTACHMENT 12
Specifications for Fire Lane No Parking Signs



All sign and lettering dimensions shown are *minimums*. "Arial Narrow" font used is used in sample above though other legible sans-serif fonts may be acceptable.

Signs shall be securely mounted facing the direction of travel and clearly visible to oncoming traffic entering the designated area. Signs shall be made of durable material and installed per Attachments 13 and 14.

ATTACHMENT 10
Specifications for Fire Lane Entrance Signs
To be used only at vehicle entry points to areas that contain "Fire Lane—No Parking" signs or red curbs



All sign and lettering dimensions shown are *minimums*. "Arial Narrow" font used is used in sample above though other legible sans-serif fonts may be acceptable.

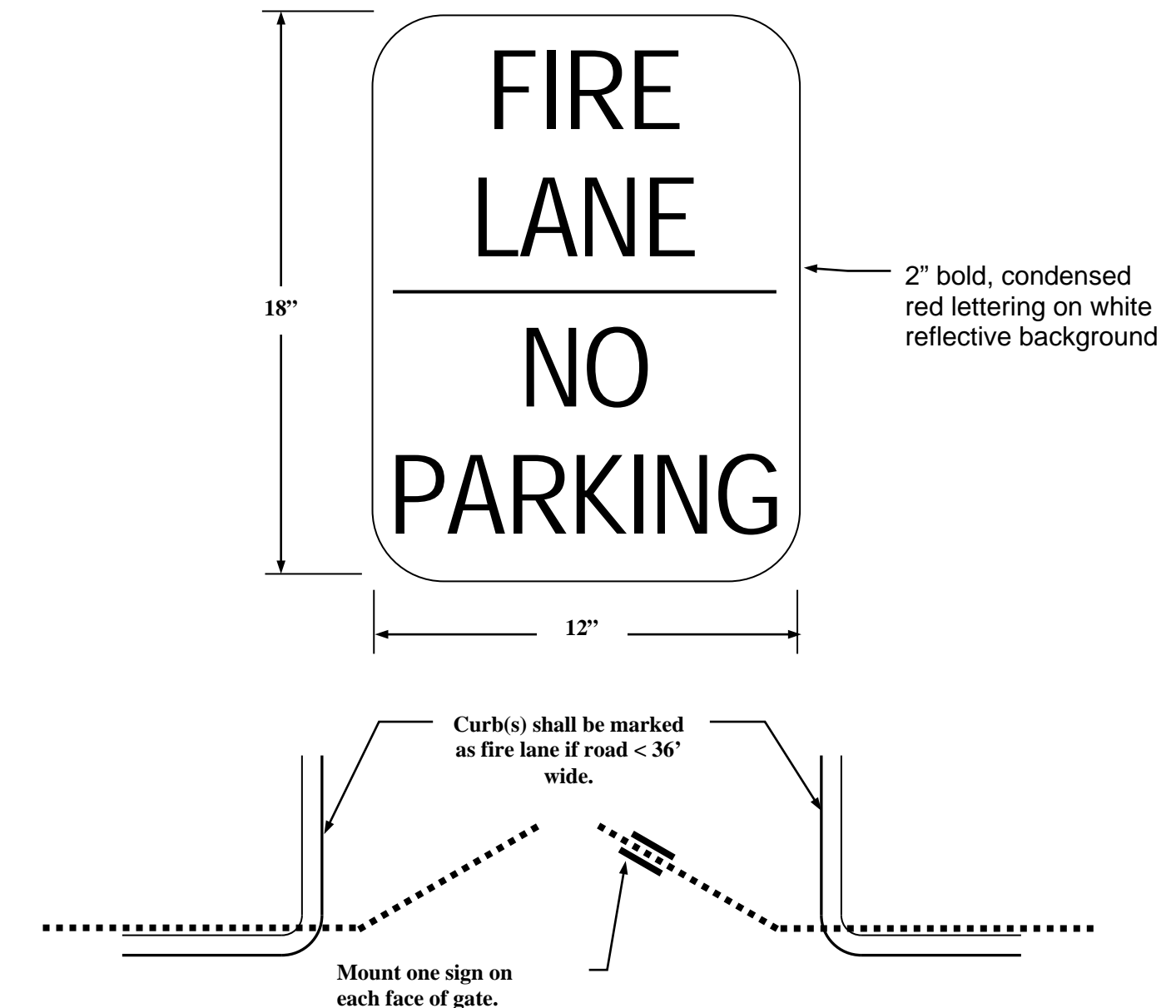
This sign shall be posted at all vehicle entrances to areas marked with either red curbs or fire lane "No Parking" signs. Signs shall be securely mounted facing the direction of travel and clearly visible to oncoming traffic entering the designated area. Signs shall be made of durable material and installed per Attachments 13 and 14.

Towing company contact information is required for all properties with a standing written agreement for services with a towing company per the California Vehicle Code.



ATTACHMENT 16

Specifications for "Fire Lane - No Parking" Signs for Manually Operated Gates and Barriers



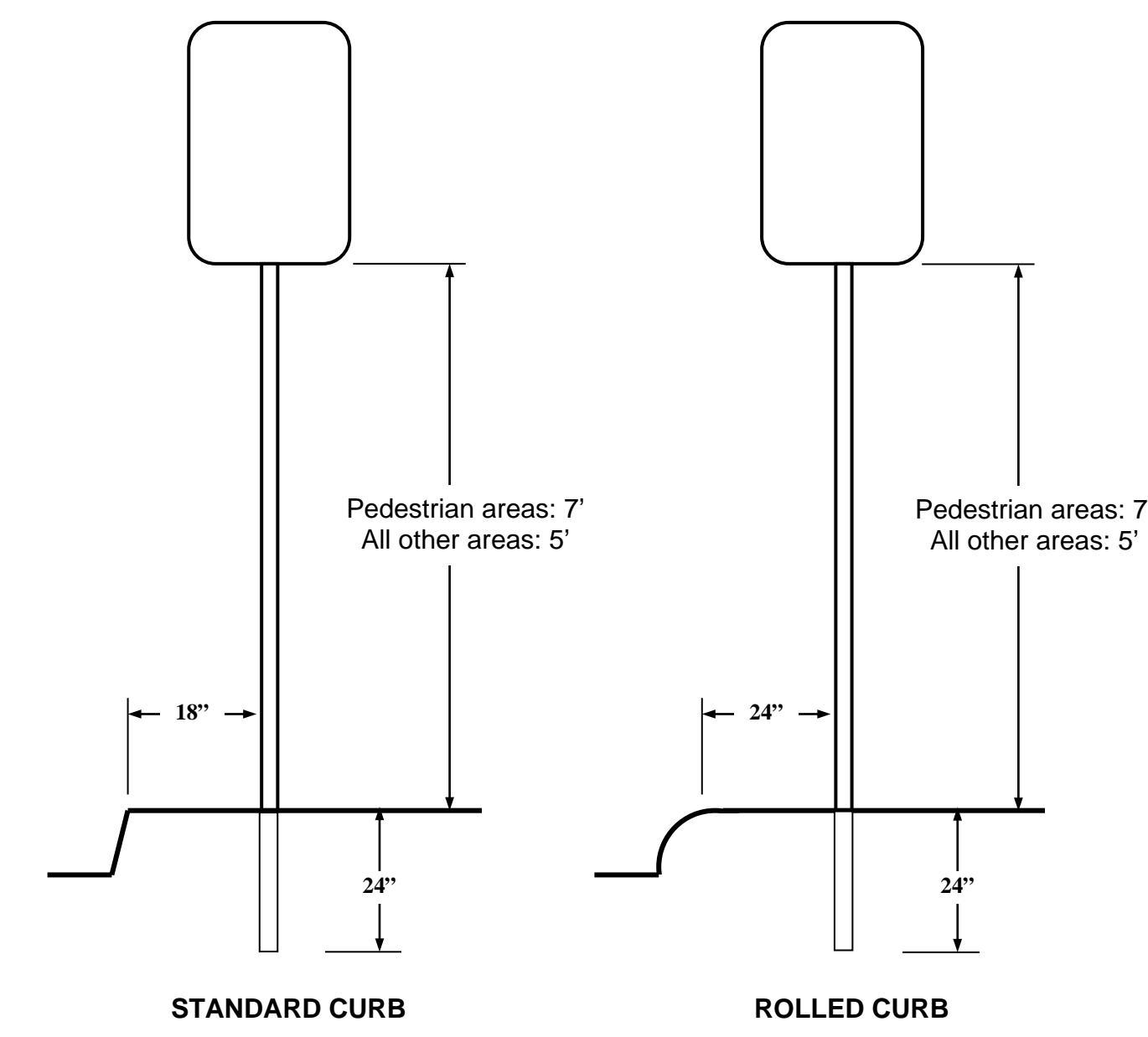
All sign and lettering dimensions shown are *minimums*. "Arial Narrow" font used is used in sample above though other legible sans-serif fonts may be acceptable.

"Fire Lane—No Parking" sign shown in Attachment 12 may be used as an alternative. Signs shall be securely mounted on the front and back face of the gate clearly visible to traffic entering the designated area. Signs shall be made of a durable material.



ATTACHMENT 14

Mounting Specifications for Fire Lane Entrance and No Parking Signs



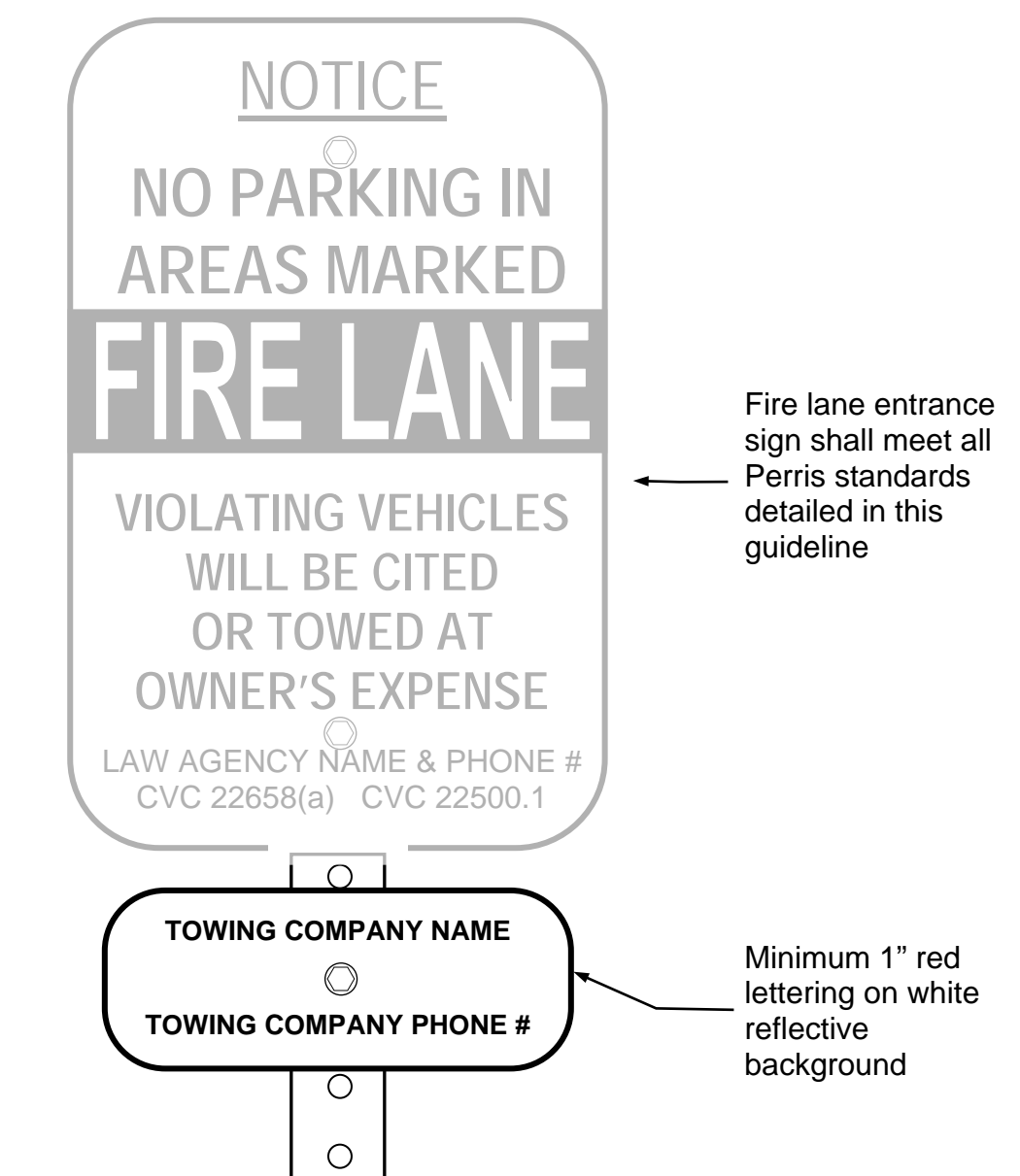
Signs shall be mounted facing the direction of vehicular travel. Signs may be mounted on existing posts or buildings where the centerline of the sign is no more than 24" from the edge of the roadway.

Depth of bury shall be a *minimum* of 24" and rebar, a concrete footing, or another method to prevent removal of the sign is recommended. Footings for signs located in the public right-of-way shall be per the local jurisdiction's requirements.



ATTACHMENT 11

Specifications for Alternate Location of Towing Company Information

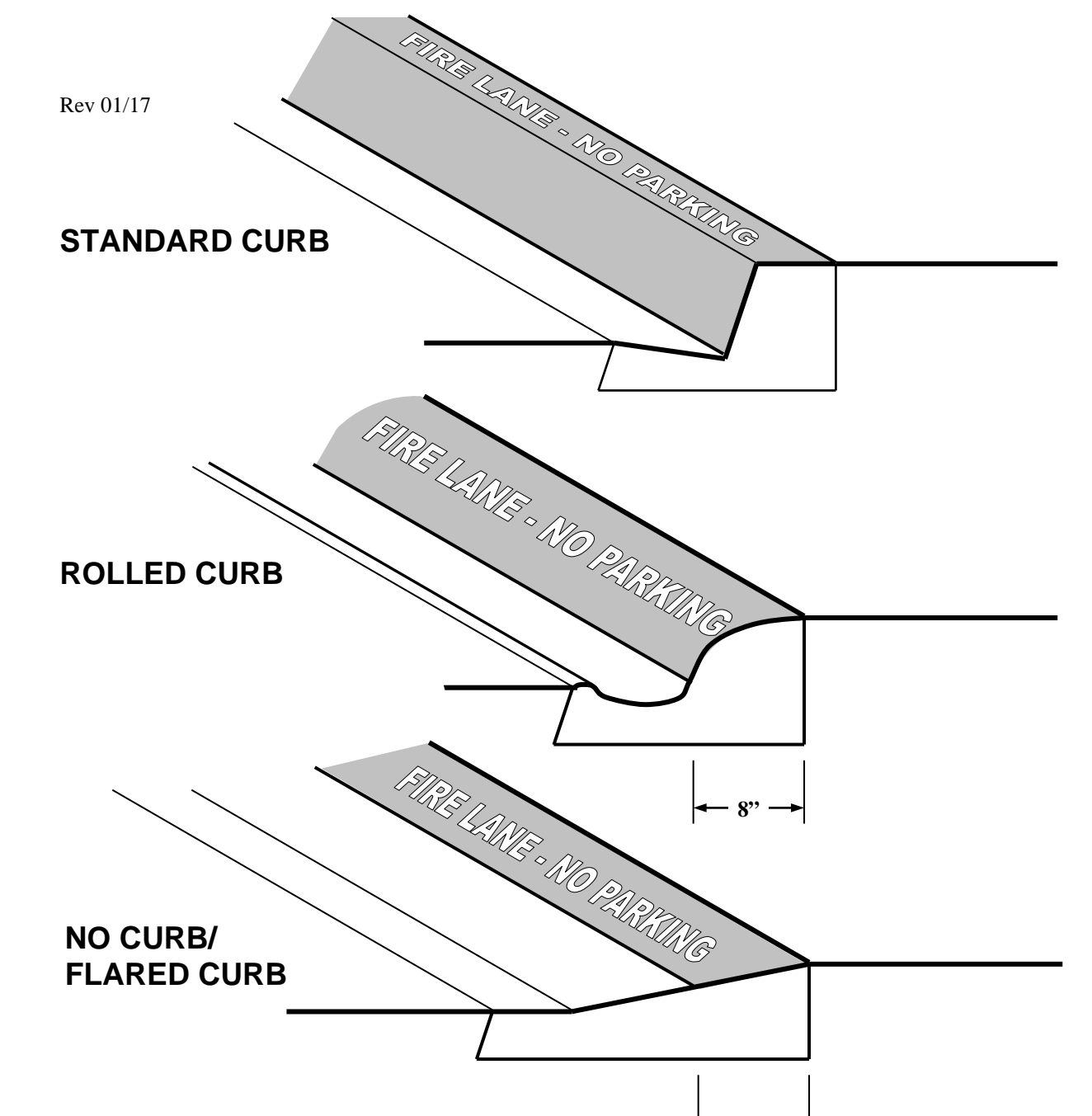


Towing company contact information is required for all properties with a standing written agreement for services with a towing company per the California Vehicle Code.

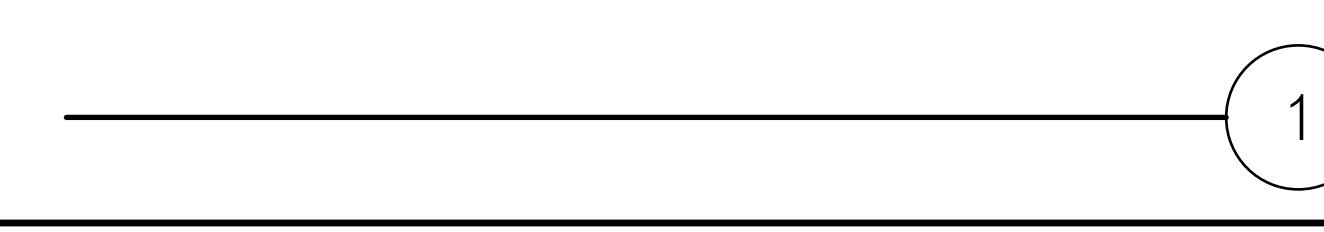
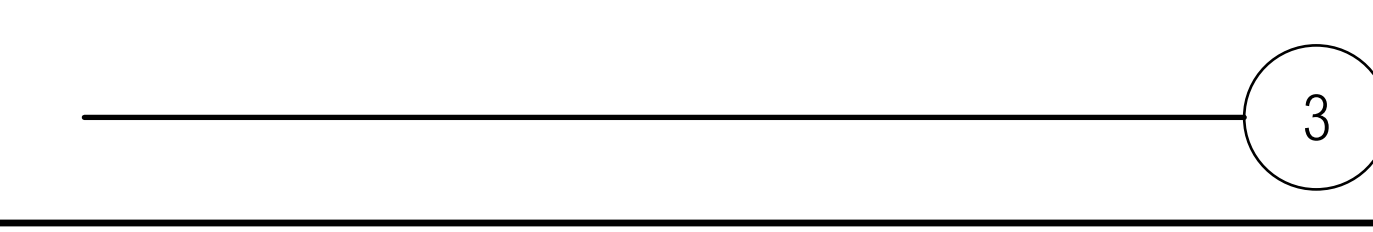
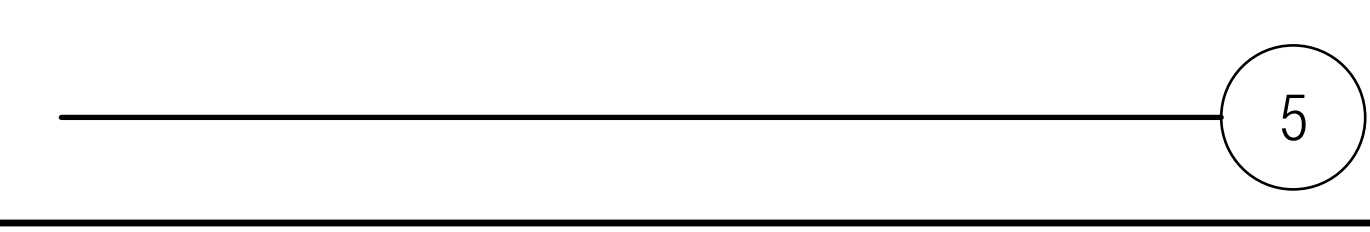
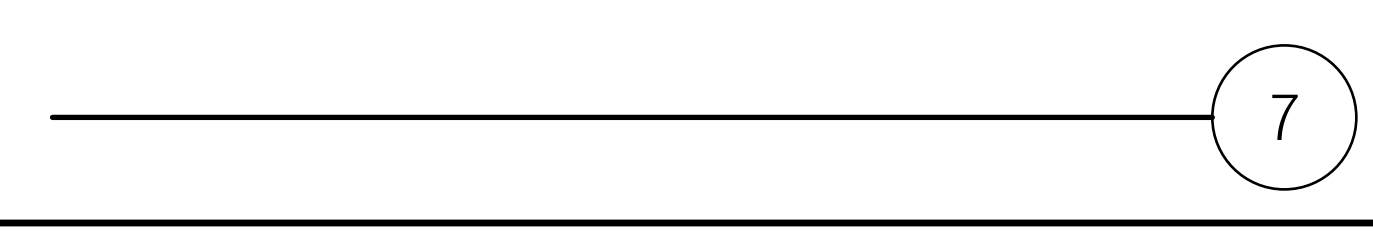
To facilitate periodic changes in towing company contracts, the towing company contact information may be posted on a separate sign mounted directly below the fire lane entrance sign instead of on the entrance sign itself. The method of attachment to the post shall not obscure the wording on either sign.

ATTACHMENT 9

Fire Lane Identification – Red Curbs



- Fire lane entrance sign(s) shall also be provided per Attachment 10 or 11.
- Curbs shall be painted OSHA safety red.
- "FIRE LANE – NO PARKING" shall be painted on top of curb in 3" white lettering at a spacing of 30' on center or portion thereof.



RG A
Office of Architectural Design
15231 Alton Parkway, Suite 100
Irvine, CA 92618
T 949-341-0920
FX 949-341-0922

CONSULTANT

PROFESSIONAL SEALS

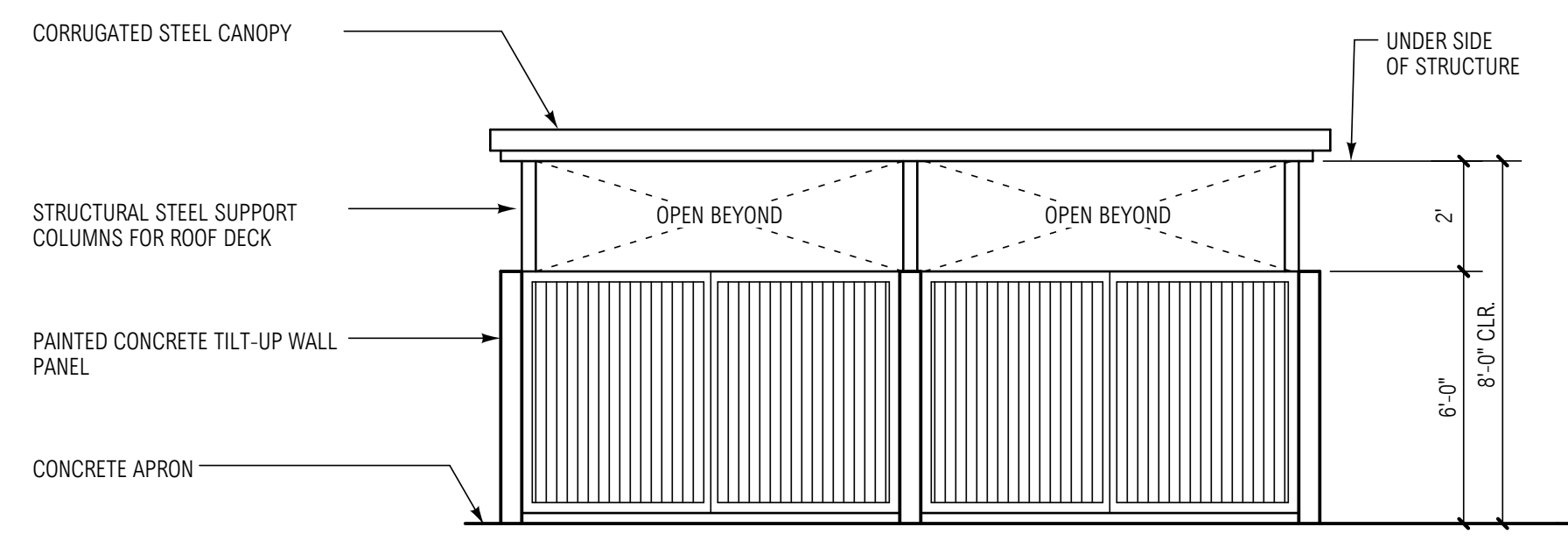
PLACENTIA AVENUE
DEVELOPMENT
0000 PLACENTIA AVENUE
CITY OF PERRIS, CA

LAKE CREEK INDUSTRIAL LLC
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TUSTIN, CA 92780
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MARK	DATE	DESCRIPTION
SD	09/20/2023	SCHEMATIC DESIGN

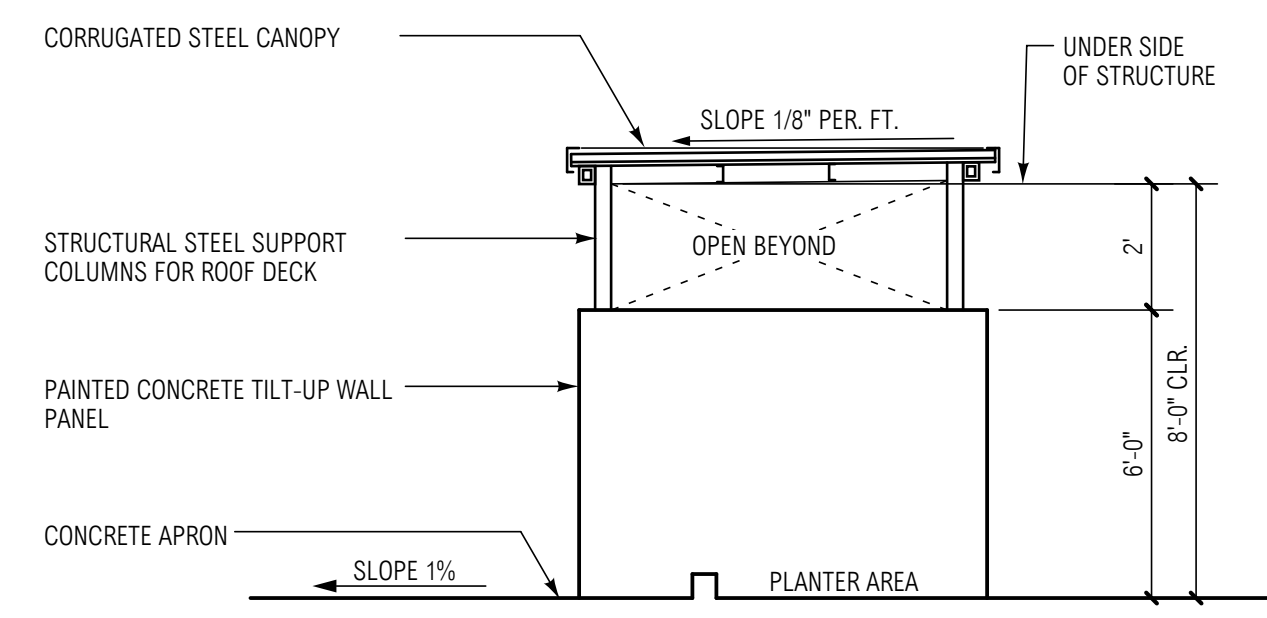
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SHEET TITLE
FIRE SIGNAGE PLAN



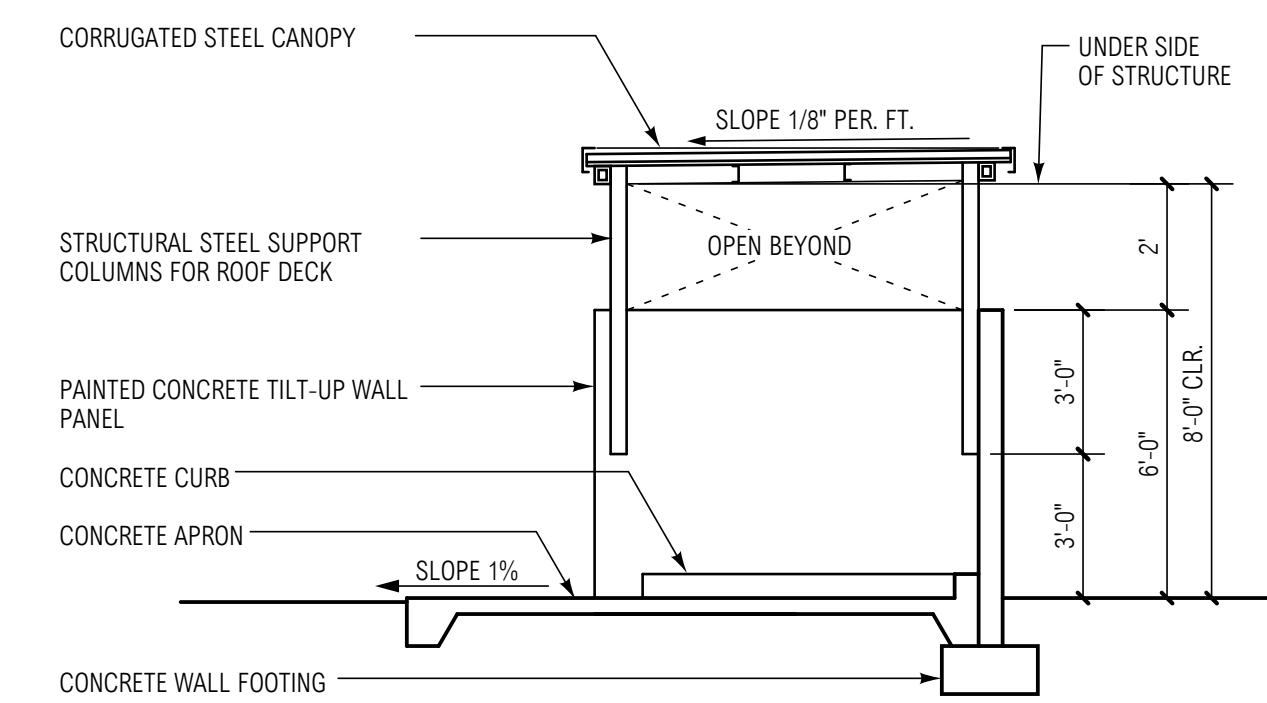
TRASH ENCLOSURE FRONT ELEVATIONS

SCALE: 1/4" = 1'-0"



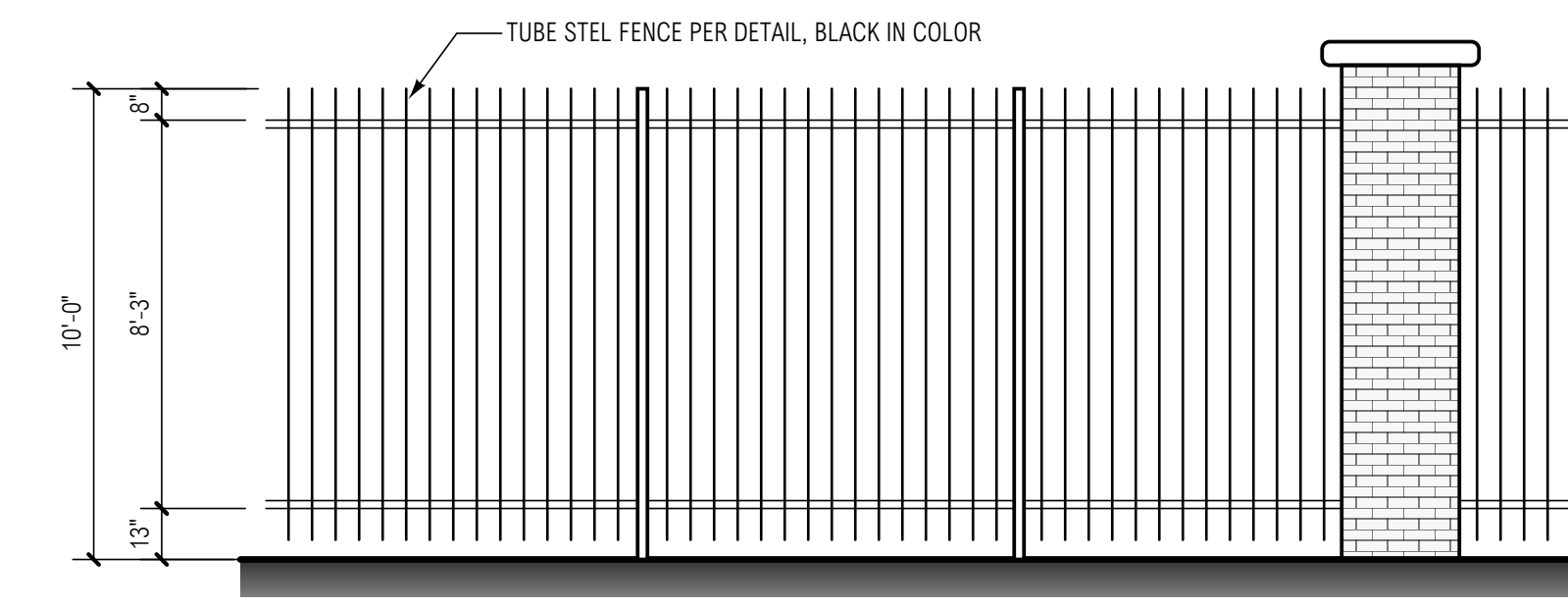
TRASH ENCLOSURE SIDE ELEVATIONS

SCALE: 1/4" = 1'-0"



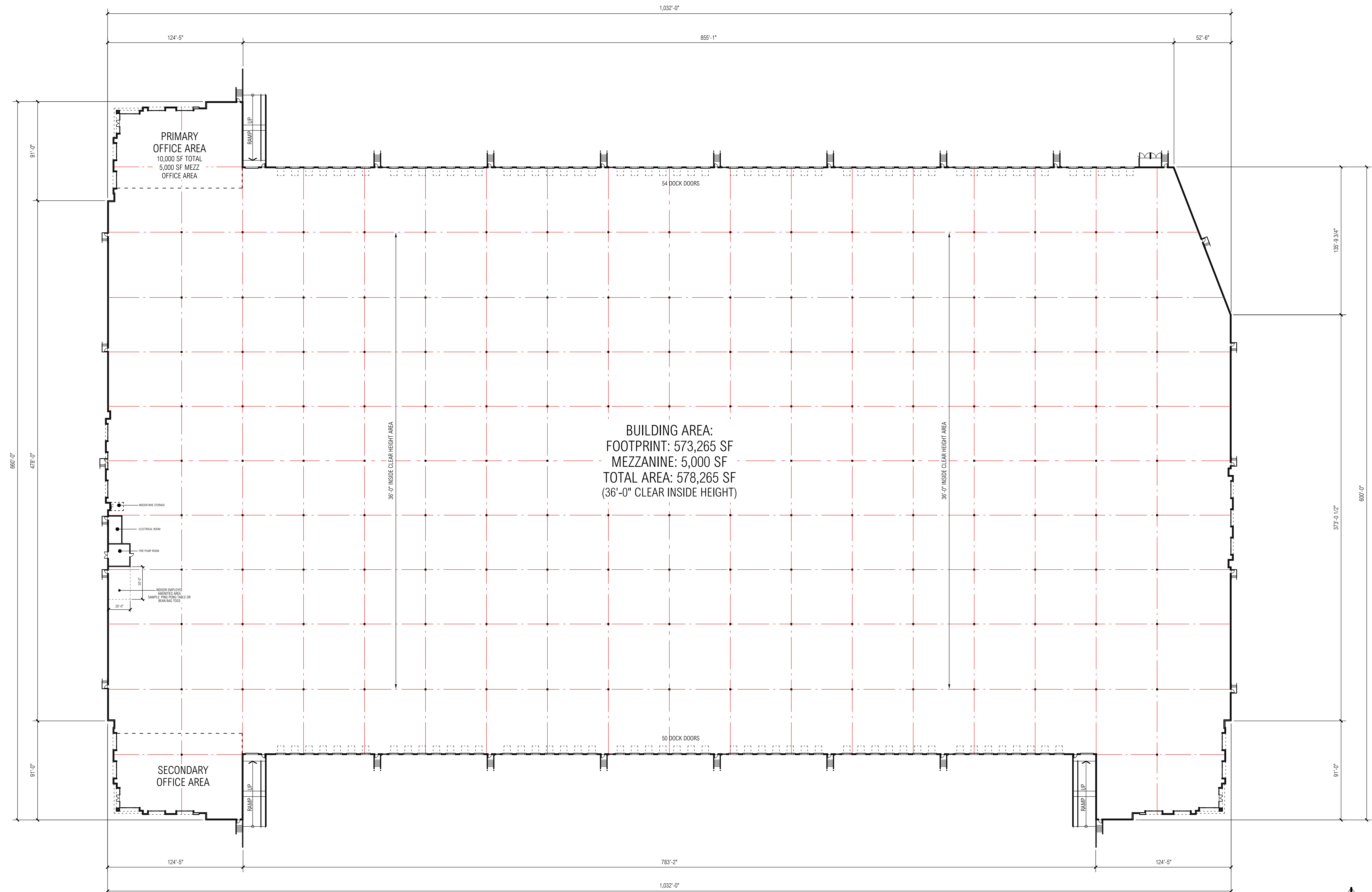
TYPICAL TRASH ENCLOSURE SECTION

SCALE: 1/4" = 1'-0"



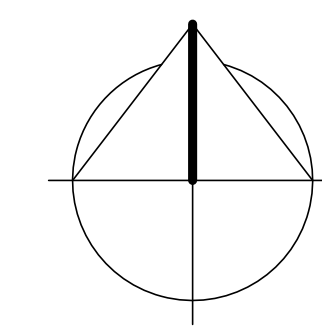
TYPICAL TUBE STEEL FENCE ELEVATION

SCALE: 1/4" = 1'-0"



FLOOR PLAN

SCALE: 1" = 30'-0"



CONSULTANT

PROFESSIONAL SEALS

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SHEET TITLE:	FLOOR PLAN

PLACENTIA AVENUE DEVELOPMENT

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CD	BID	FC	DD	SD	MARK	DATE	DESCRIPTION
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SHEET TITLE

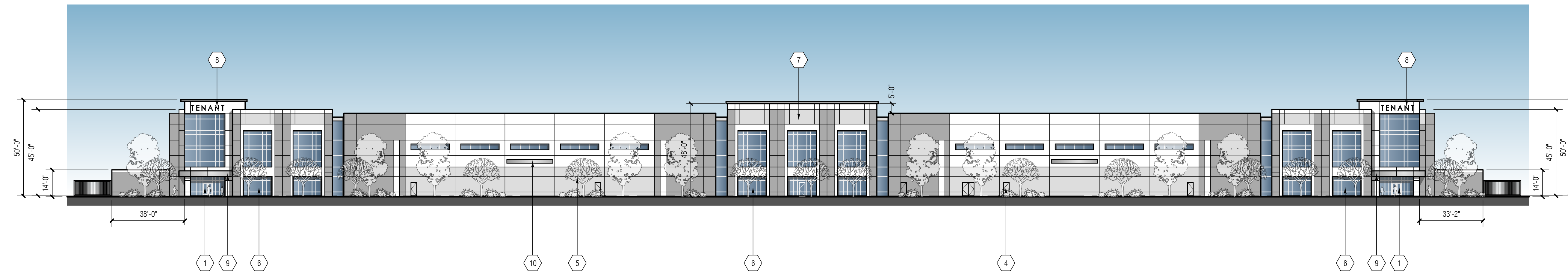
EXTERIOR ELEVATION

KEYNOTES

1. PRIMARY ENTRANCE.
2. PAINTED 12' WIDE X 14' HIGH LEVEL VERTICAL LIFT TRUCK DOOR, FACTORY PAINTED WHITE.
3. PAINTED 9' WIDE X 10' HIGH VERTICAL LIFT TRUCK DOOR, FACTORY PAINTED WHITE.
4. 3' X 7' PAINTED METAL MAN DOOR.
5. 2" WIDE X 3/4" DEEP HORIZONTAL / VERTICAL REVEAL.
6. BLUE GLASS IN ANODIZED ALUMINUM STOREFRONT FRAME SYSTEM.
7. PAINTED CONCRETE TILT-UP EXTERIOR WALL CONSTRUCTION.
8. PROPOSED FUTURE TENANT SIGNAGE LOCATION.
9. ALUM. ENTRY TRELLIS CANOPY
10. 20' X 2' LIGHT BOX WITH DOWNWARD LIGHTS

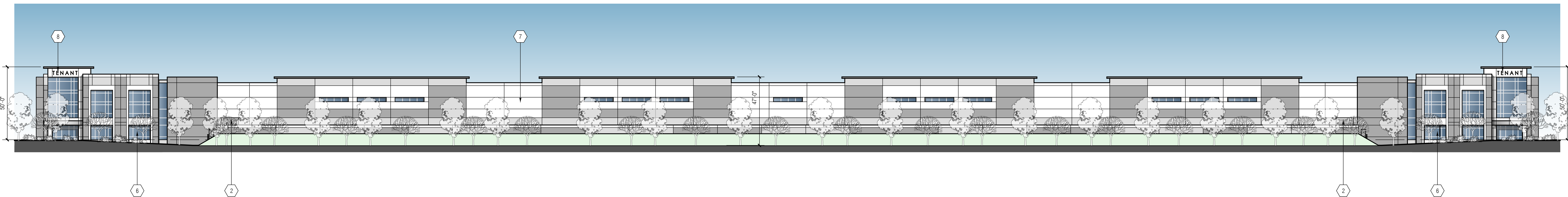
FINISH SCHEDULE:

- | | |
|---|---|
|  | 1. FIELD COLOR
SW-7063 NEBULOUS WHITE |
|  | 2. MEDIUM ACCENT COLOR
SW-7072 ONLINE |
|  | 3. DARK ACCENT COLOR
SW-7664 STEELY GRAY |
|  | 4. TRELLISES -
BRUSHED STAINLESS |
|  | 5. GLASS - PRIMARY WINDOW
PPG SOLARCOOL PACIFICA |



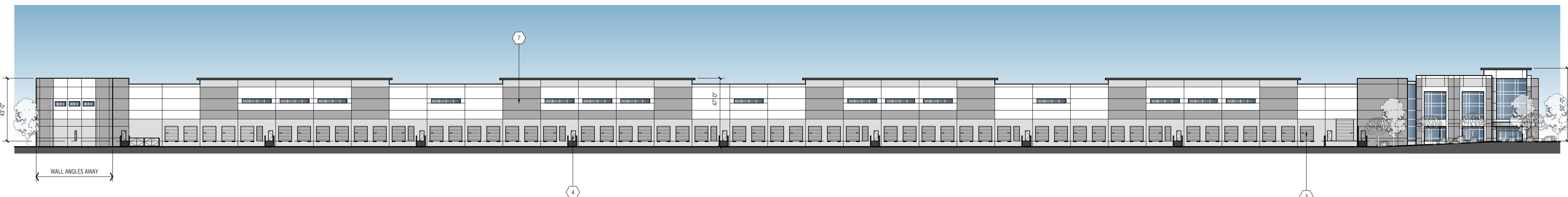
WEST ELEVATION

SCALE: 1" = 30'-0"



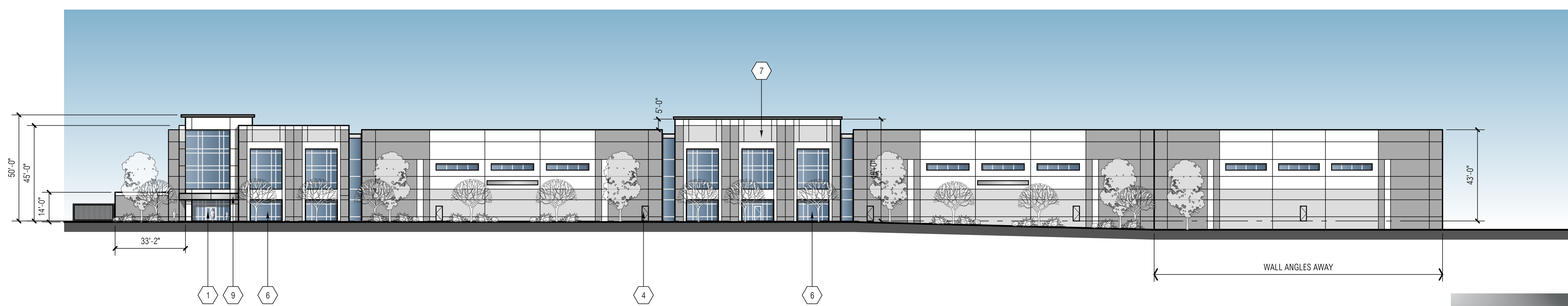
SOUTH ELEVATION

SCALE: 1" = 30'-0"



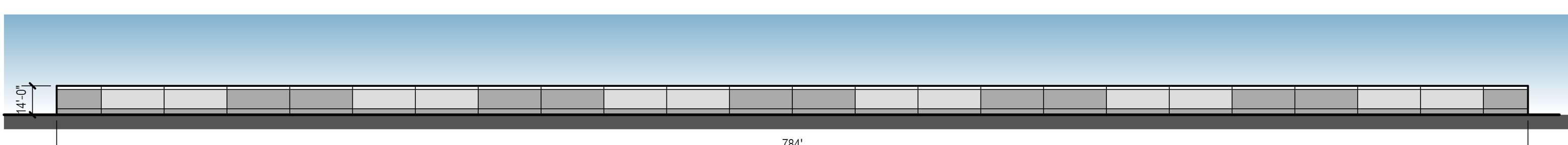
NORTH ELEVATION

SCALE: 1" = 30'-0"



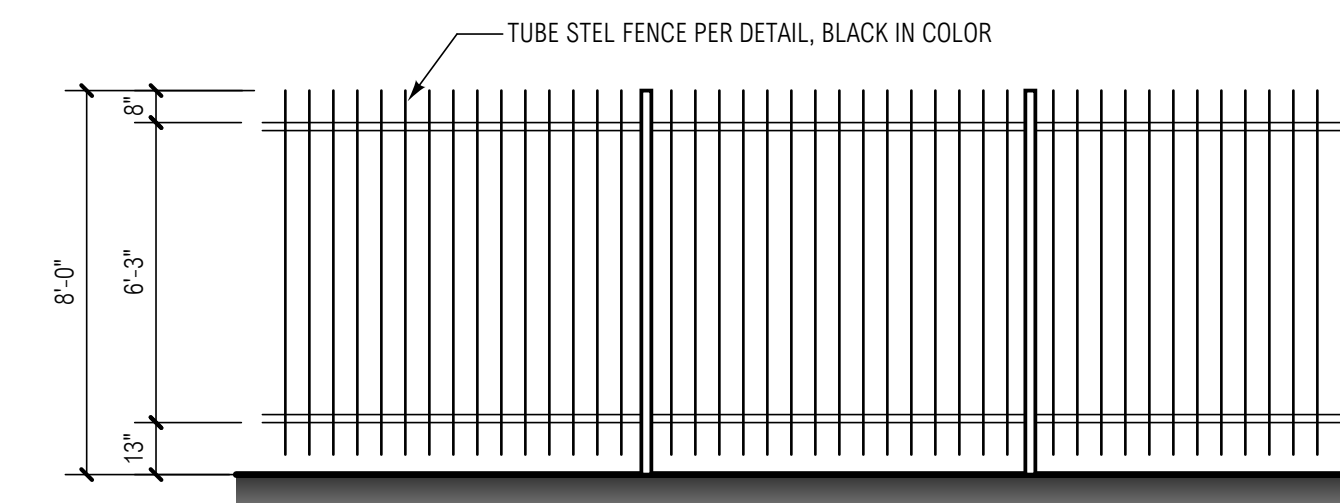
EAST ELEVATION

SCALE: 1" = 30'-0"



SOUTH SCREENWALL ELEVATION

SCALE: 1" = 40'-0"



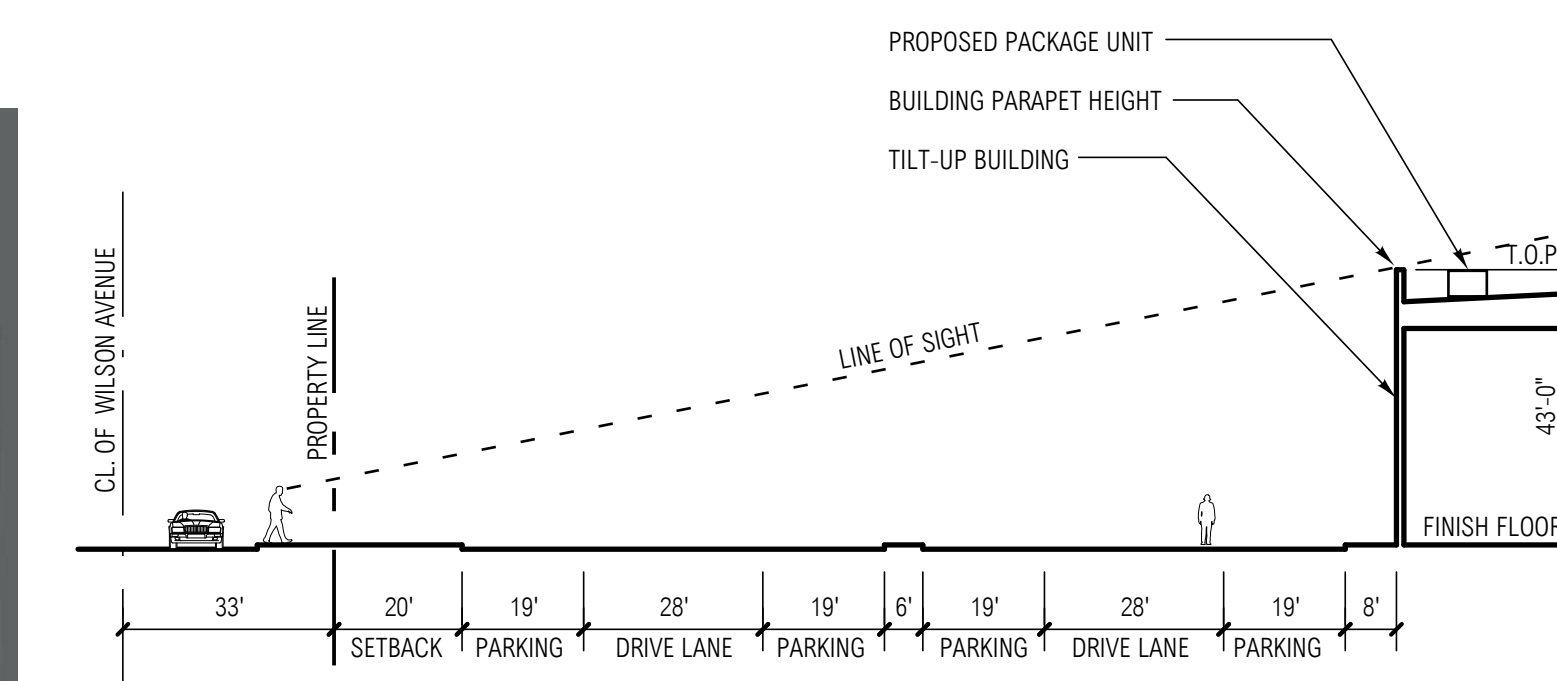
TYPICAL TUBE STEEL FENCE ELEVATION

SCALE: 1/4" = 1'-0"



SIMILAR SITE LIGHTING STYLE

SCALE: N.T.S.



TYPICAL EQUIPMENT SCREEN LINE OF SIGHT

SCALE: 1" = 30'-0"

NOTE: LINE OF SIGHT TAKEN FROM 6'-0" ABOVE FINISH GRADE

NOTES:

1. ALL ROOFTOP MECH. EQUIPMENT SHALL BE SCREENED FROM VIEW.
2. PROVIDE GRAFFITI RESISTANT COATING TO A HEIGHT OF 12 FEET ON THE WEST ELEVATION.

CONSULTANT

PROFESSIONAL SEALS

PLACENTIA AVENUE
DEVELOPMENT

0000 PLACENTIA AVENUE
CITY OF PERRIS, CA

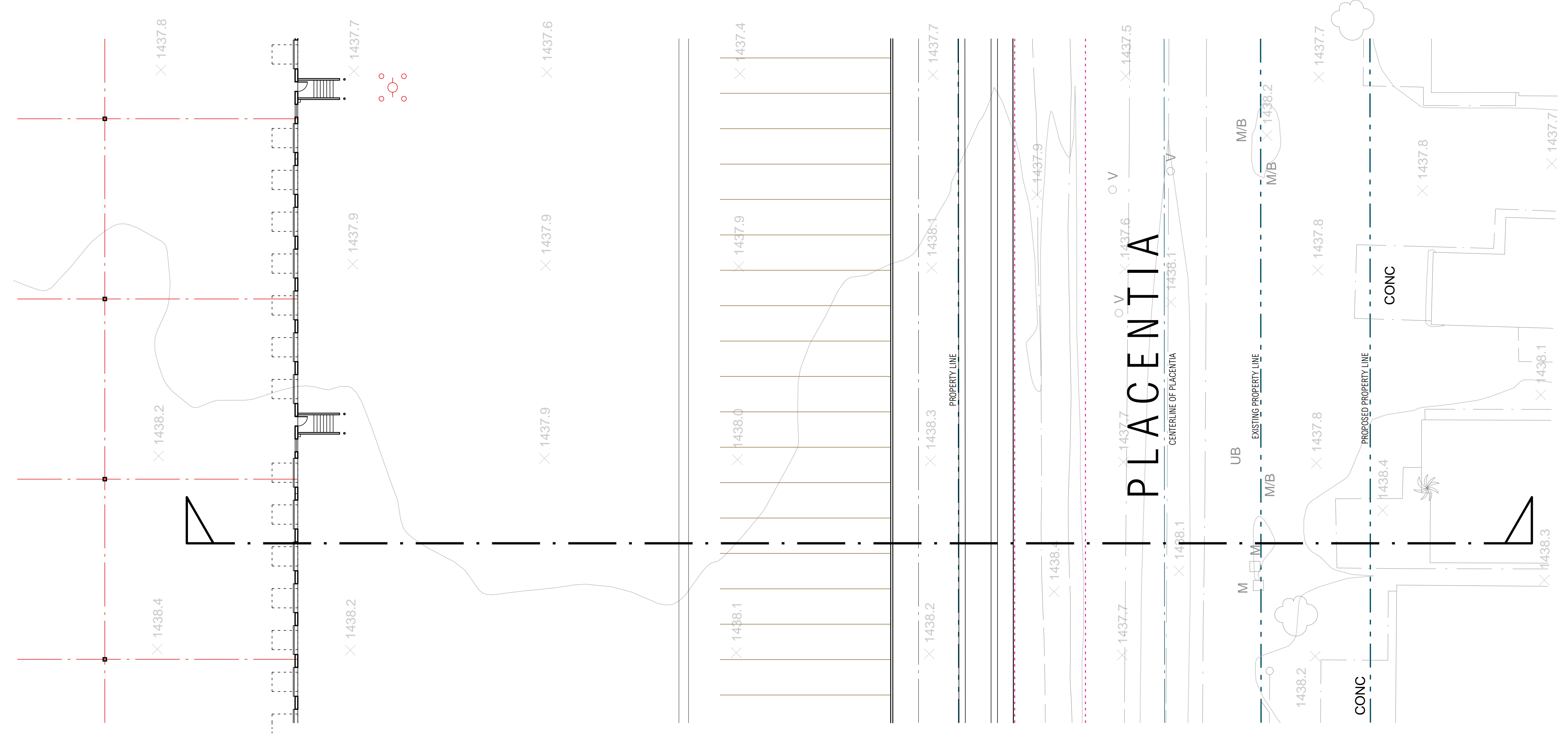
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13681 NEWPORT AVENUE, SUITE 8301
TUSTIN, CA 92780
PHONE: 786-200-9881
OWNER: MICHAEL JOHNSON
EMAIL: mj@lakecreekindustrial.com

MARK	DATE	DESCRIPTION
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BID		
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SD	09/20/2023	SCHEMATIC DESIGN

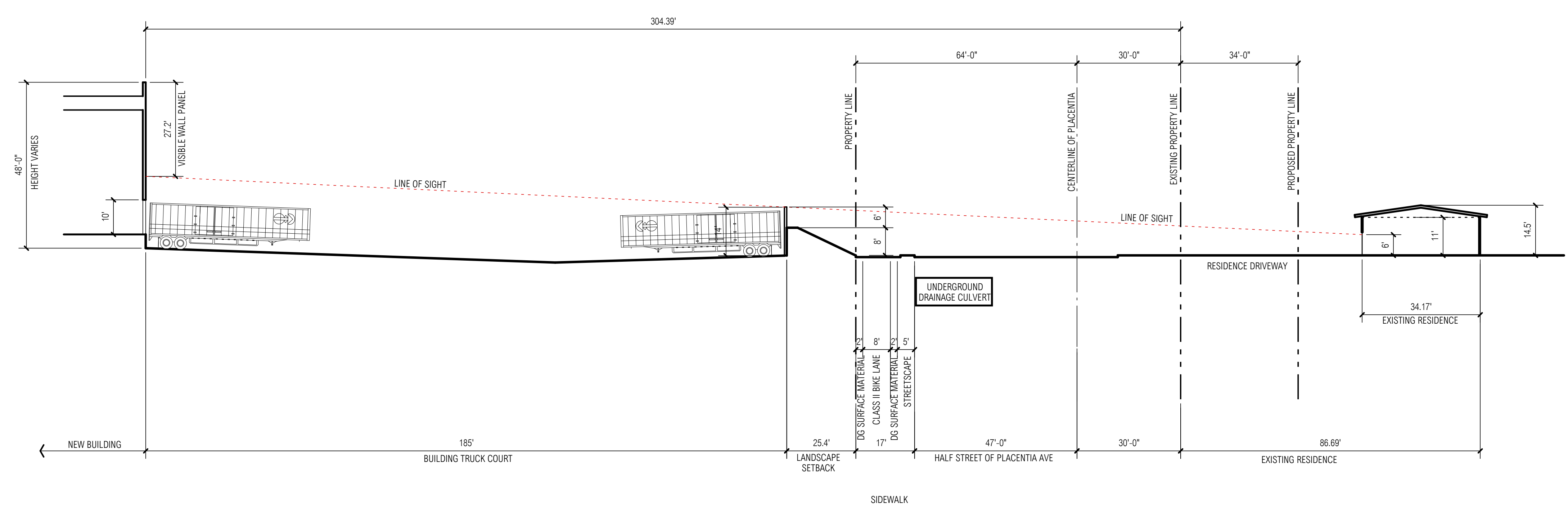
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COPYRIGHT:	RG, OFFICE OF ARCHITECTURAL DESIGN

SHEET TITLE

SITE SECTION



PARTIAL SITE PLAN
SCALE: 1" = 20'-0"



SITE SECTION
SCALE: 1" = 20'-0"

Appendix B Plant Species Observed Within the Study Area

<i>Scientific Name</i>	<i>Common Name</i>
<i>Amaranthaceae (Amaranth family)</i>	
<i>Amaranthus albus*</i>	Tumbleweed
<i>Chenopodium album*</i>	Goosefoot
<i>Arecaceae (Palm family)</i>	
<i>Washingtonia Robusta*</i>	Mexican fan palm
<i>Asteraceae (Aster family)</i>	
<i>Anthemis cotula*</i>	Mayweed
<i>Centaurea melitensis*</i>	Maltese star-thistle
<i>Erigeron canadensis</i>	Canadian horseweed
<i>Helianthus annuus</i>	Sunflower
<i>Heterotheca grandiflora</i>	Telegraphweed
<i>Lactuca serriola*</i>	Prickly lettuce
<i>Matricaria discoidea*</i>	Pineapple weed
<i>Oncosiphon piluliferum*</i>	Stinknet
<i>Silybum marianum*</i>	Milk thistle
<i>Boraginaceae (Forget-me-not family)</i>	
<i>Amsinckia intermedia</i>	Fiddleneck
<i>Brassicaceae (Mustard family)</i>	
<i>Brassica nigra*</i>	Black mustard
<i>Hirschfeldia incana*</i>	Shortpod mustard
<i>Sisymbrium irio *</i>	London rocket
<i>Chenopodiaceae (Goosefoot family)</i>	
<i>Salsola tragus*</i>	Prickly Russian thistle
<i>Euphorbiaceae (Spurge family)</i>	
<i>Ricinus communis*</i>	Caster bean
<i>Geraniaceae (Geranium family)</i>	
<i>Erodium cicutarium*</i>	Redstem stork's bill
<i>Fabaceae (Pea family)</i>	
<i>Melilotus indicus*</i>	Sourclover
<i>Hordeum murinum*</i>	Mouse barley
<i>Medicago polymorpha*</i>	Bur clover
<i>Juncaceae (Rush family)</i>	
<i>Juncus balticus</i>	Baltic rush
<i>Malvaceae (Mallow family)</i>	
<i>Malva parviflora*</i>	Cheese mallow

Scientific Name	Common Name
Montiaceae (Montia family)	
<i>Calandrinia menziesii</i>	Red maids
Plantaginaceae (Plantain family)	
<i>Plantago lanceolata</i> *	Narrow leaf plantain
Pinaceae (Pine family)	
<i>Pinus sp.</i> *	Pine tree
Poaceae (Grass family)	
<i>Avena barbata</i> *	Slender oats
<i>Bromus diandrus</i> *	Ripgut brome
<i>Bromus madritensis subsp. Rubens</i> *	Red brome
<i>Cynodon dactylon</i> *	Bermuda grass
<i>Hordeum marinum</i> *	Mediterranean barley
<i>Festuca perennis</i> *	Italian ryegrass
<i>Schismus barbatus</i> *	Schismus
Solanaceae (Nightshade family)	
<i>Datura sp</i> *	Jimsonweed
<i>Nicotiana glauca</i> *	Tree tobacco

Nomenclature follows the Jepson Manual, Second Edition (Baldwin et al 2012).

* = naturalized, non- native plant species.

Appendix C Wildlife Species Observed Within the Study Area

Scientific Name	Common Name
Birds	
<i>Agelaius phoeniceus</i>	Red-winged blackbird
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Buteo jamaicensis</i>	Red-Tailed hawk
<i>Cathartes aura</i>	Turkey vulture
<i>Corvus corax</i>	Common Raven
<i>Calypte anna</i>	Anna's hummingbird
<i>Chondestes grammacus</i>	Lark sparrow
<i>Corvus brachyrhynchos</i>	American crow
<i>Sturnus vulgaris</i>	European Starling
<i>Carpodacus mexicanus</i>	House Finch
<i>Charadrius vociferus</i>	Killdeer
<i>Sturnella neglecta</i>	Western Meadowlark
<i>Petrochelidon pyrrhonota</i>	Cliff swallow
<i>Columba livia</i>	Rock Pigeon
<i>Euphagus cyanocephalus</i>	Brewer's Blackbird
<i>Zonotrichia leucophrys</i>	White-crowned sparrow
<i>Falco sparverius</i>	American kestrel
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Sayornis saya</i>	Say's phoebe
<i>Passer domesticus</i>	House Sparrow
<i>Sayornis nigricans</i>	Black phoebe
<i>Quiscalus quiscula</i>	Common Grackle
<i>Zenaida macroura</i>	Mourning Dove
Mammals	
<i>Otospermophilus beecheyi</i>	California ground squirrel
Reptiles	
<i>Uta stansburiana</i>	Common Side-blotched Lizard

Appendix D Special-Status Species and Their Potential to Occur Within the Project Site

Potential for occurrence	Common name (Scientific name)	Federal listing status	State listing status	CNPS list	Number of records within 10 miles	Year(s) sighted
HP	Burrowing owl (<i>Athene cunicularia</i>)	--	--	--	66	1980 - 2017
A	Stephens' kangaroo rat (<i>Dipodomys stephensi</i>)	Endangered	Threatened	--	82	1923 - 2011
A	Western mastiff bat (<i>Eumops perotis californicus</i>)	--	--	--	5	1957 - 2001
A	California horned lark (<i>Eremophila alpestris actia</i>)	--	--	--	8	1992 - 2015
A	Smooth tarplant (<i>Centromadia pungens ssp. laevis</i>)	--	--	1B.1	45	1969 - XXXX
A	California glossy snake (<i>Arizona elegans occidentalis</i>)	--	--	--	9	1929 - 2016
A	Least Bell's vireo (<i>Vireo bellii pusillus</i>)	Endangered	Endangered	--	20	2007 - 2015
A	Parish's brittlescale (<i>Atriplex parishii</i>)	--	--	1B.1	2	1999 - XXXX
A	Orange-throated whiptail (<i>Aspidoscelis hyperythra</i>)	--	--	--	32	1918 - 2005
A	Coast horned lizard (<i>Phrynosoma blainvillii</i>)	--	--	--	18	1929 - XXXX
A	Chaparral sand-verbena (<i>Abronia villosa var. aurita</i>)	--	--	1B.1	2	2004 - 2014
A	Long-spined spineflower (<i>Chorizanthe polygonoides var. longispina</i>)	--	--	1B.2	8	1980 - 2015
A	Crotch bumble bee (<i>Bombus crotchii</i>)	--	--	--	9	1938 - 2020
A	Southern grasshopper mouse (<i>Onychomys torridus ramona</i>)	--	--	--	4	1908 - 1938
A	Western pond turtle (<i>Emys marmorata</i>)	--	--	--	1	1987
A	Southern California rufous-crowned sparrow (<i>Aimophila ruficeps canescens</i>)	--	--	--	13	1992 - 2011
A	San Jacinto Valley crownscale (<i>Atriplex coronata var. notatior</i>)	Endangered	--	1B.1	13	2000 - 2015
A	Coastal California gnatcatcher (<i>Polioptila californica californica</i>)	Threatened	--	--	34	1980 - 2015
A	Coastal whiptail (<i>Aspidoscelis tigris stejnegeri</i>)	--	--	--	3	1993 - 2001

A	Western spadefoot (<i>Spea hammondi</i>)	--	--	--	34	1958 - 2019
A	Red-diamond rattlesnake (<i>Crotalus ruber</i>)	--	--	--	29	1923 - XXXX
A	Spreading navarretia (<i>Navarretia fossalis</i>)	Threatened	--	1B.1	12	1995 - 2020
A	Coulter's goldfields (<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>)	--	--	1B.1	20	2000 - 2017
A	White cuckoo bee (<i>Neolarra alba</i>)	--	--	--	1	1938
A	Northwestern San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>)	--	--	--	13	1992 - 2017
A	Thread-leaved brodiaea (<i>Brodiaea filifolia</i>)	Threatened	Endangered	1B.1	8	2000 - 2017
A	Wright's trichocoronis (<i>Trichocoronis wrightii</i> var. <i>wrightii</i>)	--	--	2B.1	4	1937 - 2011
A	Davidson's saltscale (<i>Atriplex serenana</i> var. <i>davidsonii</i>)	--	--	1B.2	7	1991 - 2013
A	Los Angeles pocket mouse (<i>Perognathus longimembris brevinasus</i>)	--	--	--	8	1940 - 2016
A	Western yellow bat (<i>Lasiurus xanthinus</i>)	--	--	--	4	1981 - 1992
A	San Bernardino kangaroo rat (<i>Dipodomys merriami parvus</i>)	Endangered	Candidate Endangered	--	6	1908 - 1957
A	Pocketed free-tailed bat (<i>Nyctinomops femorosaccus</i>)	--	--	--	1	1985
A	Tricolored blackbird (<i>Agelaius tricolor</i>)	--	Threatened	--	12	2011 - 2015
A	Riverside fairy shrimp (<i>Streptocephalus woottoni</i>)	Endangered	--	--	2	2009
A	San Bernardino ringneck snake (<i>Diadophis punctatus modestus</i>)	--	--	--	1	2000
A	American badger (<i>Taxidea taxus</i>)	--	--	--	2	1990
A	Payson's jewelflower (<i>Caulanthus simulans</i>)	--	--	4.2	7	1902 - 1982
A	Parry's spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>)	--	--	1B.1	15	1936 - 2012
A	California screw moss (<i>Tortula californica</i>)	--	--	1B.2	2	2012 - 2013
A	San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)	--	--	--	8	1998 - 2015
A	Southern California legless lizard (<i>Anniella stebbinsi</i>)	--	--	--	13	1967 - 2018
A	Bell's sage sparrow (<i>Artemisiospiza belli belli</i>)	--	--	--	7	1998 - 2002
A	loggerhead shrike (<i>Lanius ludovicianus</i>)	--	--	--	2	1994 - 2007
A	Southern Sycamore Alder Riparian Woodland (<i>Southern Sycamore Alder Riparian Woodland</i>)	--	--	--	6	1980 - 1985

A	Munz's onion (<i>Allium munzii</i>)	Endangered	Threatened	1B.1	6	1897 - 2016
A	Cooper's hawk (<i>Accipiter cooperii</i>)	--	--	--	3	1983 - 2001
A	White-faced ibis (<i>Plegadis chihi</i>)	--	--	--	1	1993
A	Golden eagle (<i>Aquila chrysaetos</i>)	--	--	--	1	1974
A	Ferruginous hawk (<i>Buteo regalis</i>)	--	--	--	3	1989 - 2008
A	San Diego ambrosia (<i>Ambrosia pumila</i>)	Endangered	--	1B.1	1	2009
A	Long-eared owl (<i>Asio otus</i>)	--	--	--	2	1983
A	San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	--	--	--	1	1999
A	Round-leaved filaree (<i>California macrophylla</i>)	--	--	2.2	2	1987
A	Quino checkerspot butterfly (<i>Euphydryas editha quino</i>)	Endangered	--	--	4	1945 - 1998
A	Palmer's grapplinghook (<i>Harpagonella palmeri</i>)	--	--	4.2	3	1986 - 1990
A	Little mousetail (<i>Myosurus minimus ssp. apus</i>)	--	--	3.1	1	1981
A	Dulzura pocket mouse (<i>Chaetodipus californicus femoralis</i>)	--	--	--	1	1993
A	White-tailed kite (<i>Elanus leucurus</i>)	--	--	--	1	1983
A	Yellow warbler (<i>Setophaga petechia</i>)	--	--	--	1	2014
A	Woven-spored lichen (<i>Texosporium sancti-jacobi</i>)	--	--	3	1	2002
A	Robinson's pepper-grass (<i>Lepidium virginicum var. robinsonii</i>)	--	--	4.3	4	1962 - 2008
A	Southern Riparian Scrub (<i>Southern Riparian Scrub</i>)	--	--	--	1	1980
A	Plummer's mariposa-lily (<i>Calochortus plummerae</i>)	--	--	4.2	1	1989
A	California Orcutt grass (<i>Orcuttia californica</i>)	Endangered	Endangered	1B.1	1	1941
A	Icenogle's socialchemmis spider (<i>Socalchemmis icenoglei</i>)	--	--	--	1	1997
A	Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	Threatened	Endangered	--	1	2001
A	Yellow-breasted chat (<i>Icteria virens</i>)	--	--	--	2	2001 - 2015
A	Lawrence's goldfinch (<i>Spinus lawrencei</i>)	--	--	--	1	2001
A	Mud nama (<i>Nama stenocarpa</i>)	--	--	2B.2	1	2010
A	Bald eagle (<i>Haliaeetus leucocephalus</i>)	Delisted	Endangered	--	2	1975 - 1981

CNPS List Definitions

List 1A: Plants presumed extinct in California

List 1B.1: Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California

List 1B.2: Plants rare, threatened, or endangered in California and elsewhere, fairly threatened in California

List 1B.3: Plants rare, threatened, or endangered in California and elsewhere, not very threatened in California

List 2.1: Plants rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California

List 2.2: Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California

Potential for Occurrence Definitions

Absent [A] – Species distribution is restricted by substantive habitat requirements, which do not occur – or are negligible within the Project Site, and no further survey or study is obligatory to determine likely presence or absence of this species.

Habitat Present [HP] – Species distribution is restricted by substantive habitat requirements, which occur within the Project Site, and further survey or study may be necessary to determine likely presence or absence of species.

Present [P] – Species or species sign were observed within the Project’s permanent disturbance footprint, or historically has been documented within the Project Site

Critical Habitat [CH] – The Project Site is located within a USFWS-designated critical habitat unit

Appendix E Burrowing Owl Survey Report

DRAFT

The Cubes at Placentia
October 2023

BURROWING OWL SURVEY

Perris United States Geological Survey
7.5-Minute Topographic Quadrangle Map

Prepared By



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TABLE OF CONTENTS

Section	Page
1.0 SUMMARY / INTRODUCTION	1-1
2.0 BURROWING OWL BACKGROUND	2-1
3.0 METHODS.....	3-1
4.0 BURROWING OWL SURVEY RESULTS	4-1
5.0 RECOMMENDED MEASURES TO AVOID AND MINIMIZED IMPACTS TO NESTING BIRDS	5-1
6.0 CERTIFICATION.....	6-2
7.0 REFERENCES.....	7-1
FIGURES	
Figure 1 Regional Location	1-2
Figure 2 Site Vicinity.....	1-3
Figure 3 Results.....	4-5

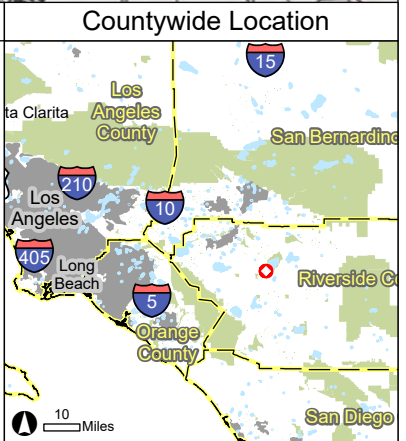
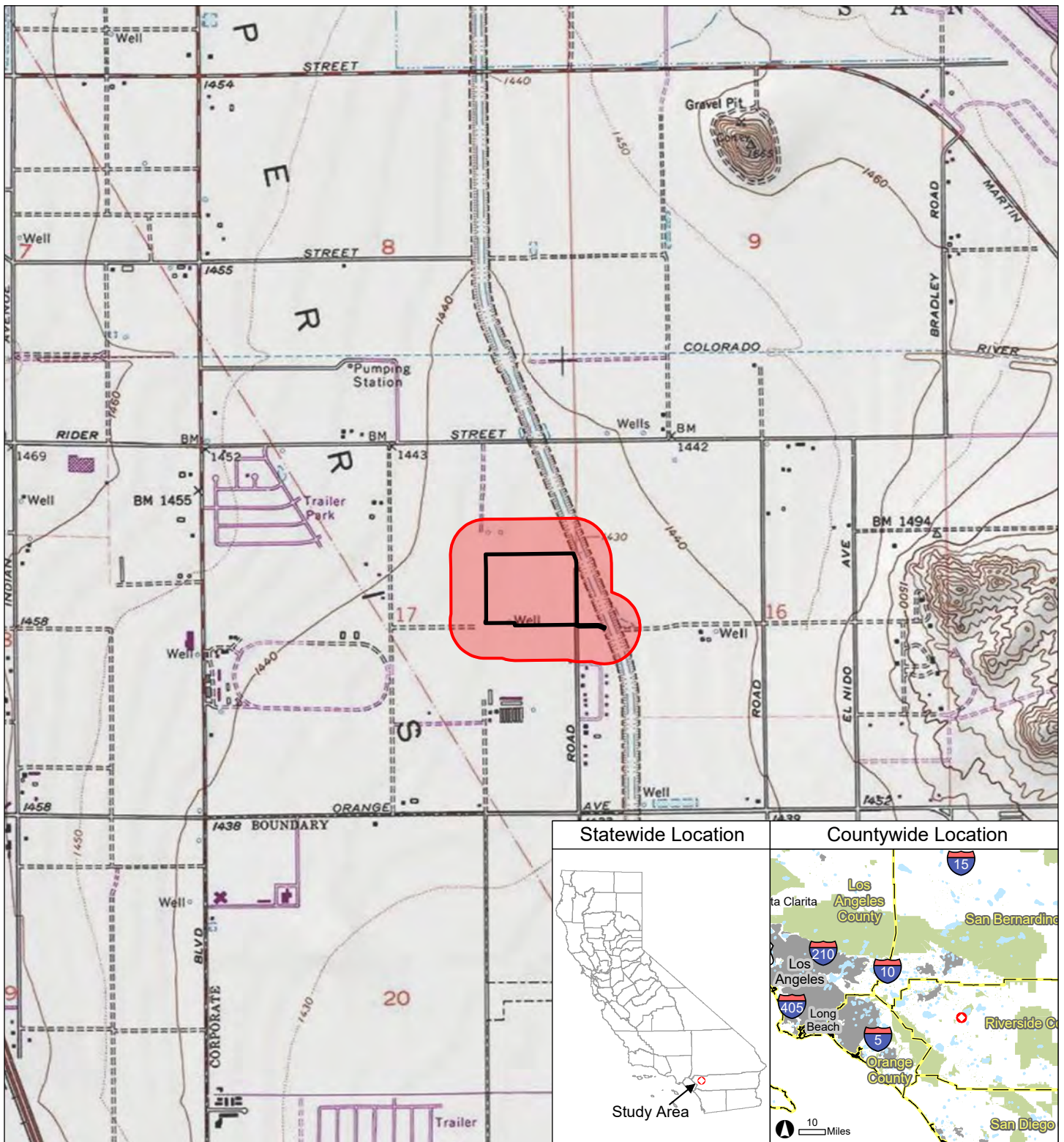
1.0 SUMMARY / INTRODUCTION

CRG Services Management, LLC (CRG) is proposing to develop the Cubes at Placentia (hereafter referred to as the Project). The Project is located north of Placentia Avenue, west of the Perris Valley Storm Drain, and east of Wilson Avenue, in Riverside County, California. (Assessor's Parcel Numbers [APN's] 300-170-003, 300-170-004, 300-170-005, a300-170-006 and 300-170-010). This report provides the methods, assumptions, and results of focused surveys for Burrowing Owl (*Athene cunicularia*). The Project is located within Township 04 South and Range 03 West - Section 17, of the Perris United States Geological Survey (USGS) 7.5-Minute Topographic Quadrangle Map (USGS 1988).

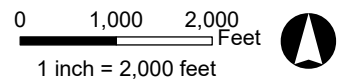
The Project occurs at an approximate elevation of 1,440 ft. above mean sea level (msl). Land use in the vicinity of the Project includes commercial, agriculture, residential and industrial endeavors. Agricultural and other commercial development activities were historically operated within the Project's proposed ground disturbance footprint (Project Site). There is also evidence of recent disking, and trash from illegal dumping throughout the Project Site.

For the purposes of this report, the "study area" includes the Project Site, plus a 500-foot buffer where practical (Figures 1 and 2). The Project is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), Mead Valley Area Plan. According to the Regional Conservation Authority (RCA) MSHCP Information Map, the Project Site is also within a predetermined survey area for the Burrowing Owl.

No Burrowing Owls were detected nesting, foraging, or dispersing within the study area during any of the 2022 or 2023 survey events. Numerous low quality potential burrows and burrow complexes were detected (Figure 3). The burrows observed lacked evidence of owl sign (i.e., tracks, molted feathers, cast pellets, prey remains, egg shell fragments, owl white wash, and nest burrow decoration materials). The lack of Burrowing Owl within the study area is likely a result of the depauperate landscape, and the presence of owl predators. Although the Project has the potential to impact lands that could be utilized by Burrowing Owl as habitat – under the appropriate suite of environmental conditions, surveys for the species are negative. Therefore, there is no presumption that Project implementation would result in the loss of individual Burrowing Owls, or that it would adversely affect local or regional populations of them.



- Study Area
- Project Site
- County Boundary (inset)
- Urban Area (inset)
- Interstate or State Highway (inset)
- Water Body (inset)
- Park or National Forest (inset)



Data Sources:
 - Bureau of Land Management Cadastral GIS 2015
 - USGS 7.5-minute quadrangle map
 - ESRI US Topo Maps accessed Aug 2023
 Map Prepared: 8-17-23

Prepared by:

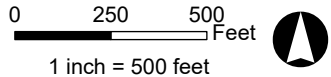
 Environmental Engineering and Science

The Study Area is located in San Bernardino County on the Perris USGS 7.5-minute quadrangle map; San Bernardino Meridian, Township 4 South, Range 3 West, in Section 17: Center coordinate (WGS 1984): Latitude 33.824, Longitude -117.211

Figure 1. Regional Location



- Project Site (29.85 ac)
- Study Area (108.59 ac)



Data Sources:
 - ESRI World Imagery accessed Aug 2023,
 imagery date: 2/26/2022

Map Prepared: 8-17-23

Prepared by:
NOREAS
 Environmental Engineering and Science

Figure 2. Site Vicinity

2.0 BURROWING OWL BACKGROUND

The Burrowing Owl has been designated by the California Department of Fish and Wildlife (CDFW) as a species of special concern. “State Species of Special Concern” status applies to animals not listed for protection under the federal Endangered Species Act or the California Endangered Species Act. The designation denotes that a species is declining at a rate that could result in State listing or that a species has historically occurred in low numbers and known threats to their persistence currently exist. The designation is intended to result in “special consideration” for these animals during the environmental review and discretionary permitting processes. In addition, the designation is also intended to focus research and management attention on poorly-known, potentially at-risk species, by stimulating the collection of additional information on their biology, distribution and status.

Burrowing Owls prefer open, dry annual or perennial grasslands, agricultural and rangelands, deserts, and scrublands characterized by low-growing vegetation. Burrowing Owls also prefer areas inhabited by small mammals as they predominately depend on mammal burrows (particularly ground squirrels) for subterranean nesting. Owls can be found at elevations ranging from 200 ft. below sea level to 9,000 ft. above (CDFG 1995). Burrowing Owls commonly perch on fence posts or on mounds outside their burrows. Northern populations of Burrowing Owls are usually migratory, while more southern populations may move short distances or not at all (Haug et al. 1993, Botelho 1996). Little is known about the winter ranges of migratory populations, although migratory Burrowing Owls are believed to mix with resident populations in California during the winter months (Coulombe 1971, Haug et al. 1993).

Burrowing Owls tend to be resident where food sources are stable and available year-round (Rosenberg et al. 1998). Typically, they disperse or migrate south in areas when food becomes seasonally scarce. Burrowing Owls tend to be opportunistic feeders. Large arthropods, mainly beetles and grasshoppers, comprise a substantial portion of their diet (Rosenberg et al. 1998). Small mammals, especially mice, rats, gophers, and ground squirrels, are also important food items. Other prey animals include reptiles and amphibians, scorpions, young cottontail rabbits, bats, and birds such as sparrows and Horned Larks. Consumption of insects increases during the breeding season. Burrowing Owls hover while hunting; after catching their prey they return to perches on fence posts or the ground. Burrowing Owls are primarily active at dusk and dawn, but, if necessary, will hunt at any time of day (CBOC 1993, CDFG 1995; Rosenberg et al. 1998).

The breeding season for Burrowing Owls is March to late August; the season tends to last later in the northern part of the range (CBOC 1993, CDFG 1995, Klute et al. 2003). Clutch size (number of birds hatched at the same time) ranges from 1 to 12 and averages about 7 (Ehrlich 1988). The incubation period is 28–30 days (Ehrlich 1988). The female performs all the incubation and brooding (sitting on eggs to hatch them by the warmth of the body) and is believed to remain continually in the burrow while the male does all the hunting (Rosenberg et al. 1998). The young fledge (take their first flight out of the nest) at 44 days but remain near the burrow and join the adults in foraging flights at dusk (Ehrlich 1988). The maximum life span recorded for a banded bird in the wild is approximately 8.5 years (Rosenberg et al. 1998).

In resident populations, nest site fidelity is common, with many adults nesting each year in their previous year’s burrow; young from the previous year often establish nest sites near (<900 ft) their natal sites (Trulio 1997, Rosenberg et al. 1998). Burrowing Owls in migratory populations also often nest in the same burrow, particularly if the previous year’s breeding was successful (Belthoff and King 1997). Other birds in the same population may move to burrows near their previous year’s burrow. The species is

threatened primarily by loss, degradation, and fragmentation of habitat, although they do readily inhabit anthropogenic landscapes such as agricultural fields, golf courses, and airport grasslands (Korfanta et al. 2005).

DRAFT

3.0 METHODS

Prior to beginning field surveys, resource specialists were consulted and available information (i.e., resource management plans and relevant documents) was reviewed to determine the locations and types of resources that have the potential to exist within - and adjacent to, the study area. Resources were evaluated within several miles of the Project. The materials reviewed included, but were not limited to, the following:

- U.S. Fish and Wildlife Service (USFWS) Critical Habitat Mapper and File Data (USFWS 2023a);
- USFWS Carlsbad Field Office Species List for Riverside County (USFWS 2023b);
- California Natural Diversity Database maintained by the CDFW (CDFW 2023);
- 1993 California Burrowing Owl Consortium (CBOC) Burrowing Owl Survey Protocol and Mitigation Guidelines;
- 2012 California Department of Fish and Game (CDFG) Staff Report on Burrowing Owl Mitigation;
- Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP 2003); and
- Aerial Photographs (Microsoft Corporation 2023).

A Burrowing Owl habitat suitability assessment and burrow survey, were conducted on 18 February 2022, in accordance with the *29 March 2006 Western Riverside County MSHCP Burrowing Owl Survey Instructions*. Natural and non-natural substrates were examined for potential burrow sites. All potential burrows encountered were examined for shape, size, molted feathers, whitewash, cast pellets and/or prey remains. Disturbance characteristics and all other animal sign encountered within the study area were documented to the greatest extent practical as well.

Since suitable habitat was detected for Burrowing Owl within the study area, six (6) additional surveys were performed (details are presented within *TABLE NO. 1 - SUMMARY OF SURVEY CONDITIONS FOR SURVEYS*). A hand-held, global positioning system (GPS) unit with sub meter accuracy was used to survey predetermined transects that were prepared within a Geographic Information System (Figure 3). Survey transects were spaced at appropriate intervals to allow for complete visual coverage of the Project Site and study area. Where necessary, transect spacing was reduced or expanded in the field - to account for differences in terrain, vegetation density, visibility and access considerations (i.e., private property). Where access was limited, observations were made from the nearest appropriate vantage points by means of public rights-of-way with the use of binoculars, and spotting scopes. The presence of a species was based on direct observations of individual(s), sign, and/or vocalization. Avian scientific nomenclature and common names follows Sibley (2000).

Field surveys were conducted when weather conditions were conducive to observing birds. Surveys were not performed during rain, extreme temperatures, high winds (> 25 miles per hour), or dense fog. Targeted owl surveys were conducted on 08 and 15 March, 01 and 21 April 2022, and 21 June and 06 July 2023. Surveys were performed from approximately 1 hour before sunrise to 2 hours after sunrise, when weather conditions were conducive to observing owls outside of burrows.

4.0 BURROWING OWL SURVEY RESULTS

The majority of the study area consists of heavily disturbed ruderal vegetation with no substantial native stands of vegetation. Agricultural, commercial development, and residential activities were historically operated within the Project Site. There is also evidence of recent disking, and trash from illegal dumping throughout the Project’s proposed disturbance footprint.

No Burrowing Owls were detected nesting, foraging, or dispersing within the study area during the 2022 and 2023 survey events. Nonetheless, potential burrows and burrow complexes – albeit low quality, were detected (Figure 3). The burrows observed lacked evidence of owl tracks, molted feathers, cast pellets, prey remains, egg shell fragments, owl white wash, or nest burrow decoration materials. The presence of several burrows and burrow complexes >11 cm in diameter (height and width), and >150 cm in depth warranted recording and reporting; even though the aforementioned burrows lacked owl sign or owls. Survey conditions during the field events are presented in Table No. 1.

TABLE NO. 1 - SUMMARY OF SURVEY CONDITIONS FOR SURVEYS

Survey Dates	Surveyors	Survey Type	Time ¹ Start/End	Temperature °Fahrenheit Start/End	Wind Speed (MPH)	Start/End Cloud Cover (%)	Date of last precipitation prior to survey
2/18/22	Lincoln Hulse and Brent Helm	Burrow Survey	0730 - 1600	50/73	0-05	Clear/Clear	2/15/22
3/08/22	Lincoln Hulse and Brent Helm	Crepuscular BUOW (Morning) Survey 1)	0515- 1145	45/66	0-05	Clear/Clear	02/23/22
3/15/22	Lincoln Hulse	Crepuscular BUOW (Morning) Survey 2)	0530- 1115	48/77	0-05	Clear/Clear	03/04/22
4/01/22	Lincoln Hulse and Brent Helm	Crepuscular BUOW (Morning) Survey 3)	0530- 1100	54/64	0-05	60/40	03/28/22
4/21/22	Lincoln Hulse	Crepuscular BUOW (Morning) Survey 4)	0530- 1130	49/70	0-05	40/40	03/28/22
6/21/2023	Lincoln Hulse	Crepuscular BUOW (Morning) Survey 5)	0545- 1130	57/77	0-05	Clear/Clear	05/31/23
7/07/2023	Lincoln Hulse	Crepuscular BUOW (Morning) Survey 6)	0515- 1100	59/84	0-05	Clear/Clear	05/31/23

BUOW = Burrowing Owl
MPH = Miles Per Hour

¹ While targeted owl surveys were limited to approximately 1 hour before sunrise to 2 hours after sunrise, and 2 hours before sunset to 1 hour after sunset; the start and end times presented within this table detail all time spent within the study area on any given day - which include setup, reporting and demobilization activities.

The lack of Burrowing Owls within the study area is likely a result of the depauperate landscape, and the presence of owl predators (e.g., Red-Tailed Hawk [*Buteo jamaicensis*] and Cooper's hawk [*Accipiter cooperii*]). Although the Project has potential to impact lands that could be utilized by Burrowing Owl as habitat – under the appropriate suite of environmental conditions, surveys for the species are negative. Therefore, there is no presumption that Project implementation would result in the loss of individual Burrowing Owl, or that it would adversely affect local or regional populations of them.

Representative photographs of the study area are provided below, and wildlife detected during the surveys are provided within Table No. 2.

	<p>Photograph 1. Facing East.</p>
	<p>Photograph 2. Facing West.</p>



Photograph 3. Facing South.



Photograph 4. Potential Burrow

TABLE NO. 2 – WILDLIFE DETECTED DURING FIELD SURVEYS

Scientific Name	Common Name
Birds	
<i>Agelaius phoeniceus</i>	Red-winged blackbird
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Buteo jamaicensis</i>	Red-Tailed hawk
<i>Cathartes aura</i>	Turkey vulture
<i>Corvus corax</i>	Common Raven
<i>Calypte anna</i>	Anna's hummingbird
<i>Chondestes grammacus</i>	Lark sparrow
<i>Corvus brachyrhynchos</i>	American crow
<i>Sturnus vulgaris</i>	European Starling
<i>Carpodacus mexicanus</i>	House Finch
<i>Charadrius vociferus</i>	Killdeer
<i>Sturnella neglecta</i>	Western Meadowlark
<i>Petrochelidon pyrrhonota</i>	Cliff swallow
<i>Columba livia</i>	Rock Pigeon
<i>Euphagus cyanocephalus</i>	Brewer's Blackbird
<i>Zonotrichia leucophrys</i>	White-crowned sparrow
<i>Falco sparverius</i>	American kestrel
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Sayornis saya</i>	Say's phoebe
<i>Passer domesticus</i>	House Sparrow
<i>Sayornis nigricans</i>	Black phoebe
<i>Quiscalus quiscula</i>	Common Grackle
<i>Zenaida macroura</i>	Mourning Dove
Mammals	
<i>Otospermophilus beecheyi</i>	California ground squirrel
Reptiles	
<i>Uta stansburiana</i>	Common Side-blotched Lizard

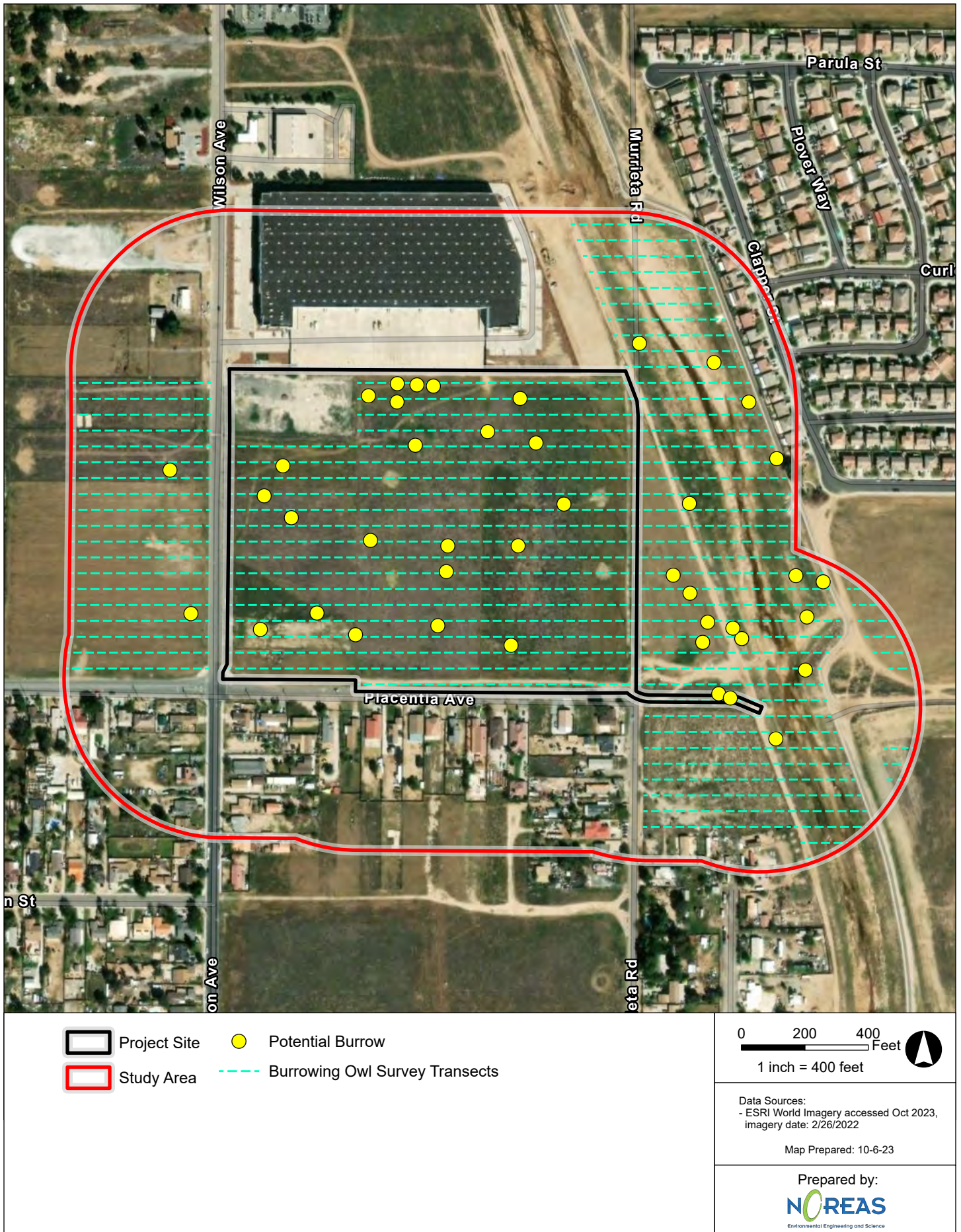


Figure 3. Burrowing Owl Potential Burrows

5.0 RECOMMENDED MEASURES TO AVOID AND MINIMIZED IMPACTS TO NESTING BIRDS

The following measures are recommended as a means of avoiding and minimizing adverse impacts to nesting birds that have the potential to occur within the Project Site, and on adjacent lands:

- Due to the presence of potentially suitable Burrowing Owl habitat within the Project Site, a 30-day pre-construction survey for owls is warranted prior to initial ground-disturbing activities (including vegetation clearing, clearing and grubbing, tree removal, site watering, equipment staging, grading, etc.). This is an MSHCP requirement, as it safeguards that no owls have colonized the Project Site in the days - or weeks, preceding the ground-disturbing activities.
 - If Burrowing Owls have colonized the Project Site prior to the initiation of ground-disturbing activities, the Project shall immediately inform the RCA and the appropriate wildlife agencies, to coordinate regarding the need for a Project specific Burrowing Owl Protection, Management and/or Relocation Plan.
 - If ground-disturbing activities occur, but the Project Site is left undisturbed for more than 30 days, a pre-construction survey will again be warranted to safeguard that Burrowing Owl has not colonized the Project Site since it was last disturbed. If Burrowing Owl is found, the same coordination described above is necessary
- In order to comply with Section 10 of the Migratory Bird Treaty Act and relevant sections of the California Fish and Game Code, any vegetation clearing within the Project Site should take place outside of the typical avian nesting season (e.g., March 15th until September 1st) – to the maximum extent practical. If work needs to take place between March 15th and September 1st, a pre-activity survey for nesting birds would be warranted prior to the onset of Project activities. To the maximum extent practicable, a buffer zone from occupied nests should be maintained during physical ground disturbing activities. Once nesting has ended, the buffer may be removed.
- Limits of grading and Project activities shall be clearly delineated with temporary construction staking, flagging, or similar materials.
- To avoid attracting predators and nuisance species, the Project Site shall be clear of debris, where possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from the Project.

6.0 CERTIFICATION

The services performed and documented in this report have been conducted in a manner consistent with the level of care and skill ordinarily exercised by other professional consultants under similar circumstances. No other representations are either expressed or implied and no warranty or guarantee is included or intended in this report. Opinions relating to presence, absence, or potential for occurrence of biological resources are based on limited data and actual conditions may vary from those encountered at the times and locations where the data were obtained despite due professional care.

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: October 9, 2023

SIGNED: 
Lincoln Hulse

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Appendix F Photographic Log

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Photograph 1. Facing Southeast.



Photograph 2. Facing West.



Photograph 3. Facing Southwest.



Photograph 4. Facing North.

Appendix G
Delineation of Wetlands & Waterways

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The Cubes at Placentia

Wetland and Waterways Assessment

October 2023

Prepared By



16361 Scientific Way
Irvine, CA 92618
(949) 467-9116

TABLE OF CONTENTS

Section	Page
1.0 INTRODUCTION.....	1-1
2.0 METHODS.....	2-1
2.1 Regulatory Review.....	2-1
2.1.1 Army Corps of Engineers.....	2-1
2.1.2 Regional Water Quality Control Board.....	2-4
2.1.3 California Fish and Game Code	2-5
2.1.4 Western Riverside County Multiple Species Habitat Conservation Plan Riparian Riverine Resources & Vernal Pools	2-6
2.2 Literature Review	2-7
2.2.1 Aerial Photography	2-8
2.2.2 U.S. Fish and Wildlife Service National Wetland Inventory Data and Environmental Protection Agency WATERS GeoViewer.....	2-8
2.2.3 Antecedent Precipitation Tool	2-8
2.2.4 Topography.....	2-8
2.3 Procedures and Field Data Collection.....	2-9
2.3.1 Waters of the United States Delineation Techniques	2-9
2.3.2 Waters of the State Delineation Techniques	2-9
2.3.3 Vegetation	2-10
2.3.4 Soils.....	2-11
2.3.5 Hydrology & Impounded Features.....	2-12
3.0 SURVEY RESULTS.....	3-1
3.1 Soils.....	3-1
3.2 Hydrology.....	3-1
3.3 Waters of the United States and Waters of the State	3-2
4.0 PROPOSED RECOMMENDATIONS AND MEASURES TO OFFSET ADVERSE IMPACTS TO SPECIAL AQUATIC RESOURCE AREAS	4-1
5.0 REFERENCES.....	5-1

FIGURES

Figure 1. Regional Location	1-3
Figure 2. Vicinity Map	1-4
Figure 3. Delineation of Waters and Wetlands	3-1
Figure 5. Regional Watershed Map.....	3-3
Figure 6. FEMA 100-Year Flood Zone	3-4
Figure 7. National Wetlands Inventory	3-5

APPENDICES

Appendix A	Photograph Log
Appendix B	Data Forms

COMMON ACRONYMS AND ABBREVIATIONS

CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CWA	Clean Water Act
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
GIS	Geographic Information System
GPS	Global Positioning Systems
HUC	Hydrologic Unit Code
MESA	Mapping Episodic Stream Activity Field Guide
MSHCP	Western Riverside Multiple Species Habitat Conservation Plan
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
OBL	Obligate Wetland
OHWM	Ordinary High Water Mark
RHA	Rivers and Harbors Act
RPW	Relatively Permanent Waters
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
TNW	Traditional Navigable Waters
UPL	Upland
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WoS	Waters of the State
WoUS	Waters of the United States

1.0 INTRODUCTION

This assessment of *Waters of the United States* (WoUS) and *Waters of the State* (WoS) was prepared for The Cubes at Placentia (hereafter referred to as the “Project”). The Project occurs at an approximate elevation of 1,440 feet above mean sea level within the Perris U.S. Geographic Survey 7.5-Minute Quadrangle Maps (USGS 1981). The Project is located north of Placentia Avenue, and east of Wilson Avenue, in Riverside County, California. (Assessor's Parcel Numbers [APN's] 300-170-003, 300-170-004, 300-170-005, 300-170-006 and 300-170-010, Figures 1 and 2). This report is intended to delineate the extent of features that may be subject to the following within the Project Site:

- ✓ Regulation by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA) and the Regional Water Quality Control Board's (RWQCB) legal authority in accordance with Section 401 of the CWA as WoUS;
- ✓ California Department of Fish and Wildlife (CDFW) jurisdiction pursuant to Section 1600 (et seq.) of the California Fish and Game Code (CFG Code) and Section 13260 of the California Water Code (CWC) as WoS; and
- ✓ Protection as defined under Section 6.1.2 of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) as Species Associated with Riparian/Riverine Areas and Vernal Pools.

For the purposes of this analysis, all features that qualify as CDFW Section 1600 (et seq.) jurisdictional as WoS, are considered MSHCP riparian/riverine resources. This evaluation has been completed using data acquired from current and historic imagery, hydrologic databases, analytic tools, physical on the ground analyses/measurements, and a review of the regulations, manuals, and guidance documentation created to identify the geographic limits of WoUS and WoS (including but not limited to surface water conveyance features, riparian plant communities, riverine land cover types and wetlands and vernal pools). To that end, subject matter experts assessed the Project and its localized watershed for the presence of riparian/riverine resources, lakes, rivers, streambeds, surface waters, and wetlands on February 18, 2022 and September 25, 2023.

Historic and current aerial photography of the Project were reviewed, prior to and during the field assessments. Aerial photography was informative with deference to the state and function of land resources in both the present, and historic context. The U.S. Environmental Protection Agency (EPA) WATERS GeoViewer tool also provided access to spatial data sets - such as interactive Upstream/Downstream search capabilities, to assist in determining the jurisdictional status of resources detected within the region. Additionally, the Federal Emergency Management Agency (FEMA) flood zone was reviewed, and the National Wetland Inventory – which is maintained by the U.S. Fish and Wildlife Service (USFWS). This was all done to support the identification of potential aquatic resources within Project limits.

For the purposes of this document, the Project Site is defined as the Project's proposed disturbance footprint (Figure 2). Please note that the delineation of potential WoUS was conducted following guidance in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (USACE 2008). The ordinary high-water mark (OHWM) of potential other WoUS was delineated following the guidance in *A Field Guide to the Identification of the Ordinary High-Water Mark in the Arid West Region in the Western United States* (USACE 2008b).

This document presents NOREAS Inc. (NOREAS) best effort at estimating WoUS and WoS boundaries using the most up-to-date regulations, written policies, and guidance from the USACE, RWQCB, CDFW, and the Western Riverside County Regional Conservation Authority (RCA). However, only the USACE, RWQCB, CDFW and RCA can make a final determination of jurisdictional aquatic resource area boundaries.

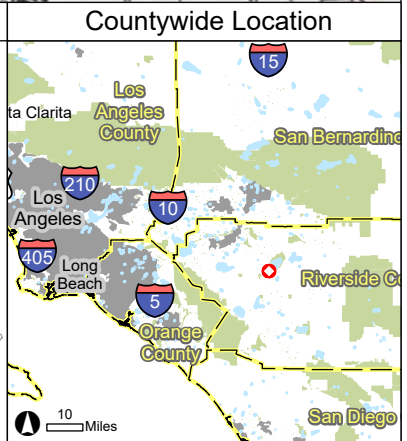
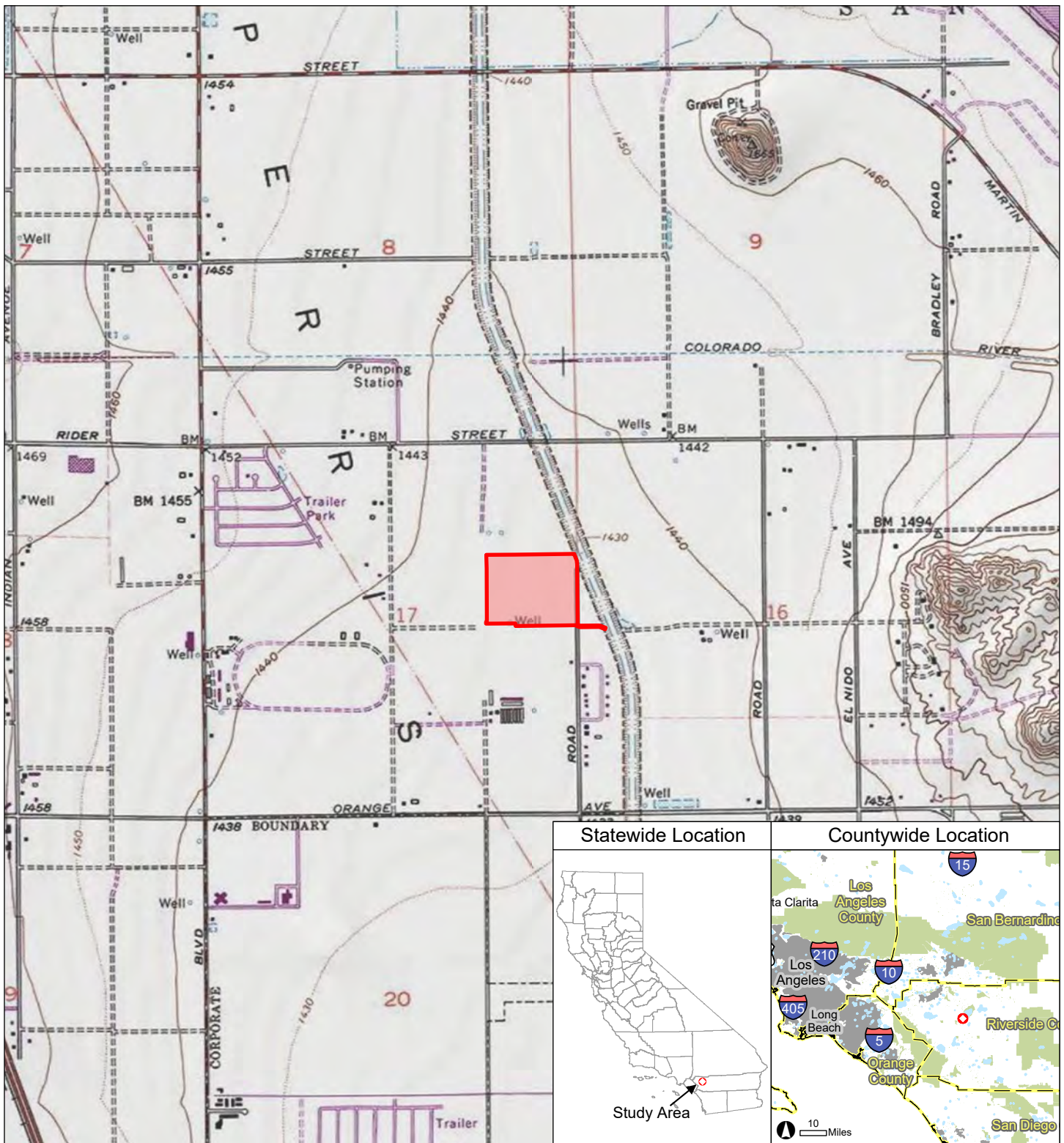
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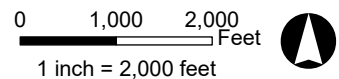
Lake Creek Industrial
Michael Johnson
1302 Brittany Cross Road
Santa Ana, CA 92705
786 200-9681

Please note that one or both individuals will make themselves available to accompany a representative from the USACE, RWQCB, CDFW, or Riverside County personnel to the Project and allow them to enter the Project Site; and to collect samples during normal business hours - if needed.

In summary, the evidence provided herein implies that the Project Site includes WoS, but avoids WoUS (Figure 3). Notably, any location within the Perris Valley Storm Drain bearing signs of an OHWM, have been specifically circumvented by the design of the Project's disturbance footprint. It's important to mention that while flows from the Perris Valley Storm Drain do eventually merge with Canyon Lake, all impacts to WoUS are being deliberately avoided. But the Project Site does extend into the upper earthen western exterior boundaries of the aforesaid man-made storm drainage facility. This area is void of vegetation and is regularly maintained to allow access to the structure. This location is coincident with a discernable bank line with topographic relief, and contributes – albeit in a limited capacity, to water conveyance and connectivity downstream. Therefore, the Project Site includes 0.002-acres of WoS - non-riparian ephemeral streambed, which constitute a total of 13 linear feet (Figure 3).



- Project Site
- County Boundary (inset)
- Urban Area (inset)
- Interstate or State Highway (inset)
- Water Body (inset)
- Park or National Forest (inset)



Data Sources:
 - Bureau of Land Management Cadastral GIS 2015
 - USGS 7.5-minute quadrangle map
 - ESRI US Topo Maps accessed Aug 2023
 Map Prepared: 8-16-23

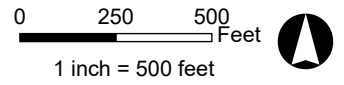
Prepared by:
NOREAS
 Environmental Engineering and Science

The Study Area is located in San Bernardino County on the Perris USGS 7.5-minute quadrangle map; San Bernardino Meridian, Township 4 South, Range 3 West, in Section 17: Center coordinate (WGS 1984): Latitude 33.824, Longitude -117.211

Figure 1. Regional Location



 Project Site (29.85 acres)



Data Sources:
 - ESRI World Imagery accessed 8/16/2023,
 imagery date: 2/26/2022

Map Prepared: 8-16-23

Prepared by:

 Environmental Engineering and Science

Figure 2. Site Vicinity

2.0 METHODS

2.1 Regulatory Review

2.1.1 Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States (WoUS). The term “WoUS” is defined in Corps regulations at 33 CFR Part 328.3(a) as:

- (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;
- (2) Impoundments of waters otherwise defined as WoUS under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;
- (3) Tributaries of waters identified in paragraphs (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;
- (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) of this section and with a continuous surface connection to those waters;
- (5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section 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) of this section.

Corps regulations at 33 CFR Part 328.3(b) exclude the following from being “WoUS” even where they otherwise meet the terms of paragraphs (a)(2) through (5) above:

- (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 WoUS; and
 - (8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(c)(4) as:

...that line on the shore established by the fluctuation 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.

“Adjacent” wetlands are defined by 33 CFR 328.3(c)(2) as having a “continuous surface connection” to other WoUS.

2.1.1.1 Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term “wetlands” (a subset of “WoUS”) is defined at 33 CFR 328.3(c)(1) as “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.” In 1987 the Corps published the Wetland Manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the Wetland Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the Wetland Manual and Arid West Supplement provide great

detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- More than 50 percent of the dominant plant species at the site must be hydrophytic in nature as published in the most current national wetland plant list;
- Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Whereas the Wetland Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criterion with the exception for areas with “problematic hydrophytic vegetation”, which require a minimum of 14 days of ponding to be considered a wetland.

2.1.1.2 Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, the U.S. Environmental Protection Agency (EPA) asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of “WoUS” in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the Clean Water Act.

The written opinion notes that the court’s previous support of the Corps’ expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc.*) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.

Therefore, the court’s opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the Clean Water Act (regardless of any interstate commerce connection).

2.1.2 Regional Water Quality Control Board

The State Water Resource Control Board and each of its nine Regional Boards regulate the discharge of waste (dredged or fill material) into WoUS and waters of the State (WoS). WoUS are defined above and WoS are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code 13050[e]).

Section 401 of the CWA requires certification for any federal permit or license authorizing impacts to waters of the U.S. (i.e., waters that are within federal jurisdiction), such as Section 404 of the CWA and Section 10 of the Safe Rivers and Harbors Act, to ensure that the impacts do not violate state water quality standards. When a project could impact waters outside of federal jurisdiction, the Regional Board has the authority under the Porter-Cologne Water Quality Control Act to issue Waste Discharge Requirements (WDRs) to ensure that impacts do not violate state water quality standards. Clean Water Act Section 401 Water Quality Certifications, WDRs, and waivers of WDRs are also referred to as orders or permits.

2.1.2.1 State Wetland Definition

The State Board Wetland Definition and Procedures define an area as wetland as follows:

An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation.

The following wetlands are WoS:

1. *Natural wetlands;*
2. *Wetlands created by modification of a surface water of the state¹; and*
3. *Artificial wetlands² that meet any of the following criteria:*
 - a. *Approved by an agency as compensatory mitigation for impacts to other WoS, except where the approving agency explicitly identifies the mitigation as being of limited duration;*
 - b. *Specifically identified in a water quality control plan as a wetland or other water of the state;*
 - c. *Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the*

¹ “Created by modification of a surface water of the state” means that the wetland that is being evaluated was created by modifying an area that was a surface water of the state at the time of such modification. It does not include a wetland that is created in a location where a water of the state had existed historically, but had already been completely eliminated at some time prior to the creation of the wetland. The wetland being evaluated does not become a water of the state due solely to a diversion of water from a different water of the state.

² Artificial wetlands are wetlands that result from human activity.

natural landscape; or

d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not WoS unless they also satisfy the criteria set forth in 2, 3a, or 3b):

- i. Industrial or municipal wastewater treatment or disposal,*
- ii. Settling of sediment,*
- iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,*
- iv. Treatment of surface waters,*
- v. Agricultural crop irrigation or stock watering,*
- vi. Fire suppression,*
- vii. Industrial processing or cooling,*
- viii. Active surface mining – even if the site is managed for interim wetlands functions and values,*
- ix. Log storage,*
- x. Treatment, storage, or distribution of recycled water, or*
- xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or*
- xii. Fields flooded for rice growing.*

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not WoS. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

2.1.3 California Fish and Game Code

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the 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 has provided information and practical guidance for consistent and uniform administration of Section 1600 (et seq.) of the CFG Code within *A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607* (ESD-CDFG 1994). In its most general sense, CFG Code Sections 1600 (et seq.) establishes a fee-based process to safeguard that projects conducted in and around lakes, rivers, or streams do not adversely impact fish, aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife resources. Or, when adverse impacts cannot be avoided, compliance with the aforesaid CFG Code Sections safeguards that adequate mitigation and/or compensation is provided.

While there is no definition for the term lake in the CFG Code or associated regulations, the term stream, which includes creeks and rivers, is defined within Title 14, California Code of Regulations (CCR), Section 1.72:

- "A stream is 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 a surface or subsurface flow that supports or has supported riparian vegetation."

Nonetheless, this definition is not complete with respect to CFG Code Sections 1600 (et seq.) because it does not define the terms bed, channel, or bank and does not define other stream-related features such

as aquatic life, riparian vegetation, etc. As a result, CDFW published the following concepts with deference to what constitutes a stream for the purposes of implementing and enforcing CFG Code Sections 1600 (et seq.) (ESD-CDFG 1994).

1. The term stream can include intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams (United States Geological Survey maps, USGS), and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be ***considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife.***
2. Biologic components of a stream may ***include aquatic and riparian vegetation, all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system.***
3. As a physical system, a stream not only includes water (at least on an intermittent or ephemeral basis) ***but also a bed or channel, a bank and/or levee, instream features such as logs or snags, and various flood plains depending on the return frequency of the flood event being considered (i.e., 10, 50, or 100 years, etc.).***
4. The lateral extent of a stream can be measured in several ways depending on a particular situation and the type of fish or wildlife resource at risk. The following criteria are presented in order from the most inclusive to the least inclusive:
 - a. The flood plain of a stream can be the broadest measurement of a stream's lateral extent depending on the return frequency of the flood event used. For most flood control purposes, the 100-year flood event is the standard measurement and maps of the 100-year flood plain exist for many streams. However, the 100-year flood plain may include significant amounts of upland or urban habitat and therefore may not be appropriate in many cases.
 - b. The outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats and is therefore a reasonable and identifiable boundary for the lateral extent of a stream. In most cases, the use of this criterion should result in protecting the fish and wildlife resources at risk.
 - c. Most streams have a natural bank which confines flows to the bed or channel except during flooding. In some instances, particularly on smaller streams or dry washes with little or no riparian habitat, the bank should be used to mark the lateral extent of a stream.
 - d. A levee or other artificial stream bank could also be used to mark the lateral extent of a stream. However, in many instances, there can be extensive areas of valuable riparian habitat located behind a levee.

Any of the above criteria could be applicable in determining what constitutes a stream depending on the potential for the proposed activity to adversely affect fish and other stream-dependent wildlife resources.

2.1.4 Western Riverside County Multiple Species Habitat Conservation Plan Riparian Riverine Resources & Vernal Pools

According to Section 6.1.2 of the MSHCP:

- “Riparian/Riverine Areas are lands which contain Habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.”
- “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, and the definition of the watershed supporting vernal pool hydrology, must be made on a case-by-case basis. Such determinations should consider the length of the time the area exhibits upland and wetland characteristics and 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.”

As defined under Section 6.1.2 of the MSHCP, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, riparian/riverine areas are areas dominated by trees, shrubs, persistent emergent plants, or emergent mosses and lichens which occur close to or are dependent upon nearby freshwater, or areas with freshwater flowing during all or a portion of the year. Conservation of these areas is intended to protect habitat that is essential to several listed or special-status water-dependent fish, amphibian, avian, and plant species.

For this analysis, all features that qualify as CDFW jurisdiction are considered MSHCP riparian/riverine resources, and WoS.

2.2 Literature Review

For the purposes of this document, the “Project Site” is defined as the Project’s proposed ground disturbance footprint (Figure 2). Prior to conducting fieldwork, the following information was reviewed to determine watershed characteristics, locations and types of aquatic resources that may be present within the Project Site:

- Perris Topographic Map 7.5-minute USGS Map (USGS 1981);
- Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants (Brady et al. 2013);
- 2023 color aerial photographs (Bing Maps 2023);
- Google Earth version 5.2.1.1588 (May 2023);
- MSHCP Transportation and Land Management Agency Geographic Information Services Database (GISD 2023);
- Regional Conservation Authority GIS Data Mapping Tool (RCA 2023, <https://www.wrc-rca.org/rcamaps/>);
- Natural Resource Conservation Service, Soil Survey Geographic Database (SSURGO) (USDA-NRCS 2023a);
- Natural Resource Conservation Service, Watershed Boundary Dataset (USDA-NRCS 2023b);

-
- Environmental Protection Agency Enviromapper for Water (EPA 2023);
 - Federal Emergency Management Agency (FEMA 2023);
 - National Wetlands Inventory (NWI) maintained by the US Fish and Wildlife Service (USFWS) (USFWS 2023);
 - 2023 U.S. Environmental Protection Agency (EPA) WATERS GeoViewer Tool (epa.maps.arcgis.com/apps/webappviewer/);
 - 2023 EPA Antecedent Precipitation Tool (APT) (epa.gov/wotus/antecedent-precipitation-tool-apt);
 - California Department of Water Resources Weather Station #240 (CIMIS 2023).

The Project Site and adjacent lands were examined to assess the presence of a discernable bed and bank, riparian or aquatic habitat, aquatic fish and wildlife resources, *Traditional Navigable Waters* (TNW), *Relatively Permanent Waters* (RPW), or evidence of a change in vegetation type, density, or vigor. The intent of this assessment was to determine where water may flow, or may not flow - or terminate, and was used to determine efficient locations for visual inspections to occur in the field.

2.2.1 Aerial Photography

Historic and current aerial photography of the Project and adjacent areas were reviewed, prior to and during the field assessments. Aerial photography was informative with deference to the state and function of land resources in both the present, and historic context. Inundation and vegetative signatures on aerial images can imply the presence - or absence, of lakes, rivers, or streambed systems within a discrete location.

2.2.2 U.S. Fish and Wildlife Service National Wetland Inventory Data and Environmental Protection Agency WATERS GeoViewer

The Federal Emergency Management Agency (FEMA) flood zone is depicted in Figure 6. Furthermore, the National Wetland Inventory (NWI) – which is maintained by the U.S. Fish and Wildlife Service (USFWS), was reviewed to support the identification of potential aquatic resources within Project limits (Figure 7). However, this database (i.e., the NWI) specifically rejects its use for regulatory jurisdictional review. Additionally, the U.S. Environmental Protection Agency (EPA) WATERS GeoViewer tool provided access to spatial data sets - such as interactive Upstream/Downstream search capabilities, and interactive watersheds, to assist in determining the jurisdictional status of resources detected within and adjacent to the Project (epa.maps.arcgis.com/apps/webappviewer/).

2.2.3 Antecedent Precipitation Tool

The Antecedent Precipitation Tool (APT) was also utilized to determine whether field observations are representative of typical climatic conditions (i.e., those that have been experienced over the past thirty years). This tool is informative when assessing whether certain field conditions are observed during typical, as opposed to atypical rainfall cycles. The APT queries data from weather stations that are located within a 30-mile radius from the Project.

2.2.4 Topography

USGS topographic maps were reviewed as well. These maps tend to illustrate elevation contours, drainage patterns, and hydrography within the Project limits and on adjacent lands. USGS 7.5-Minute Topographic Quadrangle Perris was evaluated to facilitate identification of potential drainage features within the Project Site and on adjacent lands - as indicated from topographic changes, blue-line features, or visible drainage patterns in order to characterized features.

2.3 Procedures and Field Data Collection

Potential USACE-defined wetlands, WoUS, WoS and other riverine resources were delineated in the field with a handheld Global Positioning System (GPS) receiver. The surface area of each feature was then calculated within a Geographic Information System (GIS) to determine total jurisdiction area within the Project Site. KMZ (Keyhole Markup Language Zipped) files and GIS/ESRI shapefiles are available for all mapped resources, upon request, as aquatic resource boundaries were not permanently flagged or demarked within the Project Site at the time of delineation in 2023.

2.3.1 Waters of the United States Delineation Techniques

The specific delineation of signatures tied to WoUS was conducted within the Project Site using a combination of on the ground quantification, remote sensing and ground verification via pedestrian surveys in 2022 and 2023. Assessment of the presence of an OHWM was based on observations - or evidence of flow, and unique characteristics indicating the presence of active water flow, shelving, drift lines, and disturbed vegetation. Or other indicators identified in the “Field Guide to Identification of the OHWM in the Arid West Region of the Western United States” (USACE 2008). OHWM characteristics in this region would primarily consist of sediment sorting, destruction of terrestrial vegetation, and a change in substrate in the feature as compared to the surrounding upland area. However, features were excluded from this assessment if they exhibited swales and erosional characteristics in accordance with USACE CWA Regulations Title 33 CFR Part 328.3(b) Not Waters of the United State³.

Data collected included digital format GPS locations, and photos of the Project Site. Both a routine off-site and on-site field determination was conducted for USACE-defined wetlands, and non-wetland WoUS and other published guidelines.

Typically, an area must meet criteria for hydrophytic vegetation, hydric soils, and wetland hydrology to be identified as a potential wetland under USACE jurisdiction. Features that did not meet the hydrophytic vegetation wetland criteria are reviewed to determine if they met the definition of other WoUS (i.e., had evidence of an OHWM). Data collected from georeferenced aerial photographs, topographic maps, and soils data are viewed on handheld mobile devices, and used to target areas with potential WoUS. During fieldwork, all accessible areas within the Project Site were visually surveyed for hydrophytic vegetation, standing water, scoured areas, etc. Inaccessible areas were viewed from the elevated locales with the aid of binoculars, aerial photographs, and so forth.

Areas that were determined to have an OHWM and/or defined bed/bank and suspected of being WoUS, wetlands or other sensitive riparian/riverine communities were further analyzed for a dominance of hydrophytic vegetation, hydric soils, and hydrology as described below. The evaluation process for USACE-defined wetlands considered vegetation, soils, and hydrological parameters of suspected features. The location of the OHWM was defined based on clear lines visible on banks; shelving; changes in the character of the soil; destruction of terrestrial vegetation; presence of litter and debris; and differences in vegetation species, composition or structure.

2.3.2 Waters of the State Delineation Techniques

The field delineation for WoS was conducted within the Project Site as well areas using a combination of on the ground quantification, and remote sensing with on the ground verification via pedestrian surveys in in 2022 and 2023. With respect to suspected jurisdictional features; they were assessed in the field

³ USACE CWA Regulations Title 33 CFR Part 328.3(b) Not Waters of the United States – In summary, b(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow, are not WoUS.

for the presence of definable streambeds (i.e., having a bed, bank, and channel) and any associated riparian habitat. Streambeds and suspected riparian habitats were evaluated using the CFGC Section 1600 (et seq.), direction described in *A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607* (ESD-CDFG 1994) and the recommendations detailed within the Mesa Field Guide: Mapping Episodic Stream Activity (Vyverberg et al. 2014) (MESA).

Accordingly, CFGC Section 1600 (et seq.) jurisdiction is presumed to extend to the following features:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects, and riparian vegetation will be treated like natural waterways.
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated as natural waterways.
- Artificial waterways without the attributes of natural waterways should generally not be subject to CFGC provisions.

MESA was also used to assist with identification and mapping of episodic streams; and identification of locations where water is absent and/or has been absent for several years - or more. To that end, total WoS jurisdictional limits were delineated for surface waters, lakes, rivers, streams (i.e., defined bed, bank, and channel) or other land cover types used by fish, aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife resources within the Project Site. The dimensions (i.e., linear length, width, and area) of each feature were generally determined based on the top-of-bank limits. If adjacent bank, floodplain, and/or terrace areas are included within the cover types that could be used by fish, aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife resources, then the feature plus any associated land cover was mapped and included as WoS.

However, within the Project Site signatures which meet the general definition and description for topographic lows, rills, gullies, swales, features excavated wholly in - and that drain only upland areas, and erosional signatures. These features were determined not to be WoS. The majority of these features are a result of road improvements, explicitly those related to drainage infrastructure, where roadside swales and culverts are created out of uplands, and are maintained to prevent street flooding; by merely conveying water away from the impermeable roads and other developed surfaces. These features are engineered and designed to collect precipitation and urban runoff along the roadway and other infrastructure. But more importantly, these features lack connectivity - or the capacity to interact with the larger landscape, as they are not tributary to any larger drainage system. Nonetheless, they disperse water away from vital infrastructure after significant rainfall events, etc., resulting in notable erosion or sedimentation issues. Not surprisingly, this category of feature is routinely subject to anthropogenic disturbance in the form of repairs, clean-outs, enlargements, maintenance and other modifications. These are not natural streams, washes or rivers, etc. – to the contrary, they are artificial features without the attributes of natural waterways; nor do they connect downstream habitats with other aquatic resources. As a result, none of the aforesaid signatures were determined to be subject to regulation under Section 1600 (et seq.) of the CFG Code; California Water Code section 13000 et seq.; or considered riparian/riverine resources as defined under Section 6.1.2 of the MSHCP.

2.3.3 Vegetation

Plants observed were identified to the taxonomic level sufficient to determine their wetland indicator status based on the National List of Plant Species that occurs in the Arid West Region National List of

Plant Species that Occur in Wetlands⁴ (EL 1987, Reed 1998, Lichvar 2012, and Table 1). Plants of uncertain identity were subsequently identified from taxonomic keys (Baldwin et al. 2012). Scientific and common species names were recorded per Baldwin et al. (2012) and Lichvar (2012).

Table 1. Summary of Wetland Indicator Status

Category	Probability
Obligate Wetland (OBL)	Plants that occur almost always (estimated probability > 99%) in wetlands under natural conditions
Facultative Wetland (FACW)	Plants that occur usually (estimated probability >67% to 99%) in wetlands, but also occur (estimated probability 1% to 33%) in non-wetlands
Facultative (FAC)	Plants with a similar likelihood (estimated probability 33% to 67%) of occurring in both wetlands and non-wetlands
Facultative Upland (FACU)	Plants that occur sometimes (estimated probability 1% to <33%) in wetlands, but occur more often (estimated probability >67% to 99%) in non-wetlands
Obligate Upland (UPL)	Plants that occur rarely (estimated probability < 1%) in wetlands, but occur almost always (estimated probability >99%) in non-wetlands under natural conditions
No Indicator (NI)	Wetland indicator status not assigned. Species is assumed to be upland.

Within this Report, the hydrophytic vegetation indicators criterion was met if the USACE's Dominance Test and/or Prevalence Index –using absolute, rather than relative vegetation cover, were satisfied. Vegetation communities were evaluated for each WoS, WoUS, wetland and other sensitive riparian / riverine location or water conveyance feature detected within the Project Site. Evaluations of vegetation communities were primarily limited to regions present within the OHWM and/or top of bed/bank, in addition to the outer limits of associated riparian / riverine vegetation. Vegetation communities were identified according to the percent cover of dominant plant species observed within each community. Vegetation classifications were based on a visual estimation of characteristic dominant flora within a type following Holland (1986) and/or Sawyer et al. (2009).

2.3.4 Soils

Soil texture, matrix, redoximorphic features (i.e., mottles), and any presence of subsoil layers impervious to water infiltration were documented from hand-excavated soil pits to the greatest extent practical. Soils were examined for positive hydric soil indicators such as low chroma, mottles (e.g., iron or manganese concretions), histic epipedons, organic layers, gleization, sulfidic odor or other primary hydric soil indicators listed on an Arid West Wetland Determination Data Form. Soil color and characteristics were determined from moist soil peds using Munsell Soil Color Book (Munsell Color 2000). When warranted, soils are evaluated in the field to a depth of approximately 8-20 inches, where possible. GPS position data are collected at each soil pit and detailed within Project figures – when this type of sampling is appropriate. If warranted, upland and wetland soil pits are evaluated as well to delineate the wetland/upland boundary – when necessary. Hydric soil assessments were predominately based upon the guidance provided in the Arid West Regional Supplement (USACE 2008b). General soil information for Project Components was obtained from the Soil Survey for Riverside County (USDA-NRCS 2023a).

⁴ USACE 2018 [https://wetland-plants.sec.usace.army.mil/nwpl_static/v34/home/home.html].

2.3.5 Hydrology & Impounded Features

Hydrology was evaluated in areas suspected of seasonal inundation and/or saturation to the surface during the growing season. Recent precipitation data was analyzed to evaluate the frequency and amount of rainfall events within the Project Site, and on surrounding lands. Hydrological information was also determined for features by signatures on aerial photographs over time, as well as field analysis of the presence/absence of primary - or secondary hydrological indicators (i.e., surface water, saturation, sediment or drift deposits, watermarks, soil cracks, oxidized root channels, and/or biotic or salt crusts). Additionally, impounded features – if observed, were assessed to determine if they possessed natural characteristics with indicators of all three (3) wetland parameters: 1) dominance of hydrophytic vegetation (or Facultative Neutral), 2) possess hydric soils in the upper part, and 3) wetland hydrology.

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3.0 SURVEY RESULTS

The topography within the Project Site is generally flat at about 1,440 feet above mean sea level (amsl). The Project Site is predominately comprised of developed, disturbed and/or non-native land cover types. Land use in the vicinity of the Project includes commercial, agriculture, residential and industrial endeavors. Agricultural and other commercial development activities were historically operated within the Project Site. There is also evidence of recent disking, and trash from illegal dumping throughout the Project's ground disturbance footprint. Nonetheless, Project implementation will slightly impact the Perris Valley Storm Drain (Figure 3). Notably, any location within the Perris Valley Storm Drain bearing signs of an OHWM, have been specifically circumvented by the design of the Project's disturbance footprint. But the Project Site does extend into the upper earthen western exterior boundaries of the aforesaid man-made storm drainage facility. This area is void of vegetation and is regularly maintained to allow access to the drainage structure. This location is coincident with a discernable bank line with topographic relief, and contributes – albeit in a limited capacity, to water conveyance and connectivity downstream to Canyon Lake.

3.1 Soils

The Web Soil Survey is an online Geographic Information System (GIS) that provides the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) with online soil data (NRCS 2023). This website was used to assess soil characteristics and soil types within the Project Site. This database was also used to determine if the Project Site's mapped soils were likely to include any hydrologically influenced areas.

According to the USDA NRCS, the Project Site consists of the following soil complexes (Appendix, Figure 4):

- Domino silt loam;
- Domino silt loam, saline-alkali; and
- Exeter sandy loam, 0 to 2 percent slopes.

Of the above referenced soil types, Domino silt loam, saline-alkali is formally classified as hydric. But please note that the NRCS Soil mapped units do not provide precise information, about the locations of soil types - or their inclusions. NRCS Soil Survey data users are cautioned that due to the limitations of mapping – primarily through aerial photo interpretation, a percentage of unique soil types may have gone unidentified, or misidentified.

3.2 Hydrology

The Project Site is located within the San Jacinto Regional Watershed (Hydrologic Unit Code 18070202) (Figure 5). Both EPA WATERS GeoViewer results, and USGS 7.5 Quadrangle Map evidence the Perris Valley Storm Drain within the Project Site (Figures 1 and 5).

It is also important to notice that although the NWI was reviewed (Figure 7), it was not considered indicative of the resources observed within the Project Components for the following reasons:

- 1) NWI users are cautioned that the features displayed therein show wetland type and extent using a biological definition. There is no attempt to define the limits of proprietary jurisdiction of any Federal, State, or local government - or to establish the geographical scope of the regulatory programs of government agencies. Therefore, the data should not be relied upon for jurisdictional identification.

- 2) NWI maps have been prepared from limited analysis of high-altitude imagery in conjunction with collateral data sources focusing on wetlands. When imagery is conflicting, the Environmental Systems Research Institute (ESRI) Base imagery is used.
- 3) The features within the Project Components are relatively small, and do not have obvious vegetation species variability, making they are indistinguishable from other signatures (e.g., off highway vehicle tracks), at high altitude.

The FEMA (2023) flood zone is depicted in Figure 6. Notably, the regional climate within the vicinity of the Project Site consists of warm and dry summer months with relatively cool and wetter winters. Seasonal rainfall and snow occur predominantly in the winter and spring months (November – April). U.S. Climate (U.S. Climate Data, 2022) precipitation data for the Perris/Menifee (Station 240) are detailed below:

- Seasonal precipitation prior to the field surveys measured 5.3 inches (February 2022 – March 2022); and
- Average annual precipitation within the region is 11.1 inches.

3.3 Waters of the United States & Waters of the State

The evidence provided herein implies that the Project Site includes WoS, but avoids WoUS (Figure 3). Notably, any location within the Perris Valley Storm Drain bearing signs of an OHWM, have been specifically circumvented by the design of the Project’s disturbance footprint. It's important to mention that while flows from the Perris Valley Storm Drain do eventually merge with Canyon Lake, all impacts to WoUS are being deliberately avoided. But the Project Site does extend into the upper earthen western exterior boundaries of the aforesaid man-made storm drainage facility. This area is void of vegetation and is consistently maintained to allow access to the drainage structure. This location is coincident with a discernable bank line with topographic relief, and contributes – albeit in a limited capacity, to water conveyance and connectivity downstream to Canyon Lake; which strengthen its potential status as a WoS. *Therefore, the Project Site includes 0.002-acres of WoS - non-riparian ephemeral streambed, which constitute a total of 13 linear feet (Figure 3).*

Graphics depicting the limits of WoUS and WoS are provided as Figure 3, and photographs are provided as Appendix B. Tables 2 and 3 below summarizes WoUS and WoS jurisdiction and impacts in more detail, and is followed by a description of the Perris Valley Storm Drain.

Table 2. Summary of WoUS and Project Impacts

Feature	Permanent Impacts – Project Site	Temporary Impacts – Project Site	Total
	(Acres)	(Acres)	(Acres)
Perris Valley Storm Drain	0.00	0.00	0.00
Total	0.00	0.00	0.00

Table 3. Summary of WoS and Project Impacts

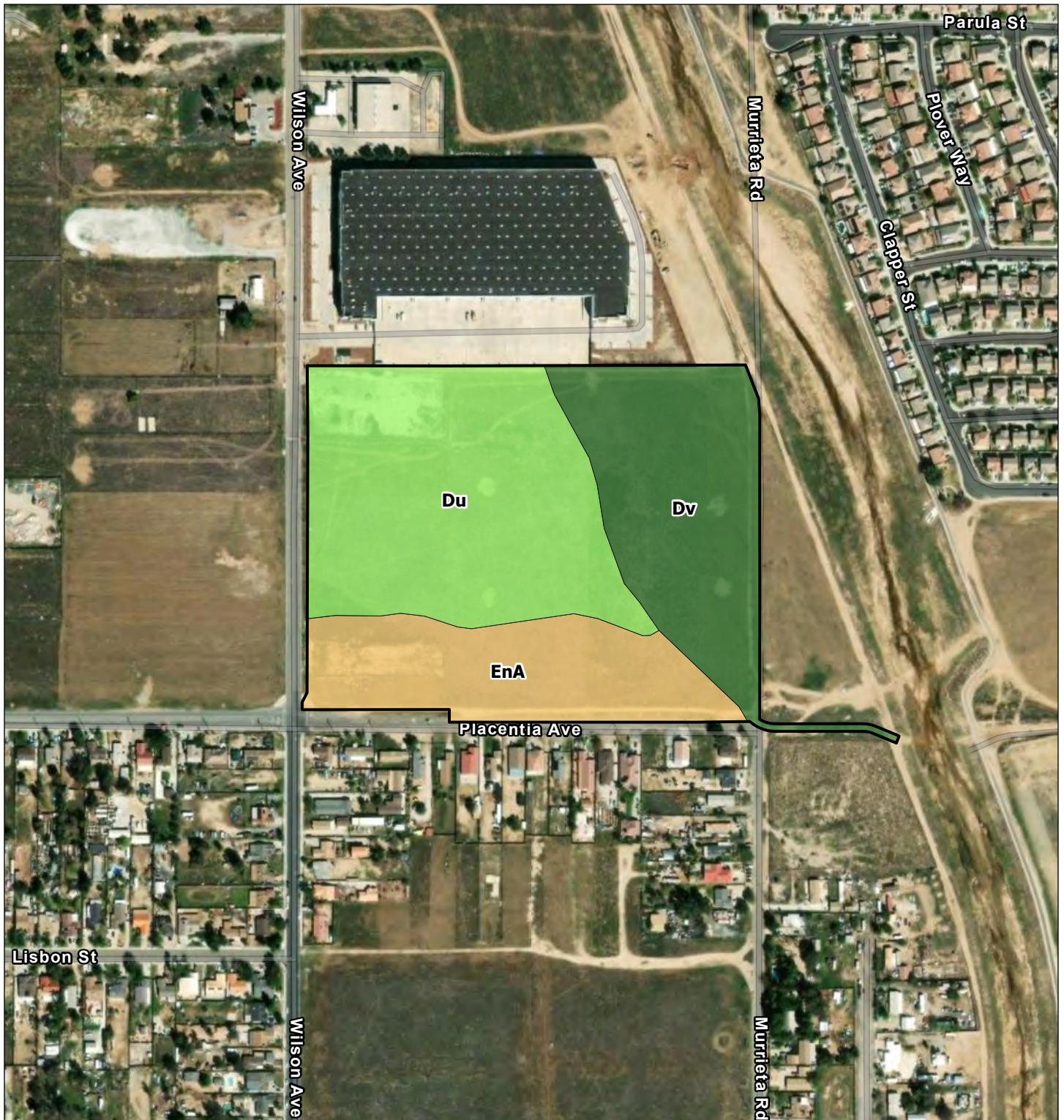
Feature	Permanent Impacts – Project Site	Temporary Impacts – Project Site	Total
	(Acres)	(Acres)	(Acres)
Perris Valley Storm Drain	0.002	0.00	0.002
Total	0.002	0.00	0.002

Perris Valley Storm Drain

The Perris Valley Storm Drain is a water conveyance feature within the Project Site’s eastern boundary. The drainage is intermittent, includes a low flow channel and exhibits an OHWL which is approximately 250 feet wide. There is also evidence of water marks, sediment deposits, drainage patterns and debris. This drainage facility has been constructed, but has earthen exterior banks which are void of vegetation and are regularly maintained to allow access to the structure. This engineered drainage includes discernable bank line with topographic relief, and contributes – albeit in a limited capacity, to water conveyance and connectivity downstream to Canyon Lake. Vegetation within and along the banks of the Perris Valley Storm Drain are dominated by Bermuda grass (*Cynodon dactylon*) and English plantain (*Plantago lanceolata*). Bermuda grass is a perennial species widely used for lawns, pastures, and sports fields in warmer climates. The English plantain is also a perennial, but it is commonly found in grasslands, meadows, and other disturbed areas. That said, trace amounts of Baltic rush (*Juncus balticus*), were observed within the low flow channel. Baltic rush is a perennial which is typically found in wet habitats, including marshes, wet meadows, and along the edges of ponds and streams.




Figure 3. Delineation of Waters and Wetlands




 Project Site

Soil Types

 Du - Domino silt loam

 Dv - Domino silt loam, saline-alkali

 EnA - Exeter sandy loam, 0 to 2 percent slopes

0 200 400 Feet

1 inch = 400 feet



Data Sources:

- ESRI World Imagery accessed 8/16/2023, imagery date: 2/26/2022

- NRCS Web Soil Survey accessed 8/16/2023

Map Prepared: 8-16-23

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 4. Soils Map

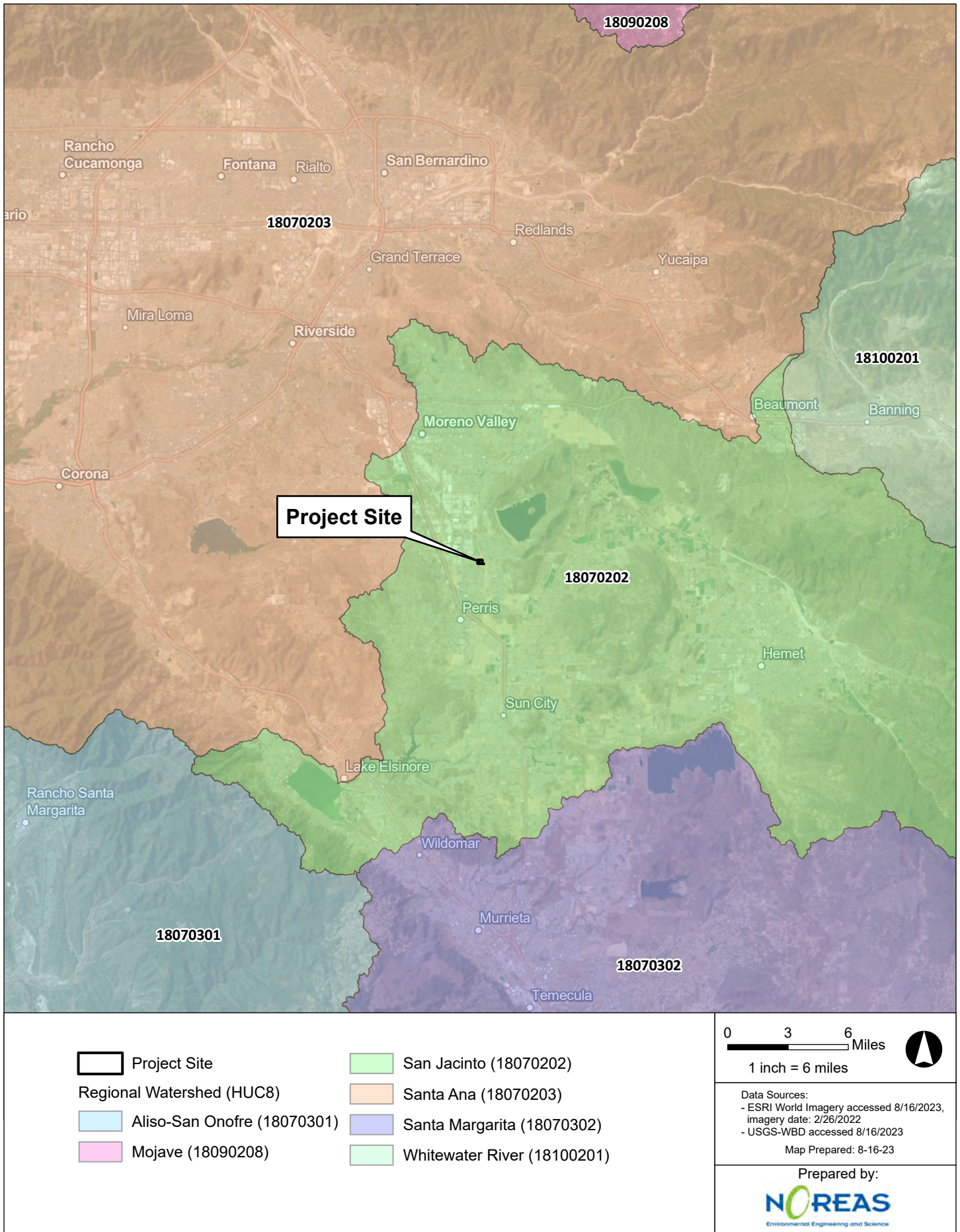
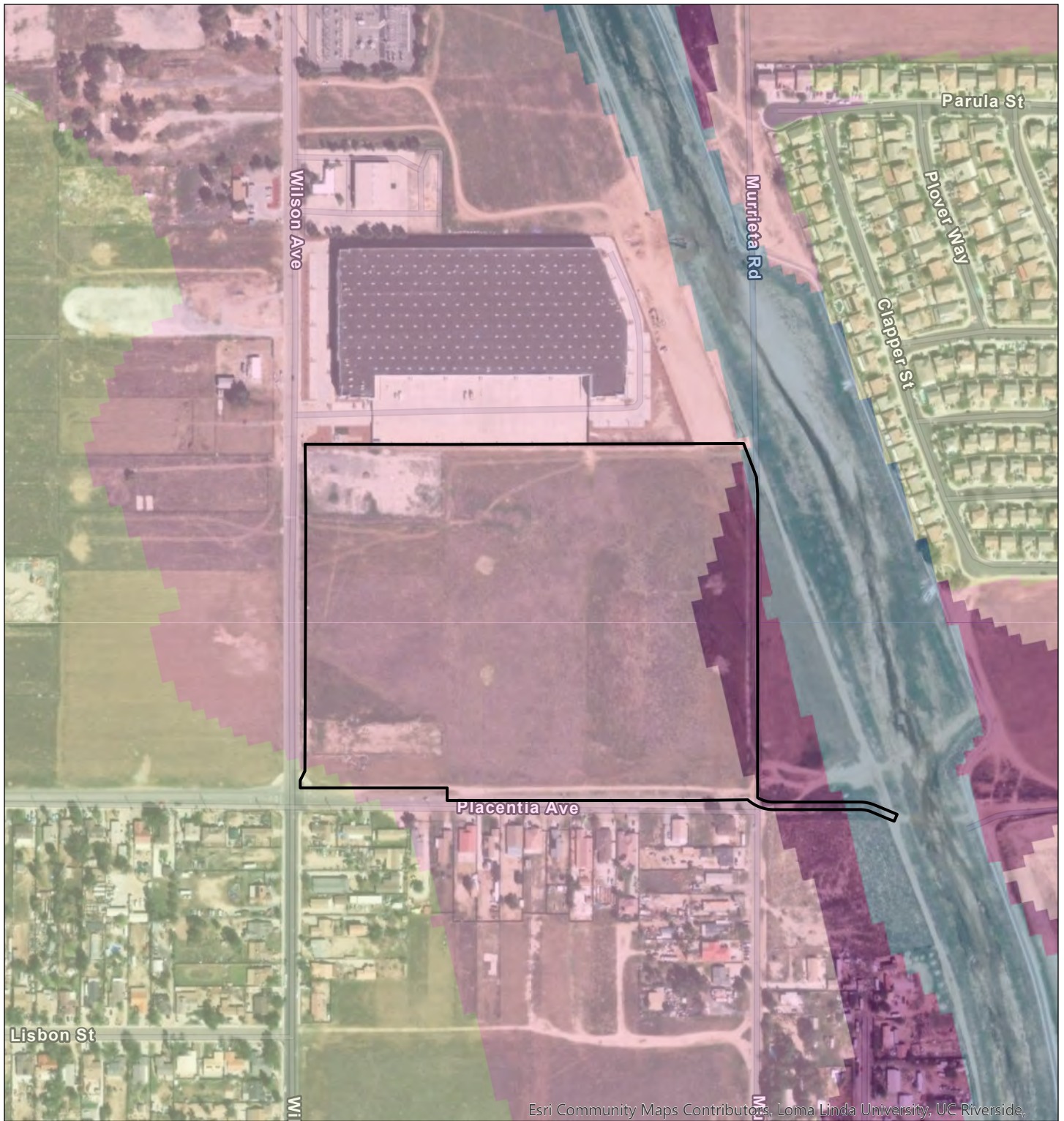


Figure 5. Regional Watershed Map



Esri Community Maps Contributors, Loma Linda University, UC Riverside,

Project Site

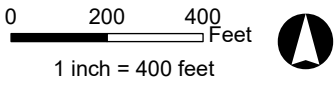
FEMA Flood Hazard Zone

1% Annual Chance Flood Hazard

Regulatory Floodway

Area of Minimal Flood Hazard

0.2% Annual Chance Flood Hazard



Data Sources:
 - ESRI World Imagery accessed 8/16/2023, imagery date: 2/26/2022
 - FEMA National Flood Hazard Layer accessed 8/16/2023

Map Prepared: 8-16-23

Prepared by:



Figure 6. FEMA 100-Year Flood Zone





 Project Site	0 200 400 Feet 1 inch = 400 feet
USA Wetlands	Data Sources: - ESRI World Imagery accessed 8/16/2023, imagery date: 2/26/2022 - US Fish and Wildlife Service National Wetland Inventory accessed 8/16/2023 Map Prepared: 8-16-23
 River	Prepared by:  Environmental Engineering and Science

Figure 7. National Wetland Inventory

4.0 PROPOSED RECOMMENDATIONS AND MEASURES TO OFFSET ADVERSE IMPACTS TO SPECIAL AQUATIC RESOURCE AREAS

This document presents NOREAS' best effort at estimating special aquatic resource area boundaries using the most up-to-date regulations, written policies, and guidance from the USACE, RWQCB, CDFW and RCA. However, only the USACE, RWQCB, CDFW and RCA personnel can make a final determination of special aquatic resource area boundaries.

The following measures are recommended as a means of avoiding and minimizing adverse effects to special aquatic resource areas that have the potential to occur within Project limits, and on adjacent lands:

- Prior to undertaking ground-disturbing activities within or immediately adjacent to any special aquatic resource areas, consult with the appropriate responsible resource agency to verify the results detailed herein, and complete any necessary discretionary permits/ authorizations if avoidance of special aquatic resource areas is not possible.

The services performed and documented in this report have been conducted in a manner consistent with the level of care, and skill ordinarily exercised by other professional consultants under similar circumstances. No other representations are either expressed or implied, and no warranty - or guarantee is included or intended in this report. Opinions relating to presence, absence, or potential for occurrence of special aquatic resource areas are based on limited data despite due professional care.

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**APPENDIX A
PHOTOGRAPH LOG**

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APPENDIX A
PHOTOGRAPH LOG

	<p>Photograph 1. Facing Southeast.</p>
	<p>Photograph 2. Facing West</p>

APPENDIX A
PHOTOGRAPH LOG

	<p>Photograph 3. Facing Southwest</p>
	<p>Photograph 4. Facing North.</p>

APPENDIX A
PHOTOGRAPH LOG



Photograph 5. Data Point 1. Associated with the Perris Valley Storm Drain.



Photograph 6. Perris Valley Storm Drain - Facing East.

**APPENDIX B
DATA FORMS**

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Placentia Avenue Industrial Project City/County: Perris/Riverside Sampling Date: 02-18-22
 Applicant/Owner: Lake Creek Industrial State: CA Sampling Point: DP 1
 Investigator(s): Lincoln Hulse, Brent Helm Section, Township, Range: S 17 T4 S, R3 W
 Landform (hillslope, terrace, etc.): Floodplain/Drainage Local relief (concave, convex, none): Concave Slope (%): >1%
 Subregion (LRR): Mediterranean California Lat: 33.82467 Long: -117.20766 Datum: NAD 83
 Soil Map Unit Name: Exeter sandy loam, slightly saline-alkali NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Data point is within the Perris Valley Storm Drain - outside of the Project's disturbance footprint.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>None</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>None</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species <u>2</u> x 2 = <u>4</u>
4. _____	_____	_____	_____	FAC species <u>10</u> x 3 = <u>30</u>
5. _____	_____	_____	_____	FACU species <u>25</u> x 4 = <u>100</u>
<u>0</u> = Total Cover				UPL species <u>8</u> x 5 = <u>40</u>
				Column Totals: <u>45</u> (A) <u>174</u> (B)
				Prevalence Index = B/A = <u>3.86</u>
Herb Stratum (Plot size: <u>10 x 10</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Cynodon dactylon</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>Juncus balticus</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>Plantago lanceolata</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Erodium cicutarium</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>Bromus madritensis</u>	<u>3</u>	<u>N</u>	<u>UPL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>45</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>None</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>55</u> % Cover of Biotic Crust <u>0</u>				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Remarks:
 Hydrophytic vegetation is not present, as the Dominance Text is not >50% and the Prevalence Index is >3.0.

Arid West Ephemeral and Intermittent Streams OTHM Datasheet

Project: <i>Perris</i>	Date: <i>2/18/2022</i>	Time: <i>11:44am</i>
Project Number:	Town:	State: <i>California</i>
Stream:	Photo begin file#:	Photo end file#:
Investigator(s): <i>Helm</i>		

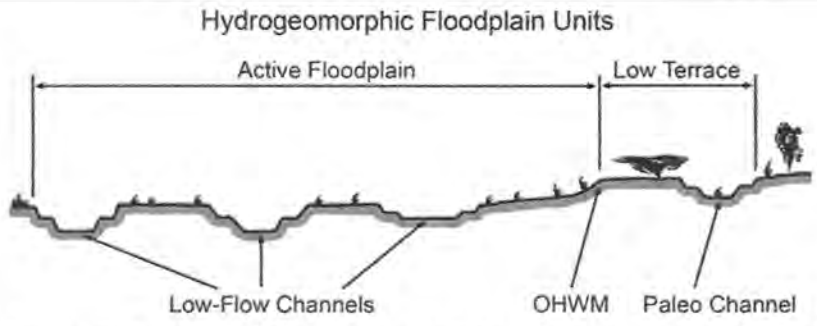
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?	Location Details:
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?	Projection: Datum:
	Coordinates:

Potential anthropogenic influences on the channel system:
Channel is human-made for flood water conveyance. Several 3 to 6 foot diameter culverts discharge storm water into the system. Site is utilized by pedestrians, bicyclists, and wagons. The site is littered with trash.

Brief site description:
Large excavated channel with relatively flat bottom, except for meanders of low-flow channel and water discharges from numerous culverts.

Checklist of resources (if available):

<input checked="" type="checkbox"/> Aerial photography Dates:	<input type="checkbox"/> Stream gage data Gage number:
<input checked="" type="checkbox"/> Topographic maps	Period of record:
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Vegetation maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input type="checkbox"/> Rainfall/precipitation maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	



- Procedure for identifying and characterizing the floodplain units to assist in identifying the OTHM:**
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
 - a) Record the floodplain unit and GPS position.
 - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
 - c) Identify any indicators present at the location.
 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
 5. Identify the OTHM and record the indicators. Record the OTHM position via:

<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

Project ID: Perris Cross section ID: OHWM # A Date: 2/18/2022 Time: 11:48

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- Change in average sediment texture
- Change in vegetation species
- Change in vegetation cover
- Break in bank slope
- Other: Rock line of vegetation and debris
- Other: _____

Comments:

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Sand
Total veg cover: 20 % Tree: _____ % Shrub: _____ % Herb: 20 %

Community successional stage:

- NA
- Early (herbaceous & seedlings)
- Mid (herbaceous, shrubs, saplings)
- Late (herbaceous, shrubs, mature trees)

Indicators:

- Mudcracks
- Ripples
- Drift and/or debris
- Presence of bed and bank (sometimes)
- Benches
- Soil development
- Surface relief
- Other: standing water
- Other: _____
- Other: _____

Comments:

Water was present in portions of the low-flow channel from a storm event that happened on Tuesday (2/15/2022) which was roughly 1/4 to 1/8 ".

Cynodon dactylon
Plantago lanceolata

Project ID: Perris Cross section ID: OHWM# A Date: 2/18/2022 Time: 11:53

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Sand

Total veg cover: 35 % Tree: _____ % Shrub: _____ % Herb: 35 %

Community successional stage:

- NA
- Early (herbaceous & seedlings)
- Mid (herbaceous, shrubs, saplings)
- Late (herbaceous, shrubs, mature trees)

Indicators:

- Mudcracks
- Ripples
- Drift and/or debris
- Presence of bed and bank
- Benches
- Soil development
- Surface relief
- Other: Scours
- Other: _____
- Other: _____

Comments:

Transient depending on storm events in the greater watershed.

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Sand to loamy sand

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: 90 %

Community successional stage:

- NA
- Early (herbaceous & seedlings)
- Mid (herbaceous, shrubs, saplings)
- Late (herbaceous, shrubs, mature trees)

Indicators:

- Mudcracks
- Ripples
- Drift and/or debris
- Presence of bed and bank
- Benches
- Soil development
- Surface relief
- Other: _____
- Other: _____
- Other: _____

Comments:

The low-terrace is artificial "terrace" due to the excavation of the channel in a desert basin.

Appendix H Project GIS Files (provided separately)

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