SERRANO SUMMIT-CIVIC CENTER ADDENDUM TO ENVIRONMENTAL IMPACT REPORT

Opportunities Study Area

Program Environmental Impact Report

(State Clearinghouse No. 2004071039)

Addendum No. 2

and

Serrano Summit Area Plan 2009-01 and

Tentative Tract Map no. 17331

Site Specific Environmental Impact Report

(State Clearinghouse No. 2011501009)

Addendum No. 1

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TABLE OF CONTENTS

TABLES

APPENDICES

SECTION 1.0 INTRODUCTION

In 2002, the voters of Orange County passed Measure W, which amended the Orange County General Plan to allow for the development of an urban regional park, plus cultural, educational, employment, and housing uses, at the former Marine Corps Air Station (MCAS) El Toro. Measure W removed a noise restriction caused by the aircraft overflight activities over seven properties consisting of approximately 838 acres within the City of Lake Forest (City). The noise restriction had previously limited the zoning of those properties to light industrial and commercial.

In 2008, the City prepared the City of Lake Forest Opportunities Study Program Environmental Impact Report (SCH No. 2004071039), dated May 2008, for what became known as the Opportunity Study Area (OSA). The OSA Program Environmental Impact Report (PEIR) analyzed a General Plan Amendment and Zone Change to change the zoning and land use designations on the approximately 838 acres from industrial, agricultural, and commercial to residential, commercial, public facilities, and mixed uses.

Of the seven properties analyzed in the OSA PEIR, Site 3 (IRWD/Lewis) specifically refers to an 82-acre property located to the north of Serrano Highlands residential neighborhood, south of Commercentre Drive, east of Bake Parkway, and west of Serrano Creek at the terminus of Biscayne Bay Drive and Indian Ocean Drive, which is now referred to as Serrano Summit. The OSA PEIR analyzed the change to the General Plan land use from Public Facility (29 acres) and Light Industrial (53 acres) to Medium Density Residential, with a maximum density of 25[1] dwelling units per acre and a maximum of 833 dwelling units and 11 acres of park. In addition, a Public Facility overlay was placed over an approximately 11-acre portion of the site, which provided the City of Lake Forest with an option to accept the dedication of the site for development of a Civic Center. The City also negotiated development agreements with each of the seven landowners within the OSA to address such issues as affordable housing, school impacts, traffic impacts, park and recreation facilities, community facilities, density caps, and phasing of construction. The General Plan Amendment (GPA), Zone Change (ZC) and Development Agreement (DA) for the Serrano Summit property was approved in 2008, and relied on the analysis in the OSA PEIR.

In August 2016, the City approved a General Plan Amendment that re-designated the Civic Center portion of the Project site from Medium Density Residential with a Public Facility overlay to a Public Facility designation. Therefore, the Project site has two land use designations, Medium Density Residential and Public Facility. An Addendum to the OSA PEIR was prepared for this General Plan Amendment.

Subsequent to approval of the GPA/ZC/DA in 2008, IRWD prepared an Area Plan and Tentative Tract Map (TTM) to provide more specificity to development of the Serrano Summit property. The Area Plan created a land use plan, which defined the location of roadways, parks, and future

[1] The OSA Program EIR references a density range of 10 – 23 dwelling units per acre. However, the City's General Plan specifies a density range of 15 – 25 dwelling units per acre for the Medium Density Residential designation, and the Area Plan permits up to 25 dwelling units per acre.

residential development; established the type and density of residential neighborhoods; defined the park and recreation amenities; created design guidelines for future architecture; and established residential development standards. The Tentative Tract Map, which functions as a subdivision map and rough grading plan, established pad elevations, retaining wall heights, and grading quantities, as well as many other engineering details. In 2012, the City took action to approve Area Plan (AP) 2009-01 and Tentative Tract Map (TTM) No. 17331. Additionally, the City approved Use Permit (UP) 9-11-2132, which adopted the development standards included in the Area Plan.

The City's approval of the AP/TTM/UP relied on a project-specific EIR, titled "Serrano Summit Area Plan 2009-01 and Tentative Tract Map No. 17331 Environmental Impact Report, January 2012" (SCH No. 2011051009). The Serrano Summit EIR is a project-specific EIR that tiered off of the program level OSA PEIR. The distinction between the two environmental documents is the OSA PEIR analyzed the overall land use change at a more policy level for seven properties totaling 838 acres, while the Serrano Summit EIR analyzed the potential effects of developing the 82-acre site[2] in accordance with the provisions in the Area Plan and TTM.

One provision of the ZC and DA, which was incorporated into the Area Plan, was the requirement that Irvine Ranch Water District (IRWD) provide the City with an Irrevocable Offer of Dedication (IOD) for the parcel of land that had the Public Facility overlay, which could be used by the City for the development of a Civic Center. The Area Plan defined the "proposed project" to include construction of a Civic Center on approximately 11.9 acres, known as Planning Area (PA) 13. Since the adoption of the AP and TTM, the City accepted the dedication of the Civic Center site and commenced a planning process to further identify site constraints and design opportunities for the site. Further studies and preliminary design, however, have resulted in changes to how the site can be developed. Furthermore, in the intervening years since the AP was approved, the market conditions have changed and IRWD has requested the ability to modify the design of one of the residential housing types permitted by the AP. In order to accomplish these changes, the City has determined that the following revisions to project entitlements are necessary:

- Amendment to the Development Agreement
- Amendment to Area Plan 2009-01
- Amendment to Use Permit 9-11-2132

The Project Site refers to the 82-acre property known as Serrano Summit. Of the 82 acres, the City owns, or will own through an IOD, approximately 12.57 acres. The remainder of the Project Site is owned by IRWD. This document generally refers to the City and/or IRWD as Applicant, unless one party is specifically referenced. The modified Project is defined below as the proposed changes that constitute the amendment to the Development Agreement, Area Plan Amendment, amended Use Permit, and revisions to the Site Plan and Tentative Tract Map. This document is an Addendum to the two prior EIRs. Since the Serrano Summit EIR tiered off of the OSA PEIR the

[2] The Serrano Summit EIR analyzed 98.9 acres, which includes the approximately 82-acre Serrano Summit site and the adjacent approximately 17-acre Baker Water Treatment Plant site, also owned by IRWD.

two prior CEQA documents are consistent, and this Addendum refers to those prior EIRs, individually and collectively, as the Prior EIRs, unless one of the EIRs is specifically referred to by name for clarity.

1.1 Proposed Modifications

The proposed changes to the prior approvals are summarized herein. Collectively the proposed changes constitute the modified Project.

Development Agreement

The proposed language revisions to the DA are summarized below.

- Minor changes to the language in the body of the Agreement to clarify the intent of the Agreement and update notice provisions.

- Revisions to Exhibit F, Public Benefits, to revise the acreages associated with the Irrevocable Offer of Dedication (IOD) by IRWD to the City for the Civic Center. The prior IOD of 11.9 acres was intended to provide 9 usable net acres. During the design phase the City discovered a portion of the property is not useable, leaving approximately 7.46 net usable acres. Revisions to the DA provide for an additional IOD of 0.67 acre, which combined with the prior IOD, would provide a total of 8.13 usable net acres for the Civic Center site. The revised language also clarifies that the IODs shall serve as credit against other fee or financial obligations associated with development of the remainder of Serrano Summit.

- Revisions to Exhibit F, Public Benefits, to revise and add language pertaining to the City's "self-help" provisions, which would allow for grading and construction of the Civic Center Site Improvements, which is defined in the original DA as the "grading, preparation, delivery, permitting, and insuring title to the Civic Center site" in advance of development of the remainder of Serrano Summit. The language further clarifies timing and party responsibilities.

- New Attachment 5 to Exhibit F, includes a revised property map, which shows the updated boundaries of the Civic Center building pad.

- New Attachment 6 to Exhibit F, City Completion of Civic Center, outlines a process by which the City may exercise its self-help provisions and initiate grading and construction of the Civic Center Site Improvements prior to development of the remainder of Serrano Summit. Among other things, the new Attachment 6 to Exhibit F also details the parties' mitigation requirements on and off the Civic Center site, outlines a process for the City to borrow fill material from the remainder of Serrano Summit, and construct the entirety of Indian Ocean Drive.

Area Plan 2009-01

The Area Plan will remain largely unchanged, with the exception of those provisions summarized below and as delineated in the redline/strikeout version of the Area Plan included in Appendix A. No changes would occur to the overall project boundary, land use plan, maximum development of 608 dwelling units, and park acreage.

- Revise Section 4.4 of the Area Plan, including Table 4-1, to clarify that the previously identified housing type called "Enclave Homes" does not require a separate heading in the Area Plan. Each of the Single Family Detached housing types is considered an Enclave Home; the description for which is included as part of the Single Family Detached Enclave Residential definition. "Urban Court" has been added as a new housing type under the Single Family Detached Enclave Residential heading.

- Revise Section 4.4 of the Area Plan, including Table 4-1, to add a new permitted type of residential housing, referred to as "Urban Court." The Area Plan describes Urban Court housing as: "A smart-growth alternative to traditional, suburban style single-family subdivisions, urban court homes have smaller lot areas with compact building footprints and reduced yard setbacks, street frontages, passageways between buildings, and open space. Urban Court single family homes provide more space-efficient and economically attractive alternative for sites planned for apartments or condominium uses."

- Edits to Table 4-1 to account for the additional housing type and update the statistical summary as a result of modifications to the Civic Center site plan.

- Modify Section 7.4, Architectural Design Guidelines, to 1) allow single family detached homes to incorporate roof decks into the overall roof design and 2) modify garage design to revise the medium recess standards and allow the use of split garages whereby garage doors are separated from one another by increasing the recess of one of the doors or using a side entry design for one of the garages.

- Modify Section 10.6, Residential District Standards, including Table 10-2, to incorporate the following changes in development standards:
  - Urban Court Property line setbacks – define property line setbacks as those required by the California Building Code.
  - Urban Court Setback from property line of local streets – establish a 5-foot setback to living area and a 3' setback to the porch.
  - Delete the lot coverage requirement for the Urban Court, Rear Loaded Duplex, and Motor Court/Green Court products because the setbacks govern the lot coverage.
  - Establish a setback of 26 feet between livable areas across an alley at the 2nd and 3rd stories for all three housing types.
  - Urban Court Building height of main structures – revise to 36 feet 6 inches.
  - Delete footnote 4 in Table 10-2 referring to lot coverage.

- Add a new page of graphics and pictures to define the Urban Court housing type and update the graphics and pictures to better define the Green Court, Motor Court, and Rear Loaded Duplex housing types to reflect the revisions to the development standards.

- Modify Table 10-2 on Page 10-11 to clarify that all rear-loaded duplex homes are permitted to have a zero side yard setback at the attached "party" wall, since this type of housing shares a common wall.

- Revise Table 10-3 and update the corresponding graphics to establish a setback of 26 feet between livable areas across an alley at the 2nd and 3rd stories for the Townhomes/Triplexes, Rear-Loaded Stacked Flats, and Front-Loaded Stacked Flats housing types.

- Revise Figure 11-2 to adjust the phase plan consistent with the Amendment to the Development Agreement that permits grading and construction of the Civic Center in Phase I.

Use Permit 9-11-2132

The amendment to the Use Permit would reflect the revisions to the development standards provided in the amended Area Plan 2009-01 (Appendix A). The revisions to the Use Permit and associated development standards include:

- Property line setbacks – revise the setback from 5 feet, to the California Building Code standard.
- Setback from property line of local streets – revise the living setback from 10 feet to 5 feet.
- Setback from property line of local streets – revise the porch setback from 5 feet to 3 feet.
- Maximum coverage for a planning area - revise from 70% to 85%.
- Building height of main structures – revise from 35 feet to 40 feet.

Tentative Tract Map No. 17331

The City has determined that an amendment to Tentative Tract Map (TTM) No. 17331 is not necessary because the revisions are minor in nature and the changes are within substantial conformance of the approved TTM. However, since the changes to the TTM constitute the overall physical change associated with the amendments to the DA and Area Plan 2009-01, those changes are incorporated into this environmental document for both disclosure and to determine whether the changes to the DA, Area Plan 2009-01, and Use Permit 9-11-2132 could have new or increased physical impacts to the environment. Appendix B includes a redline

graphic that compares the original TTM in black with the proposed changes in red. Those changes have the following effects:

- Reduce the size of the Civic Center pad from 9.3 acres to 8.13 acres.
- Reduce the Residential area by 0.67 acre.
- Reduce impacts on the Civic Center site to avoid impacts to biological resources and jurisdictional waters of the U.S. and State.
- Maintain a balanced earthwork. The original plan included 916,000 cubic yards of cut and 916,000 cubic yards of fill, not including remedial grading. The revised plan has the same amount of cut; however, the fill area has become smaller to account for avoiding biological resources. In order to keep the site balanced, the excess dirt will be used to raise pad elevations approximately 2 to 3 feet above original approval.

Civic Center

The Serrano Summit EIR analyzed certain assumptions for the Civic Center, which were outlined in the Project Description under the Tentative Tract Map No. 17331. Since the TTM does not provide details for the Civic Center other than the pad dimensions and elevation, this document lists the details of the Civic Center separately for clarity, even though there is no separate discretionary action for approval of the revisions to the Civic Center. The proposed conceptual site plan for the Civic Center is included in Appendix C.

- Assumptions for the Civic Center analyzed in the Serrano Summit EIR:
  - Approximately 44,000 square foot City Hall
  - Approximately 20,000 square foot community center
  - Approximately 50,000 square foot government facility
  - Total of approximately 114,000 square feet

- Proposed revisions to the Civic Center site plan:
  - Approximately 51,473 square foot Administration Building (City Hall)
  - Approximately 18,105 square foot Community Center
  - Approximately 17,100 square foot Senior Center
  - Approximately 13,718 square foot Council Chambers
  - Total of approximately 100,396 square feet

1.2 Prior Environmental Documentation

The City previously prepared two environmental documents that pertain to the modified Project. First, in 2008, the City prepared the City of Lake Forest Opportunities Study Program Environmental Impact Report (SCH No. 2004071039), dated May 2008. The City also used that

programmatic EIR for approval of the Development Agreement between the City and IRWD. Second, in 2012, the City prepared the "Serrano Summit Area Plan 2009-01 and Tentative Tract Map No. 17331 Environmental Impact Report, January 2012" (SCH No. 2011051009), tiered off the Opportunity Studies Program EIR. The City relied on that site-specific EIR for approval of the Area Plan, Tentative Tract Map, and Use Permit.

The City has determined, for reasons specified below, that the revisions proposed as part of the Project are minor, would not result in any new or more significant environmental impacts, and thus qualify for an Addendum. Because the actions that constitute the modified Project relied on two separate EIRs (the DA was approved by the OSA Program EIR, and the Area Plan and TTM were approved by the Serrano Summit project level EIR) and the amendments to the prior actions are now being considered as one Project, the City has determined that an Addendum to both EIRs is necessary.

1.3 Basis for an Addendum

Prior to approval of subsequent actions that constitute a "project" under CEQA, such as amendments to the DA, Area Plan, and Use Permit, the City is required to determine whether the environmental effects of such actions are within the scope of prior environmental analysis, or whether additional environmental analysis is required. That decision is influenced by whether the subsequent actions result in new significant impacts or increase the severity of previously identified significant impacts.

Under CEQA, the lead agency or a responsible agency shall prepare an addendum to a previously-certified Final EIR if some changes or additions are necessary to the prior EIR, but none of the conditions calling for preparation of a subsequent or supplemental EIR have occurred (CEQA Guidelines§§ 15162, 15164). Once an EIR has been certified, a subsequent EIR is only required when the lead agency or responsible agency determines that one of the following conditions has been met:

> (1) Substantial changes are proposed in the project, or substantial changes occur with respect to the circumstances under which the project is undertaken, which require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects [CEQA Guidelines §15162(a)(1)&(2)];
>
> (2) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:
>
> a) The project will have one or more significant effects not discussed in the previous EIR;

b) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

d) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative [CEQA Guidelines §15162(a)(3)].

The City of Lake Forest has evaluated the potential environmental impacts of the proposed modifications as previously set forth. The City, acting as the Lead Agency, has determined that none of the CEQA conditions listed above apply and that an Addendum to the Final OSA Program EIR (SCH No. 2004071039) is appropriate for the proposed modifications to the Development Agreement and an Addendum to the Final project-specific Serrano Summit EIR (SCH No. 2011051009) is appropriate for the proposed modifications to the Area Plan, TTM, and Use Permit, and fully comply with CEQA, as described in the CEQA Guidelines. An addendum does not need to be circulated for public review, but rather can be attached to the Final EIRs (CEQA Guidelines §15164(c)). Prior to initiating the modified Project, the City will consider this Addendum together with the adopted Final EIRs and will make a decision regarding the modified Project [CEQA Guidelines §15164(d)].

1.4 Mitigation Measures

In accordance with CEQA Guidelines §§ 15162 through 15164, the City has determined the changes associated with the modified Project are minor and no new mitigation measures are required, as documented in detail in Section 2 below. The two prior environmental documents, OSA PEIR and Serrano Summit EIR, both included mitigation measures affecting development of the Project site. Several measures have already been complied with and are shown in strike-through format. The other measures remain in place and are listed below.

Table 1: Mitigation Monitoring and Reporting Checklist

Aesthetics	
AES-1	Prior to issuance of a precise grading permit for the project, the applicant shall submit a photometric plan to the Development Services Department for review and approval. The plan shall specify the following: a. The lighting type and placement to ensure that the effects of security lighting are limited as a means of minimizing night lighting and the associated impacts to aesthetics. All light fixtures will use glare-control visors, arc tube suppression caps, and will use a photometric design that maintains 70 percent of the light intensity in the lower half of the light beam.

	b. All interior floodlights, lighting and advertising (including signage), and other security lighting shall be directed away from adjacent uses and towards the specific location intended for illumination. All lighting shall be shielded to minimize the production of glare and light spill off-site. Landscape illumination and exterior sign lighting shall be accomplished with low-level unobtrusive fixtures. The plan shall include the types and appearance of proposed residential light standards. (Source: OSA PEIR Mitigation Measure MM 3.1-1 to 3.1-4)
Air Quality	
AQ-1	Prior to issuance of any Grading Permit, the City Engineer and the Chief Building Official shall confirm that the Grading Plan, Building Plans and specifications stipulate that, in compliance with South Coast Air Quality Management District Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the South Coast Air Quality Management District's Rules and Regulations. In addition, South Coast Air Quality Management District Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. The following measures shall be implemented to reduce short-term fugitive dust impacts on nearby sensitive receptors: • All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust; watering, with complete coverage, shall occur at least twice daily, preferably in the late morning and after work is done for the day; • Water trucks shall be utilized on the site and shall be available to be used throughout the day during site grading to keep the soil damp enough to minimize dust being raised by the construction operations; • Replace ground cover in disturbed areas as quickly as possible; • On-site vehicle speed shall be limited to 15 miles per hour; • All on-site roads shall be paved as soon as feasible or watered periodically or chemically stabilized; All material transported off-site shall be sufficiently watered and securely covered to prevent excessive amounts of dust prior to departing the job site. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code; • Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip on a gravel surface to prevent dirt and dust from impacting the surrounding areas; • All delivery truck tires shall be watered down and scraped down prior to departing the job site; • Visible dust beyond the property line which emanates from the project shall be minimized to the extent feasible; • Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period; and • Sweep streets at the end of the day. (Source: Serrano Summit Area Plan 2009-01 and Tentative Tract Map No. 17331 FEIR, Mitigation Measure AQ-1)

AQ-2	The following measures shall be implemented during construction to substantially reduce NOX related emissions. They shall be included in the Grading Plan, Building Plans, and contract specifications. Contract specification language shall be reviewed by the City prior to issuance of a grading permit. Reductions in particulate emissions shall also be realized from the implementation of these measures as well as Mitigation Measure AQ-1. • Off-road diesel equipment operators shall be required to shut down their engines rather than idle for more than five minutes, and shall ensure that all off-road equipment is compliant with the CARB in-use off-road diesel vehicle regulation and SCAQMD Rule 2449. • The following note shall be included on all grading plans: "During construction activity, the contractor shall utilize California Air Resources Board (CARB) Tier III certified equipment or better for all on-site construction equipment according to the following: - January 1, 2012 to December 31, 2014: All off-road diesel powered construction equipment greater than 50 hp shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. - Post-January 1, 2015: If applicable, all off-road diesel- powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards where available and commercially feasible. - A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided to the City at the time of mobilization of each applicable unit of equipment. • The contractor and applicant, if the applicant's equipment is used, shall maintain construction equipment engines by keeping them tuned and regularly serviced to minimize exhaust emissions. • Use low sulfur fuel for stationary construction equipment. This is required by SCAQMD Rules 431.1 and 431.2. • Utilize existing power sources (i.e., power poles) when available. This measure would minimize the use of higher polluting gas or diesel generators. • Configure construction parking to minimize traffic interference. • Minimize obstruction of through- traffic lanes and provide temporary traffic controls such as a flag person during all phases of construction when needed to maintain smooth traffic flow. Construction shall be planned so that lane closures on existing streets are kept to a minimum. • Schedule construction operations affecting traffic for off-peak hours to the best extent when possible. • Develop a traffic plan to minimize traffic flow interference from construction activities (the plan may include advance public notice of routing, use of public transportation and satellite parking areas with a shuttle service.) • Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than five minutes. (Source: Serrano Summit Area Plan 2009-01 and Tentative Tract Map No. 17331 FEIR, Mitigation Measure AQ-2)

Biological Resources	
BIO-1	Prior to the issuance of a grading permit, the Applicant shall conduct biological field surveys of the IRWD study area for Rayless raywort (*Senecio aphanactis*), a special status wildlife species that was not surveyed in the Biological Reports. Surveys shall be conducted in accordance with current California Department of Fish and Game (CDFG) or United States Fish and Wildlife Services (USFWS) survey protocols for the target species by a qualified biologist or botanist, in order to determine their presence or absence at the Project site. (Source: OSA PEIR Mitigation Measure MM 3.4-1)
~~BIO-2~~	~~Prior to the issuance of a grading permit, the Applicant shall, in an area where a species or habitat is not covered by the Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) has been identified, comply with the requirements of the Federal Endangered Species Act (FESA) or California Endangered Species Act (CESA), if applicable. If the species or habitat is not protected under FESA or CESA, but is otherwise protected through the Migratory Bird Treaty Act or other similar regulatory act requirement, the Applicant shall provide suitable replacement habitat at a minimum of 1:1, and shall prepare and submit a mitigation plan for City approval that demonstrates that the replacement habitat is protected in perpetuity and that appropriate long- term habitat management is provided. The mitigation plan shall be prepared in consultation with and receive the approval of the agency regulating the species or habitat (i.e., USFWS, CDFG, and the NCCP Non-Profit Corporation (i.e., Nature Reserve of Orange County (NROC). The mitigation plan shall include the following, at minimum: detailed habitat impacts; mitigation acreage (1:1 ratio); mitigation location (i.e., where the proposed conservation or restoration will occur); the acreage of conservation or restoration that will be conducted; and how many trees/plants will be planted or translocated (when mitigating impacts to trees or rare plants); a planting plan and seed mixes; five year maintenance and monitoring plans; source(s) of long term site funding; conservation easements (if any); biological monitoring during grading activities; and fencing of any habitat area that would not be disturbed by construction. (Source: OSA PEIR Mitigation Measure MM 3.4- 3).~~
BIO-3	Prior to the issuance of a grading permit, the Applicant shall conform and comply with the applicable requirements of the Natural Community Conservation Plan and Habitat Conservation Plan (NCCP/HCP) for the County of Orange Central and Coastal Subregion, including the payment of the appropriate in-lieu fee, or existing IRWD non-reserve banked acreage as applicable, to mitigate for the loss of coastal sage scrub and any other NCCP/HCP covered habitat and species observed on the Project site. For impacts to a Conditionally Covered Species (i.e., Southwestern willow flycatcher (*Empidonas traillii extimus*), the Applicant shall prepare a mitigation plan. The mitigation plan shall be developed in coordination with USFWS, CDFG, and the NCCP Non-Profit Corporation (i.e., Nature Reserve of Orange County (NROC), and approved by the USFWS. The mitigation plan shall, at minimum: • Address design modifications and other onsite measures that are consistent with the project's purposes, minimize impacts, and provide appropriate feasible protections; • Provide for compensatory habitat restoration/enhancement activities at an appropriate location (which may include land in the Reserve system or other open space) and which may include planting of riparian trees and shrubs and/or cowbird

	trapping; • Provide for monitoring and Adaptive Management of habitat, within the Reserve system including cowbird trapping, consistent with Chapter 5 of the NCCP/HCP. The Applicant shall also demonstrate to the satisfaction of the Director of Development Service[s] compliance with the following NCCP/HCP construction impact avoidance measures or such measure in effect at the time of construction: 1. To the maximum extent practicable, no grading of coastal sage scrub habitat that is occupied by nesting gnatcatchers shall occur during the breeding season (February 15 through July 15). It is expressly understood that this provision and the remaining provisions of these "construction-related minimization measures," are subject to public health and safety considerations. These considerations include unexpected slope stabilization, erosion control measures, and emergency facility repairs. In the event of such public health and safety circumstances, landowners or public agencies/utilities will provide United States Fish and Wildlife Services/California Department of Fish and Game (USFWS/CDFG) with the maximum practicable notice (or such notice as is specified in the NCCP/HCP) to allow for capture of gnatcatchers, and any other coastal sage scrub Identified Species that are not otherwise flushed and shall carry out the following measures, to the extent practicable, in the context of the public health and safety considerations. 2. Prior to the commencement of grading operations or other activities involving significant soil disturbance, all areas of coastal sage scrub habitat to be avoided under the provisions of the NCCP/HCP, shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of grading operations or shall be conducted to locate gnatcatchers within 100 feet of the outer extent of projected soil disturbance activities and the locations of any such species shall be clearly marked and identified on the construction/grading plans. 3. A monitoring biologist, acceptable to USFWS/CDFG will be on site during any clearing of coastal sage scrub. The landowner or relevant public agency/utility will advise USFWS/CDFG at least seven (7) calendar days (and preferably 14 calendar days) prior to the clearing of any habitat occupied by Identified Species to allow USFWS/CDFG to work with the monitoring biologist in connection with bird flushing/ capture activities. The monitoring biologist shall flush identified Species (avian or other mobile Identified Species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they shall be captured in mist nets, if feasible, and relocated to areas of the site to be protected or to the NCCP/HCP Reserve System. It shall be the responsibility of the monitoring biologist to assure that Identified bird species will not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis. 4. Following the completion of initial grading/earth movement activities, all areas of coastal sage scrub habitat to be avoided by construction equipment and personnel shall be marked with temporary fencing or other appropriate markers clearly visible to construction personnel. No construction access, parking, or storage of equipment or materials shall be permitted within such marked areas. 5. Coastal sage scrub identified in the NCCP/HCP for protection and located within the likely dust drift radius of construction areas shall be periodically sprayed with water

	to reduce accumulated dust on the leaves as recommended by the monitoring biologist. (Source: OSA PEIR Mitigation Measure MM 3.4-2)
~~BIO-4~~	~~Prior to the approval of grading plans, the Applicant shall prepare an application for fill of waters subject to the Army Corps of Engineers (ACOE) jurisdiction. If appropriate, a streambed alteration agreement shall be obtained from California Department of Fish and Game (CDFG). The Applicant shall submit an application to the Regional Water Quality Control Board (RWQCB) for a waste discharge requirement or waiver of waste discharge requirement. The Applicant shall also consider any other permits from the ACOE, CDFG, RWQCB, or any other applicable regulatory agency that may be necessary. (Source: OSA PEIR Mitigation Measure MM 3.4-4)~~
BIO-5	To the extent feasible, all vegetation removal activities shall be scheduled outside the nesting season (typically February 15 to August 15) to avoid potential impacts to nesting birds. However, if initial vegetation removal occurs during the nesting season, all suitable habitat shall be thoroughly surveyed for the presence of nesting birds by a qualified biologist prior to commencement of clearing. If any active nests are detected, a buffer of at least 100 feet (300 feet for raptors) shall be delineated, flagged, and avoided until the nesting cycle is complete as determined by the biological monitor to minimize impacts. (Source: OSA PEIR Mitigation Measure MM 3.4.2)
Cultural Resources	
CUL-1	Prior to the issuance of a grading permit for any site within the project area, a qualified archaeologist shall be retained by the applicant for that grading permit to provide professional archaeological services. The archaeologist shall be present at the pre-grading conference to establish procedures for archaeological resource surveillance. Those procedures shall include provisions for temporarily halting or redirecting work permit sampling, identification, and evaluation of resources deemed by the archaeologist to potentially be historical resources or unique archaeological resources under CEQA. If, before grading, any portions of the property subject to the grading permit have been identified as sites, which may have such resources present and may be impacted by development, the archaeologist shall conduct a site survey and records search and such further examination as may be needed to assess the significance of the resources. If the archaeological resource is determined to be a unique archaeological resource, options for avoidance or preservation in place shall be evaluated and implemented if feasible. In the event that avoidance or preservation in place is infeasible and the archaeologist determines that the potential for significant impacts to such resources exists, a data recovery program shall be expeditiously conducted. The archaeologist also shall conduct on-site archaeological monitoring for the grading operation. Should historical resources or unique archaeological resources be discovered during the grading operation, grading activities shall be modified to allow expeditious and proper analysis and/or salvage of the resources. Disposition of the resources shall be within the discretion of the City of Lake Forest. (Source: OSA PEIR Mitigation Measure MM 3.5-1)
CUL-2	The qualified archaeologist retained shall prepare monthly progress reports to be filed with the site developer(s) and the City of Lake Forest. (Source: OSA PEIR Mitigation Measure MM 3.5-2)

CUL-3	Artifacts recovered shall be prepared, identified, and cataloged before donation to the accredited repository designated by the City of Lake Forest. State of California Guidelines for the Curation of Archaeological Collections shall be consulted regarding the treatment of recovered artifacts. Any artifacts determined to be insignificant shall be offered to local schools for use in educational programs. (Source: OSA PEIR Mitigation Measure MM 3.5-3)
CUL-4	The qualified archaeologist retained shall prepare a final report to be filed with the site developer(s) and the City of Lake Forest. The qualified archaeologist retained shall prepare a final report to be filed with the site developer(s), the City of Lake Forest, and the South Central Coastal Information Center. The report shall include a list of specimens recovered, documentation of each locality, interpretation of artifacts recovered, and shall include all specialists' reports as appendices. (Source: OSA PEIR Mitigation Measure MM 3.5-4)
CUL-5	Prior to issuance of a grading permit, a qualified paleontologist shall be retained by the site developer(s) to provide professional paleontological services. Specifically, during grading activities, the qualified paleontologist shall conduct on-site paleontological monitoring for the Project site. Monitoring shall include inspection of exposed surfaces and microscopic examination of matrix to determine if fossils are present. The monitor shall have authority to divert grading away from exposed fossils temporarily in order to recover the fossil specimens. Cooperation and assistance from on-site personnel shall be provided to assist timely resumption of work in the area of the fossil discovery. (Source: OSA PEIR Mitigation Measure MM 3.5- 5)
CUL-6	The qualified paleontologist retained shall prepare monthly progress reports to be filed with the site developer(s) and the City of Lake Forest. (Source: OSA PEIR Mitigation Measure MM 3.5-6)
CUL-7	Fossils recovered shall be prepared, identified, and cataloged before donation to the accredited repository designated by the City of Lake Forest. (Source: OSA PEIR Mitigation Measure MM 3.5-7)
CUL-8	The qualified paleontologist retained shall prepare a final report to be filed with the site developer(s) and the City of Lake Forest. The report shall include a list of specimens recovered, documentation of each locality, interpretation of fossils recovered, and shall include all specialists' reports as appendices. (Source: OSA PEIR Mitigation Measure MM 3.5-8)
Geology and Soils	
GEO-1	Prior to approval of grading plans, the project shall adhere to geotechnical recommendations outlined in Chapter 4.0, General Recommendations, of the Geotechnical Exploration Report, prepared by Leighton and Associates, Inc., dated January 11, 2010. Recommendations shall be noted on project grading plans and building specifications for the proposed Tentative Tract Map and any future projects proposed within the Area Plan. Grading plans and building specifications shall be reviewed and approved by the Building Official. (Source: OSA PEIR, Legal Requirements for Geology, Soils and Mineral Resources)

Greenhouse Gases	
GHG-1	The proposed project shall include, but not be limited to, the following list of potential design features. These features shall be incorporated into the project design to ensure consistency with adopted statewide plans and programs. The project applicant shall demonstrate the incorporation of the following project design features prior to the issuance of building or occupancy permits as applicable. *Transportation* • Provide pedestrian connections to the off-site circulation network (building permit). • Implement a trip reduction program, for which all employees shall be eligible to participate (occupancy permit). This measure is not applicable to residential uses. • Provide a ride sharing program, for which all employees shall be eligible to participate (occupancy permit). This measure is not applicable to residential uses. *Energy Efficiency* • Design buildings to be energy efficient, 15 percent above Title 24 requirements (building permit). • The landscape plan shall utilize strategically placed trees that shall shade building walls, particularly those containing the most windows (building permit). • Install high efficiency lighting, and energy efficient heating and cooling systems (building permit). • Reduce unnecessary outdoor lighting (building permit). *Water Conservation and Efficiency* • Install water-efficient irrigation systems (building permit). • Comply with the landscape sustainability measures in the Sustainability Development Regulations of the *Serrano Summit Area Plan* (building permit). • Install low-flow faucets and toilets (building permit). *Solid Waste* • Reuse and recycle construction waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard) (building permit). Provide interior and exterior storage areas for recyclables and adequate recycling containers located in public areas (occupancy permit). (Source: Serrano Summit Area Plan 2009-01 and Tentative Tract Map No. 17331 FEIR, Mitigation Measure GHG-1)
Hazards and Hazardous Materials	
HAZ-1	Prior to demolition activities, an asbestos survey shall be conducted by a qualified environmental professional to determine the presence or absence of asbestos. If present, asbestos removal shall be performed by a State-certified asbestos containment contractor in accordance with the Toxic Substance Control Act (TSCA), (15 U.S.C. Section 2601 et. seq.) Title 2 – Asbestos Hazard Emergency Response for handling asbestos. (Source: OSA PEIR, Legal Requirements for Hazards and Hazardous Materials)
HAZ-2	If during demolition of the structures, paint is separated from the building material (e.g., chemically or physically), the paint waste shall be evaluated independently from the building material by a qualified environmental professional to determine its proper management.

	According to the Department of Toxic Substances Control, if paint is not removed from the building material during demolition (and is not chipping or peeling), the material may be disposed of as construction debris (a non- hazardous waste). The landfill operator shall be contacted in advance to determine any specific requirements they may have regarding the disposal of lead-based paint materials, if necessary. (Source: OSA PEIR, Legal Requirements for Hazards and Hazardous Materials)
HAZ-3	Prior to issuance of a grading permit, soil sampling shall occur within the portions of the Project site that have historically been utilized for agricultural purposes and may contain pesticide residues in the soil, as determined by a qualified Phase II specialist. The sampling shall determine if pesticide concentrations exceed established regulatory requirements and shall identify further site characterization and remedial activities, if necessary. (Source: OSA PEIR, Legal Requirements for Hazards and Hazardous Materials)
HAZ-4	At least three business days prior to any lane closure, the construction contractor shall notify the Orange County Sheriff's Department (OCSD) and Orange County Fire Authority (OCFA), along with the Development Services Department, of construction activities that would impede movement (such as road or lane closures) along roadways immediately adjacent to the development area, to allow for uninterrupted emergency access and maintenance of evacuation routes. (Source: OSA PEIR MM 3.7-3)
Hydrology and Water Quality	
HYD-1	All City landscape contractors and project developers shall be required, as part of their contract, to submit to the City a landscape design plan includ[ing] the following elements: • Maximized use of climate-appropriate plant species with minimum water and fertilizer requirements; • Watering shall be kept to the minimum necessary to maintain new landscaping; • Drip irrigation shall be used only until the California friendly landscaping is established; and • Minimal use of fertilizers and pesticides. (Source: OSA PEIR Mitigation Measure MM 3.8-2)
HYD-2	Prior to the issuance of a grading permit, the Applicant shall be required to coordinate with the Nitrogen and Selenium Working Group in order to establish eligibility for the de minimus permit implemented by the Santa Ana Regional Water Quality Control Board. (Source: OSA PEIR Mitigation Measure MM 3.8-3)
HYD-3	Prior to the issuance of a grading permit, the Applicant shall develop appropriate Best Management Practices, such as a nutrient management program, to reduce the amount of nutrients entering the watershed (see San Luis Rey Watershed Urban Runoff Management Program http://www.projectcleanwater.ord/html/wurmp_sanluis_rey.html for an example of a management program that addresses nutrients). In addition, a pesticide management program shall be developed to the satisfaction of the City to reduce the amounts of pesticides entering the watershed through minimizing the use of pesticides and emphasizing non-chemical controls (see the City of San Francisco's Integrated Pest Management Program for example at http://www.sfgov.org/site/frame.asp?u= http://www.sfwater.org/). These plans shall be approved by the City prior to issuance of a

	grading permit. (Source: OSA PEIR Mitigation Measure MM 3.8- 4)
Noise	
NOI-1	Prior to grading permit issuance, the construction contractor shall demonstrate, to the satisfaction of the City of Lake Forest Development Services Department, the following: • Construction contracts shall specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other State required noise attenuation devices. • Construction noise reduction methods such as shutting off idling equipment, maximizing the distance between construction equipment staging areas and nearby occupied uses, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receptors. • The construction contractor shall submit a haul plan to the City, and the City shall ensure the planned haul truck routes avoid residential areas to the extent feasible. • All construction entrances shall clearly post construction hours, allowable workdays, and the phone number of the job superintendent. This will allow surrounding owners to contact the job superintendent with concerns. If the contractor receives a justifiable noise-related complaint, appropriate corrective actions shall be implemented and a report taken indicating the action with a copy of the report provided to the reporting party upon request. • Construction activities shall be prohibited between 8:00 PM and 7:00 AM the following day from Monday through Saturday, and no construction shall be permitted on Sundays and Federal holidays. Construction noise during the allowed construction time periods shall be exempt from the noise level provisions in the Noise Control Ordinance. (Source: as modified from OSA PEIR Mitigation Measure MM 3.10-1)
~~NOI-2~~	~~The project applicant shall require by contract specifications that construction staging areas and earthmoving equipment shall be located as far away from occupied vibration and noise sensitive sites as possible (i.e., residential uses). Should construction activities take place within 25 feet of an occupied structure, a project specific vibration impact analysis shall be conducted. The vibration impact analysis shall provide measures for minimizing vibration impacts that exceed 85 VdB. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit. (Source: as modified from OSA PEIR Mitigation Measure MM 3.10-1)~~
Public Services	
PUB-1	Prior to issuance of a grading permit, the site developers shall enter into a Secured Fire Protection Agreement with OCFA that shall ensure an adequate level of service is maintained in the City. (Source: as modified from OSA PEIR Mitigation Measure MM 3.12-2)
Source: City of Lake Forest: Serrano Summit Area Plan 2009-01 and Tentative Tract Map No. 17331 Final Environmental Impact Report. January 2012.	

1.5 Summary of Findings

In accordance with the analysis presented in Section 2, and pursuant to Section 15162, 15164, and 15183 of the State CEQA Guidelines, the City of Lake Forest has determined that:

1) The modified Project does not result in substantial changes that would require major revisions to the previously certified EIRs due to new or substantially more severe significant environmental effects than previously analyzed; and

2) No substantial changes in circumstances have occurred that would result in new or more severe significant environmental impacts than previously analyzed; and

3) No new information of substantial importance as described in Section 15162 (a)(3) has been identified that would require major revisions to the analysis or conclusions presented in the prior EIRs.

1.6 Cumulative Impacts

The modified Project would not change the development boundary, permitted land uses, extent of construction activities, or intensity of development. Therefore, the short-term construction impacts and long-term operational impacts would remain consistent with the analysis provided in the OSA PEIR and the Serrano Summit EIR. There would be no changes to the analysis or conclusions regarding cumulative impacts, including the finding of significant and unavoidable adverse air quality and GHG impacts.

SECTION 2.0 ENVIRONMENTAL CHECKLIST

2.1 Aesthetics

Issues:	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	X	☐
b) Substantially damage scenic resources, including scenic vistas from public parks and views from designated scenic highways or arterial roadways?	☐	☐	X	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings? 1. Does the project exceed the allowed height or bulk regulations, or exceeds the prevailing height and bulk of existing structures? 2. Is the project proposed to have an architectural style or to use building materials that will be in vivid contrast to an adjacent development where that development had been constructed adhering to a common architectural style or theme; 3. Is the project located on a visually prominent site and, due to its height, bulk, architecture or signage, will be in vivid contrast to the surrounding development or environment degrading the visual unity of the area? 4. Does the project include unscreened outdoor uses or materials? 5. Does the project result in the introduction of an architectural feature or building mass that conflicts with the character of the surrounding development?	☐	☐	X	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	X	☐

Issues:	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
e) Will the project create a new source of substantial night light that would result in "sky glow" (i.e. illumination of the night sky in urban areas) or "spill light" (i.e. light that falls outside of the area intended to be lighted) onto adjacent sensitive land uses.	☐	☐	X	☐

Discussion: The Prior EIRs determined that development of the Project site would not have significant impacts on visual resources because the Project site is an infill site surrounded by light industrial and residential development. Furthermore, the Prior EIRs concluded the Project site does not constitute a scenic resource or provide views of a scenic vista. The Prior EIRs concluded that impacts could occur from night lighting and included a mitigation measure requiring a photometric plan prior to construction to demonstrate lighting would not spill beyond the Project boundaries.

The proposed changes associated with the Project would not change the prior conclusions with respect to Aesthetics impacts and would not require new or revised mitigation measures.

a, b) The Project site remains the same size and in the same location as analyzed in the Prior EIRs. Therefore, the prior conclusions that the site does not constitute a scenic resource or provide views of a scenic vista remain unchanged.

c) The proposed revisions to the Area Plan and TTM would slightly increase the height of future buildings. Building pads would be raised approximately 2 to 3 feet to accommodate excess soil to maintain a balanced grading plan. Additionally, the Area Plan Amendment proposes to increase the height limit of one of the residential building types by 5 feet. Neither of these changes would affect or change the conclusions in the Prior EIRs. As shown in the visual simulations included in Section 8.1 of the Serrano Summit EIR, the distance from surrounding public views and nearby residences to the Project site are at a distance that a slight increase in height of the building pad or residential structure would not be noticeable. With respect to surrounding residences, the primary view across Serrano Creek is of the Civic Center as shown in Views 5 and 6 in Section 8.1 of the Serrano Summit EIR. The site plan changes to the Civic Center have reduced the size of the building pad and avoided the lower portion of an existing drainage and riparian vegetation adjacent to Serrano Creek. As a result, the Civic Center buildings will be located farther away from Serrano Creek than previously analyzed and more of the existing riparian vegetation will remain in the foreground, which could also further shield or soften views of the Civic Center.

d, e) The proposed revisions associated with the Project would not change the potential impact of night lighting on glare or "sky glow." The overall land use (residential, park, and Civic Center) and building intensity (number of dwelling units and size of the Civic Center) have not changed. Therefore, the type and intensity of night lighting would remain as previously analyzed and no changes to Mitigation Measure AES-1 are necessary.

Conclusion: The changes in design associated with the modified Project would not change the visibility or character of the development. Therefore, no changes to the conclusions presented in the Prior EIRs are warranted. Mitigation Measure AES-1 remains appropriate, without changes, to reduce potential impacts from glare and night lighting. No new impacts or intensification of previously identified impacts would occur with the modified Project.

2.2 Agriculture and Forestry Resources

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
II.	AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest protocols adopted by the California Air Resources Board. Would the project:				
	a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	X	☐
	b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	X	☐

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	X	☐
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	X	☐
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	X	☐

Discussion: The Prior EIRs concluded development of the Project site would not impact Agriculture and Forest Resources because no resources exist on the Project site; the Project site is not designated Prime or Unique Farmland; the Project site does not have an Agriculture or Forest zoning designation; and the Project site is not subject to a Williamson Act contract.

a) The Project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as documented in the Prior EIRs and confirmed on the Orange County Important Farmland Map prepared by the California Department of Conservation as part of the Farmland Mapping and Monitoring Program. The proposed changes associated with the Project would not change those designations, therefore, no new impacts would occur.

b, c) The General Plan designation for the Project site is Medium Density Residential and Public Facility. According to the City of Lake Forest General Plan Land Use Map and Zoning Map, no agriculture or timber farmland designation exists on the Project site. Furthermore, the Project site is not subject to a Williamson Act contract. The proposed changes associated with the Project would not change those designations, therefore, no new impacts would occur.

d) As documented in Section 5.3 of the Serrano Summit EIR, the Project site contains a mix of coastal sage scrub, riparian, and ruderal vegetation communities. The vegetation mapping did not identify forest or timber resources. The proposed changes associated with the Project would not change the conditions of the Property, therefore, no new impacts would occur.

e) No other conditions exist that would convert farmland or timberland because those resources do not exist on the Project site or in the area. The Project site represents an infill condition surrounding by existing development on all sides and the City of Lake Forest General Plan Land Use Map does not designate any immediately surrounding properties for agricultural uses. The proposed changes associated with the Project would not change the conditions of the Property, therefore, no new impacts would occur.

Conclusion: The proposed changes associated with the Project would not change the conclusions in the Prior EIRs. The Project site continues to not have agriculture or timber resources or be subject to agriculture, timber, or Williamson Act land use restrictions. None of the components of the Project (DA/AP/UP) would change those designations or conclusions. No new impacts or intensification of previously identified impacts would occur with the modified Project.

2.3 Air Quality

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
III.	AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	X	☐
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	X	☐
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	X	☐
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	X	☐
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	X	☐

Discussion: The Prior EIRs concluded that development of the Project site would result in significant and unavoidable air quality impacts during both construction and operations. The Prior EIRs determined that NOx emissions from construction activities, primarily grading equipment, would exceed established thresholds. The Prior EIRs also concluded that based on the trip generation of 8,770 vehicle trips, NOx emissions from vehicles would also exceed AQMD emissions.

Air quality impacts are based on the intensity of development, both in the short-term during construction and in the long-term during operation. The Prior EIRs analyzed development of 608 residential dwelling units, approximately 11 acres of parks, and approximately 114,000 square

feet of civic uses[3]. Neither the size of the Project site nor the intensity of the proposal have changed. The Project boundary remains the same and in comparison, the size of the Civic Center pad has been reduced from 9 acres net usable to 8.13 acres net usable acres. This change was made to avoid a drainage and riparian habitat. Furthermore, the intensity of development has been slightly reduced. The maximum number of residential dwelling units remains 608. However, the size of the Civic Center has been reduced from approximately 114,000 square feet to slightly under 101,000 square feet. Therefore, the proposed changes associated with the Project would not change the conclusions in the Prior EIRs, but would result in slightly less impactful development.

a, b) The Prior EIRs concluded that the proposed development of the Project site would be consistent with adopted regional plans. Since the Project site and intensity of planned development would remain unchanged, the conclusions in the Prior EIRs also remain unchanged.

c) The Prior EIRs concluded that both short-term construction emissions and long-term operational emissions would exceed established thresholds resulting in a significant impact. One of the changes associated with the modified Project is a reduction in size of the Civic Center building pad from 9 acres net usable to 8.13 acres net usable. While this reduction occurs in an area of fill, the overall grading quantity of approximately 916,000 cubic yards would remain unchanged because the earthwork volume is dictated by the amount of cut. In order to avoid exporting material off-site, certain residential building pads would be raised by 2 to 3 feet to offset the reduction in fill area. The result is an unchanged grading program with similar emissions.

Long-term operational impacts are based on vehicle trips. The Prior EIRs analyzed potential impacts from a maximum development of 608 residential dwelling units and approximately 114,000 square feet of Civic Center uses. The maximum number of dwelling units remains unchanged at 608. The revised programing for the Civic Center has reduced the building square footage to slightly under 101,000 square feet. This minor reduction in building square footage would not result in a material change to trip generation. Therefore, the modified Project would not cause a significant change in operational impacts and in fact would result in fewer impacts due to the smaller building square footage.

The Prior EIRs included mitigation measures to reduce emissions of NOx to the extent possible. Those mitigation measures would remain in place and unchanged.

d) The Prior EIRs conducted a Localized Significance Threshold (LST) analysis and a Carbon Monoxide (CO) hotspot screening. Both studies determined impacts would be less than significant. The LST and CO hotspot analyses are sensitive to grading quantities and long-term vehicle emissions. Since neither the grading quantities nor maximum development intensity

[3] The OSA PEIR analyzed 883 dwelling units. The Serrano Summit EIR analyzed a mix of 608 residential units and approximately 114,000 square feet of Civic Center uses as the "project" and 883 dwelling units as the alternative.

would change as a result of the modified Project, the LST and CO hotspot conclusions would remain the same.

e) Short-term odors can occur during construction, both during grading and painting of structures, and long-term odors depend on the type of land use. Since the grading quantities and building sizes would remain the same as originally proposed, no change to short-term odor impacts would occur. Similarly, the long-term residential and office/civic land uses would also remain the same, resulting in similar impacts as presented in the Prior EIRs.

Conclusion: The changes in design associated with the modified Project would not change the air quality analysis included in the Prior EIRs. The amount of grading and development intensity remain unchanged. Therefore, no changes to the conclusions presented in the Prior EIRs are warranted. Mitigation Measures AQ-1 and AQ-2 remain appropriate, without changes, to reduce potential impacts from emissions. No new impacts or intensification of previously identified impacts would occur with the modified Project.

2.4 Biological Resources

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
IV.	BIOLOGICAL RESOURCES. Would the project:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	X	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	X
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	X
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	X	☐

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	X	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	X	☐

Discussion: The Project site is located adjacent to Serrano Creek and is dominated by upland habitat, primarily coast sage scrub. One drainage, referred to as Drainage A in the Serrano Summit EIR, extends from near the end of Indian Ocean Drive across the Civic Center property, and connects with Serrano Creek. Drainage A is a perennial drainage, fed by what appears to be two (2), 8-inch sub-canyon drains. The drainage pipes extend north toward Indian Ocean Drive, below the adjoining light industrial development. Constant flows have been observed in all seasons, and it appears the flows are not greatly affected by winter storm events. The constant flow in Drainage A has resulted in the establishment of wetlands and riparian habitat. Focused surveys have not shown occupation by least Bell's vireo (LBV) or Southwestern willow flycatcher (SWF).

The upland habitat is dominated by coastal sage scrub (CSS) habitat. The western portion of the site contains patches of disturbed CSS. The eastern portion of the site, especially the area surrounding Drainage A, supports high quality CSS. Focused surveys determined portions of the Project site are occupied by coastal California gnatcatcher (CAGN), a federally threatened song bird.

The Project site is located within the County of Orange Natural Communities Conservation Plan (NCCP), which is a regional Habitat Conservation Plan (HCP). The NCCP establishes take authority for sensitive species, such as the California gnatcatcher, and establishes a fee program to fund regional mitigation for the species. Portions of the IRWD property have experienced impacts to CSS as a result of construction of the adjacent Baker Water Treatment Plant project. The payment of fees into the NCCP program has occurred for those impacts.

The changes associated with the modified Project would reduce the amount of impacts to wetland and riparian resources and maintain the same amount of impacts to other habitat types, including CSS. The site plan changes to the Civic Center reduced the size of the building pad from 9 acres net usable to 8.13 acres net usable. The Prior EIRs analyzed the 9-acre building pad, which would have impacted the entirety of Drainage A, the perennial drainage that crosses the Civic

Center site, resulting in impacts to 0.289 acre of Waters of the U.S. and 1.909 acres of Waters of the State. By reducing the site of the Civic Center building pad, impacts would be reduced to 0.095 acre of Waters of the U.S. and 1.10 acres of Waters of the State.

a) The modified Project has the same potential to impact listed species as originally analyzed in the Prior EIRs. The Project site has been historically, and is presumed to be currently, occupied by CAGN. Recent surveys for LBV and SWF were negative. The changes associated with the Project would minimize impacts to riparian habitat, thereby reducing potential impacts to LBV, SWF, and other riparian species. Mitigation Measure BIO-1 requires field surveys for Rayless Ragwort prior to clearing. In 2008, a study by Harmsworth surveyed the Civic Center site and Serrano Summit park site and did not find evidence of Rayless Ragwort. Since the species can be found in coastal sage scrub mix, pre-clearing surveys on the Serrano Summit site with existing coastal sage scrub shall be conducted.

Mitigation Measure BIO-3 has three requirements to offset impacts to candidate or special status species. First, payment of in-lieu fees for removal of coastal sage scrub habitat consistent with the NCCP. The City of Lake Forest has already paid its in-lieu fee for CSS removal on the Civic Center site. A fee was previously paid for removal of approximately 12.5 acres of CSS on the Serrano Summit site. Prior to further impacts to CSS on the Serrano Summit Site, additional fees will be required. Second, Mitigation Measure BIO-3 requires a mitigation plan for impacts to conditionally covered species, such as southwestern willow flycatcher. A mitigation plan has not been prepared because no conditionally covered species, such as the southwestern willow flycatcher, were observed on the Project site. Therefore, this portion of the measure is no longer applicable. Finally, Mitigation Measure BIO-3 requires compliance with the provisions of the NCCP prior to clearing coastal sage scrub. Those construction avoidance measures remain in effect.

Since impacts to the rest of the site would remain unchanged, the conclusions presented in the Prior EIRs would remain unchanged and Mitigation Measures BIO-1 and BIO-3 would remain in effect.

b, c) The modified Project would reduce the impact to riparian resources, including wetlands, that fall within the jurisdictional limits of the U.S. Army Corps of Engineers (Corps) and the California Department of Fish and Wildlife (CDFW) compared to the original project design. The City has obtained regulatory permits from the Corps, CDFW, Regional Water Quality Control Board (RWQCB), and United States Fish and Wildlife Service (USFWS), which are included in Appendix D. The regulatory permits require the long-term conservation and management of the avoided wetland and riparian resources. Furthermore, the City is obligated to construct a new drainage feature on the Project site, planted with riparian habitat, with the intent of creating a new wetland and associated riparian habitat. The City also purchased one acre of credit at the Soquel Canyon Mitigation Bank for preservation and enhancement of riparian resources. Therefore, the modified Project represents reduced impacts of biological resources.

d) The changes associated with the modified Project would not change the analysis associated with wildlife movement. The Project site is an infill site and the Project boundaries remain the same. The reduction in impacts to riparian resources improve wildlife movement, but only over a portion of the Project site.

e, f) The changes associated with the modified Project would not change compliance with local policies, ordinances, or the Orange County NCCP/HCP. The City received a Section 7 determination from the USFWS that confirmed the overall development's consistency with the NCCP/HCP. The revisions associated with the modified Project are included in the Section 7 determination.

Conclusion: The revisions in design associated with the modified Project would not change the biological analysis included in the Prior EIRs, with the exception of reducing impacts to wetland and riparian resources. Aside from reducing the size of the development pad for the Civic Center to reduce impacts to riparian resources, the development boundary would remain unchanged. Mitigation Measures BIO-1, BIO-3, and BIO-5 remain appropriate, without changes, to reduce potential impacts to biological resources. Mitigation Measures BIO-2 and BIO-5 have already been satisfied through the issuance of regulatory permits, including a Section 7 to determine consistency with the NCCP/HCP. No new impacts or intensification of previously identified impacts would occur with the modified Project.

2.5 Cultural Resources

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
V.	CULTURAL RESOURCES. Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	☐	☐	X	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	X	☐
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	X	☐
d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	X	☐

Discussion: A cultural resources record search was conducted as part of the Prior EIRs and no historical resources were found within a half mile of the Project site. The Prior EIRs relied on these surveys and found impacts to be less than significant with mitigation. The mitigation, listed as CUL-1 through CUL-8 within Table 1, require archaeological and paleontological monitoring during grading activities.

Subsequent to the Prior EIRs, an updated cultural resource assessment was prepared for the entire Project site as part of the federal regulatory permitting process (404 permit) with the U.S. Army Corps of Engineers and associated Section 106 consultation with the State Historic Preservation Officer (SHPO). That report, included as Appendix E, confirmed the conclusions in the Prior EIRs that no resources exist on site and no new mitigation measures are required.

a) The modified Project would not change the area of impact as analyzed in the Prior EIRs, except to reduce the footprint of the Civic Center. Therefore, no new areas that could impact historical resources would occur. The subsequent cultural analysis conducted by DUKE CRM in 2014 found three fence posts considered historic features, however the fence posts contain limited research potential and were determined not significant and not eligible for the National Register of Historic Places and California Register of Historical Resources. Mitigation measures CUL-1 through CUL-4 remain applicable. No new mitigation is required.

b) The modified Project would not change the area of impact as analyzed in the Prior EIRs, except to reduce the footprint of the Civic Center. Therefore, no new areas that could impact archaeological resources would occur. The subsequent analysis conducted by DUKE CRM in 2014 found one isolated mano fragment. The finding is not considered a unique archaeological resource as defined by CEQA and is therefore not significant. As part of the DUKE CRM study, the Native American Heritage Commission (NAHC) was contacted in November 2014 and no Native American tribes responded and no requests for consultation were received. Mitigation measures CUL-5 through CUL-8 remain applicable. No new mitigation is required.

c) The modified Project would not change the area of impact as analyzed in the Prior EIRs, except to reduce the footprint of the Civic Center. Therefore, no new areas that could impact paleontological resources would occur. The subsequent analysis conducted by DUKE CRM in 2014 found two fossil fragments, likely of marine mammal bone. Both finds are highly disturbed, fragmented, and not considered significant.

d) The modified Project would not change the area of impact as analyzed in the Prior EIRs, except to reduce the footprint of the Civic Center. Therefore, no new areas that could impact human remains would occur. The Project site is not located near a cemetery and there is no evidence to suggest that human remains could be located on the Project site.

Conclusion: The changes in design associated with the modified Project would not change the cultural resources analysis included in the Prior EIRs. The limits of disturbance remain unchanged, except for a slight reduction on the Civic Center site to avoid a riparian drainage. Therefore, no changes to the conclusions presented in the Prior EIRs are warranted. Mitigation Measures CUL-1 through CUL-8 remain appropriate, without changes, to reduce potential impacts to cultural, archaeological, and paleontological resources. No new impacts or intensification of previously identified impacts would occur with the modified Project.

2.6 Geology and Soils

Issues:			New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
VI.	GEOLOGY AND SOILS. Would the project:					
	a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:	☐	☐	X	☐
	i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	X	☐
	ii)	Strong seismic ground shaking?	☐	☐	X	☐
	iii)	Seismic-related ground failure, including liquefaction?	☐	☐	X	☐
	iv)	Landslides?	☐	☐	X	☐
	b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	X	☐
	c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	X	☐
	d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	X	☐

Issues:	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	X	☐

Discussion: The modified Project includes minor changes to the grading plan. The southern portion of the Civic Center building pad has been reduced in size to minimize impacts to the adjacent riparian drainage. That area was originally planned as a fill site, accepting dirt from elsewhere on the Project site. Without a place for that dirt, certain residential building pads would be raised by approximately 2 to 3 feet to avoid exporting soil material from the site. Raising the building pads approximately 2 to 3 feet would also cause a corresponding increase in retaining wall heights in certain areas. The minor grading changes do not affect the underlying geology of the site or the ability to grade the site and achieve stability standards. Confirmation of the minor nature of these changes is found in a determination by the City that the changes to the TTM and corresponding rough grading plan substantially conform to the original Tentative Tract Map. The Tentative Tract Map need not be revised. A Geotechnical Exploration Report was prepared by Leighton and Associates in 2010. No changes to this report are necessary.

a) i) – iv) The Project boundaries and limits of grading have not changed with the exception of reducing the size of the Civic Center building pad. The Project site remains outside of the Alquist-Priolo Earthquake Fault Zone. The underlying geology remains the same and the modified Project does not increase or alter the potential risks from fault rupture, seismic shaking, liquefaction, or landslides.

b) The modified Project would not increase the risk of top soil loss or erosion. The Project site would be graded and landscaped. The change in grading boundaries would occur at the southern portion of the Civic Center pad. That area would be vegetated with native plant species and not left in a condition susceptible to soil loss or erosion.

c) The stability of the geologic unit underlying the Project site was analyzed in the Prior EIRs. The changes associated with the modified Project, which include approximately 2 to 3 feet of additional fill, would not change the stability of the underlying geologic unit. The recommendations in the geotechnical report would remain in place to ensure geologic stability and the additional wall height in certain areas would be engineered to accommodate the additional fill material.

d) The changes associated with the modified Project would not change the expansiveness of the soils on the Project site. The geotechnical report concluded that on-site soil samples have a low expansion potential and the geotechnical recommendations would remain applicable.

e) Septic tanks are not proposed as part of the modified Project.

Conclusion: The changes in design associated with the modified Project would not change the geology and soils analysis included in the Prior EIRs. The limits of disturbance remain unchanged, except for a slight reduction on the Civic Center site to avoid a riparian drainage and the minor increase in building pad heights would not change the underlying geology. Therefore, no changes to the conclusions presented in the Prior EIRs are warranted. Mitigation Measure GEO-1, which requires implementation of the recommendations included in the geotechnical report, remains appropriate, without changes, to reduce potential impacts from grading the Project site. No new impacts or intensification of previously identified impacts would occur with the modified Project.

2.7 Greenhouse Gas Emissions

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
VII.	GREENHOUSE GAS EMISSIONS. Would the project:				
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	X	☐
b)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases?	☐	☐	X	☐

Discussion: The Prior EIRs concluded that development of the Project site would result in less than significant Greenhouse Gas (GHG) impacts during both construction and operations. The Prior EIRs determined that implementation of the measures included in Green Builder Program and Sustainability Development Regulations would reduce GHG emissions from construction and operation below the level of significance.

GHG impacts are based on the intensity of development, both in the short-term during construction and in the long-term during operation. Emissions from construction and operations are combined and amortized over the life of the project, which is assumed to be 30 years. The Prior EIRs analyzed development of 608 residential dwelling units, approximately 11 acres of parks, and approximately 114,000 square feet of civic uses. Neither the size of the Project site nor the intensity of the proposal have changed. The Project boundary remains unchanged and in comparison, the size of the Civic Center pad has reduced from 9 net usable acres to 8.13 net usable acres. This revision was made to avoid a drainage and riparian habitat. Furthermore, the intensity of development has been slightly reduced. The maximum number of residential dwelling units remains 608. However, the size of the Civic Center has been reduced from approximately 114,000 square feet to slightly under 101,000 square feet. Therefore, the proposed changes associated with the Project would not change the assumptions and conclusions in the GHG analysis.

a) The Prior EIRs determined that development of the Project site would result in less than significant GHG emissions. The proposed changes that constitute the Project would not change the intensity of construction or operation, therefore, no changes to the assumptions used in the GHG analysis that could change the results would occur.

b) The proposed revisions to the Project would not change the intensity of development, such that new GHG impacts would occur, resulting in a conflict with adopted policies. Mitigation Measure GHG-1, which requires the implementation of energy efficient building standards, remains applicable and unchanged, allowing the Project to remain consistent with the City's Green Builder Program and Sustainability Development Regulations.

Conclusion: The changes in design associated with the modified Project would not change the GHG analysis included in the Prior EIRs. The amount of grading and development intensity remain unchanged, both of which are used to calculate GHG emissions. Therefore, no changes to the conclusions presented in the Prior EIRs are warranted. Mitigation Measure GHG-1 remains appropriate, without changes, to reduce potential impacts from emissions. No new impacts or intensification of previously identified impacts would occur with the modified Project.

2.8 Hazards and Hazardous Materials

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
VIII.	HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	X	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	X	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	X	☐
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	X	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	X	☐
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	X	☐

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	X	☐
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	X	☐

Discussion: The Prior EIRs concluded through the preparation of a Phase I site assessment that potential Hazards and Hazardous Waste impacts would be less than significant. The changes associated with the modified Project would not change those conclusions because the boundaries of the Project site and the uses proposed as part of the Project would not change. Irvine Ranch Water District's Baker Water Treatment Plan (WTP) remains located to the south of Serrano Summit. The Baker WTP routinely relies on deliveries of chemicals considered hazardous. The delivery route would rely on the extension of Indian Ocean Drive between the Civic Center and the Serrano Summit developments. The potential for release of hazardous materials was analyzed in the Prior EIRs and determined to be less than significant. The design changes associated with the modified Project would not change that delivery route or the conclusions in the Prior EIRs.

a - c) The design changes associated with the modified Project would not change the land uses analyzed in the Prior EIRs, therefore, no new transport, use, or potential release of hazardous materials would occur. The Baker WTP would continue to rely on deliveries of hazardous materials, and the changes associated with the modified Project would not alter that route or process.

d) The Prior EIRs determined the Project site is not included on a list of hazardous materials sites and does not pose a risk to the public. The changes associated with the modified Project would not change those prior conclusions because the site boundary remains the same.

e - f) The Project site is not located in an airport land use plan or near a private or public airstrip. Since the location and boundaries of the Project site have not changed, no new impacts would occur from the modified Project.

g) The roadway circulation patterns and land use patterns remain the same as analyzed in the Prior EIRs, therefore no changes to emergency access routes or evacuation routes would occur.

h) The Project boundary and land uses remain the same as analyzed in the Prior EIRs. The only change in boundary would occur at the southern portion of the Civic Center building pad. The building pad has been reduced in size to avoid impacts to a riparian drainage. This change would not change the risks of exposing persons to wildland fires because the vegetation that would be avoided and the mitigation placed in that general area includes riparian habitat with high water and moisture values, not vegetation that poses a high fire risk.

Conclusion: The Prior EIRs concluded the development of the Project site would result in less than significant impacts from hazards and hazardous materials with implementation of Mitigation Measures HAZ-1 through HAZ-4. The foregoing Mitigation Measures remain applicable to the Project and have been carried forward in this Addendum. The changes associated with the modified Project are minor and do not change the conclusions in the Prior EIRs. The land uses, intensity of development, and location of development all remain the same. The Mitigation Measures all remain unchanged and no new or more intense impacts would occur.

2.9 Hydrology and Water Quality

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
IX.	HYDROLOGY AND WATER QUALITY. Would the project:				
a)	Violate any water quality standards or waste discharge requirements?	☐	☐	X	☐
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	X	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in flooding- or off-site?	☐	☐	X	☐
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff above pre-development condition in a manner which would result in flooding on- or off-site?	☐	☐	☐	X
e)	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	X	☐

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
f)	Otherwise substantially degrade water quality?	☐	☐	X	☐
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	X	☐
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	X	☐
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	X	☐
j)	Cause inundation by seiche, tsunami, or mudflow?	☐	☐	X	☐
k)	Deposit sediment and debris materials within existing channels obstructing flows?	☐	☐	X	☐
l)	Exceed the capacity of a channel and cause overflow during design storm conditions?	☐	☐	X	☐
m)	Adversely change the rate, direction or flow of groundwater?	☐	☐	X	☐
n)	Have an impact on groundwater that is inconsistent with a groundwater management plan prepared by the water agencies with the responsibility for groundwater management?	☐	☐	X	☐
o)	Cause a significant alteration of receiving water quality during or following construction?	☐	☐	X	☐

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
p)	Create or contribute runoff water which would generate substantial additional sources of polluted runoff?	☐	☐	X	☐
q)	Substantially degrade water quality by discharge which affects the beneficial uses (i.e. swimming, fishing, etc.) of the receiving or downstream waters?	☐	☐	X	☐
r)	Increase in any pollutant for which the receiving water body is already impaired as listed on the Clean Water Act Section 303(d) list?	☐	☐	X	☐

Discussion: The changes associated with the modified Project would not change the planned drainage system or water quality treatment system. The Prior EIRs analyzed the potential hydraulic and water quality impacts from development of the Project site on Serrano Creek. The Prior EIRs included a Preliminary Hydrology Report and a Preliminary Water Quality Management Plan. The original project design included two water quality/detention basins and additional water quality BMPs that remain with the modified Project modifications.

a, o - r) The Project site drains into Serrano Creek, which is an impaired water body. The Preliminary WQMP includes treatment BMPs and Mitigation Measure HYD-2 requires coordination with the Nitrogen and Selenium Working Group. The changes associated with the modified Project would not change any of the planned treatment BMPs included in the Preliminary WQMP. The Project would be required to comply with the Preliminary WQMP as well as Mitigation Measures HYD-2. No new areas of impervious surface would be added that would require treatment, and instead the size of the Civic Center building pad reduced from 9 acres to 8.3 acres.

b, n) The changes associated with the modified Project would not increase the intensity of development or the amount of impervious surface, both of which could affect groundwater supplies. The Civic Center building pad would reduce in size from 9 acres to 8.3 acres and the remaining disturbance boundary would remain the same.

c - d) The changes associated with the modified Project would not change the drainage patterns from the original design. The Project site has two locations for discharge of stormflow into Serrano Creek. An upstream connection near the Civic Center and a downstream connection near the planned nature park and Baker WTP. The original development plans directed the

majority of the storm runoff to the downstream connection, which enters Serrano Creek in a more stable area than the upstream connection. This drainage pattern would not change with the modified Project modifications.

e) The volume of discharge that could affect the capacity of the planned drainage system would not change as a result of the modified Project modifications. The changes associated with the modified Project do not increase the intensity of development nor the amount of impervious surface that could cause an increase in runoff that would result in new impacts.

f) The modified Project would retain the same water quality treatment facilities as provided in the Preliminary WQMP and analyzed in the Prior EIRs. No changes would occur that would create a new or more severe impact.

g - h) The Prior EIRs determined that no housing or structures would be located within a 100-year floodplain. That determination remains the same for the modified Project because development boundaries would remain unchanged with the exception of reducing the size of the Civic Center pad, which would move buildings farther away from Serrano Creek, thus reducing the potential impact.

i) The Project site is not located below a levee or dam; thus no impacts would occur. The modified Project would not change this conclusion.

j) The Project site is not located in an area susceptible to impacts from tsunami or seiche; thus no impacts would occur. The risk of mudflow is associated with geotechnical stability. As discussed in Section 2.6, the modified Project would not change the stability of the Project site or create a new condition that would increase the risk of mudflow.

k) The Project site drains into Serrano Creek, however prior to discharge, all flows from the Project site would be either captured in a detention basin or water quality treatment BMP. Furthermore, once the site is developed, the risk of debris leaving the Project site is substantially reduced because the area of remaining open space that could produce debris would be substantially reduced with development of the Project site and in most cases, the remaining open space would be landscaped, irrigated, and routinely maintained, which further reduces the risk of debris flow. The changes associated with the modified Project would not change the conclusions in the Prior EIRs because there are no planned changes to the drainage or water treatment facilities on the Project site.

l - m) The changes associated with the modified Project would not increase development intensity or development area that could lead to increased runoff or velocities. The development boundary remains the same, with the exception of the reduction in the Civic Center building pad from 9 acres to 8.3 acres.

Conclusion: The changes associated with the modified Project are minor. They include reducing the size of the Civic Center building pad, slightly raising the elevation of residential building pads

and retaining walls, and revising the type of permitted types of residential housing. None of those changes would increase development intensity, the amount of impervious surface, or the development boundaries. The drainage patterns and water quality treatment facilities would remain as originally designed and analyzed in the Preliminary Hydrology Report and Preliminary WQMP. No changes to that Hydrology Report or Preliminary WQMP would be necessary. Mitigation Measures HYD-1 through HYD-3 remain applicable and unchanged and have been carried forward to the modified Project in this Addendum. Therefore, no new impacts or intensification of previously identified impacts would occur with the modified Project.

2.10 Land Use and Planning

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
X.	LAND USE AND PLANNING. Would the project:				
a)	Physically divide an established community?	☐	☐	X	☐
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	X	☐
c)	Substantially conflict with on-site or adjacent land use due to project-related significant unavoidable indirect effects (e.g., noise, aesthetics, etc.) that preclude use of the land as it was intended by the General Plan.	☐	☐	X	☐
d)	Conflict with the Central and Coastal Natural Communities Conservation Program/Habitat Conservation Plan (NCCP/HCP) of which the City of Lake Forest is a participant?	☐	☐	X	☐

Discussion: The OSA PEIR analyzed the initial land use change to allow residential and civic center uses on the Project site. The Serrano Summit EIR analyzed further refinements of the land use plan through the approval of an Area Plan. The changes associated with the modified Project are consistent with the original adopted land use designations and the changes only refine architecture, development standards, and types of permitted residential dwellings.

a) The Project site is an infill site, surrounded by existing light industrial and residential development. The southern boundary of the Property is bordered by Serrano Creek. Therefore, development of the site would not divide an existing community.

b) The City of Lake Forest General Plan, dated June 21, 1994 and amended in August 2016designates the Project site as Medium Density Residential (MDR) and Public Facility. An Area Plan was subsequently adopted and, as analyzed in the Serrano Summit EIR, determined to be consistent with the General Plan's goals, policies, and land use designations. The modified Project includes an amendment to the Area Plan for refinements of architecture, development standards, and types of permitted residential dwellings. The modified Project does not change the proposed land uses, which remain residential and civic center, consistent with the adopted General Plan land use designations. The most substantive proposed change would permit a new type of residential dwelling referred to as "Urban Court," which is part of the Single Family Detached Enclave Residential heading. This type of housing would permit a form of small lot detached housing with accompanying development standards. No change in land use or change in overall development policy would occur. The other Area Plan Amendment changes focus on design. Similarly, none of those changes would conflict with established land use policies or goals. Therefore, the modified Project remains consistent with the City's General Plan, Zoning Code, and other established land use regulations.

c) Land use compatibility can be influenced by land use, intensity/density of development, or change in development standards. The City of Lake Forest General Plan established land use designations that identify permitted land uses. The Project site is designated Medium Density Residential andPublic Facility. The Prior EIRs determined the permitted land uses of residential and civic center were compatible with the surrounding light industrial and residential land uses. Since the modified Project would not change the proposed land uses, the modified Project remains consistent with the General Plan land use designation and compatible with surrounding land uses.

The OSA PEIR analyzed development of 833 dwelling units on the project site and the Serrano Summit EIR analyzed 608 dwelling units plus 115,000 square feet of civic center uses. The modified Project does not propose to change the intensity or density of development. The modified Project remains under the development threshold analyzed in the Serrano Summit EIR and consistent with the 25 dwelling unit per acre maximum density established in the Area Plan. Therefore, the modified Project would not increase development intensity or density and therefore, remains compatible with surrounding land uses.

The modified Project includes a slight change to development standards, however the proposed changes would not affect surrounding land uses. The proposed "Urban Court" residential housing type would have an increase in permitted height from 35 feet to 36.5 feet. The slight increase in permitted height would allow roof decks. This change would not affect surrounding land uses because the closest residential uses are separated by either Serrano Creek or the Baker Water Treatment Plant from the proposed development and the slight increase in structure height, assuming the structure is built to the maximum permitted height, would not be perceptible given the distance to surrounding residential uses. The modified Project would also revise other development standards, such as lot coverage and setbacks to accommodate the "Urban Court" housing type and for similar reasons, these changes would also not be perceptible

to surrounding land uses. Therefore, the modified Project remains consistent with surrounding land uses.

d) The Project site is located within the Orange County Central Coastal NCCP/HCP. The City has completed a Section 7 consultation with the U.S. Fish and Wildlife Service based on the modified Project and received a streamlined Biological Opinion. The Biological Opinion, which is included in Appendix D, confirms the Project's consistency with the NCCP/HCP.

Conclusion: The modified Project includes an Amendment to the Area Plan, however that Amendment includes only minor design changes that would remain consistent with adopted land use regulations, including the General Plan. No new impacts would occur. No mitigation is required.

2.11 Mineral Resources

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
XI.	MINERAL RESOURCES. Would the project:				
	a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	X	☐
	b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	X	☐

Discussion: The changes associated with the modified Project would not change whether or not mineral resources are present on the Project site. Furthermore, no mineral resources are present on the Project site or immediate area.

a) The modified Project would not change the conclusions in the Prior EIRs that mineral resources are not present on the Project site.

b) The modified Project would not change the conclusions in the Prior EIRs that the City's General Plan or other land use plans do not designate the site for locally important mineral resources.

Conclusion: The modified Project would not change the analysis or conclusions found in the Prior EIRs, and would not result in any new or more intense impacts related to mineral resources.

2.12 Noise

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
XII.	NOISE. Would the project result in:				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	X	☐
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	X	☐
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	X	☐
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	X	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	X	☐
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	X	☐

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
g)	Project traffic will cause a noise level increase of 3 dB or more on a roadway segment adjacent to a noise sensitive land use. Noise sensitive land uses include the following: residential (single-family, multi-family, mobile home); hotels; motels; nursing homes; hospitals; parks, playgrounds and recreation areas; and schools?	☐	☐	X	☐
h)	The resulting "future with project" noise level exceeds the noise standard for sensitive land uses as identified in the City of Lake Forest General Plan?	☐	☐	X	☐
i)	Exceeds the stationary source noise criteria for the City of Lake Forest as specified by the Exterior noise standards set forth in the Noise Control Chapter of the Lake Forest Municipal Code?	☐	☐	X	☐

Discussion: The Prior EIRs analyzed potential construction, operation, and vibration noise associated with development of the Project site and determined impacts would be less than significant with mitigation. The changes associated with the modified Project would not change the analysis included in the Prior EIRs. The Project boundaries remain the same, with the exception of the Civic Center building pad, which would be smaller and located farther away from residential uses located on the opposite side of Serrano Creek. Grading quantities would also not change. The additional fill material that was planned for the Civic Center site would be used to slightly raise other building pads on the Project site. This change would not alter construction activities. The intensity of development would also not change. The size of the Civic Center is slightly smaller than originally anticipated and the maximum number of dwelling units remains the same as originally analyzed.

a – d) The changes associated with the modified Project are minor and would not change the project boundaries, amount of grading, or intensity of development. Therefore, no changes would occur to potential short-term construction noise and vibration impacts, as well as long-term operational impacts. Mitigation Measures NOI-1 would remain applicable and unchanged.

Since sensitive receptors are not located within 25 feet of the Project site and therefore grading activities, Mitigation Measure NOI-2 is no longer applicable and has been removed.

e – f) The Project site is not located near a public or private airport or airstrip, therefore the changes associated with the Project would not alter the analysis or conclusions in the Prior EIRs.

g-i) The changes associated with the modified Project are minor and would not change the approved land use or approved intensity of development, therefore operational and stationary source noise levels would remain the same as analyzed in the Prior EIRs.

Conclusion: The changes associated with the modified Project are minor. They include reducing the size of the Civic Center building pad, slightly raising the elevation of other building pads and retaining walls, and revising the type of permitted types of residential housing. None of those revisions would change the boundary or amount of grading, increase development intensity, or change permitted land uses. The construction and operational noise remain as analyzed in the Prior EIRs. Mitigation Measures NOI-1 and NOI-2 remain applicable and unchanged. Therefore, no new impacts or intensification of previously identified impacts would occur with the modified Project.

2.13 Population and Housing

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
XIII.	POPULATION AND HOUSING. Would the project:				
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?	☐	☐	X	☐
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	X	☐
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	X	☐

Discussion: Development of the Project site will increase population through construction of new homes. The OSA PEIR initially analyzed this population growth in conjunction with the General Plan Amendment that would allow 833 dwelling units on the Project site. The OSA PEIR determined impacts to population and housing would be less than significant. The Serrano Summit EIR further analyzed potential impacts to population and housing and reached the same conclusion. The Project analyzed in the Serrano Summit EIR was based on a mix of 608 dwelling units and 114,000 square feet of civic center uses. The changes associated with the modified Project consist of minor design changes and would not change the permitted land uses or the maximum development cap of 608 dwelling units.

a) The modified Project would not change or increase the population beyond that analyzed in the Prior EIRs. Therefore, no new impacts or intensification of impacts would occur.

b) No housing currently exists on the Project site, therefore, no displacement of existing housing would occur.

c) No housing currently exists on the Project site, therefore, no displacement of existing housing would occur.

Conclusion: The changes associated with the modified Project are minor. They include reducing the size of the Civic Center building pad, slightly raising the elevation of other building pads and

retaining walls, and revising the type of permitted types of residential housing. None of those revisions would change the land use or intensity of development, including the number of permitting dwelling units. Therefore, no additional population or housing would be created as part of the modified Project, and no new impacts or intensification of previously identified impacts would occur.

2.14 Public Service

Issues:	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
XIV. PUBLIC SERVICES.				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	X	☐
Fire protection?	☐	☐	X	☐
Police protection?	☐	☐	X	☐
Schools?	☐	☐	X	☐
Parks?	☐	☐	X	☐
Other public facilities?	☐	☐	X	☐

Discussion: The OSA PEIR analyzed potential impacts to public facilities from the development of 833 dwelling units. Upon further refinement, the Serrano Summit EIR analyzed potential impacts from development of 608 dwelling units and 114,000 square feet of civic center uses. The revisions associated with the modified Project consist of minor design changes and would not change the permitted land uses or the maximum development cap of 608 dwelling units. Therefore, the modified Project would not cause any new or more intense impacts on public facilities.

a) The revisions associated with the modified Project consist of minor design changes that would not increase the intensity of development such that new or more intense demand would be placed on general governmental public services, fire protection, police protection, schools, or parks. The modified Project includes a Civic Center designed to accommodate the demands of the City. The modified Project also includes the same number and size of new parks as originally proposed. Mitigation Measure PUB-1 would remain in place and unchanged to require further coordination with the Orange County Fire Authority for fire protection.

Conclusion: The changes associated with the modified Project are minor. They include reducing the size of the Civic Center building pad, slightly raising the elevation of other building pads and retaining walls, and revising the type of permitted types of residential housing. None of those revisions would change the land use or intensity of development, including the number of permitting dwelling units. Therefore, no additional demands on public services would be created as part of the modified Project, and no new impacts or intensification of previously identified impacts would occur. Mitigation Measure PUB-1 would remain applicable and unchanged.

2.15 Recreation

Issues:	New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
XV. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	X	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment?	☐	☐	X	☐

Discussion: The OSA PEIR analyzed potential impacts to recreation facilities from the development of 833 dwelling units. Upon further refinement, the Serrano Summit EIR analyzed potential impacts from development of 608 dwelling units and 114,000 square feet of civic center uses. The changes associated with the modified Project consist of minor design changes and would not change the permitted land uses or the maximum development cap of 608 dwelling units. Therefore, the modified Project would not cause any new or more intense impacts on recreation facilities.

a) The modified Project would not increase development intensity beyond that analyzed in the Prior EIRs and the modified Project would not change the number and size of new parks included in the development proposal.

b) The Prior EIRs analyzed the development of 6.1 acres of new parks. The modified Project would not change the amount of park included in the development plan.

Conclusion: The changes associated with the modified Project are minor. They include reducing the size of the Civic Center building pad, slightly raising the elevation of other building pads and retaining walls, and revising the type of permitted types of residential housing. None of those revisions would change the land use or intensity of development, including the number of permitting dwelling units or the amount of park space provided. Therefore, no additional demands on recreation would be created as part of the modified Project, and no new impacts or intensification of previously identified impacts would occur.

2.16 Transportation/Traffic

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
XVI.	TRANSPORTATION / TRAFFIC. Would the project:				
a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	X	☐
b)	Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	X	☐
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	X	☐
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	X	☐
e)	Result in inadequate emergency access?	☐	☐	X	☐

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	X	☐
g)	ICU (intersection capacity utilization) values at intersections, with the proposed project, exceed the City of Lake Forest performance criteria as specified in Table C-3 of the General Plan Circulation Element?	☐	☐	X	☐
h)	The proposed project includes design features or uses that may cause traffic hazards such as sharp curves, tight turning radii from streets, limited roadway visibility, short merging lanes, uneven road grades, or any other conditions determined by the City traffic engineer to be a hazard?	☐	☐	X	☐
i)	The project provides less parking than required, applying the standards found in the City of Lake Forest Municipal Code?	☐	☐	X	☐

Discussion: The Prior EIRs included a traffic study that analyzed potential impacts to area intersections from the generation of traffic associated with development of the Project site. The traffic study relied on trip generation rates from the Institute of Traffic Engineers based on the type of proposed land uses. Development of 608 dwelling units and 114,000 square feet of civic center uses would generate approximately 8,770 average daily trips. Applied to the existing roadway network with existing and forecast background traffic, the study determined potential impacts would be less than significant.

The changes associated with the modified Project consist of minor design revisions that do not change land use or intensity of uses. The design of the Civic Center has been refined and the total square footage is approximately 101,000 square feet, less than that assumed in the Prior EIRs. Furthermore, the residential development cap of 608 dwelling units would remain unchanged.

a – b, and g) The modified Project consists of minor design changes that would not affect overall development intensity or land use. The changes do not warrant revisions to the traffic study used in the Prior EIRs. Therefore, the analysis and conclusions presented in the Prior EIRs remain unchanged.

c) Development of the Project site would not impact air traffic or air travel; therefore, the changes associated with the modified Project would also not cause a new impact.

d and h) The modified Project consists of minor changes in design features, none of which would affect the design of internal streets or change the permitted land uses from residential/civic center to an incompatible land use. Therefore, the modified Project would not create new hazardous conditions or incompatible land uses.

e) The Project site has multiple points of access, none of which would change with the modified Project. Therefore, no new impacts would occur.

f) The proposed design changes would not affect the planned roadway system, including lane configuration and design, bicycle facilities, bus routes, and pedestrian circulation. The modified Project consists of minor design changes that affect architecture and types of permitted residential dwelling units. No new impacts would occur.

i) The design changes proposed as part of the Project would not affect the amount of parking provided either on the Civic Center site or within the residential neighborhoods. The size of the building pad for the Civic Center has been reduced from 9 acres to 8.3 acres. This reduction has resulted in the redesign of parking to include a parking structure for a total of 466 parking spaces. This amount of parking meets the City's parking requirements.

Conclusion: The changes associated with the modified Project are minor. They include reducing the size of the Civic Center building pad, slightly raising the elevation of other building pads and retaining walls, and revising the type of permitted types of residential housing. None of those revisions would change the land use or intensity of development, including the number of permitting dwelling units, size of the Civic Center, or the amount of grading or haul trips. Furthermore, the changes included as part of the modified Project would not change the street layout, design, or connection points. Therefore, the modified Project would not create new traffic impacts or intensify previously identified impacts. No new mitigation is required.

2.17 Utilities and Service Systems

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
XVII.	UTILITIES AND SERVICE SYSTEMS. Would the project:				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	X	☐
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	X	☐
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	X	☐
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? In making this determination, the Authority shall consider whether the project is subject to the water supply assessment requirements of Water Code Section 10910, et. seq. (SB 610), and the requirements of Government Code Section 664737 (SB 221).	☐	☐	X	☐
e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	X	☐

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	X	☐
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	X	☐

Discussion: The anticipated demands on utility systems analyzed in the Prior EIRs would not change as part of the modified Project because the modified Project would not change the land use or development intensity.

a – b and e) The demand for wastewater depends on development intensity. The modified Project would not cause an increase in the number of dwelling units (608) or square footage of Civic Center uses (101,000) beyond that analyzed in the Prior EIRs. IRWD is the local wastewater treatment provider and also the owner of the residential portion of the Project site. IRWD has reviewed the development plan and determined that wastewater demands can be met. No new impacts would occur as a result of the modified Project.

c) The design of the storm drain system and water quality treatment BMPs would not change as a result of the modified Project. Two connections to Serrano Creek would remain, with the majority of the flows from the Project site directed through a detention basin to the downstream discharge point in Serrano Creek. No new impacts would occur as a result of the modified Project.

d) The demand for domestic water depends on development intensity. The modified Project would not cause an increase the number of dwelling units (608) or square footage of Civic Center uses (101,000) beyond that analyzed in the Prior EIRs. IRWD is the local water provider and also the owner of the residential portion of the Project site. IRWD has reviewed the development plan and determined that water demands can be met. No new impacts would occur as a result of the modified Project.

f - g) Solid waste generation is based on land use and development intensity. The modified Project would not change the proposed land uses or increase the intensity of development beyond that analyzed in the Prior EIRs. Therefore, the modified Project would not cause new impacts from solid waste generation.

Conclusion: The changes associated with the modified Project are minor. They include reducing the size of the Civic Center building pad, slightly raising the elevation of other building pads and retaining walls, and revising the type of permitted types of residential housing. None of those revisions would change the land use or intensity of development, including the number of

permitting dwelling units, size of the Civic Center, or the amount of park space provided. Furthermore, the changes included as part of the modified Project would not change the location of detention basins and storm drain connections to Serrano Creek. Therefore, the modified Project would not create new impacts to utilities or intensify previously identified impacts. No new mitigation is required.

2.18 Mandatory Findings of Significance

Issues:		New Potentially Significant Impact	New Mitigation is Required	No New Impact/No Impact	Reduced Impact
XVIII.	MANDATORY FINDINGS OF SIGNIFICANCE				
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	X
b)	Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☐	☐	X	☐
c)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probable future projects.)	☐	☐	X	☐
d)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	X	☐

a) The changes in design associated with the modified Project would not change the biological analysis included in the Prior EIRs, with the except of reducing impacts to wetland and riparian resources. Aside from reducing the size of the development pad for the Civic Center to reduce impacts to riparian resources, the development boundary would remain unchanged. Mitigation Measures BIO-1, BIO-3, and BIO-5 remain appropriate, without changes, to reduce potential impacts to biological resources. Mitigation Measures BIO-2 and BIO-5 have already been satisfied through the issuance of regulatory permits, including a Section 7 to determine consistency with the NCCP/HCP. No new impacts or intensification of previously identified impacts would occur with the modified Project.

b) The modified Project does not cause any new or more severe short-term or long-term significant impacts. No new or revised mitigation measures are required and the conclusions presented in the Prior EIRs remain unchanged.

c) The modified Project would not change the development boundary, permitted land uses, extent of construction activities, or intensity of development. Therefore, the short-term construction impacts and long-term operational impacts would remain consistent with the analysis provided in the Prior EIRs. There would be no changes to the analysis or conclusions regarding cumulative impacts. The finding of significant and unavoidable adverse air quality impacts would also apply to this EIR Addendum.

d) The changes associated with the modified Project are minor. They include reducing the size of the Civic Center building pad, slightly raising the elevation of other residential building pads and retaining walls, and revising the types of permitted residential housing. None of those revisions would change the land use or intensity of development, including the number of permitting dwelling units, size of the Civic Center, or the amount of park space provided. No new impacts or more severe impacts to human beings, either directly or indirectly, would occur.

Appendix A

Amendment to the Area Plan 2009-01

SERRANO SUMMIT

FINAL
AREA PLAN

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January 2012

SERRANO SUMMIT

AREA PLAN

JANUARY 2012

FINAL

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City of Lake Forest

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Irvine Ranch Water District

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TABLE OF CONTENTS

Section 10 - Development Regulations

Section 11 - Implementation

Section 12 - Relationship to the General Plan

TABLE OF EXHIBITS

TABLE OF APPENDICES

Appendix - Architectural Style Sheets

EXECUTIVE SUMMARY

Section 1.0

January 2012

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"Remember the Past, Challenge the Future"

City of Lake Forest's Motto

OVERVIEW 1.1

The Serrano Summit Area Plan is a comprehensive plan for the development of approximately 98.9 acres located within the City of Lake Forest, California. Serrano Summit is located north of existing residential uses in Serrano Highlands, south of Commercentre Drive and existing industrial uses at the current terminus of Biscayne Bay Drive, east of Bake Parkway, and west of Serrano Creek. Vehicular access to the site is available via both Indian Ocean Drive and Biscayne Bay Drive. The regional and local context of Serrano Summit is illustrated on Exhibit 1-1, "Regional Location Map," and Exhibit 1-2, "Vicinity Map."

Serrano Summit provides for development of a new community of residential neighborhoods combined with parks and recreation areas, neighborhood gathering places, a new Civic Center site, and existing and future Public Facilities.

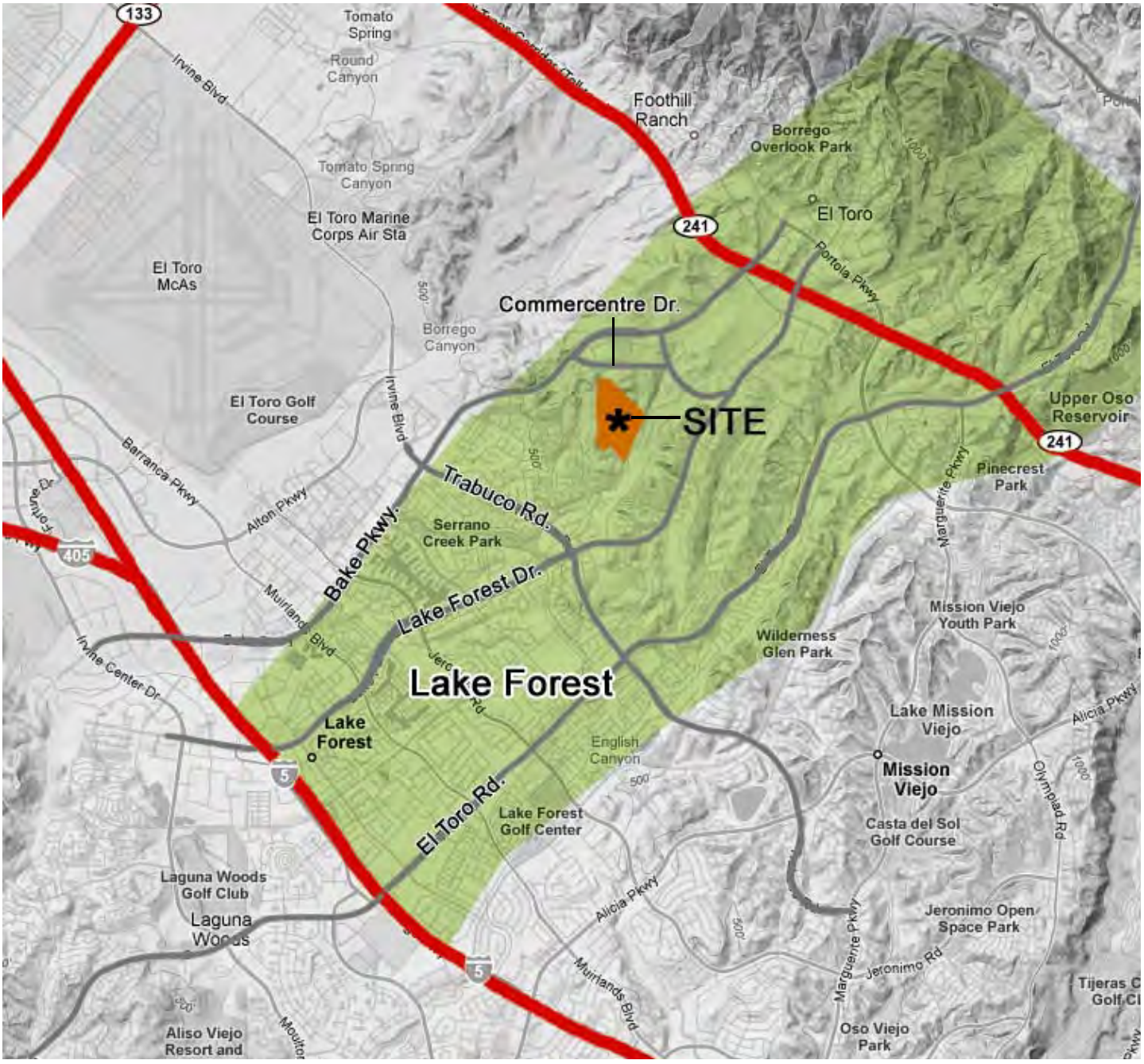
View from Project Site Looking Northeast at Saddleback Mountains

REGIONAL LOCATION MAP EXHIBIT 1-1

N.T.S.

VICINITY MAP

EXHIBIT 1-2



N.T.S.

PURPOSE OF THE AREA PLAN 1.2

The Serrano Summit Area Plan establishes the regulations and guidelines which will govern development of Serrano Summit. The Area Plan implements the City of Lake Forest General Plan goals and policies established for the project area and establishes the zoning regulations for the community. Where the regulations of the Area Plan vary from the City of Lake Forest zoning regulations for the project area, the provisions of the Serrano Summit Area Plan shall prevail.

COMMUNITY VISION 1.3

Serrano Summit is a 98.9-acre master planned community located in the northwest portion of Lake Forest, California. This elevated setting has long range views to the west and south, where the Pacific Ocean is visible on a clear day. The site is located immediately adjacent to the Serrano Creek and regional trail – its most prominent natural feature from which the community derives its name and primary thematic inspiration.

Community Design Goals and Principles

Serrano Summit has been planned based on the fundamental principles of good community form, a logical pattern of organization, and the site's unique natural form givers. To ensure the successful interpretation and implementation of these ideas, the community design goals and principles have been distilled down to the following four primary principles:

- Create a Distinctive Place
- Connect With Nature
- Capture Views
- Provide a Social Heart

Create a Distinctive Place

Enhance the intrinsic value of the community through creation of distinctive, quality neighborhoods that differ from the disconnected subdivision models of the recent past. Promote design in architecture, landscape and neighborhood planning to establish a visually exceptional environment. Create long term value and community pride for future residents and homeowners and the City of Lake Forest.

Connect With Nature

The open space near the site is viewed as a valuable - and value-added - amenity that should be connected to the community's daily life and identity.

Capture Views

Orient all structures and public spaces to take the greatest advantage of the long range views available from the site.

Provide a Social Heart

Establish a community-wide armature of public activities, active and passive parks, and engaging places that provide opportunities for recreation and private reflection. Exhibit 1-3 provides a general organization diagram of the primary connections

between the community's destinations, and should be integrated in the design of all residential neighborhoods through the combined use of building orientation, a multi-purpose trail, paseos or sidewalks.

Major Framework Elements

To create a physical plan that manifests the community design goals and principles, a set of major framework elements and structures was established which defines critical relationships and organizing criteria. These broadly defined elements are:

Circulation and Site Design

Organize buildings and circulation based on the community's cross axial orientation (as shown on Exhibit 1-3, "Public Activities Linkage Diagram"). Maintain a predictable, logical and efficient grid pattern of organization that fits the shape and geometry of the project's development envelope.

Community Arrival Sequence

To enhance the experience of entering a unique and special place, implement the design elements and principles established by the Community Arrival Sequence Plan (as detailed on Exhibit 1-4).

The Central Spine Street / Iconic Building Placement

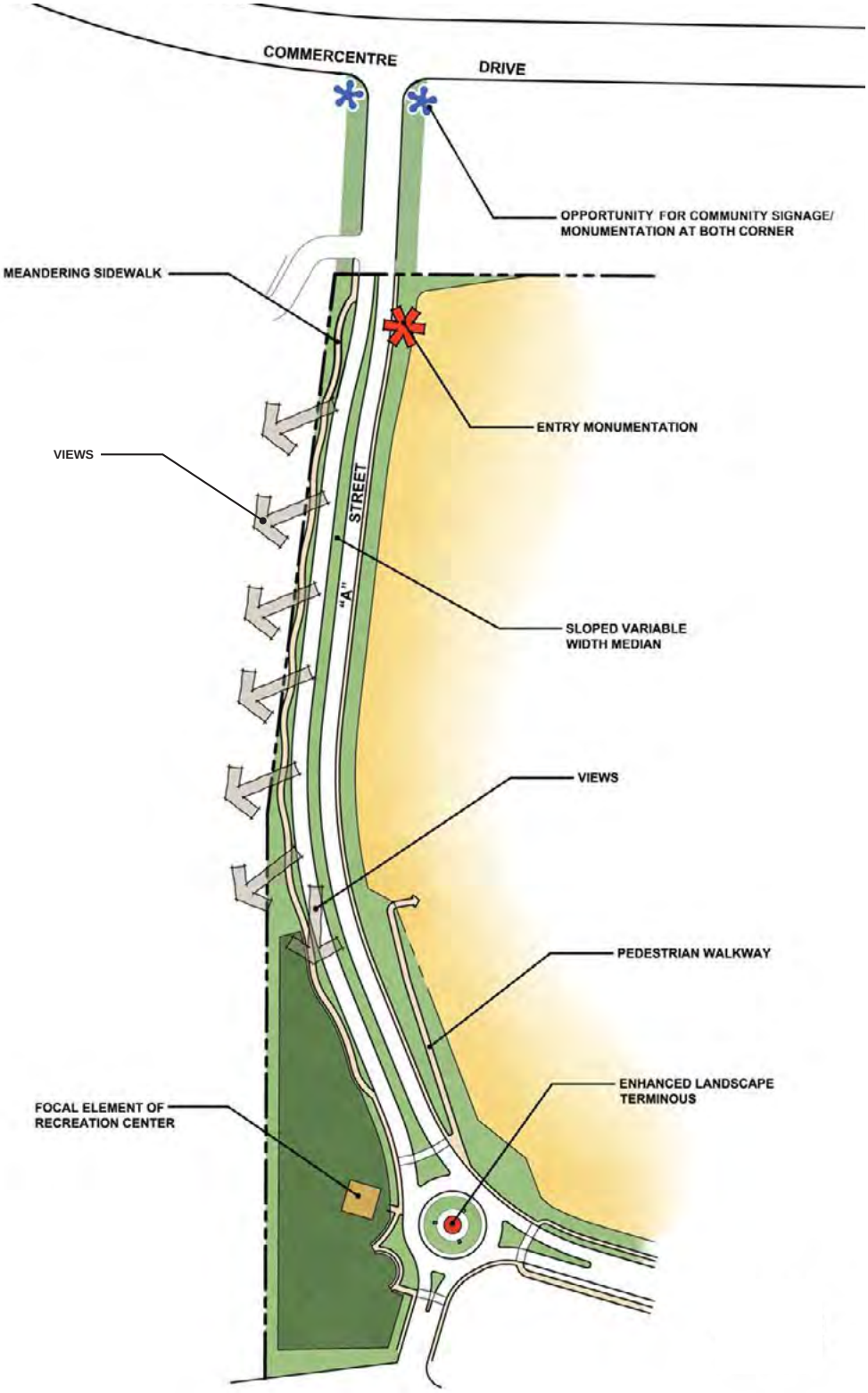
The design characteristics of 'B' Street have been developed to provide a pleasant walking experience along the prominent central spine of the community. Homes along 'B' Street will be oriented fronting the street and connecting front doors directly to the streets sidewalk.

The visual terminus planned for both ends of the Central Spine Street will be established through the placement of public buildings. The Community Recreation Building is located at the western terminus of 'B' Street, while the eastern terminus serves as the location of the planned City of Lake Forest Civic Center (as depicted on Exhibit 1-5, "Master Land Use Plan"). Roundabouts at each end of 'B' Street will further add to the street's striking visual attraction in addition to providing traffic-calming benefits.

PUBLIC ACTIVITIES LINKAGE DIAGRAM

EXHIBIT 1-3

COMMUNITY ARRIVAL SEQUENCE EXHIBIT 1-4



N.T.S.

LAND USE 1.4

The Area Plan contains provisions which ensure that land uses are arranged in keeping with the guiding principles of design, as well as the geographical features and environmental character of Serrano Summit as follows:

- A human scale of development is planned, providing pedestrian connectivity within the community through paseos and pedestrian linkages.
- Providing an array of housing types that address a variety of market segments.
- Design of residential neighborhoods oriented to long views, parks and open space areas that promote an outdoor lifestyle with active and passive recreational opportunities for its residents.
- Residential neighborhoods located within easy walking distance to parks and open space areas.
- Public Facilities that provide services to the area, while sufficiently separated from the residential community.

Streets

Collector and local streets form the circulation system for the community providing for the efficient movement of vehicles through the community and via a system of pedestrian linkages. The project street system incorporates the following features:

- Streets that include expanded landscaped parkways and sidewalks separated from the street to create an intimate environment promoting alternative forms of transportation.
- Traffic calming features integrated into the design of the circulation system including two roundabouts to reduce traffic speeds.
- Bicyclists may use all public and private streets including 'A' Street, 'B' Street, 'D' Street (private), 'E' Street (private), and Indian Ocean Drive.

Residential Architecture & Site Planning

Serrano Summit will promote diverse and varied architecture combined with comprehensive site planning to produce the following:

- Residential neighborhoods designed with varied housing types and architectural styles.
- Streets linked together in a manner friendly to pedestrians while being accessible to bicycles and automobiles, that connect neighborhoods to parks, open space, public uses, and recreational areas.

Refer to Section 7, "Residential Design Guidelines," for a discussion of residential architecture permitted within the Serrano Summit boundaries.

Civic Center Architecture & Site Planning

Serrano Summit includes a Civic Center on-site located within convenient access of project area residents by biking or walking.

- The Civic Center site will be easily accessible from Commercentre Drive via Indian Ocean Drive.
- The Civic Center will be designed to serve as the visual terminus of 'B' Street, which will be designed to create a sense of arrival.
- Provision is made for pedestrian linkages connecting the residential neighborhoods on-site with the Civic Center, and the Civic Center with nearby open space areas, and the Serrano Creek Trail.
- The Civic Center complex will provide gathering space(s) for social interaction.

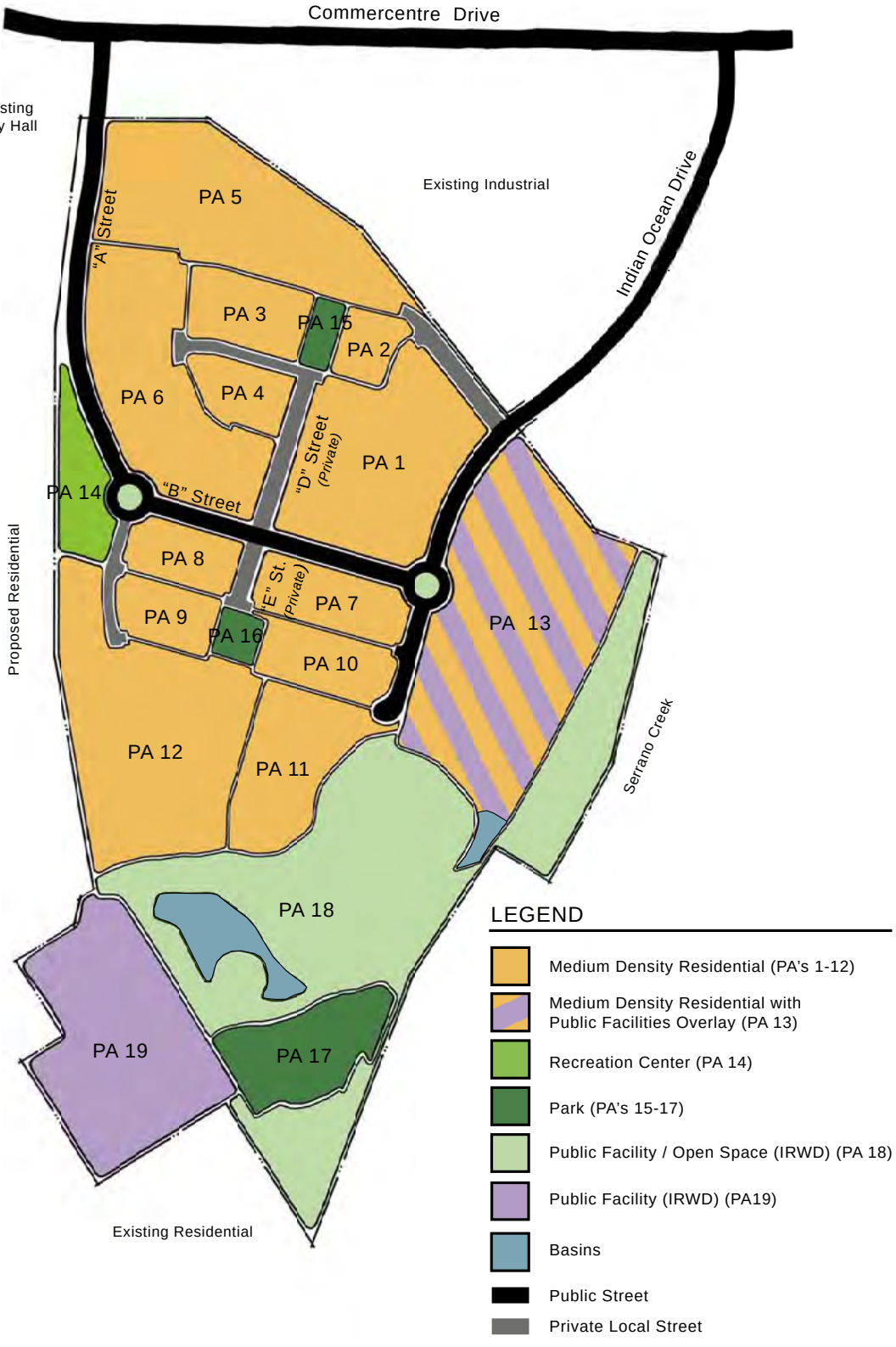
Sustainable Design

Serrano Summit is designed as a community founded on the principles of sustainable design. Sustainable features of Serrano Summit shall promote the following:

- The use of climate-appropriate plant materials and non-invasive ornamental landscape materials utilized as the primary plant materials for streetscape, public open space and trail.
- Residential development connected to the open space areas within the community by linkages promoting walking and bicycling as a feasible alternative to automobile travel.

MASTER LAND USE PLAN

EXHIBIT 1-5



N.T.S.

- Canopy trees utilized in public areas such as parkways, medians, and the public parks to provide shade and natural cooling.
- The use of reclaimed water to irrigate public parks, neighborhood edges, and other common landscape areas.
- Utilization of energy efficient appliances addressing conservation of electricity.
- Recycling of construction materials.
- Reduce water usage by using California-friendly plant materials and recycled water.

SERRANO SUMMIT IDENTITY 1.5

Regional site characteristics and formative elements of the Serrano Summit community include the following criteria:

- Physical characteristics of the site
  - ~ *Native vegetation (eucalyptus trees)*
  - ~ *Landform (hills, Serrano Creek)*
- Local history, heritage and commerce (ranching, agriculture)
- Sociology and culture (Spanish settlements, independent farming, small towns)
- Climate (semi-arid and strong sunlight most of the year)
- Historic and traditional building styles and forms of the region such as Monterey, Spanish Colonial, Santa Barbara and Adobe Ranch

Identifying elements of the thematic building styles are as follows:

- Monterey - rectangular plan form, symmetrical, front balcony, gable roof, stucco walls, board and batten shutters, square posts
- Spanish Colonial - one- and two-story volumes, simple, soft edge, exterior arches, rustic building materials, mostly stucco finished, tile roofing, decorative tile / wrought iron embellishments
- Santa Barbara - boxy, simple massing, one- and two-story stacked elements, recessed entry or covered porch, hip or intersecting gable roof, arches and arcades, balconies, decorative tiling, "S" shaped concrete roof tiles
- Adobe Ranch - simple, often "L" shaped, rectangular two-story massing, gable and shed roof forms, arches and arcades, recessed windows with shutters, painted brick or stone detailing

Other thematic criteria for the Serrano Summit community:

- Must have the ability to be translated to all unifying elements (buildings, walls, entry monumentation)
- Must be capable of modern translation (inclusion of attached garages and other market and code-driven features)
- Be compatible with the surrounding community and context

Below are the general community theme recommendations for Serrano Summit:

- Focus on early California "golden age" styles (up to pre-war era) rather than European transplants (Tuscan, French, English, Andalusian).
- Utilize rustic, natural materials, textures and interpretations rather than formal and refined.
- Colors should primarily be organic and earth toned hues, borrowing from the natural beiges, browns, greens and grays of the site's vegetation.
- Choose styles and elements that "blur" the separation between the indoor and the outdoor.
- Focus on "small town" rather than "big city" characterizations and references.
- It is important that a complete sensory separation begins at the transition between the industrial area to the north and entering the residential community — "you have arrived at a surprisingly different and distinct environment."
- Promote creation of public vista plazas and capture public and private viewscape opportunities, wherever possible.
- Maintain sensitivity of off-site views of Serrano Summit from the surrounding community.

DEVELOPMENT PLAN 1.6

The development plan for Serrano Summit is illustrated on Exhibit 1-5, "Master Land Use Plan." Land uses planned for Serrano Summit are described in the Land Use Summary, Table 4-1.

GOVERNING DOCUMENTS 1.7

Development of Serrano Summit will be governed by the following:

- The City of Lake Forest General Plan, which establishes policies governing land use, circulation, housing, recreation and resources, public facilities/growth management, and safety and noise.
- The City of Lake Forest Municipal Code (as of the date of approval of this Area Plan document), which governs development within the project area in instances where the Area Plan is silent on development standards and regulations.
- Title 9, Planning and Zoning, of the City of Lake Forest Municipal Code (as of the date of approval of this Area Plan document), except as otherwise specified by the Serrano Summit Area Plan.
- The Serrano Summit Area Plan, which includes a land use plan, open space plan, infrastructure plan, fuel modification plan, landscape concept plan, development regulations, design guidelines, and implementation procedures.
- The approved Serrano Summit Development Agreement, recorded in the Orange County Clerk's office on October 22, 2008 as document number 2008000486878, which establishes provisions for the development of Serrano Summit related to phasing of land use, timing of infrastructure and other public improvements, and provisions for infrastructure financing.
- Applicable subdivision provisions of the Subdivision Map Act.
- Retaining Wall Design Guidelines as approved by the City Council on June 15, 2010.
- Any and all previous and current Irvine Ranch Water District (IRWD) documents and approvals.
- Covenants, Conditions, and Restrictions (CC&R's) to be established by the developer of Serrano Summit as a private contract binding property owners with specific restrictions on the use of their property, and establishing a Homeowners Association (HOA) as a means of governance, revenue collection, and management of HOA functions.

AREA PLAN COMPONENTS 1.8

The Serrano Summit Area Plan is organized into the following sections in addition to Section 1, Executive Summary.

Section 2 - Introduction

The Introduction serves to acquaint the reader with:

- Area Plan goals and objectives;
- The project setting;
- A general description of the project proposal;
- The relationship of the Area Plan to the City of Lake Forest General Plan and the City's Municipal Code.

Section 3 - Existing Conditions

The physical setting for Serrano Summit is described in this section outlining the existing physical conditions within and around the project area.

Section 4 - Plan Elements

This section describes the land use planning areas and the acreage, density, and use within each planning area, as well as the system of parks, pedestrian linkages, and open space planned for the community.

Section 5 - Infrastructure & Services

This section provides conceptual plans and information on the community's backbone water, sewer, storm drain systems, and grading concept in addition to a discussion of public facilities provided and public utilities needed to serve the community.

Section 6 - Circulation

This section provides conceptual plans and information on the community's street and pedestrian linkage systems.

Section 7 - Residential Design Guidelines

The Serrano Summit Residential Design Guidelines are intended to direct the site planning and architectural quality of the development, which include:

- Community recreation and common facilities.
- Single family detached, enclave, single family attached, and multi-family homes.
- The use of green building techniques.

Section 8 - Civic Center Design Guidelines

The Civic Center Design Guidelines are intended to direct the site planning, landscape, and architectural quality of development on the 11.9-acre Civic Center parcel.

Section 9 - Landscape Design Guidelines

The Serrano Summit Landscape Design Guidelines are intended to direct the quality of the community landscape, including walls and fences, site furniture, signage, plant palette, fuel modification, and hardscape elements of the development.

Section 10 - Development Regulations

Regulations contained in this section will establish permitted and conditionally permitted uses for the community and the standards regulating the development of land uses within Serrano Summit. The relationship of the Serrano Summit Area Plan development regulations to the City of Lake Forest Municipal Code is also discussed.

Section 11 - Implementation

The Implementation section presents:

- The policies and procedures for the review and approval of specific development proposals, within Serrano Summit by the City of Lake Forest.
- The methods and procedures for interpreting and amending the Area Plan as necessary.
- The policies and procedures for the City of Lake Forest review and approval of specific development proposals within Serrano Summit.
- A summary of project financing and project maintenance responsibilities for new development within Serrano Summit.

Section 12 - General Plan Consistency

This section includes a discussion describing the relationship of the Serrano Summit Area Plan to the applicable policies of the City of Lake Forest General Plan.

INTRODUCTION

Section 2.0

January 2012

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AREA PLAN OVERVIEW 2.1

Serrano Summit is an approximately 98.9-acre area located within the jurisdiction of the City of Lake Forest, California. The project area is predominantly vacant land and includes an existing Irvine Ranch Water District (IRWD) plant, water reservoirs, and one office building within the project boundaries. Approximately 56.2 acres within Serrano Summit will be devoted to medium density residential uses, subject to the Public Facilities Overlay. The City of Lake Forest has indicated a desire to build a Civic Center on nine acres within Serrano Summit. The City has requested that an Area Plan be prepared for the project to guide future development and ensure that all potential land uses are consistent with the City of Lake Forest General Plan goals and policies.

The Serrano Summit Area Plan is a comprehensive plan for the development of a master planned community combining a Civic Center site with development of medium density residential neighborhoods designed at a human scale with features that promote walking throughout the community and adjacent open space.

The creation of a sustainably designed, planned community is a fundamental objective for the Serrano Summit Area Plan. Water reclamation and groundwater recharge technology for water reuse is planned to supplement the water needs of the community. A Civic Center, parks, open space areas, and a recreation center are located nearby. Pedestrian and bicycle usage can be used to connect the community and offer an alternative means of travel to the automobile.

The Serrano Summit Area Plan serves as a mechanism and implementation tool to ensure that the development of the new community is accomplished in a cohesive manner and that the community is served by adequate infrastructure, open space, parks, and other recreational amenities. The Area Plan has been approved by Resolution No. __ and adopted by the City Council. Approval of the Serrano Summit Area Plan includes the approval of a "Master Land Use Plan," contained within this Area Plan. It should be expressly noted that the IRWD specifically retains any and all development rights associated with development within Planning Areas 18 and 19 of the Serrano Summit community and that approval of this Area Plan in no way diminishes or otherwise impacts these rights.

PROJECT SETTING 2.2

The Serrano Summit property encompasses approximately 98.9 acres of predominantly vacant land located south of Commercentre Drive, west of Serrano Creek, north of Serrano Highlands, and northeast of Bake Parkway. The project area is located approximately 3.6 miles from the I-5 Freeway, 2.1 miles from State Route 241 (Toll Road), and one quarter mile from Bake Parkway — the closest arterial street that provides the primary access to the project area. Serrano Summit is centrally located within the Lake Forest city limits.

Currently, the majority of the Serrano Summit property consists of vacant land that was formerly used for agricultural purposes. The land within Serrano Summit is now owned by the Irvine Ranch Water District (IRWD). Portions of the land include an IRWD plant, water tanks, and one office building, which is now abandoned.

The City of Lake Forest General Plan designates much of the project area as "Medium Density Residential." In addition, a small portion of the "Medium Density Residential" area (approximately 11.9 acres) has a "Public Facilities Overlay" designation. The remainder of the 98.9 acre project site (approximately 8.1 acres), including the land with the IRWD plant and water tanks, is designated as "Public Facility."

This Area Plan has been prepared for Serrano Summit to ensure that the goals and policies of the General Plan are addressed through implementation of the Serrano Summit Area Plan.

View of the South End of the Property Looking West

AREA PLAN GOALS & OBJECTIVES 2.3

The vision for Serrano Summit is achieved through the implementation of specific goals and objectives established for the Area Plan

Goal - Create a Livable Environment

Objective

Implement a land plan for a livable community incorporating a balance of land uses adequately served by public facilities, infrastructure, utilities, parks, and open space. A livable community should include features such as:

- Facilitation of alternative means of mobility such as biking and walking.
- Opportunities for informal neighborhood interaction.
- Diverse architectural design.
- Connectivity among neighborhoods.
- Diversity and choice of housing types and opportunities for a variety of lifestyles and economic segments of the marketplace.
- Passive and active recreational opportunities located throughout the community.

Goal - Develop a Land Use Plan Responding to Environmental Conditions of the Area

Objective

Address topographic, geologic, hydraulic, and environmental conditions as part of the land use plan.

Goal - Provide for a Range of Housing to Meet the Needs of a Variety of Economic Segments

Objective

Anticipate housing needs and market demand by providing a range of homes targeting the evolving economic profile of the surrounding region.

Goal - Plan for a Circulation System Serving Motorists, Bicyclists, & Pedestrians

Objective

Create a pedestrian-friendly and bicycle-friendly circulation system which encourages walking and biking while providing for the safe and efficient movement of automobiles through the community.

Goal - Create a Strong Community Identity for Serrano Summit

Objective

Implement a set of guiding principles that create a sense of place and promote a sense of belonging by its residents to the community.

Goal - Incorporate Sustainable Features into all Aspects of the Community

Objective

Implement an Area Plan incorporating the fundamentals of sustainability and green design.

Goal - Respond to issues in the EIR by implementing mitigation measures as part of the Area Plan

Objective

Incorporate mitigation measures into the Area Plan document, as applicable and feasible.

Goal - Protect Public Facilities

Objective

Protect existing IRWD facilities and allow for future modifications and improvements by creating separation between these facilities and future residential uses through buffers such as grade separation, landscaping setbacks, etc. that will be needed to serve the City and region.

AREA PLAN SUMMARY 2.4

The Serrano Summit Area Plan proposes the development of:

- Residential uses
- A Civic Center
- Sheriff/Police Facilities
- Parks and Recreational Facilities
- Open Space
- Public Facilities

The comprehensive land use plan for Serrano Summit is illustrated in Exhibit 1-3, "Land Use Plan" and described in Table 4-1, "Development Summary by Planning Area."

Residential Land Use

Medium Density Residential land use comprises approximately 56.2 acres, including 11.9 acres with a Public Facilities Overlay, within Serrano Summit allowing for a variety of residential detached and attached housing types at densities not to exceed 25 dwelling units per acre. Up to 833 single family and attached dwelling units are allocated in Planning Areas 1 through 13, with 11.9 gross acres on Planning Area 13 also allowed for a Civic Center per the Public Facilities Overlay.

Civic Center Land Use

Approximately 11.9 gross acres within Serrano Summit are currently planned for development of a new Civic Center complex for the City of Lake Forest. The complex is anticipated to include a City Hall building, sheriff/police facilities, a Community Center, a public outdoor plaza for community events, and surface and/or structured parking. The approved Development Agreement includes provisions for a Civic Center development timeline, as well as a contingency option for residential development on the 11.9 gross acres. If the City elects to develop the Civic Center off-site or fails to act within the required time limits specified in the City-approved Serrano Summit Development Agreement, then the project master developer may proceed with developing the 11.9 gross acre site with Medium Density Residential units at densities of up to 25 du/ac; provided, however, that the total number of

dwelling units permitted within Serrano Summit shall not exceed 833 dwelling units.

Public Facility Land Use

In addition to the other land uses within the Serrano Summit community, approximately 28.4 acres of the site will be devoted to Public Facility uses required by the Irvine Ranch Water District for their operations including an office building, water reservoirs, treatment plant, and related facilities.

Parks & Amenities

Serrano Summit includes the development of approximately 6.1 acres as parks, including a 1.9 acre site for a private recreation center.

There will be two neighborhood parks and each park will be a minimum of 0.5 acre in size. The neighborhood parks will be improved with open play areas, picnic and barbecue facilities, a volleyball court or ½ court basketball court, and informal gathering areas. In addition to the neighborhood parks, the project will provide for a Passive/Nature Park on-site adjacent to Serrano Creek of 3.2 acres.

The private recreation facility will be constructed on approximately 1.9 acres and will be available for use by project residents and their guests. The facility will include a clubhouse building, restrooms and showers, a swimming pool, tot lot, open play area, and surface parking lot.

Open Space, Greenways & Multi-Use Trail

The Serrano Summit Area Plan establishes connections to the Serrano Creek Trail that runs along an eastern portion of the project area. The Area Plan provides for development of greenways and a multi-use trail linking each planning area within the community to parks, open space, the recreation center, the Civic Center, and the Serrano Creek Trail.

AUTHORITY & REQUIREMENTS OF THE AREA PLAN 2.5

The City of Lake Forest has directed that an Area Plan be prepared for the subject property. The Development Agreement approved by the City Council for the Serrano Summit project sets forth the minimum requirements and review procedures for an Area Plan, which shall include the following plans:

1. Master Land Use Plan;
2. Grading Concept Plan;
3. Site-Wide Grading Cross Section (Section A-B-C);
4. Site-Wide Grading Cross Section (Section D-E);
5. 3-D Grading Model;
6. Circulation Plan;
7. Circulation Plan Cross Sections;
8. Utility Concept Plan;
9. Water Quality Management Plan;
10. Landscape Tree District Plan;
11. Landscape Concept Plan;
12. Public & Private Recreational Facilities Plan;
13. Master Plan of Parks, Trails & Open Space;
14. Wall & Fencing Plan;
15. Fuel Modification Plan;
16. Fuel Modification Notes;
17. Maintenance Responsibilities Plan;
18. Design Plan;
19. Development Phasing Plan; and
20. Public Facilities Phasing & Financing Plan.

No Feature Plan (as defined in Section 9.184.020 of the City of Lake Forest Municipal Code) shall be required by the City of Lake Forest prior to approval of the Serrano Summit Area Plan.

This Area Plan shall be processed per Section 9.184.040(C), "Public Hearings," of the City's Municipal Code. The City Council is the approving authority for all Area Plan applications and amendments per the approved Development Agreement.

DEVELOPMENT APPROVAL COMPONENTS 2.6

The adoption of the Serrano Summit Area Plan is one step in a process leading to the development of the project area. The components of the development approval process for the Serrano Summit project are discussed below.

Area Plan

The Serrano Summit Area Plan, when adopted, will serve as a legal document which implements the General Plan land use designations of "Medium Density Residential" and "Public Facility" within the Serrano Summit boundaries. The designations also include a "Public Facilities Overlay" on the 11.9 gross acre Civic Center site. This Area Plan is designed to serve as a "blueprint" for development within the project area by establishing the distribution of land use and the criteria for development of each land use as set forth herein. The Area Plan establishes the development requirements and guidelines to be applied to each phase of development within the project area. This Area Plan will be adopted by the City of Lake Forest by resolution.

Subdivision Maps/Subdivision Improvement Plans/Design and Construction Plans

Tentative Tract Maps, subdivision improvement plans, and design and construction plans for the development within the Serrano Summit project area will be reviewed and approved by the City of Lake Forest pursuant to the approval of the Serrano Summit Area Plan. Tentative Tract Maps, subdivision improvement plans, and design and construction plans will be prepared pursuant to the applicable provisions of the State of California Subdivision Map Act (Government Code Section 66410 through 66499) and the Lake Forest Municipal Code, and consistent with the applicable provisions contained within the Serrano Summit Area Plan.

An "A" Map will first be prepared defining the residential planning areas, parks, civic center, open space, Irvine Ranch Water District uses and major infrastructure. Subsequently, individual builders will prepare and submit "B" Maps to the City for approval.

Development Agreement

A Development Agreement has been approved by the City of Lake Forest for the Serrano Summit project. The Development Agreement provides the provisions relating to land use and phasing of development, timing of infrastructure and public facilities, and provisions for infrastructure financing for the Serrano Summit project. The Development Agreement was recorded in the Orange County Clerk's office on October 22, 2008, as document number 2008000486878.

CEQA COMPLIANCE 2.7

An EIR has been prepared by the City of Lake Forest for the Opportunities Study Area (OSA), including the Serrano Summit project area, in accordance with the California Environmental Quality Act (CEQA) and City requirements to provide a detailed analysis of potential environmental impacts associated with the development within the OSA and Serrano Summit project boundaries. The current EIR prepared for Serrano Summit addresses the potential impacts associated with the project at a "project level." The EIR includes recommended mitigation measures for the project. All subsequent development approvals will need to incorporate mitigation measures contained in the EIR.

SEVERABILITY 2.8

If any regulation, condition, program, or portion of the Serrano Summit Area Plan, or any future amendment or addition hereto, is held invalid or unenforceable by the decision of a court of competent jurisdiction, then such portions shall be deemed separate, distinct, and independent provisions and the invalidity of such portions or provisions shall not affect the validity and enforceability of the remaining portions and provisions herein.

EXISTING CONDITIONS

Section 3.0

January 2012

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SITE & LOCAL HISTORY 3.1

Don Jose Serrano settled this area of the Saddleback Valley, through a 10,688 acre Mexican Land Grant in 1846 by then Governor Pio Pico. Originally named Rancho Cañada de los Alisos (the Valley of the Sycamores), the area later became known as El Toro, named after the bulls that roamed Don Jose Serrano's ranch. Serrano and his family lived on the rancho raising longhorn cattle until a series of droughts, beginning in 1863 and continuing intermittently through 1883, forced the family to divide the ranch and mortgage into several sections. In the early 1900s, Dwight Whiting, a resident of the area, planted 400 acres of fast-growing eucalyptus trees as an answer to the California lumber shortage. Although the trees failed as a source of lumber, in the 1960s, master developer Occidental Petroleum decided to create a master-planned community around the trees and man-made lakes. The eucalyptus provided landscaping for the modern homes and led to the "Forest" in Lake Forest. In 1991, the El Toro area incorporated as the City of Lake Forest. The City currently encompasses an area of just over 16 square miles in size.

The Serrano Summit project area has historically been used for agricultural purposes and, more recently, for use by the IRWD for reservoir storage and treatment plant uses. Currently, the project area is generally undeveloped with the exception of the ongoing IRWD uses, as illustrated on Exhibit 3-1, "Existing Land Uses." The natural vegetation and soil conditions that once occurred on-site have been significantly altered through agricultural use, leaving little or no native vegetation of environmental significance, except at the outer edges of the community.

PROPERTY OWNERSHIPS 3.2

Serrano Summit is comprised of approximately 98.9 gross acres. The applicant owns all of the land within the project boundaries, except for a small parcel (less than 1/8 of an acre) owned by the Metropolitan Water District (MWD) parcel in the southernmost portion of Serrano Summit.

EXISTING LAND USES

EXHIBIT 3-1

SURROUNDING LAND USES 3.3

Land uses adjacent to Serrano Summit include:

- North: Commercentre Drive and existing industrial uses
- South: Serrano Highlands (existing residential community)
- West: Bake Parkway (separated from the site by slopes and undeveloped land)
- East: Serrano Creek and residential

The City of Lake Forest General Plan designates the undeveloped areas surrounding the Serrano Summit project area for the following land uses:

- North: Light Industrial
- South: Low Density Residential (2 to 7 du/net acre) and Low-Medium Density Residential (7 to 15 du/net acre), although the zoning allows for densities in some areas averaging 16.5 du/ac.
- West: Light Industrial and Very Low Density Residential 0 to 2 du/net acre) and Low-Medium Density Residential (7 to 15 du/net acre)
- East: Regional Park/Open Space and Low Density Residential (2 to 7 du/net acre) and Low-Medium Density Residential (7 to 15 du/net acre)

Exhibit 3-2 "Surrounding Land Uses," illustrates the General Plan land use designations and existing land use characteristics surrounding Serrano Summit.

PHYSICAL SITE FEATURES 3.4

Topography

The land within Serrano Summit rises gently from the south, up from the lowest elevation of approximately 540 feet. The topography gradient increases as the site rises to its highest elevation of approximately 709 feet.

The topographic conditions found within the project area are illustrated on Exhibit 3-3, "Existing Site Topography."

Site Characteristics

Exhibit 3-4, "Site Opportunities and Constraints," illustrates select physical site characteristics within the Serrano Summit boundaries.

SURROUNDING LAND USES EXHIBIT 3-2

LEGEND

- Low Density Residential (2-7 DU/Net Acre)
- Low-Medium Density Residential (7-15 DU/Net Acre)
- Medium Density Residential (15-25 DU/Net Acre)
- Commercial
- Business Park
- Light Industrial
- Public Facility
- Community Park / Open Space
- Regional Park / Open Space
- Open Space
- Public Facilities Overlay
- Project Site Boundary

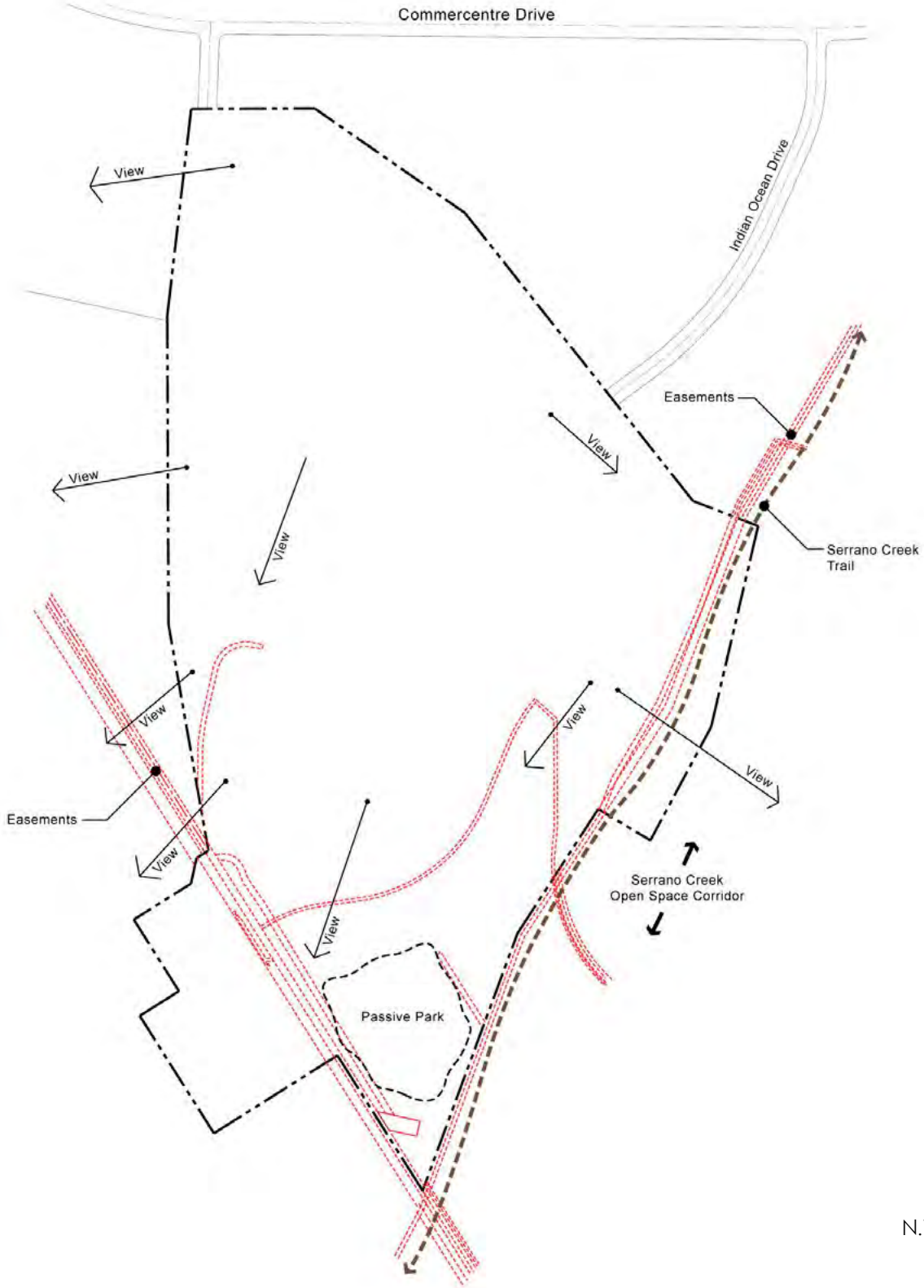
N.T.S.

EXISTING SITE TOPOGRAPHY

EXHIBIT 3-3

SITE OPPORTUNITIES & CONSTRAINTS

EXHIBIT 3-4



EXISTING CIRCULATION & INFRASTRUCTURE 3.5

Existing Access and Circulation

The I-5 is located approximately 3.6 miles west of Serrano Summit. SR-241 is located approximately 2.1 miles north of the project area. Primary access to Serrano Summit is provided from the I-5 to the project vicinity via Bake Parkway, which is located approximately ¼ mile from the project area. Commercentre Drive is located north of Serrano Summit. Indian Ocean Drive and 'A' Street (Biscayne Bay Drive) provide direct access to the project area.

Commercentre Drive is located north of Serrano Summit, and is currently improved with 64 feet of paved area and 5 foot wide sidewalks. Access from Commercentre Drive to the project area is available from both 'A' Street (Biscayne Bay Drive) and Indian Ocean Drive. Access to the IRWD water facilities is available from Peachwood to the south.

Existing Infrastructure

Water

The Irvine Ranch Water District (IRWD) is the water service provider for the City of Lake Forest and will provide water service for Serrano Summit. A 12-inch domestic water main exists within Indian Ocean Drive, adjacent to the project area. Residential uses shall be connected to the domestic water system. The IRWD's Master Water Facilities Plan of has identified new facilities to serve the project area.

The existing water supply system is adequate to serve the proposed project.

Existing water supply improvements serving/in proximity to the project area are illustrated on Exhibit 3-5, "Existing Infrastructure."

Sewer

The IRWD is the entity providing sewer service to the City of Lake Forest, which will also provide sewer service to the project area. The IRWD's Sub Area Master Plan (SAMP) was completed in October 2010 under the direction of the IRWD and identified new facilities to serve the project area. Existing sewer facilities in proximity to Serrano Summit are illustrated on Exhibit 3-5, "Existing Infrastructure."

Drainage

There are various existing storm drain facilities on-site ranging in size from 18 inches to 24 inches. Off-site, there is a 36-inch storm drain facility in Commercentre Drive with 30-inch laterals in both Biscayne Bay Drive and Indian Ocean Drive draining north to Commercentre Drive. Drainage flows for Serrano Summit, as with existing surrounding neighborhoods, will end up in Serrano Creek. Detention and water quality basins and facilities will be located upstream to treat the water before it enters Serrano Creek. Existing storm drain facilities serving/in proximity to the project area are illustrated on Exhibit 3-5, "Existing Infrastructure."

Utilities

Electricity

Serrano Summit is located within the service territory of Southern California Edison Company.

Natural Gas

The Southern California Gas Company (SCG) provides natural gas service in the vicinity of the project area.

Communication Systems

AT&T provides telephone service within the Serrano Summit boundaries.

Solid Waste

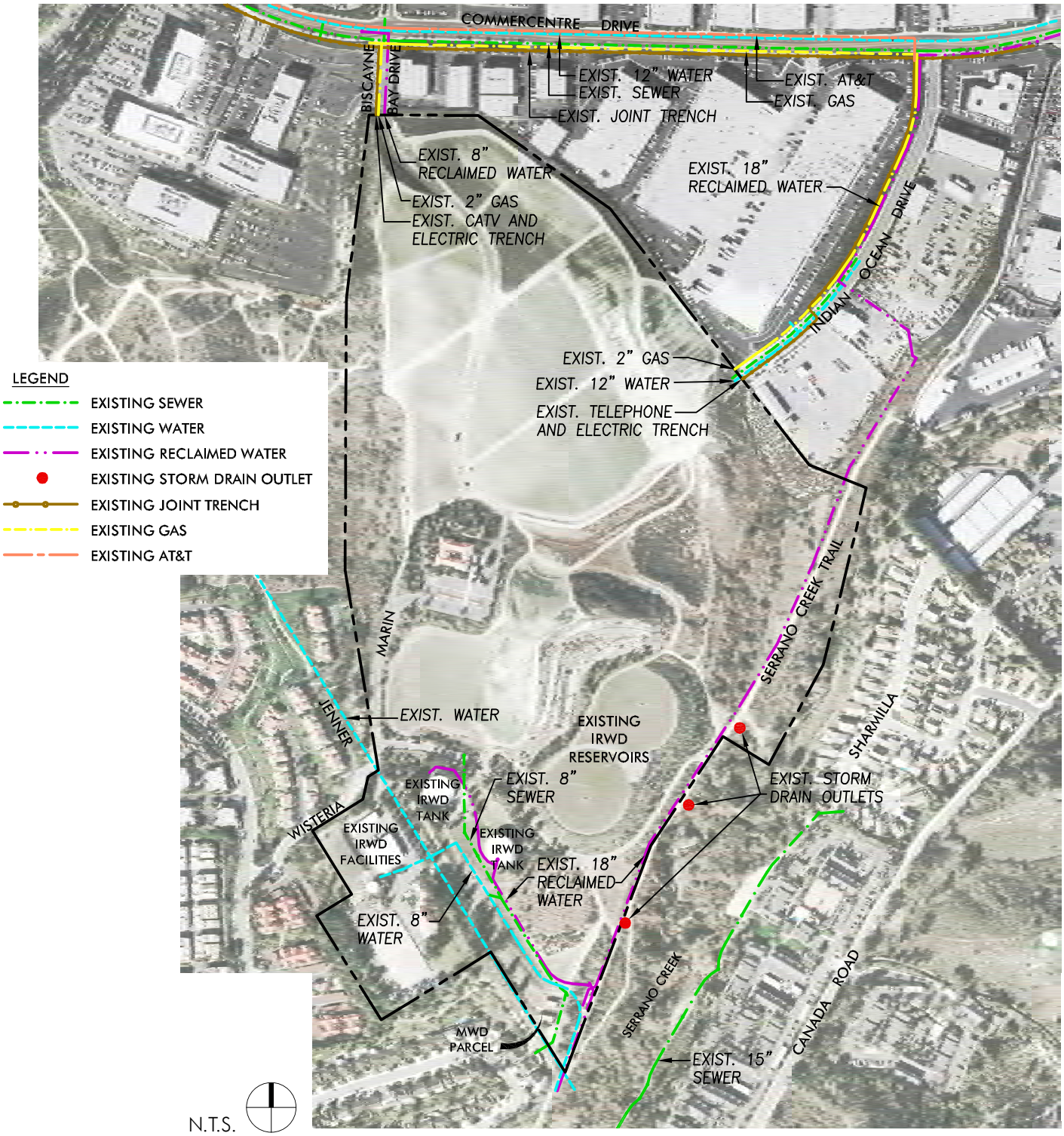
Waste Management provides solid waste collection and disposal to the City of Lake Forest on a contract basis. Service to the project area can be extended through existing service agreements/contracts.

Cable Television

Cox Communications provides cable television service within Serrano Summit.

EXISTING INFRASTRUCTURE

EXHIBIT 3-5



SCHOOLS 3.6

Serrano Summit is located within the boundaries of the Saddleback Valley Unified School District (SVUSD). The SVUSD will serve the school age needs of grades K – 12.

The SVUSD has eight elementary schools in the vicinity of the project area serving grades K – 6. In addition, the SVUSD includes four intermediate schools serving grades 7 – 8. All schools have excess capacity except for an elementary school in Foothill Ranch. The nearest high school to Serrano Summit is El Toro High School, which is located at 25255 Toledo Way in Lake Forest.

In lieu of providing a school site within Serrano Summit, the project master developer will pay the required school fees pursuant to the approved Saddleback Valley Unified School District Mitigation Agreement.

PLAN ELEMENTS

Section 4.0

January 2012

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INTRODUCTION 4.1

The Plan Elements in this Chapter of the Serrano Summit Area Plan form the basis of a master land use plan for development of a new community, balancing Medium Density Residential land uses with civic uses, parks, trails, open space, recreational amenities, and Public Facilities.

Among the many proposed community features, Serrano Summit will include a recreation center and two neighborhood parks for the residential development.

The land use plan for Serrano Summit is illustrated in Exhibit 4-1 "Master Land Use Plan." Table 4-1, "Land Use Summary," provides a description of the total acreage assigned to each land use category within Serrano Summit.

COMMUNITY THEME 4.2

The thematic inspiration for Serrano Summit draws on the authentic elements of its place and its past: from the adjacency of the Serrano Creek, the rustic character of the open space, and the legacy of the Serrano family who created one of the first cattle ranching operations in this area of the Saddleback Valley.

The Community Theme will be applied throughout the Serrano Summit community including the architecture for the residential development, recreation center, and Civic Center; project-wide landscaping along streets, parkways, parks, and the recreation center; and the designs of community walls and fencing.

Regional Identifiers and Inspiration

The historic and regional characteristics identified below have informed and inspired the thematic identity of Serrano Summit:

- Physical Characteristics of the Site
  - ~ *Native vegetation*
  - ~ *Landforms (hills, creeks)*
  - ~ *Rustic and natural*
- Mexican Land Grants, local history, heritage and commerce (ranching, agriculture)
- Sociology and culture (Spanish settlements, independent farming and ranching, small towns)
- Climate (semi-arid, strong and unobscurred sunlight most of the year)
- Historic and traditional building styles and forms of the region (various Spanish historic and revival styles)

Thematic Criteria

- Must have the ability to be translated to all unifying community elements (buildings, walls, entry monumentation)
- Architectural theme must be capable of modern translation (inclusion of attached garages and other market and code driven features)

Recommended Community Theme

The overall guiding theme for the Serrano Summit community is characterized by the following statement:

Authentically inspired by the land, its early history and its Spanish stylistic roots.

Elements supporting the community theme are:

- Architectural styles will focus on early California "golden age" styles (up to pre-war era) rather than European transplants (Tuscan, French, English). These styles may include Monterey, Spanish Colonial, Santa Barbara and Adobe Ranch. Refer to the Architectural Styles

Sheets in the Appendix for information on these styles. Other styles may be approved, provided a style is compatible and consistent with the overall community theme and approved by the Development Services Director.

- Utilize natural materials such as stone, wood and brick, etc.
- Colors should primarily be organic and earth toned hues, borrowing from the natural beiges, browns, greens and grays of the site's vegetation.
- Promote building elements which "blur" the separations between the indoor and the outdoor
- "Small-Town" rather than "Big-City" characterizations and references.
- Create a complete sensory separation and transitional experience between leaving the industrial area and entering the residential community – visitors should feel "they have arrived at a surprisingly different and distinct environment."
- Promote creation of public vista plazas that capture public and private viewscape opportunities where ever possible
- Maintain sensitivity of off-site views of the project from the surrounding community.

COMMUNITY DESIGN 4.3

Neighborhood Design

When implemented, the Master Land Use Plan for Serrano Summit will result in the development of a new community of walkable neighborhoods with a Civic Center located at the terminus of the central spine road ('B' Street). Sidewalks will connect the residential areas with the Civic Center. The project will be connected by on-street bicycle usage and sidewalks that encourage walking and biking throughout the community.

The plan for Serrano Summit as a "walkable" community is demonstrated in the Master Land Use Plan, and implemented by the following hierarchy of community design:

1. At the Community scale – A single community organized along a spine road ('B' Street) with the recreation center serving as the community focal point at the terminus of 'B' Street. The recreation center location allows all residents to enjoy long views and vistas of the surroundings, even those residents that do not reside on the project perimeter edges.
2. The community will include parkways and streets with sidewalks that will connect the residential areas with the Civic Center and adjacent on-site open space areas.
3. At the Neighborhood scale - Individual neighborhoods designed around shared small neighborhood parks integrating recreation and open space activities into the daily lives of residents.

Pedestrian accessibility is provided throughout Serrano Summit via a system of sidewalks adjacent to the street or separated by landscaped parkways and landscaped paseos. Bicycle access is provided on community streets.

It is encouraged that homes be oriented to front onto public gathering places enabling residents to have their "eyes on the street," promoting a safe hometown feel. Serrano Summit is a community of smaller neighborhoods offering a diversity of architectural types and styles.

Sustainability

The community design of Serrano Summit focuses on the creation of a sustainable community with resource conservation as an important development objective.

- Water conservation is a major feature of Serrano Summit with the incorporation of climate specific land design.
- Reducing automobile trips is encouraged by providing alternative modes of travel including walkways connecting residential areas with the on-site civic uses, parks, open space, and recreational amenities, thereby reducing reliance on the automobile for access to these facilities.
- To further reduce automobile trips, homes in Serrano Summit will be equipped with technologies designed to accommodate home offices potentially reducing the number of residents commuting to work.

Land Use Summary

The following table summarizes the land uses within Serrano Summit by planning area.

TABLE 4-1
DEVELOPMENT SUMMARY
BY PLANNING AREA

Residential Planning Area	Example Product Types	Gross Acres	Units	Density (du/ac)
1	~ Conventional Single Family Detached Homes ~ Rear Loaded Homes ~ ~~Enclave Homes (Detached)~~ ~ Urban Court ~ Motor Court Homes ~ Green Court Homes ~ Rear Loaded Duplex Homes ~ Front Loaded Duplex Homes ~ Attached Enclave Homes ~ Townhomes ~ Rear Loaded Stacked Flat Condos ~ Apartments	6.9	608	Not to exceed 25.0*
2		1.0		
3		2.0		
4		1.4		
5		7.1		
6		6.6		
7		1.8		
8		1.6		
9		1.5		
10		2.1		
11		3.5		
12		8.8		
PA1 to PA 12 SUBTOTAL		44.3	608	Not to exceed 25.0*
13	SFA/Apartments**/***	11.9	225	18.9
SUBTOTAL RESIDENTIAL		56.2	833	14.8
14	Recreation Center	1.9	-	-
15	Neighborhood Park	0.5	-	-
16	Neighborhood Park	0.5	-	-
17	Passive/Nature Park****	3.2	-	-
18	Public Facility/Open Space (IRWD)	20.3	-	-
19	Public Facility (IRWD)	8.1	-	-
-	Roadway Rights-of-way	8.2	-	-
TOTAL		98.9	833	8.4

Table 4-1 Notes:

* The maximum permitted residential density per planning area shall not exceed 25 dwelling units per acre.

** The Public Facilities Overlay allows for the development of a Civic Center in Planning Area 13.

***Per the Development Agreement, if a Civic Center is developed on this site, it will be on a minimum of ~~9.0~~ 8.13 usable net acres.

****Per the Development Agreement, a neighborhood park will be provided on a minimum of 2.95 usable net acres.

NOTE: - "Enclave Homes" are not being removed but rather the designation is incorporated as a product type under the "Green Court / Motor Court" heading. Urban Court added as a new product type under SFD Enclave Residential.

MASTER LAND USE PLAN

EXHIBIT 4-1

PLAN ELEMENTS 4.4

Residential

Residential planning areas comprise approximately 56.2 acres of Serrano Summit, including 11.9 gross acres of Public Facilities Overlay (Planning Area 13). A maximum of 833 residential dwelling units in a variety of density ranges and housing types are planned in Planning Areas 1 through 13. A housing types below. If the Center or the gross acres will ning Area 13). ut with up to

are permitted of which are 4-1 is provided mmit may be x. Ultimately, will determine the appropriate product mix, as dictated by the marketplace and within the constraints of this Area Plan.

NOTE: - "Enclave Homes" are not being removed but rather the designation is incorporated as a product type under the "Green Court / Motor Court/" heading. Urban Court added as a new product type under SFD Enclave Residential.

The housing types described below are intended to address a variety of economic segments of the market. These housing types are permitted in every planning area within Serrano Summit.

Single Family Detached Residential

Conventional Single Family Detached Homes

Conventional residential homes on a variety of lot sizes are allowed. Local residential streets provide access to these home types and alternative garage configurations are encouraged with an "architecture forward" design that extends living areas and porches forward of the face of the garage.

Rear Loaded Homes

This traditional single family home concept places garages at the rear of the lot accessed from a private drive or lane. Front doors and porches face neighborhood streets or open space areas. A pedestrian oriented streetscene is promoted with this residential type because garages are not visible from the street and driveway curb cuts are not present along the street.

Single Family Detached Enclave Residential

~~Enclave Homes (Detached)~~

Detached homes in enclaves of typically eight or less homes designed around a common private drive minimize the view of garages from the street and consolidate driveway curb cuts along neighborhood streets to promote pedestrian connectivity. The front doors of these enclave homes may be taken from the street, the common private drive, or a paseo or open space area, resulting in a variety of plotting conditions.

Urban Court

A smart-growth alternative to traditional, suburban style single-family subdivisions, urban court homes have smaller lot areas with compact building footprints and reduced yard setbacks, street frontages, passageways between buildings, and open space. Urban Court single family homes provide more space-efficient and economically attractive alternative for sites planned for apartments or condominium uses.

Motor Courts

Detached single family homes are clustered around "motor courts" which provide access to front-loaded garages. In most cases, parking can be accessed from the motor court streets. Since many homes' front doors will face onto the interior parking court, special care must be taken to create street-friendly elevations, with front doors and windows facing the street on the homes closest to the street.

Green Courts

Green courts are detached single family homes that face onto two sides of a shared green. The shared greens provide a controlled environment for younger children and a park-like atmosphere in which to

play without crossing any streets, as the court-facing homes allow easy supervision by parents or community members. Green courts also serve as a setting for informal interaction and gatherings. At least one side of the green is adjacent to a street, making front entrances visible from the street and providing on-street guest parking opportunities. Because the homes face a common green space, garages must be accessed from rear alleys or common drives.

Single Family Attached Residential

Rear Loaded Duplex Homes

Paired homes are commonly referred to as duplexes. These single family attached homes encourage the utilization of rear loaded garage configurations and "architecture forward" floor plan designs to minimize or eliminate garages visible from neighborhood streets.

Front Loaded Duplex Homes

Front loaded duplex homes take both front door and garage access from the neighborhood street. Though attached, these homes often have massing that suggests the character of a detached home, making these duplexes compatible with lower-density neighborhoods.

Attached Enclave Homes

Attached enclave homes consist of attached units that remove garages from the street and consolidate curb cuts with access provided from private drives. Front doors may either face an open space courtyard created by the form of the building, with pedestrian walkways separated from the street, or directly onto the neighborhood street itself.

Townhomes

This traditional attached home concept places garages at the rear of the building accessed from a private drive or alley. Front doors and porches face neighborhood streets and open space areas. Generally, no garages face the street and no driveway curb cuts interrupt the pedestrian connectivity along the street.

Rear Loaded Stacked Flat Condos

In stacked condominiums products, garages are oriented onto a private motorcourt served by a drive, with front doors opening onto linear paseos, courtyards or neighborhood streets.

Multi-Family Attached Residential

Apartments

Apartments include all types of rental products and may vary in height from two to three stories. Apartments may include garages and/or carports.

Civic Center (Public Facilities Overlay; Planning Area 13)

Approximately a 11.9 gross acre site within Serrano Summit is Medium Density Residential, but is also subject to a Public Facilities Overlay. The site is currently planned for a Civic Center. The Civic Center will be designed to serve as the governmental offices for the City of Lake Forest. The Civic Center is anticipated to contain a City Hall, a Community Center, sheriff/police facilities, a public outdoor plaza, and surface and structured parking.

Public Facility/Open Space (Planning Area 18)

Approximately 20.3 acres within Serrano Summit will be identified as Public Facility/Open Space. The open space will include a multi-purpose trail. The trail will provide connections between the Serrano Summit community and the regional trail system (i.e., the Serrano Creek Trail) and the 3.2 acre passive/nature park (Planning Area 17). The trail will provide pedestrian and bike connectivity from the northeastern portion of the City of Lake Forest along Serrano Creek and adjacent to Serrano Summit.

Public Facility (Planning Area 19)

Approximately 8.1 acres on-site are now used for or planned for development of Public Facility uses by IRWD in Planning Area 19. This area will continue to be used for the IRWD water facilities.

Parks & Trails

Approximately 6.1 acres of Serrano Summit are reserved as parks, trails, and a recreation center. Approximately 4.2 acres of the 98.9 acre project area will be developed as parkland to provide for the active and passive recreational needs of the community in addition to a 1.9 acre recreation center site. The neighborhood parks will be located within a short walking distance of the surrounding residences.

There will be two on-site neighborhood parks. There will be one neighborhood park in Planning Area 15 and another in Planning Area 16. Each neighborhood park shall be a minimum of 0.5 acre in size. Each of the 0.5 acre neighborhood parks will be improved with one or more of the following amenities:

- Seating areas
- Sport court
- Tables, benches, trash cans, drinking fountains, and barbecues
- Shade structure for group recreation purposes
- Play area/tot lot
- Informal gathering areas

In addition to the neighborhood parks, the project will include a Passive/Nature Park on-site adjacent to Serrano Creek that will be approximately 3.2 acres in size. The park is described in more detail in Section 9.11 and on Exhibit 9-17. This park will contain, at a minimum, the following amenities:

- Tables, benches, trash cans, drinking fountain, and barbecues
- One shade structure for group recreation purposes
- Hitching posts
- Watering trough

As part of the neighborhood parks system, Serrano Summit includes development of an approximately 1.9 acre private recreation center. This recreation facility will be available for use by Serrano Summit residents and their guests. The facility will include a clubhouse building, restrooms and showers, a swimming pool, tot lot, open play area, and surface parking lot. The recreation center has been specifically sited to offer views and vistas of the surrounding areas.

The parks, trails, open space, and Public Facilities planned for Serrano Summit are illustrated on Exhibit 4-2, "Master Plan of Parks, Trails, and Open Space."

MASTER PLAN OF PARKS, TRAILS & OPEN SPACE

EXHIBIT 4-2

INFRASTRUCTURE - PUBLIC FACILITIES & SERVICES

Section 5.0

January 2012

Architecture+Planning

DOMESTIC WATER 5.1

Domestic water will be supplied to Serrano Summit by the Irvine Ranch Water District (IRWD). IRWD presently provides domestic water service to an approximate 179-square mile area in central Southern California. Serrano Summit's average daily water demand is approximately 200,000 gallons per day, or 224 acre feet per year. Potable water to serve the project site will be supplied per the Sub Area Master Plan (SAMP) to be prepared under the supervision of IRWD and the property owner.

At this time, the project has identified regional facilities for two points of connection possibilities to provide adequate domestic and fire water services to the site. The first point of connection is at the boundary line adjacent to Indian Ocean Drive, where an existing 12" water line has been stubbed out to this site. The second point of connection will be within Commercentre Drive at the intersection of Biscayne Bay Drive, where there exists another 12" water line. In order to reach the project site, approximately 300 linear feet of mainline pipe will be needed to be constructed off-site.

Existing regional facilities capable of providing service to Serrano Summit are listed below:

- An existing 12" domestic water line in Indian Ocean Drive; and
- An existing 12" domestic water line in Biscayne Bay Drive.

Facilities needed to provide flow and pressure in conformance with IRWD and fire department standards include mainline pipe sizes ranging from 8" to 12" and looped configurations to ensure pressure efficiencies.

Water System Development Standards

- All water lines shall be designed per IRWD requirements, installed underground in accordance with the requirements and specifications of the Orange County Health Department, and inspected per IRWD standards.
- The location of facilities shall conform to IRWD and City of Lake Forest standards.
- Water conservation measures will be incorporated into the development to include water saving devices and systems and including the use of reclaimed water for irrigation where possible.
- Any design of off-site facilities shall be coordinated with the affected property owners and IRWD.
- The design of all water facilities for the purposes of fire protection shall be subject to the review and approval of the Orange County Fire Authority.

RECLAIMED WATER 5.2

Reclaimed water will be supplied to Serrano Summit by IRWD. IRWD presently provides reclaimed water service to approximately 7,000 acres in the central Southern California area. Serrano Summit's average year reclaimed water demand is approximately 400 ac-ft. Reclaimed water, if available, will be used to irrigate landscaping in parks, streets, parkways, common areas and open space areas. Existing regional facilities capable of providing service to Serrano Summit include an existing reclaimed water mainline adjacent to the project site within Biscayne Bay Drive, and existing reclaimed water mainline at the southerly corner of the project site. All proposed IRWD reclaimed water facilities will be designed in conformance with IRWD standards. Standards typically would include a 4" or 6" looped mainline throughout the community. All facilities will be designed in accordance with the SAMP for this project, to be created under the supervision of IRWD and the property owner.

Reclaimed Water System Development Standards

- All reclaimed water lines shall be designed per IRWD requirements, installed underground in accordance with the requirements and specifications of the Orange County Health Department, and inspected per IRWD standards.
- The location of facilities shall conform to IRWD and City of Lake Forest standards.
- Reclaimed water facilities shall be constructed per IRWD standards for supplying reclaimed water to eligible irrigated lands.
- Water conservation measures will be incorporated into all development within Serrano Summit to include water saving devices and systems including the use of reclaimed water for irrigation where possible.
- Any design of off-site facilities shall be coordinated with the affected property owners and IRWD.

SEWER 5.3

Sewer service to Serrano Summit will be provided by IRWD. IRWD presently provides sewer service to approximately 179-square miles in central Southern California. Serrano Summit's average day wastewater generation is approximately 150,000 gallons. Wastewater generation, system hydraulics and facility planning will be based on the Sub Area Master Plan (SAMP) for the project, to be prepared under the supervision of IRWD and the property owner. According to IRWD standards, Serrano Summit will install transmission sewer mains ranging in size from 8 inches to 12 inches. Facilities needed to provide sewer service in conformance with IRWD standards include all facilities as referenced in the SAMP, as prepared by the IRWD.

Sewer System Development Standards

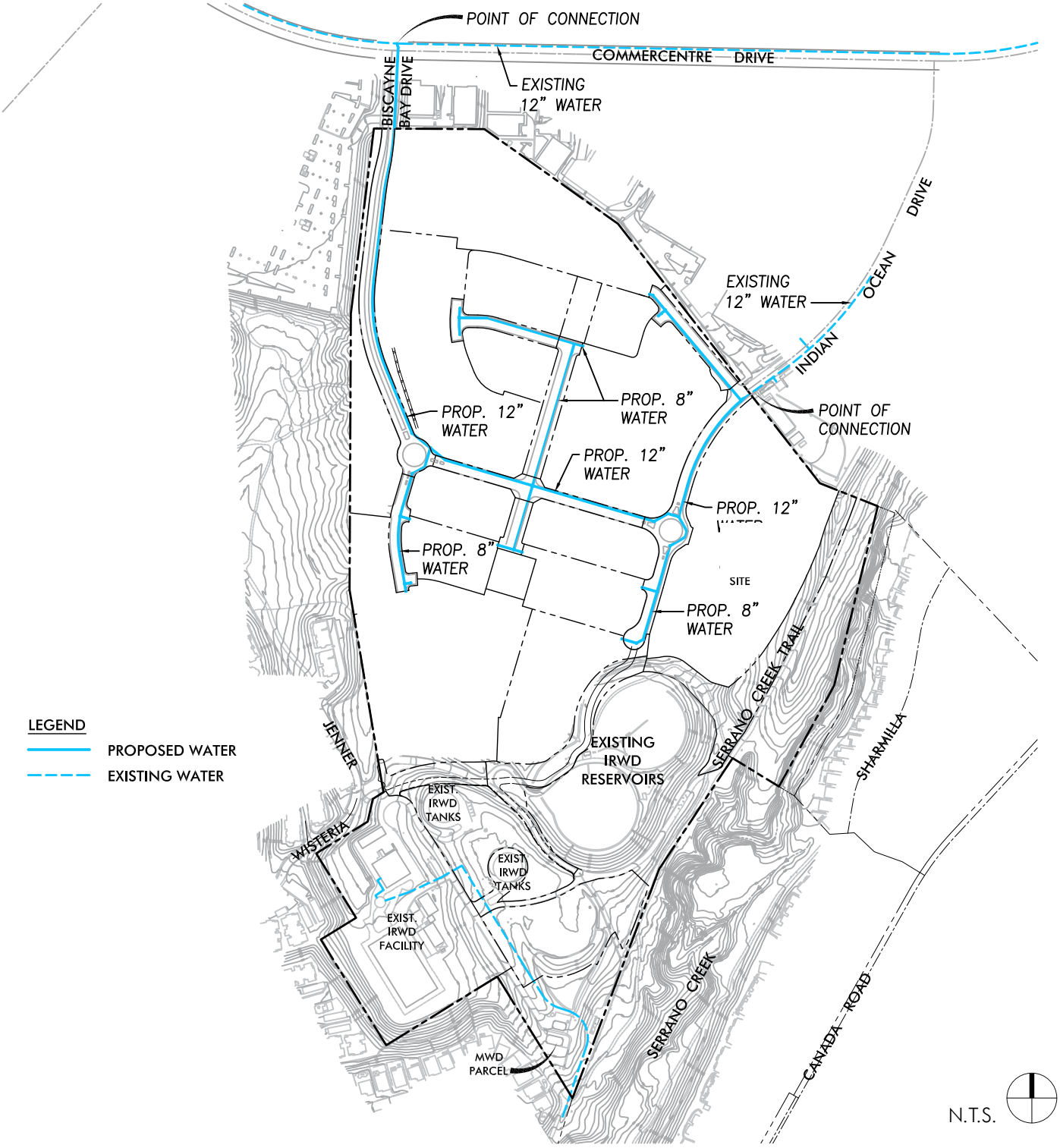
- All sewer lines shall be designed per IRWD requirements, installed in accordance with the requirements and specifications of the Orange County Health Department, and inspected per IRWD standards.
- The location of facilities shall conform to IRWD and City of Lake Forest standards.
- Any design of off-site facilities shall be coordinated with the affected property owners and IRWD.

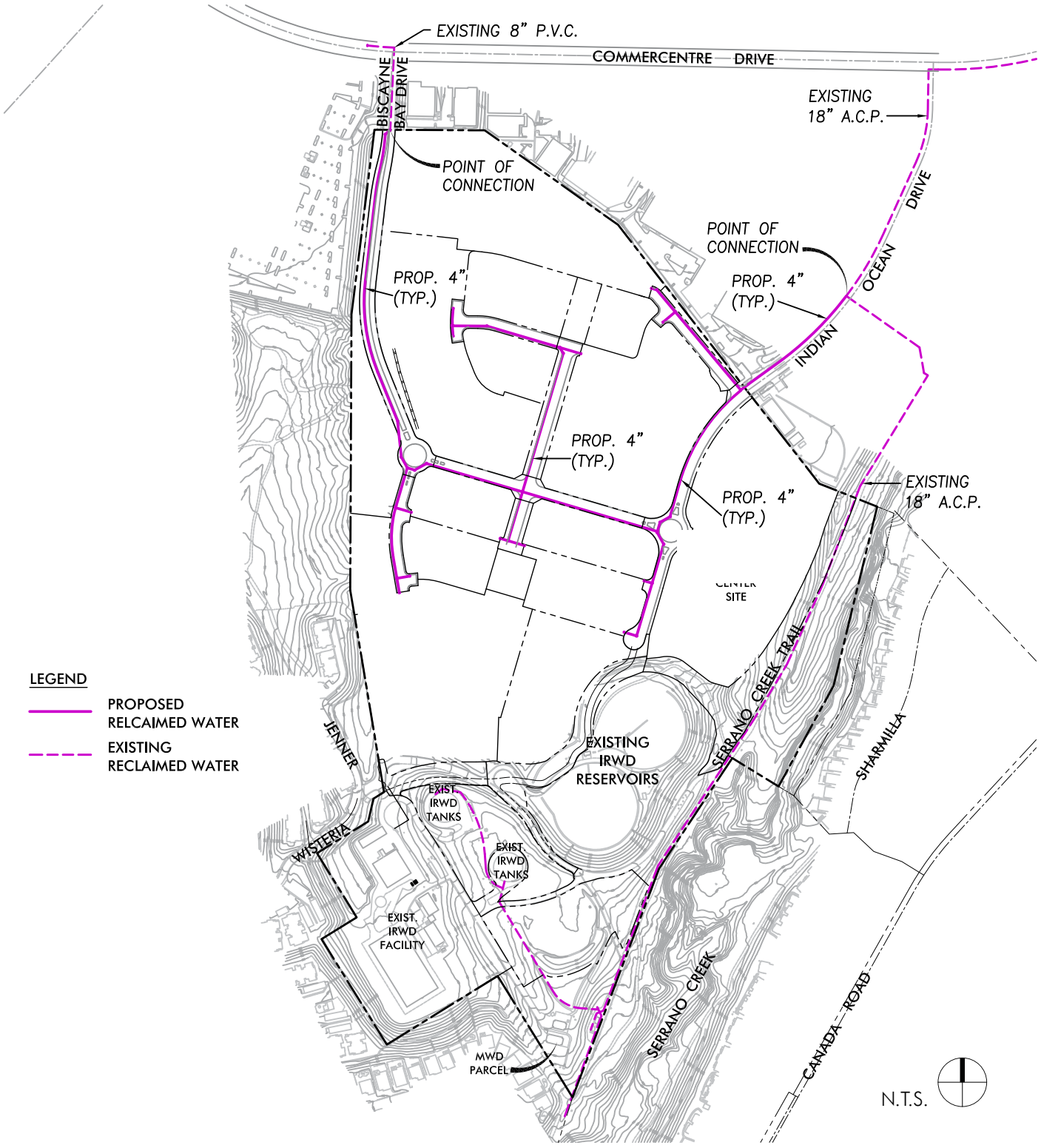
DRAINAGE 5.4

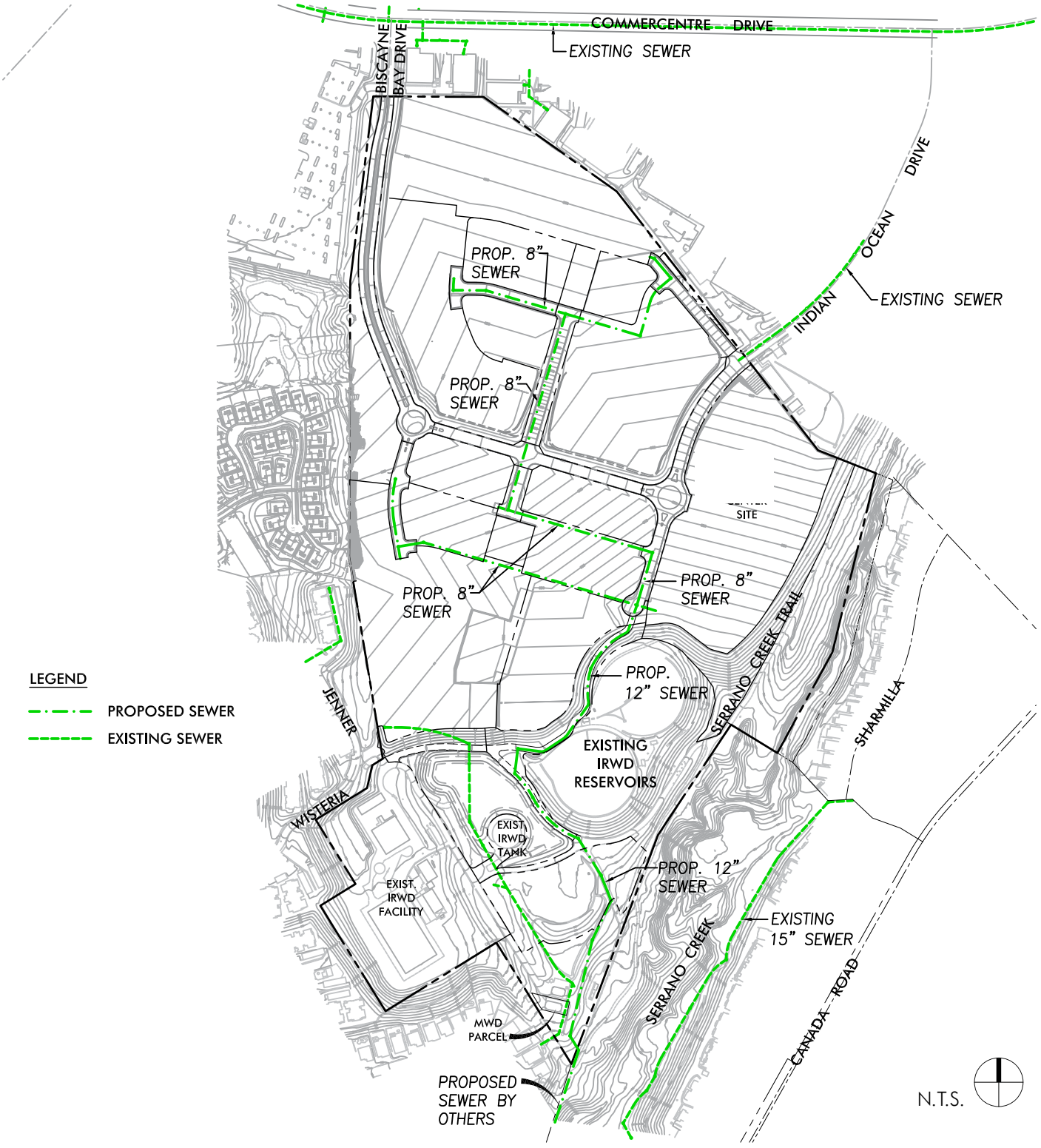
The Serrano Summit project proposes a comprehensive system intended to collect, convey and deliver storm flows in accordance with both City of Lake Forest and County of Orange requirements. The primary goal of the storm water management system is to prevent flooding and protect property by providing safe, effective site drainage. Serrano Summit contains approximately four existing drainage areas ranging in size from 2 acres to 59 acres. The existing regional storm drain facility capable of serving Serrano Summit is the Serrano Creek to the southeast of the site. Hydrology, hydraulics and facility planning are based on a preliminary hydrology report dated June 2008 by Fuscoe Engineering. The storm water management system generally consist of the following conveyance facilities: Terrace drains, down drains, outlet structures, parkway culverts, earthen swales, area drainage systems, underground piping, catch basins, manholes, junction structures, and energy dissipaters. The Serrano Summit storm drain system also includes a detention area in the park just north of private 'D' Street (in Planning Area 15).

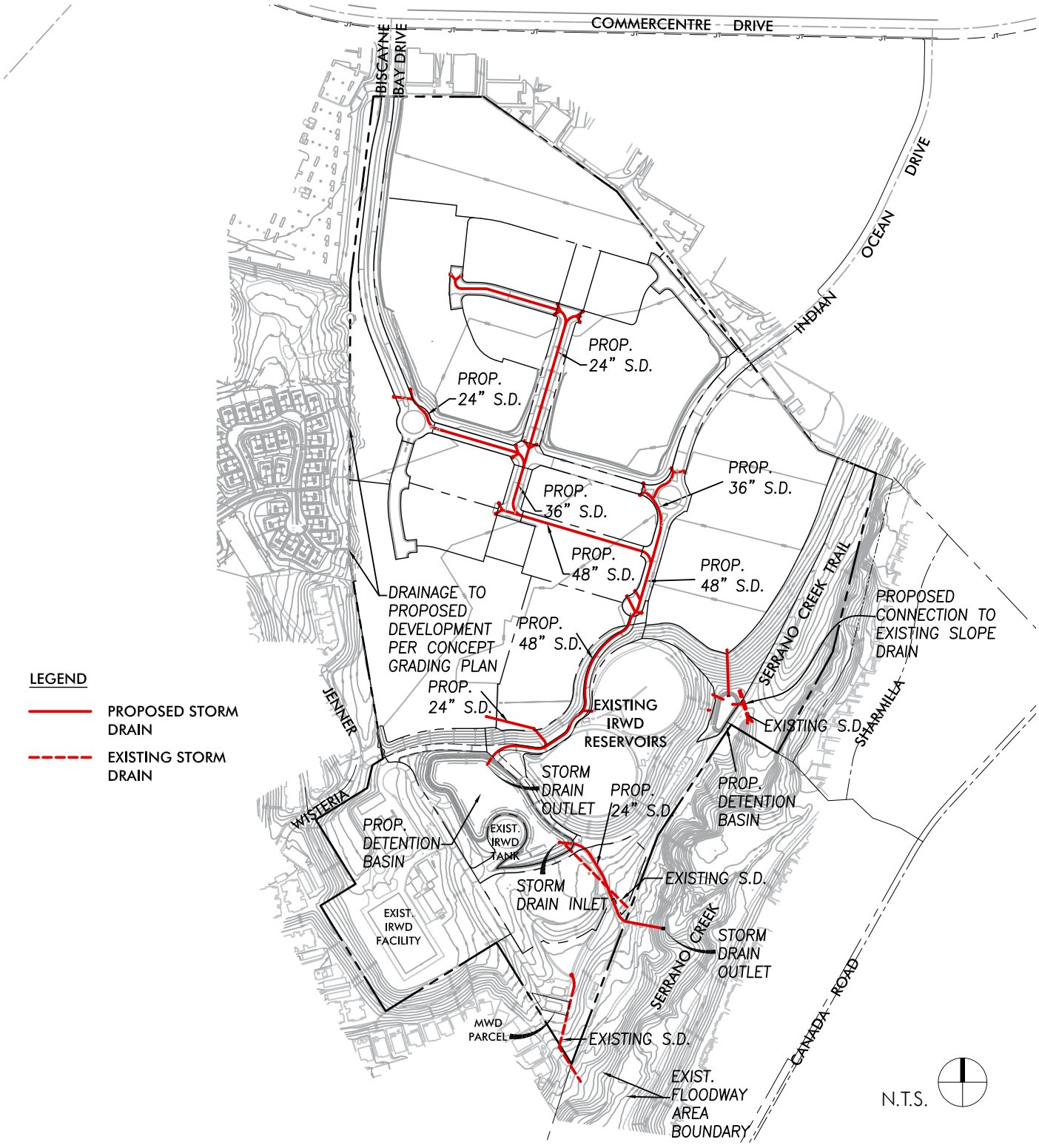
Drainage Development Standards

- Drainage and flood control facilities and improvements shall be provided in accordance with the City of Lake Forest and the County of Orange requirements.
- Storm drain facilities shall ensure the acceptance and disposal of 100-year storm runoff without damage to streets or adjacent property.
- All areas within Serrano Summit will be required to prepare a Storm Water Pollutant Prevention Plan (SWPPP) in accordance with the requirements of the National Pollutant Discharge Elimination System (NPDES) standards.


POINT OF CONNECTION
COMMERCENTRE DRIVE
EXISTING 12" WATER
BISCAYNE BAY DRIVE
OCEAN DRIVE
EXISTING 12" WATER
INDIAN
PROP. 12" WATER
PROP. 8" WATER
POINT OF CONNECTION
PROP. 12" WATER
PROP. 12"
PROP. 8" WATER
SITE
PROP. 8" WATER
SERRANO CREEK TRAIL
SHARMILLA
JENNIER
EXISTING IRWD RESERVOIRS
EXIST. IRWD TANKS
WISTERIA
EXIST. IRWD TANKS
EXIST. IRWD FACILITY
SERRANO CREEK
MWD PARCEL
CANADA ROAD
LEGEND
PROPOSED WATER
EXISTING WATER
N.T.S.

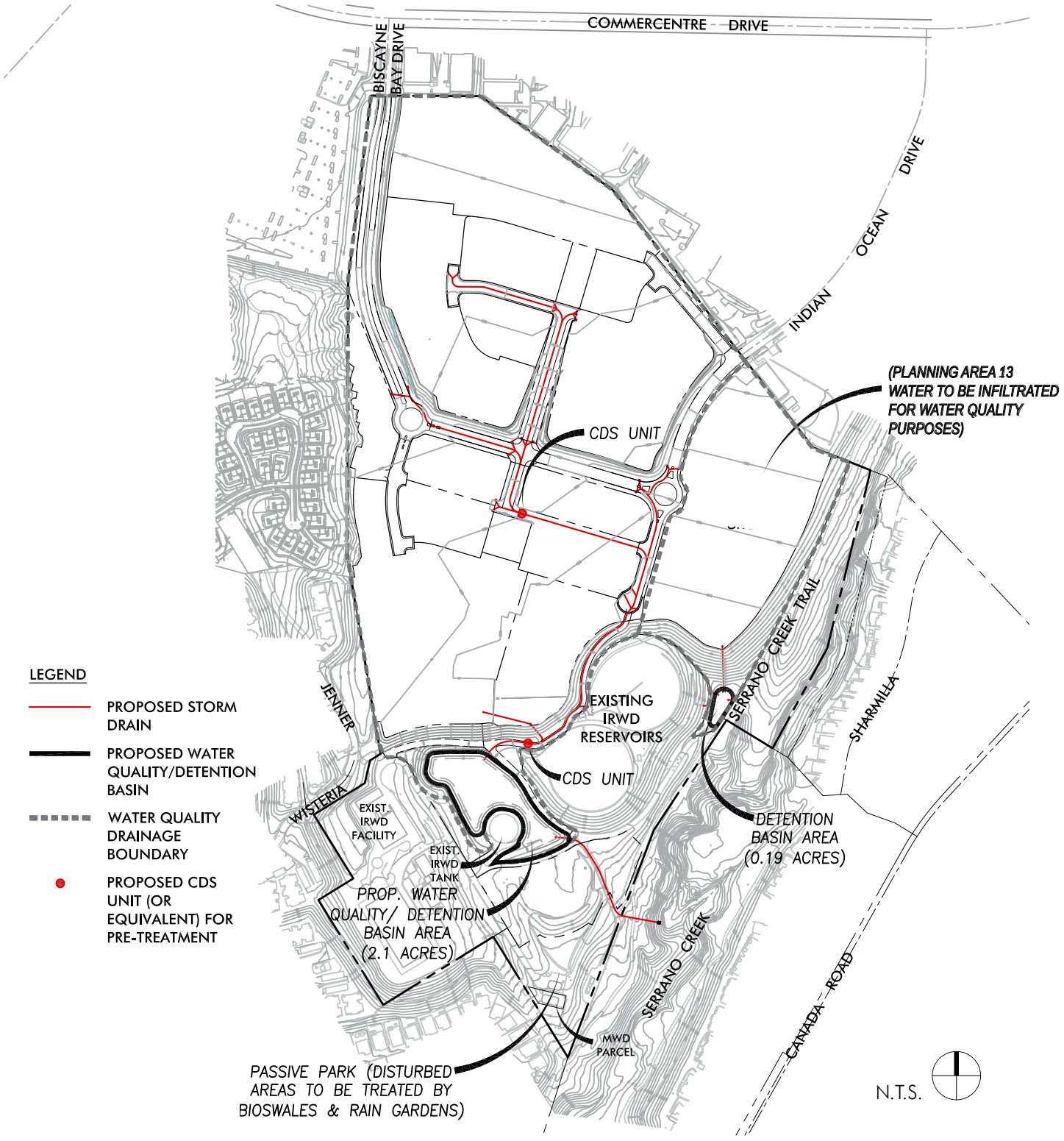

EXISTING 8" P.V.C.
COMMERCENTRE DRIVE
BISCAYNE BAY DRIVE
EXISTING 18" A.C.P.
POINT OF CONNECTION
POINT OF CONNECTION
PROP. 4" (TYP.)
PROP. 4" (TYP.)
OCEAN DRIVE
INDIAN
PROP. 4" (TYP.)
PROP. 4" (TYP.)
EXISTING 18" A.C.P.
SITE
LEGEND
PROPOSED RELCAIMED WATER
EXISTING RECLAIMED WATER
SERRANO CREEK TRAIL
JENNER
EXISTING IRWD RESERVOIRS
SHARMILLA
EXIST. IRWD TANKS
WISTERIA
EXIST. IRWD TANKS
EXIST. IRWD FACILITY
SERRANO CREEK
MWD PARCEL
CANADA ROAD
N.T.S.


COMMERCENTRE DRIVE
EXISTING SEWER
BISCAYNE BAY DRIVE
INDIAN OCEAN DRIVE
EXISTING SEWER
PROP. 8" SEWER
PROP. 8" SEWER
PROP. 8" SEWER
PROP. 8" SEWER
SITE
PROP. 12" SEWER
SERRANO CREEK TRAIL
SHARMILLA
JENNER
WISTERIA
EXISTING IRWD RESERVOIRS
EXIST. IRWD TANK
EXIST. IRWD FACILITY
PROP. 12" SEWER
EXISTING 15" SEWER
SERRANO CREEK
CANADA ROAD
MWD PARCEL
PROPOSED SEWER BY OTHERS
LEGEND
PROPOSED SEWER
EXISTING SEWER
N.T.S.


COMMERCENTRE DRIVE
BISCAYNE BAY DRIVE
OCEAN DRIVE
INDIAN
PROP. 24" S.D.
PROP. 24" S.D.
PROP. 36" S.D.
PROP. 36" S.D.
PROP. 48" S.D.
PROP. 48" S.D.
PROP. 48" S.D.
DRAINAGE TO PROPOSED DEVELOPMENT PER CONCEPT GRADING PLAN
PROP. 24" S.D.
EXISTING IRWD RESERVOIRS
SERRANO CREEK TRAIL
PROPOSED CONNECTION TO EXISTING SLOPE DRAIN
EXISTING S.D.
SHARMILLA
JENNER
WISTERIA
STORM DRAIN OUTLET
PROP. 24" S.D.
PROP. DETENTION BASIN
PROP. DETENTION BASIN
EXIST. IRWD TANK
STORM DRAIN INLET
EXISTING S.D.
EXIST. IRWD FACILITY
SERRANO CREEK
STORM DRAIN OUTLET
MWD PARCEL
EXISTING S.D.
CANADA ROAD
EXIST. FLOODWAY AREA BOUNDARY
N.T.S.
LEGEND
PROPOSED STORM DRAIN
EXISTING STORM DRAIN

WATER QUALITY 5.5

A Water Quality Management Plan (WQMP) will be prepared for the grading and drainage operations for Serrano Summit, designed to filter and treat surface runoff in a manner to comply with requirements of the City of Lake Forest and the Regional Water Quality Control Board. To mitigate potential impacts, this WQMP relies on a variety of facilities, each specifically located within the system to provide incremental removal of urban pollutants. The applicant will comply with requirements of the National Pollutant Discharge Management Elimination System (NPDES) permit. The applicant will provide Best Management Practices (BMPs) to control discharges of pollutants into receiving waters. Plans for such improvements shall be approved by the City of Lake Forest. The main feature of this WQMP is a 2.1 acre detention/water quality basin located in the area adjacent to the two above ground tanks in the southerly portion of the site.


COMMERCENTRE DRIVE
BISCAYNE BAY DRIVE
OCEAN DRIVE
INDIAN
(PLANNING AREA 13 WATER TO BE INFILTRATED FOR WATER QUALITY PURPOSES)
CDS UNIT
JENNER
EXISTING IRWD RESERVOIRS
SERRANO CREEK TRAIL
SHARMILLA
CDS UNIT
WISTERIA
EXIST. IRWD FACILITY
EXIST. IRWD TANK
DETENTION BASIN AREA (0.19 ACRES)
PROP. WATER QUALITY/ DETENTION BASIN AREA (2.1 ACRES)
SERRANO CREEK
MWD PARCEL
CANADA ROAD
PASSIVE PARK (DISTURBED AREAS TO BE TREATED BY BIOSWALES & RAIN GARDENS)
N.T.S.
LEGEND
PROPOSED STORM DRAIN
PROPOSED WATER QUALITY/DETENTION BASIN
WATER QUALITY DRAINAGE BOUNDARY
PROPOSED CDS UNIT (OR EQUIVALENT) FOR PRE-TREATMENT

GRADING 5.6

Grading for the Serrano Summit project reflects a conceptual grading approach consistent with requirements of the City of Lake Forest and the County of Orange and includes mass graded pads at a minimum of 1% slope. More detailed grading plans will be required as part of the approval of any Tentative and Final subdivision maps. In general, considerations while preparing the concept grading plan include preservation of existing edge conditions, where possible, and to minimize any export or import. Additionally, terracing of the site was implemented to preserve and enhance views and develop flat pads such that conventional product types could be efficiently land planned.

The Conceptual Grading Plan shall be used as a guide for the final grading design.

Grading work shall be balanced on-site, and within adjacent development phases, if possible. If a development proposal does not include an entire Planning Area, then prior to the approval of the proposed development an overall conceptual grading plan for the entire planning area shall be submitted for Planning Department approval. The conceptual grading plan for each planning area shall be used as a guideline for the preparation and evaluation of subsequent detailed grading plans for individual stages of development within that Planning Area. The conceptual grading plans for any Planning Area shall include preliminary pad and roadway elevations. Grading plans submitted for review and approval should include a plan for the mass grading and movement of large quantities of dirt from one area of the development to another for balance purposes. Rough grading plans should include information detailing movement of dirt to rough grade elevations that approximates the final finished grades and a precise grading plans should include information detailing movement of dirt to a finished grade tolerance required for the construction of structures and road improvements.

The existing elevations at the project site range from approximately elevation 540 at the south corner of the site to approximately elevation 705 near the northwest corner of the site which is close to the Biscayne Bay Drive entrance. To the south beyond the proposed residential development, there are four IRWD tanks on-site — two underground tanks and two above ground tanks. These four tanks are located at the southern portion of the site and are at approximately elevations 628 for the top of the buried tanks, 605 and 595 for the above ground tanks. The terrain is irregular with respect to grading; however, the site tends to drain from the north to the south at a gross level, at a more detailed level there are berms, knobs, basins, slopes, terracing, and many storm drain features to collect water and remove off-site.

The midsection of the site is relatively flat having slopes in the range of 1.5% to 2.0%, the west edge has a berm type effect being much higher than the middle/gut portion of the site, as the east edge has down slopes with terracing and drainage channels that collect water and take it off-site with an existing storm drain outlet. As the site progresses southward, there are slopes and additional terracing to get to the top of the underground tanks, and to get to the pad levels of the above ground tanks. At that point, there are access roadways for IRWD facility maintenance, and a host of underground infrastructure to feed these facilities.

Given the irregularity of the existing grade, the water quality issues with regard to Water Quality/ Detention basin location options, and the land use plan, the site will be transformed into mass graded pads with two main terraces, while keeping the southerly IRWD facility area largely intact. The upper tier occurs just north of 'A' Street and 'B' Street and ranges in height from approximately 24' to 28' above the lower tier just south of 'A' Street and 'B' Street. The existing berm on the west edge has been knocked down for view purposes and the sump on the east edge has been filled in in order to form the proposed new Civic Center pad. The lower tier extends from 'B' Street to the existing terrace just north of the existing underground tanks. This terrace assists with views while maintaining original land forms and aiding with a proposed balance cut and fill site. An area between the two above ground tanks will be graded out for the water quality/detention basin and the dirt from that excavation will be used to the north for required fill areas. Regarding the cut, fill, and balance concepts, the cut areas generally are as follows:

- The northerly edge from Indian Ocean Drive west to the westerly property line - average 15';

- The west edge of the property southerly to the IRWD facilities area (with the exception of filling one ravine) – average 20';
- An area of cut that starts south of 'B' Street and encompasses the westerly midsection of that mass graded pad area – average 25';
- The fill areas of the site are generally in the middle of the upper tier – average 13';
- The entire east side where the Civic Center site is proposed - average 40';
- There is also a sizeable fill area just north of the above ground tanks – average 16'.

In addition to those cut and fill areas, there will be remedial grading requirements per the soils engineer, which will account for some additional cut and fill. Preliminary calculations for the earthwork include accommodations for bulking of some of the cut material, shrinkage of some of the cut material, and subsidence of some of the fill material. All this considered, it appears that the graded portions of Serrano Summit are close to a balanced site.

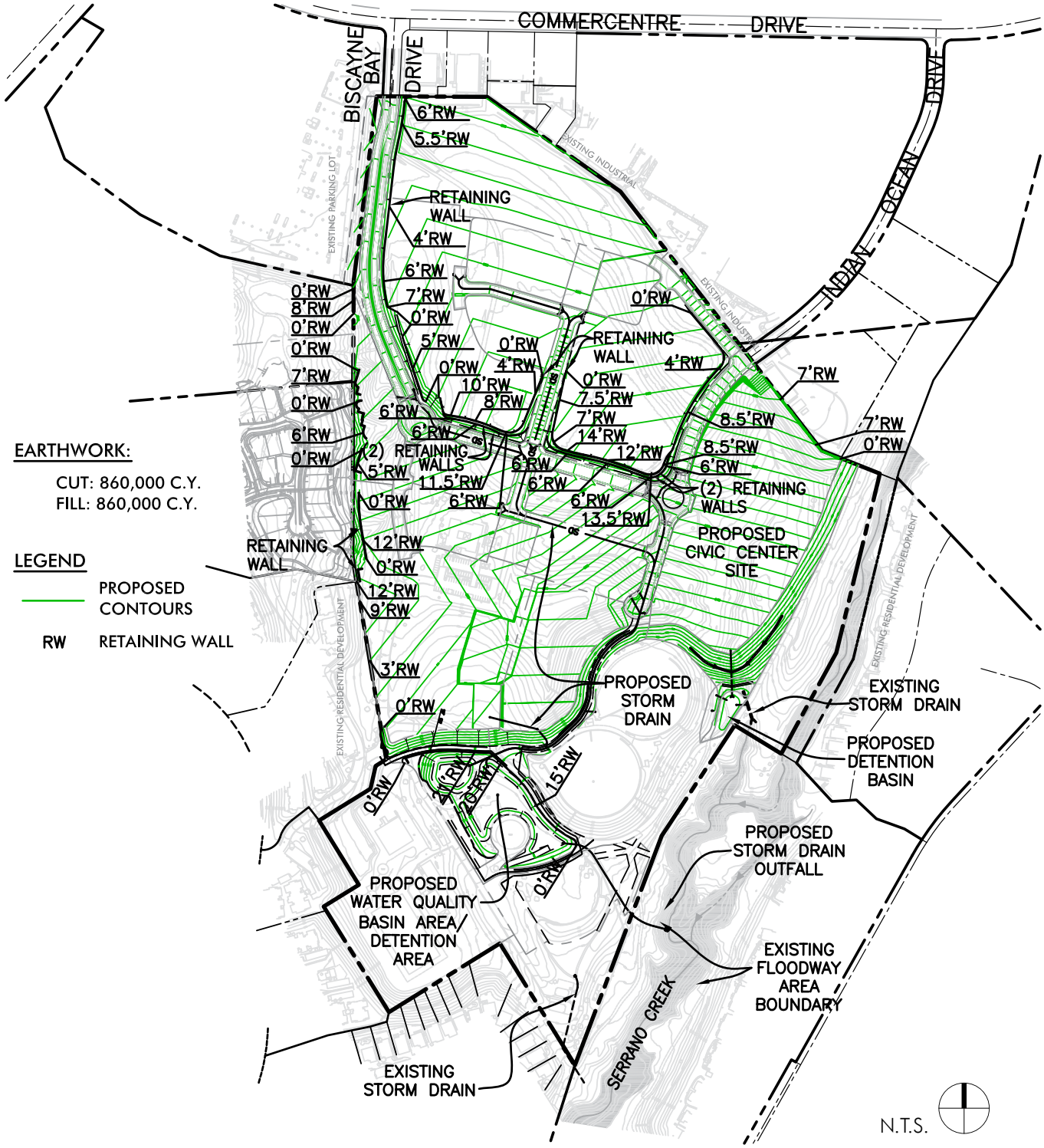
Exhibit 5-7 shows two site-wide grading cross sections (Section A-B-C and Section D-E) through Serrano Summit. In addition, a three-dimensional mesh model depicting the actual grading of the Serrano Summit site is shown in Exhibit 5-8, 3D Grading Model.

Grading Plan Development Standards

- After approval of a tentative tract map, the developer may submit plans for rough grading.
- After approval of a tentative tract map, the developer may submit plans for rough grading.
- A grading permit shall be obtained from the City of Lake Forest, as required by the City of Lake Forest, prior to grading.
- All public collector and local streets shall have a minimum gradient of 1%.
- All private streets and drives shall have a minimum gradient of 0.5%.
- Prior to initial grading activities, a detailed geotechnical study shall be prepared to analyze on-site soil conditions and slope stability.
- Slopes exceeding ten feet (10') in vertical height are allowed provided they are recommended to be safe in a Slope Stability Report prepared by a soils engineer or an engineering geologist and approved by the City of Lake Forest's City Engineer. Orange County Grading Code will be observed with regard to slope setback requirements.
- The applicant shall be responsible for maintenance and upkeep of all planting and irrigation systems until those operations are the responsibilities of other parties.
- Potential brow ditches, terrace drains, or other minor swales, as determined necessary by the City of Lake Forest at future stages of project review, shall be in conformance with the Orange County standards.
- In order to achieve an earthwork balance within any development phase, grading may encroach into an area of future development. Encroachment into these areas may involve the borrowing or temporary stockpiling of dirt to balance areas in the order of the project phasing. If such is the case, grading plans shall be prepared for this purpose and grading will be performed in a manner consistent with the Orange County and City of Lake Forest requirements. The overall Conceptual Grading Plan for the project will be used as a guide for the overall project as well as any conceptual grading plans for an individual planning area. Any off-site grading shall adhere to all Orange County and City of Lake Forest requirements and these Grading Plan development standards. Any grading involving another parcel must have the permission of all applicable property owners and appropriate easement documents.
- Graded land that is undeveloped shall be maintained weed-free, treated with soil binder, or other approved methods of soil stabilization, to prevent dust and dirt erosion. Planting with interim landscaping shall comply with NPDES Best Management Practices for wind and water erosion control.

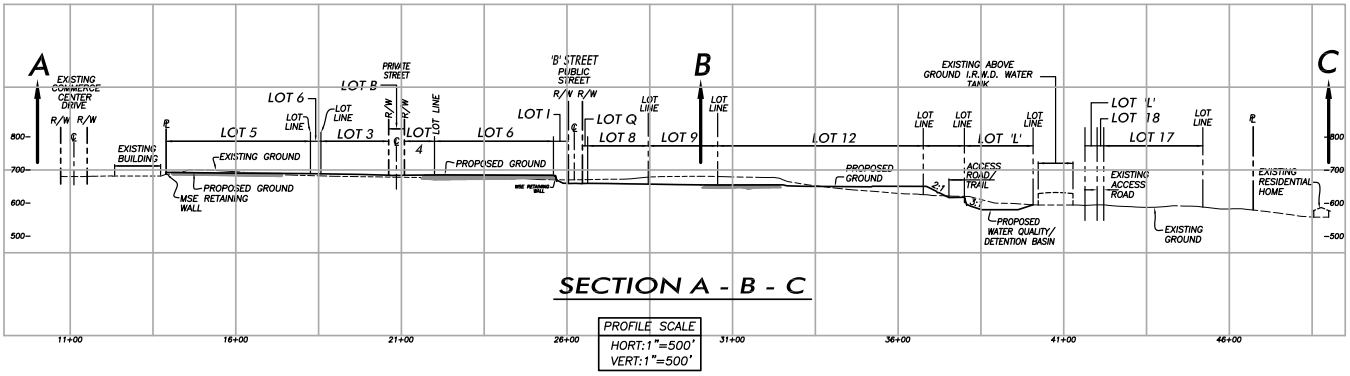
GRADING CONCEPT PLAN

EXHIBIT 5-6



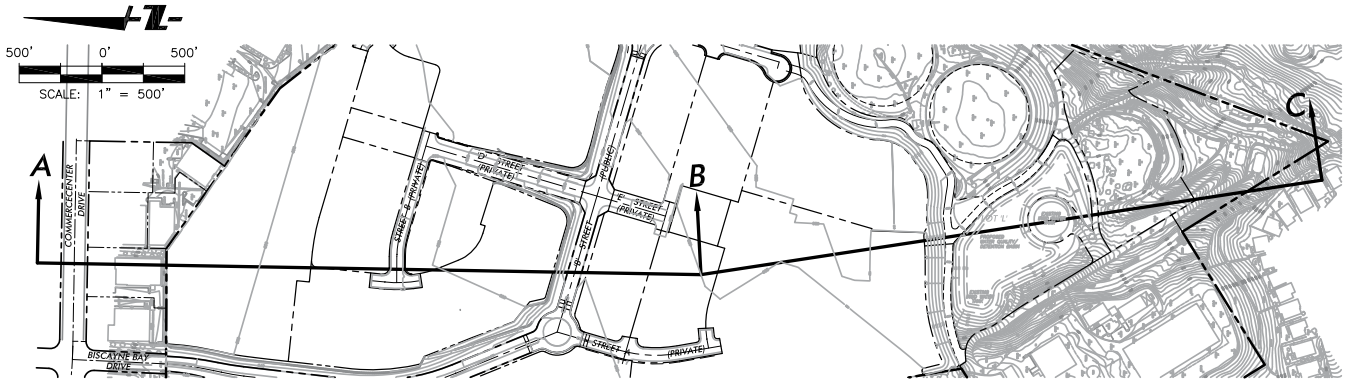
SITE-WIDE GRADING CROSS SECTIONS

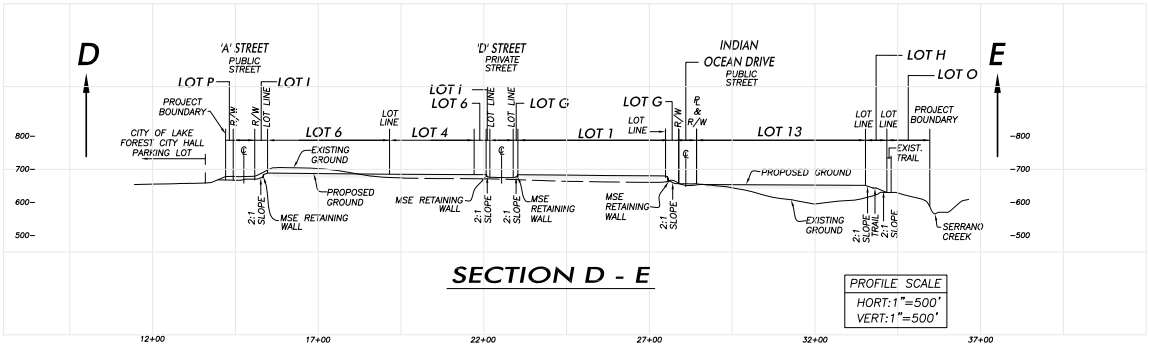
EXHIBIT 5-7



SECTION A - B - C

PROFILE SCALE
HORT: 1"=500'
VERT: 1"=500'





SECTION D - E

PROFILE SCALE
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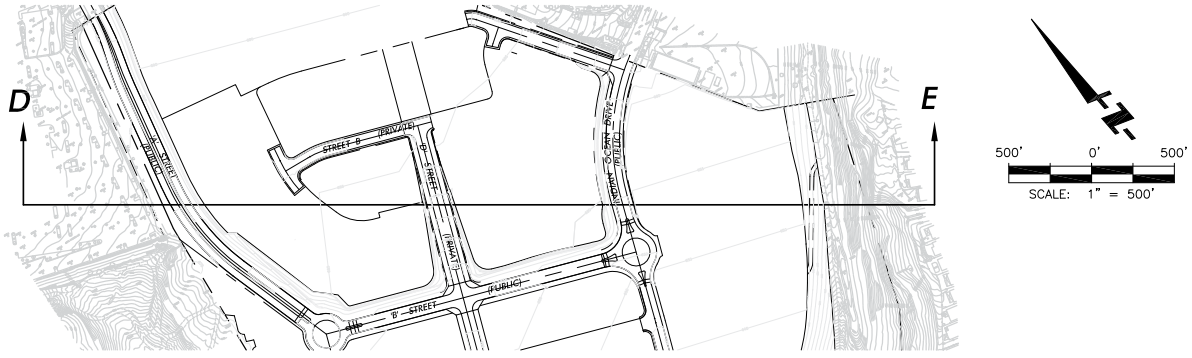
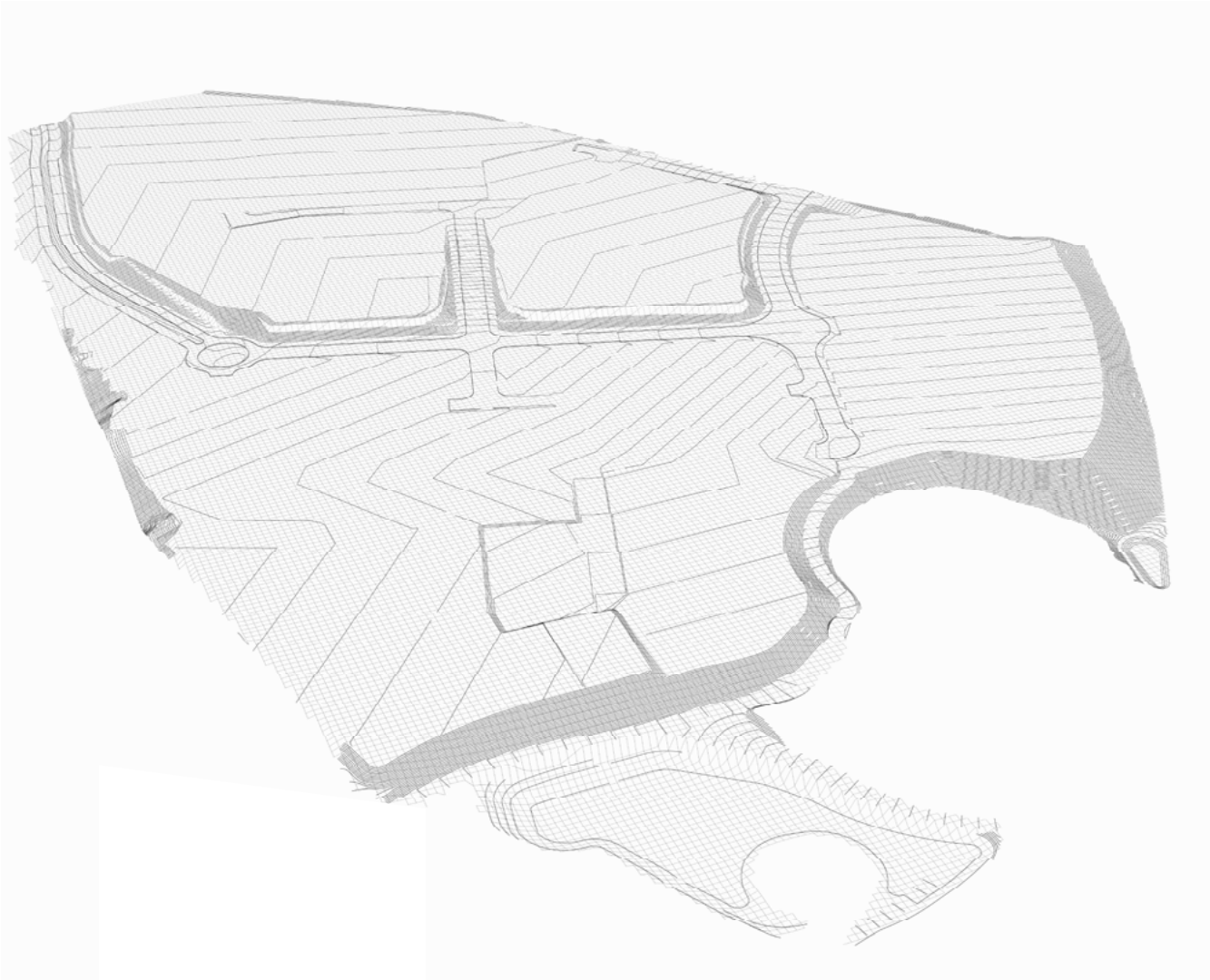
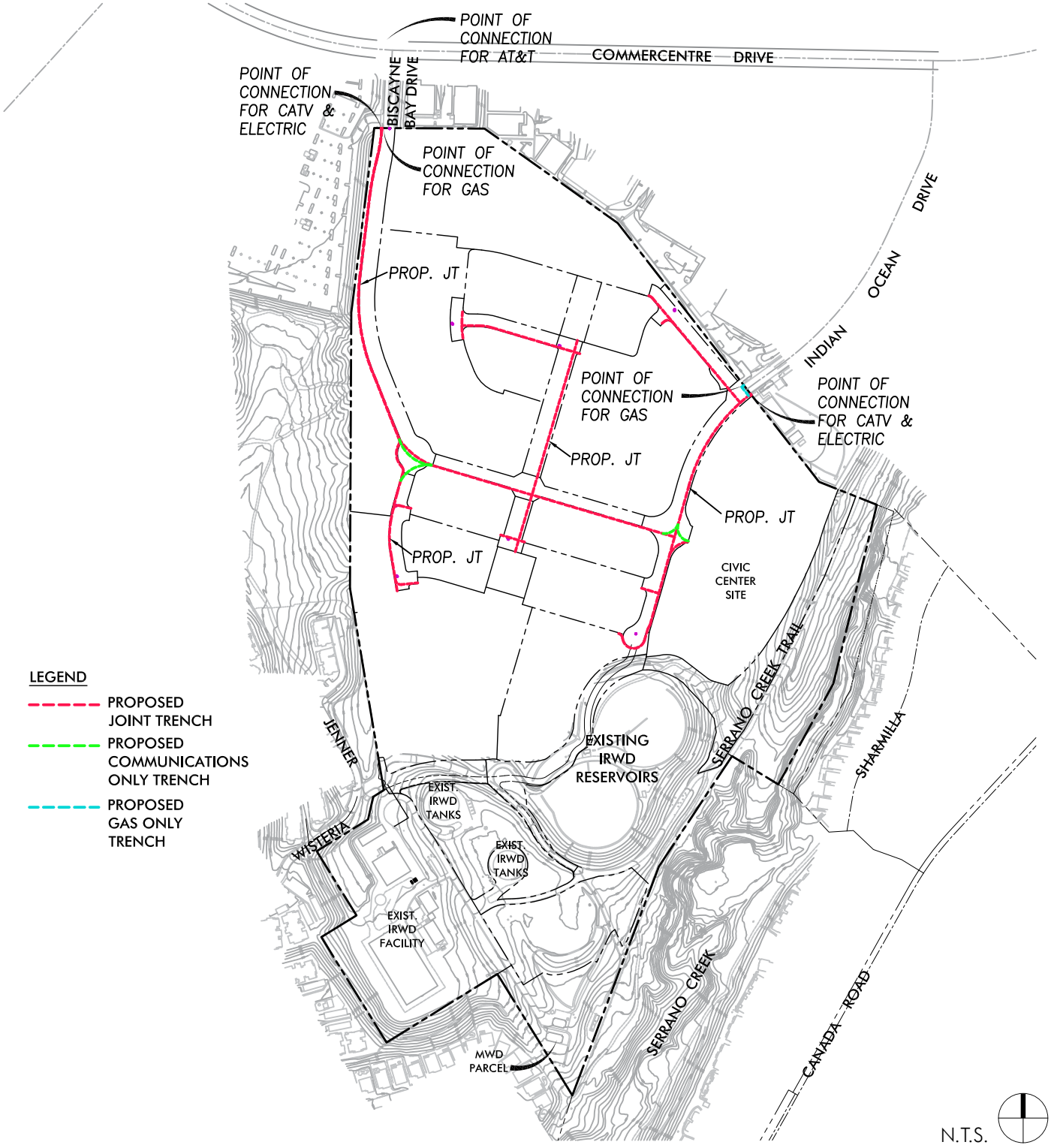


3-D GRADING MODEL

EXHIBIT 5-8



N.T.S.


POINT OF CONNECTION FOR AT&T
COMMERCENTRE DRIVE
POINT OF CONNECTION FOR CATV & ELECTRIC
BISCAYNE BAY DRIVE
POINT OF CONNECTION FOR GAS
PROP. JT
OCEAN DRIVE
INDIAN
POINT OF CONNECTION FOR GAS
POINT OF CONNECTION FOR CATV & ELECTRIC
PROP. JT
PROP. JT
PROP. JT
CIVIC CENTER SITE
SERRANO CREEK TRAIL
SHARMILLA
JENNER
EXISTING IRWD RESERVOIRS
EXIST. IRWD TANKS
EXIST. IRWD TANKS
WISTERIA
EXIST. IRWD FACILITY
MWD PARCEL
SERRANO CREEK
CANADA ROAD
LEGEND
PROPOSED JOINT TRENCH
PROPOSED COMMUNICATIONS ONLY TRENCH
PROPOSED GAS ONLY TRENCH
N.T.S.

COMMUNITY FACILITIES 5.7

Civic Center

An 11.9 gross acre site in Serrano Summit may be developed as a new civic center for the City of Lake Forest per the Public Facilities Overlay. Civic center land provided by the project developer will be offered and accepted pursuant to the Serrano Summit Development Agreement.

Schools

Saddleback Valley Unified School District is the school district serving the K-12 school needs of the Serrano Summit community. Schools within the vicinity of Serrano Summit that may serve the K-12 school level needs of the community include:

- Lake Forest Elementary School (21801 Pittsford Drive, Lake Forest)
- Rancho Cañada Elementary School (21801 Winding Way, Lake Forest)
- Serrano Intermediate School (24642 Jeronimo, Lake Forest)
- El Toro High School (25255 Toledo Way, Lake Forest)

The developer will pay school mitigation fees as required by the State of California and specified in the Serrano Summit Development Agreement.

Police / Sheriff

Police services for the City of Lake Forest are provided by contract with the Orange County Sheriff's Department. The developers of Serrano Summit will pay the required impact fee for police services pursuant to the conditions of approval of any tentative tract map for development.

Fire

Fire services in the City of Lake Forest are provided by the Orange County Fire Authority. The developers of Serrano Summit will pay the required impact fee for fire protection services pursuant to the conditions of approval of any tentative tract map for development.

Library

The developers of Serrano Summit will pay the required library fees pursuant to the conditions of approval of any tentative tract map for development.

Solid Waste

Waste Management provides waste collection and disposal in Lake Forest. Waste Management will provide solid waste collection and disposal services to Serrano Summit.

Parks

Serrano Summit incorporates 6.1 acres of parkland including a 1.9 acre recreation center. The parkland and recreation center will be improved and dedicated by the project master developer to the City of Lake Forest pursuant to the terms contained in the Serrano Summit Development Agreement.

Other Public Facilities

The developers of Serrano Summit will pay the required impact fee for public facilities pursuant to the terms contained in the Serrano Summit Development Agreement.

TECHNOLOGY PLAN 5.8

The responsibility for enforcement of the following provisions shall be through the master developer.

Network Description

Developers should strive to implement the most advanced networks commercially available at Serrano Summit. Networks should be based upon technology that is commercially proven and stable for deployment in commercial environments.

Network refers to the assembly of components, software, and network management tools linked together in a single cohesive web for the purpose of effectively and efficiently transporting and switching all communications signals within Serrano Summit in a reliable and cost-effective manner.

Networks should be planned with four architectural objectives in mind:

1. The networks should be scalable; that is, easily and seamlessly scaled up or down, without interruption, to support increased or decreased users or volumes of traffic.
2. The networks should be open: that is, the networks employ an Open System Interconnection (OSI) design framework. The networks must have the ability to support any standard device attached to the network irrespective of the vendor or manufacturer.
3. The networks should be adaptable; that is, the network will need to adapt to the needs of any user, for any combination of voice, data, or image.
4. The networks must be evolvable; that is, the networks must employ a design concept recognizing the future will present technology innovations and user-community changes that cannot be foreseen today.

These four characteristics – scalable, open, adaptable, and employable – define the networks developers must deploy to serve Serrano Summit.

Infrastructure

Open Systems refers to an environment that is designed and constructed in a way that will allow any set of hardware and software to operate on the system, if the hardware and software have been designed and built in compliance with Open Systems Interconnection (OSI) standards. OSI is an internationally accepted framework for standards of communication systems. OSI was developed by the International Standards Organization (ISO) and is the only internationally accepted framework of standards for communication between different systems made by different vendors. The OSI model organizes the communications process into seven layered categories. Each layer in the sequence ensures the operability of the next layer. The seven layers are:

- Layer 1 – The Physical Layer
- Layer 2 – The Data Link Layer
- Layer 3 – The Network Layer
- Layer 4 – The Transport Layer
- Layer 5 – The Session Layer
- Layer 6 – The Presentation Layer
- Layer 7 – The Application Layer

Implementation

Many implementation models have been attempted by developers to ensure their communities have access to world-class communications services. The method of implementation sought for Serrano Summit is as follows:

Strategic Partnering

This implementation practice calls for the developer to forge a collaboration with one or more service providers, whereby the provider(s) agree to deploy advanced infrastructure in exchange for establishing a business relationship that will convey a marketing advantage for the service provider. Normally, this marketing advantage comes in the form of an endorsement or co-branding. This strategy is principally employed where the developer has no interest in investing or establishing a competency in communications and technology, but trades the marketing support for advanced infrastructure. Strategic partnering can be employed for one or all communications services. Strategic Partnering is the approach most commonly employed in large master-planned communities and will be the approach used in Serrano Summit.

Residential Wiring Specifications

To take full advantage of an all-fiber network, developers at Serrano Summit must contemplate an inside-the-home wiring distribution system. This wiring standard is called a "structured" wiring standard or "smart home" wiring standard and is a requirement of all developers and builders at Serrano Summit. Each housing unit must meet this minimum standard, and the wiring system must be tested and certified, prior to securing the certificate of occupancy.

Transmission & Wireless Communication Towers

Transmission towers and wireless communication towers shall be prohibited in all planning areas within Serrano Summit, with the exception of Planning Area 19. Transmission towers and wireless communication towers are permitted pursuant to the regulations contained in Chapter 10, "Development Regulations," of this Area Plan.

CIRCULATION

Section 6.0

January 2012

Architecture+Planning

CIRCULATION 6.1

The circulation plan for Serrano Summit addresses both regional and local circulation requirements. The circulation plan also addresses the efficient movement of vehicular traffic through the community, as well as an environment for pedestrian movement and bicycle traffic. Reducing unnecessary reliance on the automobile as a primary means of travel throughout Serrano Summit is a fundamental objective of the circulation plan.

Regional access to the Serrano Summit project area is provided from the I-5 Freeway via Bake Parkway, an arterial roadway. Regional access is also available from the northeast by SR-241, a toll road. Commercentre Drive, a commercial street, provides access from Bake Parkway to the two collector streets that service the project — Biscayne Bay Drive (referred to as 'A' Street herein) and Indian Ocean Drive.

Serrano Summit is served internally by a network of public collector roadways and private local streets. There are three collector streets within the project area — Indian Ocean Drive, 'A' Street and 'B' Street. 'B' Street incorporates two roundabouts at either end. These roundabouts are designed to create a sense of arrival and provide traffic calming. 'D' and 'E' Streets are private streets.

New sidewalks and pedestrian linkages connecting residential neighborhoods, parks, and open space areas are planned within Serrano Summit. An off-street multi-use trail will connect the community with the Serrano Creek trail. The network of sidewalks and linkages planned for Serrano Summit will provide bicycle and pedestrian connectivity to all areas within the community.

Master Circulation Plan

Serrano Summit is accessible from Bake Parkway via Commercentre Drive via Indian Ocean Drive and 'A' Street (the planned new southern extension of Biscayne Bay Drive). Indian Ocean Drive and 'A' Street are connected together by a new collector street, 'B' Street. The planned Civic Center complex is located at the intersection of Indian Ocean Drive and 'B' Street. Exhibit 6-1, the "Circulation Plan" establishes the hierarchy and general location of roadways within Serrano Summit.

The alignment of the internal circulation system planned for Serrano Summit is approximated. Final alignments will be established as part of the City of Lake Forest's approval of tentative maps.

'A' Street and 'B' Street

'A' and 'B' Streets are both Collector streets. The streets are designed with the following rights-of-way:

- 'A' Street: A divided street with a right-of-way width of 56 feet.
- 'B' Street: An undivided street with a right-of-way width of 41 feet. Both ends of 'B' Street are anchored by traffic roundabouts.

Indian Ocean Drive

Indian Ocean Drive is a Collector street with a right-of-way width that varies from 47.5 to 51.5 feet.

Exhibits 6-2 to 6-4 illustrate the cross sections for each of the above streets.

Private Drives and Alleys

'D' and 'E' Streets are undivided private streets with a curb-to-curb width of 36 feet.

Private drives and alleys within Serrano Summit will provide access and circulation throughout the community, distributing vehicular traffic from public collector streets into and through the residential neighborhoods. Private drives and alleys proposed for Serrano Summit are illustrated on Exhibits 6-6 to 6-8, and discussed below.

Traffic Calming / Roundabout

Serrano Summit incorporates design features including roundabouts within the residential neighborhoods to encourage drivers to proceed slowly and reduce traffic noise on street. These features contribute to more livable neighborhoods in which to walk, bike and drive.

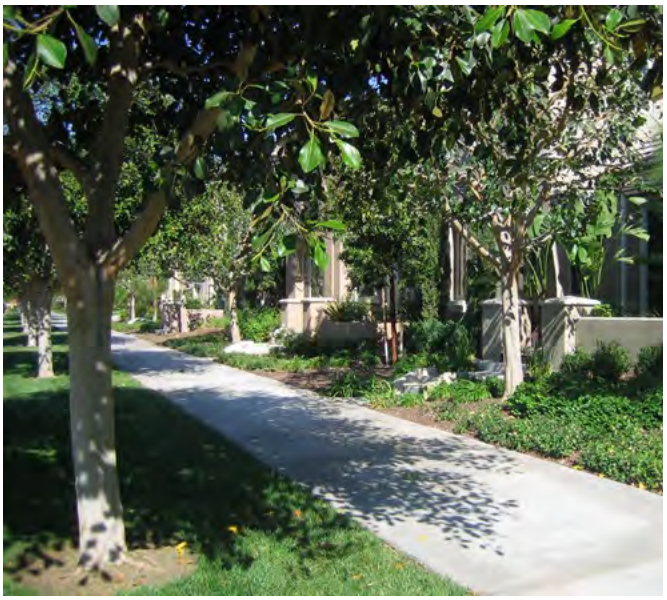
Two roundabouts are planned at both ends of 'B' Street, as depicted in Exhibits 6-9 and 6-10. Exhibit 6-1 illustrates the planned locations of the two roundabouts. Roundabouts replace traditional all-way stops at intersections in order to provide even flows from side streets, slow traffic as drivers maneuver around the circle, reduce delays and resulting congestion, and provide opportunity for landscaping.

Streetscaping

The landscape concept for Serrano Summit is designed to contribute to a sense of the street system as a pedestrian protected area to promote slower traffic speeds. This can be achieved through landscaping adjacent to streets which combine the use of shade trees, shrubs and ground cover adjacent to sidewalks to create a more intimate streetscape.

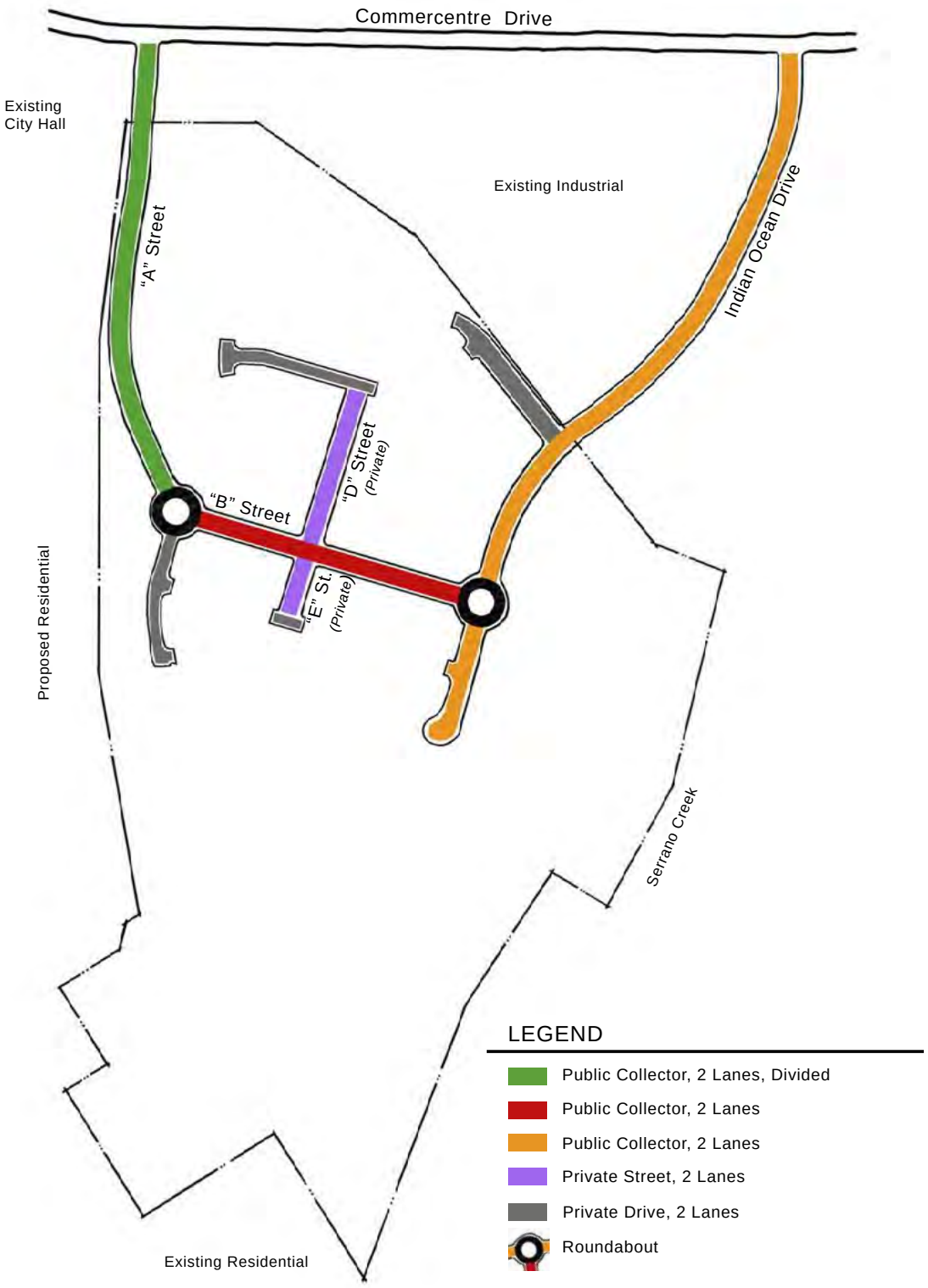
Pedestrian Circulation

Pedestrian circulation will be provided throughout Serrano Summit by means of interconnected sidewalks. Sidewalks may be adjacent to the street, or may be separated from vehicular travel lanes by a landscaped parkway. Exhibit 4-2, "Master Plan of Parks, Trails & Open Space," illustrates the pedestrian and bicycle connectivity system within Serrano Summit. Exhibits 6-2 through 6-6 illustrate the typical sidewalk and trail improvements associated with the Serrano Summit roadways. A multi-purpose trail will tie into the Serrano Creek Trail.



Collector Street with Landscaped Parkway

Local Street with Curb-Adjacent Sidewalk

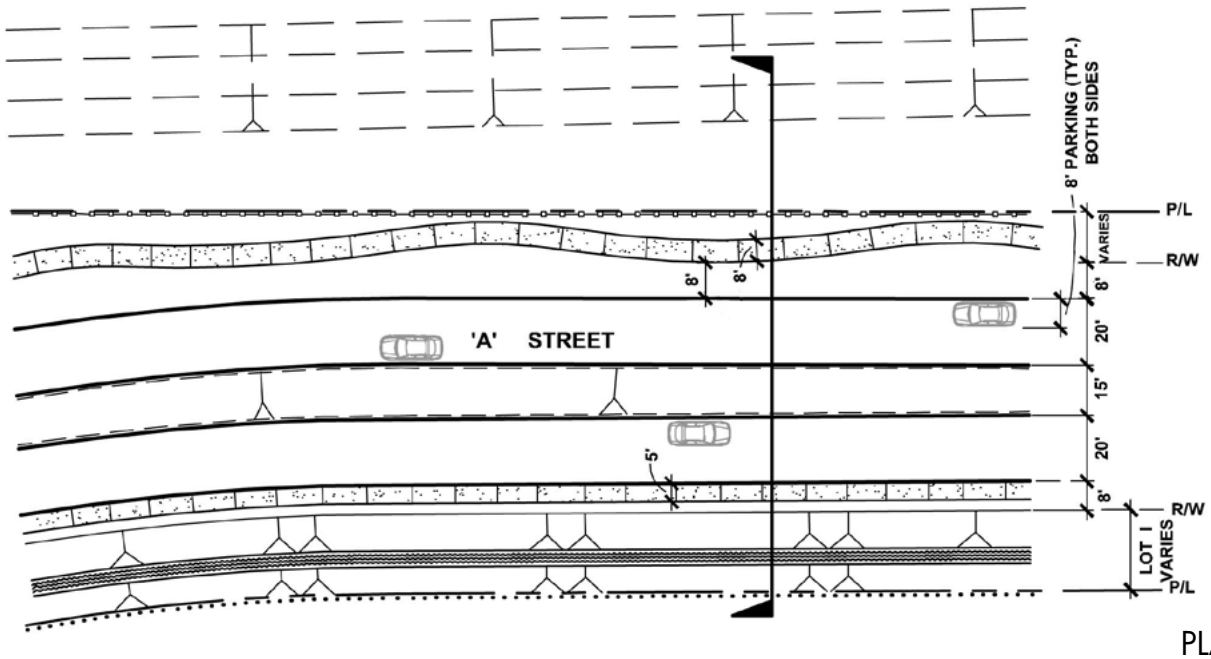

Commercentre Drive
Existing City Hall
Existing Industrial
"A" Street
Indian Ocean Drive
"D" Street (Private)
"B" Street
"E" St. (Private)
Proposed Residential
Serrano Creek
Existing Residential
LEGEND
Public Collector, 2 Lanes, Divided
Public Collector, 2 Lanes
Public Collector, 2 Lanes
Private Street, 2 Lanes
Private Drive, 2 Lanes
Roundabout

N.T.S.

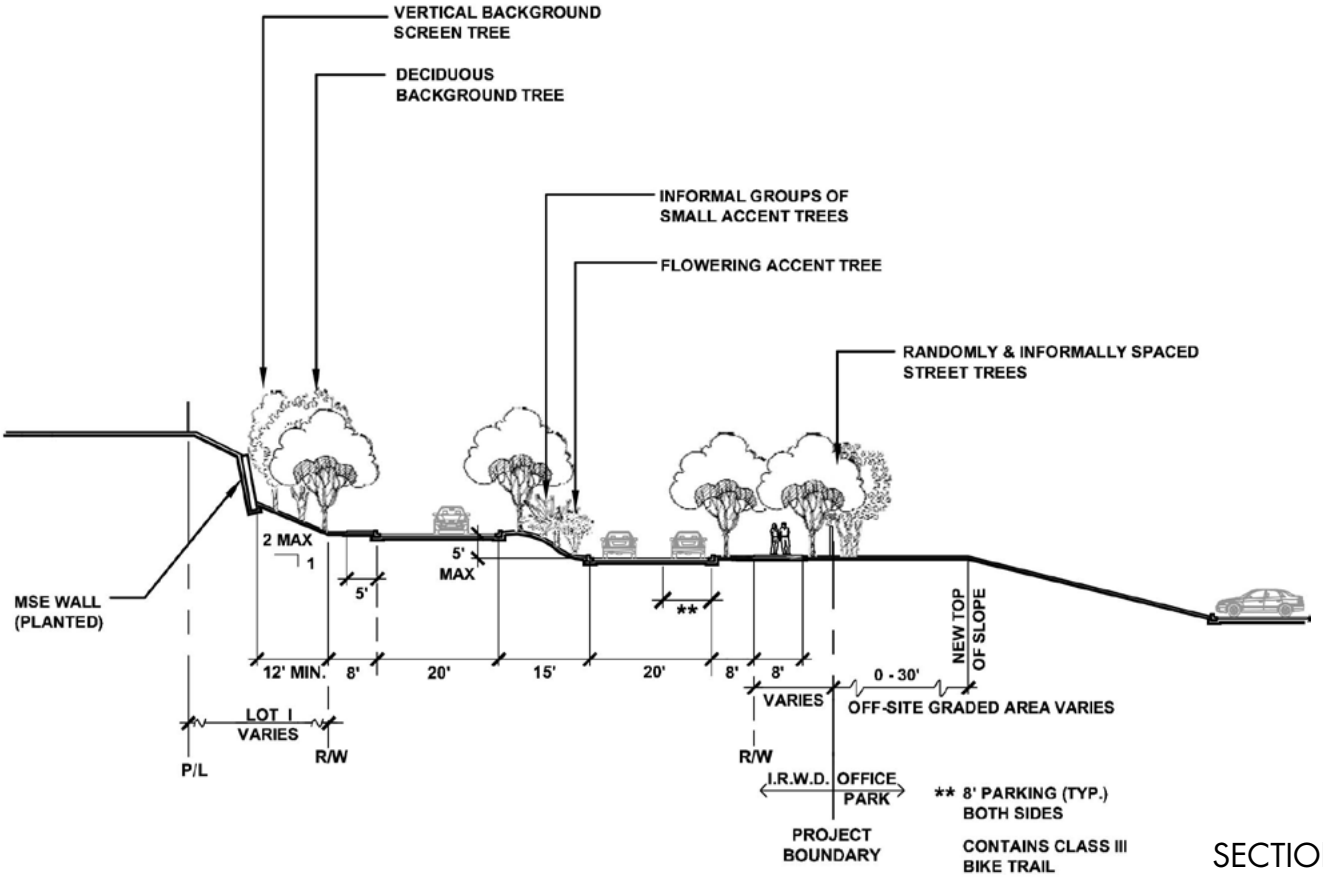
General Circulation System Development Standards

- Any application for any subdivision within the Serrano Summit boundaries shall comply with the design of the project's master planned infrastructure within the final map boundaries.
- Each subdivision shall comply with the on-site and off-site street improvement recommendations and mitigation measures outlined in the subsequent traffic studies prepared for each individual development project and EIR level mitigations adopted as part of the approval of this Area Plan.
- All major internal roads within Serrano Summit shall be constructed per the cross sections included as Exhibits 6-2 through 6-9 in this Area Plan, or as approved by the City of Lake Forest.
- Landscape improvements for roadway rights of ways shall be in accordance with the roadway landscape treatments described in Section 9 of the Serrano Summit Area Plan, "Landscape Design Guidelines."
- Public Utility Easements (PUE) are allowed on the outside of a street right-of-way. PUE are located adjacent to 'A' and 'B' Streets and private 'A', 'B', 'C', 'D' and 'E' Streets, 3' outside of property lines.
- All intersection spacing and/or access openings shall be as shown on the circulation plan, or as approved by the City of Lake Forest.
- Any landscaping within public road parkways, medians, slopes, walls and roundabouts will be maintained by the Master Homeowners Association (excluding the east side parkway of Indian Ocean Drive).
- Bike lanes developed as part of the Serrano Summit project shall be reviewed and approved by the City of Lake Forest, if located within public right-of-way.
- All tentative tract map(s) shall provide for adequate emergency and fire access per the Orange County Fire Authority (OCFA) requirements.

'A' STREET PLAN VIEW & SECTION EXHIBIT 6-2

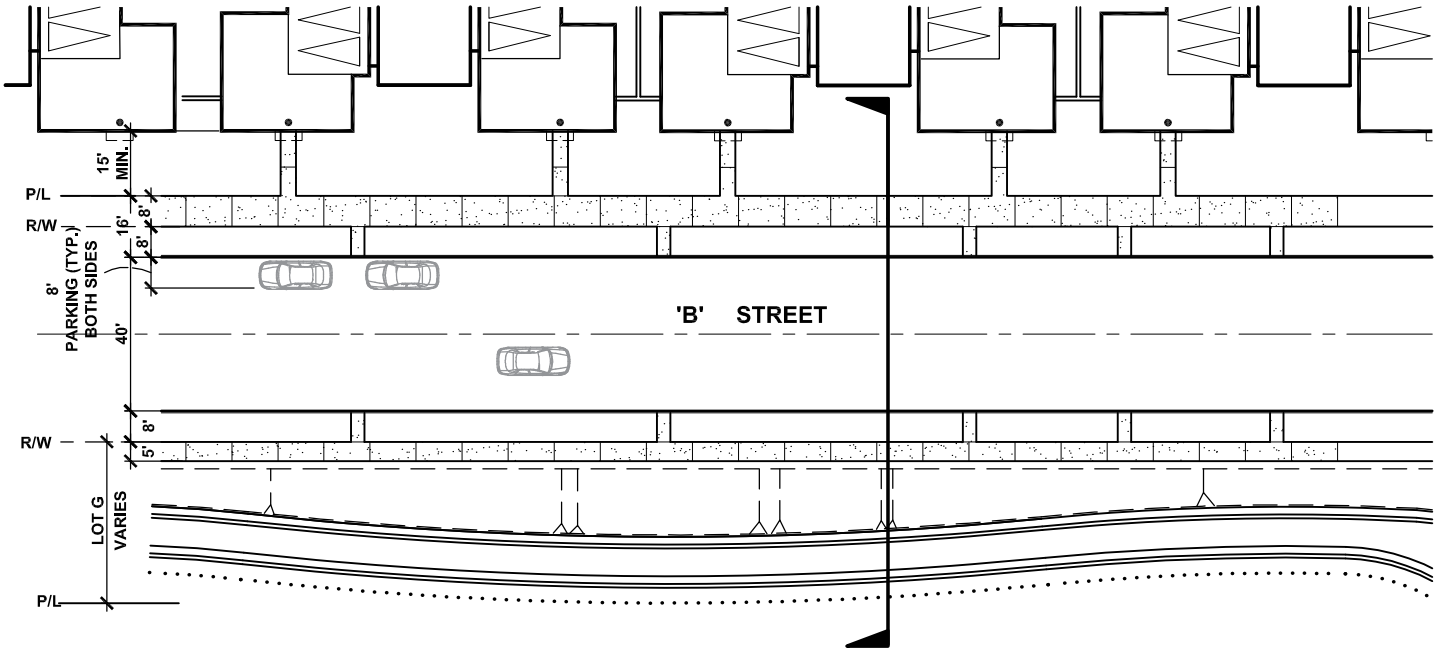


PLAN VIEW

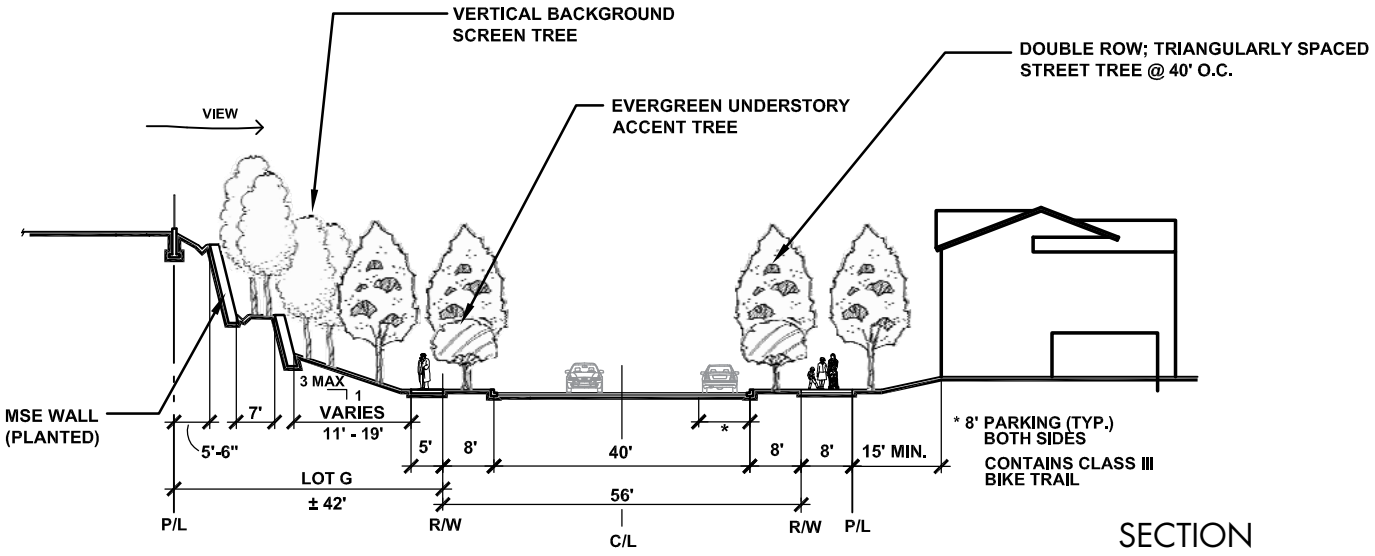


SECTION

'B' STREET PLAN VIEW & SECTION EXHIBIT 6-3

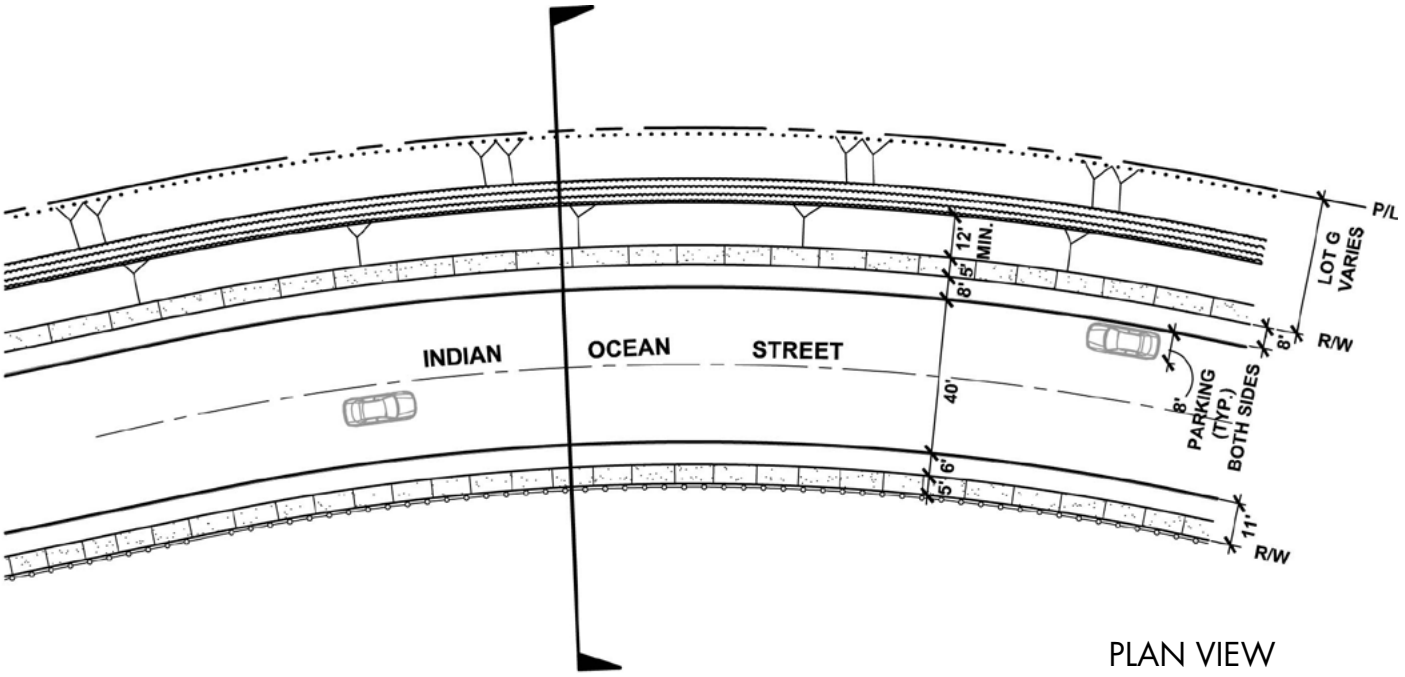


PLAN VIEW

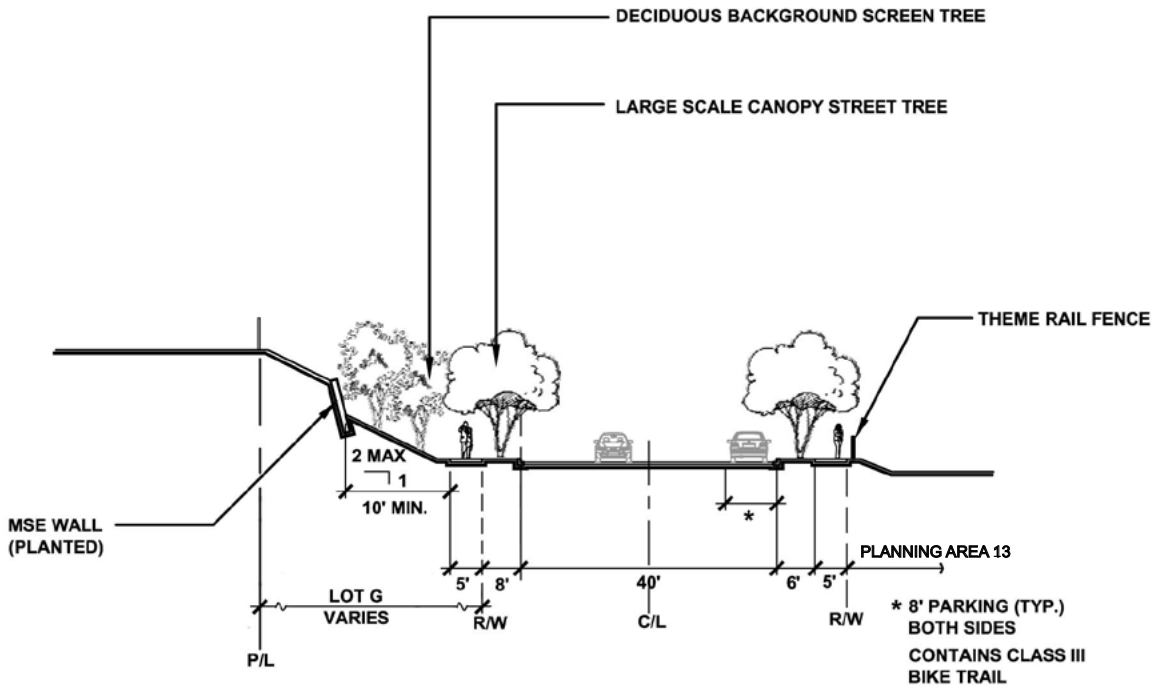


SECTION

INDIAN OCEAN DRIVE PLAN VIEW & SECTION EXHIBIT 6-4



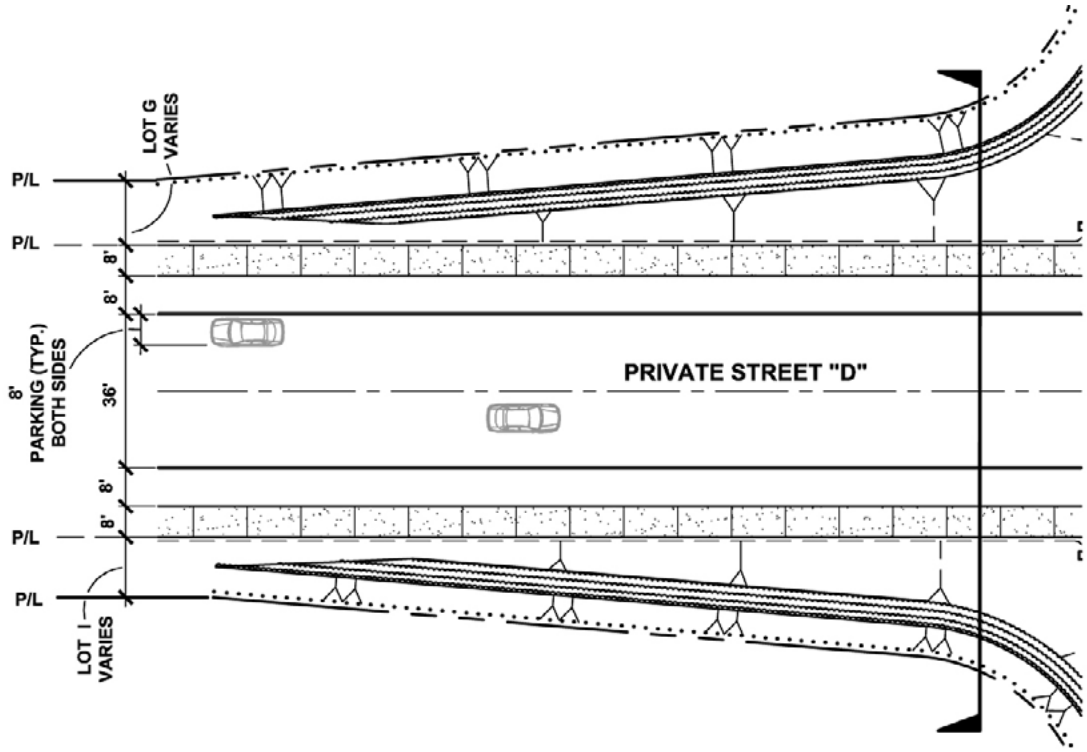
PLAN VIEW



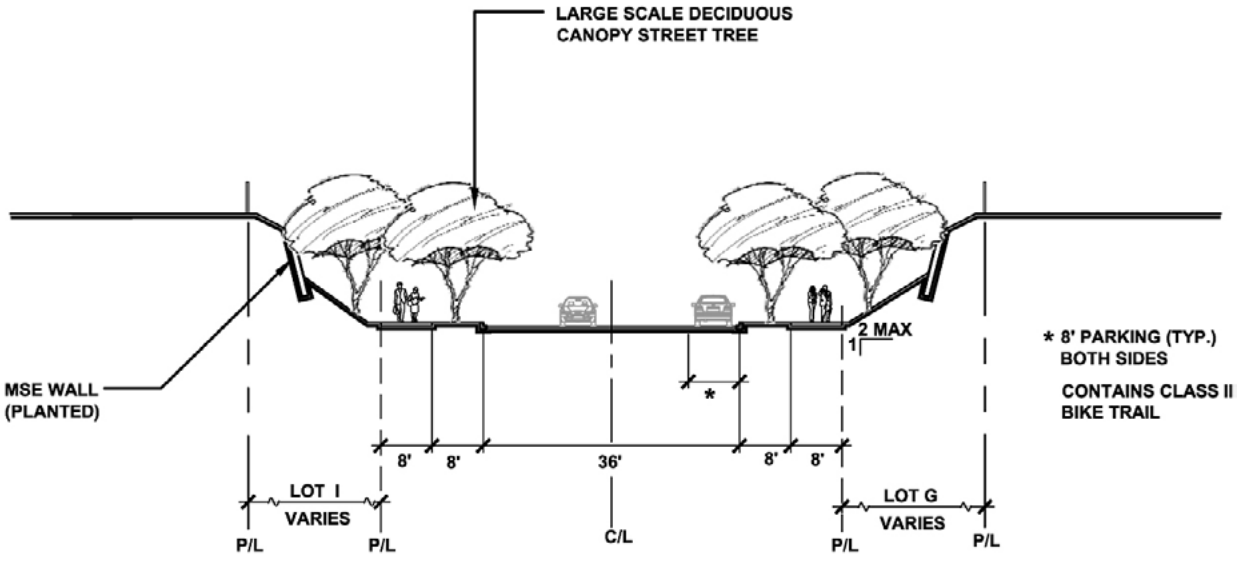
SECTION

‘D’ STREET PLAN VIEW & SECTION EXHIBIT 6-5

(PRIVATE)



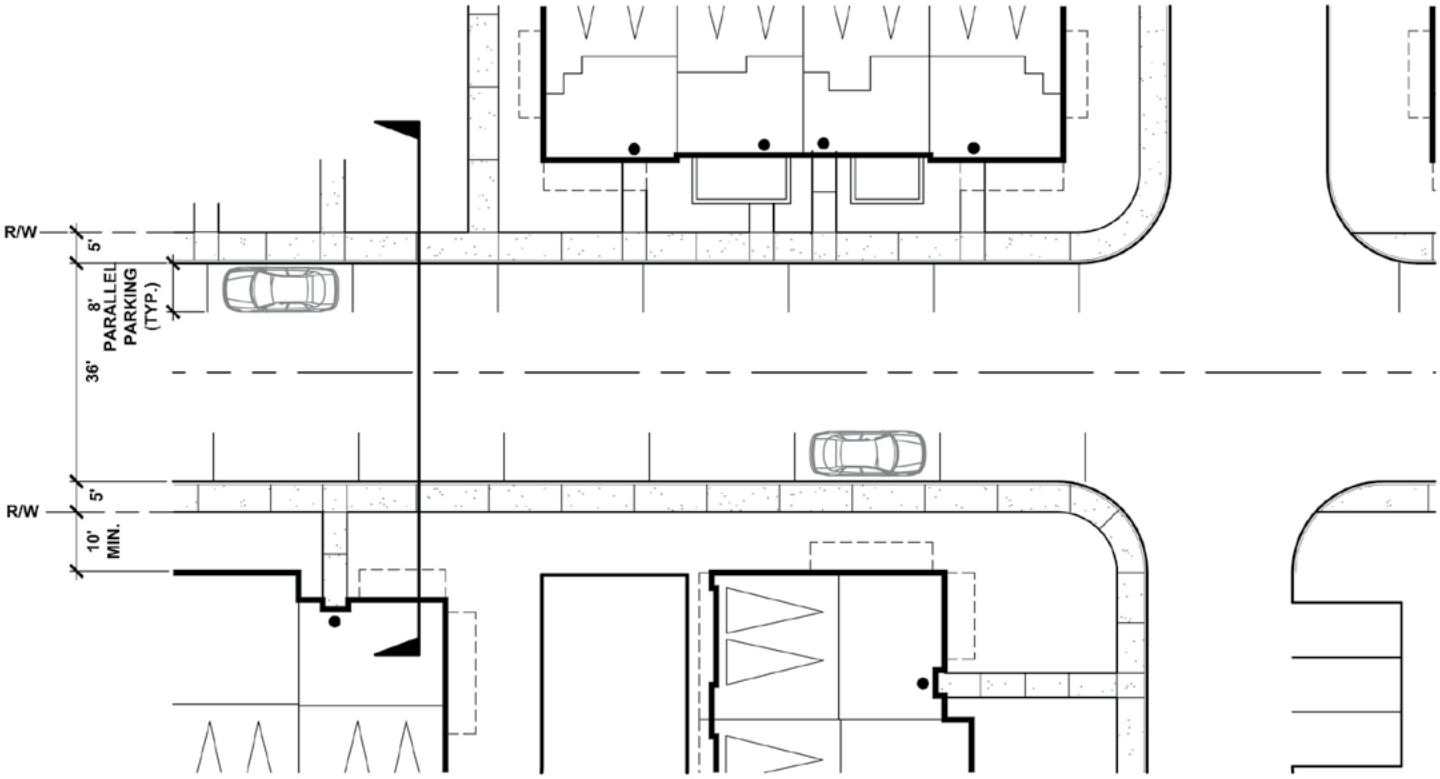
PLAN VIEW



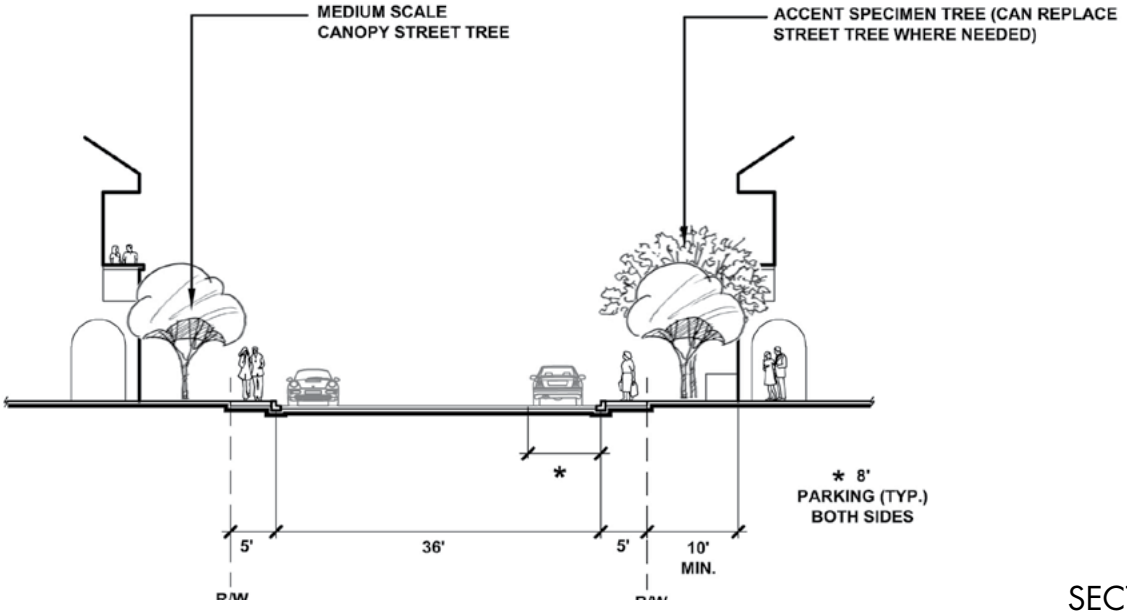
SECTION

PRIVATE LOCAL STREET PLAN VIEW & SECTION (WITH ON-STREET PARKING)

EXHIBIT 6-6



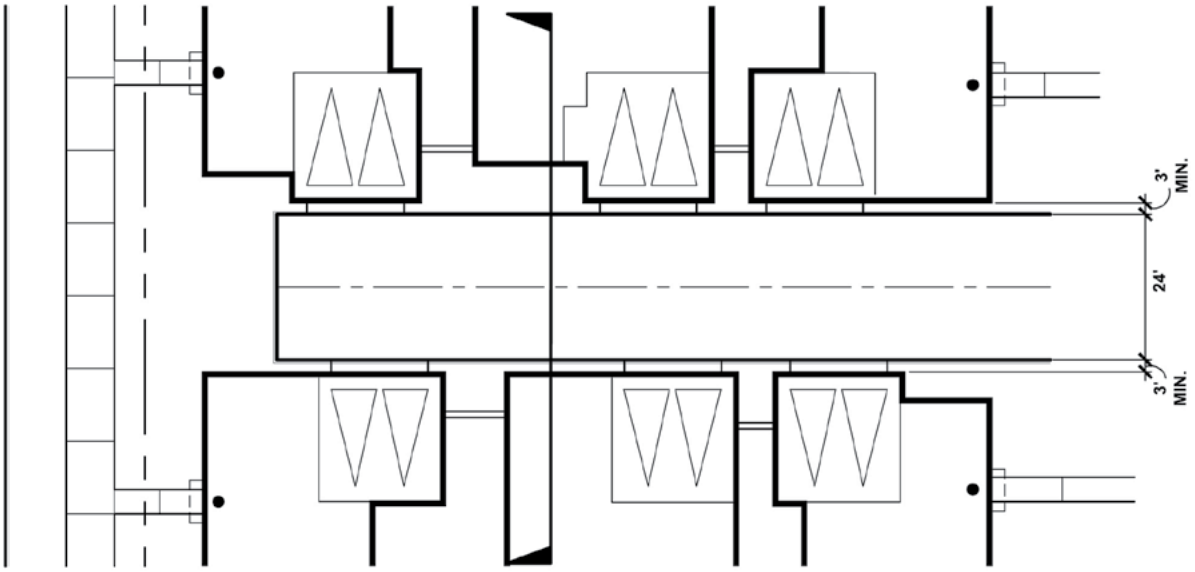
PLAN VIEW



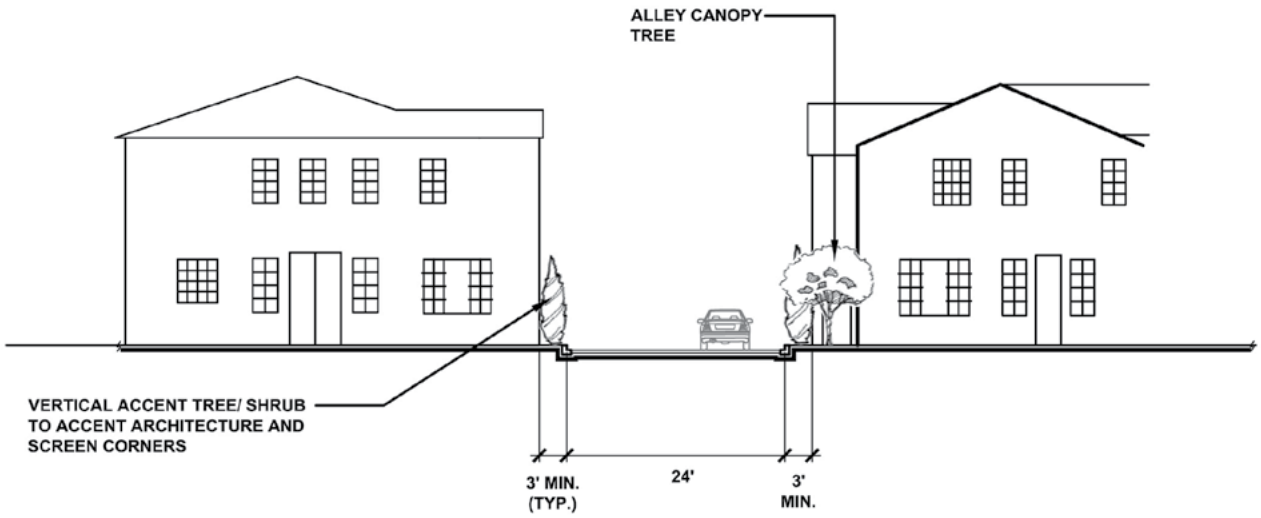
SECTION

PRIVATE ALLEY DRIVE PLAN VIEW & SECTION - SINGLE FAMILY RESIDENTIAL

EXHIBIT 6-7



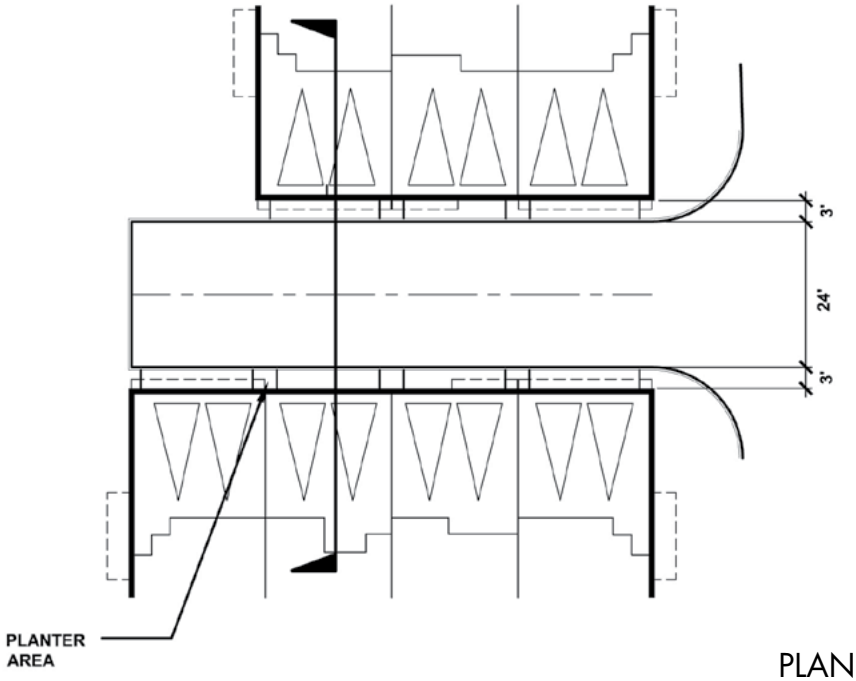
PLAN VIEW



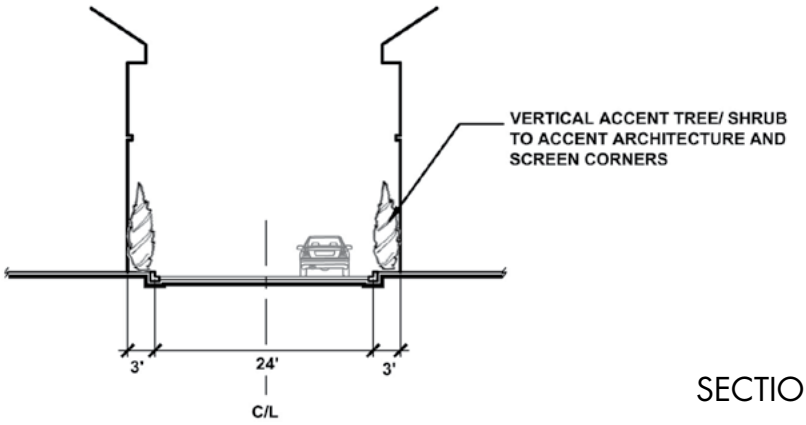
SECTION

PRIVATE ALLEY DRIVE PLAN VIEW & SECTION - TOWNHOME

EXHIBIT 6-8



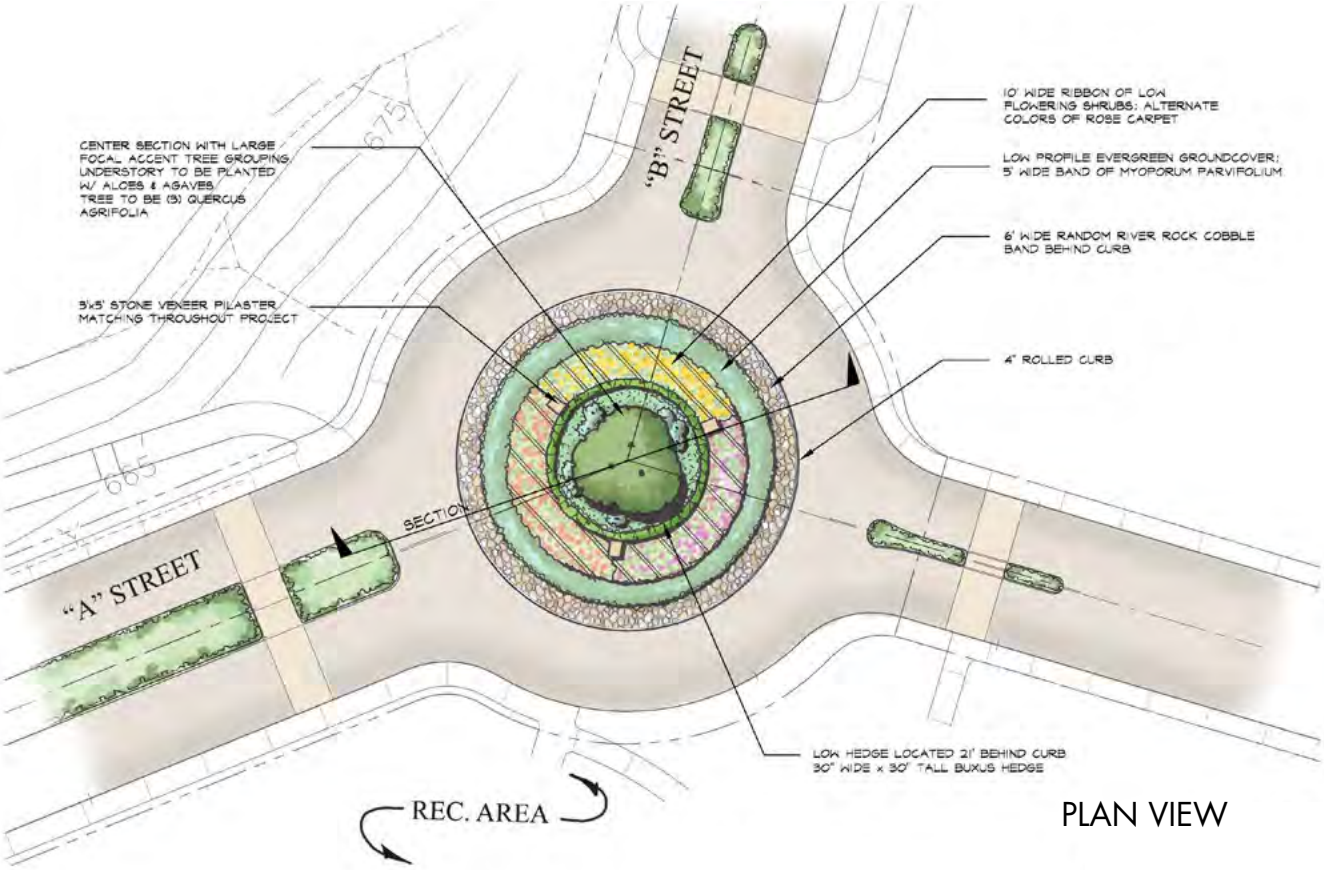
PLAN VIEW



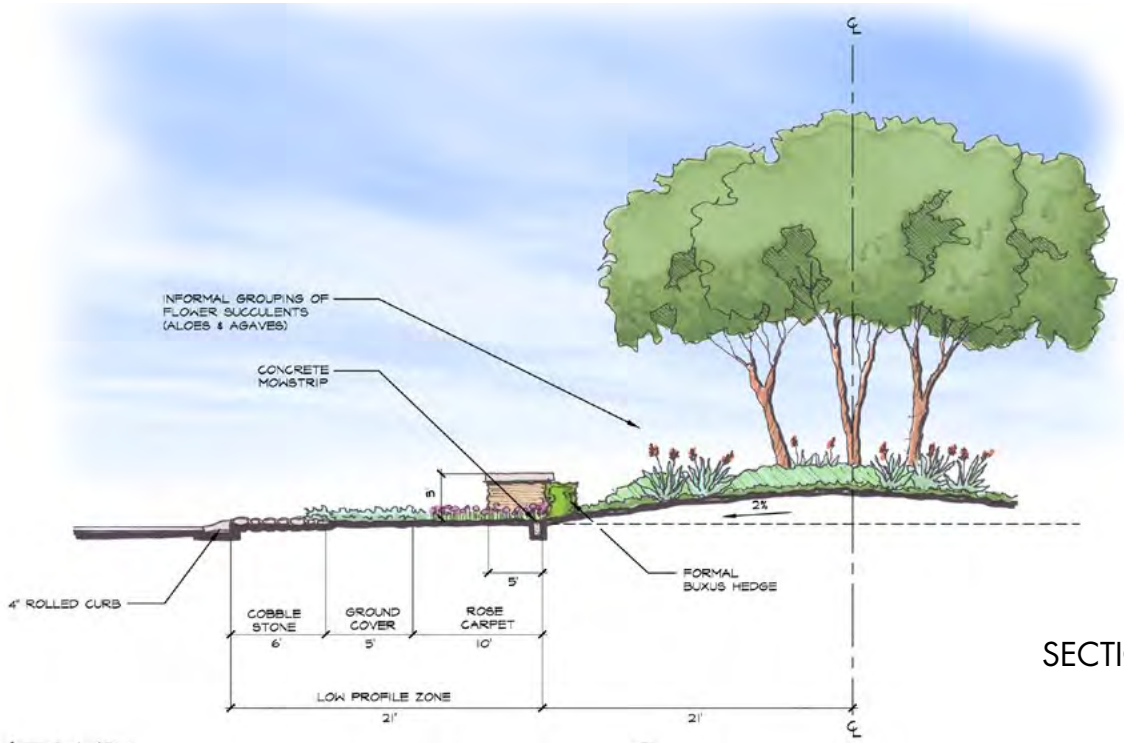
SECTION

ROUNDABOUT AT 'A' STREET & 'B' STREET

EXHIBIT 6-9



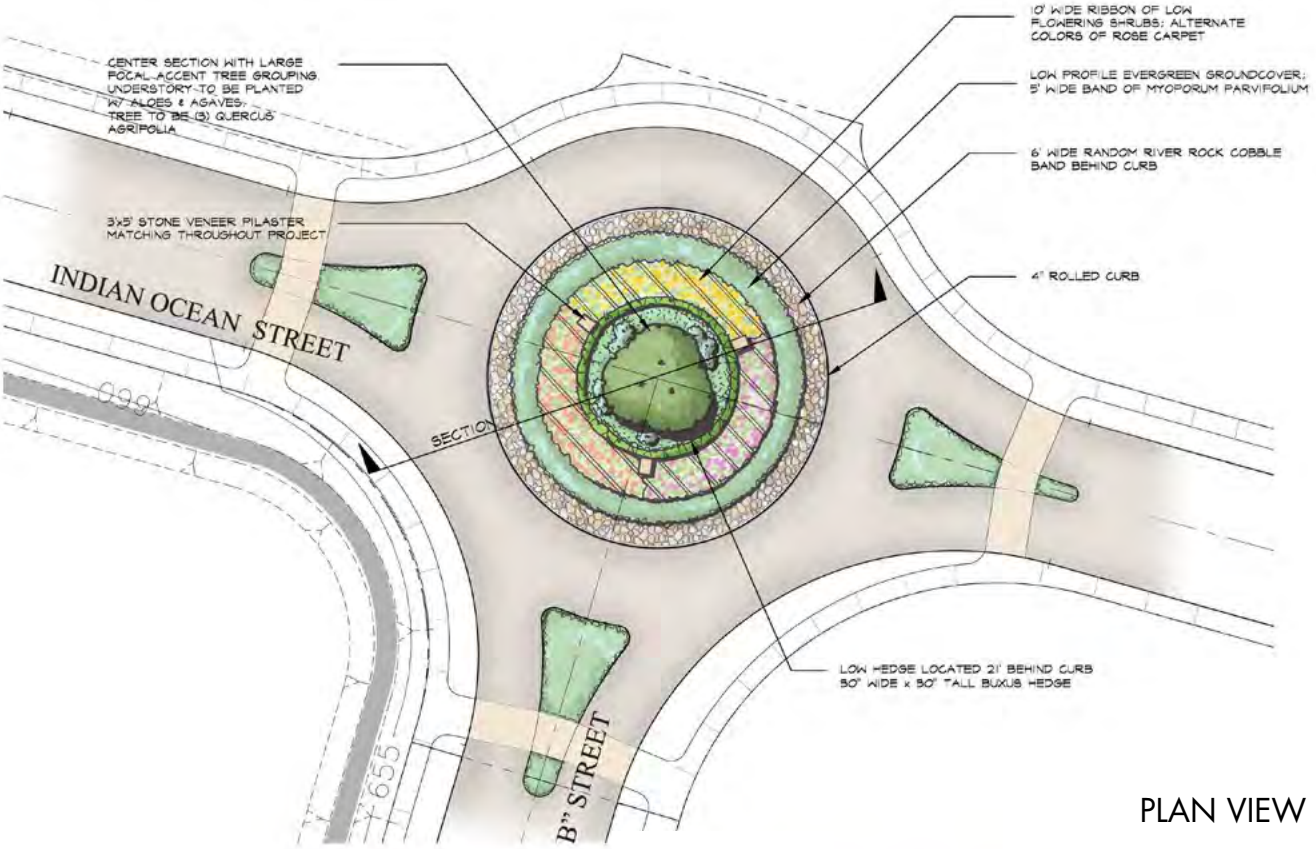
PLAN VIEW



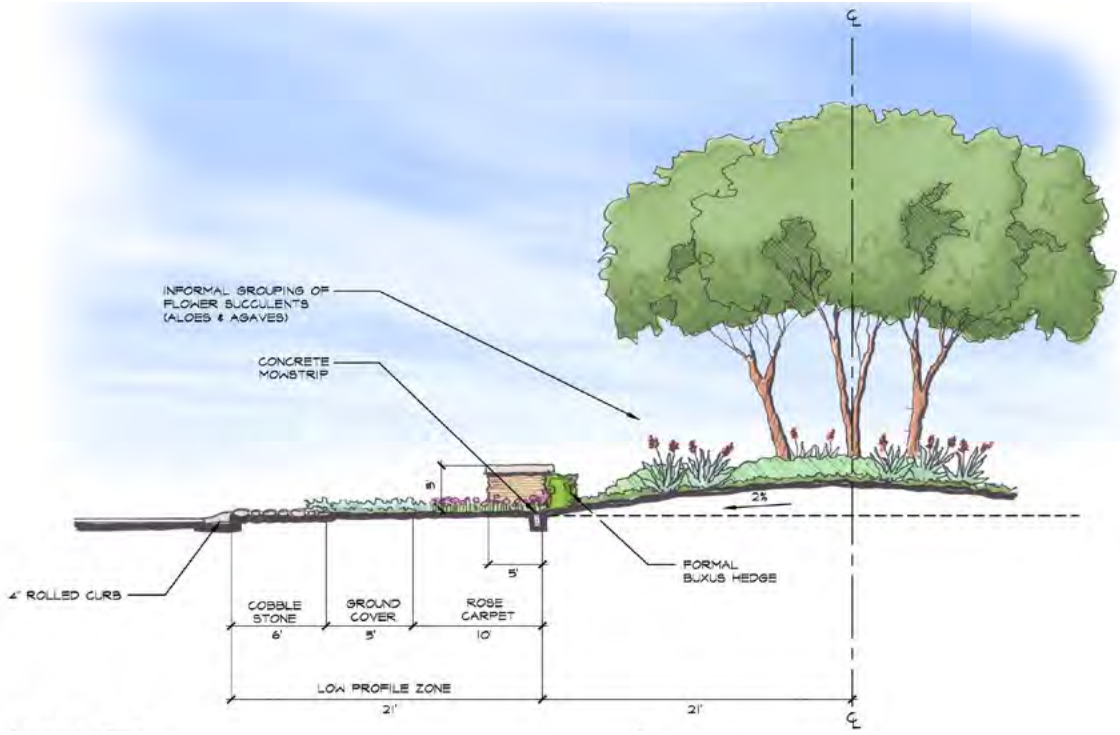
SECTION

ROUNDABOUT AT 'B' STREET & INDIAN OCEAN DRIVE

EXHIBIT 6-10



PLAN VIEW



SECTION

SERRANO SUMMIT AREA PLAN

RESIDENTIAL DESIGN GUIDELINES

Section 7.0

January 2012

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Architecture+Planning

DESIGN GUIDELINES INTRODUCTION 7.1

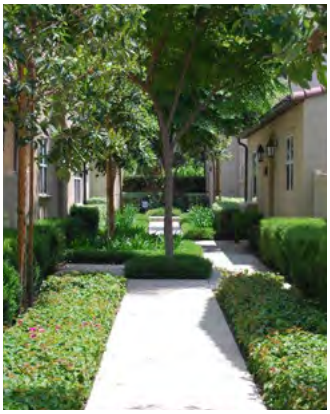
The Design Guidelines sections of the Area Plan are designed to guide development within Serrano Summit and will incorporate the principles of Smart Growth, Sustainability, and Green Design. The Residential Design Guidelines begin with Neighborhood Planning concepts, and are then organized into Architectural Guidelines by four (4) primary housing types - Single Family Detached (SFD), Single Family Detached Enclave (SFD-E), Single Family Attached (SFA), and Multi-Family Attached (MFA). Section 8 of the Area Plan includes design guidelines for the planned Civic Center.

The Serrano Summit Community Design Guidelines have been prepared to ensure that the vision elements of the plan are well articulated and implemented throughout the project site by providing planning, architectural, and landscape design criteria.

The Design Guidelines will ensure implementation of the Area Plan goals and objectives for development. Such goals include:

- Incorporate sustainable features into all aspects of the community.
- Create a strong community identity for Serrano Summit
- Plan for a circulation system serving motorists, bicyclists, and pedestrians
- Create livable residential neighborhoods.
- Provide for a range of housing types to meet the needs of a variety of economic segments.
- Develop a land use plan responding to the environmental conditions of the area.

Sketches and graphic representations contained herein are for CONCEPTUAL PURPOSES ONLY and are to be used as general visual aids in understanding the basic intent of the guidelines. They are not meant to depict any actual lot or building design. In an effort to encourage creativity and innovation, the guidelines express "intent" rather than "absolute."



Residential Design Fundamentals

The community of Serrano Summit is designed to promote a healthy and socially connected lifestyle for its residents through the creation of tightly integrated neighborhoods which maximize distance views, provide connections to trails, parks, and the rich open space amenities of the Serrano Creek Corridor. Diversity and creativity in design are encouraged within an underlying harmony of compatible styles and appropriate details. Important elements of design within Serrano Summit include:

- Formal street pattern with alternative routes to each destination.
- Reinforcement of community identity through architectural design.
- Integration of a pedestrian-friendly circulation system.
- Residential neighborhoods designed at a "human scale" and oriented to pedestrian activity.
- A variety of housing opportunities addressing multiple lifestyles.
- Homes that incorporate energy saving materials and techniques, whenever feasible and cost effective.

COMMUNITY RECREATION & COMMON FACILITIES 7.2

Serrano Summit has been developed around the central idea of providing a variety of resident friendly elements that promote a healthy, vibrant community dynamic. These elements include common recreational facilities such as a pool, clubhouse, and other facilities as appropriate to the scale and activity of each community neighborhood. Common facilities act as a socializing and gathering place within the neighborhood.

The following elements should be considered when designing for such facilities:

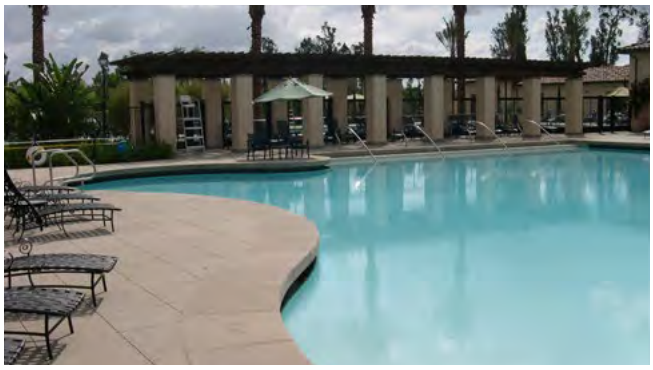
1. The community recreational center building should serve as the focal point of the community and should exhibit a high level of quality design with attention to detail on all readily visible sides.
2. Community pedestrian connectors such as open space, paseos, and sidewalks should connect with the "Clubhouse/Recreation Center."
3. All architectural elements within the community center and common facility (community connectors), such as street furnishings, benches, lighting, and trash receptacles should be consistent with the selected overall themed character of the community.

The Common Facilities may include the following amenities:

- Jogging/walking paths/trails
- Natural open space
- Neighborhood parks
- Dog park
- Seating node
- BBQ node

The Clubhouse/Recreation Center in Planning Area 14 may include the following amenities:

- Clubhouse building
- Pool
- Spa
- Tot/kid pool or water play area
- Sun deck
- Shade oasis
- Tot lot
- Restrooms and showers



NEIGHBORHOOD PLANNING DESIGN GUIDELINES 7.3

Introduction

Site Planning Concept

The goal of the Serrano Summit Area Plan is to integrate a variety of housing types into one cohesive neighborhood fabric. The benefits are two-fold: such integration creates diversity and enables a broad spectrum of homes within the community.

Neighborhood residential components may include:

- Single family detached neighborhoods, from conventionally-loaded homes to court-loaded enclave homes. The ability to mix-and-match these home types throughout a neighborhood allows for small, diverse pockets of single family detached residential design.
- Single family attached neighborhoods which often resemble small villages, with the buildings generally oriented around public spaces such as open areas and recreational amenities. Buildings often form linear edges or green courts, creating opportunities for pedestrian connectivity.
- Multi-family attached neighborhoods are generally oriented around public spaces, such as open areas and recreational amenities, with opportunities for pedestrian connectivity.

How to Use the Guidelines

The following guidelines have been written to guide builders and architects in creating site plans and architecture that is consistent with the community framework and planning principles of Serrano Summit as explained in this Area Plan. Sketches and graphic representations shown herein are intended to assist in defining the design fundamentals, while allowing for and encouraging individual interpretation and creativity.

Site Plan Design

Preserving Views

Careful building placement and street orientation can help protect privacy, views, and the visual quality of the community. Where feasible, preservation of the privacy of surrounding residential homes, as well as capturing long-range vistas to the south, east, and west, is encouraged.

Smaller Parcels

One of the Serrano Summit project's goals is to create neighborhoods that promote walkability and pedestrian accessibility of neighborhoods. By creating smaller residential parcels, builders can create a less "mass produced" environment with a more intimate character.

Community Circulation

The overall circulation concept for Serrano Summit emphasizes both vehicular and pedestrian connectivity. The community "spine" road (referred to hereinafter as 'B' Street) provides vehicular access to most of the development parcels within the master plan and features two roundabouts at either end of the roadway. 'B' Street also features pleasant walkways set within shady landscape zones. Together, these design features provide for walking between neighborhoods, as well as to the community recreation area, civic center, on-site parks, and other open space amenities.

Gated Neighborhoods

Gated neighborhoods are permitted in all residential areas of Serrano Summit at the discretion of the project master developer, the builder of each tract and the City of Lake Forest. If provided, gated neighborhoods are not required to have a street connection to an adjoining parcel unless necessary for secondary access, drainage, utility connections, and/or emergency egress; however, gated neighborhood must at least provide a pedestrian connection to adjacent planning areas.

Parcel to Parcel Connections

Connectivity within Serrano Summit will enhance the community feel and encourage utilization of open space and community amenities. To heighten the connectivity of Serrano Summit, at least one street connection is required between adjacent non-gated parcels. Pedestrian sidewalks shall be incorporated into the street pattern connection. Builders must coordinate parcel to parcel connections with the Master Developer and one another. However, where the street pattern of one parcel is previously established, the following parcel shall build their street pattern off the existing connection.

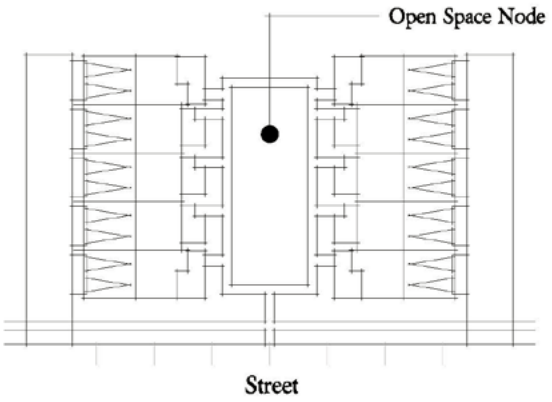
Parcel Connections to Streetscape, Paseos & Open Space

Within Serrano Summit, pedestrian connectivity from the residential neighborhoods to recreational amenities must be provided (See Exhibit 4-2, Master Plan of Parks, Trails & Open Space). These pedestrian linkages can be located in paseos (greenbelt areas that are separate from the vehicular circulation system). In addition, pedestrian linkages include sidewalks adjacent to public and private streets. There is also a multi-use trail connecting the Civic Center site to the open space. Together these linkages promote a strong pedestrian orientation to Serrano Summit, and provide the opportunity for alternative modes of travel.

Building Orientation for Single Family Attached and Multi-Family Dwellings

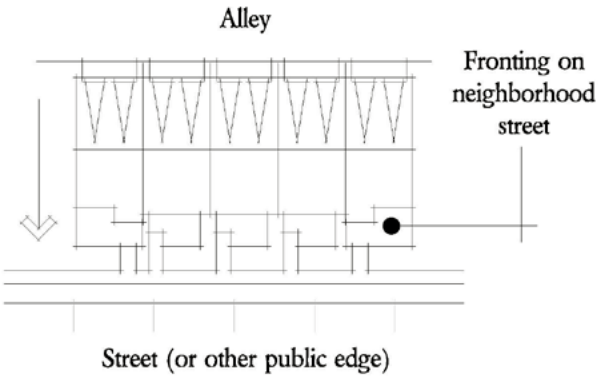
Building orientation for single family attached and multi-family dwellings is an important element in site design. Because of the nature of the housing type, most attached dwelling floor plans offer little private outdoor space. Therefore, the public areas become increasingly important as they provide the necessary outdoor space for recreation.

- Where feasible, buildings should be oriented in a manner which creates open space pockets and opportunities for recreational nodes.



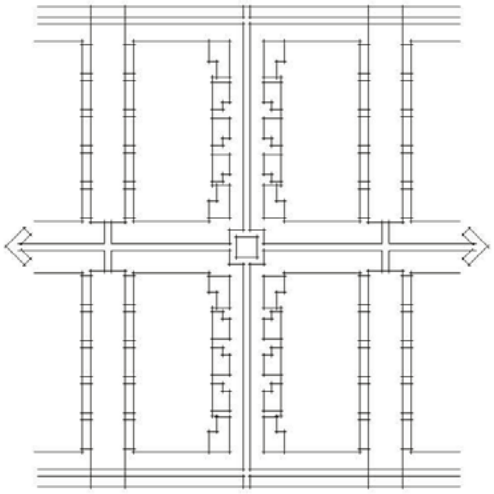
Open Space Pockets

- Front entries should face public edges, whether open space pockets, paseos, or streets.



Fronting on Public Edges

- Interconnecting walkways between buildings are encouraged.



Interconnecting Walkways

Plotting Standards

Floor Plan Variation

Single Family Detached and Enclave Dwellings

Single family dwellings should be plotted in a manner which provides variety in scale and architectural massing within a block. Variety not only provides visual interest to the neighborhood design, but it also provides each home with an identity. To achieve variety at Serrano Summit, several elements should be considered in the design of neighborhoods. Homes should offer a variety in floor plans, roof designs, materials, colors, garage orientations, outdoor living, and style-appropriate architectural detailing.

- Each neighborhood shall have a minimum of three floor plans for each single-family housing type (different plans are defined as those with significant variation in floor plan, garage access, and massing);
- Each of the floor plans must offer a minimum of three different architectural styles; and
- For single family detached homes, no more than two dwelling units with the same floor plan shall be plotted adjacent to one another. In addition, the floor plans shall be reversed and shall provide different elevations and color schemes to avoid a repetitious street scene.
- For enclave dwellings, no more than three dwelling units with the same floor plan shall be plotted adjacent to one another. For enclave homes, adjacent units shall be a different elevation and color scheme.

Single Family Attached and Multi-Family Dwellings

Attached and multi-family dwelling neighborhoods should offer a mix of floor plans and building types. Building type is defined as a composition of floor plans with a building massing that is distinguishable from other buildings within the neighborhood. This includes, but is not limited to, buildings with stacked flats, townhomes of varying sizes and orientations, and a mixture of these unit types.

- Attached and Multi-Family Communities
  - ~ *A minimum of two building types are required for each neighborhood, and*
  - ~ *A minimum of two floor plans is required for each building.*
  - ~ *Unit plans may be repeated within building types.*
  - ~ *Provide at least one architectural style and two elevations or color schemes for that style per residential building type.*

Privacy

Privacy is an important consideration in residential site planning, especially when buildings are plotted with minimal side yards. Thoughtful site planning, landscaping, and other design techniques should be used to preserve privacy, where feasible.

Visible Edges

Neighborhood identity is closely tied to its interaction with community streets, open space networks and edge conditions. To maintain the visual quality of Serrano Summit, the thematic community streetscapes and open space edges along the perimeter of each development parcel have been addressed in this section.

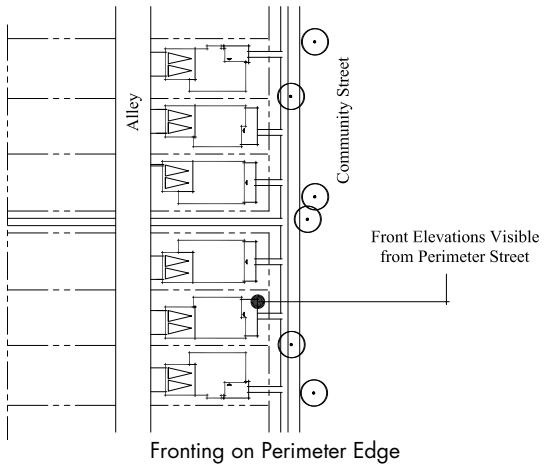
All homes and buildings located along prominent perimeter edges shall incorporate architectural enhancements to elevations exposed to the community streetscape or open space areas as detailed in this section.

Community "Spine" Road Edges

To the extent practical, parcel edges along 'B' Street shall have front or side elevations that are exposed to the perimeter master plan streetscape. This condition can be satisfied in one, or a combination of, the following ways:

"Front" Elevations

"Front" elevations include homes or plotting conditions where the front elevation (or front door) is exposed to the edge. This includes the front or corner side elevation of rear loaded and enclave homes. In this condition, walls or fences, if any, may be located between buildings only; provided, however, that front patio walls up to 42" in height are permitted.



Fronting on Perimeter Edge

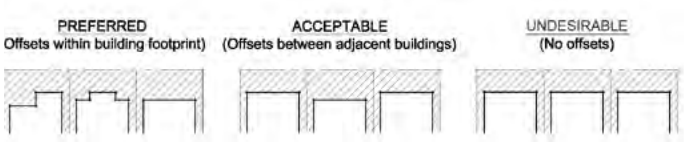
Other Visible Perimeter Edges

In other cases where a non-front elevation of a home or building faces a visible perimeter edge, the elevation shall be articulated in an appropriate manner. Such dwellings may incorporate the elements listed below.

Varying Rear Setbacks

Rear elevations adjacent to perimeter edges should provide some undulation in building placement and massing. This can be achieved through massing breaks or staggered setbacks between multiple homes:

- Staggered wall planes on an individual house with a minimum 2' offset, or
- Staggered rear setbacks on adjacent homes with a minimum 2' offset



Rear Articulation

Rear elevations may have no setback offsets if found to be appropriate with the overall theme of the neighborhood and when effectively complemented by sufficient landscaping.

Variation of Roof Planes

When appropriate to the architectural style of the home, a variety of roof forms is encouraged, including gable, cross-gable, hip and clipped hip elements, or shed roofs.

Architectural Enhancements

Elevations of multi-family buildings visible from perimeter edge conditions should be designed similarly to the other elevations of the building.

Required Elements:

- Wrapping of materials from front elevation
- Trim on all other windows (as appropriate to style)
- Window grilles to match front elevation (if applicable)

In addition to the above, rear and side elevations that are visible from parks and streets shall also include architectural features from the list below.

Select at least two of the following:

- Offset wall planes (Minimum offset: 2')
- Articulation
- Roof plane breaks
- Color blocking
- Shutters on second-story windows
- Introduction of accent building materials and colors
- Introduction of accent elements such as outlookers, and decorative grille work, consistent with the front elevation
- Other similar features that provide articulation to the visible side or rear elevations.

Also, all rear and side elevations shall include the following architectural features:

- Trim on windows
- Accent colors
- Articulation (rear only)

Visible Corners

Corners are formed where two streets or paths intersect, thus making two sides of a corner dwelling visible—the front and the corner side. Where this occurs in single family detached neighborhoods, exposed corner side elevations should be designed to an appropriate level of detail as the front elevation to present similar quality elevations on both streets.

In addition, the following architectural enhancements should be incorporated into the design of homes plotted on visible corners:

- Open side yard landscape treatments;

- Building pop-outs and recesses;
- Roof plane breaks;
- Accent colors, materials and detailing; or
- Other similar features which enhance and provide articulation to the visible side elevation.

Garages, Driveways & Parking Areas

De-Emphasize Garages; Architecture-Forward Plans

When addressing the streetscene in single family detached communities, residential garages should be positioned to de-emphasize their visual impact. This will allow the active, visually interesting features of the house to dominate the streetscape. Where feasible to the home type, garages should be paired.

Garages may be sited in several ways:

- Recessed (shallow, medium, and deep)
- Corner lot with side-street entry garage
- Forward swing-in garage (53' or wider lots)
- Split garages
- Lane-loaded garage
- Detached garages
- Garage forward

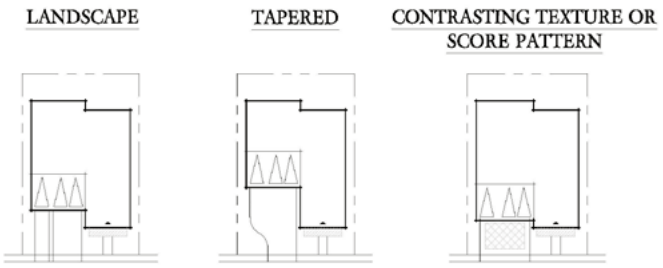
Garages for enclave homes should be located off of a court. Front homes within an enclave may have garages which take access directly from the street as well as the court.

Garages for single family attached and multi-family buildings may be rear- or front-loaded, and may exhibit a variety of siting conditions, dependent on the building type.

(See Section 7.4, Architectural Design Guidelines, for garage design criteria)

Driveway & Parking Criteria

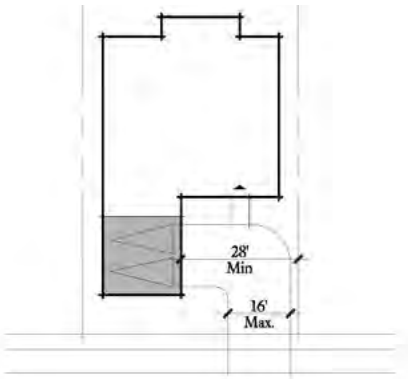
Minimum driveway lengths shall be either be five feet or less in length to discourage parking in the driveway or 18 feet or greater in length to accommodate parking in the driveway.



Driveway Variety

Note: Front entry driveways that are 16' in width or less do not require enhancement.

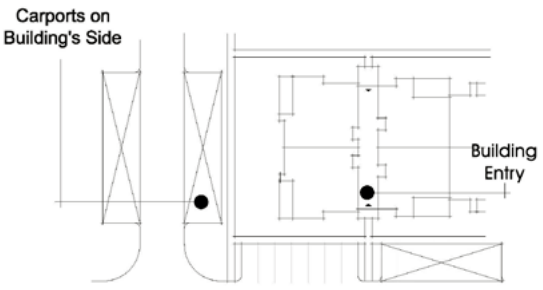
The maximum width of a driveway at the street for a turn-in garage shall not exceed 16'. The distance from the face of the garage door to the side yard lot line shall be a minimum of 28' (22' pavement and minimum 2' apron).



Turn-In Garage - Driveway Dimensions

Detached Garage Buildings & Carports

Special consideration should be made for the location of detached garage buildings and carports. In general, continuous carports at building entries should be discouraged.



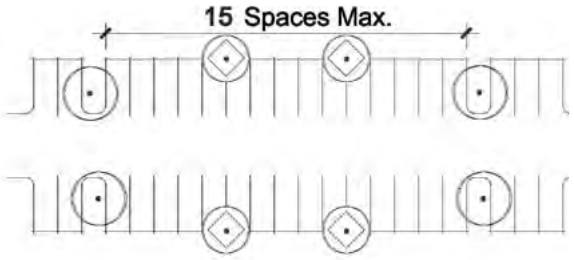
Unobstructed Front Entry

Where detached garages or carports are included, the style, color, and materials of these structures shall be compatible with that of the primary buildings.

Parking Areas

Parking areas should not be a dominant site feature. Where feasible, parking lots should be divided into a series of connected smaller lots. This can be accomplished by incorporating one of the following:

- A landscaped bulb should be used to break up parking lots, with a maximum of 15 contiguous spaces in a row and 10 spaces in a row on average.
- A landscape tree well shall be installed every 5 parking spaces between landscape bulbs.



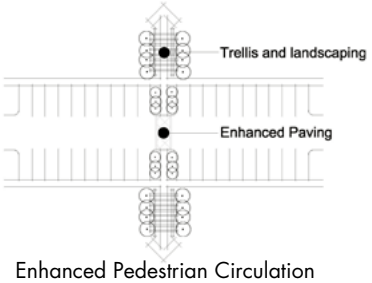
Parking space separation

In addition, parking areas should be treated as "landscape plazas," with attention to landscape surfaces, softened edges, shade, and pedestrian circulation. This can be accomplished by incorporating at least one of the following:

- Pedestrian walkways should connect public rights-of-way and residential land uses when appropriate.

Pedestrian Access in Parking Areas

- Enhanced paving materials, trellises, and landscaping should be used to accentuate the pedestrian circulation system.



Enhanced Pedestrian Circulation

Refuse & Recyclable Material Storage Areas

The following standards apply to all single family attached residential developments, apartments, parks, and the private recreation center within Serrano Summit:

- Refuse and recyclable materials storage areas shall be enclosed and screened in compliance with the City of Lake Forest Municipal Code.
- Storage areas should be screened from public view through the use of landscaping.
- Where appropriate to the building typology, refuse and recyclable material containers should be integrated into the overall building form to facilitate screening.
- Enclosures shall be finished using materials compatible with the surrounding architecture. Gates shall be solid metal painted to match adjacent buildings.
- The location of storage areas shall be conveniently accessible for trash removal by standard refuse disposal vehicles.
- Storage areas that can be overlooked from above should incorporate roof structures to screen the contents of the enclosure from view. Such roof structures should be designed to allow the doors of the refuse container to fully open.

Loading & Service Access

- Service, loading, storage, and maintenance areas shall be screened from public view where reasonably possible.
- No loading will be permitted from any public street adjacent to the site.
- Service areas must be located and designed so that service vehicles have clear and convenient access and do not prohibit adjacent vehicular or pedestrian circulation or vehicular parking.
- The final locations of loading/service areas will be approved by the City of Lake Forest.

ARCHITECTURAL DESIGN GUIDELINES 7.4

Introduction

Overall Goal

The intent of the following architectural design guidelines is to facilitate the creation of a high-quality, pedestrian-inviting community comprising multiple neighborhoods with a cohesive sense of place. The goal of the guidelines is to ensure a high level of quality in function and visual appearance, in addition to encouraging architectural variety and compatibility.

Simple Home Design

The following are goals for the community and will be enforced by the project master developer:

To meet the high demand for purchasing single family homes, affordability by design is an important consideration for home builders in Serrano Summit. Homes that feature simple structural forms such as building massing and roof forms will allow efficiencies in materials and construction that lower costs for the builder and buyer alike.

Smaller homes are especially likely to benefit from a simple, streamlined architectural design. The "simple house" approach, characterized by stacked massing, simple rooflines and a keen attention to detail, can maximize the buildable square footage of smaller lots. Certain architectural styles are particularly appropriate for the "simple house" approach because of their characteristically simple massing and distinctive details.

Single family detached enclave homes are well suited to simple home design. Architectural embellishments on the side of internal units are often not visible, and thus benefit from the cost savings of a more simplified massing.

The design of higher density single- and multi-family attached buildings must pay careful attention to conveying a sense of human scale. These buildings tend to have larger building masses, but must relate to the neighborhood in a manner that communicates the familiar language of domestic architecture.

All attached dwellings, regardless of architectural style or building typology, should exemplify quality design. Building elements such as form and massing, roof design, materials and color, garage design, detail elements, and functional elements should be consistent with the appropriate architectural styles and should complement those of surrounding buildings and land uses.

Simplified architectural massing also has positive impacts on the reduction of the carbon footprint of the building through more resource-efficient design.

How to Use the Guidelines

The following guidelines have been written to guide builders and architects in creating architecture which is consistent with the envisioned community. While many examples are provided, these are not mandated solutions. Instead, sketches and graphic representations are intended to serve as visual aids in understanding the specific concepts and ideas, while providing flexibility for individual interpretation and creativity.

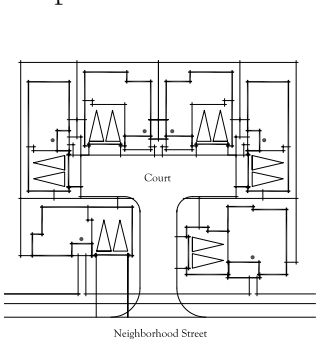
Included Housing Types

Single Family Detached

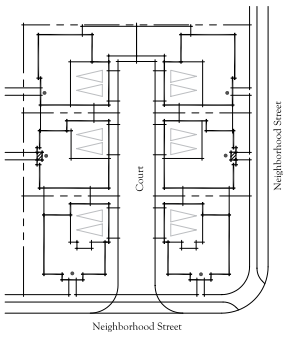
Housing types included in this category include front-loaded, and rear-loaded lots, as well as z-lots.

Single Family Enclave

Two examples of single family enclave homes are depicted below.



Motor Court



Enclave

Single Family Attached

Housing types included in this category include rear- and front-loaded duplexes, attached enclave homes, townhomes, and stacked flats.

Multi-Family Attached

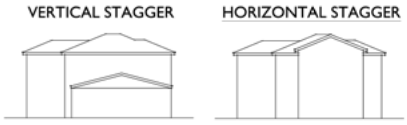
This category of housing types consists of rental apartments.

Building Form & Massing

To provide rhythm and balance to the architecture of a dwelling, simple bold elements should be integrated into the design of each building visible from a street or paseo. Several architectural elements should be used to meet this goal:

Vertical and/or Horizontal Stagger

Oftentimes a streetscene with numerous flat unarticulated walls creates an uninviting street presence. Floor plans should feature a mix of vertical and/or horizontal stagger to provide shadow and depth along highly visible edges such as streets and paseos. Within an enclave, homes should be plotted in such a manner as to provide similar relief along paseo edges.

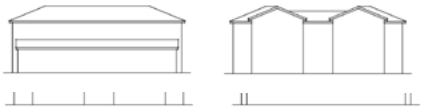


Staggering wall planes limits the bulk of elevations

The form of attached residential buildings should be consistent with the appropriate architectural style and display architectural compatibility. Due to their nature as larger buildings, multi-family building design must be mindful of the relationship to, and impact on, adjacent neighbors. Each neighborhood should include a collection of varied but complementary forms that creates a streetscene that is clear to navigate physically and visually. Buildings should relate to each other both horizontally and vertically.

Maintaining human scale is an important element in attached residential building design. This can be achieved through breaking up one large building shape into multiple forms. The massing of each building should include a distinct base, middle, and top. These layers soften the visual impact of the building on the street, and create a friendly, domestic scale. The base, middle and top of a building can be differentiated using massing, color breaks, and changes in material.

- Visually prominent offsets, both horizontally and vertically, are encouraged in building design to minimize large expanses of uninterrupted wall planes.
- Combinations of two and three-story forms should be used to create variety in setback and overall building form.



Staggering wall planes limits the bulk of elevations

- Massing breaks, such as eroded corners and entry courts, promote visibility and allow block transparency.

One, Two, and Three-Story Forms

Some architectural styles lend themselves to tapered or stepped massing which reduces the bulk of a building. Where appropriate with the architectural style of the building, combinations of one, two and three-story forms to create variety in setback and building form is encouraged.

Building Height

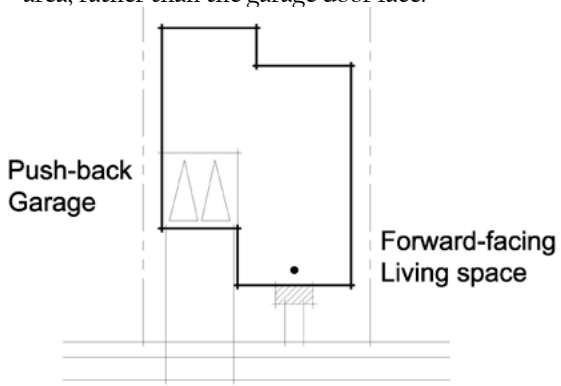
Buildings should incorporate elements that reduce visual height, such as:

- Balconies at building corners to provide negative space.
- Reduced massing along pedestrian-oriented edges is encouraged to create an inviting relationship between buildings and the pedestrian environment.

Forward-Facing Living Spaces

Forward-facing living spaces should be a key criterion for floor plan design and plotting of the dwelling. When compatible with the product type,

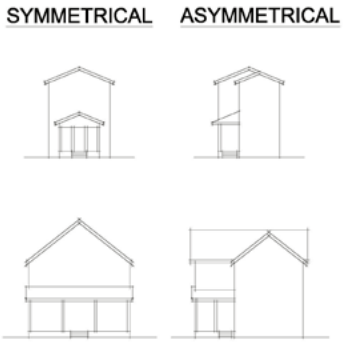
it is strongly encouraged that at least 50% of the street elevation should consist of living or entrance area, rather than the garage door face.



Garages should be positioned to de-emphasize their visual impact on the street

Building Symmetry

Streetscenes possessing visual interest and variety are primary components of Serrano Summit. Where appropriate to the architectural styles either symmetric or asymmetric plan forms are encouraged along street- or paseo-facing homes.



Where appropriate, either symmetric or asymmetric plan forms are encouraged.

Elevation Style

Architectural elements, such as building form, entry, roof, details, materials, and color should be consistent with each building's architectural style.

Architectural styles and elevations must be compatible and appropriate to the building typology (such as linear townhomes and stacked flats).

Single Story Elements

The introduction of single-story elements is encouraged to add variety to the street scene and help establish pedestrian scale. Where appropriate to the architectural style, single-story elements should include:

- Porch
- Porte-cochere
- Single-story living space
- 4' second-story recess
- Pop-out gable element (enclosed or open)

Roof Design

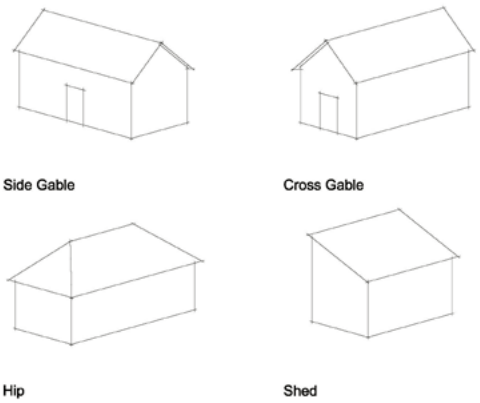
Homes within Serrano Summit adjacent to paseos and public streets should incorporate techniques that reduce visual height such as variety in roof forms, direction of slopes, and variety in ridgelines and height. These techniques provide diversity and interest to the building form and the neighborhood as a whole.

Roof Form

Variety in roof forms is encouraged throughout Serrano Summit. Appropriate roof forms include, but are not limited to:

- Gable (front and side)
- Cross gable
- Shed
- Hip

Where consistent with the architectural style of the building, the arrangement of different roof forms (including porch roofs, dormers, bays, cross gables, and hips) are encouraged. Some single family detached homes may incorporate roof decks into the overall roof design.



Variety in roof form is encouraged.

Roof Pitch

Roof pitch should be consistent with the architectural style of the building, when properly designed in a manner that is architecturally consistent with the building. While 4:12 – 6:12 are generally typical roof slopes, other roof slopes are encouraged where consistent with the architectural style. Flat roofs are discouraged for single family detached homes, but may be permitted for attached and multi-family homes.

Elevation Style

While variety in roof design, materials, and overhangs is encouraged, roof treatments should be compatible with and appropriate to the architectural style of the building.

Fascias

Fascia design should be appropriate to the architectural style of the building. Generally, fascia boards should be made of wood, unless there is an exceptional reason.

Roof Vents

Roof vents should be painted to match the color of the roof material used.

Building Materials

Building color and materials are two of the most dominant visual elements in the architecture of a building. Quality, contrasting materials, including stone, brick, siding, and stucco, can enhance the value of a building.

The application of colors and materials should appropriately match the overall neighborhood design theme. The selection of material palettes should provide variety in color and texture while being harmonious. Also, the use of building materials should be integral to the design of dwelling and architectural style, and should not appear arbitrary, forced, or artificial.

Material Selection

Where appropriate to the architectural style of the building, a variety of materials should be used to accentuate building form. Such building materials may include:

- Stucco with a finish of light or medium sand or light lace.
- Horizontal, vertical, board and batten, or shingle siding.
- Natural or simulated brick veneer.
- Stone or simulated stone, ledge stone, river rock, country rubble, or fieldstone.
- Contemporary materials, as appropriate to the architectural style of the building.

In prominent locations on buildings such as at main entries and corners of buildings, architectural treatments and materials may be enhanced.

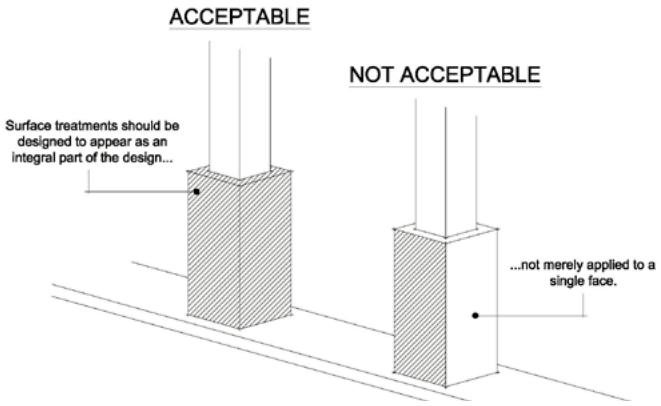
Finish materials should be appropriate in their use and application, durable and of high quality.

Refer to the architectural style sheets provided in the appendices for style-appropriate building materials.

Application of Building Materials

While a variety of building materials is encouraged, in no case shall building materials be chosen arbitrarily. All surface treatments and materials should be designed to appear as an integral part of the design, and not arbitrarily applied.

- Materials should wrap columns and posts in their entirety.
- Material changes should occur at significant architectural elements including roof breaks, half-columns, furred out edges, bay windows, or enhanced trim elements.



Materials should wrap columns and posts in their entirety.

Roof Materials

To provide variety and interest to the neighborhoods in Serrano Summit, a variety of roof materials and colors are encouraged. All roof materials should be compatible with the architectural style of the building and should have a matte finish to minimize glare. Permitted roof materials include:

- S-Tiles, Flat Tiles, and Shakes: Clay or concrete may be used where appropriate to the architectural style of the dwelling.
- Slate or concrete slate: Slate may be used where appropriate to the architectural style of the dwelling.
- Architectural-grade composition
- Metal: Standing seam (as accent roof materials where appropriate to the architectural style)
- Built-up roof

Prohibited Materials

- Wood shingle or shake
- Rolled roofing material

Chimney flue spark arrestors should be disguised with a decorative metal shroud (painted to match the roof) when visible from the street.

Refer to the architectural style sheets provided in the appendices for style-appropriate roof materials.

Building Color

The selection and application of color is a key element to creating visually interesting neighborhoods. To achieve this, a distinct color palette should be developed for each neighborhood.

Color Palette

The color palette should be selected with the design objectives of avoiding monotony, providing a variety of colorful schemes, and promoting visual diversity. Selected colors should be consistent with the architectural style of the building.

Single-family neighborhoods should have a minimum of three color palettes per architectural style.

- Each color palette should contain a minimum of three different colors, not including the roof color.
- Masonry may be substituted for one of the required colors on appropriate styles.
- All primary field colors should be discernibly different from each other.
- Each scheme should have a different accent color.
- Fascia and trim colors may be the same within a scheme.
- Unless appropriate to the architectural theme of Serrano Summit, no two dwelling units with the same color palette should be plotted adjacent to one another.

Refer to the architectural style sheets provided in the appendices for style-appropriate color selection.

Application of Color

The selection of a style-appropriate color palette along with the thoughtful applications and composition of color is an important element in creating a visually attractive building as well as enhancing the value of a neighborhood and the character of the larger community. Requirements for color selection and application are as follows:

- The selection of a building's color palette should be appropriate to its architectural style.
- Color blocking, or the use of multiple colors, should be used only where appropriate to the buildings architectural style.
- Building and material colors should provide depth and interest and be non reflective.
- Selected finish materials should be appropriate in their use and application, durable and of high quality.
- Any field color on a wall plane used at the base of a building should continue down to the foundation.
- Color changes should generally occur at inside corners only.
- Accent colors should be used primarily on ornamental elements, railings, shutters, front doors, and similar architectural features.
- Masonry colors should be selected to compliment the architectural style and overall color palette of the building. Grout colors should harmonize and blend, rather than contrast with the colors of the particular masonry materials.
- Exposed woodwork, beams, posts, railings, etc. should be colored to match a buildings fascia
- Trim colors for window trim and recesses should be selected to be discernable for the building color.
- Exposed gutters and downspouts should be colored to match or compliment the surface to

which they are attached, or painted to match the buildings color palette.

- All bare metallic surfaces (vents, pipes, gutters – excluding copper gutters, etc.) must be painted or covered from view in a manner harmonious with the general exterior architecture treatment of the building. All flashing and sheet metal must be colored to match the material to which it is attached.
- Colors applied to fascia, garage door, window frame and mullions should be selected to complement the architectural style and color palette of the building.

Garage Design

The relationship between the residential building and the street is an important element of neighborhood character for Serrano Summit. On all streetscenes, the amount of building allocated to living space (living rooms, dining rooms, entries, and other non-garage spaces) shall be maximized. Primary forward-facing living spaces should be a key element of most floor plan designs along with plotting of the dwelling to help activate the street and promote walkable neighborhoods.

Garage Placement Options for Single Family Detached Homes

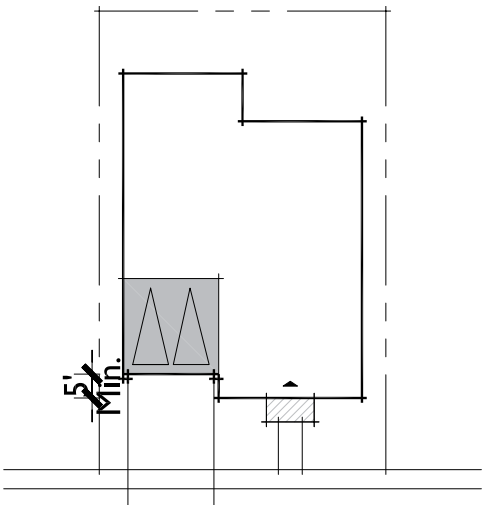
Garages for single family detached homes should be staggered with respect to orientation and location on the lot. Some garages may be pushed back from the house and others rotated to a turn-in fashion so the visually interesting features of the homes dominate the streetscene. Paired driveways and garages are permitted within all residential areas in Serrano Summit.

~~Excepting~~ Single family detached front loaded (Table 10-1) ~~rear-loaded neighborhoods, each Single Family Detached~~ neighborhoods should feature a minimum of three of the following garage placement options recessed, rear-loaded, or split garage. To maintain a diverse and non-garage dominated streetscene, no more than one floor plan per neighborhood may feature a flush/garage forward plan.

Recessed

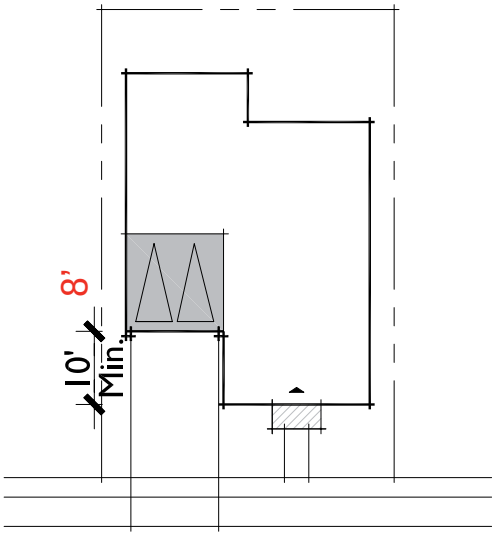
Recessed garages are located behind the front elevation/ living space.

- Shallow Recess: Garage is set back a minimum 5' from front elevation or living space



Shallow recess garage

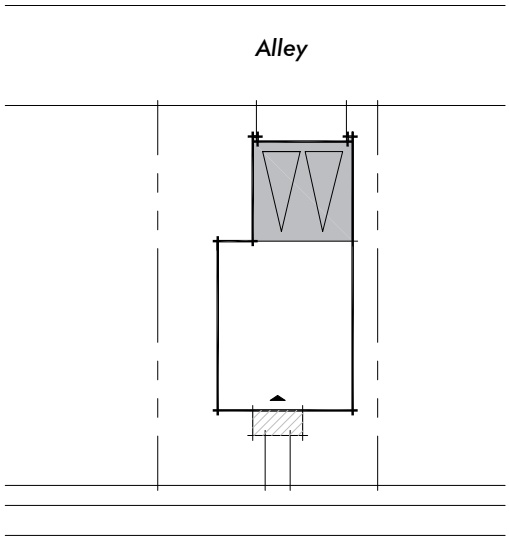
- Medium Recess: Garage is set back a minimum ~~10'~~ 8' from front elevation or living space



Medium recess garage

Rear Loaded

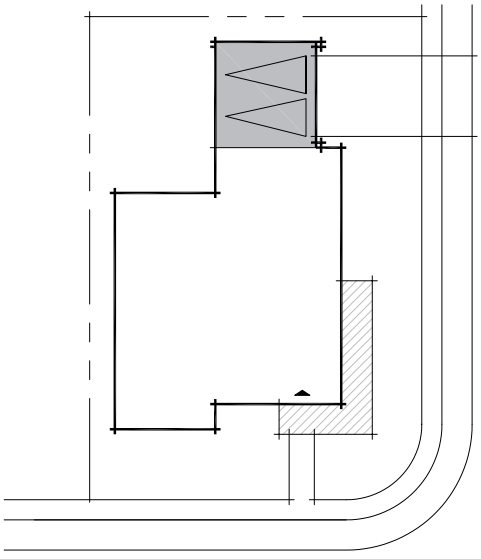
Rear loaded garages are accessed from a rear or side alley. The garage door face shall be recessed 6" or include fur-outs 6" forward of the garage plane (see image on following page).



Rear loaded garage

Corner Condition

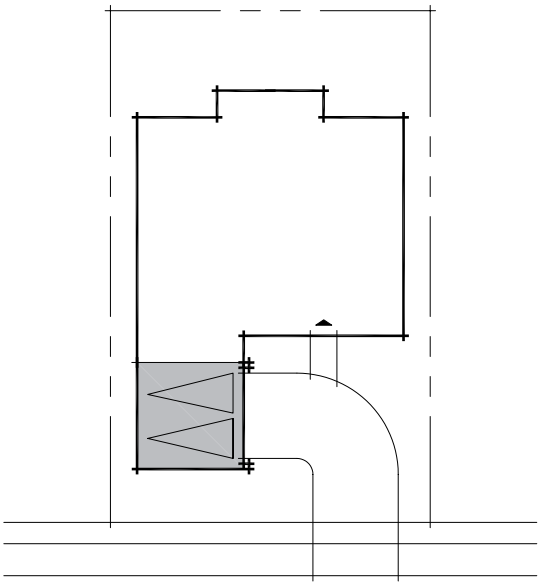
This garage placement allows the option of entering from the side street, thereby eliminating the garage and driveway from the front face of the house. Side-street entry garages can be attached or detached.



Corner condition garage

Turn-In

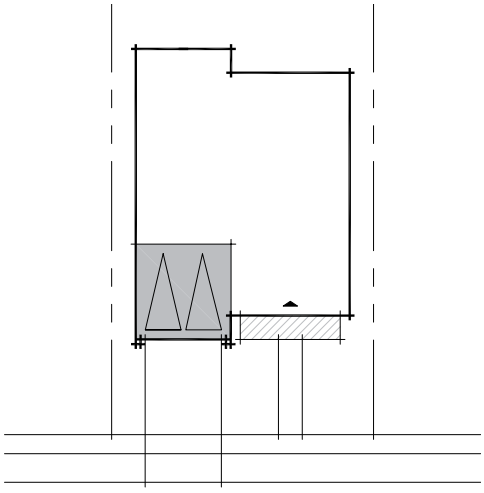
Turn-in garages greatly reduce the impact of garage door faces on the streetscape. These garage placements can be located at the front, side or rear of a plan. To provide adequate back-up space, side entry garages are limited to lots 53' or wider.



Turn-in garage

Flush / Forward Garage

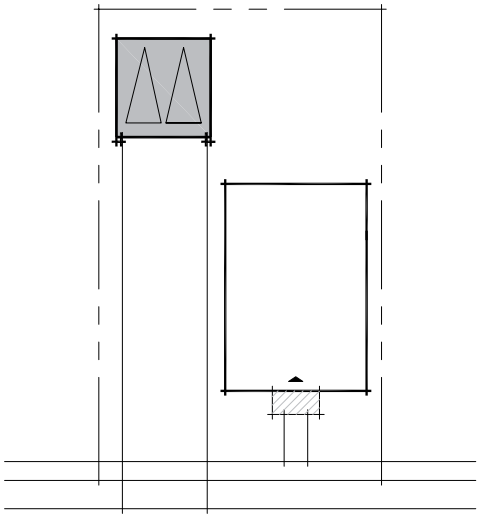
This garage placement is located flush or forward of the home's front facade. Extra attention and treatments must be applied when using this garage location. For example, a decorative garden fence, low wall with gates, trellis, porte-cochere, or additional landscaping. Garage door faces should be recessed a minimum of 12 inches or have a fur-out of at least 12 inches projecting forward of the garage door.



Forward garage

Detached

Garages detached from the primary residence are generally located toward the rear of the lot. Similar architectural details as designed on the primary residence should be applied to the detached garage.



Detached garage

Tandem

Tandem garages are long, rectangular garages capable of accommodating two vehicles, end to end in the width of a standard one car garage. Tandem garages allow a narrower garage frontage and the ability to park automobiles in tandem. This orientation lessens the impact of the garage doors on the streetscene by creating the appearance of a single car garage. Tandem garages should be recessed a minimum of 12 inches or have a fur-out of at least 12 inches projecting forward of the garage door.

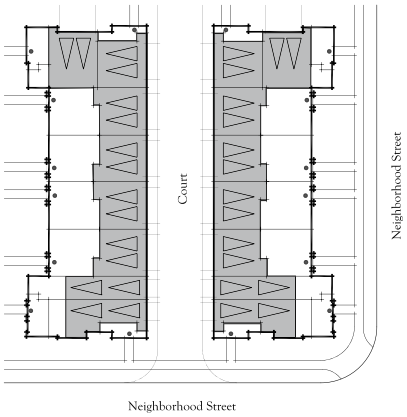
Current economic trends are favoring smaller dwelling unit sizes. Tandem parking allows for more flexibility and innovation in design and works well with higher density products. Higher density products are generally more affordable, which is what consumers are searching for in today's housing market.

The provision of a tandem garage, rather than the traditional two-door garage, provides an opportunity for housing complexes to fit more dwellings per acre without reducing parking requirements or sacrificing neighborhood character.

Tandem parking is a parking design tool, not a tool for reducing parking requirements. The most efficient operation of tandem parking is when both parking spaces are contained within an enclosed garage owned by a single owner.

In addition, tandem parking visually de-emphasizes the garage by making a two-car garage have the appearance of a one-car garage. This makes for a more appealing streetscene with fewer and smaller garage doors.

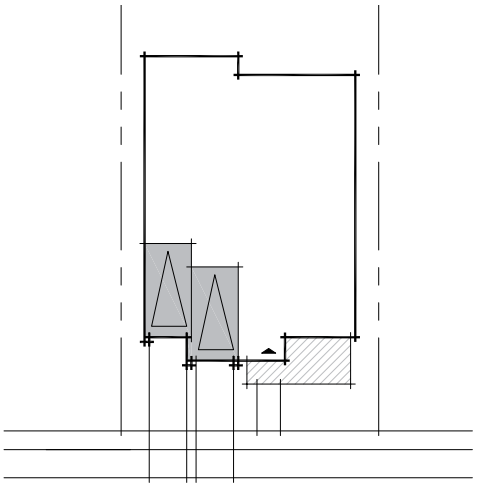
Use of tandem parking shall be evaluated on a case-by-case basis prior to the B Map process and future site development permit or use permit process. Requests for tandem parking must include justification that addresses how a tandem garage configuration will comply with parking in the same manner as a side-by-side garage.



Residential product with select tandem garages

Offset Garages

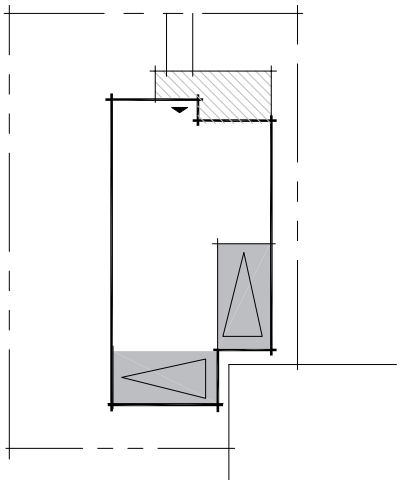
Offset garages have garage doors which are offset from one another. The offset creates depth and shadow, articulation, and interest to the front façade of the dwelling. The garage door face of forward or flush garages should be recessed a minimum of 12 inches or have a fur-out of at least 12 inches projecting forward of the garage door.



Offset garage

Split Garages

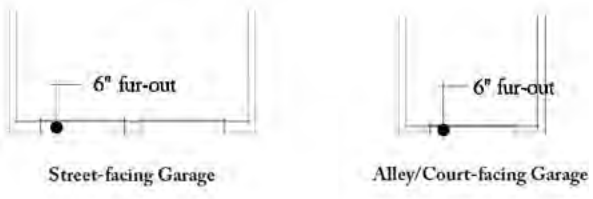
Split garages have garage doors separated from one another. The split creates articulation, and interest to the rear façade of the dwelling. Garage door faces should be recessed a minimum of 12 inches or have a fur-out of at least 12 inches projecting forward of the garage door.



Split garage

Standard Garage Doors

Street-facing garage doors shall be recessed a minimum of 6 inches or be surrounded with 6-inch minimum fur-outs. Garages loaded off a lane or court street may have the garage door face offset a minimum of 6 inches or be surrounded with six-inch minimum fur-outs. No additional offset or fur-out is required on recessed or turn-in garages.



Standard garage recesses

Garage doors shall be compatible with the architectural style of the residence. Decorative window lites, when used, should be appropriate to the architecture of the building.

Garages for Multi-Family Housing

- Provide one required covered parking space in garage or carport for each unit. See Section 10, Development Regulations, for parking requirements.
- Use of tandem parking shall be evaluated on a case-by-case basis during the B Map process.

Outdoor Living Space

The homes of Serrano Summit should create an inviting pedestrian environment. The incorporation of a usable outdoor living space into the design of each dwelling provides residents an opportunity to engage in the outdoor environment.

Covered Porches and Entries

Porches are outdoor covered spaces usually located at the front entry of the residence. They not only help to provide a pedestrian scale element to the building massing, but also allow an area for residents to enjoy the outdoor climate while conversing with neighbors.

- Integral to the Design: Where porches are provided, they should be designed as an integral element of the building with details, eaves, supports, and railings in keeping with the architectural style and other elements of the building's design.
- Covered Elements: Porches shall be fully covered in one of the following ways:
  - ~ *Roof element matching the residence*
  - ~ *Trellis structure*
  - ~ *Second-story balcony or overhang*
- Columns: Columns used in conjunction with porches should convey a sense of strength and support.

- Minimum Size: Covered porches shall be a minimum of 6' deep (posts or columns can be included in this minimum area).
- Wrap Porches: On corner lots or lots adjacent to open areas, porches that wrap the corner of the building are encouraged.
- Covered entries, if provided, shall have a depth of at least three feet (3') to provide shelter from the elements

Balconies

A balcony is a projecting platform on the exterior wall of a building that is usually enclosed by a railing or balustrade. Balconies provide visual relief to the building mass and add human scale. Balconies are either cantilevered outward from the exterior wall or supported from below by columns or brackets, depending on the architectural style of the building.

- Integral to the Design: Where balconies are provided, they should be designed as an integral element of the building with details, eaves, supports, and railings in keeping with the architectural style.
- Location: Balconies may be covered or open (covered or trellised balconies are preferred for single-family attached and multi-family attached homes). They can be either recessed into the mass of the building or designed as a projecting element and can be located on any side of the dwelling.
- Minimum Size: In order to be functional, balconies should be a minimum of four feet (4') in depth.
- Decorative Balconies: The use of architectural enhancements such as decorative balconies is encouraged where appropriate to the architectural style of the building. No minimum depth is required for decorative balconies.
- Columns: Columns used in conjunction with balconies should convey a sense of strength and support.
- Scuppers or internal drains are required on all balconies for drainage.

Courtyards

A courtyard is a ground level outdoor space, partially or fully enclosed on all four sides by the building or courtyard walls. The design of a courtyard is integral to the floor plan as it provides a transition from the public street to the private entrance of the home.

- Integral to the Design: Where courtyards are provided, they should be designed as an integral element of the building; courtyard walls should be finished to match the building. Stone, ceramic tiles, steps, recesses, cut-outs, or wrought iron accents are encouraged.
- Location: Courtyards may be located on the front, side, or rear of the dwelling, or can be internal to the floor plan.

Architectural Detailing

In keeping with creating a quality development, architectural detailing is a key element to home design in Serrano Summit. The quality and appropriate use of detail elements is important and should be genuine to the architectural style of the building. Architectural detail elements may include:

- Railing: Wood or synthetic wood product, wrought iron, or tubular steel railing;
- Brackets and Fascia: Wood, synthetic wood product, or stucco outlookers, brackets, fascia, dentils, and corbels;
- Trim, Headers, and Sills: Wood, synthetic wood product, foam, or stucco trim surrounds, headers, and sills;
- Decorative Ceramic or Clay: Decorative ceramic or clay tiles and pipe vents;
- Grille Work: Decorative wrought iron grille work;
- Gable-end Detailing: Decorative wood, synthetic wood, or foam gable-end detailing;
- Shutters: Wood or manufactured shutters – Bermuda shutters, plank shutters, louvered shutters; and
- Style Specific Elements: Other architectural style specific details.

Buildings should activate the street, utilizing elements such as canopies and awnings, stoops, plazas, and enhanced entries with porches, trellises or courtyards, where appropriate to building typology and architectural style.

Entries

In order to create a pedestrian-friendly neighborhood, each home in Serrano Summit shall be designed with an enhanced front entry, where appropriate. The entry can be articulated in a variety of forms, but should remain consistent to the architectural style of the dwelling. Potential enhancements may include, but are not limited to:

- Porches;
- Covered entry;
- Courtyards;
- Projecting roof elements; and
- Porticos.

Windows

Generally, the location of windows is determined by the practical considerations of room layout, views, and privacy. Because windows play an important role in the exterior architectural character of the home, special emphasis should be given to the way windows are used for design effect.

- Trim Surrounds: All windows on the front, side, and rear elevations that are visible from parks, open space areas, and public rights-of-way should feature trim surrounds, headers, or sills. Trim should be proportionate to the size of the window, with a minimum of one inch (1"). The style of trim should be consistent with the architectural style of the building.
- Window Style: The style and shape of windows should be consistent with the architectural style of the building. Where appropriate to style and window form, use of multi-paned windows is encouraged.
- Headers and Sills: The design of header, sill and trim elements must be consistent with the architectural style of the residence.
- Window Colors: Vinyl, extruded wood and clad-wood frame windows should be appropriately colored to match or complement the building or trim colors. Aluminum frames are not permitted.
- Glazing: Glazing may be either clear or tinted. Reflective glass is not permitted.
- The use of mirrored or highly reflective glass is not permitted, unless proved to be energy efficient.
- Windows on the second and third floor of a building should be treated with detailing of similar quality as those on the ground floor on all sides where visible from public view.

Awnings

Awnings, when provided, should be designed as an integral part of the architecture and should be consistent with the architectural style of the building.

Functional Elements

Mechanical Equipment & Meters

Special care should be taken that mechanical equipment does not detract from the architecture as follows:

- Mechanical equipment such as air conditioners, heaters, and evaporative coolers may not be mounted on any sloped roof.
- When mounted on flat roofs of attached homes, mechanical equipment should be completely screened by parapet walls at least as tall as the equipment screened.
- Ground mounted air conditioning units visible to public view must be screened by walls or landscaping at least six inches (6") higher than the unit and located away from pedestrian paths and project amenities, except when used in courts and lanes with limited or no screening.
- Mechanical devices such as exhaust fans, vents and pipes should be painted to match adjacent roof surfaces.
- Natural gas and electrical meters for single-family detached homes should be screened to be integral with the architecture of the home.
- Natural gas meters for attached homes should be grouped and screened behind walls or landscaping.
- Electrical meters for attached homes should be ganged and located behind doors.
- Screen walls and electrical enclosures should be designed integral to the building architecture.
- Solar panels shall be integrated into the roof design, parallel with the roof slope. Frames shall be colored to match roof colors. Any support equipment shall be enclosed and screened from view.
- Residential transformers shall be placed and screened where permitted by the utility companies.

Gutters & Downspouts

Exposed gutters and downspouts shall be colored to match or complement the surface to which they are attached, or be colored to match accent colors of the building. However, gutters and downspouts are encouraged to be located within the walls of the buildings.

Chimneys

Chimneys are not required but if used shall be simple in design and compatible with the architecture of the building. The following features are appropriate:

- Tile caps, brick or tile banding.
- Elaborated chimney tops for Spanish Hacienda style.
- Decorative metal caps that match trim colors.

Exterior Lighting

The level of on-site lighting, as well as lighting fixtures, shall comply with any and all applicable requirements of the City of Lake Forest Code. Energy conservation shall be emphasized when specifying any lighting system.

The style, color, and finish of exterior lighting fixtures shall be consistent with the architectural style of the building. The angle and intensity of lighting should be strategically planned for mobility and safety at night and should not be used in excess of its purpose.

Exterior Stairs

Exterior stairs for attached homes should be designed as an integral part of the architecture.

- Stair guardrail design should be consistent with the architectural style of the building.

Accessory Structures

To ensure cohesive design, detached garages and other similar accessory structures should be compatible in design, materials, and color with the primary building. Such structures should also visually relate to the main building through the use of courtyards, garden walls, or other landscape elements.

GREEN BUILDER PROGRAM 7.5

The following are guidelines and programs for the Serrano Summit community and will be enforced by the project master developer:

Introduction

As part of the project's objective to create an energy efficient community of choice, builders within Serrano Summit shall incorporate green development techniques. This can be achieved through energy conservation, reduction of non-renewable resources, and California-appropriate landscape practices.

Such practices include reducing the impact of the built environment through energy reduction as well as the reduction and reuse of non-renewable resources. While a third party program is not required for residential development within Serrano Summit, builders are encouraged to participate in voluntary programs such as the California Green Builder (CGB), Energy Star, NAHB's Model Green Home Building Guidelines, Build It Green's Green Point Rated Program, and the US Green Builder Council's Leadership in Energy and Environmental Design (LEED).

California Green Builder

The Building Industry Institute has established minimum standards for California Green Builder eligibility. These guidelines set goals for significant improvements in Energy Efficiency, Indoor Air Quality and Comfort, On-site Waste Recycling, and Water and Wood Conservation. CGB offers a certification for homes which meet the standards. For more information about CGB, visit www.cagreenbuilder.org.

Energy Star

Energy Star qualified homes are independently verified to meet strict guidelines for energy efficiency set by the U.S. Environmental Protection Agency (EPA). Typical features include efficiency in home envelope, air distribution, equipment, lighting, and appliances. For more information about Energy Star, visit www.energystar.gov

NAHB's Model Green Home Building Guidelines

NAHB's voluntary Model Green Home Building Guidelines are designed for individual builders interested in green building practices. The Guidelines contain six primary sections: Lot Preparation and Design, Resource Efficiency, Energy Efficiency, Water Efficiency/Conservation, Occupancy Comfort and Indoor Environmental Quality, and Operation/ Maintenance/Education. For more information on the NAHB's Model Green Home Building Guidelines, visit www.nahb.org

Green Point Rated

GreenPoint Rated is a program of Build It Green, a professional non-profit membership organization whose mission is to promote healthy, energy- and resource-efficient new home construction in California. A GreenPoint Rated home is graded on five categories: Energy Efficiency, Resource Conservation, Indoor Air Quality, Water Conservation, and Community. For more information on the Green Point Rating program, visit www.builditgreen.org.

LEED

The LEED program categorizes performance in five areas: Site Development, Water Savings, Energy Efficiency, Materials Selection, and Indoor Environmental Quality. Sub-programs include LEED-ND (neighborhood development), LEED-NC (new construction) and LEED-H (homes). The LEED program offers four levels of certification: certified, silver, gold, and platinum. For more information on the LEED certification process, visit www.usgbc.org

Energy Conservation through Building Design

At a minimum, all buildings (except for ancillary buildings) shall either exceed the 2007 California Energy Code – Title 24, Part 6 in energy efficient design by at least 15% or comply with the California Green Building Standards Code, which was adopted in 2008. In order to meet this standard, elements of energy efficient design may include, but are not limited to:

1. High efficiency lighting:

~ *The installation of high efficiency lighting, such as CFLs (compact fluorescent lighting), greatly reduces energy consumption.*

2. Low energy cooling system, such as engineered HVAC systems with tight HVAC Ducts
   ~ *Low energy HVAC systems that are installed with tight ducts increase the efficiency in heating and cooling the home.*
3. Improved drywall, insulation, and sealing installation
   ~ *Proper installation helps to maintain the desired temperature inside the home, lessening the dependence on mechanical heating and cooling systems.*
4. Cool roofs
   ~ *A cool roof reflects and emits the sun's heat back to the sky instead of transferring it to the building below. "Coolness" is measured by two properties, solar reflectance and thermal emittance. The higher the value, the "cooler" the roof. By limiting heat penetration into the attic and living areas of the home, dependence on mechanical cooling systems can be reduced.*
5. Dual-glazed LoE2 windows with high-efficiency glazing (SHGC and U-value ‹ 0.40)
   ~ *Dual-glazed Lo E2 windows limit heat and coldness penetration, therefore reducing the need for mechanical heating and cooling.*

In addition, builders within the community are encouraged to incorporate other energy efficient design elements. Such elements may include, but are not limited to:

1. On-site renewable energy systems (PV solar panels and solar water heaters)
   ~ *Roof-integrated photovoltaic cells can be used to offset energy consumption.*
2. Energy Star appliances
   ~ *Energy Star appliances use a minimal amount of energy and lessen the home's overall energy consumption.*
3. Natural Ventilation – Window Placement and Home Orientation
   ~ *Proper window placement and home orientation allows for natural ventilation, thus lessening the dependence on mechanical cooling systems.*
4. Architectural shade elements
   ~ *Architectural shade elements (such as overhangs and awnings) protect excess sun from entering the home, keeping the house cool during the hot summer months.*

Reduction of Non-Renewable Resources

The reduction of non-renewable resources is an important aspect of green design. Such reduction practices include, but are not limited to:

1. Utilization of Environmentally Preferable Building Materials
   ~ *Environmentally preferable building materials such as non-virgin, renewable, and recyclable materials aid in the reduction of non-renewable resources.*
2. Construction Waste Recycling Program
   ~ *On-site recycling and/or donation of scrap materials to local charitable organizations greatly reduce construction waste.*
3. Low-flow Water Fixtures
   ~ *Low-flow water fixtures limit the amount of water used on a home basis.*

California-Appropriate Landscape Practices

Elements of California-appropriate landscape practices include, but are not limited, to California-friendly landscape, water-conserving irrigation practices, and energy conservation. These practices include but are not limited to:

Water-Wise and California-Friendly Landscape

- California-appropriate vegetation that reduces the consumption of water shall be incorporated into Serrano Summit's landscape. See Landscape Guidelines for the Master Plant Palette.
- Planting design (species, quantity, size and spacing) shall achieve 70% landscape area coverage within two (2) growing seasons from installation.
- Plants with high water demand are encouraged to be located in shade areas, in small highly visible areas, or where more runoff naturally occurs.
- The use of turf grass is encouraged in active use areas only. Groundcovers and drought-tolerant grasses that require less water are encouraged in non-active areas.
- No more than 50 percent of homeowner's property outside the building envelope shall be to be planted with turf; this reduces water usage by requiring a greater amount of private landscape to utilize a California friendly landscape palette.

- No more than 25 percent of homeowner's front yard landscape shall be to be planted with turf.
- Plants of similar water requirements shall be grouped to allow more effective use of irrigation.
- The ground plane shall be covered with a minimum 2" layer of decorative material to improve water-holding capabilities of soil through reduced evaporation and compaction.
- The use of decorative gravel is encouraged as a design element to offer a variety of colors and texture within landscape areas. The size of the material is to be suitable so as to remain in place once it has been installed.
- The use of mulch can also be used in landscape areas. The size of the material is to be suitable so as to remain in place once it has been installed.
- Install a 12" minimum border of decomposed granite/decorative gravel along back of curb within the parkway to minimize irrigation overspray into the gutters.
- A demonstration garden incorporated into park space as a public outreach effort to inform and educate the community is encouraged.
- Turf areas shall be sized and shaped to optimize irrigation efficiency. Turf type and location shall be selected in the same manner as other plantings. Turf shall not be treated as a fill-in matter but rather as a planned element of the landscape. All turf areas shall be on separate irrigation zones. The following conditions shall apply:
  a. *No turf may be used on slopes greater than 4:1.*
  b. *If turf is used in isolated areas (i.e. driveway strips) subsurface irrigation or micro-spray heads shall be required to avoid over-spray.*
  c. *Turf areas less than eight (8) feet wide on the shortest side shall be irrigated with subsurface irrigation or micro spray heads.*
  d. *Irregular shapes that cannot be irrigated efficiently shall be avoided.*
- Turf shall not be planted within landscaped parkways and/or median.
- Artificial turf shall be permitted within all areas of Serrano Summit except for Planning Areas 17 and 18.

Water-Conserving Irrigation Practices

- Utilizing point-irrigation systems is encouraged to allocate more efficient delivery of water to root systems and minimize run-off.
- Utilizing a weather-based master irrigation controller system that employs the use of current satellite weather data and rain shut-off devise to ensure that the irrigation schedule is based upon actual "real time" plant needs. This allows for a greater level of control within the irrigation system and minimizes potential water waste.
- Using reclaimed water in large, public open spaces is encouraged.
- Design irrigation system based upon solar exposure. Irrigation heads should be grouped in South/West and North/East exposures. This ensures that heads with similar sunny exposure will be grouped together on the same valve and heads with similar shaded exposure will be grouped together.
- The use of overhead spray heads is discouraged in small non-turf applications. The use of point irrigation or sub-surface irrigation dripline root zone irrigation system negates overspray and reduces water waste.
- Turf areas shall be irrigated with equipment that has a precipitation rate of one (1) inch or less per hour as specified by the manufacturer. Stream rotator heads are preferred; use of standard spray heads shall be avoided.

Energy Conservation Through Landscape Design

- Community and residential area landscapes are encouraged to be designed to assist with energy conservation, including planting deciduous trees next to buildings and along streets to reduce ambient temperature, reduce heat gain, allow for cool natural ventilation, and provide a more pleasant pedestrian environment.
- Deciduous trees and vines are encouraged to be planted in front of south-facing walls and windows to further cool buildings by intercepting sunlight during summer months, yet allow direct sunlight during the winter.
- Green screens (metal lattices planted with vines and/or climbing flowers) are encouraged to shade south and west-facing walls to reduce interior heat gain and beautify buildings.
- Trees with appropriate heights and spreads are encouraged to provide ample shade in the summer months for outdoor spaces such as patios and plazas, pedestrian walkways, roadways and parking lots. Structures such as trellises and porticoes should also be incorporated into the building/landscape edge, especially on south and west-facing exposures, to provide shade in the summer and allow solar penetration when the sun is at a low angle in the winter.

- Landscape buffers, screens and windrows are encouraged to be located so they facilitate cooling by prevailing breezes in summer months.
- Using trees or shrubs to shade the air-conditioning units can help increase its efficiency and reduce the temperature inside the home by several degrees.
- As technology develops, employing an appropriate means of capturing, storing and reusing on-site waste run-off water within an individual residential property is encouraged.

Sustainable Design Features

All subsequent development shall consider, but not be limited to, inclusion of the following list of potential design features. These features shall be incorporated into the project design to ensure consistency with adopted statewide plans and programs. The project developer shall demonstrate the incorporation of project design features prior to the issuance of building or occupancy permits, as noted below.

Transportation, if applicable:

- Provide pedestrian connections to the off-site circulation network (Prior to issuance of a building permit).
- Implement a trip reduction program, for which all employees shall be eligible to participate (Prior to issuance of an occupancy permit).
- Provide a ride sharing program, for which all employees shall be eligible to participate (Prior to issuance of an occupancy permit).

Energy Efficiency

- Design buildings to be energy efficient, 15 percent above Title 24 requirements (Prior to issuance of a building permit).
- Install cool pavements.
- The landscape plan shall utilize strategically placed trees that shall shade building walls, particularly those containing the most windows (Prior to issuance of a building permit).
- Install high efficiency lighting, and energy efficient heating and cooling systems (Prior to issuance of a building permit).
- Reduce unnecessary outdoor lighting (Prior to issuance of a building permit).

Water Conservation and Efficiency

- Install water-efficient irrigation systems (Prior to issuance of a building permit).
- Comply with the landscape sustainability measures in the Sustainability Development Regulations of the Serrano Summit Area Plan (Prior to issuance of a building permit).
- Install low-flow faucets and toilets (Prior to issuance of a building permit).

Solid Waste

- Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard) (Prior to issuance of a building permit).
- Provide interior and exterior storage areas for recyclables and adequate recycling containers located in public areas (Prior to building permit issuance).

CIVIC CENTER DESIGN GUIDELINES

Section 8.0

January 2012

Architecture+Planning

GENERAL GUIDELINES FOR THE CIVIC CENTER 8.1

Introduction

The Civic Center Design Guidelines within the Serrano Summit Area Plan outline the site planning, structure, and design of the proposed Lake Forest Civic Center. Architectural details will be used to enhance the buildings, particularly on elevations that are highly visible from the public realm, giving them more aesthetically pleasing façades, and integrating the structures with the overall community theme. Landscaping should be used to highlight the positive features of the building forms and site, while screening views of the negative features, where feasible.

Photographs in this section are provided for conceptual use only, and should not be used as a literal guide for architectural design.

Restricted Uses

The Public Facility Overlay allows Planning Area 13 to be used for Civic Center purposes, including those municipal services commonly provided by general law cities at city hall and civic center complexes, consistent with the provisions of Section 10.7 in this Area Plan for the "Public Facility Overlay." The following land uses shall not be included in any plans for the Civic Center site ("restricted uses"):

- Animal shelter.
- Dog park.
- Skate park.
- Roller hockey facility.
- A maintenance yard whose primary purpose is maintenance and repair of vehicles and machinery.
- A fire station with the primary function of providing firefighting and paramedic services.
- A permanent jail facility, excluding holding or similar cells as part of a sub-station of the Orange County Sheriff or other law enforcement agency.
- A parking structure exceeding the greater of 3 stories or 36 feet in height.
- Storage or overnight parking of trash trucks.
- Third party retail uses requiring permits, but excluding vending machines.
- High Hazard Group H occupancy as defined and described in Section 307 of the 2007 California Building Code.
- Any use that violates the City's noise ordinance, contained in Section 11.16 of the Lake Forest Municipal Code.
- Any use, purpose or activity not associated with those uses, purposes, or activities normally associated with a civic center, including, but not limited to, city governance, community activities and gatherings, special community events, and related public uses and activities.

Design Objectives

The design objective of this section is to concentrate architectural detailing toward building areas that are highly visible to the public, while promoting an environment of common courtyards, public plazas, and open space areas.

The intent of these design objectives is not to reduce the total amount of architectural detail and landscaping used, but to orient such enhancements in highly visible areas within the public realm.

Site Design

The following concepts are intended to facilitate architectural quality and compatibility between a variety of buildings and uses within the Civic Center site, as well as with surrounding uses within Serrano Summit.

Building Orientation

- Building Orientation should facilitate the intended function of the Civic Center area.
- Both the main vehicular and pedestrian entries to Civic Center areas from the street should be enhanced with textured pavement, landscaping and accent trees, and appropriate lighting.

Site Preparation

- The Civic Center site shall be delivered by the property owner to the City uncertified as to compaction (City will recertify the site after taking title).

- The Civic Center site shall contain a nine acre rough graded pad with a maximum 2% slope (the 2% maximum slope criteria shall not apply to the slope internal to the pad and such slope shall not be included in the net pad area calculations), street access to the perimeter of the site, wet and dry utilities to the perimeter of the site (including an off-site sewer line, if necessary, to provide sewer service for all of the nine-acre property at all pad elevations, and connection to project area storm drainage system.
- The exact boundary of the site will be determined by the Grading Plan and the City's Site Plan, and both parties acknowledge that the actual gross acreage offered for dedication to the City will exceed nine acres, will run to certain property line and right-of-way boundaries, and will include some slope banks adjacent to the Civic Center pad. Acreage calculated with the formula in this paragraph shall be referred to as "Net Acres."

Visible Edges

- Highly visible Civic Center building edges around the Civic Center area should be designed to provide a pleasant aesthetic, complementing the style of surrounding buildings.

Mechanical & Functional Equipment

- Outdoor storage shall not exceed the height of surrounding walls.
- Ground mounted equipment, such as transformers and heating units, if otherwise visible to the public, should be screened with walls and/or landscaping.
- No utility appurtenances shall be allowed directly within a pedestrian area.

General Guidelines for Buildings

Building forms should exhibit a discernible base, body, roof line and entry with colors and materials chosen in support of these key elements.

Major architectural elements, such as building mass, roof type, height, entrances, openings, arcades and other similar features should complement and harmonize the architectural style and proportion of the buildings.

Massing & Articulation

Building articulation shall be used to break up a single, dominant building form.

- Expansive, un-articulated surfaces should be avoided when visible from a public street. The use of varying textures is encouraged.
- Building height may be reduced through vertical massing breaks that complement the style of the building.
- Returns must terminate at a logical point and must be finished and treated on all exposed sides.
- Articulation elements, such as insets and pop-outs, and horizontal and vertical elements may be used to give visual interest to buildings.
- Massing elements and building projections should relate to the proportions of the building.
- Where used, tower elements shall relate to the massing of the building and architectural style proposed. Tower elements include architectural components that are higher than the adjacent building's parapet or roof.
- Roof forms should be simple and complement the architectural style and internal organization and function of buildings and surrounding residential.
- Buildings shall include at least one minor and one major focal point, utilizing changes in building forms, materials, or colors. Focal points may double as primary entry articulation.

Building Entries

- Entries should be designed as an integral part of the building form.
- Primary building entries should be easily identifiable and emphasized through building massing, architectural elements, and material use.

Architectural Detailing

- Careful detailing, such as expansion joints, reveals, cornices, eaves, parapets, and window treatment, should be used to provide an attractive elevation to all façades visible from public streets.
- A variety of colors and materials should be used throughout the building's elevations not to exceed four (4) complementary colors.

Material & Color Use

- Materials and colors should be used logically, with darker colors and/or "heavier" materials used on the base, "supporting" lighter colors and materials above it.
- Colors chosen should not be used to accentuate building form or call attention to building features.
- Subtle accent colors that compliment the building's color palette may be used to identify special areas or entries.
- Materials should wrap architectural elements in their entirety. Changes in materials along a building elevation should occur at inside corners only.
- Materials used should be durable and long lasting.

Mechanical & Functional Equipment

- Mechanical equipment visible from the public realm should be located as to be screened by the building's architecture or screens, where possible.
- Ground mounted equipment, such as transformers and heating/air conditioning units, shall be screened with walls and/or landscaping and located away from all pedestrian areas.
- Outdoor storage shall not exceed the height of surrounding walls.
- Major utility lines, such as gas, telephone, and electrical (34.5kV or less) shall be placed underground when feasible and as approved by the local utility company.
- Trash bins to be screened from any public views by fencing, walls and/or landscaping

Civic Center Buildings

The following design guidelines provide guidance and direction for the design of specific building uses on the Civic Center site, and cover site design, construction materials, appurtenances, and site elements. They do not, however, provide direction for any particular architectural style.

Civic Center and governmental buildings should be designed and constructed to be of a high quality, with form, massing, and style that complements that of its surroundings.

Location

Buildings may be oriented around an open space such as a central courtyard or plaza.

Pedestrian connections between office buildings and the uses that they serve shall be convenient, direct, and well-lit for the user.

Building entries for vehicular and pedestrian use shall be clearly demarcated and easily accessible, and shall be designed to minimize pedestrian and vehicular conflicts.

Civic Center and governmental buildings shall have an adjacent buffer area of landscaping, around their perimeter with the exception of entry points. Vehicles may not encroach in this area.

Architecture

The design of Civic Center and governmental buildings shall complement the design of its surroundings. Horizontal and vertical articulation shall be used to visually reduce the massing of the structure.

The building entrance should be clearly distinguishable and easily seen as a major focal point on the building.

The materials and colors used shall reflect those used in accompanying buildings, and be of an equally high quality.

Pedestrian Access

Multiple points of pedestrian access shall be designed for the Civic Center and governmental buildings, and be fully incorporated with the walkways and stairways, parking, open areas, and nearby buildings.

Pedestrian walkways, elevators, escalators, ramps, and stairways shall be well-lit for safety. Where walkways connect through parking lots they should be of sufficient width, excluding car overhangs. A multi-use trail shall be provided from Planning Area 13 down to the regional trail adjacent to Serrano Creek.

Rooftops

The roofs of the Civic Center and governmental buildings should be designed to be integral with the overall building design, and should complement the style and character of the buildings.

Parking Structure

Parking structures, where applicable, shall be designed and constructed to the same level of quality as the buildings they serve. Their design shall be integrated into the site as a whole, making them convenient and accessible for the surrounding Civic Center uses. The maximum height of any parking structure within Serrano Summit shall be the greater of either three stories or 36' in height.

Location

The use of pedestrian connections between parking structures and the uses that they serve shall be convenient, direct, and well-lit for the user. Entries to the parking structure for both vehicular and pedestrian use shall be clearly demarcated and easily accessible, and shall be designed to minimize pedestrian and vehicular conflicts.

The parking structure shall be sited so as not to be a predominant feature of the site. In other words, the parking structure should be placed to the side of the major buildings within the Civic Center complex, so as not to screen the major Civic Center buildings to the greatest extent feasible. It should be noted that the parking structure is contemplated to be constructed in a future phase. Site planning on the Civic Center site shall take into consideration that portions of the surface parking lots will need to accommodate a parking structure as the need arises for additional parking.

Architecture

The design of the parking structure shall complement the design of the uses that it serves. The materials and colors used shall reflect those used in accompanying buildings, and be of an equally high quality.

The parking garage shall be screened by berming and /or landscaping along the ground level for visual relief. Screening shall be appropriate to the scale of the structure; the planting of tall trees and self-climbing vines is encouraged.

Pedestrian Access

Multiple points of pedestrian access shall be designed into the parking structure, and be fully incorporated with the walkways, stairways, and elevators both within the structure and its accompanying buildings.

Pedestrian walkways, elevators, ramps, and stairways shall be well-lit for safety. Glass elevators and glass-enclosed walkways are encouraged to provide a sense of security.

CIVIC CENTER PLAZA DESIGN 8.2

Purpose & Intent

The design and orientation of buildings directly affects the design of plazas. These plazas serve to encourage socialization by providing open space for public gathering. Combined with well-designed walkways and entries, plazas create an effective, aesthetically-pleasing pedestrian flow from one location to the next.

Successful plaza design is rooted in six key factors:

1. Function
2. Character & Amenities
3. Layout/Scale
4. Sitting Space
5. Environmental Factors
6. Access & Circulation

The Civic Center may include a plaza in its design. The following section is intended to provide design guidance for plazas.

Function

Plazas shall be designed for a variety of functions and activities, both active and passive.

Character & Amenities

Key, unique features should define the design of a plaza. The upkeep of these elements, as well as lighting, fountains, and other similar elements shall be considered during design.

Art

Public art is encouraged within a plaza to add a sense of culture and emotion to the surrounding environment.

Amenities

Amenities such as seating, tables, umbrellas, landscaping, water elements, lighting, bollards, bicycle racks, cigarette urns, and trash receptacles should be provided in the plaza, where appropriate to uses. Such amenities should be conveniently located where public socializing is common, and should complement the surrounding buildings.

Layout

Plazas should be designed with clear boundaries that visually enclose, create limits and centralize focus onto the plaza. Plazas should be designed to provide a sense of arrival, be scaled appropriate to the environment, and have a unique character enhanced with stairways, vantage points, and repeating patterns—all while being flexible enough to allow a variety of functions to occur within.

Plazas and courtyards should be created through the design and orientation of surrounding buildings on the site, and should be arranged in such a way to create opportunities for safe and effective pedestrian movement between buildings. A formal arrival plaza on-site should be located directly in front of the City Hall at the terminus of 'B' Street. Other plazas should be oriented to maximize viewing opportunities of surrounding open space and distant views.

Building entries and windows, wherever possible, should be oriented towards activities to enhance the activity and security of the space.

Amenities and spaces should be designed at the pedestrian level.

Repetitious forms and patterns, in paving, landscaping, and surrounding articulation, help to identify space and are encouraged.

Sitting Space

Plazas should be designed as an inviting space for users, through the inclusion of varying forms of seating.

Plaza design should include ample site furniture for visitors, allowing users to rest, converse, and observe the area. This should include seating, as well as tables, umbrellas, and other place making features, where appropriate. Site furniture should complement the design of the plaza and surrounding

buildings, and must be of high quality, durable, and resistant to vandalism.

Benches should include backrests and chairs should be well-contoured to make sitting within the plaza physically comfortable.

The placement and orientation of site furniture throughout the plaza should be considered, as well, allowing for individual and grouped seating in both the sun and shade.

Environmental Factors

The design and orientation of plazas should encourage pedestrian use throughout all seasons.

Plaza design and layout shall provide protection from wind, when practical, through the use of canopies, pavilions, and semi-outdoor spaces.

If included, water features should be designed to be accessible and touchable.

Plaza design layouts shall provide adequate shade for the outdoor sitting areas within the Civic Center complex. Shade may be created by providing canopy trees or permanent structures. Structures shall complement surrounding architecture in style, form, or materials, but should be provided at the pedestrian scale.

Access & Circulation

Plazas should be designed to accommodate all age groups and accessibility needs, including consideration of strollers, crutches, canes, walkers, and wheelchairs.

The landscaping component of this section describes the minimum landscape requirements that shall be followed in the design of all public and private improvements within the Civic Center complex. Landscaping shall be used to promote the aesthetic character and value of Serrano Summit and shall:

- Define, unify and enhance the public space;
- Embellish and enhance private areas; and
- Screen views of parking, loading, service areas and utilities.

CIVIC CENTER LANDSCAPING 8.3

General Landscape Standards

All buildings, grounds, slope banks, plazas, and open space areas within Planning Area 13 (Civic Center) of Serrano Summit shall be maintained by the City of Lake Forest or other entity acceptable to the City.

In addition to the City of Lake Forest's standard landscape plans and specifications, and the standards provided in Section 9 - Landscape Design Guidelines of this Area Plan, the following shall apply:

- Any areas not designed for paving or building shall be landscaped and maintained.
- Planning Area 13 is located adjacent to Serrano Creek and therefore falls within the "riparian" tree zone. A strong effort shall be made to provide compatible landscape design with native and existing transitional creek areas.
- Landscaping along Civic Center street edges shall be consistent with, and complement, the landscaping of surrounding uses along that street.
- Civic Center landscaping shall make use of street trees having a minimum size of 24" box spaced at regular intervals of between 30' - 40' o.c., while maintaining an average tree spacing of 35' o.c. throughout. As accents, plantings of informal clustered massings of California native trees are encouraged with a minimum size of 15 gallons, where applicable.
- The perimeter landscape of the Civic Center complex shall reflect the character of Serrano Summit and shall strengthen its community landscape theme.
- The design of the Civic Center shall employ water conservation techniques to provide a sensible and complete landscape solution for the center.
- Underground drainage shall be used to drain landscaped areas.
- Automatic irrigation infrastructure shall be permanently provided in all landscaped areas, except for those designed as swales for water quality purposes. Moisture-sensing and water-monitoring devices shall be used, in compliance with drought and water conservations standards adopted by the City of Lake Forest.
- The use of California-friendly plants, mulch, installation of drip irrigation systems, minimizing of impervious areas, and the designing of landscaped areas as shallow swales to retain irrigation water is encouraged, where feasible, to reduce water use.
- Site features, such as bicycle racks, recycling bins, planters, and benches, should be designed as an integral part of the project.
- A landscape and irrigation plan shall be submitted to the City of Lake Forest for review and approval prior to issuance of building permits.

Street Frontage Landscape Standards

Landscaped areas along street frontages shall be appropriate to the scale, orientation, and purpose of the area and consistent with the Area Plan. Tree and shrub locations and layouts shall be consistent with other existing sections of the street. Installation of street frontage landscaping along the Civic Center frontage shall provide for a seamless streetscape, thereby integrating into the overall community.

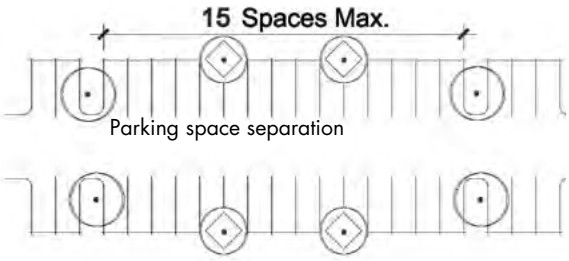
Parking Lots

The following standards shall be applied to the Civic Center parking lot landscaping in Planning Area 13 of Serrano Summit:

- The parking areas should not block pedestrian access between buildings and the public street. These areas should be designed to allow for pedestrian through-connectivity, through the use of walkways with enhanced paving, trellis structures, and/or landscape treatments.
- Trees located within parking lots shall be located within planters, with a spacing as determined by local jurisdiction. Minimum tree size within planters shall be 24 inch box.
- Planters shall have a minimum inside width of 5', and be bounded by a concrete curb, unless intended to be used as landscaped swales for NPDES water quality protection purposes.
- An end cap planter, with a minimum inside width of 5', should be provided at each end of all

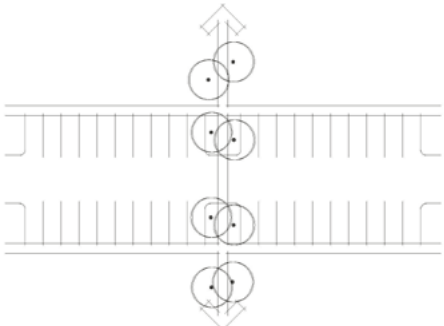
rows within the parking lot. Planters shall have a minimum length equal to the longest adjacent parking space, inclusive of curb.
- Tree canopies in planters may not be lower than 7' above the ground.
- Additional landscaping in parking lot planters shall not obstruct the ability for police or security to properly view the area.
- Parking lots should be designed to serve for vehicle parking, while also serving as an open, uninterrupted multi-functional plaza for special events. This requires that the parking spaces be simply striped and minimizing the use of planters with raised curbs and concrete wheel stops.

Where feasible, parking lots should be divided into a series of connected smaller lots. This can be accomplished by incorporating one of the following:
- A landscaped bulb should be used to break up parking lots, with a maximum of 15 contiguous spaces in a row and 10 spaces in a row on average.
- A landscape tree well shall be installed every 5 parking spaces between landscape bulbs.

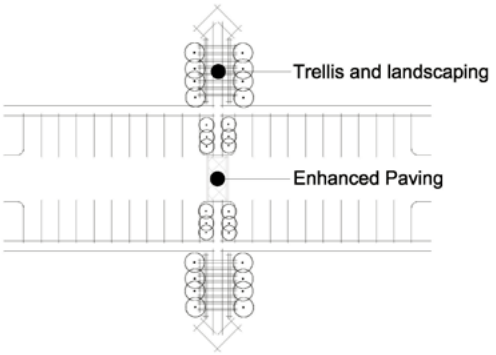


Parking space separation

In addition, parking areas should be treated as "landscape plazas," with attention to landscape surfaces, softened edges, shade, and pedestrian circulation. This can be accomplished by incorporating at least one of the following:
- Pedestrian walkways should connect public rights-of-way and residential land uses when appropriate.


Pedestrian Access in Parking Areas

- Enhanced paving materials, trellises, and landscaping should be used to accentuate the pedestrian circulation system.



Enhanced Pedestrian Circulation

Acceptable Plant Materials

The planting concept for the Civic Center complex should be consistent with the concept for the rest of the community, when feasible. See Section 9 - Landscape Design Guidelines for an approved plant palette for the community. The City shall have discretion to select plant materials for the Civic Center complex; provided, however, it is strongly encouraged to incorporate the use of native and riparian compatible species, where appropriate. Should the site develop with residential uses, then the standards in Section 9 - Landscape Design Guidelines within this Area Plan shall apply.

CIVIC CENTER SIGNAGE 8.4

Civic Center Signage Guidelines

Signage guidelines for the Civic Center complex shall allow for City and affiliated uses and individuality, while maintaining a high level of quality and complementing signage located throughout the community.

Within this section, Civic Center sign guidelines are addressed in eight components:

1. General Sign Program Guidelines
2. General Design Requirements
3. Monument Signs
4. Business Directory & Directional Signs
5. Wall-Mounted Signs
6. Temporary Signs
7. Sign Illumination
8. Prohibited Signs

Signs will be reviewed during the City's design review process for their consistency with these guidelines, and the Serrano Summit Area Plan as a whole.

General Sign Program Guidelines

Civic Center signage shall be regulated by a uniform sign program, and submitted to the City of Lake Forest for review in conjunction with building construction and approval. Submittals shall include drawings and details sufficient for review by the City, including as appropriate:

- Elevation(s) of the buildings for which signs are being requested, showing design, location, size, and layout of wall signs. Elevations shall be drawn to scale indicating dimensions, attachment devices, and construction details.
- Site plan of the site for which signs are being requested showing building and perimeter with location of proposed and existing ground-mounted monuments and elevations showing proposed design and dimensions of signs.
- Section through letter and/or sign panel showing the dimensioned projection of the letter face and/or sign panel. The method of illumination shall also be identified.

General Design Requirements

- All signs should be designed to be appropriate with the scale and proportion for the buildings on which they are placed and the areas in which they are located.
- All signs shall be designed to be aesthetically pleasing, and visually complement the style of the building on which they are located or identifying, as well as the community as a whole.
- All permanent signs shall be used for the purpose of identification and direction only. Advertising is not permitted on permanent Civic Center signage.
- Permanent ground-level signs are limited to identification monument signs, directory signs, directional signs, and on-site regulatory signs.
- Sign colors shall be chosen for legibility and shall complement the style of the Civic Center use and community as a whole. Substantial contrast should be provided between the color and material of the background and the letters or symbols for ease of reading in both and night conditions. The sign panel background should be free of distracting details and decoration.
- Lettering should be designed and applied to avoid shadow distortions.
- Sign materials shall be durable and of a high quality. Metal signs may be made of aluminum, brass, bronze, copper, or stainless steel and may be painted.
- The City of Lake Forest shall be responsible for the proper maintenance of the signs, and shall routinely inspect signage within the Civic Center site to ensure an attractive appearance at all times. If at any time the City of Lake Forest determines that the signs or other elements of the signs are damaged or indicate a noticeably deteriorated appearance, the City shall replace or otherwise refurbish the sign to restore it to its original appearance.
- Street address signs shall be displayed for each building.
- Sign types not covered in this program shall follow the City of Lake Forest Municipal Code.

Temporary Signs

- Temporary signs include all non-illuminated signs that identify, or provide basic information about, future facilities, for sale/for lease opportunities and construction activities, or for special events. No other temporary signs are permitted.
- Temporary signs include panels, placards, and banners and are prohibited on the exteriors of Civic Center and governmental buildings, roofs, walls, or fences. Small temporary directional signs may be permitted for special events.
- Temporary signs are not permitted at intersection corners or within ten feet of the street curb in the Civic Center area.
- The City is responsible for the removal of all balloons, banners, and other temporary signs by the end of the last day of the event. All helium balloons must be removed by the end of the day in which balloons are put up. No helium balloons shall be cut loose to fly freely; all helium filled balloons as permitted by the sign program shall be discarded in a designated trash bin or receptacle.
- Signs providing sales, leasing, and construction information are allowed and shall follow the guidelines from the City of Lake Forest Municipal Code.

BUS SHELTERS IN CIVIC CENTER AREA 8.5

The visual appearance and design of bus stops and the allocation of bus stop amenities that enhance pedestrian comfort and safety play a significant role in the decision to use mass transit. Amenities should be provided to improve the attractiveness of mass transit as a means of transportation to and from the Civic Center areas, thereby reducing parking needs.

General Standards & Guidelines

The design of bus stops shall be directed through coordination with the Orange County Transportation Authority (OCTA), or their applicable design standards, if provided.

Shelters shall be designed with the following factors taken into consideration:

- The durability and strength of materials.
- The resistance of chosen materials and paint treatments to weather conditions, graffiti, cutting, fire, and other forms of vandalism.
- Consideration of potential greenhouse effect during hot weather.
- The balance of external lighting within the Civic Center area with that within the bus shelter.
- Design which complements that of the Civic Center area.
- Wheelchair accessibility within the shelter.
- Inclusion of trash can and newspaper boxes within the design.
- Communications conduits for future use.
- The use of a semi-transparent material that allow bus operators to see within the shelter.
- Wheelchair marking/placard that indicates the space underneath the shelter dedicated for wheelchairs.

WALLS & FENCES IN CIVIC CENTER AREA 8.6

General Standards & Guidelines

Walls and fences within the Civic Center area should be consistent with that elsewhere within the Serrano Summit boundaries, as regulated in the Walls & Fences component of Section 9 - Landscape Guidelines.

Walls and fences construction shall complement building design within the Civic Center area, and be constructed of community-appropriate materials, colors, and textures.

Fencing facing Serrano Creek shall be "open," view-type fencing.

Refuse & Recyclable Material Storage Areas

- Refuse and recyclable materials storage areas shall be enclosed and screened in compliance with the City of Lake Forest Municipal Code.
- Storage areas should be screened from public view through the use of landscaping, fencing or walls or a combination thereof.
- Where appropriate to the building typology, refuse and recyclable material containers should be integrated into the overall building form to facilitate screening.
- Enclosures shall be finished using materials compatible with the Civic Center architecture. Gates shall be painted solid metal.
- The location of storage areas shall be conveniently accessible for trash removal by standard refuse disposal vehicles.
- Storage areas that can be overlooked from above should incorporate roof structures to screen the contents of the enclosure from view. Such roof structures should be designed to allow the doors of the refuse container to fully open.

Loading & Service Access

- Service, loading, storage, and maintenance areas shall be screened from public view where reasonably possible.
- No loading will be permitted from any public street adjacent to Planning Area 13.
- Service areas must be located and designed so that service vehicles have clear and convenient access and do not prohibit adjacent vehicular or pedestrian circulation or vehicular parking.
- The final locations of loading/service areas will be approved by the City of Lake Forest.

CIVIC CENTER AREA LIGHTING 8.7

General Standards & Guidelines

The Civic Center area lighting component addresses the illumination of the Civic Center area for the purposes of safety, security, and nighttime ambience, including lighting for parking areas, pedestrian walkways, architectural and landscape features, and any additional exterior areas.

- A comprehensive lighting plan shall be prepared and approved in conjunction with the site plans submitted for approval to the City Planning Department. In addition, all plans shall be reviewed and approved by the City of Lake Forest Police Department/Orange County Sheriff's Department.
- Exterior lighting within a parking lot, service area, or other intentionally lit area should be located and designed to minimize direct glare outside of the specific area.
- Lighting sources shall be shielded, diffused, or indirect in order to avoid glare to pedestrians and motorists. Lighting fixtures should be selected and located to confine the area of illumination to within the boundaries of the Civic Center area.
- Pedestrian paths should be lighted by pole, directed up lighting, or bollard-type fixtures that are in scale with the pedestrian, typically no more than 16' for pole lights or 3' in height for bollards. All lighting fixtures shall be designed to resist vandalism.
- A balance of lighting for building users and lighting of architectural features should be emphasized to provide user-friendly interior and exterior schemes with the main consideration being the aesthetic effect of the lighting design.
- Night lighting and security lighting shall be sensitively designed to ensure that no off-site glare is directed toward neighboring uses and that the overall intensity of the site lighting is not excessive. The use of excessive nighttime security lighting is discouraged, with other security measures being considered, instead.
- Downward-directed building illumination placed below the horizontal building line helps reduce glare and adds an aura of class to the façade.
- Skyward-directed lights designed to attract attention, such as searchlights or moving lights, are prohibited.
- Lighting near to and adjacent to open space areas shall be designed to minimize sky glow and glare in order to minimize light pollution and be sensitive to Serrano Creek.
- Street lights should be located between street trees to provide light that is uninterrupted by tree canopies.
- Freestanding lighting styles shall be post, column, or double column types.
- Building signs illuminated above or below by spotlights are permitted.
- Lighting fixtures, poles, wattage and lens for all site, walkways, parking lot, and street lights shall match community lights for overall community continuity.

TABLE 8-1
SUMMARY OF LIGHTING DESIGN CRITERIA

USE	LIGHT LEVELS*	UNIFORMITY RANGE	DISTRIBUTION	LIGHT SOURCE
Roadways	0.4	20:1	Full Cutoff	Metal halide, induction
Roundabout	0.5	15:1	Full Cutoff	Metal halide, induction
Pedestrian Walkways	0.5	10:1 Primary 15:1 Secondary	Full Cutoff or Cutoff	Metal halide, induction
Plazas	0.5	15:1	Full Cutoff or Cutoff	Metal halide, induction
Entries	1.0	15:1	Full Cutoff, Cutoff, or Semi-Cutoff	Metal halide, compact fluorescent, LED, induction
Landscape			Shielded	Metal halide, compact fluorescent

*Average footcandles.

CIVIC CENTER GREEN BUILDING STANDARDS 8.8

As part of the Area Plan's objective to create an energy efficient community of choice, the Civic Center within Serrano Summit may incorporate ecological practices and green development techniques. This can be achieved through energy conservation, reduction of non-renewable resources, and California-appropriate landscape practices.

Such practices include lessening the impact of the built environment through energy reduction as well as the reduction and reuse of non-renewable resources. While a third party program is not required for the Civic Center within Serrano Summit, participation in voluntary programs such as the US Green Building Council's Leadership in Energy and Environmental Design (LEED) is encouraged.

By adopting green building standards, savings on heating and cooling costs are possible in addition to becoming eligible for various grants and tax credits.

This section includes a few of the many green standards that are highly encouraged to be used within the Civic Center complex.

- High efficiency lighting:
  - ~ *The installation of high efficiency lighting, such as CFLs (compact fluorescent lighting), greatly reduces energy consumption.*
- Low energy cooling system, such as engineered HVAC systems with tight HVAC Ducts
  - ~ *Low energy HVAC systems that are installed with tight ducts increase the efficiency in heating and cooling the building.*
- Improved drywall, insulation, and sealing installation
  - ~ *Proper installation helps to maintain the desired temperature inside the building, lessening the dependence on mechanical heating and cooling systems.*
- Cool roofs
  - ~ *A cool roof reflects and emits the sun's heat back to the sky instead of transferring it to the building below. "Coolness" is measured by two properties, solar reflectance and thermal emittance. The higher the value, the "cooler" the roof. By limiting heat penetration into the building, dependence on mechanical cooling systems can be reduced. Rooftop gardens function in this manner.*
- Dual-glazed LoE2 windows with high-efficiency glazing (SHGC and U-value ‹ 0.40)
  - ~ *Dual-glazed Lo E2 windows limit heat and coldness penetration, therefore reducing the need for mechanical heating and cooling.*

In addition, other energy efficient design elements are encouraged. Such elements include, but are not limited to:

- On-site renewable energy systems (PV solar panels and solar water heaters)
  - ~ *Roof-integrated photovoltaic cells can be used to offset energy consumption.*
- Natural Ventilation – Window Placement and Building Orientation
  - ~ *Proper window placement and building orientation allows for natural ventilation, thus lessening the dependence on mechanical cooling systems.*
- Architectural shade elements
  - ~ *Architectural shade elements (such as overhangs and awnings) protect against excess sun from entering buildings, keeping them cool during the hot summer months.*

Reduction of Non-Renewable Resources

The reduction of non-renewable resources is an important aspect of green design. Such reduction practices include, but are not limited to:

- Utilization of Environmentally Preferable Building Materials
  - ~ *Environmentally preferable building materials such as non-virgin, renewable, and recyclable materials aid in the reduction of non-renewable resources.*
- Construction and General Waste Recycling Program
  - ~ *On-site recycling and/or donation of scrap materials to local charitable organizations greatly reduce construction waste.*
- Low-flow Water Fixtures
  - ~ *Low-flow water fixtures limit the amount of water used on a per-building basis.*

California-Appropriate Landscape Practices

Elements of California-appropriate landscape practices include, but are not limited to California-friendly landscape, water-conserving irrigation practices, and energy conservation. These practices include but are not limited to:

- Water-Wise and California-Friendly Landscape
  - ~ *California-appropriate vegetation that reduces the use of water may be incorporated into the Civic Center's landscaping. See Section 9 - Landscape Guidelines for the Master Plant Palette.*
  - ~ *Plants with high water demand are encouraged to be located in shade areas or near creek and open drainage areas.*
  - ~ *The use of turf grass should be limited to active use areas only. Groundcovers and drought-tolerant grasses that require less water should be used in non-active areas.*
  - ~ *Plants of similar water requirements shall be grouped to allow more effective use of irrigation.*
  - ~ *The extensive use of mulch, decomposed granite, or gravel is encouraged in landscape areas to improve water-holding capabilities of soil through reduced evaporation and compaction.*
- Water-Conserving Irrigation Practices
  - ~ *Utilizing point-irrigation systems is encouraged to allocate more efficient delivery of water to root systems and minimize run-off.*
  - ~ *Utilizing master irrigation systems (smart systems) with moisture sensors is encouraged to ensure irrigation watering is based on actual need for irrigation watering and to allow a greater level of control in the management of irrigation.*
  - ~ *Using recycled water in large, public open spaces is encouraged.*
- Energy Conservation through Landscape Design
  - ~ *Community and Civic Center area landscapes are encouraged to be designed to assist with energy conservation, including planting deciduous trees next to buildings and along streets to reduce ambient temperature, reduce heat gain, allow for cool natural ventilation, and provide a more pleasant pedestrian environment.*
  - ~ *Deciduous trees and vines are encouraged to be planted in front of south-facing walls and windows to further cool buildings by intercepting sunlight during summer months, yet allow direct sunlight during the winter.*
  - ~ *Green screens (lattices planted with vines and/or climbing flowers) are encouraged to shade south and west-facing walls to reduce interior heat gain and beautify buildings.*
  - ~ *Trees with appropriate heights and spreads are encouraged to provide ample shade in the summer months for outdoor spaces such as plazas, pedestrian walkways, roadways and parking lots are encouraged. Structures such as trellises and porticoes may also be incorporated into the building/landscape edge, especially on south and west-facing exposures, to provide shade in the summer and allow solar penetration when the sun is at a low angle in the winter.*
  - ~ *Landscape buffers, screens and windrows are encouraged to be located so they facilitate cooling by prevailing breezes in summer months are encouraged.*

LANDSCAPE DESIGN GUIDELINES

Section 9.0

January 2012

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COMMUNITY LANDSCAPE 9.1

The following design guidelines establish a hierarchy of the landscape design principles for Serrano Summit and its surrounding roadways. Careful attention is given to creating an appropriate and appealing landscape design that complements and enhances the overall character of Serrano Summit. All landscape plans, streetscape plans, and graphic designs with regard to community identity, neighborhood identity, or entry monumentation shall conform to the guidelines as set forth herein, and will be subject to review and approval by the City of Lake Forest.

LANDSCAPE THEME 9.2

The goals of the community landscape at Serrano Summit are as follows:

- A master landscape theme that complements the internal Land Use Plan;
- Take advantage of the idyllic site;
- Promote and preserve long distant views and vistas;
- Work organically with the natural surrounding hillside and vegetation;
- Promote a feeling that you arrived at "somewhere special," a place that has preserved the past;
- Environmentally sensitive and California friendly;
- Landscape to be California-friendly and a leader in "water wise" design;
- Promote lifestyle activities which "blur" the separation between indoor and outdoor spaces; and
- Display remnants of an Early California Rancho. These subtle expansions authentically inspired by the land's Spanish roots.

The landscape theme for the Serrano Summit community should work hand-in-hand with the Site Plan. This community is an infill development that has spectacular views which the Land Use Plan strives to promote and preserve. The landscape design should complement and reinforce that direction. The landscape, which includes site amenities, hardscape and softscape elements, should promote a consistent theme. (See Exhibit 9-1, Community Landscape Features, and Exhibit 9-2, Conceptual Landscape Master Plan.)

The theme for Serrano Summit is Early California, celebrated by preserving small pockets or remnants of Spanish stylistic roots. The natural riparian vegetation from Serrano Creek will be expanded and incorporated into the community from the North. The low-growing, native "hillside vegetation" will transition into the project from the western and southern slopes. This approach will help integrate the community with its surroundings and promote a "well rooted," organic and established appearance typical of Early California Spanish design.

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INDIAN OCEAN DRIVE
DRIVE
COMMERCENTRE
BISCAYNE BAY DRIVE
INTERNAL SLOPES
Trees
Vary depending on "District"
Shrubs
Agave attenuata N.C.N
Anigozanthos manglesii Kangaroo Paw
Bougainvillea 'Hawaii' Variegated Bougainvillea
Carissa grandiflora 'Boxwood Beauty' Natal Plum
Feijoa sellowiana Pineapple Guava
Leucophyllum laevigatum Chihuahuan Sage
Lomandra longifolia Breeze Dwarf Mat Rush
Rhaphiolepis species Indian Hawthorne
Rosmarinus o. 'Prostratus' Trailing Rosemary
Senecio mandraliscae N.C.N.
RIPARIAN ZONE FUEL MODIFICATION
Trees
Alnus rhombifolia White Alder 18/22
Heteromeles arbutifolia Toyon 8/10
Platanus racemosa California Sycamore 16/19
Quercus agrifolia Coast Live Oak 14/16
Shrubs
Artemisia caucasica Caucasian Artemisia
Baccharis salicifolia Mulefat
Ceanothus species N.C.N.
Eschscholzia californica California Poppy
Fremontodendron californicum California Flannelbush
Ribes speciosum Flowering Gooseberry
EXISTING TREES (TYP.)
REGIONAL TRAIL
OFF-SITE EXISTING CHAPARRAL & GRASSLAND (TYP.)
COMMUNITY ENTRY & MONUMENTATION @ INDIAN OCEAN DRIVE
PROPOSED CIVIC CENTER SITE
ENHANCED LANDSCAPE STREET FRONTAGE
ICONIC INTERSECTION
SECONDARY NEIGHBORHOOD MONUMENTS (ALL 4 CORNERS)
PRIVATE RECREATION AREA
COMMUNITY ENTRY & MONUMENTATION @ 'A' STREET
PASSIVE PARK
MANUFACTURED OUTBOARD FUEL MOD SLOPES
Trees
Cercis mexicana Mexican Redbud 11/13
Heteromeles arbutifolia Toyon 8/10
Platanus racemosa California Sycamore 16/19
Quercus agrifolia Coast Live Oak 14/16
Sambucus mexicana Mexican Elderberry 10/14
Shrubs
Agave attenuata N.C.N.
Alyogyne huegelii Blue Hibiscus
Artemisia caucasica Caucasian Artemisia
Baccharis 'Centennial' Coyote Brush
Ceanothus species N.C.N.
Cistus hybridus Rockrose
Eschscholzia californica California Poppy
Mimulus species Monkeyflower
Opuntia littoralis Prickly Pear
Quercus dumosa Coastal Scrub Oak
Rhus species Sugar Bush
MSE WALLS
Shrubs
Bougainvillea 'Hawaii' Variegated Bougainvillea
Eschscholzia californica California Poppy
Lantana sellowiana 'Momma' White Lightin' Trail Lantana
Lomandra longifolia Breeze Dwarf Mat Rush
Rosmarinus o. 'Prostratus' Trailing Rosemary
Myoporum parvifolium Myoporum
CALIFORNIA FRIENDLY HILLSIDE FUEL MODIFICATION
Trees
Platanus racemosa California Sycamore 16/19
Quercus douglasii Blue Oak 15/17
Rhus lancea African Sumac 13/16
Sambucus mexicana Mexican Elderberry 10/14
Shrubs
Artemisia caucasica Caucasian Artemisia
Baccharis 'Centennial' Coyote Brush
Ceanothus species N.C.N.
Eschscholzia californica California Poppy
Hesperaloe parviflora Red Yucca
Lupinus bicolor Sky Lupine
Nassella (Stipa) pulchra Purple Needlegrass
Opuntia littoralis Prickly Pear
Yucca whipplei Our Lord's Candle
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GENERAL LANDSCAPE CRITERIA 9.3

General Provisions

1. All landscape plans shall comply with the City's Water Efficiency Landscape Ordinance (Ordinance 207). All landscape and irrigation plans for streetscapes and graphic designs with regard to the identity of Serrano Summit, neighborhood identity or entry monuments shall conform to the Design Guidelines and regulations as set forth herein and shall be subject to Design Review by the City of Lake Forest. The form and content of landscape plans for streets, parks, and other common areas shall conform to City application requirements.
2. The design and improvement of all public parks, open space, paseos and trail, including landscape and irrigation plans, within Serrano Summit shall be reviewed and approved by the City of Lake Forest Parks Department.
3. Installation of landscaping and automatic irrigation within the front yards of all residential areas shall be provided by the home builder. At a minimum, the builder will install ground cover and appropriate shrubs and trees in the front yards of homes within residential areas, consistent with landscape plans approved during the site development plan or use permit process. At a minimum two trees shall be installed, of which at least one, is a shade tree. A variety of front yard landscape designs shall be provided by the developer for use by homeowners. Within single family attached residential areas the builder shall be responsible for the installation of full landscape improvements within the development. Areas not used for hardscape shall be landscaped. All landscape plans shall be reviewed and approved by the City of Lake Forest and shall be designed to incorporate water conservation measures.

Landscape Standards

1. Landscaping within Serrano Summit shall be provided in accordance with the Landscape Design Guidelines, utilizing plant materials specified on the Master Plant Palette included in Section 9.16. Boundary landscaping will be required adjacent to residential areas. Landscaping shall generally be placed along the entire perimeter property line or on manufactured slopes between properties.
2. Landscaping and automatic irrigation systems within the public rights-of-way of Serrano Summit shall be installed by the developer.
3. Freestanding perimeter walls and view fencing shall be provided within, and at the perimeter of, Serrano Summit as specified in Section 9.13, Walls and Fences. Such walls and fences will be constructed concurrently with the construction of improvements required for development of the neighborhoods of the Serrano Summit boundaries.
4. Perimeter walls shall be constructed in locations and of a design consistent with the "Fence and Wall Plan" and "Block Wall" exhibits located in Section 9.13, Walls and Fences. Perimeter walls shall not exceed six feet in height from finished grade. If required for sound attenuation, perimeter walls may exceed six feet in height but must be constructed using transparent material, subject to the recommendations of an acoustical study and approval by the City. Perimeter walls shall be constructed of either masonry or other permanent, durable, low maintenance material. Thematic perimeter fencing shall be constructed of all durable materials, which may include materials with a wood-like appearance, or tubular steel subject to approval by the City. In no instance shall wooden fencing be permitted along perimeters.
5. Individual residential lot side and rear yard walls and fencing shall not exceed six feet in height from highest adjacent finished grade. Side and rear walls may exceed six feet (6') in height if required by the City of Lake Forest for sound attenuation pursuant to the recommendations of an Acoustical Report. Walls and fencing within the residential front yard setback area shall not exceed three feet in height. Side and rear yard walls shall be of decorative masonry construction on both sides of the wall or other permanent low maintenance materials. Front yard fences may be constructed of wood or any other durable materials with a wood like appearance, subject to approval by the City. View fencing may be of a decorative wrought

iron, tubular steel/aluminum glass panels, or other durable material approved by the City.

6. All perimeter wall and fence materials throughout Serrano Summit will be of uniform manufacture with colors specified for the overall design theme.
7. Non-toxic vegetation shall be utilized adjacent to all public open space areas to the extent feasible.
8. Landscape design shall emphasize the planting of long-lived plant species that are native to the region or well adapted to the climatic and soil conditions of the area.
9. The landscape design should help create and reinforce the distinct character of various features within the natural and man-made environments.
10. The landscape treatment of all areas shall emphasize the planting of shade trees in both formal and informal groupings throughout the community.
11. The use of non-invasive, California-friendly plant materials that are climate-appropriate shall be utilized where appropriate.
12. Landscape plans for any development shall consider service lines, traffic sight line requirements, and structures on adjacent properties to avoid conflicts as trees and shrubs mature.
13. Street trees and trees planted near walkways or street curbs shall be selected and installed to prevent damage to sidewalks, curbs, gutters and other improvements.
14. Plants with high water demand are encouraged to be located only in areas where runoff naturally occurs.
15. The use of turf grass should be used in active use areas only. Groundcovers and drought-tolerant grasses that require less water should be used in non-active areas.
16. Planting design (species, quantity, size and spacing) shall achieve a minimum of 70% ground plane coverage within two (2) growing seasons from installation.
17. The ground plane shall be covered with a minimum 2" layer of decorative material to improve water-holding capabilities of soil through reduced evaporation and compaction.
18. The use of decorative gravel is encouraged as a design element to offer a variety of colors and texture within landscape areas. The size of the material is to be suitable so as to remain in place once it has been installed.
19. Install a 12" minimum border of decomposed granite/decorative gravel along back of curb within the parkway to minimize irrigation overspray into the gutters.
20. Public/private areas shall be separated with a 6" by 6" concrete mow strip when adjacent to private property.
21. Turf areas shall be sized and shaped to optimize irrigation efficiency. Turf type and location shall be selected in the same manner as other plantings. Turf shall not be treated as a fill-in matter but rather as a planned element of the landscape. All turf areas shall be on separate irrigation zones. The following conditions shall apply:
    a. *No turf may be used on slopes greater than 4:1.*
    b. *No more than 50 percent of homeowner's property outside the building envelope shall be planted with turf; this reduces water usage by requiring a greater amount of private landscape to utilize a climate-appropriate landscape palette.*
    c. *Turf should only be used in active areas.*
    d. *Turf areas less than eight (8) feet wide on the shortest side shall be irrigated with subsurface irrigation or micro spray heads.*
    e. *Irregular shapes that cannot be irrigated efficiently shall be avoided.*
    f. *Artificial turf shall be permitted within Serrano Summit planning areas, with the exception of areas designated as Open Space (i.e., Planning Area 18).*

IRRIGATION PRACTICES AND DESIGN 9.4

Irrigation for both public and private landscapes should be designed to be water-efficient and water-wise. All irrigation systems shall be designed to properly water plant materials given the site's climate and soil conditions. The following is a list of some of the guiding principles for an appropriate irrigation system design:

- All public areas and rights of ways shall have automatic irrigation systems and shall be compatible with reclaimed water systems.
- Utilizing a weather-based master irrigation controller system that employs current weather data and a rain shut-off devise to ensure that the irrigation schedule is based upon actual "real time" plant needs. This allows for a greater level of control within the irrigation system and minimizes potential water waste.
- Utilization of point-irrigation (drip) systems is encouraged to allocate more efficient delivery of water to root systems and minimize run-off.
- The use of overhead spray heads is discouraged in non-turf applications. The use of point irrigation or sub-surface irrigation dripline root zone irrigation system negates overspray and reduces water waste.
- Spray systems shall have low volume (gpm) matched-precipitation heads.
- Turf areas shall be irrigated with equipment that has a precipitation rate of one (1) inch or less per hour as specified by the manufacturer. Stream rotator heads are preferred; use of standard spray heads shall be avoided.
- All irrigation products specified shall achieve an irrigation operational distribution uniformity of 70% or greater in all turf areas and 80% in all other landscaped areas.
- Using reclaimed water in large, public open spaces is highly encouraged, if available.
- Design irrigation system based upon solar exposure. Irrigation heads should be grouped in South/West and North/East exposures. This ensures that heads with similar sunny exposure will be grouped together on the same valve and heads with similar shaded exposure will be grouped together.
- All major tree groupings shall have an additional support irrigation system providing water to each individual tree utilizing a flush grade bubbler system on a separate valve in order to more efficiently manage water demand.

LANDSCAPE TREE DISTRICTS 9.5

To ensure that the concept and theming established for the community as a whole extends to the residential neighborhood level (above and beyond the parks and gardens that are required), Serrano Summit has been divided into landscape tree districts (see Exhibit 9-3, Landscape Tree District Plan) that are comprised of multiple planning areas.

While community-wide landscaping criteria will provide a visual continuity throughout the community, a collection of defined landscape tree districts have been established to distinguish specific neighborhoods, collections of neighborhoods, or other specialized zones. Each landscape tree district will establish criteria reinforcing its unique characteristics and thematic elements within the context of the larger community.

A landscape tree district may be defined by the characteristics of an area's:

- Predominant architectural theme
- Location and proximity to natural open space areas or other significant site features
- Specific land uses (residential, public facility, Civic Center)

Subtle variations in landscape will occur between landscape tree districts, creating a distinguishable and unique sense of place for each district.

All landscape tree district criteria shall be complimentary to the overall community landscape concept.

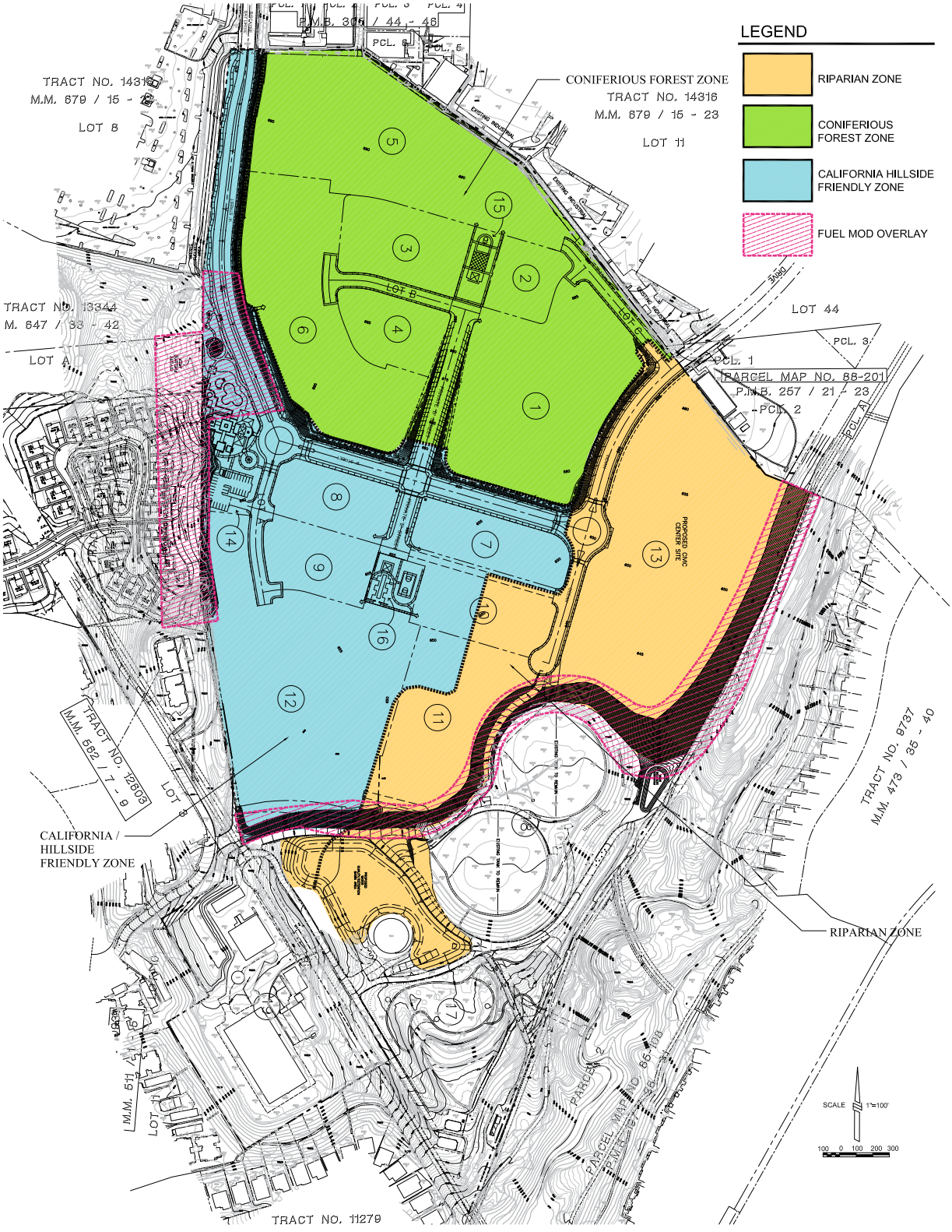
The Serrano Summit community is divided into several distinct "Tree Neighborhood Zones." The intent of these "Tree Zones" is to help reinforce each district's own sense of unique identity while still strengthening the overall community's theme. These zones are designed to simulate nature and blend into the overall regional viewshed. They are also based on geographic factors such as elevation, slope orientation, canyons, as well as proximity to significant groves of existing native trees. Each "Tree Neighborhood Zone" has its own tree palette of related tree species which are visually compatible based on form, pattern, texture and color. All internal street trees and 75% of all trees located on manufactured slopes, transition areas and fuel modification zones shall be from the designated tree palette for that neighborhood zone. The remaining 25% of trees, along with all trees on buildable pad areas, may be selected from the overall landscape plant palette. This concept provides a simple method of precluding a "patchwork" effect from lot to lot, helps to unify the landscape framework, and provides some diversity while avoiding mono-culture.

Riparian Zone

California Hillside Zone

Coniferous Forest Zone

LANDSCAPE TREE DISTRICT PLAN EXHIBIT 9-3



TIERED LANDSCAPE PROGRAM 9.6

Landscaping for Serrano Summit shall follow a tiered planting concept as shown in General Tiered Planting Requirements Table (see Table 9-1). This concept shall be consistent throughout the community, from perimeter streetscape design to residential front yards. Using different scales, forms, colors, and/or textures of plant materials, tiered – or layered and promotes interest and diversity. The application of tiered planting is required to enhance the visual character of the project by softening the appearance of walls and fencing along major community roadways. The tiered concept shall also be applied at the neighborhood level (along collector and local streets) and in front of individual residential units or multifamily housing projects. A selection of acceptable planting materials is found in the Master Plant Palette (see Section 9-16).

TABLE 9-1
GENERAL TIERED LANDSCAPING REQUIREMENTS

LAYER	DESCRIPTION	SIZE
Layer A	Low spreading groundcover (1) (including turf or turf substitute)	Under 12" height
Layer B	Low mounding shrub/ groundcover (1)(2) (informal mass planting)	12"-30" height
Layer C	Low hedge (formal - linear)	12"-30" height
Layer D	Medium shrub (2) (informal mass or hedge)	24"-48" height
Layer E	Large shrub (2) (informal mass or hedge)	42"-60" height
Layer F	Vertical (growth habit columns rather than horizontal)	42"-72" height
Accent	Strategically located specimens	Varies

FOOTNOTES

1. Groundcover material shall be permeable and able to retain moisture in the root zone, as well as reduce dust and weeds. Examples of appropriate ground plane materials include decomposed granite (3/8" minus with 11% fines), fractured gravel (3/4"-1"), fractured rock (2"-6"), river rock (4"-9"), shredded bark, and ornamental grass.
2. Shrubs shall be a minimum of 5-gallons in size; in any "multi-layer" scheme. For shrubs serving as the first (shortest) layer, a 1-gallon shrub size or rooted cutting is acceptable.

The Specific Tiered Landscaping Requirements Table (see Table 9-2), provides details on how to approach multi-layered landscaping in front and side yards, slopes and large open spaces.

TABLE 9-2
SPECIFIC TIERED LANDSCAPING REQUIREMENTS

PLANTER WIDTH	NUMBER OF LAYERS REQUIRED		
LAYER	FRONT YARDS	STREET-ADJACENT SIDE YARDS	SLOPES & LARGE OPEN SPACE
18"-30"	1	1	1
30"-48"	2	2	1
48"-60"	2 or 3	2	1
60" & up	3	3	-
5'-12'	-	-	2
12' & up	-	-	2 or 3

Accent planting is encouraged depending on length of planter and could, depending on its use, count as a layer.

STREETSCAPE DESIGN 9.7

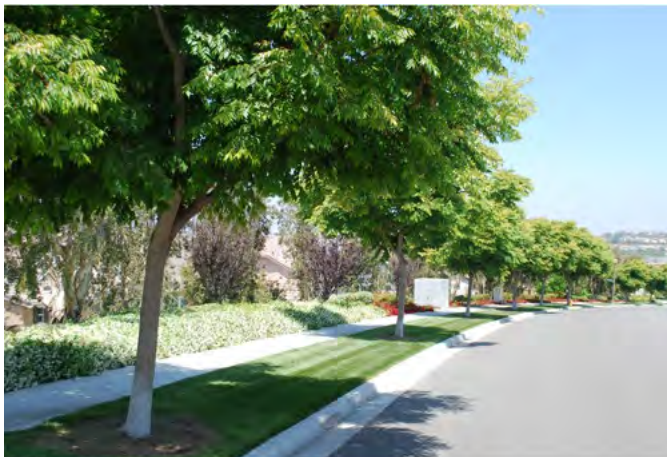
Landscape design plays a crucial role in effective street design that goes beyond form and aesthetics. Streetscape connects neighborhoods allowing a smooth circulation of both vehicular and pedestrian traffic. It addresses comfort, safety, security and accessibility for residents and visitors. Streets in neighborhoods will be designed to be enjoyable, walkable and interactive to pedestrians. The streetscape hierarchy consists of two levels of streetscape design: Community- and neighborhood-level streetscape (see Exhibits 9-4 to 9-10).

Community-level streetscapes/street tree patterns shall de designed in a manner to define the unique character of the Serrano Summit community.

Neighborhood-level streetscapes shall be designed to reinforce the more intimate character of residential areas.

In some areas within the community, corners of adjacent residential lots shall be thematically landscaped for transition into neighborhood and community spaces. Wall treatments will become more visually distinct with decorative pilasters accentuated by accent trees and plants. Trees shall be strategically located to not interfere with driving visibility.

Refer to streetscape tree list (see Table 9-3) for exact tree species for each street within Serrano Summit.



Community-Level Streetscape Design

Streetscape design guidelines establish a hierarchy for the landscape development along the collector roadways, as well as establishing a framework for consistency of design. Three collector streets service the Serrano Summit community: 'A' Street, 'B' Street, and Indian Ocean Drive. (See Exhibits 9-4 to 9-6)

The following criteria shall be followed:

- All collector streets shall be planted in accordance with the Serrano Summit streetscape design.
- Street trees will be at a minimum size of 24" box in size.

TABLE 9-3
STREETSCAPE TREE LIST

BOTANICAL NAME	COMMON NAME	PERIMETER ROAD 'A'	PERIMETER ROAD 'A' BACKGROUND/UNDERSTORY	"B" STREET	"B" STREET BACKGROUND/UNDERSTORY	INDIAN OCEAN STREET TREE	INDIAN OCEAN BACKGROUND/ UNDERSTORY	PRIVATE 'D' STREET	INTERIOR NEIGH. STREET TREE/ RIPARIAN ZONE	INTERIOR NEIGH. STREET TREE/ CA. HILLSIDE ZONE	INTERIOR NEIGH. STREET TREE/ CONIFEROUS FOREST ZONE	ACCENT POINTS	CORNER TREATMENTS	ALLEY
Acacia smallii	Sweet Acacia									•				
Arbutus 'Marina'	Strawberry Tree				•									•
Callistemon viminalis	Weeping Bottle Brush									•				•
Cedrus deodara	Deodar Cedar										•	•		
Cercis mexicana	Mexican Redbud		•											
Cercidium h. 'Desert Museum'	Thornless Hybrid Palo V.									•				
Chitalpa tashkentensis 'Pink Dawn'	Chitalpa											•		•
Cinnamomum camphora	Camphor Tree					•	•							
Cupaniopsis anacardioides	Carrotwood								•					
Cupressus sempervirens	Italian Cypress											•		•
Dracaena draco	Dragon Tree		•									•		
Lagerstroemia farnesia 'Hybrids'	Crape Myrtle									•	•	•		
Magnolia grandiflora 'D.D. Blanchard'	Southern Magnolia										•			
Melaleuca quinquenervia	Cajeput Tree								•					
Pinus canariensis	Canary Island Pine										•			
Pinus eldarica	Afghan Pine										•			
Pinus pinea	Italian Stone Pine										•			
Platanus acerifolia 'Bloodgood'	London Plane Tree			•						•				
Platanus racemosa (1)	California Sycamore	•					•		•					
Prosopis glandulosa 'Thornless'	Thornless Texas Honey Mesquite									•				
Pyrus calleryana 'Aristocrat'	Aristocrat Flowering Pear											•		•
Quercus agrifolia (1)	Coast Live Oak								•	•				
Rhus lancea	African Sumac									•				
*Schinus molle	California Pepper Tree	•												
Tipuana tipu	Tipu Tree							•						
*Tristania conferta	Brisbane Box		•		•		•				•			
Ulmus parvifolia 'True Green'	Evergreen Elm											•		
Umbellularia californica (1)	California Bay								•					

(*) Denotes trees that are to be avoided in wind prone areas.

(1) Denotes trees that are native to California.

- Root barriers will be used, as necessary, to discourage root growth invasion on pavement.
- Average street tree spacing shall not exceed 30' o.c.
- All trees and plant materials shall correspond with the approved trees and plant list to reinforce community theme.
- All trees planted within turf areas will require arbor guards to prevent damage to the trunk.
- Understory trees and shrub masses should be planted in series of tiered layering (foreground, midground, background) to help define borders and plant groupings while combining interesting foliage textures and color.
- Background and screen trees shall be strategically planted behind sidewalks to help create a green backdrop supporting the street tree canopy.

Landscape development surrounding the community will help to establish the character, while maintaining consistency with the City of Lake Forest.

Neighborhood-Level Streetscape Design

Neighborhood-level streetscape design within Serrano Summit shall be consistent in character with the community-level streetscapes and should promote pedestrian circulation throughout the community. The Neighborhood-level Streetscape Design shall consist of the following elements:

- Private Drive Streetscapes
- Private Alley Streetscapes
- Unique or Special Streetscape Scenarios

Private Drive Streetscape

The landscape design should reinforce the distinct character of the neighborhood (or landscape tree districts) while still continuing the expression of the overall community image, and provide efficient pedestrian and vehicular circulation routes (See Exhibit 9-9).

The neighborhood streetscape should include:

- All trees and plant materials will correspond with the approved trees and plant list to reinforce community theme.
- Street trees will be at a minimum of 24" box with required caliper and dimension standards.
- Root barriers will be used to discourage root growth invasion on pavement.
- There should be strong connections between "Community Core" and neighborhood identity.
- Sufficient space must be provided between driveways and garden walls to allow for the growth of the tree trunks
- Thorn trees must be avoided in areas where children play or ride bicycles.
- Appropriate sized tree canopies scaled to fit the specific street as required. Small and medium sized canopy shade trees are encouraged.

Private Alley Streetscape

Private lanes shall include a landscaped area on both sides of the lane when the paved area is a maximum of 24' in width (See Exhibit 9-10 and 9-11). The following criteria is to be followed wherever feasible:

Condition 1

When planter is less than 24" deep, provide a vertical decorative metal trellis support with (1) 5 gallon climbing vine and (2) 1 gallon accent shrubs at a minimum.

Condition 2

When a planter is more than 24" deep or greater, provide (1) 5 gallon minimum plant (column form) and (2) 1 gallon accent shrubs at a minimum.

Condition 3

For long linear foundation planters, provide (1) 5 gallon minimum plant (column form) at garage and 5 gallon plants (hedge form) at 24" o.c. for the duration of the building wall. Omit column form plant when planter is 18" to 24" deep.

All trees and plant materials will correspond with the approved trees and plant list to reinforce community theme.

Unique or Special Streetscape Scenarios

This section is intended to address project-specific requirements that are outside of the standard template. Scenarios such as:

- Existing streetscape elements that are to be maintained or enhanced.
- Perimeters or streetscapes that abut large WQMP facilities.

Entry points leading into the community are essential in creating a sense of place and identity for Serrano Summit. Community and neighborhood entry points shall use landscape design elements that reflect a relative hierarchy for entering each area of the community. The landscape design at the entrances shall be representative of the stylistic character of the area's design. The following are methods through which this hierarchy and continuity will be established:

- Entry points shall be accentuated through an enhanced landscape of accent plant material including trees, palms, shrubs and groundcovers.
- Changes in height, texture and color of plant material will highlight visibility, provide a skyline treatment and enhance the entry process thereby introducing the overall landscape, direction and theme of Serrano Summit.
- Size and scope of the project's monumentation program should be reflective of the scale of the project. In smaller projects, primary and neighborhood monumentation may only be required to provide the appropriate sense of entry and the appropriate "way-finding" function whereas larger projects may require the entire scope of monumentation to provide the same function.
- Enhanced accent paving is encouraged at community entrances to define the entrance and provide traffic calming.
- Entry points shall have thematic signage and markers for identity and emphasis. Their design shall remain consistent throughout the entire community.
- Wall treatments on entry points may employ the use of rich colors and materials that ties in with adjacent architecture styles for character.
- Four basic monument treatments are used to create the hierarchy of the entries and monumentation: the Primary Community Entry and Monumentation, Secondary Community Entry and Monumentation, Neighborhood Monumentation and Public/ Civic Monumentation.

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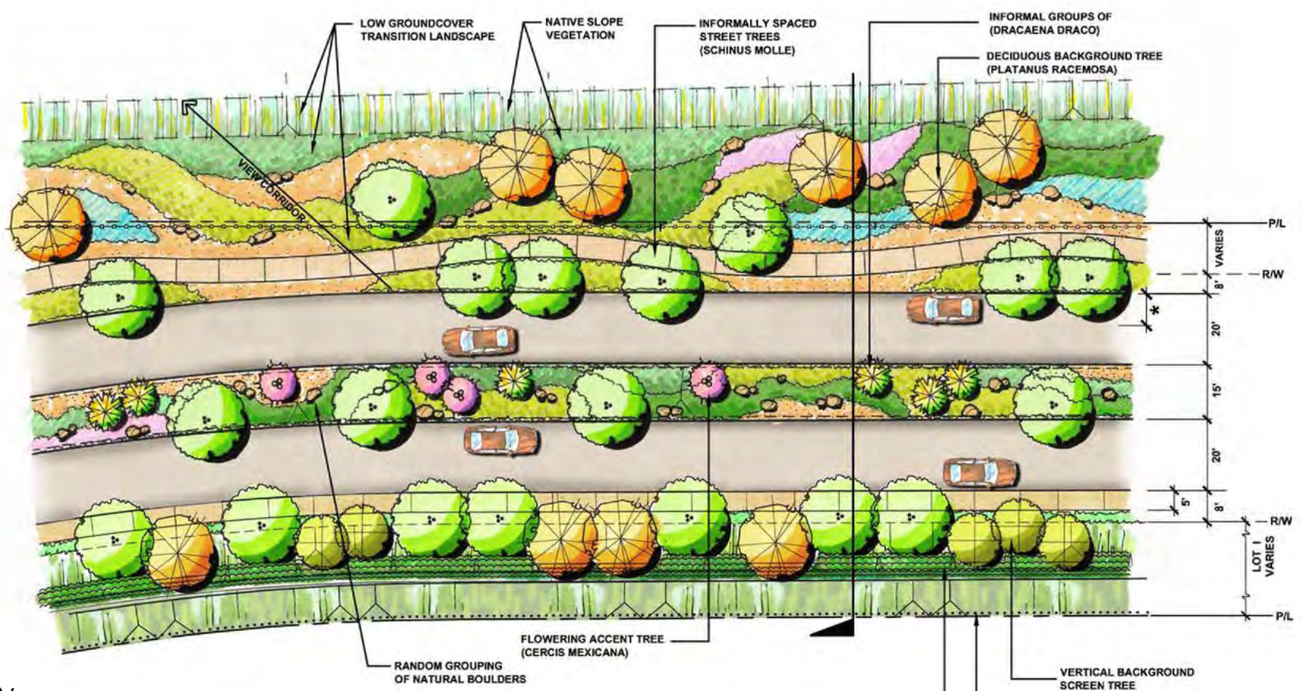

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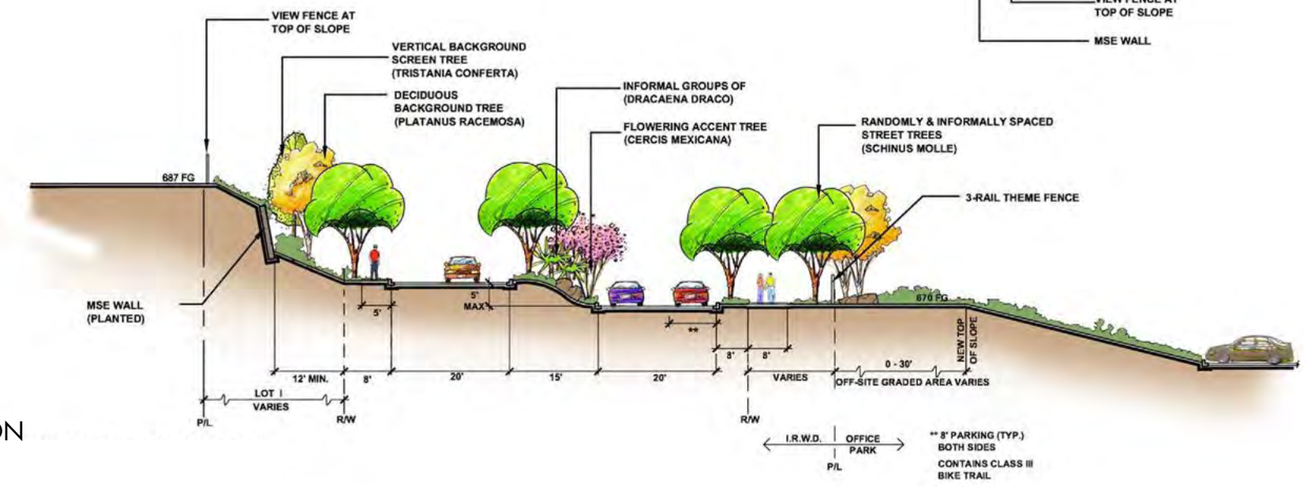

SECTION

Schinus molle
(California Pepper Tree)

Cercis mexicana
(Mexican Redbud)

Dracaena draco
(Dragon Tree)

Platanus racemosa
(California Sycamore)

Tristania conferta
(Brisbane Box)

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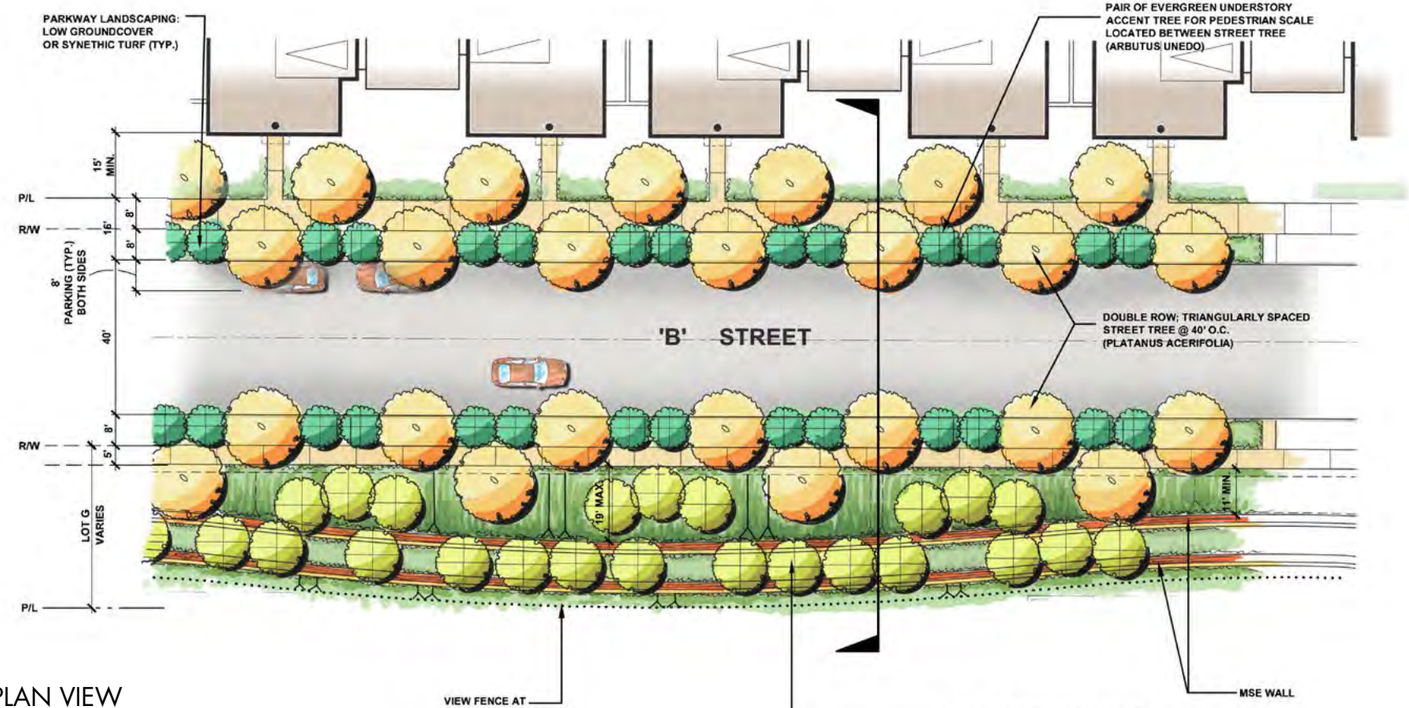

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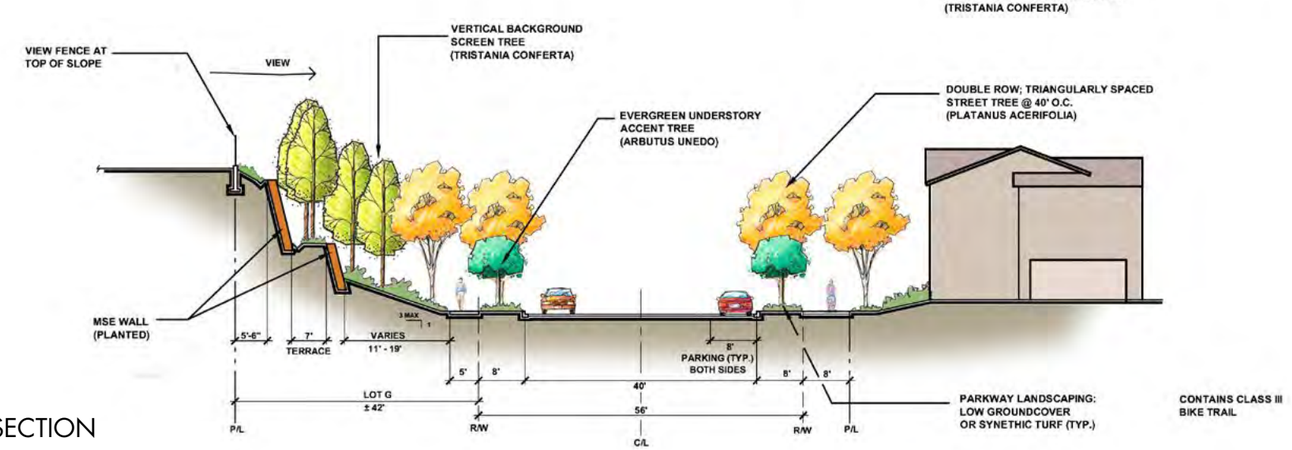

SECTION

Platanus acerifolia
(London Plane Tree)

Arbutus unedo
(Strawberry Tree)

Tristania conferta
(Brisbane Box)

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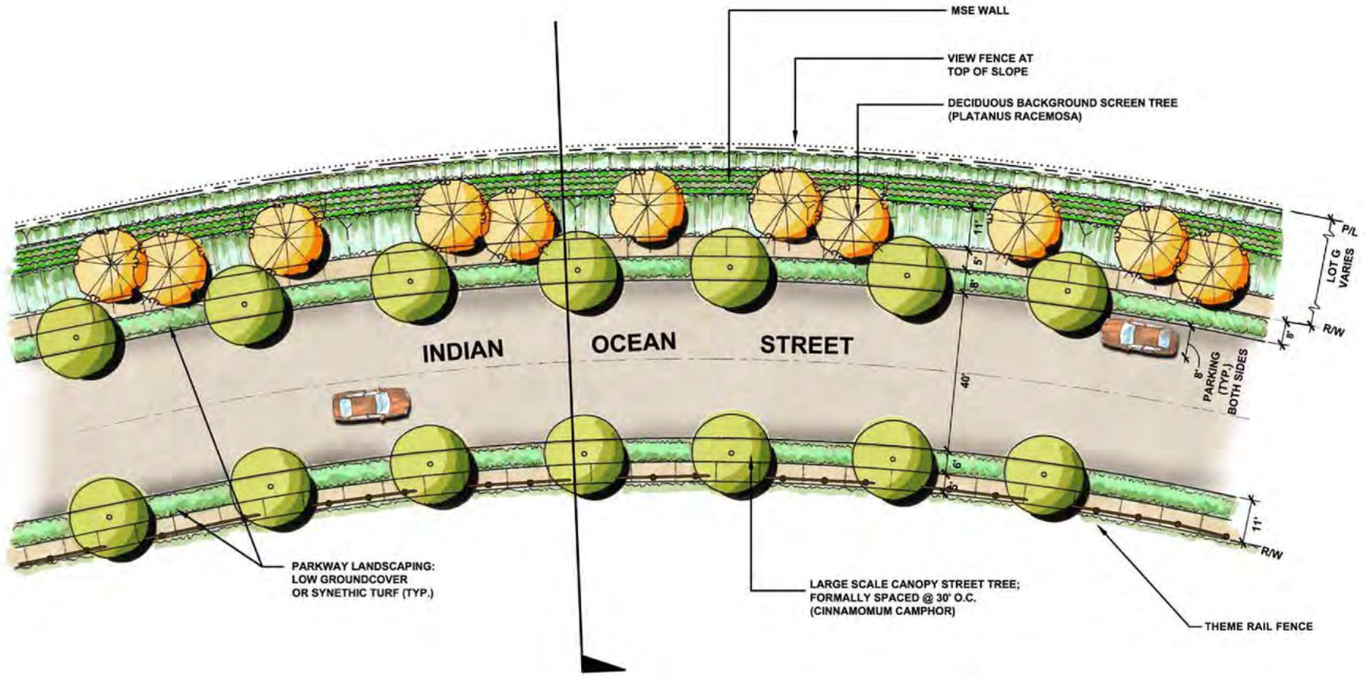
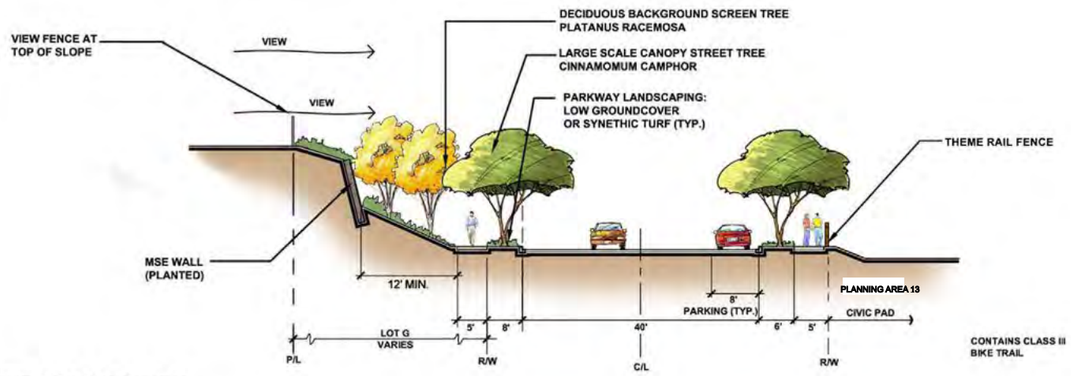


Platanus racemosa
(California Sycamore)



Cinnamomum camphora
(Camphor Tree)

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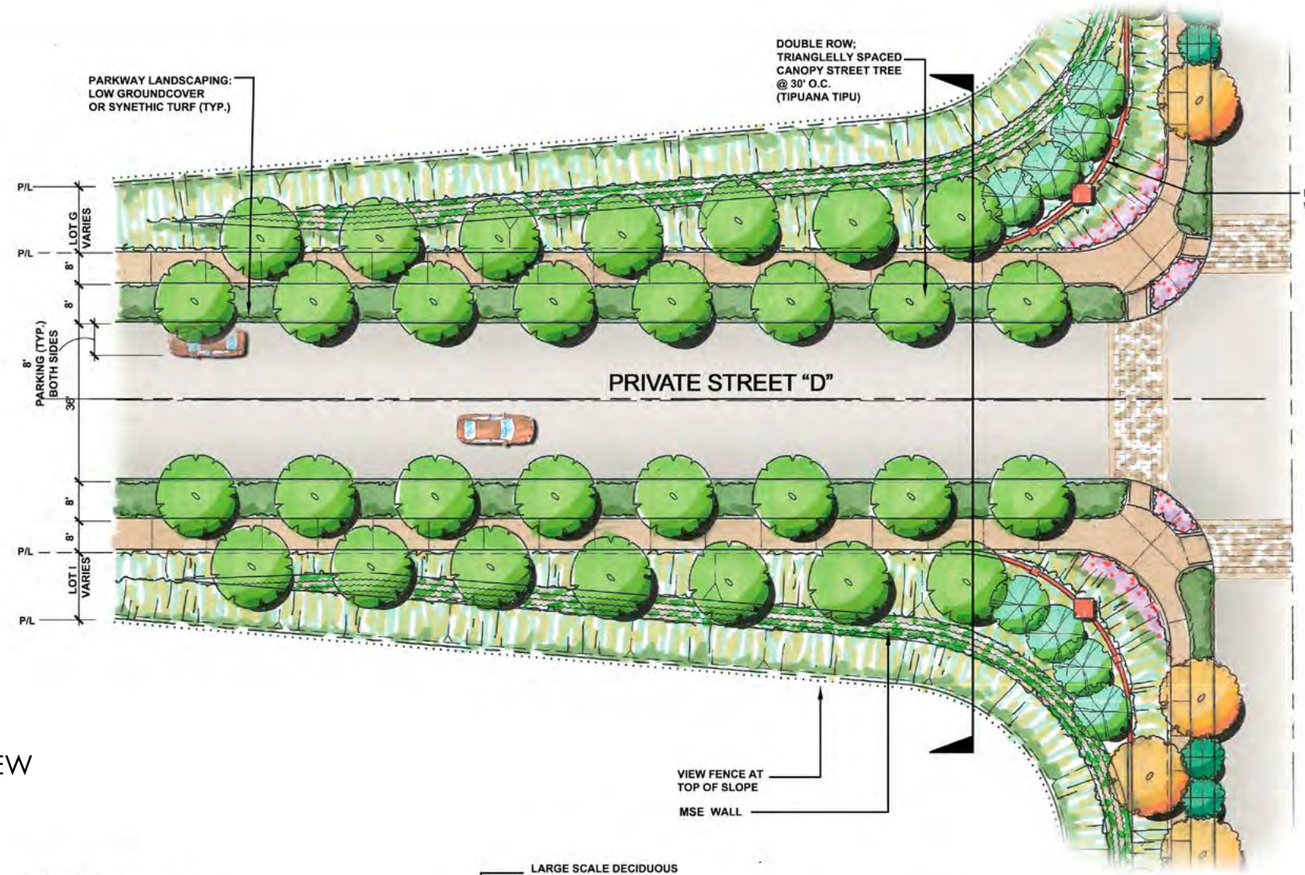

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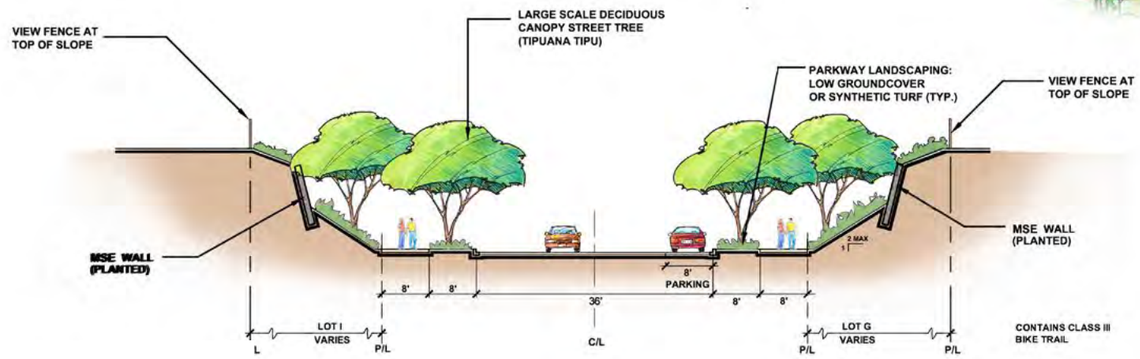

SECTION

Tipuana tipu
(Tipu Tree)

Tipuana tipu
(Tipu Tree)

Tipuana tipu
(Tipu Tree)

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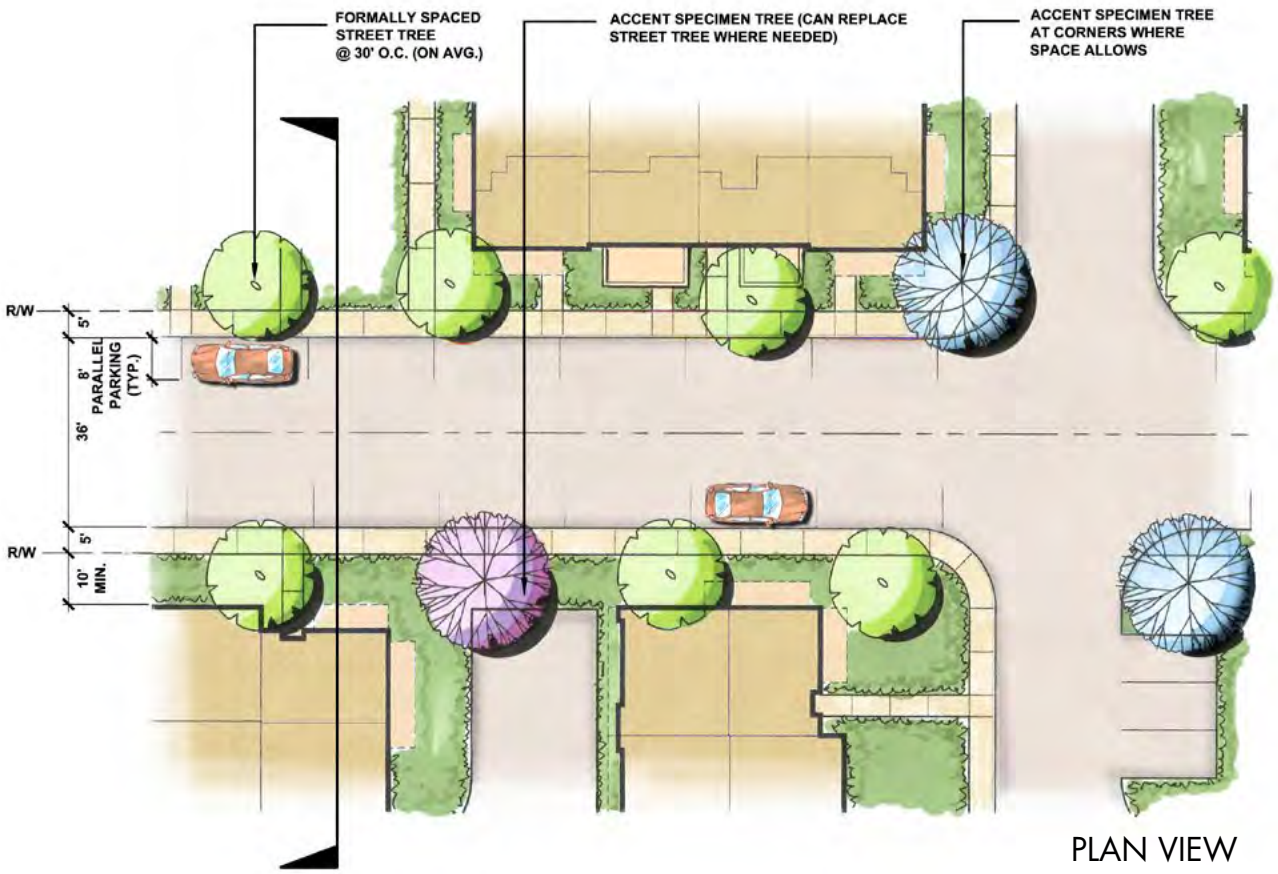
PRIVATE LOCAL STREET STREETSCAPE (WITH ON-STREET PARKING)

EXHIBIT 9-8



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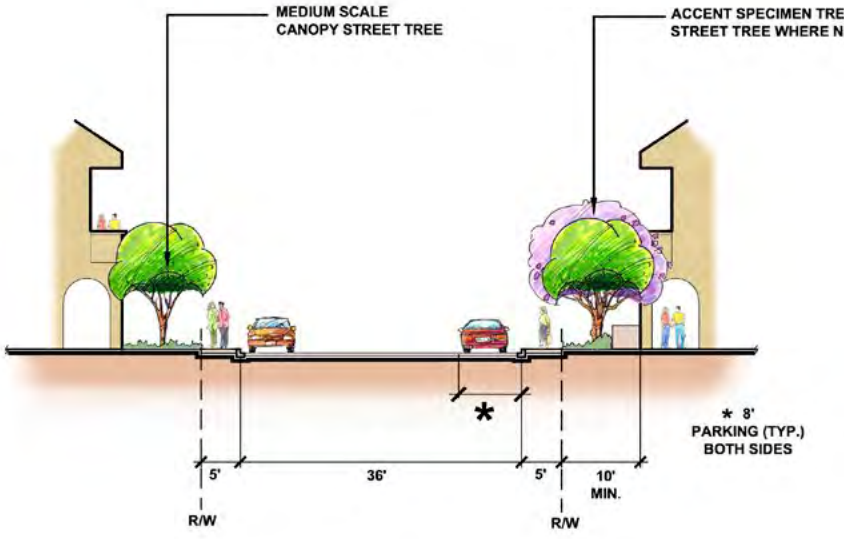
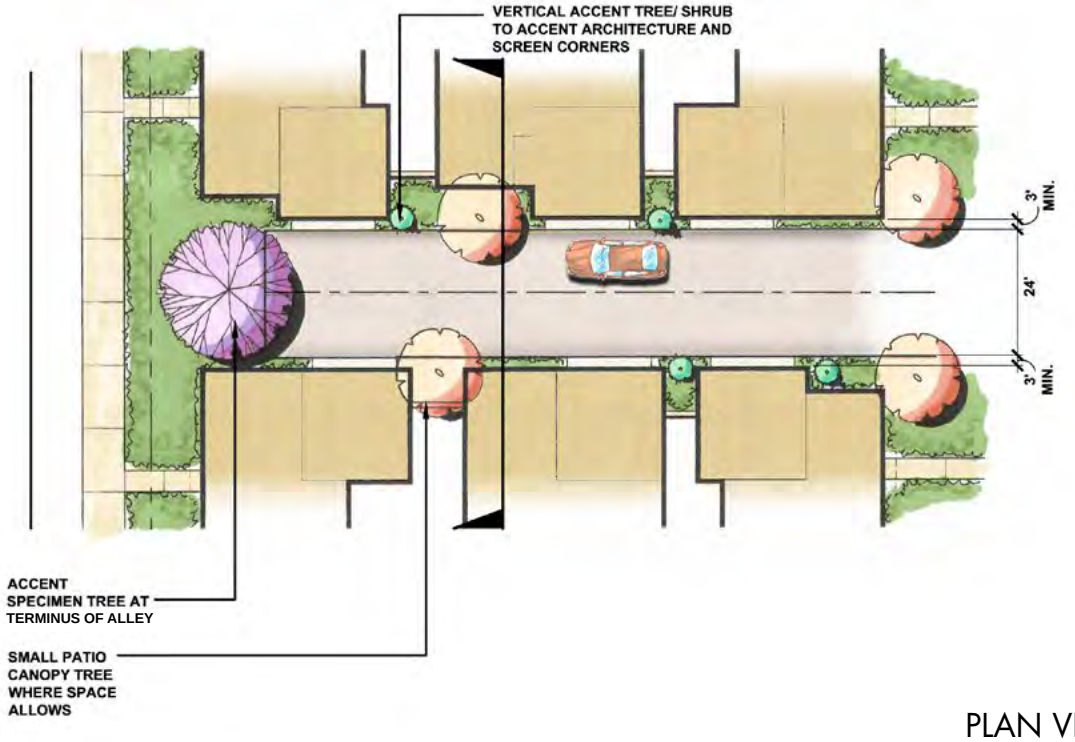


SECTION

PRIVATE ALLEY DRIVE STREETSCAPE - SINGLE FAMILY RESIDENTIAL

EXHIBIT 9-9



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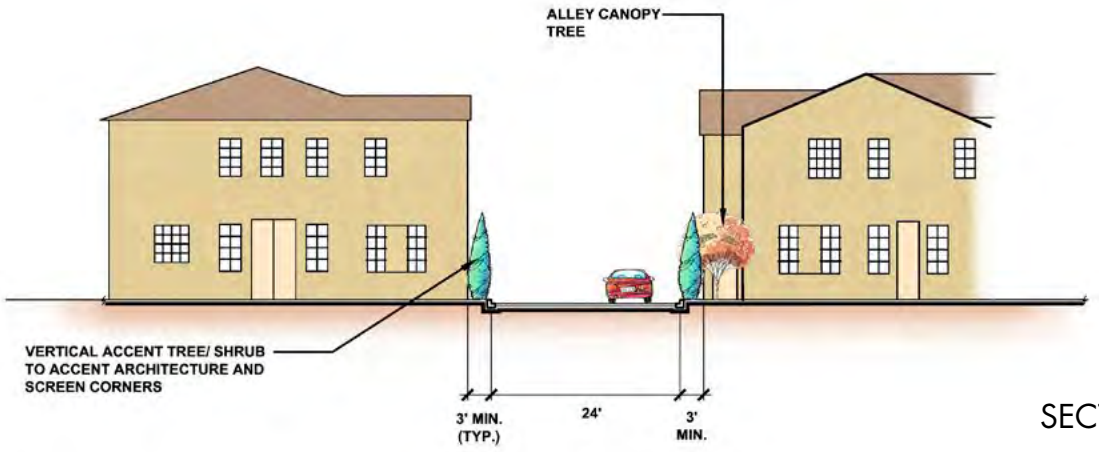
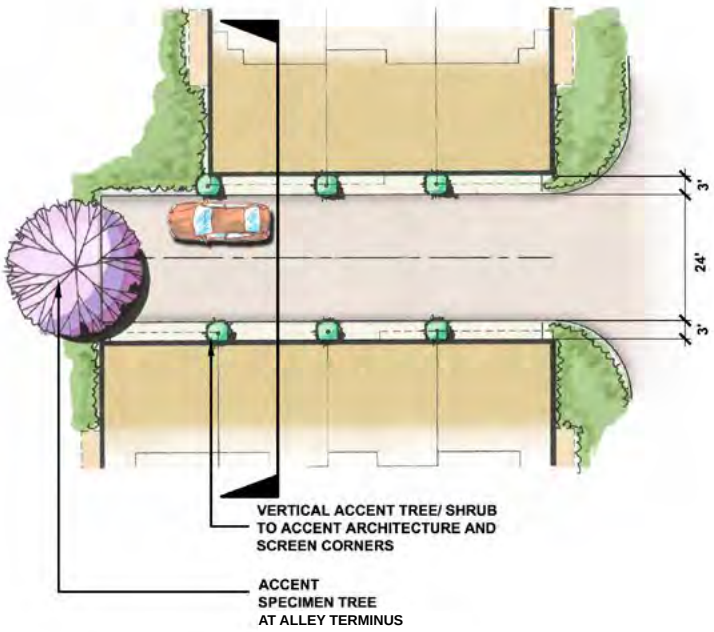


SECTION

PRIVATE ALLEY DRIVE STREETSCAPE - TOWNHOME EXHIBIT 9-10



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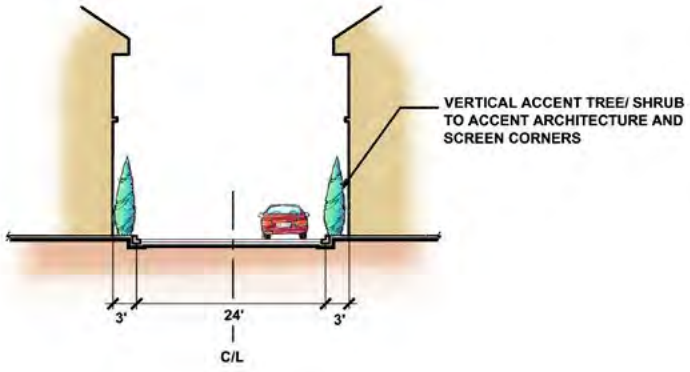

SECTION

COMMUNITY & NEIGHBORHOOD ENTRIES AND MONUMENTATION 9.8

Community Entry & Monumentation

The key entries leading into the community are identified on (see Exhibit 9-1, "Conceptual Master Landscape Plan"). The purpose of the entries is to announce the community identity and establish the unique character and theme through Serrano Summit. The introduction of stylized plant groupings that reflect the architectural theme of the community landscape are central to the success of the Community Landscape Theme (see Exhibits 9-11 to 9-12).

Highlights

- Community entries shall include tree-lined streets to announce arrival, enhance character and appeal that will inspire visitors and residents.
- All trees and plant materials shall correspond with the approved trees and plant list that corresponds to community theme and appropriate scale.
- Community entries shall have themed monumentation to enhance the arrival experience.
- Themed walls shall accent the entry process
- Monumentation should provide an appropriate area for community signage.
- Incorporate architectural caps, trims and bases to help delineate architectural detailing.
- Provide accent lighting of landscape/ monumentation

Method

- Use of focal evergreen trees with a minimum size of 48" box.
- Use of flowering accent trees with a minimum size of 36" box).
- Massing of a variety of minimum 5 gallon shrubs and groundcovers in planting beds located at entry points and roadways.
- A mixture of decomposed granite, decorative rock and boulders may be utilized to create the ground plane within the entry and median:
- Stone Veneer finish shall be El Dorado Molano with rustic "overgrout" application or similar.
- Enhanced paving shall be 80 mm thick antique cobble or stamped A.C. paving.

Iconic Intersection Landscape Treatment

There shall be a special landscape treatment created at the intersection of 'B' Street and 'D'/'E' Streets (private) as shown on Exhibit 9-1, Conceptual Landscape Plan. The intersection landscape design shall make use of unique plant material such as accent plantings.

Highlights

- All trees and plant materials shall correspond with the approved trees and plant list that corresponds to neighborhood theme and appropriate scale.
- Enhanced walls shall accent the entry process
- Incorporate architectural caps, trims and bases to help delineate architectural detailing.
- Provide accent lighting of landscape/ monumentation
- Enhanced paving at the 'B' Street/'D'/'E' Streets (private) intersection not only accentuates the intersection, but also encourages slower vehicular movement and improve pedestrian mobility and safety. This paving shall reflect the overall image of the project.

Method

- Use of focal evergreen trees with a minimum size of 36" box.
- Massing of a variety of a minimum of 5 gallon shrubs and groundcovers in planting beds located at entry points and roadways.
- Secondary entries shall have themed monumentation to enhance arrival experience.
- A mixture of decomposed granite, decorative rock and boulders may be used to create the ground plane within the entry and median:
- A minimum of one five-foot wide sidewalk located on one side of the street shall be provided to allow for pedestrian circulation.
- Stone Veneer finish shall be El Dorado Veneto Field Ledge with standard grout or similar.

- Enhanced paving shall be 80 mm thick Molano Hillstone with rustic "overgrout" application.

Neighborhood Entries

At each of the four corners within the iconic intersection (intersection of 'B' Street and private 'D'/'E' Streets) there is an opportunity to provide individual neighborhood "markers" or "signage." These markers will be the "neighborhood entries" and are designed to be simple pilasters in an Early Rancho theme. Smooth "white wash" stucco columns sit upon rustic stone veneer bases which match the pilasters of the Theme Rail Fence. Within the center of the stucco column there is an opportunity for a builder to "brand" their neighborhood by providing a tile or painted fresco within a provided inset nitch. The brand logo or signage should be in the Early California motif. The stucco and cap portion of the pilaster should be consistent at all four columns. The configuration of the stone base may vary depending on site specific grading relationships.

View of Existing Terminus of Indian Ocean Drive

View of Existing Terminus of Biscayne Drive

View of Typical Roundabout

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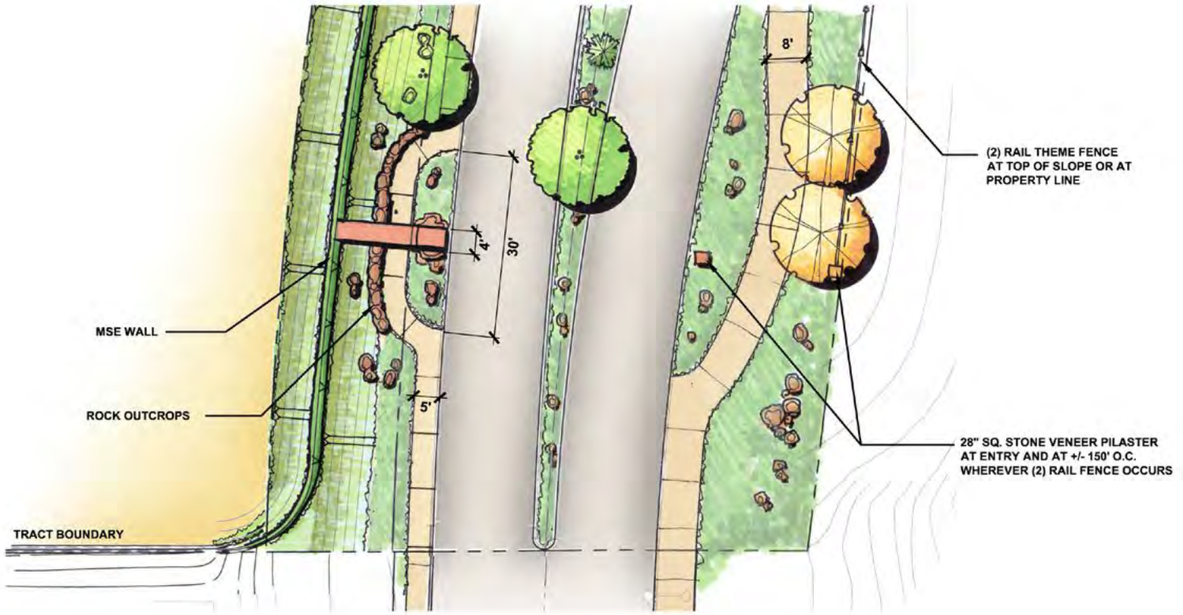

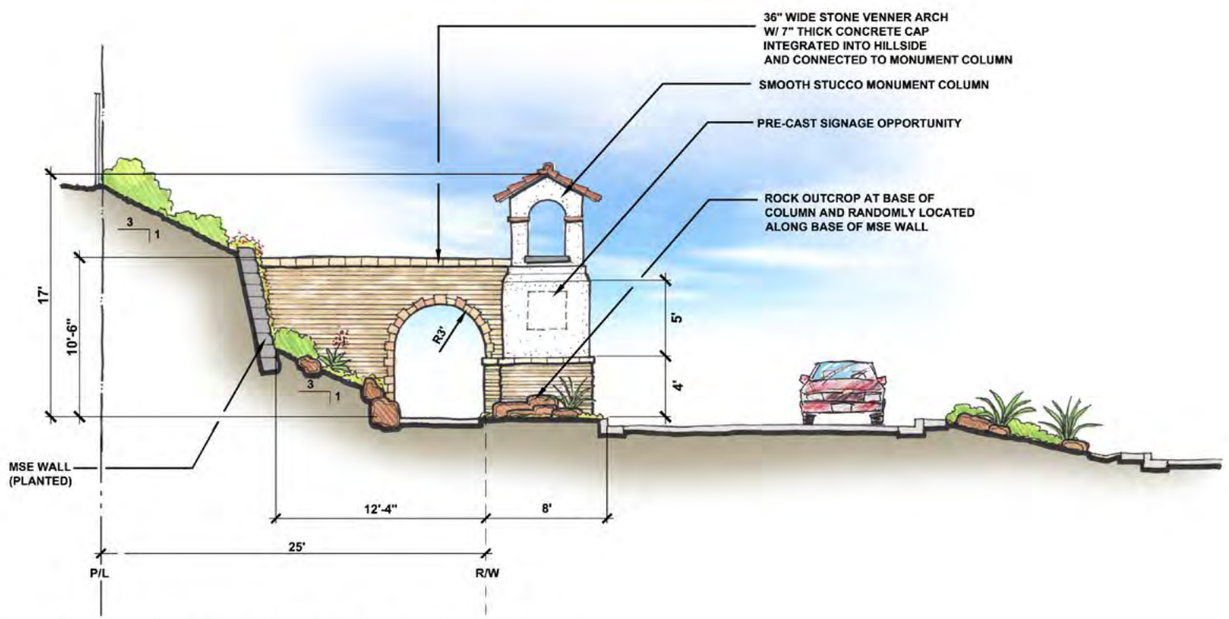

STONE VENEER PILASTER

MOLANO HILLSTONE W/ RUSTIC
"OVERGROUT" APPLICATION

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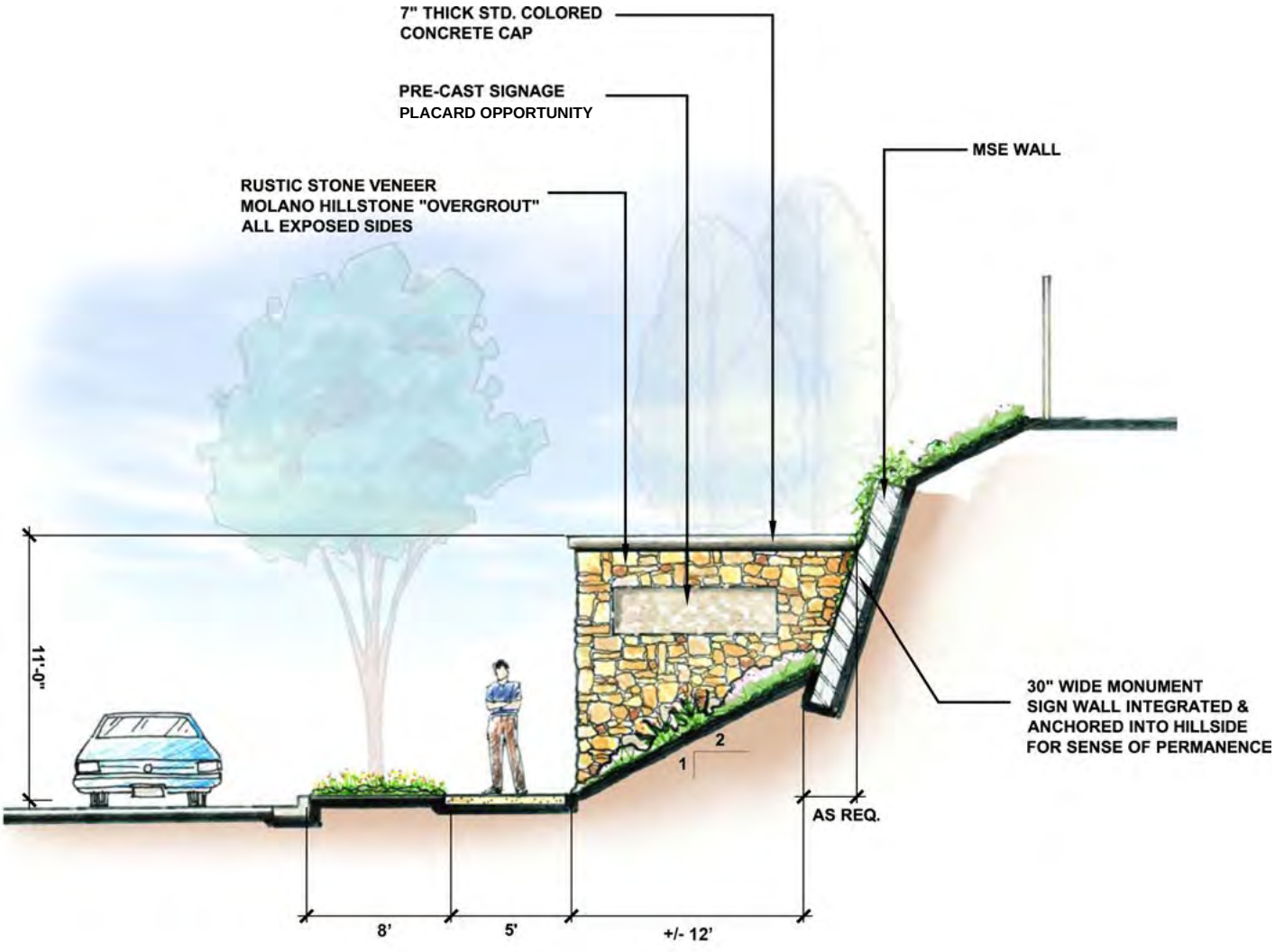
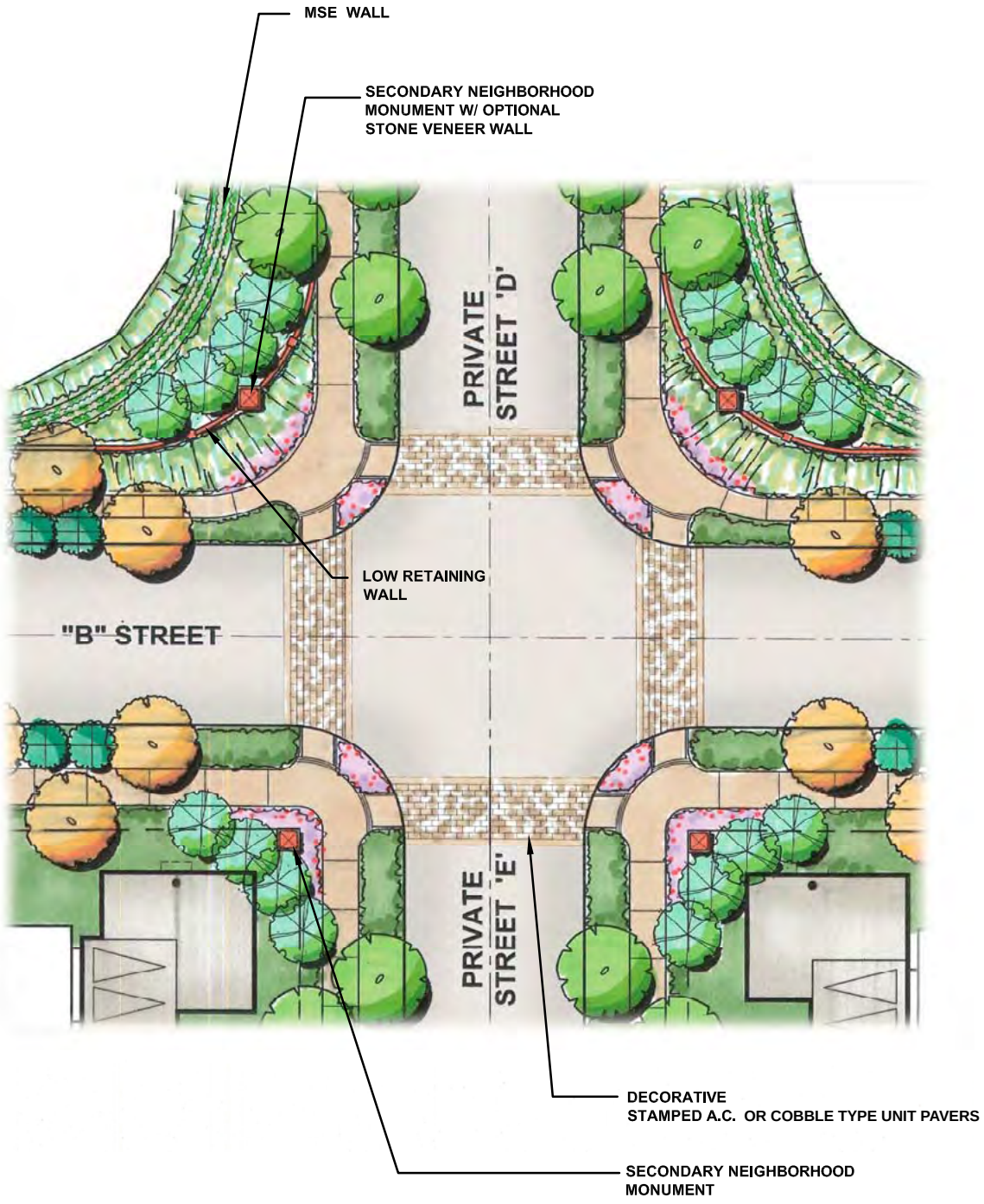
COMMUNITY ENTRY & MONUMENTATION AT INDIAN OCEAN DRIVE

EXHIBIT 9-12

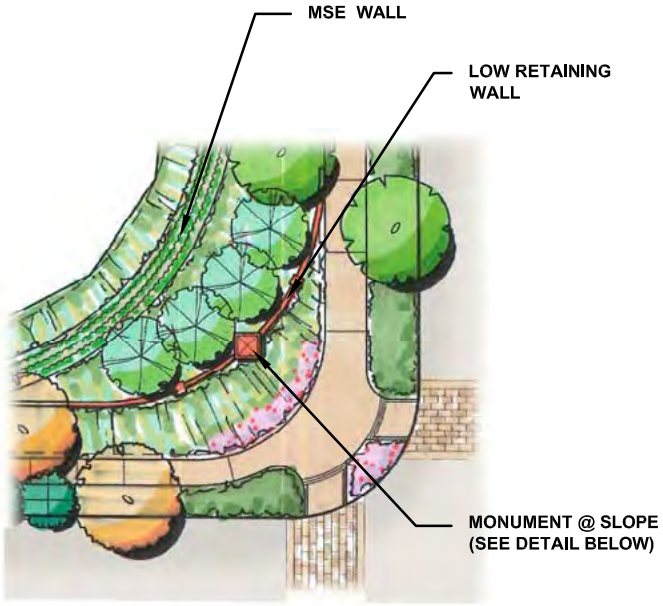


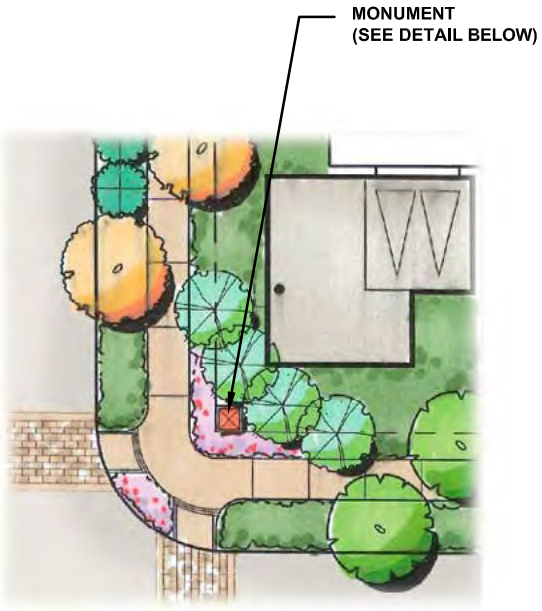
ICONIC INTERSECTION EXHIBIT 9-13

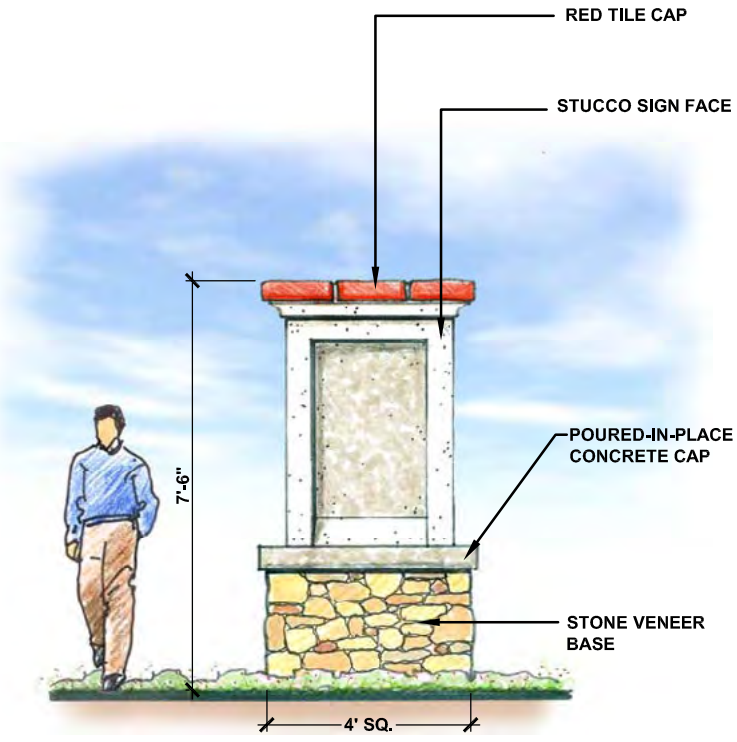


NEIGHBORHOOD ENTRY & MONUMENTATION

EXHIBIT 9-14







RESIDENTIAL LANDSCAPE DESIGN 9.9

Introduction

Residential landscape design application should bring aspects of the overall community's design theme into the individual neighborhoods. The Area Plan encourages a variety in design to allow each neighborhood its own individual character, while ensuring compatibility with the overall design of the community. The following section addresses these neighborhood design principles.

Neighborhood Design Principles

One of the goals of this section is to enact a process that will create neighborhoods cohesion. This cohesion will allow for connectivity within and between adjoining neighborhoods by addressing the larger, open space areas within a neighborhood in a manner that promotes physical action and social interaction. In addition, this process will address smaller, appropriately scaled and landscaped spaces, which enhance the neighborhood interaction experience at a more intimate level.

The neighborhood component has several key design elements that must be considered in order to achieve the goals that this section sets forth:

- Landscape plantings in public areas should develop a "sense of place" and maintaining harmony within Serrano Summit.
- Size of trees and placement will be appropriate with neighborhood scale. Opportunities for summer shade and sunlight penetration shall be considered.
- Screen and soften undesirable views while promoting and framing more desirable views and vistas that the community has to offer.
- Arrangement of climate-appropriate plants should incorporate the concepts of mass planting; plants should be placed to allow them to grow to their natural sizes and forms, and sheared hedges should be kept to a minimum.
- An overall theme of water conservation shall be represented throughout each neighborhood in the manner that the front yard landscapes are to be designed and maintained.
- Drip irrigation principals are to be used where appropriate
- Refer to the Master Plant Palette (Section 9-14) for exact plant types to be used within Serrano Summit.

Single Family Detached

The landscape design for traditional Single Family Detached neighborhood developments shall serve the purpose of creating a "sense of place" and identity within each development.

The following concepts shall be included:

- Each single-family lot shall be provided with front yard landscaping with a permanent automatic irrigation system. At a minimum, turf or groundcover, appropriate size shrubs and trees shall be provided as landscaping materials. A variety of typical landscape designs shall be provided based upon each building type within the subdivision.
- Landscape and irrigation drawings for each development shall be submitted in conjunction with Site Development Plan or Use Permit for the residential development. These landscape plans should also be reflected on the house construction plans. The plans shall be reviewed by the Planning and Building Departments prior to the issuance of building permits.
- Turf should be planted in functional active areas only.
- The landscape will feature a mixture of trees, shrubs and groundcovers with different shapes, textures and colors that will coordinate with the landscape theme of Serrano Summit.
- Trees shall be planted in informal clusters to create dynamic rhythm and avoid monotony of evenly spaced trees.
- Sizes of trees and placement will be appropriate with neighborhood scale. Opportunities for summer shade and sunlight penetration shall be considered.
- Shrub design and layout should respect the "Tiered Landscape" criteria previously outlined herein.
- Plant accent shrubs to highlight home entries.

Single Family Detached Enclave

The landscape design for the Single Family Detached Enclave developments shall create a unifying element for that neighborhood.

The following concepts shall be included:

- To foster a more dynamic and interesting landscape, the use of specimen trees, unusual clustering, or an accent tree shall be planted at focal points to create "planned surprises" within the neighborhood.
- Open space and common area amenities are encouraged to help promote a sense of community and social interaction within each parcel.
- Typically, Detached Enclave Building layouts can produce landscaped planters of varying sizes. Plants that can thrive in such spaces shall be chosen.
- The location, configuration and quality of the private open spaces for each unit are extremely important. It is highly encouraged to promote natural light penetration into these spaces to increase visibility and livability.
- Planter pockets need to be strategically located throughout the landscape to screen and soften undesirable views as required.
- When deemed necessary to improve the quality of private open space areas, low courtyard walls may be located adjacent to sidewalk or walkways with a landscape buffer.
- The landscape will feature a mixture of trees, shrubbery and groundcovers with different shapes, textures and colors that will tie in with the landscape theme of Serrano Summit.
- Informal tree clustering will be placed on harsh sun exposures for shade and passive cooling during harsh summer days and creating opportunities for people places.
- Shrub design and layout should respect the "Tiered Landscape" criteria previously outlined herein.
- Planting design should help to identify and support common areas, gathering spaces, significant walkway intersections and bring attention to specific areas such as pedestrian crossings at roadways.
- Plant accent shrubs to highlight home entries.

Single Family Attached & Multi-Family Attached

The landscape design for the Single Family Attached and Multi-family Attached developments shall serve the purpose of a unifying element for all that live within that neighborhood.

The following concepts shall be included:

- Open space and common area amenities are encouraged to help promote a sense of community and social interaction within each parcel.
- The site design for both Single Family Attached and Multi-family Attached developments should allow for a hierarchy of landscape open spaces from "large" gathering areas, to "semi-private" open space, to smaller, more "intimate" spaces. The design of each of these types of spaces must be appropriate in scale and function, and reinforce the overall theme.
- Typically Single Family Attached and Multi-Family Attached building layouts can produce landscaped planters of varying sizes. Plants that can thrive in such spaces shall be chosen.
- The location, configuration and quality of the private open spaces for each unit are extremely important. It is highly encouraged to promote natural light penetration into these spaces to increase visibility and livability.
- Planter pockets need to be strategically located throughout the landscape to screen and soften undesirable views as required.
- When deemed necessary to improve the quality of private open space areas, the courtyard walls may be located adjacent to sidewalks or walkways.
- Trees should be strategically located to help mitigate any second floor window to window incursion and screen private open space at the ground level.
- Informal tree clustering will be placed on harsh sun exposures for shade and passive cooling during harsh summer days and creating opportunities for people places.
- Where applicable, tree/plant massing will be planted informally to break the monotonous pattern of equal spacing and create for a more vibrant rhythm.

- Shrub design and layout should reflect the "Tiered Landscape" criteria previously outlined herein.
- Planting design should help to identify and support common areas, gathering spaces, significant walkway intersections and bring attention to specific areas such as pedestrian crossings at roadways.
- Plant accent shrubs to highlight home entries.
- The landscape will feature a mixture of trees, shrubbery and groundcovers with different shapes, textures and colors that will tie in with the landscape theme of Serrano Summit.
- To foster a more dynamic and interesting landscape in Single Family Attached and Multi-family Attached developments, the use of unusual clustering or accent trees shall be planted to create unique elements within the neighborhood

Interior Slope Landscape Design (Where Applicable)

- Construction of interior slope landscape for slopes larger than 5' high shall be the entire responsibility of the parcel developer.
- Soil stabilization is the primary importance of slope plantings, therefore, appropriate deep-rooted and/or fast surface covering plant material is encouraged.
- All trees and plant materials selected shall correspond with the approved trees and plant list to reinforce community theme.
- Trees will be at a minimum size of 15 gallons with required caliper and dimension standards with one tree per 500 square feet of slope area.
- All shrubs shall be a minimum of one gallon in size with one shrub per 36 square feet of slope area.
- Hand planted ground cover shall be planted with a maximum spacing of 18" o.c. or less to ensure 95% slope coverage after 18 months.
- Considerations for permanent hydroseeding, with long-lived plant species within the seed mix, will be considered as an acceptable alternate to hand-planted groundcover material.

Typical Layered Slope Plantings

COMMUNITY TRAIL 9.10

The Community Trail can provide a dual purpose for the residents of Serrano Summit. The community trail is a designed network of landscaped pathways that provides a "walkable" connection for the residents through landscaped areas to the parks, recreation center or Civic Center and open space. It will also connect with the Serrano Creek Regional Trail.

The following concepts shall be included:

- The trail provides for small gathering spaces encouraging opportunities for social interaction among neighbors, and promotes a healthy community.
- The trail will have pathways running alongside an aesthetic landscape; dotted with an assortment of trees and a variety of shrubs, groundcovers and rockscape creating for a more sensory, walk-through experience.
- The trail will have a block wall for site enclosure when adjacent to resident's property.
- Signage shall be easily visible and be harmonious with the community theme design.
- A variety of canopy trees shall be strategically located to provide a "shade oasis" at specific intervals and seating node locations to add comfort for pedestrians using the trail.

Sidewalks within Serrano Summit will vary in width from 5' minimum (along Indian Ocean Drive) to 8' (along 'A' Street, 'B' Street, and private 'D' and 'E' Streets). The multi-purpose trail between the Civic Center and Passive Park will be constructed as an approximately 20 foot wide all-weather access. Trails may be constructed of a variety of materials including, but not limited to, concrete and/or decomposed granite.

Formal Walkway

Nature Trail

Decomposed Granite Pathway

NEIGHBORHOOD PARKS 9.11

Neighborhood parks present an opportunity for shared recreation and sports between neighbors for Serrano Summit, thereby fostering relationships and building a healthy community. The landscape design allocates spaces for these activities where passive and active recreation come together.

Modern park design encourages visibility to the parks, causing their associated activities to become an integral part of the community fabric. This visibility makes it easy for nearby residents to look into park activities and conduct frequent surveillance of the park as part of the everyday fabric of their lifestyle. These design features, designed to connect residents, will promote public safety and security, as well as minimize park vandalism.

There shall be a distinct edge created between private property and any city-owned parkland. This edge shall consist of a landscape buffer, street or alleyway, or other separation acceptable to the City of Lake Forest. In addition, walkways to individual dwelling units shall be separate from park walkways.

In addition, neighborhood parks shall be designed to enhance the comfort of those using the facilities. For example, the following concepts are encouraged:

- Overhead structures such as trellises, arbors, archways shall have opportunities for shade. Their design shall tie in with the community's character and theme.
- Site furnishings such as picnic tables, barbeques, benches, waste receptacles and other site amenities in a consistent design in accordance with the Serrano Summit theme
- Signage shall be easily visible and be harmonious with the community theme design.
- All trees and plant materials selected will correspond with the approved trees and plant list to reinforce the community theme.
- Trees will be a minimum of 15 gallon size to provide opportunities for shade and seasonal change for accenting.
- Massing of shrubbery is encouraged along the perimeter of the wall or slope.
- One required handicap parking space per park (applies to Planning Areas 15 and 16) shall be provided, on or off-site. Street parking is acceptable. The Serrano Summit community is designed to encourage residents to walk and bike to the parks using the sidewalks, paseos and trail on-site. On-street parking for parks will be provided.

Pursuant to the Development Agreement, the neighborhood parks in Planning Areas 15 and 16 will include the following:

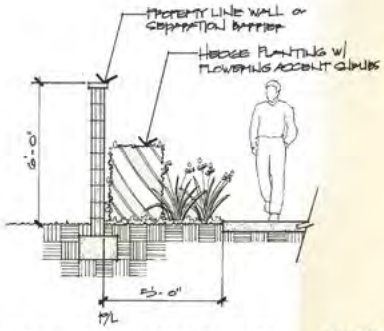
- Minimum Improvements:
  - *Construction water, WQMP, BMPs*
  - *Temporary utilities*
  - *Site grading, rough*
  - *Site grading, fine*
  - *Site drainage*
  - *Utility connections*
  - *Hardscape, sidewalks, minimum 5'wide, concrete*
  - *Hardscape, mow-strip, concrete*
  - *Turf, sod*
  - *Shrubs, minimum 5 gallon size*
  - *Trees, minimum 15 gallon size*
  - *Mulch/soil preparation*
  - *Automatic irrigation systems with computer and communications*
  - *Automatic security lighting system with communications*
  - *ADA universal signage*
  - *City standard park identification sign and park rules sign*
  - *ADA accessible path of travel*
  - *Concrete pavement under tables and seating*
  - *Athletic field and/or courts*
  - *1 Tennis court, volleyball court or basketball court*
  - *Spectator seating*
  - *Tables, benches, trash cans, drinking fountains and barbecues*
    - *1 Group barbecue with 4 tables or 2 family barbecues with 2 tables per barbecue*
    - *1 Drinking fountain per field, court and picnic area*
  - *Play lots appropriate by age group*
    - *1 Tot area*
    - *1 adjacent bench*

Pursuant to the Development Agreement, the passive/nature park in Planning Area 17 will include the following:

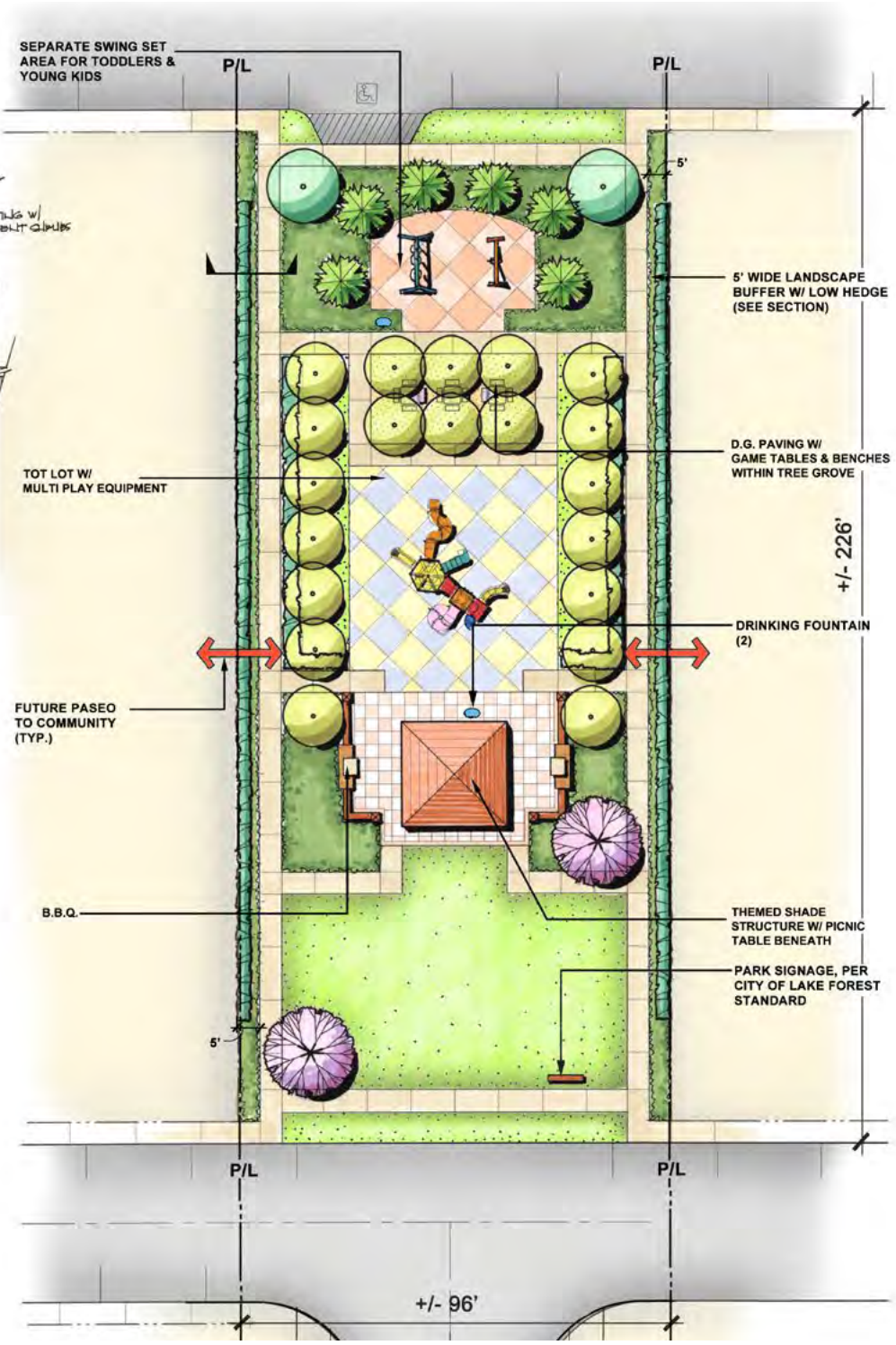
- Minimum Improvements:

NEIGHBORHOOD PARK DESIGN (PLANNING AREA 15)

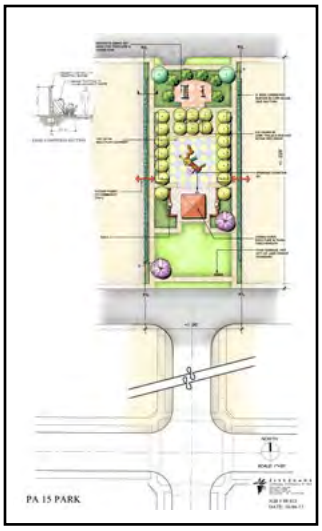
EXHIBIT 9-15



EDGE CONDITION SECTION



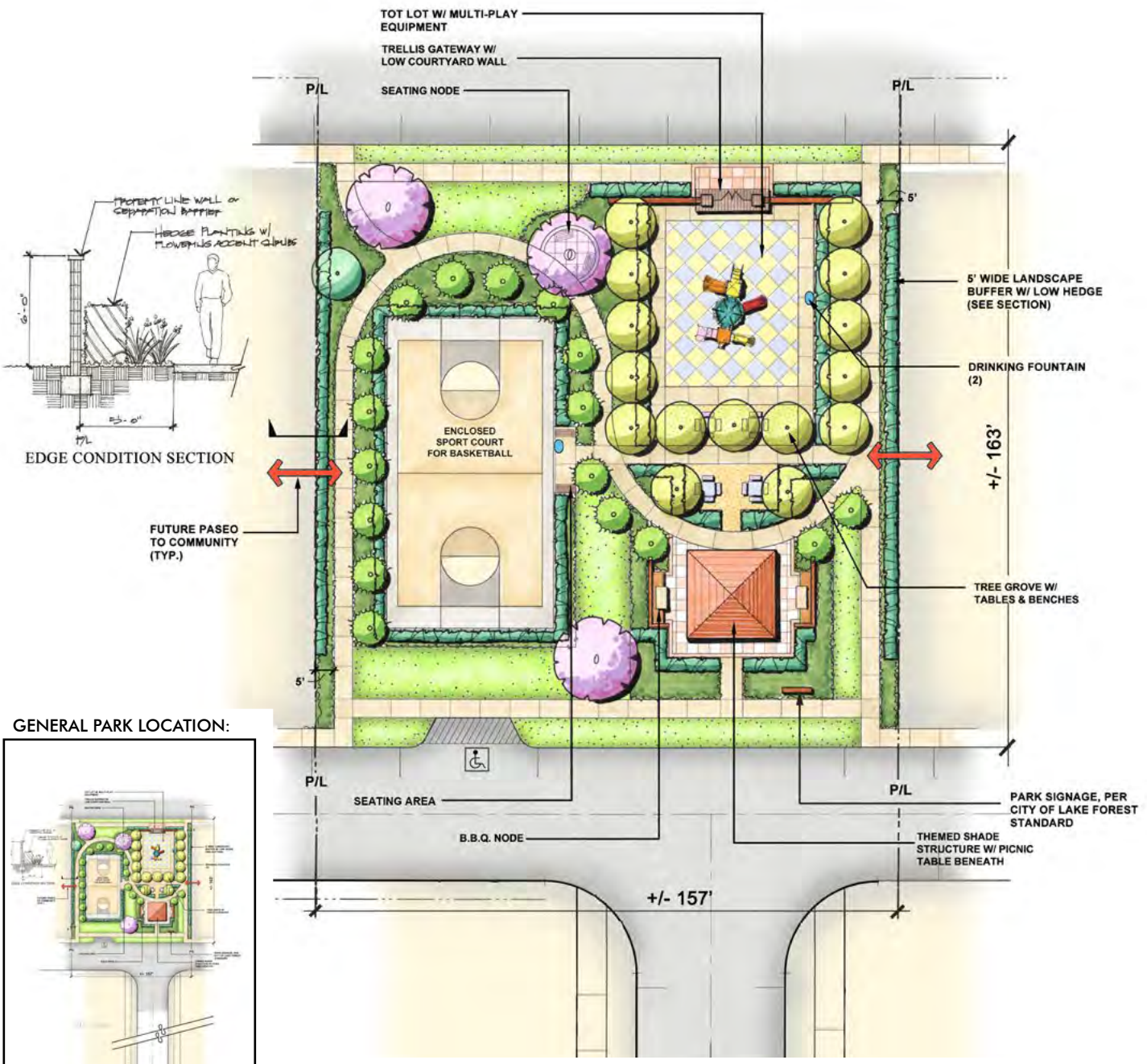
GENERAL PARK LOCATION:



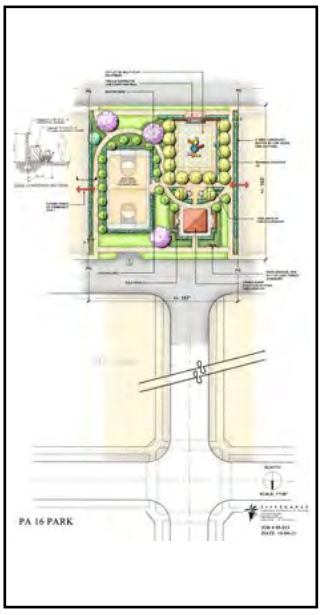
This exhibit is provided as the Precise Design.

NEIGHBORHOOD PARK DESIGN (PLANNING AREA 16)

EXHIBIT 9-16



GENERAL PARK LOCATION:



This exhibit is provided as the Precise Design.

PASSIVE / NATURE PARK DESIGN EXHIBIT 9-17
(PLANNING AREA 17)

This exhibit is provided as the Precise Design.

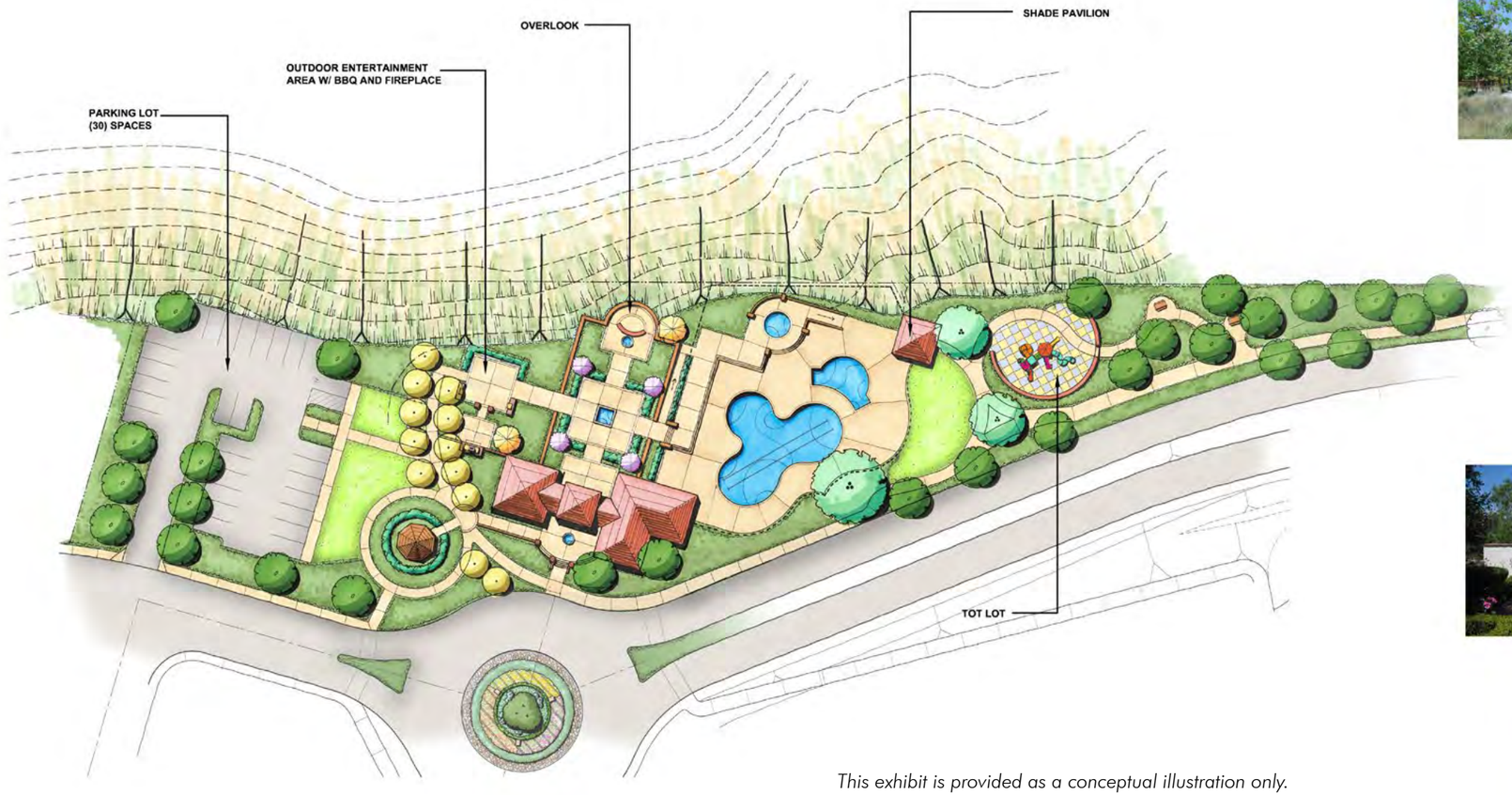
- ~ *Construction water, WQMP, BMPs*
- ~ *Temporary utilities*
- ~ *Site grading, rough*
- ~ *Site grading, fine*
- ~ *Site drainage*
- ~ *Utility connections*
- ~ *Walkways/paths, minimum 5' wide, decomposed granite*
- ~ *Hardscape, mow-strip, concrete*
- ~ *Turf, sod*
- ~ *Shrubs, minimum 5 gallon size*
- ~ *Trees, minimum 15 gallon size*
- ~ *Mulch/soil preparation*
- ~ *Automatic irrigation systems with computer and communications*
- ~ *Automatic security lighting system with communications*
- ~ *ADA universal signage*
- ~ *City standard park identification sign and park rules sign*
- ~ *ADA accessible path of travel*
- ~ *Concrete pavement under tables and seating*
- ~ *Tables, benches, trash cans, drinking fountains and barbecues*
  - ◦ *1 Group barbecue with 4 tables or 2 family barbecues with 2 tables per barbecue*
  - ◦ *1 Drinking fountain*
- ~ *1 Shade structure for group recreation purposes, minimum 50%*
- ~ *Hitching posts*
- ~ *Watering trough*

For the passive/nature park, the following criteria will apply to the area credited for parkland:

- Must be open to all Lake Forest residents, not restricted to any private use
- Minimum core dimensions of 200' x 200'
- Utilize natural topography as much as possible
- No slopes greater than 6:1
- There shall be no grade differences over 30 inches

RECREATION CENTER DESIGN
(PLANNING AREA 14)

EXHIBIT 9-18



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Lighting within Serrano Summit shall be consistent in style, color, and materials in order to maintain uniformity throughout. Lighting should be subtle, providing a soft wash of light over illuminated objects such as monumentation. A hierarchy shall be established by using a variety of lighting fixtures of appropriate illumination levels. Lighting styles shall tie into architectural styles and provide sufficient illumination for the safety and well being of the community. Fixture locations should be designed so that light source is not unnecessarily visible by pedestrian or vehicular traffic. Lighting shall be designed to prevent glare from impacting the adjacent residential areas. Frosted, louvered, or prismatic lens should be considered where decorative lighting fixtures are visible and part of the aesthetic lighting program.

The City shall maintain street lights on all public streets within Serrano Summit. The developer will submit specific lighting designs describing the type, style and height of lighting along with designs for streets and parks to the City for review and approval with the Final A Map and infrastructure construction drawings.

WALLS & FENCES 9.13

Within Serrano Summit, the walls and fences are a major component in achieving an overall community theme. A strong cohesive appearance for the community is achieved through the use of a themed community wall program and general overall wall guidelines (see Exhibit 9-19).

Exterior wall colors shall harmonize with the site. Textures are to be integrated with the site to produce a variety of shade and texture.

Wall design, materials, color and finishes shall complement adjacent architecture to keep the community design theme cohesive.

All walls that adjoin community streets (major streetscapes identified under Community- and Neighborhood-Level Streetscapes) shall be deemed "community walls." The other walls and fencing, known as "product walls" and "View Fences" shall also adhere to the strict guidelines within.

Community Walls

Community walls shall be decorative in nature. These walls consist of either solid walls, view fences, or a combination of the two.

Solid community walls shall be constructed of concrete masonry unit (CMU) block. The exterior face of the CMU community walls shall either be decorative concrete block, painted stucco or integral color stucco on concrete block.

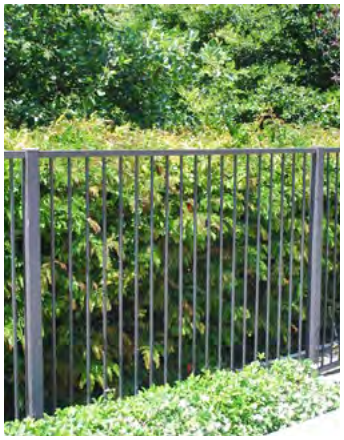
View fences or view walls along community open spaces are encouraged wherever privacy or screening is not necessary. These shall be constructed to conform to the "View Fences" community standard.

Community walls shall incorporate the use of pilasters or other design elements to help break up long stretches of walls and provide interest and rhythm. Pilaster design should compliment, or be consistent with, the materials of the community walls.

Theme Rail Fence with Pilasters

The use of a two rail fence with low stone veneer pilasters will compliment the Early California Rancho theme and will provide a rustic, established element to the community. These Themed Rail Fences will be present immediately upon entry to the community and are designed to work together with the entry monumentation. The open rail fence is located at the top of slopes to preserve and frame views or as safety guardrail adjacent to pedestrian walkways. The rail fence should have a weathered, aged appearance and be constructed of concrete, wood or vinyl.

Stone veneer pilasters should be located along fence's major turning points and at the ends. A stone veneer of rustic, natural appearance in organic, earth toned hues is required. A precast plaque or medallion should be added to some key pilasters, similar to



style in which Early California Rancho branded. This plaque should be integral with the pilaster to avoid a "bolted on" appearance. (See Exhibit 9-20)

Masonry Walls

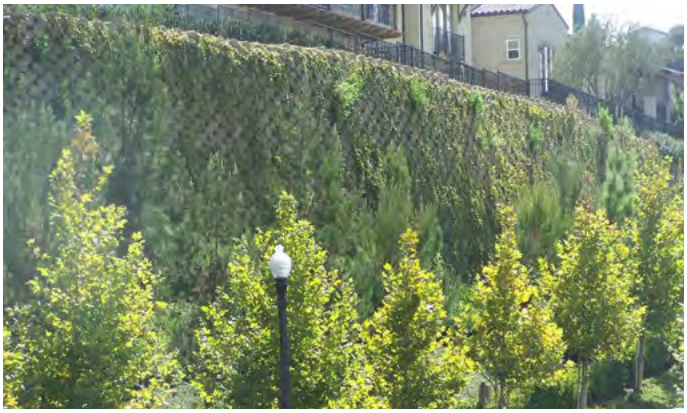
- Masonry product walls are all walls interior to a project that are not community walls and are built by the parcel developer; they shall develop a unified parcel wall theme that reflects the theme of the community.
- Masonry product walls are visible from adjacent non-residential parcels, streets or community open space.
- Side yard wall returns, side yard privacy walls along corner lots, and rear yard privacy walls along neighborhood streets are all masonry walls.
- All masonry product walls shall be constructed of CMU block and shall be installed on individual lots within all neighborhoods including side yard wall returns, side yard privacy walls along corner lots, and rear yard privacy walls along neighborhood streets. The exterior face of the product CMU walls shall either be decorative concrete block, painted stucco or integral color stucco on concrete block.
- All walls built by the parcel developer within or at the perimeter of single family neighborhoods shall meet County/City pool safety requirements.
- Where two masonry walls meet at adjoining parcels, walls shall match in color and finish, or have a unifying transitional element such as a pilaster at the connection point.
- Walls shall have a maximum step of 16 inches with a minimum of 32 inches horizontal between steps.

Retaining Wall System

Wall systems referred to as Mechanically Stabilized Earth (MSE) will be used within the community where slopes, topography differences, and/or design considerations warrant the use of a retaining wall system. This type of wall will only be used interior to the community and not on the community edges. Every effort will be taken to comply with the Retaining Wall Design Guidelines of the City. The MSE system will primarily be used along the main collector streets A, B, and Indian Ocean, with smaller MSE systems used along internal paseos and private streets. Several elements of the Guidelines will be used to soften the internal impacts of the walls on local residents as they travel along the collector streets. The wall itself will be planted using the soil pockets throughout the wall system. These vine-type plants will transform the walls into "green" backgrounds. The top of the walls will be lower than the building pad above, thus creating a slope bank at the top of the wall that will be planted to soften that upper edge and reduce the height of the wall. Significant setbacks will be provided from the base of the wall to the street. Allowing adequate space to provide this landscaping screen is important to diminishing any visual impacts of the wall. On collector streets where the wall will be used, the distance between the curb and the base of the wall will be a minimum of 20 feet and in many locations will be more than 20 feet. Within this setback there will be a series of canopy trees and shrubs that will draw the passerby attention to the foliage and diminish the visibility of the wall. The parkway will have a double row of canopy trees on either side of the sidewalk, staggered in order to provide maximum "shielding" of the wall from both drivers and pedestrians. At certain key intersections the wall system will be split, providing for a stepped system of two walls rather than one. To further diminish any impact of the wall, it will vary in setback horizontally and will vary in vertical height in order to limit the look of a monolithic wall. The entire system of MSE walls and surrounding parkway and slope bank landscaping will be maintained by the Homeowner's Association.

HEIGHT/DISTANCE CHART

LOCATION	HEIGHT OF WALL	DISTANCE
A Street	+ 6'	12.5'
B Street	6' & 14' (double wall)	14'
Indian Ocean	+ 8.5'	17'



View Fences

If applicable, view fences should be located in the rear or side yards of those properties abutting open space areas or have off-site views. These fences allow open views outward but not physical access; they shall be 5'-6" min. high. View fences may be constructed of tubular steel or lexan glass panel construction or plexiglass and vinyl or 5'-6" min. combination wall (2' CMU block wall with 4' tubular steel fence). The use of view fences shall incorporate pilasters utilizing materials consistent with adjacent walls.

All view walls built by the parcel developer within or at the perimeter of single family neighborhoods shall comply with the "View Fences" community standard design.

Garden Walls

Garden walls or fences shall not exceed 42 inches in height and may be constructed of CMU block or with materials that match the architectural style of the home. Walls to be located a minimum of two feet (2') from back of adjacent walk.

Retaining Garden and Landscape Walls

- Retaining walls next to or visible from any street or community open space shall not exceed three feet (3') in height. Grade changes that require more retaining must be terraced with a minimum three foot (3') wide planter as measured from face of wall to face of wall, unless a crib wall is used.
- Independent retaining walls must be set back a minimum of two feet (2') from back of sidewalk. Retaining walls shall not abut a sidewalk, but may abut utility boxes. All independent retaining walls must have a return back to the adjacent product wall or taper to one block high at end of retaining condition.
- Retaining walls may be combined with a product or community wall as long as the total visible height of the solid wall surface, as measured on the exterior side of the wall, does not exceed 8 feet and is softened by landscape.
- Retaining walls interior to a parcel, but visible from any street or community open space shall be splitface or crib style.


FENCE & WALL LEGEND
5'-6" HT. TUBULAR STEEL SECURITY FENCE
5'-6" HT. VIEW FENCE (3 1/2" PLEXIGLASS OVER 2' CMU) OR TUBULAR STEEL
THEME RAIL FENCE W/ STONE VENEER PILASTERS
EXISTING CMU WALL
6' HT. CMU SCREEN WALL
MSE RETAINING WALL (PLANTABLE WALL, HEIGHT VARIES)
INDIAN OCEAN DRIVE
EXISTING DEVELOPMENT
COMMUNITY ENTRY & MONUMENTATION @ INDIAN OCEAN DRIVE
COMMUNITY SIGNAGE/ MONUMENTATION
ICONIC INTERSECTION
SECONDARY NEIGHBORHOOD MONUMENTS (ALL 4 CORNERS)
PA 14 PRIVATE RECREATION AREA
COMMUNITY ENTRY & MONUMENTATION @ 'A' STREET
PROPOSED CIVIC CENTER SITE
PROPOSED DETENTION BASIN
SERRANO CREEK
PASSIVE PARK
REGIONAL TRAIL
EXISTING TANK TO REMAIN
EXISTING PARKING LOT
PROPOSED DEVELOPMENT
EXISTING VEGETATION (TYP.)
GRADED SLOPES (TYP.)
PRIVATE 'D' STREET
PRIVATE 'E' STREET
LOT A
LOT B
LOT C
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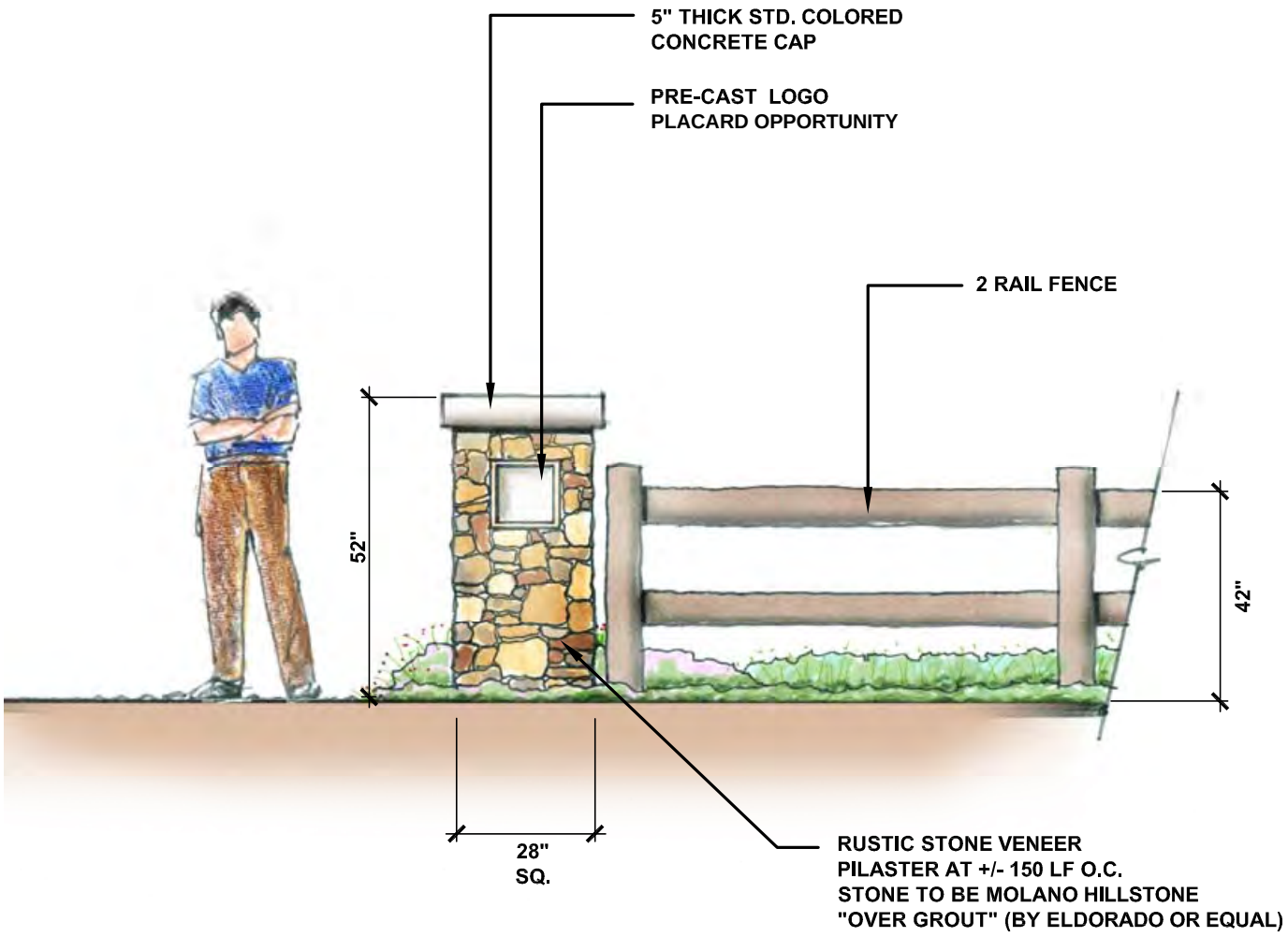
PILASTER / RAIL FENCE

EXHIBIT 9-20



SITE FURNITURE 9.14

The design of street furniture such as street lighting, trash receptacles, benches, bollards, posts, signage markers and others shall be inspired by the community theme to provide consistency and connectivity with surrounding neighborhoods and harmonize with the community's design theme.

Colors and materials of street furniture shall complement the surrounding natural hillside terrain and landscape and shall be consistent with the rustic California community theme community landscape.

SITE FURNITURE (Typical Examples)


Bench


Rectangular Picnic Table


Square Picnic Table


Waste Container


Bench


Rectangular Picnic Table


Square Picnic Table


Waste Container

SITE FURNITURE - UNIVERSAL (Typical Examples)


Bike Rack


Bollard

FUEL MODIFICATION 9.15

As an infill project with minor areas of open space, the Serrano Summit fire safety aspects have been designed and will be protected using the most recently developed codes. BehavePlus was used to estimate the maximum intensity of a fire moving towards this development, including flame lengths and fire intensity. The fuel modification zones were designed and located to cope with these findings and will ultimately reduce the flame lengths and fire intensity by the installation and maintenance of the Fuel Modification and Fire Master Plans.

Using a systematic approach, the threats presented by the vegetation that will remain after the completion of this project have been mitigated to a point where they do not present a risk to the structures or occupants of this project. The usage of fuel modification, enhanced construction features (where called for), and ongoing maintenance of the fuel modification zone, will insure that this community remains protected from the threat of wildfires as long as the conditions required by this program are in compliance.

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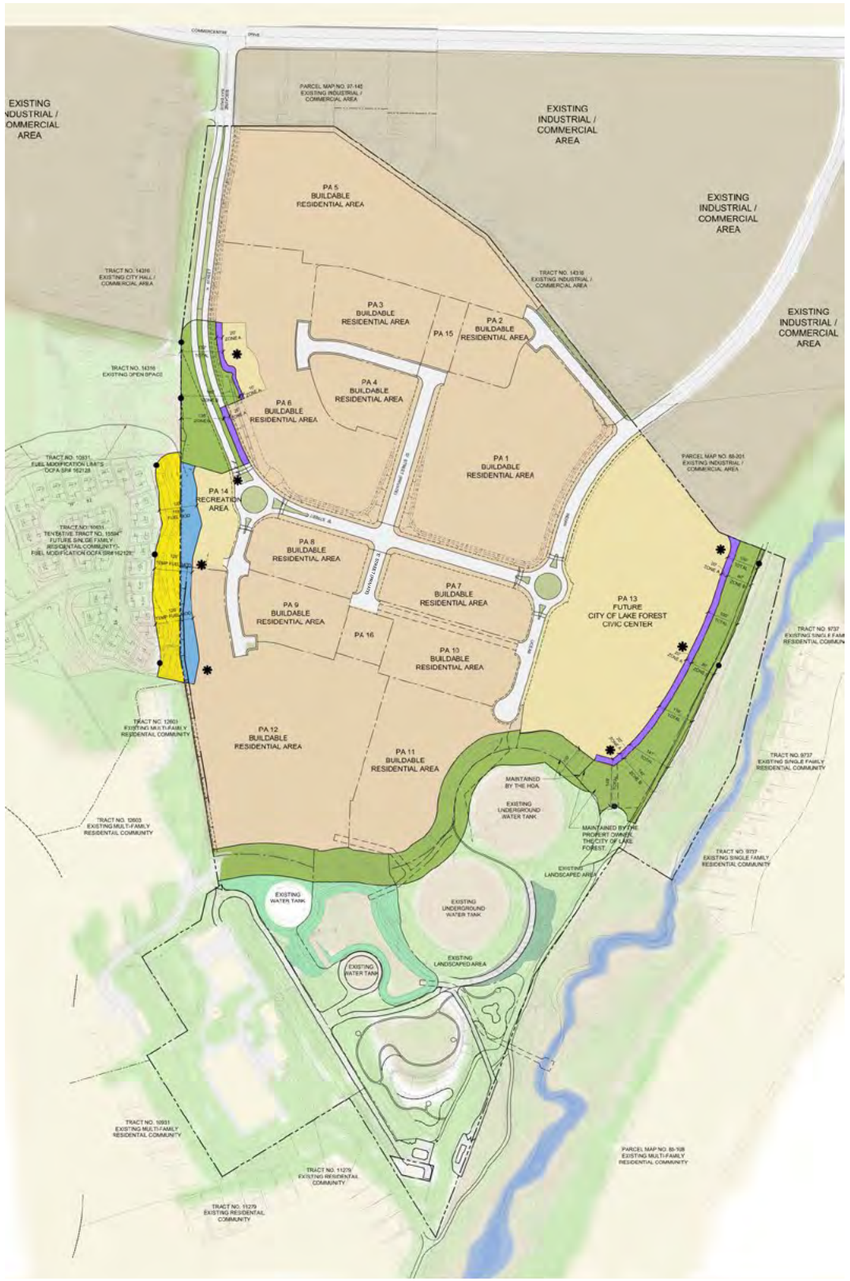
FUEL MODIFICATION PLAN

EXHIBIT 9-21



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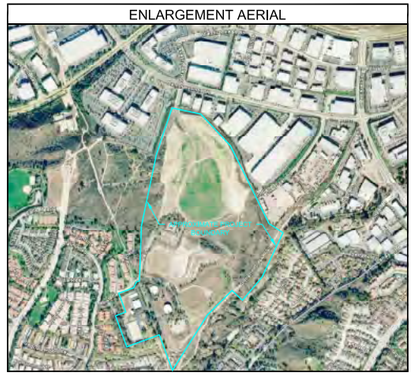
VICINITY MAP

ENLARGEMENT AERIAL



SYMBOL LEGEND

✱ ACCESS POINT - FUEL MODIFICATION WALK IN ACCESS POINT (A 5' NON-COMBUSTIBLE TUBULAR STEEL GATE WILL ONLY BE PROVIDED WHERE NECESSARY). 500' MINIMUM DISTANCE BETWEEN ACCESS POINTS AT FUEL MODIFICATION.

● IDENTIFICATION MARKER - PERMANENT IDENTIFICATION MARKERS SHALL BE CONSTRUCTED TO IDENTIFY THE LIMITS OF APPLICABLE FUEL MODIFICATION ZONES. MARKER DESIGN SHALL BE 2" DIA. X 8'-0" LONG GALVANIZED PIPE. EMBED MINIMUM 2'-6" INTO SOLID GROUND. STENCIL TOP 6" WITH A LETTER 'B' OR '2'. EXPOSE PIPE 2'-0" ABOVE VEGETATION MINIMUM.

FUEL MODIFICATION LEGEND

FUEL MODIFICATION ZONE A - 10' to 20' minimum flat or level grade - Beginning of Fuel Modification. Non-combustible construction within this zone only. Maintained by the Property Owner and or the HOA. Fuel Modification consists of irrigated landscape with plant material from the OCFA Fuel Modification Plant Palette only. Refer to Fuel Modification Requirements and Maintenance Notes. No plant material from the Undesirable Plant List shall be allowed within this zone.

FUEL MODIFICATION ZONE B - 80' to 186' - Maintained by HOA. Fuel Modification consists of irrigated landscape with plant material from the approved OCFA Fuel Modification Plant List. Zone B will be a minimum of 80' in a portion of the fuel modification. Refer to Fuel Modification Requirements and Maintenance Notes. No plant material from the Undesirable Plant List shall be allowed within this zone.

TEMPORARY FUEL MODIFICATION ZONE B - 32' to 67' - Maintained by HOA. Fuel Modification consists of irrigated landscape with plant material from the approved OCFA Fuel Modification Plant List. Zone B will be a minimum of 32' in a portion of the fuel modification. Refer to Fuel Modification Requirements and Maintenance Notes. No plant material from the Undesirable Plant List shall be allowed within this zone. This zone shall be installed prior to construction of Planning Area X only if ths project (tract#) begins constrcution prior to the adjoining project (tract#) per the license agreement aggreed upon by both parties.

TEMPORARY FUEL MODIFICATION & WEED ABATEMENT - 53' - 88' - Maintained by HOA. Temporary Fuel Modification consists of a 50% Zone C which will be a minimum of 53' throughout. Refer to Fuel Modification Requirements and Maintenance Notes, Section Zone C. No plant material from the Undesirable Plant List shall be allowed within this zone.

MANUFACTURED SLOPE IN THE VICINITY OF THE FUEL MODIFICATION Landscaped and irrigated areas as shown on this plan maintained by the HOA and/or property owner. Plant material must comply with OCFA Attachment 8: Fuel Modification Zone Plant List.

BUILDING CONSTRUCTION CLASSIFICATION LEGEND

ENHANCED CONSTRUCTION ZONE - STRUCTURES ADJOINING THE FUEL MODIFICATION: All structures within PA 13, PA 14, and structures adjoining the fuel modification on PA 6 as depicted on this plan shall receive "enhanced construction" on all four (4) sides per 2007 California Building Code Chapter 7A. Chapter 7A amendments require vents to be a minimum of 1/8" and a maximum of 1/4", however we are providing a maximum of 1/8" venting.

All other structures within this project shall meet roofing and venting requirements of the 2007 California Building Code Chapter 7A. Chapter 7A amendments require vents to be a minimum of 1/8" and a maximum of 1/4", however we are providing a maximum of 1/8" venting.

All structures within this project shall be protected with Automatic Fire Sprinklers as follows:

- All Single Family and Duplex structures shall be protected with NFPA 13-D.
- All Multi-family structures shall be protect with NFPA 13-R.
- All Commercial structures shall be protected with full NFPA 13.

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MASTER PLANT PALETTE 9.16

TABLE 9-4
MASTER PLANT PALETTE

BOTANICAL NAME	COMMON NAME	ACCENT	VERTICAL SCREEN/ BACKGROUND	STREET TREE	UNDERSTORY TREE	PARKS & TRAILS	RIPARIAN ZONE	CONIFEROUS FOREST	CALIFORNIA/HILLSIDE FRIENDLY ZONE	FUEL MOD SLOPES
TREES										
Acacia smallii	Sweet Acacia								•	
Alnus rhombifolia	White Alder		•				•			•
Arbutus 'Marina'	Strawberry Tree				•					
Callistemon viminalis	Weeping Bottle Brush		•						•	
Cedrus deodara	Deodar Cedar					•		•		
Cercis mexicana	Mexican Redbud				•					•
Cercidium h. 'Desert Museum'	Thornless Hybrid Palo V.								•	
Chitalpa tashkentensis 'Pink Dawn'	Chitalpa				•	•				
Cinnamomum camphora	Camphor Tree	•		•						
Cupaniopsis anacardioides	Carrotwood			•			•			
Cupressus sempervirens	Italian Cypress	•								
Dracaena draco	Dragon Tree	•								
Heteromeles arbutifolia	Toyon	•								•
Lagerstroemia farnesia 'Hybrid'	Crape Myrtle	•		•				•	•	
Lyonothamnus floribundus	Catalina Ironwood				•					
Magnolia grandiflora 'D.D. Blanchard'	Southern Magnolia		•	•				•		
Melaleuca quinquenervia	Cajeput Tree		•	•			•			
Pinus canariensis	Canary Island Pine		•	•				•		
Pinus eldarica	Afghan Pine		•	•				•		
Pinus pinea	Italian Stone Pine			•				•		
Platanus acerifolia 'Bloodgood'	London Plane Tree		•	•		•			•	
Platanus racemosa (1)	California Sycamore		•	•			•			•
Prosopis glandulosa 'Thornless'	Thornless Texas Honey Mesquite	•							•	
Pyrus calleryana 'Aristocrat'	Aristocrat Flowering Pear	•				•				
Quercus agrifolia (1)	Coast Live Oak			•		•	•		•	•
Quercus douglasii (1)	Blue Oak									•
Rhus lancea	African Sumac			•					•	•
Sambucus Mexicana	Mexican Elderberry								•	•
*Schinus molle	California Pepper Tree			•		•				
Tipuana tipu	Tipu Tree			•						
*Tristania conferta	Brisbane Box		•	•		•		•		
Ulmus parvifolia 'True Green'	Evergreen Elm	•				•				
Umbellularia californica (1)	California Bay			•			•			
Zelkova serrata 'Halka'	Sawleaf Zelkova					•				

(*) Denotes trees that are to be avoided in wind prone areas
(1) Denotes trees that are native to California.

TABLE 9-4
MASTER PLANT PALETTE

BOTANICAL NAME	COMMON NAME	ACCENT	VERTICAL SCREEN/ BACKGROUND	STREET TREE	UNDERSTORY TREE	PARKS & TRAILS	RIPARIAN ZONE	CONIFEROUS FOREST	CALIFORNIA/HILLSIDE FRIENDLY ZONE	FUEL MOD SLOPES
SHRUBS										
Aeonium arboreum	Tree Aeonium	•				•				
Agave attenuata	N.C.N	•								•
Agave desmettiana ‘ Variegata’	Variegated Dwarf Century Plant	•				•				
Agave vilmoriniana	Octopus Agave	•				•				
Aloe arborescens	Tree Aloe	•				•				
Aloe striata	Coral Aloe	•				•				
Alogyne huegeii	Blue Hibiscus									•
Anigozanthos manglesii	Kangaroo Paw					•			•	
Artemisia caucasica	Caucasian Artesmisia							•		•
Baccharis ‘Centennial’	Coyote Brush								•	•
Baccharis salicifolia	Mulefat									•
Bougainvillea 'Hawaii'	Variegated Bougainvillea	•				•				
Buxus m. japonica	Japanese Boxwood	•				•				
Carissa grandiflora ‘Boxwood Beauty	Natal Plum					•		•	•	
Ceanothus 'Concha'	Ceanothus						•		•	•
Ceanothus g. horizontalis	Carmel Creeper						•		•	•
Chondropetalum tectorum	Cape Rush	•					•			
Cistus hybridus	White Rockrose								•	•
Coprosma repens 'Marble Queen'	Mirror Plant	•								
Cotoneaster lacteus	Parney Cotoneaster					•	•		•	
Elaeagnus pungens	Silverberry									•
Encelia californica	California Encelia								•	•
Eschscholzia californica	California Poppy	•								•
Feijoa sellowiana	Pineapple Guava	•				•				
Fremontodendron californicum	California Flannelbush								•	•
Hemerocallis ‘Dwarf Yellow’	Day Lily	•								
Hesperaloe parviflora	Red Yucca								•	•
Juncus patens	California Gray Rush						•			
Lantana sellowiana ‘Monma’	White Lightin’ Trail Lantana	•							•	
Leucophyllum laevigatum	Chihuahuan Sage (Texas Ranger)					•			•	
Lomandra longifolia ‘LM300’	Breeze Dwarf Mat Rush						•			
Lupinus bicolor	Sky Lupine	•								•
Mandevilla splendens “Red riding Hood”	Mandevilla	•						•		
Melaleuca nesophila	Pink Melaleuca					•				
Mimulus species	Monkeyflower								•	•
Moraea bicolor	Fortnight Lily	•				•				
Muhlenbergia rigens	Deer Grass							•	•	

TABLE 9-4
MASTER PLANT PALETTE

BOTANICAL NAME	COMMON NAME	ACCENT	VERTICAL SCREEN/ BACKGROUND	STREET TREE	UNDERSTORY TREE	PARKS & TRAILS	RIPARIAN ZONE	CONIFEROUS FOREST	CALIFORNIA/HILLSIDE FRIENDLY ZONE	FUEL MOD SLOPES
Myoporum parvifolium 'Putah Creek'	Prostratum Myoprum							•	•	
Myrtus communis	True Myrtle	•				•		•		
Nassella (stipa) pulchra	Purple Needlegrass									•
Nemophila menziesii	Baby Blue Eyes								•	•
Opuntia littoralis	Prickly Pear	•							•	•
Phormium cookianum	Green Flax	•				•		•	•	
Pittosporum species	Tobira	•				•		•	•	
Plumbago capensis	Cape Plumbago								•	•
Quercus dumosa	Coastal Scrub Oak					•				•
Rhamnus californica	Coffeeberry								•	•
Rhaphiolepis species	Indian Hawthorne	•						•	•	
Rhus ovata	Sugar Bush								•	•
Ribes speciosum	Flowering Gooseberry								•	•
Rosa F. 'Ice Berg'	White Shrub Rose	•						•		
Rosmarinus o. 'Prostratus'	Trailing Rosemary					•		•	•	
Rosmarinus o. 'Tuscan Blue'	Rosemary	•							•	
Salvia gregii	Autumns Sage					•			•	
Salvia greggii 'Sierra Linda'	Red Salvia	•							•	
Senecio mandraliscae	N.C.N.	•							•	
Strelizia reginae	Bird-of-Paradise	•							•	
Thevetia peruviana	Yellow Oleander	•						•		
Viburnum tinus 'Spring Bouquet'	Laurustinus					•			•	
Westringia fruticosa 'Wynabbie Gem'	Coast Rosemary					•			•	
Xylosma congestum	Xylosma					•		•		
Yucca whipplei	Our Lord's Candle								•	•

DEVELOPMENT REGULATIONS

Section 10.0

January 2012

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Architecture+Planning

INTRODUCTION 10.1

The provisions contained herein, along with those contained within the Development Agreement, regulate design and development within Serrano Summit.

DEFINITION OF TERMS 10.2

The meaning and construction of words, phrases, titles, and terms shall be the same as provided in Section 9.04.030, "Definitions," in the City of Lake Forest Municipal Code, unless otherwise specifically provided herein. The definitions of residential product types shall be those defined in Section 4, "Land Use," of the Serrano Summit Area Plan, within the discussion of each respective land use district.

ADMINISTRATION 10.3

The Serrano Summit Area Plan, upon adoption, in addition to the Development Agreement, will serve as an implementation tool for the General Plan, as amended, to guide the growth of the community. The Serrano Summit Area Plan Development Regulations address the general provisions and development standards for the community.

GENERAL PROVISIONS 10.4

The following provisions shall apply to all proposed land development within Serrano Summit.

1. Gross Acres - Except as otherwise indicated, gross acres for all development areas are measured to the centerline of streets.
2. Grading - Development within the Serrano Summit area shall utilize grading techniques as approved by the City of Lake Forest and shall be in accordance with the City's Grading Ordinance and Grading Manual. Grading concepts shall respond to the design guidelines included in the Serrano Summit Area Plan that promote a livable community with streets and public realm areas designed for walking and resident interaction.
3. Building Modification - Additions and alterations permitted by the Serrano Summit Area Plan shall match the architectural style of the primary unit and shall be constructed of the same materials, details, and colors as the primary unit.
4. Utilities - All new and existing public utility distribution lines of 35.5kV or less shall be subsurface within the Serrano Summit boundaries.
5. Technology - All homes and businesses shall accommodate modern telecommunications technology for computer internet access, phone, fax, and television. If available locally, broadband fiber optics cable will be installed to all the properties. See Section 5.9 for more information.
6. Transfer of Density - The Serrano Summit Area Plan allocates a gross density to each Planning Area as indicated in Table 4-1, "Development Summary by Planning Area" in Section 4, of the Serrano Summit Area Plan. Variations in the gross density within any Planning Area may occur at the time of final design of the Planning Area depending upon the residential product identified for development as part of the 'B' Map process. Changes in residential density for the Planning Area are permitted among and between all of the residential Planning Areas (i.e., Planning Areas 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12) within Serrano Summit, provided that the density of each residential planning area does not exceed 25 dwelling units per acre and the total number of residential dwelling units permitted within Serrano Summit does not exceed 608 dwelling units, with an additional 225 dwelling units in Planning Area 13 if the Civic Center is not constructed.
7. Best Management Practices – Development of storm water runoff improvements within Serrano Summit shall adhere to currently adopted Best Management Practices (BMP's). The Site Design BMP's may include but not be limited to, Water Quality Management Plan basins. Common area landscaping and parks may be designed to function as a series of shallow storm water treatment basins and infiltration zones for storm water runoff from surrounding areas wherever moderately well draining soils exist.
8. Maximum Number of Dwelling Units - The maximum number of residential dwelling units permitted within Serrano Summit for Planning Areas 1 through 12 is 608 dwelling units, with an additional 225 dwelling units in Planning Area 13 if the Civic Center is not constructed.
9. Approval of this Area Plan - This Area Plan has been approved by Resolution No.___ and adopted by the City Council. Approval of the Serrano Summit Area Plan includes the approval of a "Master Land Use Plan," contained within this Area Plan.
10. Solid Waste/Recycling - Development within Serrano Summit shall comply with City of Lake Forest requirements for the provision and placement of solid waste and recycling receptacles. All homes subject to individual trash pick-up (rather than those that utilize centralized trash enclosures) shall be provided with a minimum of three separate portable wheeled containers for waste, recycling and green waste. The containers may be provided by the waste hauler. These containers shall either be stored in an enclosed garage or in a side or rear yard so as not to be visible from any public street, except during days of trash pickup or on the evening before standard trash pickup takes place.

SUSTAINABILITY DEVELOPMENT REGULATIONS 10.5

The enforcement of the following regulations shall be the responsibility of the project master developer.

Structures & Site Development

1. All homes shall accommodate technology for computer internet access, phone, fax, and television.
2. All homes shall be equipped to accommodate recharging of "plug in hybrid" vehicles.
3. Construction activities within Serrano Summit shall implement a construction waste management plan outlining on-site measures for minimizing and recycling construction waste.
4. The use of exterior building materials that do not require painting or coating is encouraged.
5. The use of recycled materials is encouraged including the use of wood certified by the Forest Stewardship Council.
6. Visible roof materials shall have a 30-year minimum life expectancy.
7. Buildings shall utilize proper insulation in walls and ceilings as well as a radiant barrier at the roof.
8. Heating, air conditioning, and ventilation systems shall incorporate a programmed thermostat.
9. Low energy windows are required for all windows.
10. All bathrooms shall provide motion detectors on light switches as required by the Building Code and high efficiency plumbing fixtures shall be used.
11. The use of interior low energy lighting fixtures and bulbs throughout all public buildings is required, whenever feasible.
12. Exterior electrical outlets on the front and rear of all buildings to allow for electric landscape maintenance equipment should be provided.

Landscape Sustainability

1. The plant palette of California-friendly and water wise plants included in the Area Plan shall be utilized. Plants shall be grouped in combinations with similar water and sun exposure needs. Grouping plants with similar needs will reduce the chance of over watering or under watering and will allow growth without risk of disease or failure due to improper irrigation.
2. A layer of 2-3 inches of bark mulch shall be installed in all planters. The mulch will retard weed growth and thus reduce the labor required for weed abatement and the need for chemical applications to control weed growth. In addition, the bark mulch will reduce the loss of moisture from the soil by evaporation and keep the root zone of the plants cooler.
3. Irrigation shall utilize low flow bubblers and spray heads, where applicable, to reduce the probability of water run off and overspray.
4. The use of an irrigation controller equipped with soil moisture sensor, rain shut off, and wind shut off capabilities is encouraged. It is recommended that the controller be able to adjust station run times to daily evapotranspiration updates. Utilizing these tools, management of the irrigation system will be automated and will reduce the labor required to provide system adjustments based on seasonal change. These mechanisms will also reduce the volume of water applied to planting areas otherwise wasted using typical time clock controllers.

RESIDENTIAL DISTRICT STANDARDS 10.6

Adoption of the development regulations described in Section 10, "Development Regulations," in this Area Plan shall be through a "master" Use Permit for all Serrano Summit planning areas.

Single Family Detached Residential (SFD)

General

This category includes the development of single-family detached dwelling units. The purpose of the residential standards for single-family detached housing is to establish the minimum criteria for the development of these product types on individual lots or as condominium style single family detached developments within the Planning Areas specified within Serrano Summit.

Permitted Uses and Facilities

1. Single family detached dwellings and garages.
2. Public or private parks, non-lighted athletic fields, community centers, senior centers, recreational buildings, greenbelts, and open space.
3. Accessory uses to include the following:
   - *a. Second Dwelling Units, in accordance the City of Lake Forest Municipal Code.*
   - *b. Home occupations per Section 9.146.060 of the Lake Forest Municipal Code.*
   - *c. Guest houses.*
   - *d. Storage sheds.*
   - *e. Gazebos, cabanas and other similar structures.*
   - *f. Home schools.*
   - *g. Swimming pools, spas, and other similar outdoor recreational amenities.*
   - *h. Patios and patio covers.*
   - *i. Storage, garden structures, cabanas, and greenhouses.*
   - *j. Monument signage.*
   - *k. Model home and subdivision sales trailers; temporary construction parking, offices, and facilities; real estate signs, signage indicating future development and directional signage in accordance with the City of Lake Forest Code.*
   - *l. Second and third story additions to existing single story dwelling units.*
   - *m. Small family child care/day care facilities (up to 6 children), in accordance with the City of Lake Forest Municipal Code.*
   - *n. Drop boxes for overnight delivery service providers.*
   - *o. Domestic household pets in accordance with the City of Lake Forest Municipal Code.*
   - *p. Parking lots associated with permitted uses.*
   - *q. Signs associated with permitted uses and as approved per the City of Lake Forest sign permit procedures.*

Conditionally Permitted Uses and Facilities

1. Places of worship including, but not limited to, churches and synagogues.
2. Congregate care facilities.
3. Minor communications facilities.
4. Parking lots associated with conditionally permitted uses.

Temporary Uses

1. Temporary uses shall be permitted pursuant to Section 9.144.070, "Temporary Uses and Structures," of the City of Lake Forest Municipal Code.

Recreational Vehicle Storage & Parking

1. Recreational Vehicle (RV) storage is prohibited on public and private streets, private lanes, and in sideyards. RV parking is restricted to public and private streets and is limited to 24 hours.

Single Family Detached Residential Development Standards

The regulations governing development of single family detached residential dwelling units within Serrano Summit are provided in Table 10-1, "Single Family Detached Residential Development Standards."

TABLE 10-1
SINGLE FAMILY DETACHED RESIDENTIAL DEVELOPMENT STANDARDS[9]

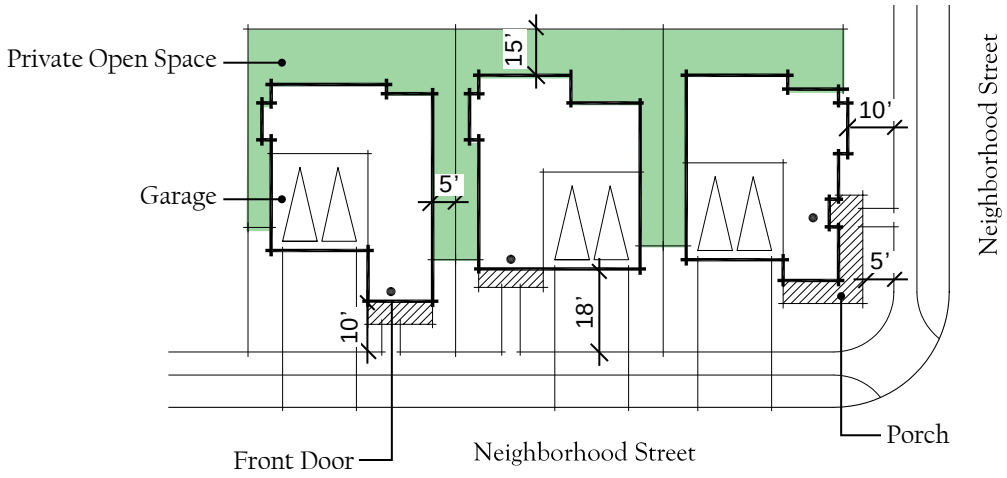
(TABLE APPLIES TO FEE SIMPLE HOUSING ONLY)

	FRONT LOADED 50'+ WIDE	FRONT LOADED 40' WIDE	SFD REAR LOADED
LOT CRITERIA			
MIN. LOT WIDTH	50'	40'	30'
MIN. LOT WIDTH AT KNUCKLE OR CUL-DE-SAC	35'	35'	N/A
MIN. LOT WIDTH AT CORNER LOT	55'	45'	35'
MIN. LOT DEPTH	80'	70'	50'
MIN. LOT AREA	4,000 sf	2,800 sf	1,500 sf
FRONT SETBACKS (FROM PROPERTY LINE)[1]			
LIVING AREA	10'	10'	10'[2]
PORCH (SINGLE STORY PLATE LINE)	5'	5'	5'[2]
STREET FACING GARAGE	18'	18'	N/A
TURN-IN GARAGE	10'	N/A	N/A
FRONT YARD SETBACK FROM 'B' STREET (APPLIES TO 'B' STREET ONLY)	15'	15'	15'
SIDE SETBACKS (FROM PROPERTY LINE)[1]			
INTERIOR PROPERTY LINE	5'	5'	5'
REAR SETBACKS (FROM PROPERTY LINE)[1]			
MAIN STRUCTURE	15'	15'	3'
GARAGE	5'	5'	3' from alley ROW
PATIO COVER OR SECOND STORY DECK	5'	5'	3'
PARK LANDSCAPE BUFFER[8]			
MEASURED FROM PROPERTY LINE	3'	3'	3'
LOT COVERAGE			
MAX. COVERAGE	60%	60%	60%
MAXIMUM BUILDING HEIGHT[3]			
MAIN STRUCTURE	35'	35'	35'
GARAGE (SINGLE STORY)	15'	15'	15'
GARAGE WITH SECOND UNIT ABOVE	35'	35'	35'
WALLS, FENCES, AND HEDGES			
MAX. HEIGHT IN FRONT SETBACK AREA[4]	42"	42"	42"
MAX. HEIGHT AT INTERIOR OR REAR PL[5]	6'	6'	6'
REQUIRED PARKING (PER LAKE FOREST MUNCIPAL CODE CHAPTER 9.168, SPECIFICALLY AS FOLLOWS:)			
TOTAL PARKING REQUIRED IN ENCLOSED GARAGE[6,10]	2 spaces/unit	2 spaces/unit	2 spaces/unit
GUEST PARKING REQUIRED[10]	0.2 space/unit[7]	0.2 space/unit[7]	0.2 space/unit[7]
OPEN SPACE			
PRIVATE OPEN SPACE	100 sf on the ground floor with a min. dimension of 6'	100 sf on the ground floor with a min. dimension of 6'	100 sf on the ground floor with a min. dimension of 6'

TABLE 10-1 FOOTNOTES

1. Architectural projections may project a maximum of 3 feet into required front, rear or side setback areas; however, in no case shall such projection be closer than 3 feet to any property line. An architectural projection is defined as an element that articulates the building elevation such as eaves, window and door pop-out surrounds, media niches, bay windows, pot shelves, chimneys, enhanced window sills, shutter details, window trim, balconies and entry gates, and other similar elements. Not applicable to paseo or court fronting units. Refer to minimum building separation requirements.
2. Not applicable to paseo or court fronting units. Refer to minimum building separation requirements.
3. Architectural projections such as chimneys, cupolas, and similar features may exceed the maximum height limit by 10 feet.
4. Solid masonry walls or fencing materials may be permitted 2' from the back of the sidewalk as long as they have a max height of 42". Combination retaining walls and wall/fence combinations can exceed 42" in height. Fences, walls, hedges or similar view obstructing structures or plants that reduce safe ingress or egress of vehicles or pedestrians shall not exceed 42" in height in any required front yard. Walls with plexiglass are restricted to areas with view opportunities.
5. Walls may exceed 6 feet in height for noise attenuation purposes subject to an approved Acoustical Study, and may have a max. height of 9 feet if a combination wall/fence/hedge, stepped wall or fence, and/or retaining wall is necessary.
6. All parking spaces to be enclosed with a minimum 20' x 20' clear inside dimension for two spaces and 10' x 20' for single spaces.
7. Required guest parking can be provided on-street or within designated open parking areas.
8. Where private property (excepting streets and alleyways) abuts a public neighborhood park in Planning Areas 15 and 16, a three foot wide landscape buffer shall be provided consisting of a low hedge, shrubs, or a low wall or fence, not to exceed three feet in height, unless a taller wall for privacy purposes is permitted by the City of Lake Forest Planning Department.
9. Development Standards approved through Use Permit 9-11-2132, in accordance with Lake Forest Municipal Code Section 9.124, Planned Development Combining District.
10. All parking spaces shall comply with the applicable sections of Lake Forest Municipal Chapter 9.168, and specifically 9.168.020, which states that if the decision-maker determines minimum parking standards are inadequate for a specific project, he may require the developer, owner or operator of any specific use to provide the adequate parking even though such addition may be in excess of the minimum requirements set forth in this section.

See Table 10-1 Development Standards: Front Loaded Small Lot - Single-Family Detached (2,800 SF Min. Lot)

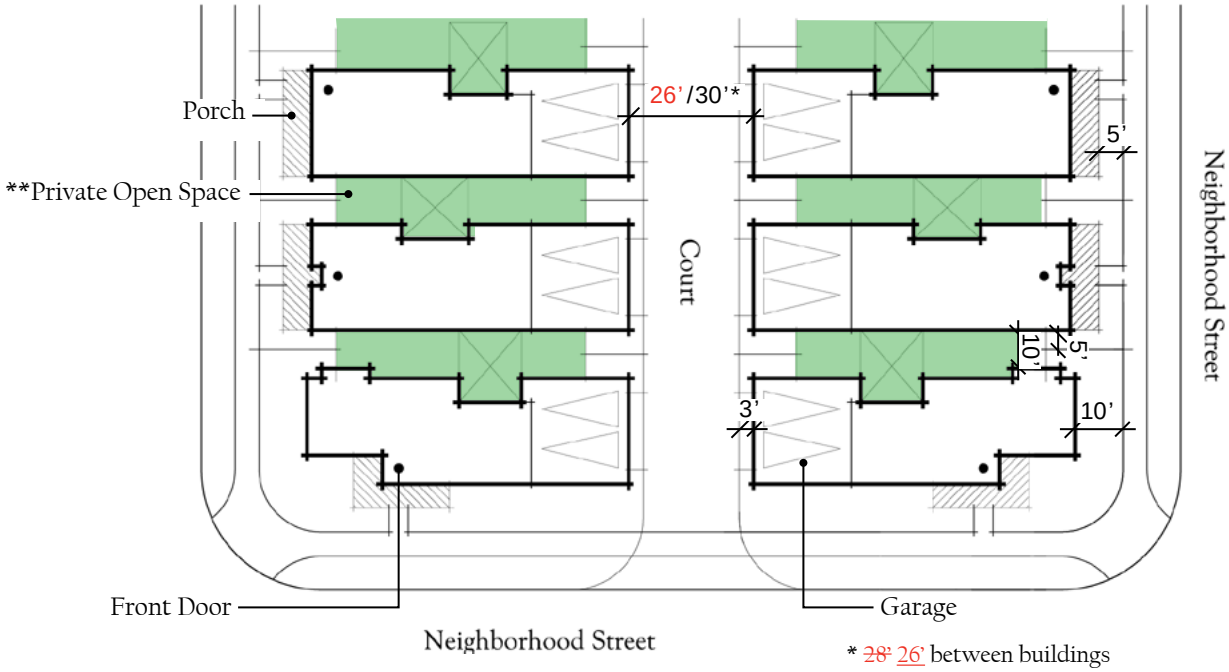


Drawing Not to Scale

Product Type Examples
(For illustrative purposes only; actual floor plans and lotting may vary)

DESIGN INTENT	
Provide corner lot elevation enhancement through side-entry or wrap porch on corner lot.	Promote neighbor interaction with front porches forward of the garage.
Provide eyes-on-the-street through living-forward floor plan design.	Create articulation in streetscene through front elevation offsets.

See Table 10-1 Development Standards: SFD Rear Loaded



Drawing Not to Scale

* ~~28'~~ 26' between buildings
30' between garage doors

** Private Open Space is created through easment.

Product Type Examples
(For illustrative purposes only; actual floor plans and lotting may vary)

DESIGN INTENT	
Limit garage door dominance on streetscene by utilizing rear-loaded garages.	Reduce driveway cuts along neighborhood streets to create a safer pedestrian environment.
Provide eyes-on-the-street through living-forward floor plan design.	Use architectural elements to articulate front elevation.
Provide corner lot elevation enhancement through side-entry on corner lot or wrap porch.	Create articulation in street scene through front elevation offsets.
Ease side yards to maximize yard useability.	

Single Family Detached Enclave Residential (SFD-E)

General

This category includes the development of single-family detached enclave and motor court/green court dwelling units. The purpose of the residential standards for detached enclave housing is to establish the minimum criteria for the development of these product types as condominium style detached enclave and motor court/green court developments within the Planning Areas specified within Serrano Summit.

Permitted Uses and Facilities

1. Single family detached enclave dwellings and garages.
2. Public or private parks, non-lighted athletic fields, community centers, senior centers, recreational buildings, greenbelts, and open space.
3. Accessory uses to include the following:
   a. *Second Dwelling Units, in accordance the City of Lake Forest Municipal Code.*
   b. *Home occupations per Section 9.146.060 of the Lake Forest Municipal Code.*
   c. *Storage sheds.*
   d. *Gazebos, cabanas and other similar structures.*
   e. *Home schools.*
   f. *Swimming pools, spas, and other similar outdoor recreational amenities.*
   g. *Patios and patio covers.*
   h. *Storage, garden structures, cabanas, and greenhouses.*
   i. *Monument signage.*
   j. *Model home and subdivision sales trailers; temporary construction parking, offices, and facilities; real estate signs, signage indicating future development and directional signage in accordance with the City of Lake Forest Municipal Code.*
   k. *Second story additions to existing single story dwelling units.*
   l. *Small family child care/day care facilities (up to 6 children), in accordance with the City of Lake Forest Municipal Code.*
   m. *Drop boxes for overnight delivery service providers.*
   n. *Domestic household pets in accordance with the City of Lake Forest Municipal Code.*
   o. *Parking lots associated with permitted uses.*
   p. *Signs associated with permitted uses and as approved per the City of Lake Forest sign permit procedures.*

Conditionally Permitted Uses and Facilities

1. Places of worship including, but not limited to, churches and synagogues.
2. Congregate care facilities.
3. Minor communications facilities.
4. Parking lots associated with conditionally permitted uses.

Temporary Uses

1. Temporary uses shall be permitted pursuant to Section 9.144.070, "Temporary Uses and Structures," of the City of Lake Forest Municipal Code.

Recreational Vehicle Storage & Parking

1. Recreational Vehicle (RV) storage is prohibited on public and private streets, private lanes, and in sideyards. RV parking is restricted to public and private streets and is limited to 24 hours.

Single Family Detached Enclave Residential Development Standards

The regulations governing development of single family detached enclave residential dwelling units within the Serrano Summit project boundaries are provided in Table 10-2, "Single Family Detached Enclave Residential Development Standards."

TABLE 10-2
SINGLE FAMILY DETACHED ENCLAVE RESIDENTIAL DEVELOPMENT STANDARDS[14]

	URBAN COURT	REAR LOADED DUPLEX	MOTOR COURT/ GREEN COURT
LOT CRITERIA			
MINIMUM LOT WIDTH	No Requirement	No Requirement	No Requirement
MINIMUM LOT DEPTH	No Requirement	No Requirement	No Requirement
MINIMUM LOT AREA	No Requirement	No Requirement	No Requirement
PROPERTY LINE SETBACKS[1,2,3]			
FRONT TO EXTERIOR PROPERTY LINE[11]	10'	10'	10'
SIDES & REAR TO EXTERIOR PROPERTY LINE[11]	5'	5'	5'
FRONT, SIDES & REAR TO INTERIOR PROPERTY LINE[12]	per CA Building Code	5'	5'
SETBACKS (FROM THE PROPERTY LINE OF LOCAL STREETS)[2,3]			
LIVING AREA	5'	10'	10'
PORCH (SINGLE STORY PLATE LINE)	3'	5'	5'
STREET FACING GARAGE	18'	18'	18'
ALLEY FACING GARAGE	3'	3'	3'
FRONT YARD SETBACK FROM 'B' STREET (APPLIES TO 'B' STREET ONLY)	15'	15'	15'
PARK LANDSCAPE BUFFER[13]			
MEASURED FROM PROPERTY LINE	3'	3'	3'
~~LOT COVERAGE~~			
~~MAXIMUM COVERAGE FOR A PLANNING AREA[4]~~		~~70%~~	~~70%~~
MINIMUM BUILDING SEPARATION			
MINIMUM DISTANCE BETWEEN STRUCTURES W/O PASEO OR GREENWAY (WITH ZERO OPENINGS)	6'	6'	6'
MINIMUM DISTANCE BETWEEN STRUCTURES W/O PASEO OR GREENWAY (WITH MAXIMUM 25% OPENINGS)	6'-6"	6'-6"	6'-6"
MINIMUM DISTANCE BETWEEN STRUCTURES SEPARATED BY PASEO OR GREENBELT[2]	10'	10'	10'
FRONT DOOR TO ADJACENT STRUCTURES	12'	12'	12'
GARAGE DOOR TO GARAGE DOOR	30'	30'	30'
BETWEEN LIVABLE AREAS ACROSS AN ALLEY (AT 2ND AND 3RD LEVELS)	26'	~~28'~~ 26'	~~28'~~ 26'
MAXIMUM BUILDING HEIGHT			
MAIN STRUCTURES[5]	36'-6"	35'	35'
WALLS, FENCES, AND HEDGES			
MAX. HEIGHT AT FRONT AND STREET SIDE PROPERTY LINE[6]	42"	42"	42"
MAX. HEIGHT AT INTERIOR OR REAR PROPERTY LINE[7,12]	6'	6'	6'
OPEN SPACE			
PRIVATE OPEN SPACE	100 sf on the ground floor with a min. dimension of 6' OR 60 sf on upper floors with a min. dimension of 5'	100 sf on the ground floor with a min. dimension of 6' OR 60 sf on upper floors with a min. dimension of 5'	100 sf on the ground floor with a min. dimension of 6' OR 60 sf on upper floors with a min. dimension of 5'

TABLE 10-2 SINGLE FAMILY DETACHED ENCLAVE RESIDENTIAL DEVELOPMENT STANDARDS			
	URBAN COURT	REAR LOADED DUPLEX	MOTOR COURT/ GREEN COURT
PARKING			
REQUIRED OFF-STREET PARKING[8,9,10,15]	Per Lake Forest Municipal Code Chapter 9.168, specifically 2 spaces per unit + 0.2 guest parking		

TABLE 10-2 FOOTNOTES

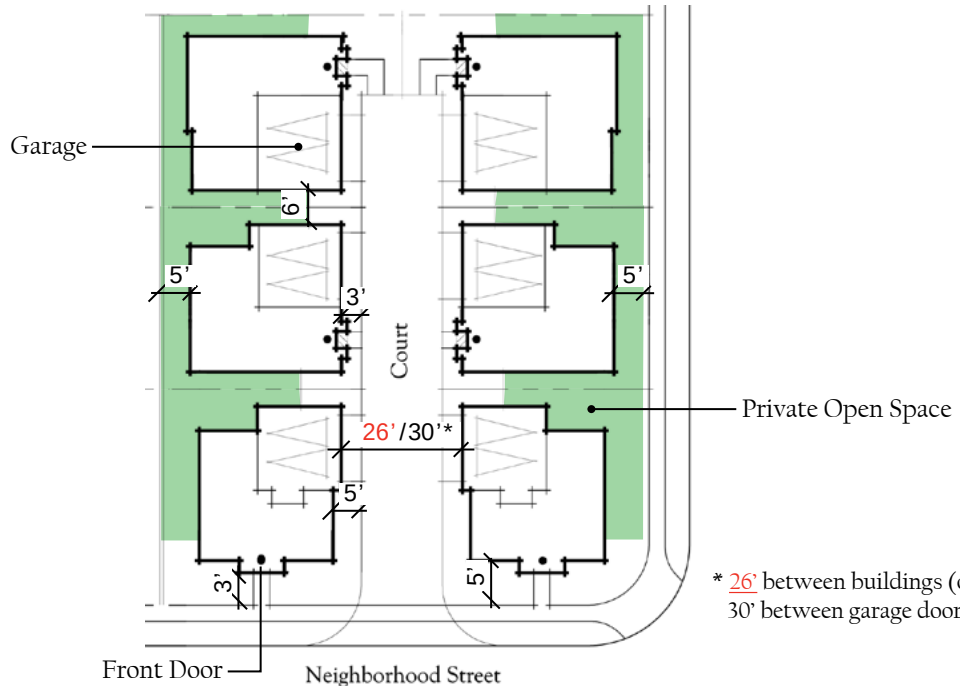
1. Each building shall have only one front elevation and one rear elevation. All other elevations shall be deemed to be side elevations. The City shall determine which building elevation shall be designated as the "front" elevation for the purposes of this Section. In most cases, the "rear" elevation shall be deemed to be the opposite elevation from the front elevation.
2. Distance is measured from the property line. Not applicable to paseo or court fronting units. Refer to minimum building separation requirements.
3. Architectural projections may project a maximum of 3 feet into required setback areas; however, in no case shall such projection be closer than 3 feet to any property line. An architectural projection is defined as an element that articulates the building elevation such as eaves, window and door pop-out surrounds, media niches, bay windows, pot shelves, chimneys, enhanced window sills, shutter details, window trim, balconies and entry gates, and other similar elements. Not applicable to paseo or court fronting units. Refer to minimum building separation requirements.
4. ~~Individual lots may exceed maximum lot coverage as long as the average lot coverage for the planning area does not exceed the maximum. Pursuant to Section 9.124.060 of the Municipal Code, the project net area shall not exceed forty (40) percent for residential projects.~~
5. Architectural projections such as chimneys, cupolas, and similar features may exceed the max. height limit by 10'.
6. Solid masonry walls or fencing materials may be permitted 2' from the back of the sidewalk as long as they have a max height of 42". Combination retaining walls and wall/fence combinations can exceed 42" in height. Fences, walls, hedges or similar view obstructing structures or plants that reduce safe ingress or egress of vehicles or pedestrians shall not exceed 42" in height in any required front yard. Walls with plexiglass are restricted to areas with view opportunities.
7. Walls may exceed 6 feet in height for noise attenuation purposes subject to an approved Acoustical Study, and may have ion wall/fence/hedge, stepped wall or fence, and/or retaining wall is necessary.
   with a minimum 20' x 20' clear inside dimension for two spaces, 10' x 20' for single es. Use of tandem parking shall be evaluated on a case-by-case basis during the B Map nent permit or use permit process, whichever comes first.
   vided on-street or within designated open parking areas.
   e, parking spaces may be either covered or uncovered as determined by the builder. ed in a carport or an enclosed garage. Open spaces are parking spaces that are intended guests.
   fined as the planning area boundary for each product type.
   efined as any subarea boundary line within an overall condo map used for phasing

   g streets and alleyways) abuts a public neighborhood park in Planning Areas 15 and 16, a three foot wide landscape buffer shall be provided consisting of a low hedge, shrubs, or a low wall or fence, not to exceed three feet in height, unless a taller wall for privacy purposes is permitted by the City of Lake Forest Planning Department.
14. Development Standards approved through Use Permit 9-11-2132, in accordance with Lake Forest Municipal Code Section 9.124, Planned Development Combining District.
15. All parking spaces shall comply with the applicable sections of Lake Forest Municipal Chapter 9.168, and specifically 9.168.020, which states that if the decision-maker determines minimum parking standards are inadequate for a specific project, he may require the developer, owner or operator of any specific use to provide the adequate parking even though such addition may be in excess of the minimum requirements set forth in this section.
16. All Rear Loaded Duplex homes are permitted to have a zero foot setback between units at the party wall.

NOTE: - "SFD Enclave" is not being removed but rather the designation is incorporated as a product type under the "Green Court / Motor Court" heading. New "Urban Court" proposed

new page

See Table 10-2 Development Standards: Urban Court



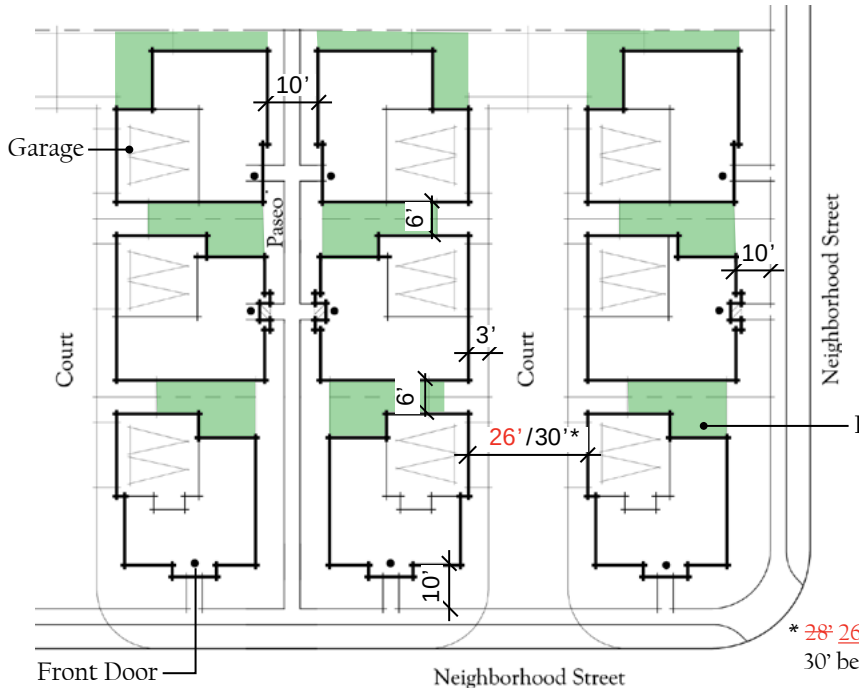
* 26' between buildings (on 2/3 story)
30' between garage doors

Drawing Not to Scale

Product Type Examples
(For illustrative purposes only; actual floor plans and lotting may vary)

DESIGN INTENT	
Provide variety through floor plan design and orientation.	Reduce driveway cuts along neighborhood streets to create a safer pedestrian environment.
Limit garage door dominance on streetscene by loading garages off shared court.	Provide eyes-on-the-street for homes fronting neighborhood street through living-forward floor plan design.
Use architectural elements to articulate front elevation.	

See Table 10-2 Development Standards: Green Court ~~Rear Loaded Paseo Enclave~~ ~~- Single-Family Detached Enclave~~



Drawing Not to Scale

* ~~28'~~ 26' between buildings (on 2/3 story)
30' between garage doors

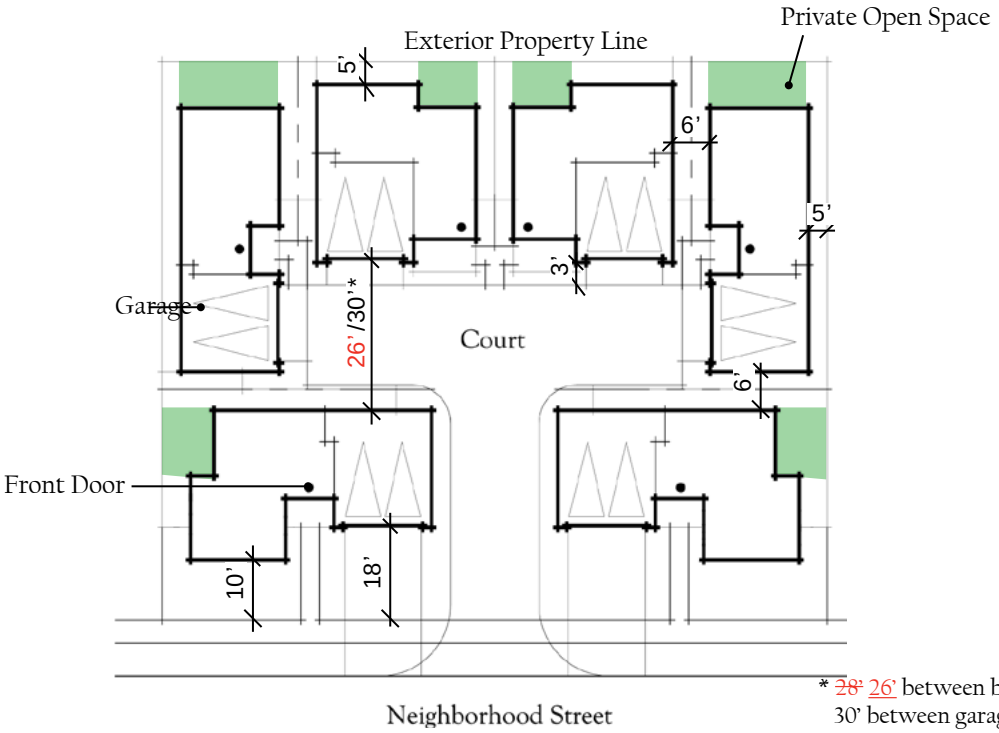
** Private Open Space is created through easment.

Product Type Examples
(For illustrative purposes only; actual floor plans and lotting may vary)

DESIGN INTENT	
Provide variety through floor plan design and orientation.	Reduce driveway cuts along neighborhood streets to create a safer pedestrian environment.
Limit garage door dominance on streetscene by loading garages off shared court.	Provide eyes-on-the-street for homes fronting neighborhood street through living-forward floor plan design.
Promote neighbor interaction by orienting front entries around shared paseo.	Use architectural elements such as wide front elevations to articulate front elevation.

updated

See Table 10-2 Development Standards: Motor Court



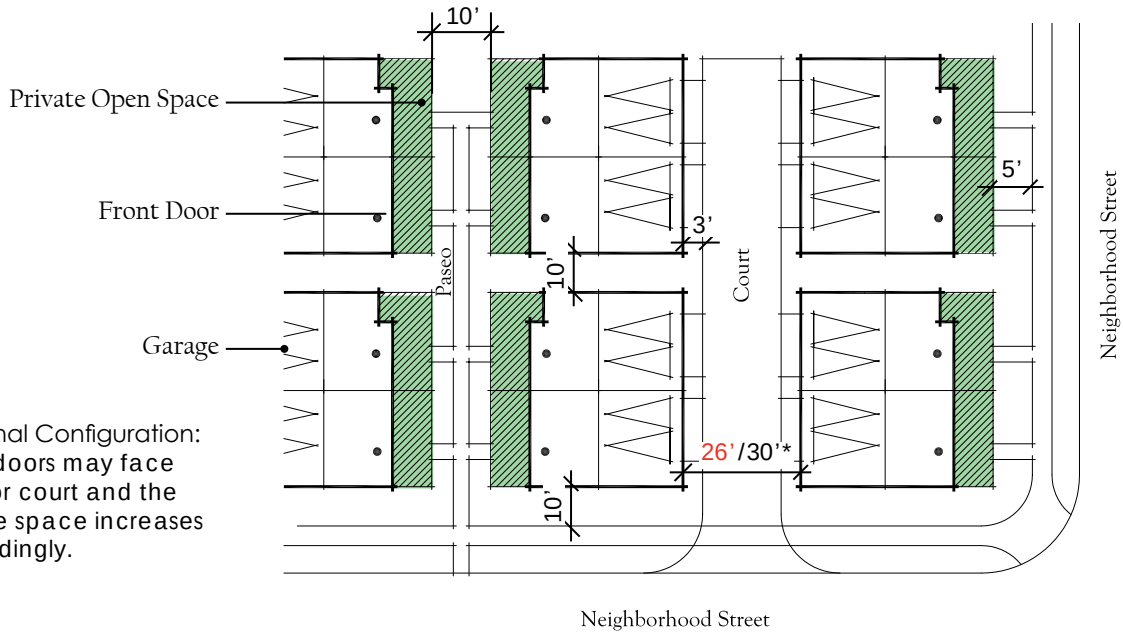
* ~~28'~~ 26' between buildings (on 2/3 story)
30' between garage doors

Drawing Not to Scale

Product Type Examples
(For illustrative purposes only; actual floor plans and lotting may vary)

DESIGN INTENT	
Provide variety through floor plan design and orientation.	Reduce driveway cuts along neighborhood streets to create a safer pedestrian environment.
Limit garage door dominance on streetscene by loading garages off shared court.	Provide eyes-on-the-street for homes fronting neighborhood street through living-forward floor plan design.
Use architectural elements such as wide front elevations to articulate front elevation.	

See Table 10-2 Development Standards: Rear Loaded Duplex



Optional Configuration: Front doors may face alley or court and the private space increases accordingly.

Drawing Not to Scale

* ~~28'~~ 26' between buildings (on 2/3 story)
30' between garage doors

Product Type Examples
(For illustrative purposes only; actual floor plans and lotting may vary)

DESIGN INTENT	
Promote neighbor interaction by orienting front entries around shared paseo.	Reduce driveway cuts along neighborhood streets to create a safer pedestrian environment.
Provide variety through floor plan design and orientation.	Provide eyes-on-the-street for homes fronting neighborhood street through living-forward floor plan design.
Limit garage door dominance on streetscene by loading garages off shared court.	

Single Family Attached (SFA) and Multi-Family Attached (MFA) Residential Development Standards

General

This category includes the development of a variety of attached type residential and multi-family attached dwelling units including but not limited to rear loaded duplexes, townhomes, stacked flats, and apartments. Refer to Table 10-3 for more information.

Permitted Uses

1. Single family attached row townhomes, duplexes, townhomes, stacked flats, residential apartments, and associated parking facilities.
2. Public or private parks, non-lighted athletic fields, community centers, recreational buildings, greenbelts, and open space, associated parking facilities and ancillary buildings.
3. Accessory uses to include the following:
   a. *Home occupations per Section 9.146.060 of the Lake Forest Municipal Code.*
   b. *Swimming pools, spas, tennis courts, sports courts, and other similar outdoor recreational amenities.*
   c. *Patios, patio covers, gazebos, barbecues, and other similar structures.*
   d. *Home schools.*
   e. *Monument signage*
   f. *Mailboxes.*
   g. *Recreation center buildings.*
   h. *Maintenance storage buildings.*
   i. *Signage as permitted pursuant to any approved sign program and pursuant to the City of Lake Forest sign permit processes.*
   j. *Model units, sales offices, and subdivision sales trailers, temporary construction offices and facilities, real estate signs, signage indicating future development and directional signage in accordance with the City of Lake Forest Municipal Code.*
   k. *Small family child care /day care, up to 6 children in accordance with the City of Lake Forest Municipal Code.*
   l. *Sales Offices and Permanent Leasing Offices.*
   m. *Drop boxes for overnight delivery service providers.*

Conditionally Permitted Uses

1. Places of worship including but not limited to churches and synagogues.
2. Congregate care facilities.
3. Minor communications facilities.
4. Parking lots and facilities associated with conditionally permitted uses.

Temporary Uses

1. Temporary uses shall be permitted pursuant to Section 9.144.070, "Temporary Uses and Structures," of the City of Lake Forest Zoning Ordinance.

Recreational Vehicle Storage and Parking

1. Recreational Vehicle (RV) storage is prohibited on public streets, private streets, in private lanes, and in sideyards. RV parking is restricted to public and private streets and is limited to 24 hours.

Tandem Parking

1. Use of tandem parking shall be evaluated on a case-by-case basis during the B Map process.

Single Family Attached Residential Development Standards

The regulations governing development of single family attached residential dwelling units within the Serrano Summit project area are provided in Table 10-3, "Single Family Attached and Multi-Family Attached Residential Development Standards."

TABLE 10-3
SINGLE FAMILY ATTACHED AND MULTI-FAMILY ATTACHED RESIDENTIAL DEVELOPMENT STANDARDS[14]

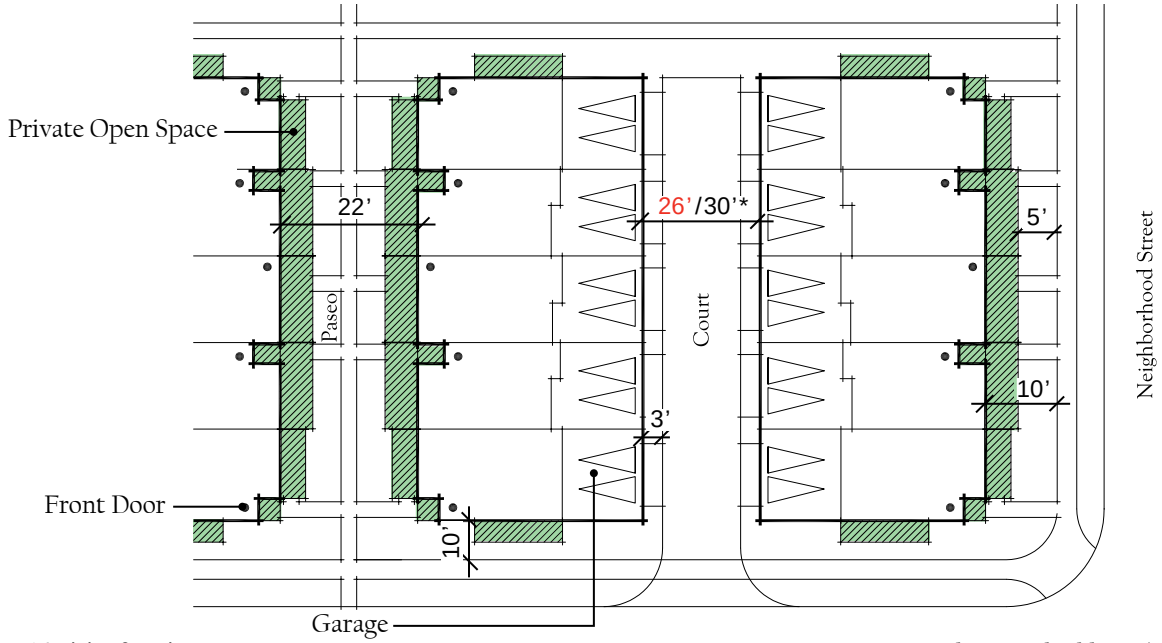
	TOWNHOMES, TRIPLEXES	REAR-LOADED STACKED FLATS	FRONT-LOADED STACKED FLATS
LOT CRITERIA			
MINIMUM LOT WIDTH	NO REQUIREMENT	NO REQUIREMENT	NO REQUIREMENT
MINIMUM LOT DEPTH	NO REQUIREMENT	NO REQUIREMENT	NO REQUIREMENT
MINIMUM LOT AREA	NO REQUIREMENT	NO REQUIREMENT	NO REQUIREMENT
MINIMUM SETBACKS (FROM THE PROPERTY LINE)[1, 2, 3]			
FRONT TO EXTERIOR PROPERTY LINE[11]	10'	10'	10'
SIDES & REAR TO EXTERIOR PROPERTY LINE[11]	5'	5'	5'
FRONT, SIDES & REAR TO INTERIOR PROPERTY LINE[12]	5'	5'	5'
SETBACKS (FROM BACK OF SIDEWALK OF LOCAL STREET)[2, 3]			
LIVING AREA	10'	10'	10'
PORCH/BALCONY	5'	5'	5'
STREET-FACING GARAGE	N/A	N/A	18'
ALLEY FACING GARAGE	3'	3'	3'
FRONT YARD SETBACK FROM 'B' STREET (APPLIES TO 'B' STREET ONLY)	15'	15'	15'
PARK LANDSCAPE BUFFER[13]			
MEASURED FROM PROPERTY LINE	3'	3'	3'
MINIMUM BUILDING SEPARATION[1]			
BUILDING FRONT TO BUILDING FRONT	22'[2]	22'[2]	22'[2]
BUILDING SIDE TO BUILDING SIDE	10'[3]	10'[3]	10'[3]
BUILDING FRONT TO BUILDING SIDE	12'	12'	N/A
GARAGE DOOR TO GARAGE DOOR	30'	30'	N/A
BETWEEN LIVABLE AREAS ACROSS AN ALLEY (AT 2ND AND 3RD LEVELS)	~~28'~~[1] 26'	~~28'~~[1] 26'	N/A
LOT COVERAGE			
MAX. COVERAGE FOR A PLANNING AREA	40% per Lake Forest Municipal Code Sec. 9.124.060(B)(1)	40% per Lake Forest Municipal Code Sec. 9.124.060(B)(1)	40% per Lake Forest Municipal Code Sec. 9.124.060(B)(1)
AREA PER UNIT			
AREA PER UNIT	No Requirement	No Requirement	No Requirement
MAXIMUM BUILDING HEIGHT[4]			
MAIN STRUCTURE	40'	40'	40'
CARPORTS/DETACHED GARAGES	15'	15'	15'
WALLS AND FENCES			
MAXIMUM HEIGHT AT FRONT AND STREET SIDE OF PROPERTY LINE[5]	42"	42"	42"
MAXIMUM HEIGHT AT INTERIOR OR REAR PROPERTY LINE[6,12]	6'	6'	6'
OPEN SPACE			
PRIVATE OPEN SPACE	100 sf on the ground floor w/ a min. dimension of 6' OR 60 sf on upper floors w/ a min. dimension of 5'	100 sf on the ground floor w/ a min. dimension of 6' OR 60 sf on upper floors w/ a min. dimension of 5'	100 sf on the ground floor w/ a min. dimension of 6' OR 60 sf on upper floors w/ a min. dimension of 5'

TABLE 10-3 SINGLE FAMILY ATTACHED AND MULTI-FAMILY ATTACHED RESIDENTIAL DEVELOPMENT STANDARDS			
	TOWNHOMES, TRIPLEXES	REAR-LOADED STACKED FLATS	FRONT-LOADED STACKED FLATS
REQUIRED OFF-STREET PARKING			
REQUIRED OFF-STREET PARKING - SINGLE-FAMILY AND MULTI-FAMILY ATTACHED[7,8, 9,15,16]	Per Lake Forest Municipal Code Chapter 9.168, specifically studio/1 bedroom unit requires 1 covered + 0.5 uncovered = 1.5 spaces total + 0.2 guest parking; 2 bedroom unit requires 2 covered + 0.5 uncovered = 2.5 spaces total + 0.2 guest parking; and 3 bedroom unit requires 3 covered + 0.5 uncovered = 3.5 total + 0.5 for additional bedrooms + 0.2 guest parking		

TABLE 10-3 FOOTNOTES

1. Each building shall have only one front elevation and one rear elevation. All other elevations shall be deemed to be side elevations. The City shall determine which building elevation shall be designated as the "front" elevation for the purposes of this Section. In most cases, the "rear" elevation shall be deemed to be the opposite elevation from the front elevation.
2. Architectural projections may project a maximum of 3 feet into required setback areas; however, in no case shall such projection be closer than 3 feet to any property line. An architectural projection is defined as an element that articulates the building elevation such as eaves, window and door pop-out surrounds, media niches, bay windows, pot shelves, chimneys, enhanced window sills, shutter details, window trim, entry gates, and other similar elements. Not applicable to paseo or court fronting units. Refer to minimum building separation requirements.
3. Balconies may project 4 feet out into courtyards and patios may project up to 8 feet into courtyards.
4. Architectural projections such as chimneys, cupolas, and other similar features may exceed the maximum permitted height by 10 feet.
5. Solid masonry walls or fencing materials may be permitted on the front property line. Fences, walls, hedges or similar view obstructing structures or plants that reduce safe ingress or egress of vehicles or pedestrians shall not exceed 42" in height in any front yard. Combination retaining walls and wall/fence combinations can exceed 42" in height. Walls with plexiglass are restricted to areas with view opportunities.
6. Walls may exceed six feet in height for noise attenuation purposes subject to an Acoustical Study and Planning Department approval.
7. All parking spaces within an enclosed garage shall have a minimum 20' x 20' clear inside dimension for double spaces, 10' x 20' for single spaces, and 10' x 38' for tandem spaces.
8. Use of tandem parking shall be evaluated on a case-by-case basis during the B Map process and/or future site development permit or use permit process, whichever comes first.
9. Covered spaces shall be either covered in a carport or an enclosed garage. Open spaces are parking spaces that are intended for use by project residents or their guests.
10. Lot area for SFA building types is defined as the development area for each building module.
11. "Exterior property line" shall be defined as the planning area boundary for each product type.
12. "Interior property line" shall be defined as any subarea boundary line within an overall condo map used for phasing purposes.
13. Where private property (excepting streets and alleyways) abuts a public neighborhood park in Planning Areas 15 and 16, a three foot wide landscape buffer shall be provided consisting of a low hedge, shrubs, or a low wall or fence, not to exceed three feet in height, unless a taller wall for privacy purposes is permitted by the City of Lake Forest Planning Department.
14. Development Standards approved through Use Permit 9-11-2132, in accordance with Lake Forest Municipal Code Section 9.124, Planned Development Combining District.
15. All parking spaces shall comply with the applicable sections of Lake Forest Municipal Chapter 9.168, and specifically 9.168.020, which states that if the decision-maker determines minimum parking standards are inadequate for a specific project, he may require the developer, owner or operator of any specific use to provide the adequate parking even though such addition may be in excess of the minimum requirements set forth in this section.
16. Required guest parking may be provided on local streets or within designated open parking areas.

See Table 10-3 Development Standards: Rear Loaded Townhomes



Drawing Not to Scale

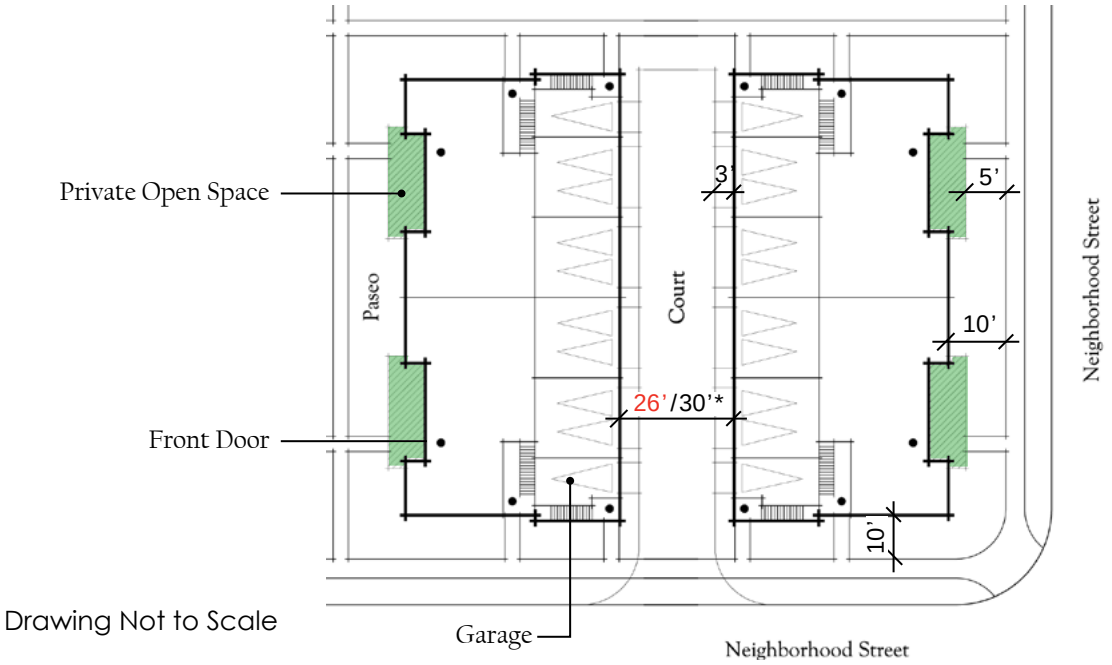
Neighborhood Street

* ~~28'~~ 26' between buildings (on 2/3 story)
30' between garage doors

Product Type Examples
(For illustrative purposes only; actual floor plans and lotting may vary)

DESIGN INTENT	
Promote neighbor interaction by orienting front entries around shared paseo.	Provide eyes-on-the-street for homes fronting neighborhood street through living-forward floor plan design.
Limit garage door dominance on streetscene by loading garages off shared court.	Use architectural elements such as wide front elevations to articulate front elevation.
Reduce driveway cuts along neighborhood streets to create a safer pedestrian environment.	

See Table 10-3 Development Standards: Rear Loaded Stacked Flats (with Carriage Units)



* ~~28'~~ 26' between buildings (on 2/3 story)
30' between garage doors

Product Type Examples
(For illustrative purposes only; actual floor plans and lotting may vary)

DESIGN INTENT	
Provide variety through floor plan design and orientation.	Reduce driveway cuts along neighborhood streets to create a safer pedestrian environment.
Create opportunities for smaller units through carriage unit and stacked flat design.	Provide eyes-on-the-street for homes fronting neighborhood street through living-forward floor plan design.
Limit garage door dominance on streetscene by loading garages off shared court.	Use architectural elements such as wide front elevations to articulate front elevation.

AGRICULTURE (P. A. 18 & P. A. 19) AND P. A. 13 (PUBLIC FACILITIES OVERLAY 10.7

General Provisions

This section sets forth the regulations for development of land uses within Serrano Summit.

The General Plan Designation for Planning Area 13 is Medium-Density Residential with a Public Facilities Overlay (PFO), which allows the site to be used for Civic Center purposes, including those municipal services commonly provided by general law cities at a city hall and civic center complex. Civic Center Design Guidelines are located within Section 8 of this Area Plan.

Permitted & Conditionally Permitted Uses

Permitted and Conditionally Permitted uses within the Agriculture (P.A. 18 and P.A. 19) district shall be as permitted and conditionally permitted in the City of Lake Forest's A1 Zone.

Permitted and Conditionally Permitted uses within Planning Area 13 (Public Facilities Overlay) shall be reflected to include the Residential District Standards (SFD, SFD-E, SFA, and MFA) in this Area Plan or a proposed Lake Forest Civic Center. The Lake Forest Civic Center shall be approved by the City Council through the design approval process.

Temporary Uses

Temporary uses are permitted in the Agriculture (P.A. 18 & P.A. 19) district and in Planning Area 13 (Public Facilities Overlay) subject to approval of a temporary use permit in accordance with the City of Lake Forest Municipal Code provisions for temporary uses. Temporary uses include, but are not limited to the following:

- Carnivals
- Circuses
- Holiday festivals/booths
- Seasonal Christmas tree/pumpkin lots
- Parking lot sales
- Sidewalk sales
- Street fairs and crafts shows
- Temporary structures and tents

TABLE 10-4 AGRICULTURE (P.A. 18 & P.A. 19) DEVELOPMENT STANDARDS	
MINIMUM DEVELOPMENT PARCEL AREA	N/A
MAXIMUM DEVELOPMENT FLOOR AREA RATIO	1.0
MINIMUM BUILDING SETBACKS[1]	
FROM PUBLIC STREET RIGHT-OF-WAY	15’
FROM PRIVATE STREET RIGHT-OF-WAY	15’
FROM INTERIOR PROPERTY LINES	0’ if adjacent to parking or industrial or commercial use; , 20’ if adjacent to open space uses, 50’ if adjacent to residential or institutional uses
SURFACE PARKING AREAS & DRIVE AISLE SETBACKS	
FROM PUBLIC STREET RIGHT-OF-WAY	10’
FROM PRIVATE STREETS & DRIVE AISLES TO BUILDINGS	2’
MINIMUM LANDSCAPE COVERAGE	
MINIMUM LANDSCAPE COVERAGE	10%
MAXIMUM BUILDING HEIGHT	
MAIN STRUCTURE	45’
ARCHITECTURAL PROJECTIONS AND FOCAL ELEMENTS, SUCH AS TOWERS, CUPOLAS, AND OTHER APPURTENANCES	55’
PORTE-COCHERES[2]	1 story
WATER RESERVOIRS AND TANKS	45’

FOOTNOTES

1. All setback areas shall be landscaped.
2. Porte-cocheres shall be open on three sides.

TABLE 10-5 PLANNING AREA 13 ONLY (PUBLIC FACILITIES OVERLAY) DEVELOPMENT STANDARDS*	
MINIMUM DEVELOPMENT PARCEL AREA	5 acres
MAXIMUM DEVELOPMENT FLOOR AREA RATIO	0.35
MINIMUM BUILDING SETBACKS[1,2]	
FROM PUBLIC STREET RIGHT-OF-WAY	20'
FROM INTERIOR PROPERTY LINES	0' if adjacent to parking, 20' if adjacent to a building, commercial, office, industrial or residential use
FROM ADJACENT OFF-SITE INDUSTRIAL USES	10'
FROM AREAS DESIGNATED AS OPEN SPACE	20'
SURFACE PARKING AREAS & DRIVE AISLE SETBACKS	
FROM PUBLIC STREET RIGHT-OF-WAY	10'
FROM PRIVATE STREETS & DRIVE AISLES TO BUILDINGS	3'
MINIMUM LANDSCAPE COVERAGE	
MINIMUM LANDSCAPE COVERAGE	15%
MAXIMUM BUILDING HEIGHT	
MAIN STRUCTURES	2 stories or 36', whichever is greater
ARCHITECTURAL PROJECTIONS AND FOCAL ELEMENTS, SUCH AS TOWERS, DOMES, CUPOLAS, AND OTHER APPURTENANCES	50'
PORTE-COCHERES[3]	1 story
PARKING STRUCTURES	3 stories or 36', whichever is greater

FOOTNOTES

1. All setback areas shall be landscaped.
2. All setbacks are measured to habitable area not architectural appurtenance or projection. An architectural projection is defined as an element that articulates the building elevation such as eaves, window and door pop-out surrounds, bay windows, pot shelves, chimneys, enhanced window sills, shutter details, window trim, balconies, pedestrian colonnades and other similar elements. Such elements may project a maximum of 3 feet into setback areas.
3. Porte-cocheres shall be open on three sides.

* If the Civic Center is not constructed in Planning Area 13, then the development standards shall revert to the residential development standards contained in Tables 10-1, 10-2 and 10-3.

Transmission & Wireless Communication Towers

Transmission towers and wireless communication towers are prohibited in all planning areas within Serrano Summit, with the exception of Planning Area 19. Transmission and wireless communication towers are permitted in Planning Area 19 by right, up to a height of 50 feet (as measured from ground level), subject to review and approval by the Director of Development Services. Towers exceeding 50 feet in height (as measured from ground level) shall be submit to review and approval by the Planning Commission. All towers shall be subject to the requirements set forth in Chapter 9.162, "Wireless Communication Facilities," of the City of Lake Forest Municipal Code, except as amended herein.

SIGNAGE 10.9

A Master Sign Program shall be submitted by the developer of Serrano Summit and approved by the City of Lake Forest to address residential project entries, residential neighborhood identification signs, commercial signage, public facility identification signs, way finding signs, and any other signs identified as necessary by the developer for the successful signage of Serrano Summit. No project signs shall be permitted in the public right-of-way. All signs shall be subject to the approval of a sign permit pursuant to the provisions of Section 9.164, "Signs," of the City of Lake Forest Municipal Code.

Master Sign Program Contents

All sign programs shall address, at a minimum, the following:

1. Permitted signs.
2. Prohibited signs.
3. The hierarchy of signage.
4. Definition of types of signs.
5. Locations and dimensions for monument signs, neighborhood identification signs, and public facilities signs.
6. Locations and dimensions of directional signage.
7. Provisions for size, location, and duration of display of temporary signs.
8. Permitted sign types, styles, illumination, construction materials, colors, and lettering styles.
9. Requirements for a sign permit application.
   a. *Procedures for obtaining approval of a sign permit.*
   b. *Procedures for amendments to the sign program.*

LIGHTING 10.10

Street Lights Along Public Streets

Streetlights along public streets, within Serrano Summit shall be high-pressure sodium vapor. Design of fixtures shall be approved by the City of Lake Forest as part of the City's Design Review process.

Lane Lighting Fixtures

Lane lighting fixtures shall be on sensors for automatic nighttime lighting. Style and specifications for lane lights shall be approved by the City of Lake Forest.

Lighting within Parks, Paseos, Tot Lots and Other Areas

Lighting within parks, paseos, tot lots and other public areas shall be approved by the City of Lake Forest as part of the City's Design Review of these facilities.

Lighting Within Civic Center Complex

Lighting within the Civic Center complex shall be subject to review and approval by the City.

SITE FURNISHINGS 10.11

Site furnishings, including but not limited to, benches, barbecues, picnic tables, tables, gazebos, shade structures, pedestrian plaza furnishings, and refuse receptacles shall be approved as part of the City's required development review process.

BUS TURNOUTS & SHELTERS 10.12

Bus turnouts and shelters shall be installed as required by the City of Lake Forest and the Orange County Transportation Authority (OCTA). Bus shelters, if provided, shall be compatible with the architectural character of Serrano Summit. The design of the bus shelters shall be approved by the City and OCTA.

MAILBOXES 10.13

Mailboxes shall be clustered and installed in locations approved by the City of Lake Forest in accordance with the requirements of the United States Postal Service. The locations of delivery service drop boxes, such as Federal Express or UPS, shall be coordinated with the location of the clustered mailboxes.

MODEL HOME DEVELOPMENT STANDARDS 10.14

The purpose of this section is to provided standards for the development of model home complexes within Serrano Summit. Model home complexes containing temporary real estate offices used solely for the initial sale of homes within the boundaries of an approved tract are permitted within any and all Residential Planning Area(s). Model home complexes are permitted in accordance with these regulations and the permitting requirements contained in Section 11.8, "Development Review and Approval Process," of this Area Plan.

Permitted Structures and Uses

The following structures and uses may be constructed as a part of a temporary model home complex:

1. Model homes in compliance with the Area Plan development regulations applicable to the properties that are being sold.
2. Garages, attached and detached, in compliance with the Area Plan development regulations applicable to the properties that are being sold. Garages attached to units being used as model homes or attached and directly adjacent to model homes may be used as temporary sales offices.
3. Accessory buildings and structures in compliance with the Area Plan development regulations applicable to the properties being sold.
4. Recreational facilities that will be a permanent portion of the subdivision in compliance with the Area Plan development regulations applicable to the properties that are being sold.
5. Permanent streets and driveways that will be part of the subdivision after the abandonment of the real estate office use.
6. Temporary children's playgrounds.
7. Temporary and permanent fencing, walks, and structural amenities.
8. Temporary vehicle parking, driveway cuts, and maneuvering areas to provide off-street parking as necessary for employees and guests.

IMPLEMENTATION

Section 11.0

January 2012

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Architecture+Planning

OVERVIEW 11.1

The adoption of the Serrano Summit Area Plan by the City of Lake Forest follows the certification of the Serrano Summit EIR. Following the adoption of this Area Plan, the project area will be developed in several phases. The Area Plan serves as the implementation tool for the City of Lake Forest General Plan, as amended, to guide the development of the community. Following adoption of this Area Plan, development within the project area will proceed pursuant to approval by the City of Lake Forest of applications for Site Development Permit, Use Permits and Subdivision Maps.

INTERPRETATION 11.2

Unless otherwise provided herein, any ambiguity concerning the content or application of the Serrano Summit Area Plan shall be resolved by the City's Planning Department in a manner consistent with the goals and objectives, purpose, and intent established in this Area Plan.

SEVERABILITY 11.3

If any portion of these regulations is declared to be invalid or ineffective in whole or in part, such decision shall not affect the validity of the remaining portions thereof. The legislative body hereby declares that they would have enacted these regulations, and each portion thereof, irrespective of the fact that any one or more portions be declared invalid or ineffective.

DEVELOPMENT DENSITY 11.4

This Area Plan has been approved by Resolution No.___ and adopted by the City Council. Approval of the Serrano Summit Area Plan includes the approval of a "Master Land Use Plan," contained within this Area Plan. The Master Land Use Plan establishes residential Planning Areas, civic uses, open space areas, parks, and a recreation center, as well as the type, pattern, and intensity of land use within each land use area. The maximum number of residential dwelling units permitted for development is established as part of the Area Plan. This Area Plan contains a plan for the installation of infrastructure and public improvements to serve the development and regulations and guidelines to govern land use within Serrano Summit.

DEVELOPMENT AGREEMENT 11.5

A Development Agreement between the City of Lake Forest and the Irvine Ranch Water District has been approved by the City of Lake Forest and establishes, among other things, provisions for the phasing of development and the methods of financing of construction, operation, and maintenance of public facilities, infrastructure improvements, and services for the Serrano Summit project area. The Development Agreement also establishes the plan for project compliance with local requirements for provision of parkland either through parkland dedication and/or payment of in lieu fees.

IMPLEMENTATION OF DEVELOPMENT REGULATIONS 11.6

Adoption of the development regulations as described in Section 10, "Development Regulations," in this Area Plan shall be through a "master" Use Permit for all Serrano Summit planning areas. The requirements of this Use Permit shall take precedence over the standards contained in the City of Lake Forest Municipal Code as of the approval date of this Use Permit. In instances where the Use Permit is silent, the City of Lake Forest Zoning standards, as of the approval date of this Use Permit, shall prevail.

IMPLEMENTATION OF DESIGN GUIDELINES 11.7

Adoption of the Serrano Summit Area Plan by the City of Lake Forest includes adoption of the design guidelines contained in the Design Guidelines sections of the Area Plan, which shall be the sole design criteria by which development projects within the project area are reviewed and approved. The Design Guidelines are intended to be flexible in nature while establishing basic evaluation criteria for the review by the City of Lake Forest of development projects during Site Development Permit Review and Subdivision Review.

DEVELOPMENT REVIEW & APPROVAL PROCESS 11.8

Subdivision Maps

All development projects within Serrano Summit shall be subject to approval of subdivision maps pursuant to the requirements of Title 7 of the City of Lake Forest Municipal Code, the State Subdivision Map Act, and the Serrano Summit Area Plan. Following approval of tentative subdivision maps and final maps approved by the City, and recordation with the County of Orange, the Serrano Summit subdivision maps become the legal documentation defining development parcels and lots within the Serrano Summit boundaries. Subdivision Maps must be accompanied and processed concurrently by a Use Permit containing the development plan for the Map.

Site Development Permit

Residential detached, attached, and multi-family development projects are subject to a Site Development Permit and approval by the City's Director of Development Services, unless the Director determines that the project would benefit from a public hearing, in which case the Site Development Permit is considered by the Planning Commission. Approval of a Site Development Permit constitutes approval of site plans, conceptual architecture, and landscaping for the project.

Conditional Use Permits

All development projects subject to approval of a Conditional Use Permit (CUP) as specified in Section 10, "Development Regulations," shall be processed for approval pursuant to the provisions contained within Section 9.184.040(c), "Public Hearings," of the City of Lake Forest's Municipal Code. In accordance with the provisions of Section 9.184.040(c), an application for a CUP constitutes a discretionary application subject to approval by the City's Planning Commission. Approval of a CUP application may also be accompanied by an application for approval of a subdivision map and a Site Development Permit. Approval of a CUP constitutes approval of project architecture, site plans, and landscape plans for development.

Exceptions

Exceptions to the development regulations contained in the Serrano Summit Area Plan with respect to site area dimensions, yards and projections into yards, heights of structures, distances between buildings, open space and off-street parking and loading can also be requested using the CUP process.

MODEL HOME COMPLEX PERMIT 11.9

All model home complexes within Serrano Summit are subject to Section 9.144.070.1 of the Municipal Code and require either a Site Development Permit or a Use Permit, depending on location. Furthermore, the Municipal Code specifies time limits for model homes.

TRANSFER OF RESIDENTIAL DWELLING UNITS 11.10

The Master Land Use Plan approved as part of the Area Plan establishes the preliminary distribution and density of residential dwelling units for each residential Planning Area as well as a total number of residential dwelling units permitted for development within Serrano Summit. Adjustments to the number of residential dwelling units allocated to a Planning Area may occur at the time of final design of any portion of the Planning Area and residential dwelling units may be transferred from one residential Planning Area to another. Changes to the number of residential dwelling units among residential Planning Areas is permitted provided the maximum number of dwelling units established for the Serrano Summit project area of 608 (or 833 if the Civic Center is not constructed) is not exceeded and provided that no planning area exceeds 25 dwelling units per acre. Any requests for a transfer of dwelling units must include an analysis of other Planning Areas to ensure that the maximum densities are being adhered to. The applicable exhibits for the Area Plan will be revised as appropriate for the changes being requested.

ADJUSTMENTS TO A PLANNING AREA 11.11

Adjustments to Planning Area boundaries shall not result in any Planning Area exceeding the allowable density of 25 units per acre.

The amendment of any planning area boundary through the "B" Map process will require either the concurrent submittal of a "B" Map for any affected planning area or an amended "A" Map.

MINOR MODIFICATIONS & AREA PLAN AMENDMENTS 11.12

Minor Modifications

The following constitute minor modifications to the Area Plan, not requiring an Area Plan Amendment. The Director of Development Services shall have the discretion to refer any such request for modification to the Planning Commission for action.

1. Change in utility or public service provider.
2. Change in roadway alignment of any roadway illustrated on the "Circulation Plan" as contained within this Area Plan when the change results in a centerline shift of less than 150 feet.
3. Residential dwelling unit transfers or adjustment of a Planning Area boundary, consistent with the provisions of Sections 11.10 and 11.11 of this Area Plan.
4. Minor deviations to adopted quantifiable development standards as contained in Section 10, "Development Regulations," of this Area Plan; provided, however, that the deviation does not result in a change of more than fifteen percent to an adopted quantifiable development standard.
5. Minor changes to landscape materials, wall materials, wall alignment, entry design, and streetscape design which are consistent with the conceptual design set forth in Section 9, "Landscape Design Guidelines," of this Area Plan.
6. Minor changes to the design guidelines contained in Sections 7, 8, and 9 of the Area Plan, which are intended to be flexible in their implementation.
7. Other modifications of a similar nature to those listed above, which are deemed minor by the Director of Development Services, that are in keeping with the purpose and intent of the approved Area Plan, and which are in conformance with the General Plan, as amended.

Area Plan Amendments

Amendments to the Serrano Summit Area Plan may be requested by the applicant at any time. Amendments to this Area Plan shall be processed pursuant to the provisions of Section 9.184.030(b), "Area Plans," of the City of Lake Forest Municipal Code. In the event the proposed amendment requires supplemental environmental analysis pursuant to CEQA, the entity submitting the application for an Area Plan Amendment is responsible for the costs associated with preparing the necessary CEQA documentation.

APPEALS 11.13

Appeals from any determination of the Director of Development Services or the Planning Commission may be made by any aggrieved party pursuant to the provisions of Section 2.04.100, "Appeals to City Council, of the City of Lake Forest Municipal Code.

CEQA 11.14

Compliance with Mitigation Monitoring Plan

The City of Lake Forest has certified an EIR for the Serrano Summit project. Development within Serrano Summit shall comply with all applicable mitigation measures or incorporate design features as described in the Mitigation Monitoring Program included as part of the EIR. Residential development projects, including any subdivision and any zoning change, proposed to implement this Area Plan, and which are consistent with this Area Plan, for which an EIR has been certified by the City of Lake Forest shall be considered for exemptions from the requirements of CEQA pursuant to Government Code 65457.

PROJECT FINANCING 11.15

The financing of construction, operation, and maintenance of public improvements and facilities (the "facilities"), and public services for Serrano Summit may include funding through a combination of financing mechanisms (see Exhibit 11-1, "Public Facilities Phasing & Financing Plan"). Final determination as to the facilities to be financed and as to maintenance responsibilities, whether publicly or privately maintained, will be made prior to recordation of final maps. The following financing options can be considered for implementation:

Facilities and Services

- Private capital investment for the construction of facilities.
- Community Facilities District (CFD) established pursuant to the Mello-Roos Community Facilities District Act of 1982, or other special district, to provide funding for the construction of a variety of public facilities and the provision of public services.
- Assessment Districts established for the purpose of funding the construction of public facilities.

Operation and Maintenance

- By individual private property owner.
- By Homeowners Association.
- By Landscape and Lighting Maintenance District (LLMD)
- By Community Facilities District (CFD) established pursuant to the Mello-Roos Community Facilities District Act of 1982, or other special district.
- By Assessment Districts.
- By the City of Lake Forest.

Approval by the City of Lake Forest is a prerequisite for the implementation of any and all establishment of special district and assessment district financing mechanisms.

PROJECT PHASING 11.16

Project phasing provides a conceptual framework to facilitate development of Serrano Summit while assuring the provision of infrastructure necessary to support the planned development (see Exhibit 11-2, "Development Phasing Plan"). Development is assumed to occur in a number of phases over time. Following the certification of the Serrano Summit EIR and adoption by the City of Lake Forest of the Area Plan, the phased development of Serrano Summit will commence in a manner designed to address the following objectives:

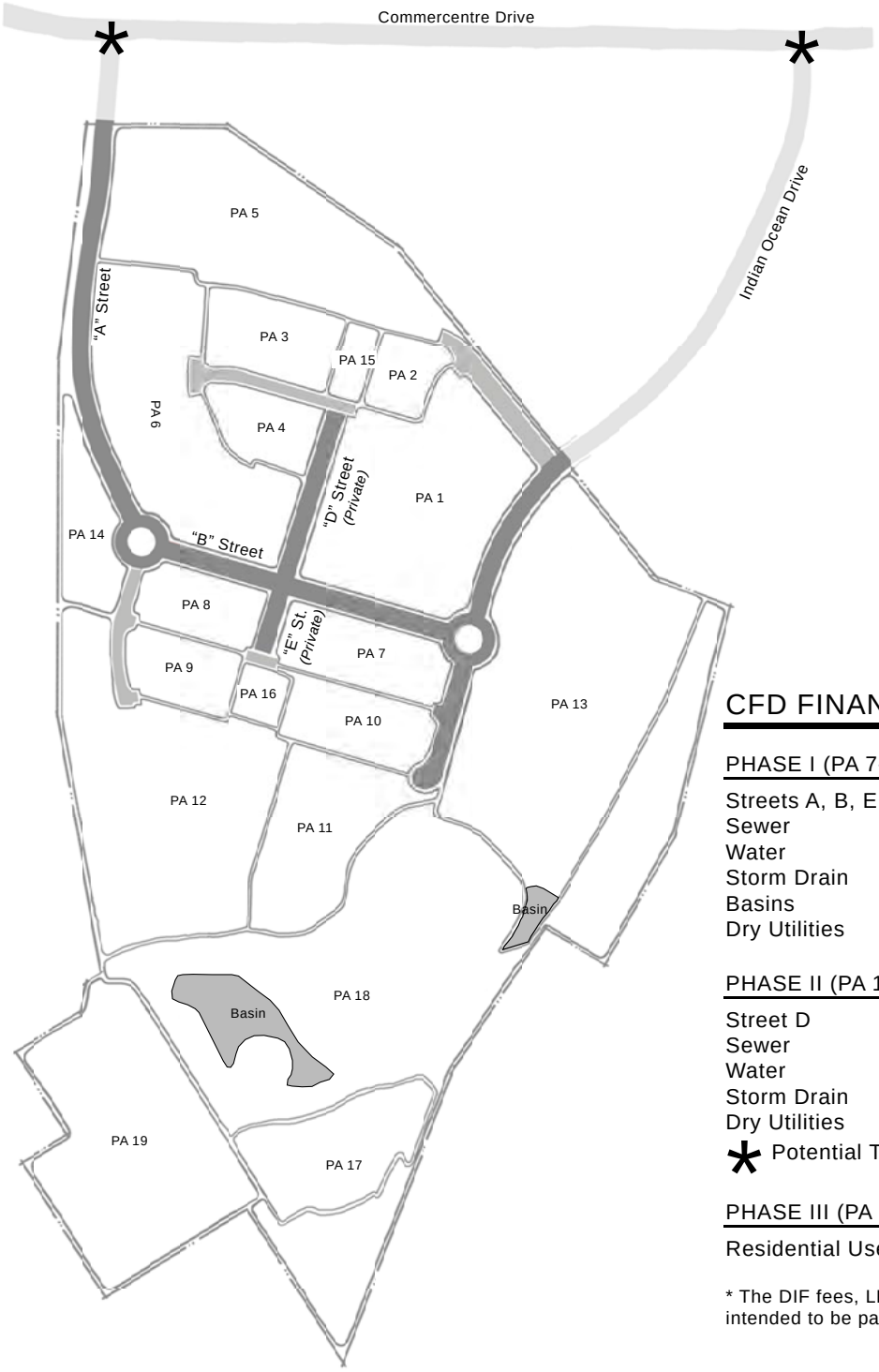
- Orderly build-out of the community based upon market and economic conditions.
- Implementation of financing mechanisms without creating a financial or administrative burden on the City of Lake Forest.
- Provision of adequate infrastructure and public facilities concurrent with development of each phase.
- Protection of public health, safety, and welfare.

The exact timing, location, and extent of individual phases is largely dependent on the private decisions of developers and landowners who are, in turn, influenced by market conditions. Phasing will also likely be influenced by relative capital costs associated with extending infrastructure and services to different phases. It is logical to assume that initial and subsequent phasing will key off of extensions of existing infrastructure located within or near the Serrano Summit boundaries.

Public and private improvements constructed as part of development of Serrano Summit shall be maintained through a combination of public and private entities as described below.

PUBLIC FACILITIES PHASING & FINANCING PLAN

EXHIBIT 11-1



CFD FINANCING*

PHASE I (PA 7-12, 14, 16, 17)

Streets A, B, E, Indian Ocean Drive
Sewer
Water
Storm Drain
Basins
Dry Utilities

PHASE II (PA 1-6, 15)

Street D
Sewer
Water
Storm Drain
Dry Utilities
* Potential Traffic Signal (if needed)

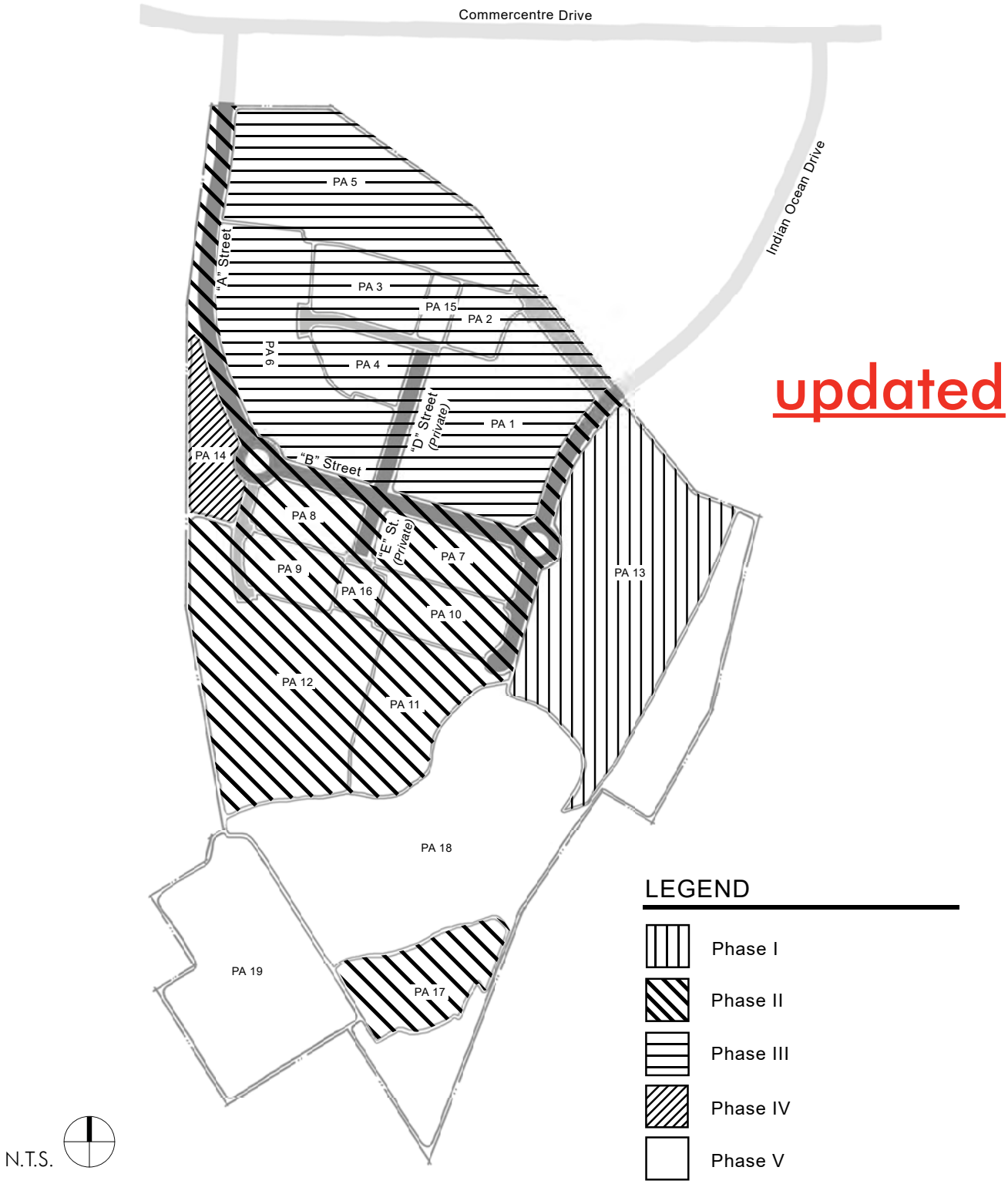
PHASE III (PA 13)

Residential Use Only

* The DIF fees, LFTM fees and school fees are also intended to be part of CFD.

N.T.S.

DEVELOPMENT PHASING PLAN EXHIBIT 11-2



updated

MAINTENANCE 11.17

Public Maintenance

Public facilities are planned for public maintenance by either the City of Lake Forest, a special district, or by the appropriate utility service provider including but not limited to the following:

- All travel areas of public roadways within the Serrano Summit boundaries.
- Public traffic signals and traffic control signs.
- Public rights-of-way improvements adjacent to the Serrano Summit boundaries completed as part of development within Serrano Summit.
- All privately constructed public on-site water facilities and sewer facilities within the Serrano Summit project area.
- The 3.2 acre Passive/Nature Park site on Planning Area 17 of Serrano Summit shall be dedicated to and maintained by the City of Lake Forest.
- Street lighting within public rights of way of public local streets and Collector street.
- Trails within the Civic Center site and the sidewalk on the east side parkway of Indian Ocean Drive.
- Bike paths within public roadway rights-of-way.
- Open space and facilities included within the gross acres of the Civic Center site.
- Off-site City signs.
- Civic Center detention basin.

Homeowner Association/Private Property Owner Maintenance

One or more homeowner associations may be established for the maintenance of private common area improvements within residential developments in Serrano Summit. Improvements to be maintained by the homeowner association(s) include, but are not limited to:

- Private streets, drives, lanes, and alleys.
- Private traffic control signs.
- Landscaping within the traffic roundabouts on both ends of 'B' Street.
- Median and parkway landscaping within all public streets (excluding the east side parkway of Indian Ocean Drive) and private streets (including 'D' and 'E' Streets).
- All sidewalks and trails within the community, except the trails within the Civic Center site and the east side parkway of Indian Ocean Drive.
- The two 0.5 acre Neighborhood Park sites within the Serrano Summit boundaries, along with any underground detention facilities, shall be maintained by the homeowner's association or other entity acceptable to the City of Lake Forest.
- Open space areas including graded slopes and ungraded slopes, fuel modification zones, off-street multi-purpose trails, detention and water quality treatment facilities, and habitat and restoration areas, other than the Civic Center site.
- The private recreation center in Planning Area 14.
- Private parks and recreational facilities within all residential areas.
- Sidewalks, community and neighborhood entries and signage, paseos, and common areas within residential areas.
- Community theme walls and fencing.
- Private courts, parkways, and landscaping within the residential areas.
- Storm drains.
- Community detention basins.
- Common area facing wall surfaces, and internal slopes fronting streets along residential collector streets and interior residential streets.
- Common area landscaping and lighting.
- Private street landscaping and lighting.
- Residential buildings where specified by a builder.
- Access road from Indian Ocean Drive to the Passive Park and Planning Area 19.

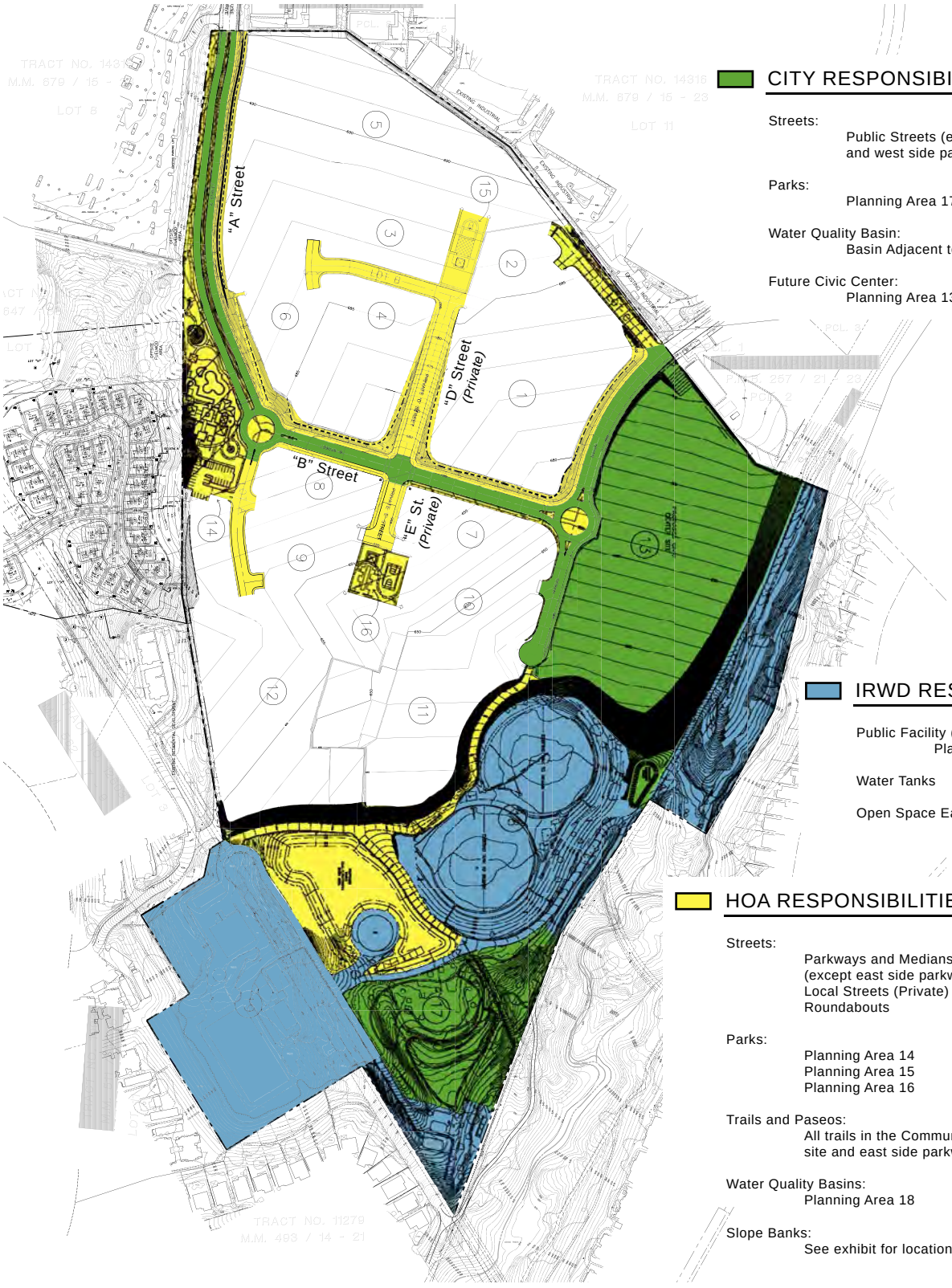
Refer to Table 11-1, "Maintenance Responsibilities for Parks, Trails and Walkways," Exhibit 4-2, "Master Plan of Parks, Trails & Open Space," and Exhibit 11-3, "Maintenance Responsibilities," for discussions of the ownership and maintenance of trails and walkways within Serrano Summit.

All applications for a development entitlement submitted after approval by the City of Lake Forest of this Area Plan shall be reviewed by the City's Planning Department for conformity with the Serrano Summit Area Plan and for compliance with

TABLE 11-1
MAINTENANCE RESPONSIBILITIES FOR PARKS, TRAILS AND WALKWAYS

	OWNERSHIP	MAINTENANCE
Pedestrian Sidewalk (on both sides of 'A' Street within the Serrano Summit boundaries)	Homeowners Association	Homeowners Association
Parkway Sidewalk (along both sides of 'B' Street)	Homeowners Association	Homeowners Association
Parkway Sidewalk (along both sides of Private Streets 'D' & 'E')	Homeowners Association	Homeowners Association
Parkway Sidewalk (along the east sides of Indian Ocean Drive within the Serrano Summit boundaries)	City of Lake Forest	City of Lake Forest
Parkway Sidewalk (along the west side of Indian Ocean Drive within the Serrano Summit boundaries)	Homeowners Association	Homeowners Association
Pedestrian Linkage - Trail Segment 'A' (*see Exhibit 4.2 for location*)	Homeowners Association	Homeowners Association
Pedestrian Linkage - Trail Segment 'B' (*see Exhibit 4.2 for location*)	Homeowners Association	Homeowners Association
Pedestrian Linkage - Trail Segment 'C' (*see Exhibit 4.2 for location*)	Ownership will be the responsibility of the City of Lake Forest if the Civic Center is built	Maintenance will be provided by the City of Lake Forest if the Civic Center is built
Pedestrian Linkage - Trail Segment 'D' (*see Exhibit 4.2 for location*)	Homeowners Association	Homeowners Association
Pedestrian Linkage - Trail Segment 'E' (*see Exhibit 4.2 for location*)	Homeowners Association	Homeowners Association
Pedestrian Linkage - Trail Segment 'F' (*see Exhibit 4.2 for location*)	IRWD	IRWD/City of Lake Forest
Pedestrian Linkage - Trail Segment 'G' *(see Exhibit 4.2 for location)*	IRWD	City of Lake Forest
Serrano Creek Trail	County of Orange	County of Orange
Access Road to Passive Park & Planning Area 19	IRWD	IRWD
2 Neighborhood Parks (Public)	City of Lake Forest	Homeowners Association
Passive/Nature Park (Public)	City of Lake Forest	City of Lake Forest

MAINTENANCE RESPONSIBILITIES EXHIBIT 11-3



CITY RESPONSIBILITIES

Streets:
Public Streets (except parkways and medians, and west side parkway of Indian Ocean Drive)

Parks:
Planning Area 17

Water Quality Basin:
Basin Adjacent to Civic Center

Future Civic Center:
Planning Area 13

IRWD RESPONSIBILITIES

Public Facility (IRWD):
Planning Area 19

Water Tanks

Open Space East of Civic Center Site

HOA RESPONSIBILITIES

Streets:
Parkways and Medians of All Public Streets (except east side parkway of Indian Ocean Drive)
Local Streets (Private)
Roundabouts

Parks:
Planning Area 14
Planning Area 15
Planning Area 16

Trails and Paseos:
All trails in the Community except within CIvic Center site and east side parkway of Indian Ocean Drive

Water Quality Basins:
Planning Area 18

Slope Banks:
See exhibit for locations

N.T.S.

CONFORMITY REVIEW 11.18

the California Environmental Quality Act (CEQA), Public Resources Code Section 2100 et.seq. The determination of whether the requested subsequent development entitlement is consistent with the Area Plan and whether the Serrano Summit EIR considered the project specific effects of the proposed application will be made through the Subsequent Conformity Review process.

Subsequent Conformity Review Process

In conjunction with the submittal of any application for approval of a subsequent development entitlement within the Serrano Summit boundaries, the applicant shall submit the appropriate City application to enable the City of Lake Forest to determine whether the proposed project is consistent with this Area Plan and whether or not there are project specific effects that are particular to the proposed project or its site that were not considered in the Serrano Summit EIR and whether an event as described in Section 15162 of the State CEQA Guidelines has occurred. The City of Lake Forest may require the submittal of additional information to make such a determination including, but not limited to the following:

- Preliminary Grading Plan,
- Preliminary Geotechnical Report,
- Preliminary Drainage Report,
- Preliminary Water Quality Best Management Practices (BMP) Plan,
- Traffic Circulation Plan,
- Traffic Study,
- Tentative Subdivision Map,
- Acoustical Analysis,
- Hazards Study (Phase I Environmental Site Assessments and Phase II limited soils investigation.),
- Water Quality Related Studies
- Mosquito Control Design Features,
- Utility Will Serve Letters,
- Water Supply Assessment Information (per SB 221),
- Hazardous Materials Usage Information,
- Biological and Cultural Resources Studies,
- Public Safety Assessment

In the event this project is determined to have project specific effects that were not considered in the Serrano Summit EIR and additional environmental review is required by the City of Lake Forest, the cost of preparing the additional studies or information required by the City shall be borne by the project master developer or the project applicant.

RELATIONSHIP TO THE GENERAL PLAN

Section 12.0

January 2012

Architecture+Planning

AREA PLAN CONSISTENCY WITH THE GENERAL PLAN 12.1

The Serrano Summit Area Plan is consistent with the goals and policies of the adopted Lake Forest General Plan. This chapter contains an analysis of each goal and the associated policies.

Land Use Element

The relationship of the Serrano Summit Area Plan to applicable Land Use Element policies is discussed below.

Balance of Land Uses

A variety of land uses are located in Lake Forest including residential, commercial, industrial, historical, and community uses. This variety of land uses offers an important balance between the generation of public revenues and the provision of public facilities and services, and also minimizes the distances people have to travel to work, shop, and recreate.

GOAL 1.0: A balanced land use pattern that meets existing and future needs for residential, commercial, industrial, and community uses.

Policy 1.1: Achieve a land use composition in Lake Forest that promotes a balance between the generation of public revenues and the costs of providing public facilities and services.

Policy 1.2: Consider increases in development intensity up to the maximum identified in the Land Use Element where development projects provide exceptional design quality, important public amenities or public benefits, or other factors that promote important goals and policies of the General Plan.

Policy 1.3: As future conditions in surrounding areas change, the future use of land presently within the Business Development Overlay will be reviewed.

Area Plan Consistency

The Serrano Summit Area Plan provides a balanced mix of residential, recreation, open space, public facilities, and civic uses. The planned Medium Density residential development is consistent with the site's development density range identified in the General Plan's Land Use Element. The Area Plan allows densities up to 25 dwelling units per acre and incorporates design guidelines to ensure exceptional design quality. The Area Plan also allows development of several neighborhood parks, a private recreation center, and a Civic Center complex.

Policy 1.3 does not apply to the Serrano Summit project; the project is not located with the Business Development Overlay.

Image and Identity

Lake Forest is establishing its image and identity as a distinctive, identifiable community among the communities comprising Orange County. The community possesses desirable physical qualities, including its lakes, urban forest, trees, major open space areas, accessible community facilities and well planned residential neighborhoods. A sense of arrival will be created by improving the appearance of major thoroughfares and entrances to the City.

Enhancing image and identity will create a greater sense of community and connection among the population of Lake Forest.

GOAL 2.0: A distinct image and identity for Lake Forest.

Policy 2.1: Enhance the physical attributes of Lake Forest to create an identifiable and distinct community within Orange County.

Policy 2.2: Promote high quality in the design of all public and private development projects.

Policy 2.3: Create greater City unity in the future by establishing a civic center that draws the north and south portions of Lake Forest together.

Area Plan Consistency

The Serrano Summit project includes both public and private components. The residential development would be constructed as a high quality development consisting of single-family and multi-family homes.

The project also includes a planned Civic Center on approximately 11.9 acres that will be centrally located to both the northern and southern portions of Lake Forest. The Serrano Summit project is designed to enhance the physical attributes of the project site and will be an identifiable and distinct community within both Lake Forest and Orange County.

Compatible and Complementary Development

Incompatibility can occur where the characteristics of specific land uses do not blend with the physical characteristics of available land. Locating different land uses in close proximity to one another can also result in incompatibilities associated with differences in the physical scale of development, noise levels, traffic levels, hours of operation, and other factors. Maintaining compatibility is important and reducing or avoiding incompatibilities in development is essential in improving the community's overall quality of life.

GOAL 3.0: New development that is compatible with the community.

Policy 3.1: Ensure that new development fits within the existing setting and is compatible with the physical characteristics of available land, surrounding land uses, and public infrastructure availability.

Policy 3.2: Preserve and enhance the quality of Lake Forest residential neighborhoods by avoiding or abating the intrusion of disruptive, non-conforming buildings and uses.

Policy 3.3: Ensure that the affected public agencies can provide necessary facilities and services to support the impact and intensity of development in Lake Forest and in areas adjacent to the City.

Policy 3.4: Blend residential and nonresidential development with landscaping and architectural design techniques to achieve visual compatibility.

Policy 3.5: Encourage the establishment of churches, synagogues, temples, and similar religious institutions in the community in accessible areas where compatibility with surrounding land uses can be achieved.

Policy 3.6: Work with lead agencies and adjacent jurisdictions to insure that correctional facilities are not located or expanded in a way that conflicts with neighborhood land uses and the quality of life in the City; clearly, such facilities should not be located within close proximity to residences.

Area Plan Consistency

Serrano Summit is a new development that is designed to be compatible with surrounding land uses, as well as the physical characteristics of the project site. Because the project is an infill development, public infrastructure (e.g., roads, sewers, water, gas, electricity, telephone, etc.) is available to service the project. The project is designed to serve as a transition between the nearby office and light industrial uses along Commercentre Drive and the existing residential uses in Serrano Highlands. The project does not propose disruptive, non-conforming buildings and uses. (Policies 3.1 and 3.2)

In compliance with Policy 3.3, the project master developer will work with the affected public agencies to ensure that the necessary facilities and services to support Serrano Summit are in place and available to serve the project prior to or concurrently with project development.

Serrano Summit includes both residential and nonresidential (i.e., the Civic Center) development. This Area Plan incorporates a conceptual landscape plan, as well as architectural and landscape design guidelines that ensure quality and consistent development within the project and visual compatibility between land uses. (Policy 3.4)

Policies 3.5 and 3.6 are not applicable since neither religious institutions or correctional facilities are planned with Serrano Summit.

Economic Diversity, Expansion and Business Retention

Enhancement of City revenue is necessary to sustain the level of public services desired by the community. This can be accomplished through diversification of the community's economic base by retaining existing businesses, and by attracting additional retail and service commercial businesses, and employment generating businesses.

GOAL 5.0: Diversification and expansion of economic activities, and retention of existing businesses and revenues in support of public services.

Policy 5.1: Improve the fiscal stability of Lake Forest through retention of existing businesses, by attracting business and industry that contributes to economic growth and employment opportunities.

Policy 5.2: Work closely with the business community in developing approaches to effective business retention, economic development, and expansion of economic activities.

Policy 5.3: Focus efforts at economic development and business retention on the commercial and industrial areas throughout the City, including the Foothill Transportation Corridor, the San Diego Freeway (I-5), and along major thoroughfares.

Policy 5.4: Pursue opportunities to promote economic development and business retention using various approaches available under state and federal law.

Policy 5.5: Streamline and refine development process procedures to insure responsiveness to the business community.

Policy 5.6: Review the zoning ordinance to insure that regulations are concise and appropriate.

Policy 5.7: Preserve the fiscal well-being of the community by ensuring that land use designation changes for land within the Business Development Overlay will not result in a loss of future net revenue for the City.

Area Plan Consistency

The project will help to improve the fiscal stability of Lake Forest through the payment of impact fees and school fees (currently, the schools in the Saddleback Valley Unified School District have excess capacity). In addition, the project will provide land for a regional park and a Civic Center. (Policy 5.1)

Policies 5.2 through 5.5 and Policy 5.7 do not apply to this project as the project does not contain any existing or proposed business uses.

Regarding Policy 5.6, the Serrano Summit Area Plan includes its own concise development regulations that have been established specifically for the Serrano Summit project.

Revitalization of Older Areas

The quality of life in the community can be substantially improved through ongoing revitalization and rehabilitation efforts aimed at improving older development in Lake Forest. These revitalization efforts will address the physical components of development including buildings, landscaping and public infrastructure.

GOAL 6.0: Revitalization of older residential, commercial, and industrial development.

Policy 6.1: Promote revitalization of identified residential neighborhoods in Lake Forest.

Policy 6.2: Promote rehabilitation of older commercial and industrial properties and buildings to enhance their quality and competitive advantage.

Area Plan Consistency

The Serrano Summit project is a new development. Therefore, Policies 6.1 and 6.2 do not apply.

CIRCULATION ELEMENT

The relationship of the Serrano Summit Area Plan to applicable Circulation Element policies is discussed below.

Intercity and Regional Transportation

Transportation in Lake Forest is directly related to an overall transportation network for the region. Planning for the needs of the community necessarily includes recognition of the related transportation needs and planning efforts of the surrounding county, region, and state. With that recognition is the need for the City to actively monitor transportation planning and development in the surrounding area.

GOAL 1.0: Support for the development of an efficient network of regional transportation facilities.

Policy 1.1: Support the completion of the Orange County Master Plan of Arterial Highways.

Policy 1.2: Work closely with adjacent jurisdictions and transportation agencies to ensure that development projects outside Lake Forest do not adversely impact the City or other providers of public facilities and services in Lake Forest.

Policy 1.3: Monitor rail travel programs including the Urban Rail System and the Commuter Rail (Metrolink) System.

Area Plan Consistency

Policies 1.1, 1.2, and 1.3 are City directives and do not apply to the Serrano Summit project.

Local Transportation Routes

Safe and convenient access to activities in the community is provided by a well designed local roadway system. That system serves the community's primary need for mobility and includes a planned hierarchy of roadways to meet that need.

GOAL 2.0: A system of roadways in the community that meets local needs.

Policy 2.1: Provide and maintain a City circulation system that is in balance with planned land uses in Lake Forest and surrounding areas in the region.

Policy 2.2: Coordinate improvements to the City circulation system with other major transportation improvement programs, such as the Foothill Circulation Phasing Plan and improvement to the San Diego Freeway (I-5).

Policy 2.3: Improve the Lake Forest circulation system roadways in concert with land development to ensure adequate levels of service.

Area Plan Consistency

The Serrano Summit project incorporates a comprehensive network of public streets, private drives, and alleys. The roadway system connects to three existing streets — Commercentre Drive, Biscayne Bay Drive and Indian Ocean Drive. The project also includes three public collector streets (i.e., 'A' Street, 'B' Street, and Indian Ocean Drive). The project will incorporate mitigation measures, as necessary and as identified in the Project EIR, to ensure adequate levels of service on area roadways.

Transit, Bicycle, Pedestrian, and Equestrian Facilities

Public transportation offers an option to the traditional use of an automobile for traveling within and outside of the community. Non vehicular methods or modes of travel, such as bicycling or walking, can reduce demands on the roadway system where appropriate facilities exist to foster those modes. Together, public transportation and non vehicular modes of travel provide important alternatives to travel by automobile.

GOAL 3.0 Increased use of public transportation.

Policy 3.1: Promote the provision of public transit facilities within areas of major development.

Policy 3.2: Encourage the provision of additional regional public transportation services and support facilities, such as park and ride lots near the San Diego Freeway (I-5) and the Foothill Transportation Corridor.

Policy 3.3: Encourage the provision of special transit services in Lake Forest.

Policy 3.4: Promote access and public transit service between Lake Forest and regional-serving transportation centers.

Area Plan Consistency

As of early 2009, the Orange County Transportation Authority (OCTA) offers a bus route (Route 480) that travels along Bake Parkway and Commercentre Drive and connects with the Irvine Station. Access to both Metrolink and Amtrak trains is available at the station. In addition, the project will pay the City LFTM fees for city-wide transportation improvements. The Serrano Summit project will also provide connections to the regional Serrano Creek trail.

GOAL 4.0: Promotion of non vehicular modes of travel.

Policy 4.1: Promote the provision of non vehicular circulation within Lake Forest.

Policy 4.2: Provide and maintain a non vehicular component of the Lake Forest overall circulation system that supports bicycles, equestrians, and

pedestrians and is coordinated with those of other service districts in Lake Forest and with adjacent jurisdictions.

Policy 4.3: Improve pedestrian access from neighborhoods to commercial areas.

Area Plan Consistency

The streets of Serrano Summit will accommodate non-vehicular circulation such as walking and cycling throughout the community. The site includes connections with the Serrano Creek Regional Trail and to other uses within the City of Lake Forest.

Parking

Convenient and well designed parking facilities are an important component of the City roadway system because they provide suitable vehicle storage areas at work, shopping, and recreation destinations. Proper parking area design can also allow for short distance travel of vehicles from one property to another without impacting the public street system.

GOAL 5.0 Convenient and suitable parking facilities for motorized and non motorized vehicles.

Policy 5.1: Require sufficient off street parking for all land uses and maximize the use of parking facilities in Lake Forest.

Policy 5.2: Eliminate the use of on street parking on identified arterial streets where maximum traffic flow is desired.

Policy 5.3: Promote the provision of access between the parking areas of adjacent properties along arterial roadways to improve overall traffic flow.

Area Plan Consistency

Serrano Summit will provide sufficient off street parking for all of the planned uses on-site. Policies 5.2 and 5.3 do not apply to the Serrano Summit project because there are no arterial streets on-site or immediately adjacent to the project site.

Transportation System and Demand Management

Transportation System Management (TSM) and Transportation Demand Management (TDM) methods are included in an overall strategy to improve transportation. These methods can improve system effectiveness and provide relief from increasing demands for more improvements to transportation facilities.

GOAL 6.0: Maximized transportation system efficiency.

Policy 6.1: Improve operational measures of the traffic system designed to maximize the efficiency of the system while minimizing delay and congestion.

Policy 6.2: Improve intersection capacity at key intersections to improve traffic flow.

Policy 6.3: Support the implementation of employer Transportation Demand Management (TDM) provisions of the Air Quality Management Plan (AQMP) and the Congestion Management Program (CMP), and participate in regional efforts to implement TDM requirements.

Area Plan Consistency

Policies 6.1, 6.2, and 6.3 are City directives and do not apply to the Serrano Summit project.

Transportation Financing

Adequate funding must be available to finance needed improvements to the transportation system. Overall system improvements will rely upon several different sources of funding to meet the expected demands for expansion and enhancement of transportation facilities.

GOAL 7.0: Utilization of various financing methods to improve the overall transportation system.

Policy 7.1: Utilize available financing methods and sources of funding to make necessary improvements to the overall transportation system in Lake Forest.

Policy 7.2: Ensure that new development in Lake Forest associated with the Foothill Circulation Phasing Plan meets the commitments for improvements described by the Plan.

Policy 7.3: Maintain the transportation standards required to qualify for revenue from the Congestion Management Plan and the Revised Traffic

Improvement and Growth Management Ordinance (Measure M).

Area Plan Consistency

Policies 7.1, 7.2, and 7.3 are City directives and do not apply to the Serrano Summit project.

RECREATION AND RESOURCES ELEMENT

The relationship of the Serrano Summit Area Plan to applicable Recreation and Resources Element policies is discussed below.

Parks and Open Space

Lake Forest has many public parks, lakes, urban forests, and a number of the major homeowner associations operate recreational facilities for use by those living within their areas. Physical fitness, athletics, and sports are important active recreational pursuits, while facilities for passive recreational activities are also necessary. Identifying ways to best utilize, improve, and broaden the overall recreational system in the community is an important effort.

GOAL 1.0: Ample recreational and cultural opportunities and facilities.

Policy 1.1: Promote the development and maintenance of a balanced system of public and private recreational lands, facilities, and programs to meet the needs of the Lake Forest population.

Policy 1.2: Maximize the utilization of existing parks, recreational facilities, and open space within Lake Forest.

Policy 1.3: Operate and maintain public park and recreational facilities in a manner that ensures safe and convenient access for all members of the community.

Policy 1.4: Require parkland improvements and facilities that are durable and economical to maintain.

Policy 1.5: Promote a high level of public outreach regarding park and recreation opportunities in Lake Forest.

Policy 1.6: Promote the future development of community centers as focal points for local activities.

Policy 1.7: Develop a network of multi-purpose trails to provide convenient, safe access to recreational, residential, and commercial areas.

Policy 1.8: Provide a positive environment to prevent anti-social forms of behavior (gangs, graffiti, juvenile delinquency).

Policy 1.9: Preserve all designated open space areas until sufficient parkland exists in the City to meet the established parkland standard to provide adequate recreational opportunities for the community except any land within the Regional Park/Open Space designation requiring reconfiguration to create a continuous open space link.

Area Plan Consistency

The intent of Policy 1.1 is met by the Serrano Summit project by the provision of the public and private neighborhood parks on 6.1 acres, including the 1.9 acre private recreational facility in Planning Area 14. The parks will provide both active and passive recreation uses on-site. In addition, Serrano Summit will make a contribution toward a major regional park that will serve all of the City of Lake Forest.

Policy 1.2 is a City directive.

A Master Homeowners Association will be responsible for maintaining the neighborhood parks within Serrano Summit in a manner that will ensure the safe and convenient access for all members of the community.

All parkland improvements and facilities within Serrano Summit will be constructed in such a fashion as to ensure that the improvements/facilities are durable and economical to maintain. (Policies 1.3 and 1.4)

Policy 1.5 is a City directive.

A community center is an proposed as part of the Civic Center, which is an allowable use in Planning Area 13. If constructed, this center would be available for use by all residents of Lake Forest. (Policy 1.6)

In compliance with Policy 1.7, Serrano Summit is designed as a master planned community that

promotes walking and cycling. The project includes a system of pedestrian linkages that will provide connections between the various residential, civic, open space, and recreational uses.

In accordance with Policy 1.8, the Serrano Summit community is designed to provide a positive environment that will help to minimize and prevent anti-social forms of behavior.

Policy 1.9 is a City directive.

Natural Resources and Features

Lake Forest contains many important natural resources and features, including its eucalyptus forest and other trees, lakes, creeks, canyons, hillsides, mineral resource areas, and other open lands. These resources add to the value of property, provide visual changes in an urban environment that create interest, and offer important landmarks that communicate a sense of place and location within the community. These important resources can be preserved or enhanced to maintain the natural physical and visual quality of Lake Forest.

GOAL 2.0: Preservation and enhancement of important natural resources and features.

Policy 2.1: Conserve and protect important natural plant and animal communities, such as areas supporting rare and endangered species, riparian areas, wildlife movement corridors, wetlands, and significant tree stands through appropriate site planning and grading techniques, re-vegetation and soil management practices, and other resource management techniques.

Policy 2.2: Coordinate water quality and supply programs with the responsible water agencies.

Policy 2.3: Encourage the expansion of reclaimed water production and use.

Policy 2.4: Conserve and protect important topographical features, watershed areas, and soils through appropriate site planning and grading techniques, re-vegetation and soil management practices, and other resource management techniques.

Area Plan Consistency

The project will preserve the drainage along Serrano Creek in open space. No rare or endangered species have been identified on the project site. In addition, no significant tree stands exist on-site.

As part of the required actions associated with development of the Serrano Summit project, the project owner/master developer (which is the Irvine Ranch Water District) will promote water quality and supply programs that include the Serrano Summit project to the extent feasible. In addition, the project will incorporate the use of reclaimed water for irrigation purposes.

This Area Plan includes a conceptual grading plan designed to conserve and protect important topographical features, watershed areas, and soils through appropriate site planning and grading techniques. The grading plan requires re-vegetation and irrigation of manufactured slopes and implementation of soil management practices and other resource management techniques, as appropriate.

GOAL 3.0: Extraction of mineral resources and reclamation of mined land, while preserving the City's plans for future use as described in the Land Use Element.

Policy 3.1: Provide for the conservation and development of significant identified mineral resource sites within Lake Forest.

Policy 3.2: Provide for the reclamation of mineral resource sites in concert with future use as described in the Land Use Element and required environmental mitigation.

Policy 3.3: Regulate mineral extraction activities to minimize hazards and conflicts with other land uses by the issuance of sand and gravel site permits.

Policy 3.4: Address and mitigate the significant environmental effects of surface mining operations.

Policy 3.5: Promote land use decisions that ensure, to the greatest extent possible, compatibility between mineral resource extraction and adjacent land uses.

Area Plan Consistency

No significant mineral resources have been identified on the Serrano Summit project site. Therefore, Policies 3.1 through 3.5 do not apply to the project.

Historic, Archaeological, and Paleontologic Resources

Lake Forest contains several important historic, archaeological, and paleontologic resources and potential resource areas that should be conserved to provide a link to the community's history and heritage. Conservation of these resources and investigation of potential resource areas represents an important undertaking for connection with the community's past.

GOAL 4.0: Conservation of important historic, archaeological, and paleontologic resources.

Policy 4.1: Protect areas of important historic, archaeological, and paleontologic resources.

Policy 4.2: Identify, designate, and protect buildings or sites of historical significance.

Area Plan Consistency

The project site does not contain any areas or sites of historic, archaeological or paleontologic importance. Therefore, Policies 4.1 and 4.2 do not apply to the Serrano Summit project.

Human Resources

Lake Forest has many homeowner associations, community groups, and business groups, which represent important resources for accomplishing long term community goals. These groups often include volunteer leaders and workers who have a distinct understanding of their neighborhoods and areas. These significant human resources may be used to establish and achieve community goals.

GOAL 5.0: Active citizen involvement to establish and achieve community goals.

Policy 5.1: Solicit citizen participation during the early stages of major public or private development projects and regulatory programs.

Policy 5.2: Utilize homeowner associations, community groups, and business groups as sources of individual volunteers for important appointed positions on City commissions, boards, and task forces.

Policy 5.3: Develop appropriate vehicles, such as newsletters, information brochures, cable television programming and announcements, and other methods, to communicate important information to the population of Lake Forest.

Area Plan Consistency

Citizen participation has been encouraged as part of the entitlement process for the Serrano Summit Area Plan. This participation included several stakeholder meetings.

Policy 5.2 is a City direction and does not apply on a project-level to the Serrano Summit community.

Policy 5.3: Develop appropriate vehicles, such as newsletters, information brochures, cable television programming and announcements, and other methods, to communicate important information to the population of Lake Forest.

Solid Waste

To maintain the long term quality of life in Lake Forest, the community must manage the generation, use, and disposal of solid waste. Recycling, reuse and reduction of solid waste, including landscaping refuse, can dramatically reduce the amount of material that will otherwise use expensive land fill space.

GOAL 6.0: Reduction of the per capita volume of solid waste produced in the community.

Policy 6.1: Reduce the per capita production of solid waste in Lake Forest in concert with the County of Orange source reduction and recycling plans for reducing solid waste.

Area Plan Consistency

Policy 6.1 is a City directive. The Serrano Summit project will comply with waste reduction requirements instituted by the City of Lake Forest and the County of Orange, as applicable.

Air Quality

Air quality within the South Coast air basin does not presently meet state and federal standards.

Cooperation among all agencies in the basin is necessary to achieve desired improvements to air quality. Lake Forest can participate and contribute its share in those efforts by proper planning for land use, transportation and energy use.

GOAL 7.0: Improvement of air quality.

Policy 7.1: Cooperate with the South Coast Air Quality Management District and Southern California Association of Governments in their efforts to implement the regional Air Quality Management Plan.

Policy 7.2: Cooperate and participate in regional air quality management planning, programs and enforcement measures.

Policy 7.3: Utilize transportation demand management to influence transportation choices related to mode and time of travel.

Policy 7.4: Implement Citywide traffic flow improvements

Policy 7.5: Implement land use policy aimed at achieving a greater balance between jobs and housing in Lake Forest.

Policy 7.6: Integrate air quality planning with land use and transportation planning.

Policy 7.7: Promote energy conservation and recycling by the public and private sector in Lake Forest.

Area Plan Consistency

Policies 7.1 through 7.6 are City directives that apply on a city-wide or regional level. The Serrano Summit Area Plan implements Policy 7.7 by incorporating energy conservation design features into the project and by encouraging energy conservation and recycling by new developments. Additionally, the community promotes walking and bicycling that will reduce vehicular usage and cut down on vehicle emissions. Serrano Summit will pay LFTM fees to the City for regional transportation improvements. Other features incorporated into the project to help minimize air quality impacts include a requirement that only gas fireplaces be provided on-site.

PUBLIC FACILITIES/GROWTH MANAGEMENT ELEMENT

Water and Sewer Service

Water and sewer service is an essential component of the infrastructure needed to support urban development. These services are provided by several special service districts including the El Toro Water District, the Trabuco Canyon Water District and the Irvine Ranch Water District.

GOAL 1.0: Effective coordination with local water and sewer service districts.

Policy 1.1: Work closely with local water and sewer districts in determining and meeting community needs for water and sewer service.

Area Plan Consistency

This Area Plan requires that the project master developer work closely with the local water and sewer district (Irvine Ranch Water District) to determine and meet the Serrano Summit community's needs for water and sewer service. The water conservation plan for the Serrano Summit community features water-wise plantings and landscaping, water-conserving irrigation techniques, and low flow toilets and showerheads.

Natural Gas, Electricity, and Communications

Natural gas is provided by the Southern California Gas Company, electricity is provided by Southern California Edison, telephone service is provided by Pacific Bell, and cable television service is provided by Cox Communications. These sources of energy and communication are necessary to support existing and future development in the community.

GOAL 2.0: Effective coordination with providers of natural gas, electricity, telephone and cable television service.

Policy 2.1: Work closely with local providers of energy and communications in determining and meeting community needs for energy and communications, and to underground overhead transmission facilities.

Area Plan Consistency

In compliance with Policy 2.1, development of the Serrano Summit project will involve close coordination with local providers of natural gas, electricity, telephone, and cable television service. ~~All~~

Fire Protection and Law Enforcement

Fire protection is provided by Orange County Fire and law enforcement is provided by the Orange County Sheriffs Department. Both services are essential to the safety of the population of Lake Forest.

GOAL 3.0: Effective coordination with Orange County Fire and Orange County Sheriffs Department.

Policy 3.1: Work closely with Orange County Fire and the Orange County Sheriffs Department in determining and meeting community needs for safety facilities and services.

Policy 3.2: Periodically evaluate level of service to ensure that Lake Forest has appropriate levels of fire, police and emergency medical services.

Area Plan Consistency

This Specific Plan includes a Fuel Modification Plan in Section 9 that will help to reduce fire risk in the Serrano Summit community. In addition, the Serrano Summit project will pay the required fees to ensure that adequate levels of fire and police protection and emergency medical services are available to the community. Also, the Civic Center complex, if built by the City of Lake Forest, may include a new sheriff's station.

An Environmental Impact Report (EIR) has been prepared for the project analyzing potential impacts from fire hazards associated with development of the project. The EIR includes mitigation measures needed to address any identified impacts. The community of Serrano Summit is not located within a high fire hazard zone.

Flood Control

Flood control facilities and maintenance are provided by Orange County Flood Control District and the City of Lake Forest. Flood control is another essential safety service necessary to ensure the desired quality of life in the community.

GOAL 4.0: Effective coordination with the Orange County Flood Control District.

Policy 4.1: Work closely with the Orange County Flood Control District in determining and meeting community needs for flood control facilities and maintenance.

Area Plan Consistency

The Serrano Summit Area Plan incorporates design features designed to address flood control facilities and maintenance. The project also incorporates WQMP basins and detention basins to ensure that build-out of Serrano Summit will not increase flows into Serrano Creek.

Libraries

Libraries and library service are provided by the Orange County Library system. The availability of reading and reference material to all members of the community is an important measure of the quality of life in Lake Forest.

GOAL 5.0: Effective coordination with the Orange County Library.

Policy 5.1: Work closely with the Orange County Library in determining and meeting community needs for library facilities and services, including hours of operation.

Area Plan Consistency

Policy 5.1 is a City directive and involves action by the City of Lake Forest.

Schools

Public education is a valued resource provided by the Saddleback Valley Unified School District in Lake Forest. The community benefits greatly from the quality of its public schools and the opportunities for joint use of City and School District facilities.

GOAL 6.0: Effective coordination with the Saddleback Valley Unified School District.

Policy 6.1 : Work closely with the Saddleback Valley Unified School District in determining and meeting

community needs for public education and related activities.

Area Plan Consistency

The project will make its fair-share contribution of school fees to the School District. Currently, the schools in the vicinity of the Serrano Summit community have excess capacity.

Transportation

Many of the regional transportation facilities are not adequately sized to accommodate existing and projected growth. In response to this situation, Orange County voter approved a measure (Measure M) in 1990 and the Foothill Corridor Phasing Plan (FCPP) to allocate additional funds, to provide needed transportation facilities.

GOAL 7.0: Adequate transportation facilities for the population of Lake Forest.

Policy 7.1: Work closely with the County of Orange, Caltrans, surrounding jurisdictions, and other transportation agencies to provide needed transportation facilities.

Area Plan Consistency

Policy 7.1 is a City directive and involves action by the City of Lake Forest in cooperation with the County of Orange, Caltrans, surrounding jurisdictions, and other transportation agencies to provide needed transportation facilities. The Serrano Summit project will be responsible for paying FCPP fees.

Jobs Housing Balance

Creating communities where people can both live and work in relatively close proximity shortens commuting and encourages the use of alternative forms of transportation to and from work. This can reduce overall traffic congestion and improve regional air quality.

GOAL 8.0: Balance between jobs and housing in Lake Forest.

Policy 8.1: Utilize information on the jobs/housing balance in the City and region as a factor in land use decision-making.

Area Plan Consistency

Policy 8.1 is a City directive and involves action by the City of Lake Forest.

Interjurisdictional Coordination and Cooperation

Lake Forest is one of 33 cities in Orange County and many of the issues and opportunities facing the community can only be resolved through mutually cooperative efforts. Planning for solid waste disposal and recycling, air quality improvement, and transportation are a few examples of issues that lend themselves to cooperative solutions.

GOAL 9.0: Effective coordination and cooperation with other public agencies to address regional issues and opportunities.

Policy 9.1: Participate with other public agencies in cooperative efforts to address important regional issues.

Policy 9.2: Monitor major new developments proposed in adjacent communities to ensure that impacts on Lake Forest are mitigated.

Area Plan Consistency

Policies 9.1 and 9.2 are City directives and involve regional issues.

SAFETY AND NOISE ELEMENT

Natural Hazards and Human Activity Hazards

The risk associated with certain natural hazards, such as geologic conditions, seismic activity, fire and flooding can be minimized through appropriate planning and preparedness actions. The risk of exposure to such hazards can be reduced to acceptable levels through proper development engineering and building practices. Certain human activities, such as flying, use of hazardous or toxic materials, use of combustibles, and criminal actions can expose the population risk. The risk of exposure to hazards associated with human activity can be reduced to acceptable levels through proper planning and regulation of human activities.

GOAL 1.0: Reduction in the risk to the community from hazards associated with geologic conditions, seismic activity and flooding.

Policy 1.1: Reduce the risk of impacts from geologic and seismic hazards.

Policy 1.2: Protect the community from flooding hazards.

Area Plan Consistency

Development within Serrano Summit will be consistent with all State of California building and construction codes pertaining to seismic safety. An Environmental Impact Report has been prepared for the project analyzing seismic and geologic hazards surrounding and within the Serrano Summit boundaries, the potential impacts to structures within the project area, and the seismic safety measures proposed as part of the project. The EIR ~~will~~ includes mitigations to address any identified potentially significant impacts.

This Area Plan identifies a series of drainage and flood control improvements intended to minimize the risk of flooding on-site and to areas downstream of the project site.

GOAL 2.0: Protection of the community from hazards associated with aircraft overflights, hazardous materials use, fire, and ground transportation.

Policy 2.1 : Reduce the risk to the community from aircraft overflights.

Policy 2.2: Reduce the risk to the community from the use and transport of hazardous materials.

Policy 2.3: Reduce the per capita production of household hazardous waste in Lake Forest in concert with the County of Orange plans for reducing hazardous waste.

Policy 2.4: Reduce the risk to the community from fire.

Policy 2.5: Reduce the risk from ground transportation hazards, such as rail and roadway systems.

Area Plan Consistency

Policies 2.1, 2.2, and 2.3 are City directives that require action by the City of Lake Forest.

The Serrano Summit Area Plan includes a fuel modification plan that will implement Policy 2.4 and reduce the fire risk to the community.

The project incorporates two roundabouts as traffic calming devices to help slow down the speed of traffic and reduce potential risks to the community arising from ground transportation hazards, such as the roadway system.

GOAL 3.0 Protection of citizens and businesses from criminal activity.

Policy 3.1: Provide substantive levels of police protection.

Policy 3.2: Improve public awareness of ways to reduce criminal activity and Orange County Sheriffs Department responsiveness (Neighborhood Watch, improved communication and education methods).

Policy 3.3: Provide an effective approach to reduce graffiti.

Area Plan Consistency

Policies 3.1, 3.2, and 3.3 are City directives and require action by the City of Lake Forest.

Emergency Preparedness

Proper preparation for major emergencies is an essential action to minimize the disruption, personal injury, and property damage associated with such events. Preventative measures and preparatory responses before an emergency occurs will hasten recovery from these emergencies.

GOAL 4.0: Improved ability of the City to respond to natural and human-related emergencies.

Policy 4.1: Support the development of local preparedness plans and multi-jurisdictional cooperation and communication for emergency situations.

Policy 4.2: Educate residents and businesses regarding appropriate actions to safeguard life and property during and immediately after emergencies.

Area Plan Consistency

Policies 4.1 and 4.2 are City directives and involve action by the City of Lake Forest.

Noise and Land Use Planning

Certain portions of the planning area are subject to high noise levels. The consideration of the sources and recipients of noise early in the land use planning process is an effective method of minimizing the impacts of noise on the community's population. Areas already impacted by noise can also have noise reduced through rehabilitative improvements.

GOAL 5.0: Consideration of the effects of noise in land use planning.

Policy 5.1: Utilize noise/land use compatibility standards as a guide for future planning and development decisions.

Policy 5.2: Provide noise control measures, such as berms, walls, and sound attenuating construction in areas of new construction or rehabilitation.

Area Plan Consistency

The EIR that was prepared for Serrano Summit incorporates noise mitigation measures, such as berms, walls, and sound attenuating construction, as needed to mitigate potential impacts from noise sources to below a level of significance.

Transportation Noise

Transportation-related noise is a primary factor affecting the overall quality of life for much of Lake Forest. Reduction of transportation-related noise is an effective approach to dealing with the detrimental effects attributable to excessive noise levels.

GOAL 6.0: Reduction in the impact of transportation-related noise.

Policy 6.1: Reduce noise impacts to sensitive land uses from transportation noise sources.

Area Plan Consistency

The EIR that was prepared for Serrano Summit incorporates noise mitigation measures as needed to mitigate potential impacts from transportation noise sources to below a level of significance.

Non-Transportation Noise

Noise sources that are not directly related to transportation include construction noise, manufacturing noise, and property maintenance activities. Such noise sources may be controlled to minimize any exposure to excessive noise levels.

GOAL 7.0: Reduction in non-transportation noise impacts.

Policy 7.1: Minimize the impacts of noise-producing land uses and activities on noise-sensitive land uses.

Area Plan Consistency

The EIR that was prepared for Serrano Summit incorporates noise mitigation measures as needed to mitigate potential impacts from noise-producing land uses to below a level of significance.

ARCHITECTURAL STYLE SHEETS

Appendix

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Architecture+Planning

AN INTRODUCTION TO ARCHITECTURAL STYLES

The Architectural Style Sheets provided in this section should be used in conjunction with the residential design guidelines in Section 7.0 to guide home design. The massing, character, and detailing of the architectural styles should be as consistent with the selected styles as feasible. However, the style sheets may be used with flexibility to allow contemporary adaptations of traditional vernaculars. Architects and designers are encouraged to exercise creativity and individual expression in conceiving and interpreting architectural form.

Furthermore, architectural styles should be honest and appropriate for the building typology. Where feasible, the choice of architectural expression should be derived from the respective building typology (i.e., row towns, courtyard buildings, single family homes, etc.).

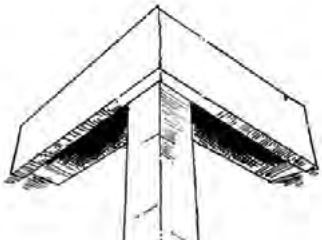
MONTEREY

The original Monterey style emerged in the mid-nineteenth century with Americans arriving from the east coast. The original style combined the two-story New England colonial house with an Adobe brick exterior. Later, the Monterey style was merged with elements from the Spanish Eclectic and Colonial Revival styles. Regardless of this evolution, the defining features of the Monterey style are the unique blend Spanish Colonial materials and the New England massing and a prominent second-story balcony, cantilevered along the front of the house and covered by the principal roof.

Appropriate Building Typologies

Single Family Detached Residential, Single Family Detached Enclave Residential, Single Family Attached Residential, Multi-Family Attached Residential

Wide Balcony and Covered Porch



Square Posts

Board and Batten Shutters

Pedimented Entry

ELEMENTS	MINIMUM STANDARDS	ENCOURAGED ENHANCEMENTS
FORM	◦ *Rectilinear plan form* ◦ *Symmetrical* ◦ *Front balcony integral to plan form (could be cantilevered or with posts extending to the ground plane)*	◦ *Simple plan with one story break or gable* ◦ *Front-facing balcony over porch*
ROOF	◦ *Main front-to-back gable roof* ◦ *4:12 to 5:12 primary roof pitch* ◦ *12" to 24" overhangs* ◦ *"S"-shape concrete or flat concrete tiles*	◦ *Main gable roof front to back with intersecting gable* ◦ *Shed roof break over balcony with 4:12 to 5:12 roof pitch* ◦ *Exposed rafter tails*
WALLS	◦ *Stucco*	◦ *Brick or slump block accents at base* ◦ *Vertical siding accents on second story*
WINDOWS	◦ *Windows with inserts on elevations with prominent and moderate public visibility* ◦ *Window trim surrounds proportionate to window size*	◦ *Enhanced window and door trim* ◦ *Recessed accent windows* ◦ *Layered trim at doors and windows* ◦ *Shutters on primary windows*
DETAILS	◦ *Wood or wood-like balcony with square posts and simple railing* ◦ *Entry door patterns should reflect architectural style of the building*	◦ *Brackets* ◦ *Pedimented entry or simple entry located under second story balcony* ◦ *Decorative wrought iron accents*

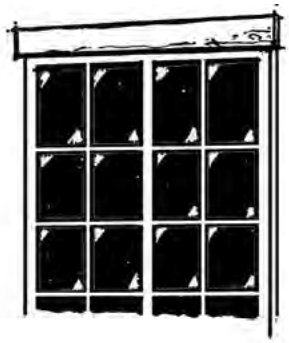
SANTA BARBARA

White-washed stucco walls are inherent to the Santa Barbara style, which also features boxy, simple forms, low-pitched gable roof form, and the use of wood and tile as accent details.

Appropriate Building Typologies

Single Family Detached Residential, Single Family Detached Enclave Residential, Single Family Attached Residential, Multi-Family Attached Residential

Decorative Tile



Window Headers

Arches and Arcades

Balcony

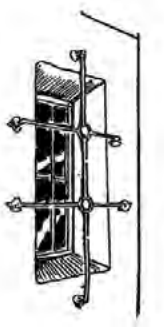
ELEMENTS	MINIMUM STANDARDS	ENCOURAGED ENHANCEMENTS
FORM	◦ *Boxy, simple massing* ◦ *One- and two-story stacked elements* ◦ *Recessed entry or covered porch*	
ROOF	◦ *Hip or intersecting gable roof* ◦ *4:12 to 5:12 primary roof pitch* ◦ *0" to 12" overhang* ◦ *"S"-shape concrete tiles* ◦ *Minimal breaks in roof form*	◦ *Semi-tight rake at gable ends*
WALLS	◦ *Stucco with light sand finish*	
WINDOWS	◦ *Vertical windows with inserts on elevations with prominent and moderate public visibility* ◦ *Accent recessed windows*	◦ *Wood or wood-like window headers* ◦ *Focal window*
DETAILS	◦ *Simple door trim* ◦ *Arches and arcades* ◦ *Decorative wrought iron accent details*	◦ *Decorative tiles* ◦ *Exposed wood or wood-like beams*

SPANISH COLONIAL

Key elements of this style utilize decorative details borrowed from historic Spanish architecture, informal plan forms, simply detailed elevations, including an identifiable feature window on the front elevation, as well as the use of arches, and other historic Spanish vernacular elements.

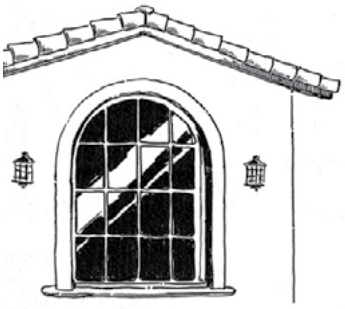
Appropriate Building Typologies

Single Family Detached Residential, Single Family Detached Enclave Residential, Single Family Attached Residential, Multi-Family Attached Residential



Decorative Wrought Iron

Arches and Arcades



Feature Window

ELEMENTS	MINIMUM STANDARDS	ENCOURAGED ENHANCEMENTS
FORM	◦ *One- and two-story massing*	◦ *Two-story massing with one-story element*
ROOF	◦ *Simple hip or gable roof intersecting gable* ◦ *4:12 to 5:12 primary roof pitch* ◦ *0" to 12" overhang with tight rake on gable ends* ◦ *"S"-shape concrete tiles*	◦ *Shed roof over porch* ◦ *Shaped rafter tails at feature areas* ◦ *Barrel or Mission style concrete tiles*
WALLS	◦ *Stucco with light sand finish*	
WINDOWS	◦ *Windows with inserts on elevations with prominent and moderate public visibility* ◦ *Window trim surrounds proportionate to window size*	◦ *Feature window on front elevation* ◦ *Recessed window* ◦ *Single or grouped round top windows* ◦ *Shutters on front elevation windows*
DETAILS	◦ *Pipe vents* ◦ *Arched column porches* ◦ *Simple door trim proportionate to door size* ◦ *Entry door patterns should reflect architectural style of the building*	◦ *Arches or arcades* ◦ *Wrought iron or wood-like balconies* ◦ *Decorative wrought iron accent details* ◦ *Decorative tile* ◦ *Stucco or decorative vents* ◦ *Front courtyards or enclosed patios* ◦ *Round or octagonal feature at corner entries* ◦ *Sculptured wing walls*

AN INTRODUCTION TO THE REVIVAL STYLE

The unique spirit of California is a result of its confluence of history, people, lifestyles, and natural environments. This region is remarkable for its cultural diversity and mild climate, providing an amazingly rich variety of opportunities to live and flourish. Consistent with this theme has been the evolution of the region's architecture, encompassing virtually every style and construction technique, while reinterpreting to the locale but retaining the essential characteristics of its origin.

Southern California residential communities of the 1920's and 1930's captured this aesthetic particularly well, translating its mix of people and ideas into an architecture of variety and comfort. While these communities can be said to have no single ancestral style, they exhibit an adaptation and re-interpretation of a number of appropriate historic styles which were transplanted from other places. This form of architectural expression can be loosely referred to as "revival" - a stylistic redefinition fitting a particular place and purpose, but retaining the romance of its original roots while free of the associations with its cultural idioms.

Examples of this vernacular can be found throughout areas of the Southland - from central Los Angeles to the foothills of Pasadena, and to the outlying suburban reaches of Claremont and Fullerton - which flourished during the early 20th century. While lacking the reputation and cachet of the more affluent boroughs of Hancock Park and Beverly Hills, they nonetheless represent superb examples of the creativity, variety, imagination and enduring charm of Southern California's "golden age" of revival architecture.

ADOBE RANCH - REVIVAL SERIES

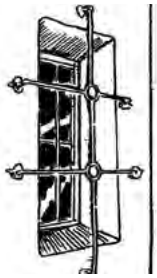
The Adobe Ranch architectural style emerged as an update and adaptation of the Spanish Ranchos built throughout the 19th century in California. Although originally constructed from adobe, conventional materials introduced with modern building practices have created an indigenous California version of the style; one that is evocative yet low in profile. Detail elements typical of this style include painted brick or stone detailing, stucco chimney forms, buttresses, and long porches. Wall mass is expressed using recessed windows and other architectural details.

Appropriate Building Typologies

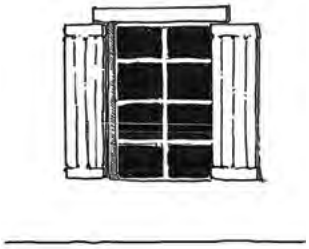
Single Family Detached Residential, Single Family Detached Enclave Residential, Single Family Attached Residential, Multi-Family Attached Residential

Arches and Arcades

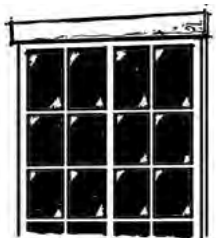
Recessed Window with Shutters



Ornamental Wrought Iron



Divided Window with Header and Shutters



Wood Window Header

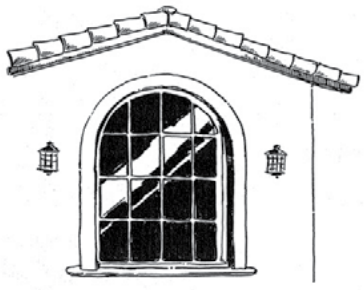
ELEMENTS	MINIMUM STANDARDS	ENCOURAGED ENHANCEMENTS
FORM	◦ *Simple, often "L"-shaped, rectangular two-story massing*	◦ *Single-story element, such as covered porch*
ROOF	◦ *Gable and shed roof forms* ◦ *4:12 to 5:12 primary roof pitch* ◦ *Flat concrete and barrel "S"-shape concrete tiles*	◦ *Semi-flush or stucco-wrapped rakes* ◦ *Exposed rafter tails*
WALLS	◦ *Stucco with light sand finish*	◦ *Painted brick or stone use*
WINDOWS	◦ *Windows with inserts on elevations with prominent and moderate public visibility* ◦ *Wood header or stucco trim surrounds*	◦ *Recessed windows with shutters*
DETAILS	◦ *Covered entry stoop* ◦ *Stucco "low wall" pot shelf on first story*	◦ *Ornamental wrought iron* ◦ *Arches and arcades* ◦ *Heavy square stucco columns* ◦ *Flat paver sill elements*

SPANISH COLONIAL - REVIVAL SERIES

The Spanish Colonial Revival style combines a wide source of elements derived from earlier related styles (adobe Spanish Colonial, Mission, Moorish, and the Boroque architecture of Colonial Spain and Portugal) while responding to a more modern-day context. This regional expression combines the basic forms of traditional Spanish architecture with local styles prevalent at the time such as Mission and Arts and Crafts. Some distinguishing features include plaster walls, chimneys with distinctive hoods, low-pitched tile roofs, and decorative wrought iron window grills. Patterned tile, terra-cotta pavers, finials and wood decks or balconies were also employed to add color, texture, and accent.

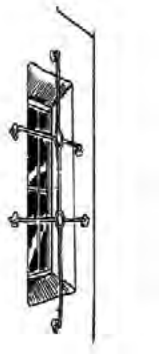
Appropriate Building Typologies

Single Family Detached Residential, Single Family Detached Enclave Residential, Single Family Attached Residential, Multi-Family Attached Residential



Arch-Top Feature Window

Plank Shutters



Wrought Iron Over Windows

ELEMENTS	MINIMUM STANDARDS	ENCOURAGED ENHANCEMENTS
FORM	◦ *One- and two-story volumes*	◦ *Turrets* ◦ *12" to 18" second-floor cantilevers*
ROOF	◦ *Gable and shed roof forms* ◦ *4:12 to 5:12 primary roof pitch* ◦ *Barrel "S"-shape concrete tiles*	◦ *Cut rafter tails* ◦ *Flush rakes* ◦ *Profile eaves*
WALLS	◦ *Stucco with light sand finish*	◦ *Rounded wall return to windows and doors*
WINDOWS	◦ *Wood or stucco trim surrounds* ◦ *Windows with inserts on elevations with prominent and moderate public visibility*	◦ *Plank or panel shutters* ◦ *Arch-top feature windows*
DETAILS	◦ *Entry door patterns to complement style* ◦ *Recessed, articulated entry*	◦ *Wrought iron over windows* ◦ *Juliet balconies* ◦ *Finials* ◦ *Wood decks*

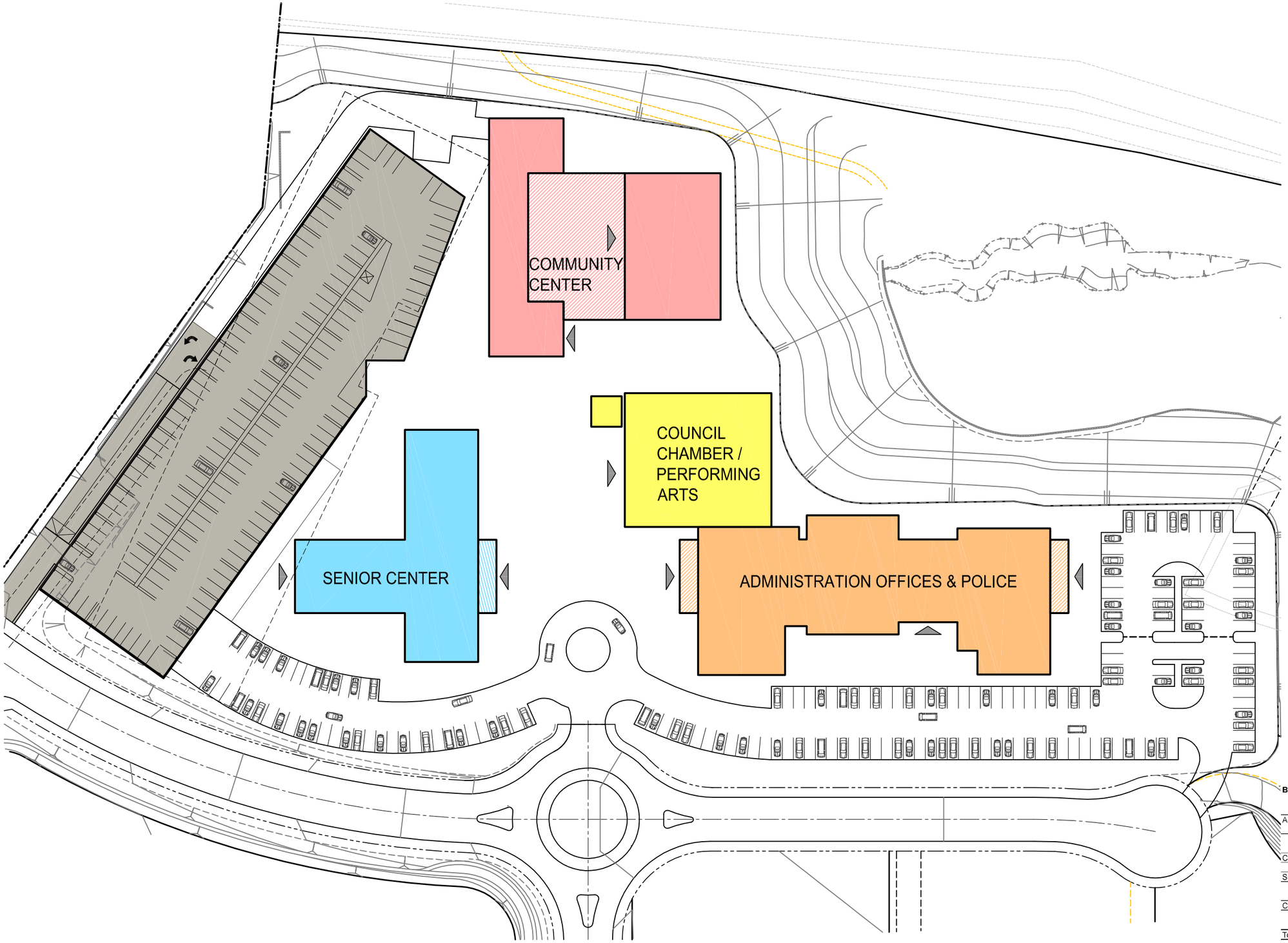
Appendix B

Tentative Tract Map No. 17331 Comparison


LOT 44
PARCEL MAP NO. 88-201
P.M.B. 257 / 21 - 23
PCL. 2
EXISTING INDUSTRIAL
COMMERCENTRE DRIVE
SCALE: 1"=100'
100 50 0 100 200
SCALE: 1"=100'
PCL. 1
TRACT NO. 14316
M.M. 679 / 15 - 23
LOT 11
LOT "J"
LOT "C"
LOT "G"
LOT 13
LOT "O"
LOT "H"
LOT "K"
LOT 1
LOT 2
LOT "B"
LOT 7
LOT 10
LOT 18
EXISTING UNDERGROUND IRWD TANK
LOT 15
LOT "D"
LOT 3
LOT 4
LOT 5
PCL. 4
PCL. 5
PCL. 3
PCL. 6
PARCEL MAP NO. 89-218
(AMENDING MAP)
PARCEL MAP NO. 87-240
P.M.B. 305 / 44-45
PCL. 2
PCL. 1
LOT "E"
LOT 16
LOT 11
PARCEL 2
LOT "F"
LOT 8
LOT 9
LOT 6
LOT 12
PARCEL 1
P.M.B. 274 / 27 - 29
LOT "L"
LOT 17
N.A.P.
PARCEL MAP NO. 85-108
P.M.B. 197 / 28 - 31
PARCEL 2
LOT "M"
LOT 19
EXISTING IRWD FACILITIES
TRACT NO. 11279
M.M. 493 / 14 - 21
LOT "A"
LOT 14
STREET A (PUBLIC STREET)
LOT "N"
LOT "P"
BISCAYNE BAY DRIVE
EXISTING CIVIC CENTER
TRACT NO. 14316
M.M. 679 / 15 - 23
LOT 8
TRACT NO. 13344
M.M. 647 / 33 - 42
LOT A
TRACT NO. 10931
M.M. 511 / 1 - 5
LOT B
LOT 3
LOT 10
LOT 11
TRACT NO. 12603
M.M. 562 / 7 - 9
TRACT NO. 10931
M.M. 511 / 1 - 5

Appendix C

Civic Center Conceptual Site Plan



LEGEND

- SENIOR CENTER
- COMMUNITY CENTER
- COUNCIL CHAMBER/ PERFORMING ARTS
- ADMINISTRATION OFFICES & POLICE
- PUBLIC SPACE
- PARKING DECK

Building	Building Program Area	2016 Schematic Plan (4 Buildings)	
Admin. Offices & Police / ECC	49,865	Level 1	30,000
		Level 2	19,865
Community Center	21,097	Level 1	21,097
Senior Center	17,479	Level 1	17,479
Council Chambers / PA Theater	13,615	Level 1	13,615
Total Building Area	102,056		102,056

0 80'

Scale 1" = 80'

LAKE FOREST CIVIC CENTER

LAKE FOREST, CA

MASTER PLAN

SCHEMATIC DESIGN PROGRESS SET 5647.00

July 07, 2016

carrierjohnson + CULTURE
1301 third avenue san diego ca 92101
phone 619.239.2353 | fax 619.239.6227

Appendix D
Regulatory Permits

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CALIFORNIA 90017

April 6, 2016

Debra Rose
Assistant City Manager
City of Lake Forest
25550 Commercentre Drive, Suite 100
Lake Forest, California 92630

Dear Ms. Rose:

I have signed and enclosed your validated Department of the Army Permit (Corps File No. SPL-2013-00406-SME). Please retain this permit for your files.

The **Notification of Commencement of Work** statement and the **Notification of Completion of Work and Certification of Compliance** statement should be completed and returned as directed in each statement.

Thank you for participating in the Regulatory Program. If you have any questions, please contact me at 213-452-3660 or via e-mail at Stephen.M.Estes@usace.army.mil. Please help me to evaluate and improve the regulatory experience for others by completing the customer survey form at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.

Sincerely,

Stephen M. Estes
Senior Project Manager
Orange and Riverside Counties Section
South Coast Branch
Regulatory Division

Enclosures

DEPARTMENT OF THE ARMY PERMIT

Permittee: Debra Rose, Assistant City Manager, City of Lake Forest

Project Name: Lake Forest Civic Center Project

Permit Number: SPL-2013-00406-SME

Issuing Office: Los Angeles District

Note: The term "you" and its derivatives, as used in this permit, means the Permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: To permanently discharge fill material into 0.082 acre of wetland waters of the United States and 0.013 acre of non-wetland waters of the United States pursuant to section 404 of the Clean Water Act of 1972, in association with the Lake Forest Civic Center Project, located within the city of Lake Forest, Orange County, California (Figures 1-6).

Specifically, you are authorized to construct a new civic center on approximately 7.3 acres of a 9.0-acre site, including an approximately 32,200-square-foot community center, 12,500-square-foot council chambers (also serving as a performing arts space), 46,900-square-foot city hall, and approximately 450 parking spaces. The proposed project would result in the permanent discharge of fill material into the northern segment of an unnamed tributary to Serrano Creek (Drainage A) and the entirety of Drainage A1, resulting in permanent impacts to approximately 0.095 acre (687 linear feet) of waters of the United States, including 0.082 acre (412 linear feet) of wetland waters of the United States (Figures 1-6).

Project Location: The project is located in two unnamed tributaries to Serrano Creek, within the city of Lake Forest, Orange County, California at approximately 33.659414, -117.678803.

General Conditions:

1. The time limit for completing the authorized activity ends on **March 3, 2021**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification from this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as Special Conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.

Special Conditions:

1. The Permittee shall mitigate for permanent impacts to 0.095 acre of waters of the United States through the establishment of 0.10 acre of wetland waters of the United States and 0.43 acre of riparian habitat buffer, as described in the final, approved mitigation plan: "Final Compensatory Habitat Mitigation and Monitoring Plan for the Lake Forest Civic Center Project" (dated July 2015, and prepared by VCS Environmental) and associated Errata Sheet, dated February 2016. The Permittee shall complete site preparation and planting and initiate monitoring as described in the final, approved mitigation plan concurrently with impacts to waters of the United States. According to the final, approved mitigation plan, responsible parties would be as follows: a) Implementation: City of Lake Forest; b) Performance: City of Lake Forest; c) Long-term management: City of Lake Forest. The Permittee retains ultimate legal responsibility for meeting the requirements of the final, approved mitigation plan. Detailed mitigation objectives, performance standards, and monitoring requirements are described in the above final, approved mitigation plan. Any requirements for financial assurances and/or long-term management provisions are also described in the above final, approved mitigation plan, as well as in Special Conditions 2 and 3 below. Your responsibility to complete the required compensatory mitigation as set forth in this Special Condition will not be considered fulfilled until you have

demonstrated compensatory mitigation project success and have received written verification of that success from the Corps Regulatory Division.

MONITORING: You shall submit monitoring reports for all compensatory mitigation sites as described in the final, approved mitigation plan by October 1 of each year following the construction of mitigation. To assure compensatory mitigation success, you shall monitor the mitigation areas for at least five consecutive growing seasons after construction or until the Corps Regulatory Division determines the final performance standards are met (monitoring shall be for a minimum of five years unless the Corps Regulatory Division agrees earlier that success has been reached and maintained for a sufficient time period, or, if success is not demonstrated to the Corps' satisfaction after the 5th year of monitoring, additional monitoring may be required by the Corps as determined at that time). The monitoring period shall commence upon completion of the construction of the mitigation site. Additionally, you shall demonstrate continued success of the compensatory mitigation site, without human intervention, for at least two consecutive years during which interim and/or final performance standards are met. The compensatory mitigation project will not be deemed successful until this criterion has been met.

GIS DATA: Within 60 days following permit issuance for Standard Individual Permits, you shall provide to this office GIS data (polygons only) depicting the boundaries of all compensatory mitigation sites, as authorized in the above, final mitigation plan. All GIS data and associated metadata shall be provided on a digital medium (CD or DVD) or via file transfer protocol (FTP), preferably using the Environmental Systems Research Institute (ESRI) shapefile format. GIS data for mitigation sites shall conform to the Mitigation_SPD.xlsx data table, as specified in the Final Map and Drawing Standards for the South Pacific Division Regulatory Program dated August 6, 2012 (http://www.spd.usace.army.mil/Portals/13/docs/regulatory/standards/map.pdf), and shall include a text file of metadata, including datum, projection, and mapper contact information. Within 60 days following completion of compensatory mitigation construction activities, if any deviations have occurred, you shall submit as-built GIS data (polygons only) accompanied by a narrative description listing and explaining each deviation.

2. The Permittee shall record a Restrictive Covenant (RC), in a form approved by the Corps Regulatory Division, which shall run with the land, obligating the Permittee, its successor and assigns to protect and maintain the 0.53-acre mitigation area (Figure 6) as natural open space in perpetuity. The RC shall preclude establishment of fuel modification zones, paved public trails, drainage facilities, walls, maintenance access roads and/or future easements, except as provided in the project description. Further, to the extent practicable, any such facilities outside the RC shall be sited to minimize indirect impacts on the avoided, established, re-established, and enhanced wetland and non-wetland waters of the United States and associated buffer. Prior to its execution and within six months of issuance of this permit, the Permittee shall submit a draft RC to the Corps Regulatory Division for review. The Permittee shall receive written approval (by letter or e-mail) from the Corps Regulatory Division of this RC prior to it being executed and recorded. No later than 30 calendar days after receiving Corps Regulatory Division

approval of the final draft RC, the RC shall be executed and recorded, and a recorded copy furnished to the Corps Regulatory Division.

GIS DATA: Within 60 days following recordation, you shall provide to this office GIS data (polygons only) depicting the RC boundaries, as authorized by the Corps. All GIS data and associated metadata shall be provided on a digital medium (CD or DVD) or via file transfer protocol (FTP), preferably using the Environmental Systems Research Institute (ESRI) shapefile format. GIS data for RC sites shall conform to the Mitigation_SPD.xlsx data table, as specified in the Final Map and Drawing Standards for the South Pacific Division Regulatory Program dated August 6, 2012 (http://www.spd.usace.army.mil/Portals/13/docs/regulatory/standards/map.pdf), and shall include a text file of metadata, including datum, projection, and mapper contact information.

3. Prior to initiating construction in waters of the United States, the Permittee shall post financial assurance ("financial assurance") in the form of a Government Letter of Assurance or another form approved by the Corps Regulatory Division for the estimated cost of implementing the approved HMMP (including a 20% contingency to be added to the total costs). The purpose of this financial assurance is to guarantee the successful implementation, maintenance, and monitoring of compensatory mitigation.

4. Prior to initiating construction in waters of the United States, the Permittee shall submit to the Corps Regulatory Division a complete set of final detailed grading/construction plans showing all work and structures in waters of the United States. All plans shall be in compliance with the Final Map and Drawing Standards for the South Pacific Division Regulatory Program dated August 6, 2012 (http://www.spd.usace.army.mil/Portals/13/docs/regulatory/standards/map.pdf). All plan sheets shall be signed, dated, and submitted on paper no larger than 11x 17 inches. No work in waters of the United States is authorized until the Permittee receives, in writing (by letter or e-mail), Corps Regulatory Division approval of the final detailed grading/construction plans. The Permittee shall ensure that the project is built in accordance with the Corps-approved plans.

5. The Permittee shall clearly mark the limits of the workspace with flagging or similar means to ensure mechanized equipment does not enter preserved waters of the United States and riparian wetland/habitat areas. Adverse impacts to waters of the United States beyond the Corps-approved construction footprint are not authorized. Such impacts could result in permit suspension and revocation, administrative, civil or criminal penalties, and/or substantial, additional, compensatory mitigation requirements.

6. This Corps permit does not authorize you to take any threatened or endangered species, in particular the coastal California gnatcatcher (*Polioptila californica californica*) and least Bell's vireo (*Vireo bellii pusillus*) or adversely modify their designated critical habitat. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g. ESA Section 10 permit, or a Biological Opinion (BO) under ESA section 7, with "incidental take" provisions with which you must comply). The enclosed U.S. Fish and Wildlife Service (USFWS) BO (FWS-OR-16B0021-16F0043) contains mandatory terms and

conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached BO, the terms and conditions of which are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit.

7. Pursuant to 36 C.F.R. section 800.13, in the event of any discoveries during construction of either human remains, archeological deposits, or any other type of historic property, the Permittee shall notify the Corps' Archeology Staff within 24 hours (Danielle Storey at 213-452-3855 or Meg McDonald at 213-452-3849). The Permittee shall immediately suspend all work in any area(s) where potential cultural resources are discovered. The Permittee shall not resume construction in the area surrounding the potential cultural resources until the Corps Regulatory Division re-authorizes project construction, per 36 C.F.R. section 800.13.

8. Within 45 calendar days of completion of authorized work in waters of the United States, the Permittee shall submit to the Corps Regulatory Division a post-project implementation memorandum including the following information:
    A. Date(s) work within waters of the United States was initiated and completed;
    B. Summary of compliance status with each Special Condition of this permit (including any noncompliance that previously occurred or is currently occurring and corrective actions taken or proposed to achieve compliance);
    C. Color photographs (including map of photopoints) taken at the project site before and after construction for those aspects directly associated with permanent impacts to waters of the United States such that the extent of authorized fills can be verified;
    D. One copy of "as built" drawings for the entire project. Electronic submittal (Adobe PDF format) is preferred. All sheets must be signed, dated, and to-scale. If submitting paper copies, sheets must be no larger than 11 x 17 inches; and
    E. Signed Certification of Compliance (attached as part of this permit package)).

Further Information:

1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:

    () Section 10 of the River and Harbor Act of 1899 (33 USC 403).
    (X) Section 404 of the Clean Water Act (33 USC 1344).
    () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 USC 1413).

2. Limits of this authorization.

    a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
    b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.
d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

   a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
   b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
   c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
   d. Design or construction deficiencies associated with the permitted work.
   e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Re-evaluation of Permit Decision. This office may re-evaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a re-evaluation include, but are not limited to, the following:

   a. You fail to comply with the terms and conditions of this permit.

   b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

   c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

   Such a re-evaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give you favorable consideration to a request for an extension of this time limit.

Your signature below, as Permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Debra Rose 3/30/16

PERMITTEE DATE

Debra Rose
Assistant City Manager

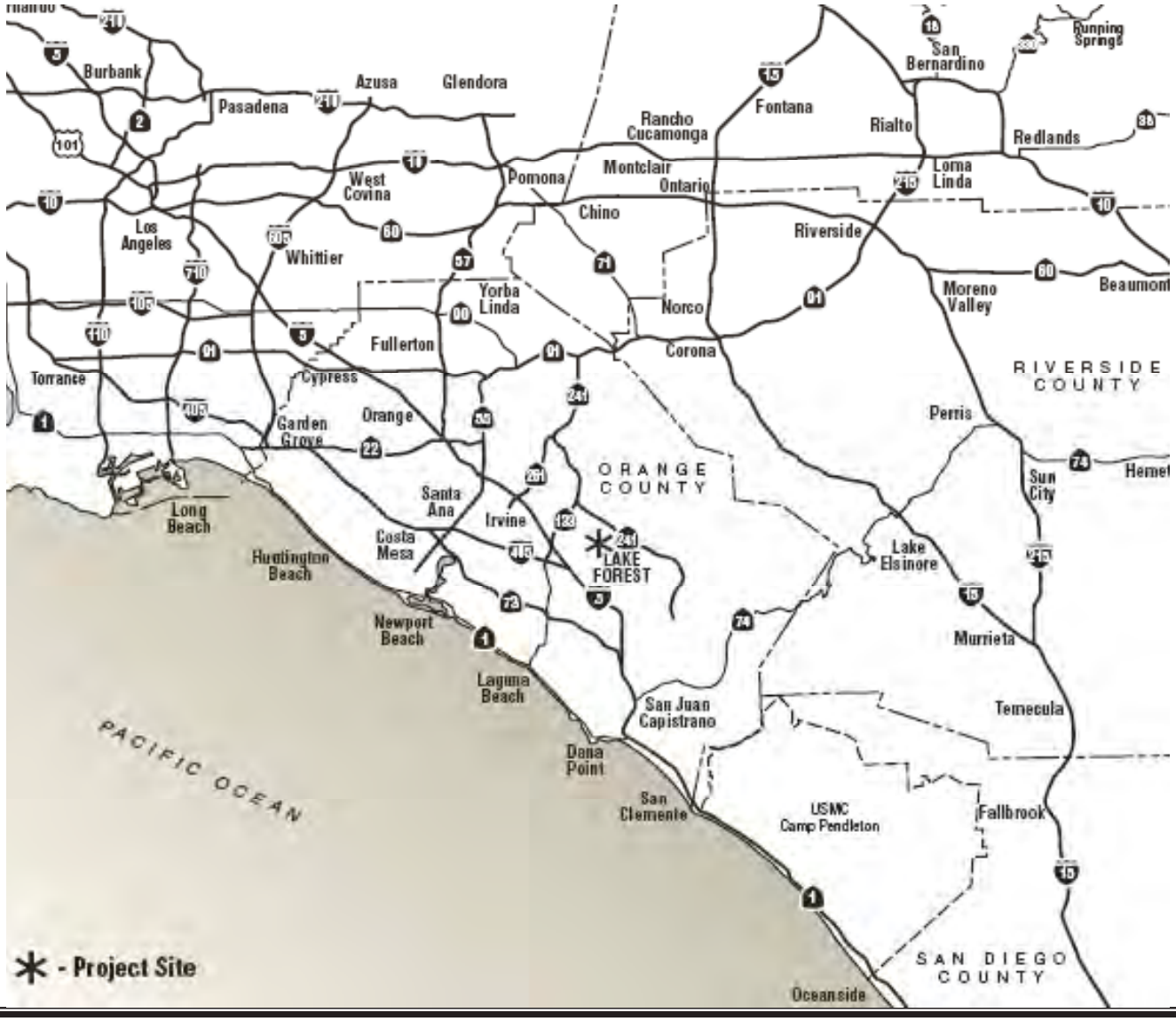
This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

4/6/2016

Stephen M. Estes DATE
Senior Project Manager
Orange and Riverside Counties Section
South Coast Branch
Regulatory Division

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

TRANSFEREE DATE



Lake Forest Civic Center

Regional Map

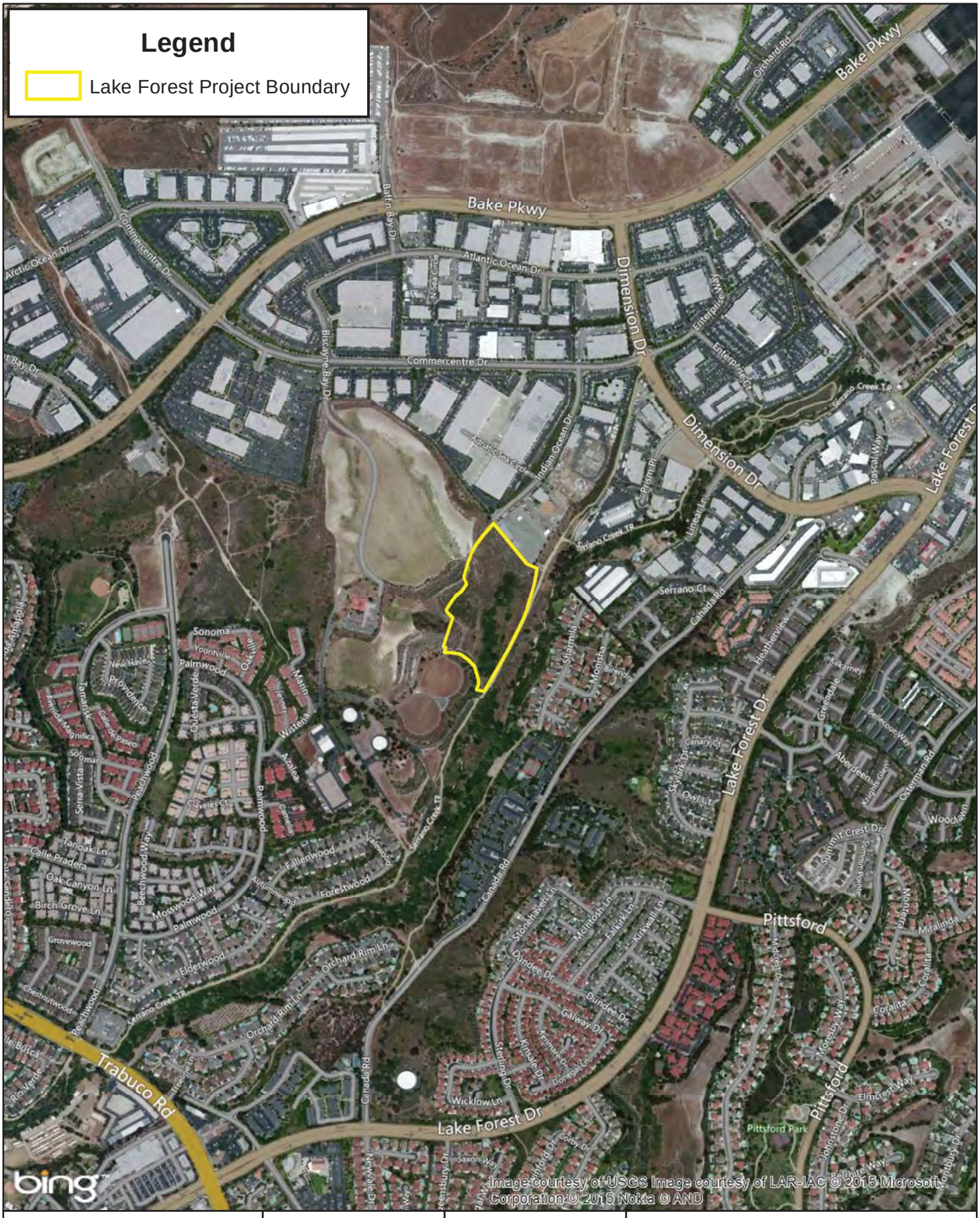
Data Source: RBF Consulting

VCS ENVIRONMENTAL
30900 Rancho Viejo Road, Suite 100
San Juan Capistrano, CA 92675
(949) 489-2700
Fax (949) 489-0309

N

Not to scale

FIGURE 1



Prepared By:
VCS Environmental

Map Created: 2/23/2015

0 250 500 1,000
Feet
1 inch = 1,000 feet

Data Source: Bing Maps

Lake Forest Civic Center
Site Vicinity Map

FIGURE 2

PARKING TABULATIONS

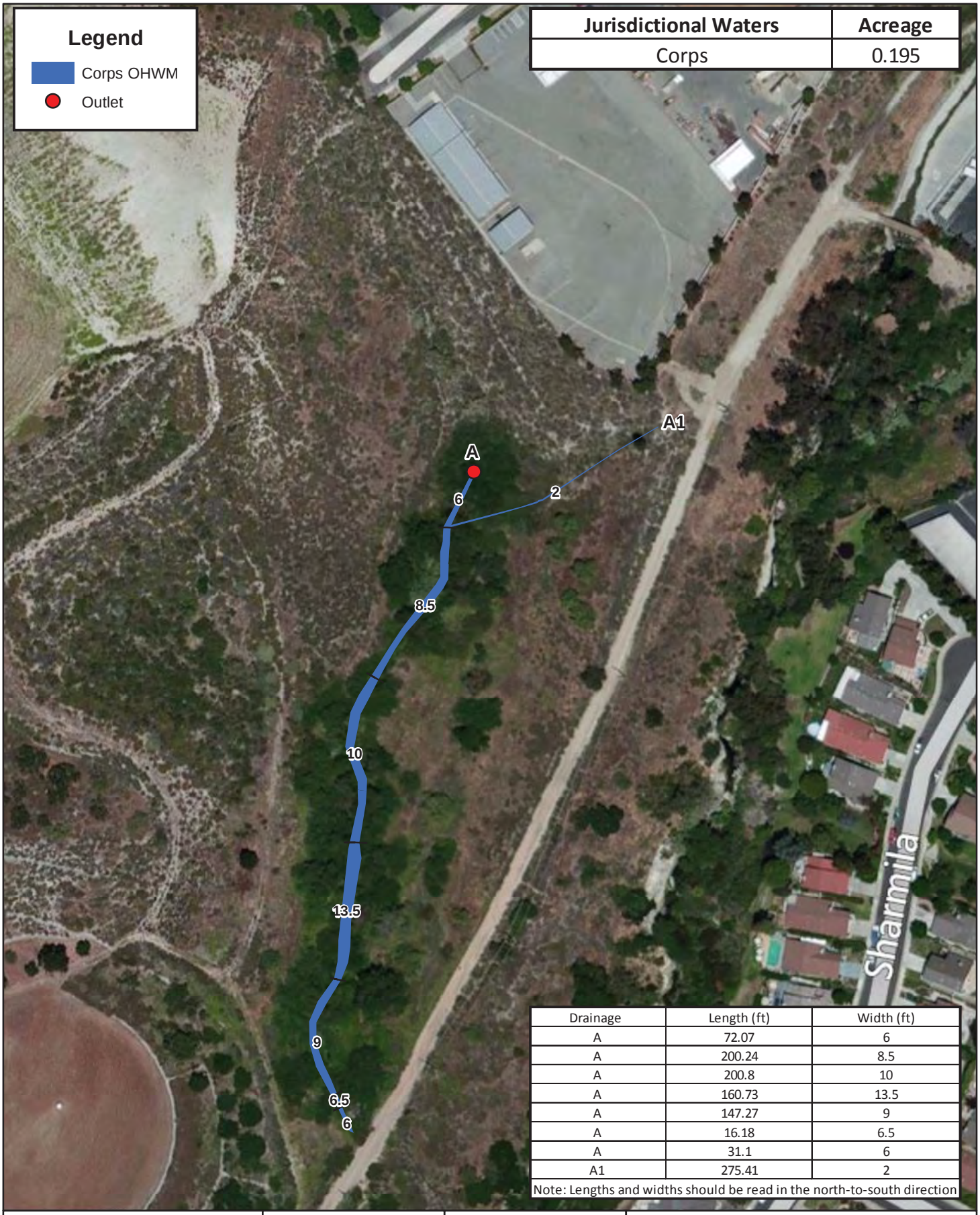
MAIN PARKING FIELD	325
CITY HALL PARKING FIELD	57
SECURE PARKING FIELD	68
PARKING TOTAL	450

REQUIRED ACCESSIBLE PARKING

MAIN PARKING FIELD	8
CITY HALL PARKING FIELD	3
SECURE PARKING FIELD	3
REQUIRED ACCESSIBLE TOTAL	14
PROVIDED ACCESSIBLE	26

VCS Environmental

Lake Forest Civic Center
Site Plan
Figure 3



Jurisdictional Waters	Acreage
Corps	0.195

Drainage	Length (ft)	Width (ft)
A	72.07	6
A	200.24	8.5
A	200.8	10
A	160.73	13.5
A	147.27	9
A	16.18	6.5
A	31.1	6
A1	275.41	2

Note: Lengths and widths should be read in the north-to-south direction

Prepared By:
VCS Environmental

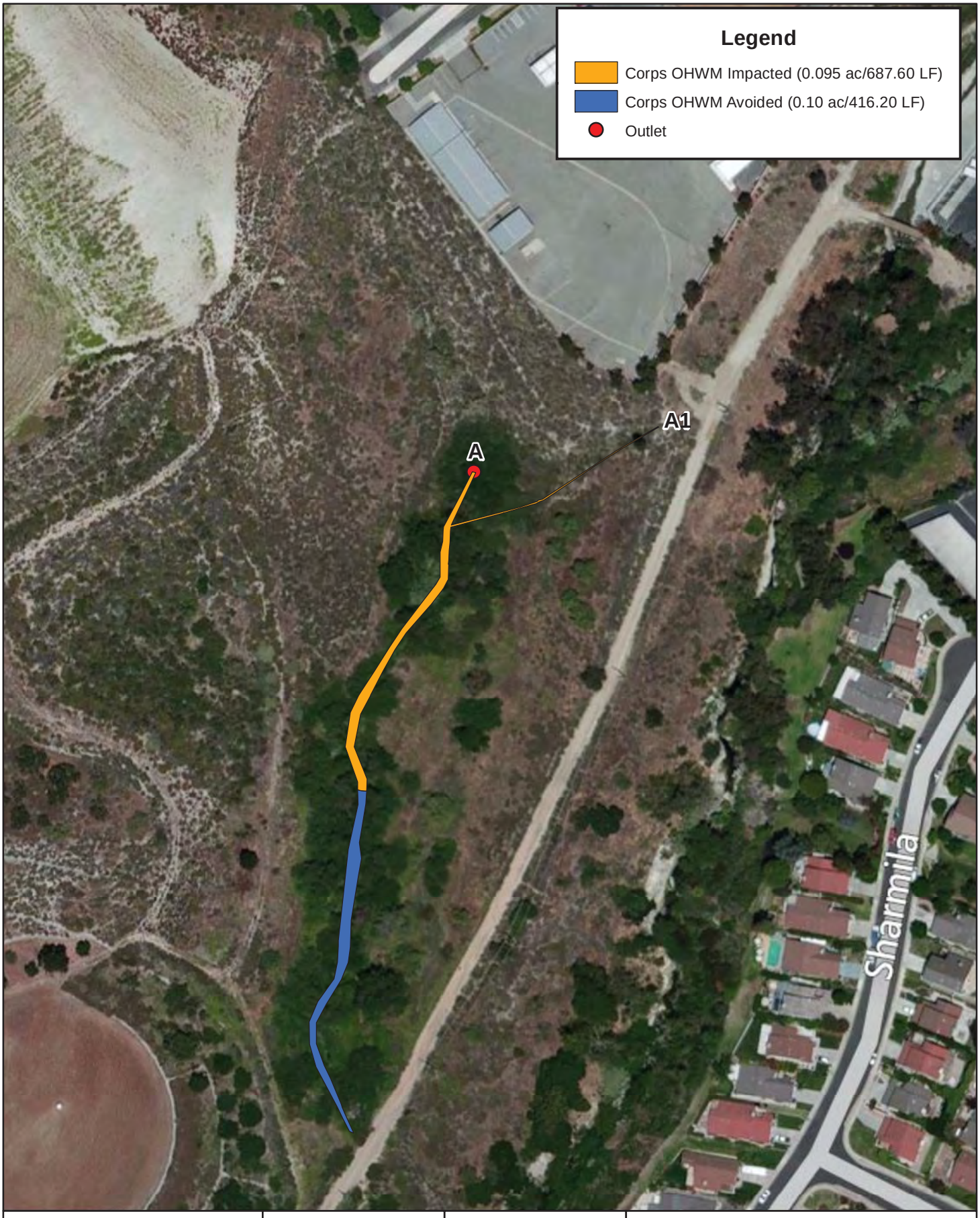
Map Created: 1/8/2014

0 37.5 75 150 Feet
1 inch = 150 feet

Data Sources: Bing Maps

LAKE FOREST CIVIC CENTER
DELINEATION

FIGURE 4



Prepared By:
VCS Environmental

Map Created: 1/8/2014

0 37.5 75 150 Feet
1 inch = 150 feet

Data Sources: Bing Maps

LAKE FOREST CIVIC CENTER
IMPACTS

FIGURE 5

Prepared By:
VCS Environmental

Map Created: 2/23/2015

0 37.5 75 150 Feet
1 inch = 150 feet

Data Sources: Bing Maps

LAKE FOREST CIVIC CENTER
MITIGATION

FIGURE 6

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Debra Rose, City of Lake Forest	File Number: SPL-2013-00406-SME	Date: 03/03/2016
Attached is:		See Section below
X	INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a LOP, you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed) by contacting the Corps district for further instruction. Also, you may provide new information for further consideration by the Corps to re-evaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:
Stephen M. Estes
Senior Project Manager
U.S. Army Corps of Engineers, Los Angeles District
915 Wilshire Boulevard, Suite 930
Los Angeles, California 90017
Phone: 213-452-3660
Email: stephen.m.estes@usace.army.mil

If you only have questions regarding the appeal process you may also contact:
Thomas J. Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division
1455 Market Street, 2052B
San Francisco, California 94103-1399
Phone: 415-503-6574 Fax: 415-503-6646
Email: thomas.j.cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:	Telephone number:

LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS

DEPARTMENT OF THE ARMY PERMIT

Permit Number: *SPL-2013-00406-SME*
Name of Permittee: *Debra Rose, City of Lake Forest*
Date of Issuance: *April 6, 2016*

Date work in waters of the U.S. will commence: _____
Estimated construction period (in weeks): _____
Name & phone of contractor (if any): _____

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit you may be subject to permit suspension, modification, or revocation.

I hereby certify that I, and the contractor (if applicable), have read and agree to comply with the terms and conditions of the above referenced permit.

_____ _____
Signature of Permittee Date

At least ten (10) days prior to the commencement of the activity authorized by this permit, sign this certification and return it using any ONE of the following three (3) methods:

(1) E-MAIL a statement including all the above information to:
Stephen.M.Estes@usace.army.mil
OR
(2) FAX this certification, after signing, to: 213-452-4196
OR
(3) MAIL to the following address:

U.S. Army Corps of Engineers
Regulatory Division
ATTN: CESPL-RG-SPL-2013-00406-SME
915 Wilshire Boulevard, Suite 930
Los Angeles, California 90017

LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS

NOTIFICATION OF COMPLETION OF WORK AND CERTIFICATION OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT

Permit Number: *SPL-2013-00406-SME*
Name of Permittee: *Debra Rose, City of Lake Forest*
Date of Issuance: *April 6, 2016*

Date work in waters of the U.S. completed: _____
Construction period (in weeks): _____
Name & phone of contractor (if any): _____

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit you may be subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of said permit.

_____ _____
Signature of Permittee Date

Upon completion of the activity authorized by this permit, sign this certification and return it using any ONE of the following three (3) methods:

(1) E-MAIL a statement including all the above information to:
Stephen.M.Estes@usace.army.mil
OR
(2) FAX this certification, after signing, to: 213-452-4196
OR
(3) MAIL to the following address:

U.S. Army Corps of Engineers
Regulatory Division
ATTN: CESPL-RG-SPL-2013-00406-SME
915 Wilshire Boulevard, Suite 930
Los Angeles, California 90017

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

In Reply Refer To:
FWS-OR-16B0021-16F0043

FEB 26 2016

Colonel Kirk Gibbs
U.S. Army Corps of Engineers, Los Angeles District
915 Wilshire Boulevard, Suite 930
Los Angeles, California 90017-3409

Attention: Stephen M. Estes, Senior Project Manager, Orange & Riverside Counties Section (SPL-2013-00406-SME)

Subject: Formal Section 7 Consultation for the City of Lake Forest Civic Center Project, City of Lake Forest, Orange County, California

Dear Colonel Gibbs:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the proposed City of Lake Forest Civic Center Project located in the City of Lake Forest, Orange County, California, and its effects on the federally threatened coastal California gnatcatcher (*Polioptila californica californica*; gnatcatcher), in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Your agency proposes to issue a permit under section 404 of the Clean Water Act to the City of Lake Forest for the construction of a community center, council chambers, city hall, and associated infrastructure on about 7.3 acres of a 9-acre site. We initiated formal consultation on October 6, 2015, which was the date we received your agency's request for consultation.

In your request for consultation, you also determined the proposed project is not likely to adversely affect the federally endangered least Bell's vireo (*Vireo bellii pusillus*; vireo). Based on our review of the conservation measures the U.S. Army Corps of Engineers (Corps) and/or the City of Lake Forest will implement as part of the project to avoid, minimize, and offset potential impacts to the vireo, we concur with your determination that the proposed project is not likely to adversely affect the vireo (see Enclosure).

This biological opinion is based on information provided with your initiation request; Biological and Conference Opinions for the Central and Coastal Subregion Natural Community Conservation Plan and Habitat Conservation Plan, County of Orange, California dated May 24, 1996 (Service 1996); Orange County Central and Coastal Subregions Natural Community Conservation Plan/Habitat

Conservation Plan (NCCP/HCP); the Final Environmental Impact Statement/Final Environmental Impact Report for the NCCP/HCP (FEIS/FEIR); and other information provided during the consultation period. The complete project file addressing this consultation is maintained at the Carlsbad Fish and Wildlife Office (CFWO).

The proposed project is located within the plan area for the NCCP/HCP. The NCCP/HCP established a multiple species conservation program to minimize and mitigate habitat loss and impacts to "Covered Species" associated with implementation of identified "Planned Activities" by Participating Landowners. In association with adoption of the NCCP/HCP, the Service issued section 10(a)(1)(B) incidental take permits to the Participating Landowners for those listed species included in the Covered Species list, pursuant to the terms of the NCCP/HCP. The Service also issued incidental take permits to "Participating Jurisdictions" to address impacts to gnatcatcher-occupied coastal sage scrub by "Non-Participating Landowners" within the boundaries of each jurisdiction. In order for us to extend to the U.S. Army Corps of Engineers (Corps) the take exemption for listed species that is provided to Participating Landowners and Participating Jurisdictions through the NCCP/HCP, the proposed action must be consistent with the NCCP/HCP and its associated incidental take permit and Implementation Agreement.

The City of Lake Forest is a Participating Jurisdiction within the NCCP/HCP plan area. Under the NCCP/HCP, incidental take of gnatcatchers within specific areas in Participating Jurisdictions may be addressed through payment of an in-lieu mitigation fee to the Natural Communities Coalition, the non-profit agency responsible for implementing the NCCP/HCP (NCCP/HCP, Section 6.2.2). The City of Lake Forest has proposed to pay the in-lieu mitigation fee for the loss of 5.59 acres of gnatcatcher occupied coastal sage scrub that will be removed in association with its development. A portion of the gnatcatcher habitat proposed to be impacted was previously offset with the in-lieu fee payment by the Irvine Ranch Water District (IRWD 2007).

Based on our review of the information provided to us, we have determined that the proposed project is consistent with the NCCP/HCP because: 1) it will be constructed in an area for which the in-lieu fee is authorized, 2) the City of Lake Forest will pay the in-lieu mitigation fee of $363,350 ($65,000 per acre) prior to initiating project activities that have potential to impact the gnatcatcher on the project site,[1] and 3) the Applicant will implement the construction-related minimization measures as outlined in Section 7.5.3 of the FEIS/FEIR.[2]

In the biological opinion for the NCCP/HCP, we reviewed the status of the gnatcatcher and the effects of implementing the plan on the species' recovery and concluded that the level of anticipated take in the plan area was not likely to result in jeopardy to the gnatcatcher. Given that the project is consistent with the NCCP/HCP, we do not anticipate any adverse effects to the gnatcatcher that were not previously evaluated in the biological opinion for the plan and have determined that no incidental take of gnatcatcher beyond that anticipated in the biological opinion for the plan will occur. Therefore, it is our conclusion that implementation of the project will not result in jeopardy

[1] Memorandum received from L. Cooke, VCS Environmental on October 30, 2015.
[2] Memorandum received from L. Cooke, VCS Environmental on November 25, 2015.

to the gnatcatcher, and we are extending to the Corps the take exemption for gnatcatcher already provided to the City of Lake Forest through its incidental take permit for the NCCP/HCP. Therefore, interagency consultation requirements of section 7 of the Act have been satisfied. As provided in 50 CFR §402.16 reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; 3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or 4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded (i.e., more than 5.59 acres of coastal sage scrub are impacted), any operations causing such take must cease pending reinitiation.

If you have any questions regarding this consultation, please contact Christine Medak of this office at 760-431-9440, extension 298.

Sincerely,

for Karen A. Goebel
Assistant Field Supervisor

Enclosure

cc:
James Sulentich, Natural Communities Coalition
Christine Beck, California Department of Fish and Wildlife

LITERATURE CITED

[IRWD] Irvine Ranch Water District. 2007. NCCP/HCP Reserve Boundary Minor Amendment Lake Forest Baker Filtration Plant. April 2007.

[Service] U.S. Fish and Wildlife Service. 1996. Biological opinion for the Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan, Orange County, California. May 24, 1996. 87 pp.

ENCLOSURE

The following information is provided in support of our concurrence with the U.S. Army Corps of Engineers' (Corps) determination that the proposed Lake Forest Civic Center Project in the City of Lake Forest, Orange County, California, is not likely to adversely affect the federally endangered least Bell's vireo (*Vireo bellii pusillus*; vireo).

A tributary to Serrano Creek runs through the project site and contains about 3.62 acres of potential vireo habitat, including willow riparian forest (2.46 acres) and mulefat scrub (1.16 acres). Protocol surveys for the vireo were conducted in 2013 and 2015 (ICF International 2013, 2015). One transient male vireo was observed in willow riparian vegetation within the construction footprint in 2013, but vireos were not observed during focused surveys conducted in 2015.

Project construction will permanently impact about 2.01 acres of potential vireo habitat (i.e., 1.11 acre of willow riparian forest and 0.90 acre of mulefat scrub). Individual vireos in or near the project footprint during construction could be impacted due to habitat removal/degradation, noise, artificial lighting, and other project-related disturbances and by habitat degradation due to increased erosion, siltation, and decreased water quality.

In addition to implementation of the construction-related minimization measures as outlined in Section 7.5.3 the NCCP/HCP, the City of Lake Forest will implement the following measures to avoid, minimize, and offset potential effects to the vireo:

1. The loss of potential habitat for the vireo on the project site will be partially offset by: a) creating 0.56 acre of new streambed and adjacent riparian buffer parallel to remaining willow riparian forest, and b) removing invasive plants and enhancing habitat within the remaining willow riparian forest (about 0.91 acres). The created habitat will include a natural riffle design that will help to minimize erosion, and the plant palette will include plant species impacted within the project site.[3]

2. Created and enhanced habitat remaining on the project site will be preserved with a restrictive covenant and maintained by the City of Lake Forest in perpetuity.

3. The City of Lake Forest will provide $15,000 to conduct invasive species removal within Serrano Creek, north of Dimension Drive, within City limits. This invasive species removal will be conducted in 2016 after the riparian bird breeding season (i.e., after September 15).

[3] The City of Lake Forest will also purchase 1.0 acre of stream enhancement credit at Soquel Canyon Mitigation Bank. The enhanced riparian habitat with black walnut and oak woodlands interspersed with mule fat, but is not known to support vireo, so it is not included in the analysis for vireo.

4. Since vireo population numbers can fluctuate over time, if habitat removal associated with construction is not completed by March 15, 2016, a qualified biologist[4] will conduct protocol surveys for vireos within 500 feet of the project footprint and report to the Corps and CFWO on the number of vireos detected in the breeding season prior to project initiation. If no nest(s), nesting behavior, or brood rearing activities are detected within 500 feet of the project footprint, work may commence. Should nesting vireos be observed, consultation may need to be reinitiated to address unanticipated effects to the vireo.

5. Under the supervision of the qualified biologist, all preserved habitat areas adjacent to the Project Boundary will be delineated by bright orange plastic fencing, stakes, flags, or markers that are clearly visible to personnel on foot and in heavy equipment. No vegetation removal, grading, or deposition of waste dirt/rubble will occur outside of the Project Boundary.

6. Silt fencing, siltation basins, gravel bags, or other controls necessary to stabilize the soil in cleared or graded areas will be installed to minimize erosion and siltation during initial vegetation clearing/removal and project construction. Erosion control measures will be installed within the fenced disturbance limits prior to the onset of vegetation clearing. These measures will be maintained in good repair until the completion of project construction.

7. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will be restricted to designated disturbed/developed areas. These designated areas will not be located within waterways or riparian areas and will be located in such a manner as to prevent runoff from entering adjacent vegetated areas and will be clearly designated on the construction plans.

The Lake Forest Civic Center Project will impact up to 2.01 acres of vireo habitat along a tributary to Serrano Creek, but the impacted habitat is not part of a vireo breeding territory. Therefore, we do not anticipate that project-related habitat loss will affect vireo breeding. To minimize long-term impacts to vireo habitat, the impacted vireo habitat will be partially offset by creating 0.56 acre of additional habitat on the project site and improving the quality of remaining 0.91 acre of habitat by removing invasive plant species. The removal of non-native invasive riparian plants from nearby Serrano Creek will temporarily improve the habitat quality for vireo adjacent to the project site. In addition, the general conservation measures included in the biological opinion will minimize the degradation of preserved vegetation with pollutants, sediment, or invasive species.

With implementation of the species-specific conservation measures outlined above, we do not expect that vireo adults, eggs, or nestlings will be killed or injured during construction activities. If construction occurs during the breeding season, measures will also be implemented to avoid

[4] The qualified biologist will be knowledgeable of vireo biology and ecology and have a minimum of 40 hours of experience conducting vireo nest monitoring in a minimum of 5 localities

disturbance of breeding vireos potentially occurring in the adjacent offsite habitat. No construction activities will occur within 500 feet of an active vireo nest. Therefore, potential effects of construction-related noise and activity on vireos potentially present in offsite habitat will be reduced to a level of insignificance (i.e., the scale of the impact will not result in take and any potential effects could not be meaningfully measured, detected, or evaluated).

For the reasons described above, we concur with the Corps' determination that the Lake Forest Civic Center Project is not likely to adversely affect vireo.

Although the proposed removal of non-native vegetation within Serrano Creek north of Dimension will temporarily enhance habitat within Serrano Creek, non-native invasive plants will eventually reinvade the area if maintenance does not continue; therefore, we recommend that management of the riparian habitat through removal of non-native invasive species be continued.

LITERATURE CITED

ICF International. 2013. 2013 least Bell's vireo and southwestern willow flycatcher presence/absence surveys results for the Lake Forest Civic Center Project. Prepared for Development Services Department, City of Lake Forest, Lake Forest, California.

ICF International. 2015. 2015 least Bell's vireo presence/absence survey results for the Lake Forest Civic Center Project. Prepared for Director of Development Services, City of Lake Forest, Lake Forest, California.

September 11, 2014

David Belmer
City of Lake Forest
25550 Commercecentre Drive, Suite 100
Lake Forest, CA 92630

CLEAN WATER ACT SECTION 401 WATER QUALITY STANDARDS CERTIFICATION FOR THE LAKE FOREST CIVIC CENTER PROJECT, CITY OF LAKE FOREST, COUNTY OF ORANGE, CALIFORNIA (ACOE REFERENCE NO. SPL-2013-00406-SME) (SARWQCB PROJECT NO. 302014-01)

Dear Mr. Belmer:

On January 17, 2014, we received an application for Clean Water Act (CWA) Section 401 Water Quality Standards Certification ("Certification") from the City of Lake Forest for a project to construct a civic center which includes a City Hall building, a Community Center, Council Chambers/Performing Arts Theater, and up to 466 parking stalls. The applicant has also submitted a filing fee of $1,330.00, which satisfies this project's fee requirement for consideration of a 401 Certification. This fee amount was determined using the Dredge and Fill Fee Calculator on the State Water Resources Control Board (SWRCB) web site, which is based on the most current iteration of California Code of Regulations, Division 3, Chapter 9, Article 1, section 2200 (a) (3). This letter responds to your request for certification that the proposed project, described in your application and summarized below, will comply with State water quality standards outlined in the Water Quality Control Plan for the Santa Ana River Basin (1995) (Basin Plan) and subsequent Basin Plan amendments:

Project Description: The project includes development of a 32,200 square foot Community Center and parking facilities, an approximate 12,500 square foot Council Chambers/Performing Arts Theater, 28,600 square foot City Hall and a total of 466 parking stalls. The site plan utilizes 7.3 acres of the available 9.0 acre site and incorporates retaining walls along the southern boundary of the proposed development area, adjacent to an area subject to US Army Corps of Engineers jurisdiction under CWA Section 404.

The development plan will impact the northern segment of Drainage A and the entirety of Drainage A1(as noted in the project's plan), resulting in impacts to a total of 0.095 acre (687 linear feet) of Waters of the US, including 0.077 acre (412 linear feet) of wetland Waters of the US.

The work will take place within Section 11 of Township 6 South, Range 8 West, of the U.S. Geological Survey *El Toro* 7.5 minute topographic quadrangle map (33° 39' 33.72" N/ 117° 40' 44.24" W).

Receiving water: San Diego Creek, Serrano Creek, and an unnamed tributary to Serrano Creek, which have present or potential beneficial uses, including: groundwater recharge (GWR), contact recreation (REC1), non-contact recreation (REC2), wildlife habitat (WILD), municipal and domestic supply (MUN), and warm freshwater habitat (WARM).

Fill area:

Permanent Impact to Wetland Habitat	0.095 acres	687 linear feet

Dredge/Fill volume: N/A

Federal permit: U.S. Army Corps of Engineers Permit No. SPL-2013-00406-SME

You have proposed to mitigate water quality impacts as described in your Certification application. The proposed mitigation is summarized below:

Onsite Water Quality Standards Mitigation Proposed:

- The total mitigation for impacts to approximately 0.095 acre of Waters of the US, consisting of approximately 0.082 acre (412 linear feet) of wetland Waters of the US and approximately 0.013 acre (275 linear feet) of ephemeral Waters of the US, will include the establishment of approximately 0.13 acre (361 linear feet) of wetland Waters of the US, establishment of approximately 0.45 acre of riparian buffer areas surrounding the newly established wetland Waters of the US, and enhancement of approximately 0.10 acre (416 linear feet) of wetland Waters of the US. Therefore, this mitigation proposal will result in no net loss to the overall acreage of Waters of the US through the provision of a mitigation ratio of 1.05:1 (0.10 acre to 0.095 acre) of established wetland Waters of the US, 4. 74:1 of established riparian buffer, and 1.05:1 (0.10 acre to 0.095 acre) of enhanced wetland Waters of the US.

Offsite Water Quality Standards Mitigation Proposed:

None

Should the proposed project impact state- or federally-listed endangered species or their habitat, implementation of measures identified in consultation with U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife will ensure those impacts are mitigated to an acceptable level. Appropriate BMPs will be implemented to reduce construction-related impacts to Waters of the State according to the requirements of Order No. R8-2009-0030 (NPDES Permit No. CAS618030), commonly known as the Orange County Municipal Storm Water Permit, and subsequent iterations thereof. Order No. R8-2009-0030 requires that you substantially comply with the requirements of State Water Resources Control Board's General Permit for Storm Water Discharges Associated with Construction Activity.

This Water Quality Certification is subject to the acquisition of all local, regional, state, and federal permits and approvals as required by law. Failure to meet any conditions contained herein, or any conditions contained in any other permit or approval for this project issued by the State of California, or any subdivision thereof, may result in appropriate enforcement action, including imposition of administrative civil liability.

Pursuant to California Code of Regulations, Title 14, Chapter 3, Section 15096, as a responsible agency, the Regional Board is required to consider an EIR or Negative Declaration prepared by the lead agency in determining whether to approve a project. A responsible agency has responsibility for mitigating and avoiding only the direct and indirect environmental effects of those parts of the project which it decides to carry out, finance, or approve. Further, the responsible agency must make findings as required by Sections 15091 and, if necessary, 15093, for each and every significant impact of the project.

In compliance with Section 15096, the Regional Board has considered the EIR prepared for the proposed project in approving this Certification. More specifically, the Regional Board has considered those sections of the EIR relating to water quality. Based on the mitigation proposed in the EIR, and the conditions set forth in this Certification, impacts to water quality will be reduced to a less than significant level and beneficial uses will be protected. Thus, the Regional Board independently finds that changes or alterations have been required in, or incorporated into the project, which avoid or mitigate impacts to water quality to a less than significant level.

This 401 Certification is contingent upon the execution of the following conditions:

1) The applicant must comply with the requirements of the applicable Clean Water Act section 404 permit.

2) Proposed mitigation shall be timely implemented. Documentation that the proposed mitigation has been installed shall be provided to this office prior to, or concurrent with, discharge of fill to, or the dredging or excavation of material from, waters of the state. Documentation that the proposed mitigation site has been conserved in perpetuity as a mitigation site for this project, shall be provided to this office with one year to the occupancy of any building constructed by the project.

3) All materials generated from construction activities associated with this project shall be managed appropriately. This shall include identifying all potential pollution sources within the scope of work of this project, and incorporating all necessary pollution prevention BMPs as they relate to each potential pollution source identified.

4) The project proponent shall utilize BMPs during project construction to minimize the controllable discharges of sediment and other wastes to drainage systems or other waters of the state and of the United States.

5) Substances resulting from project-related activities that could be harmful to aquatic life, including, but not limited to, petroleum lubricants and fuels, cured and uncured cements, epoxies, paints and other protective coating materials, portland cement concrete or asphalt concrete, and washings and cuttings thereof, shall not be discharged to soils or waters of the state. All waste concrete shall be removed.

6) Motorized equipment shall not be maintained or parked within or near any stream crossing, channel or lake margin in such a manner that petroleum products or other pollutants from the equipment may enter these areas under any flow conditions. Vehicles shall not be driven or equipment operated in waters of the state on-site, except as necessary to complete the proposed project. No equipment shall be operated in areas of flowing water.

7) This Water Quality Certification is subject to the acquisition of all local, regional, state, and federal permits and approvals as required by law. Failure to meet any conditions contained herein or any the conditions contained in any other permit or approval issued by the State of California or any subdivision thereof may result in the revocation of this Certification and civil or criminal liability.

8) Best management practices to stabilize disturbed soils must include the use of native plant species whenever feasible.

9) Applicant shall ensure that all fees associated with this project shall be paid to each respective agency prior to conducting any on-site construction activities.

Under California Water Code, Section 1058, and Pursuant to 23 CCR §3860, the following shall be included as conditions of all water quality certification actions:

(a) Every certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Section §13330 of the Water Code and Article 6 (commencing with Section 3867) of this Chapter.

(b) Certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a FERC license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to Subsection §3855(b) of this Chapter and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

(c) Certification is conditioned upon total payment of any fee required under this Chapter and owed by the applicant.

If the above stated conditions are changed, any of the criteria or conditions as previously described are not met, or new information becomes available that indicates a water quality problem, the Regional Board may require the applicant to submit a report of waste discharge and obtain Waste Discharge Requirements.

In the event of any violation or threatened violation of the conditions of this certification, the holder of any permit or license subject to this certification shall be subject to any remedies, penalties, process or sanctions as provided for under state law. For purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification. Violations of the conditions of this certification may subject the applicant to civil liability pursuant to Water Code section 13350 and/or 13385.

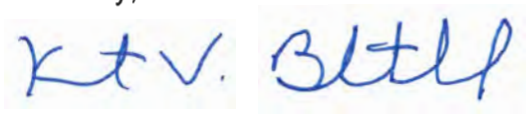
This Water Quality Certification is subject to the acquisition of all local, regional, state, and federal permits and approvals as required by law. Failure to meet any conditions contained herein, or any conditions contained in any other permit or approval for this project issued by the State of California, or any subdivision thereof, may result in appropriate enforcement action, including imposition of administrative civil liability.

This letter constitutes a Water Quality Standards Certification issued pursuant to Clean Water Act Section 401. I hereby certify that any discharge from the referenced project will comply with the applicable provisions of Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and

307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, and with other applicable requirements of State law. This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017-DWQ (Order No. 2003-0017-DWQ), "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received Water Quality Certification" which requires compliance with all conditions of this Water Quality Standards Certification. Order No. 2003-0017-DWQ is available at:
www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0017.pdf

Should there be any questions, please contact Marc Brown at (951) 321-4584, or Mark Adelson at (951) 782-3234.

Sincerely,



Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

cc (via electronic mail):
VCS Environmental - Shawn Gatchel-Hernandez – sgatchel@vcsenvironmental.com
U.S. Army Corps of Engineers, Los Angeles Office - Stephen Estes
State Water Resources Control Board, OCC - David Rice
California Department of Fish and Wildlife – Russell M. Barabe
SWRCB, DWQ-Water Quality Certification Unit - Bill Orme

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
SOUTH COAST REGION
3883 RUFFIN ROAD
SAN DIEGO, CALIFORNIA 92123

STREAMBED ALTERATION AGREEMENT
NOTIFICATION NO. 1600-2014-0005-R5
UNNAMED TRIBUTARY TO SERRANO CREEK

CITY OF LAKE FOREST
LAKE FOREST CIVIC CENTER

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and the City of Lake Forest (Permittee) as represented by Debra Rose.

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified CDFW on January 17, 2014, that the Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1603, CDFW has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

PROJECT LOCATION

The project is located within and near an unnamed tributary to Serrano Creek, in the City of Lake Forest, County of Orange, State of California; Latitude 33.65884, Longitude -117.679016; U.S. Geological Survey 7.5-minute map El Toro quadrangle, Section 11, Township 6 south, Range 8 west, San Bernardino meridian; Assessor's Parcel Number 104-132-84.

The project is located south of Commercentre Drive, east of Bake Parkway, west of Serrano Creek, in the City of Lake Forest. The site can be accessed from Interstate 5 by exiting Bake Parkway and heading east onto Bake Parkway. After 3.3 miles, head east onto Commercentre Drive. After 0.6 miles, head south onto Indian Ocean Drive. The project site is beyond the current terminus of Indian Ocean Drive.

PROJECT DESCRIPTION

The project is limited to stream impacted associated with the Lake Forest Civic Center project. The overall project includes the development of the Lake Forest Civic Center on approximately 7.3 acres of a 9.0-acre site. A portion of an unnamed tributary on-site will be filled in order to accommodate the construction of a community center, council chambers/performing arts theater, city hall, and associated parking facilities.

The project site contains an unnamed perennial stream, tributary to Serrano Creek, and an ephemeral stream, tributary to the on-site perennial stream. An existing storm drain outlet provides perennial surface flow through the project area before leaving the site through an existing culvert beneath Serrano Creek Trail and enters Serrano Creek to the southeast of the project site.

The development will result in permanent impacts to the northern segment of the perennial stream and the entirety of the on-site ephemeral stream. The existing storm drain will be extended approximately 437 linear feet beneath the development area to a new storm drain outlet at a constructed retaining wall which will form the downstream boundary of the filled development area.

The new storm drain outlet will be constructed at the head of a new stream channel which will be created immediately adjacent to the existing perennial stream. The new storm drain outlet will incorporate a splitter box, which will passively split perennial flows evenly between a new created stream channel and the avoided portion of the existing stream. The splitter box may require routine maintenance to perform as designed.

The new stream will be created along a sparsely vegetated area east of the existing perennial stream through limited grading with mechanical equipment such as skid steer loaders and/or backhoes, and will extend approximately 361 linear feet before reconnecting to the perennial stream on-site before emptying into Serrano Creek. A series of 12 drop structures consisting of un-grouted rock-rip will be installed across the new stream channel to accommodate the elevation difference between the proposed storm drain outlet and the confluence of the new stream with the existing perennial stream. In addition to the creation of the new stream and associated riparian vegetation on-site, the avoided southern portion of the existing perennial stream will be enhanced through the removal of non-native vegetation and preserved as a part of the project.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: AMPHIBIANS – Pacific treefrog (*Hyla regilla*); REPTILES – western fence lizard (*Sceloporus occidentalis*), common side-blotched lizard (*Uta stansburiana*); BIRDS – western scrub-jay (*Aphelocoma californica*), Anna's hummingbird (*Calypte anna*), wrentit (*Chamaea fasciata*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), yellow warbler (*Dendroica petechia*), horned lark (*Eremophila alpestris*), common yellowthroat (*Geothlypis trichas*), yellow-breasted chat (*Icteria virens*), acorn

woodpecker (*Melanerpes formicivorus*), song sparrow (*Melospiza melodia*), northern mockingbird (*Mimus polyglottos*), ash-throated flycatcher (*Myiarchus cinerascens*), phainopepla (*Phainopepla nitens*), Nuttall's woodpecker (*Picoides nuttallii*), California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo maculatus*), California gnatcatcher (*Polioptila californica*), bushtit (*Psaltriparus minimus*), Bewick's wren (*Thryomanes bewickii*), California thrasher (*Toxostoma redivivum*), western kingbird (*Tyrannus verticalis*), Cassin's kingbird (*Tyrannus vociferans*), least Bell's vireo (*Vireo bellii pusillus*); MAMMALS – coyote (*Canis latrans*), striped skunk (*Mephitis mephitis*), woodrat (*Neotoma* spp.), raccoon (*Procyon lotor*), California ground squirrel (*Spermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*); PLANTS – western ragweed (*Ambrosia psilostachya*), California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), mulefat (*Baccharis salicifolia*), California brittlebush (*Encelia californica*), flat-top buckwheat (*Eriogonum fasciculatum*), toyon (*Heteromeles arbutifolia*), coast live oak (*Quercus agrifolia*), watercress (*Rorippa* spp.), black sage (*Salvia mellifera*), black willow (*Salix gooddingii*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), elderberry (*Sambucus nigra*), poison oak (*Toxicodendron diversilobum*); and other riparian/wetland vegetation which provides habitat for those species, and all other aquatic and wildlife resources in the project vicinity.

The adverse effects the project could have on the fish or wildlife resources identified above include: loss of natural bed or bank; change in contour of bed, channel or bank; degradation or aggradation of channel; accelerated channel scour; loss of bank stability during construction; increase of bank erosion during construction; soil compaction or other disturbance to soil layer; increased turbidity; increased sedimentation (chronic or episodic); short-term release of contaminants (e.g., incidental from construction); long-term release of contaminants (e.g., concrete, creosote, wood preservative leachates); loss or decline of riparian and/or emergent marsh habitat; colonization by exotic plant or animal species; loss or decline of instream channel habitat; change to, or loss or decline of natural bed substrate; construction pits and trenches that can capture terrestrial organisms; disruption to nesting birds and other wildlife; direct take of terrestrial species; loss of connection to hyporheic zone; loss or impediment of terrestrial animal species travel routes due to permanent structures; diversion of flow water from, or around, activity site; change in stream flow (Q); and, change in percolation.

The project will impact a maximum of 1.10 acres of stream bed, bank, channel and associated wetland or riparian vegetation. The project will permanently impact a maximum of 1.07 acres of southern willow riparian forest and a maximum of 0.03 acre of ephemeral stream consisting of transitional riparian and/or upland vegetation.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

Permittee shall meet each administrative requirement described below.

1.1 Documentation at Project Site. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to CDFW personnel, or personnel from another state, federal, or local agency upon request.

1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.

1.3 Notification of Conflicting Provisions. Permittee shall notify CDFW if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, CDFW shall contact Permittee to resolve any conflict.

1.4 Project Site Entry. Permittee agrees that CDFW personnel may enter the project site at any time to verify compliance with the Agreement.

1.5 Agreed Work Activities. The agreed work includes activities associated with the Project Location and Project Description described above. Specific work areas and mitigation measures are described on/in the plans and documents submitted by the Permittee as a part of Notification of Lake or Streambed Alteration 1600-2014-0005-R5 and shall be implemented as proposed unless directed differently by this Agreement.

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

Resource Protection

2.1 Construction Area Demarcation. Prior to construction, the authorized construction limits shall be marked in coordination with a qualified biologist. No vegetation shall be removed outside of this marked area and no construction debris, equipment, or soils shall be placed outside of the marked area.

2.2 Biological Monitor during Vegetation Removal. Due to the presence of native riparian vegetation, all vegetation clearing shall be conducted under the direct on-site supervision of a qualified biologist.

2.3 Biological Monitor during Construction Activities. During construction activities, a qualified biologist shall monitor work areas and adjacent habitat on a daily basis.

The qualified biologist will: (a) document all activities pertaining to biological resources; (b) provide regular updates to Permittee; (c) notify Permittee immediately if unauthorized impacts to biological resources occur; and (d) advise the contractors, as needed, to ensure effective implementation of biological mitigation measures for specific site conditions. Permittee shall make available to CDFW, upon request, the documentation prepared by the biologist.

2.4 On-site Education. Permittee shall conduct an education program for all persons employed or otherwise working on the project site prior to performing any work on-site. The program shall consist of a presentation from a qualified biologist that includes a discussion of the biology of the habitats and species identified in this Agreement and present at this site. The qualified biologist shall also include as part of the education program information about the distribution and habitat needs of any special status species that may be present, legal protections for those species, penalties for violations and project-specific protective measures included in this Agreement. Interpretation shall be provided for non-English speaking workers, and the same instruction shall be provided for any new workers prior to their performing work on-site.

2.5 Qualified Biologist. For the purposes of this Agreement, a qualified biologist is one who has met all of the following minimum qualifications: (a) bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field; (b) at least 3 years of experience in field biology or current certification of a nationally recognized biological society; and (c) at least 1 year of field experience with biological resources found in or near the project area. In lieu of the following qualifications, a resume shall demonstrate to the satisfaction of CDFW that the proposed biologist(s) has the appropriate training and background to effectively implement the measures of this Agreement.

2.6 Staging Areas. Throughout construction, all equipment storage, equipment maintenance, lighting, and staging, shall occur outside of CDFW jurisdictional habitat except for work sites within areas authorized by this Agreement.

2.7 Removal and Disposal of Non-Native Vegetation. Any removed non-native vegetation shall be disposed of legally in a manner which prevents its reestablishment and in a manner that does not negatively affect other sensitive native habitat.

2.8 Prohibited Plant Species. Permittee shall not plant, seed or otherwise introduce invasive exotic plant species within or near streams. Prohibited exotic plant species include those identified in the California Exotic Pest Plant Council's database, which is accessible at: http://www.cal-ipc.org/paf/.

2.9 Local Plant Material. Plant material for revegetation should be derived from cuttings and/or seeds obtained from randomly selected native trees and shrubs occurring locally within the same drainage. Any plant material for revegetation

which cannot be obtained from local cuttings or collected seeds shall be obtained from a native plant nursery.

2.10 Herbicide Mixing. Herbicide mixing sites shall only be located in areas devoid of vegetation, and where there is no potential of a spill reaching a vegetated area or a stream, for example avoid mixing at a storm drain.

2.11 Herbicide Use in Aquatic Environment. Any herbicide used where there is the possibility that the herbicide could come into direct contact with water shall be approved for use in an aquatic environment. Great care shall be taken to avoid contact with native vegetation, and herbicide shall only be applied on calm days to prevent airborne transfer.

2.12 No Fuel Modification Activities. Vegetation trimming or removal activities for fuel modification purposes are not covered activities under this Agreement. Vegetation trimming or removal for fuel modification purposes shall be subject to separate notification pursuant to FGC section 1600 et seq.

2.13 Project Lighting. Lighting required to complete project activities shall not illuminate the stream or adjacent riparian habitat. All temporary or permanent lighting fixtures near any stream shall incorporate shields to direct light away from the bed, bank, or channel of any lake or stream within the project footprint.

Wildlife and Habitat Protection

2.14 Protected Species. This Agreement does not authorize take, incidental or otherwise, of any protected species. For the purpose of this Agreement, "protected species" means the following: a species fully protected under state law; a candidate species or species listed as threatened or endangered under the California Endangered Species Act (CESA; Fish & G. Code § 2050 et seq.) and/or Endangered Species Act (ESA; 16 U.S.C. § 1531 et seq.); a species identified by CDFW as a species of special concern; or any other species for which take is prohibited under state or federal law. No direct or indirect impacts shall occur to any protected species, except as may be authorized by a Natural Community Conservation Plan or one or more individual permits that authorize such impacts.

2.15 Avian Nesting Avoidance. If the avian nesting season cannot be avoided and construction or vegetation removal occurs between March 1st to September 15th (January 1st to July 31st for raptors), the restricted time period, a qualified biologist with experience in conducting bird breeding surveys shall conduct a minimum of 3 weekly focused surveys for nesting birds before work, including a survey completed within 3 days prior to the work in the area, to ensure no nesting birds in the project area would be impacted by the project. If an active nest is identified Permittee shall do one of the following to avoid and minimize impacts to nesting birds;

a) Implement a 300 foot minimum avoidance buffers for all passerine bird nests (500 foot for protected species) and 500 foot minimum avoidance buffer for all raptors species. The breeding habitat/nest site shall be fenced and/or flagged in all directions. The nest site area shall not be disturbed until the nest becomes inactive, or, the young have fledged, and the young are no longer being fed by the parents, and the young have left the area, and the young will no longer be impacted by the project.

b) Develop a project specific Nesting Bird Management Plan (NBMP). The site-specific nest protection plan shall be submitted to CDFW prior to commencement of project activities subject to this Agreement within the minimum avoidance buffers described above. The NBMP should include detailed methodologies and definitions to enable a qualified avian biologist to monitor and implement nest-specific buffers based upon the life history of the individual species; species sensitivity to noise, vibration, and general disturbance; individual bird behavior; current site conditions (screening vegetation, topography, etcetera), ambient levels of human activity; the various project-related activities necessary to construct the project, and other features. The NBMP shall be supported by survey documentation including: dates of survey, total field time of survey efforts, map of survey routes, names of investigators, and if any active nests were found. The NBMP shall be submitted to CDFW prior to commencement of project activities subject to this Agreement. If this option is chosen, project activities may not commence until CDFW has acknowledged receipt of survey results and any established buffers. The NBMP shall also be supported by a Nest Log which tracks each nest and its outcome. Each nest identified in the NBMP nest shall be monitored until the nest becomes inactive, including nests that remain active beyond September 15. The Nest Log shall be submitted to CDFW at the end of each week during project activities subject to this Agreement and/or until all nests identified in the NBMP are no longer active.

c) Permittee may propose an alternative plan for avoidance of nesting birds for CDFW concurrence.

2.16 Leave Wildlife Unharmed. If any life stage of any wildlife (invertebrate, amphibian, reptile, mammal, or bird) is encountered during the course of construction, said wildlife shall be allowed to leave the construction area unharmed. A qualified biologist may also relocate non-protected species (see Measure 2.14) out of harm's way to appropriate avoided habitat immediately adjacent to the project site. Exclusionary devices shall be erected to prevent the migration into or the return of species into the work site. If any protected wildlife is encountered, Permittee shall immediately inform CDFW of the observation and additional measures taken to ensure the safety of the wildlife.

2.17 Eliminate Trench Hazards. At the end of each work day, an escape ramp shall be placed at each end of any open trench or excavated pit to allow any animals that may have become entrapped in the trench or excavated pit to climb out

overnight. The ramp may be constructed of earthen fill, wood planking or other suitable material that is placed at an angle no greater than 30 degrees. If an escape ramp is not feasible, other appropriate wildlife exclusionary devices shall be employed to avoid entrapping wildlife.

2.18 Eliminate Pipe Hazards. All sections of pipe shall be visually checked for the presence of wildlife sheltering within them prior to the pipe sections being placed in a trench and attached together, or shall have the ends capped while stored on site so as to prevent wildlife from entering. After attachment of the pipe sections to one another, whether in the trench or not, the exposed end(s) of the pipeline shall be capped at the end of each day during construction to prevent wildlife from entering and being trapped within the pipeline.

Dewatering and Temporary Diversions

2.19 No Equipment in Wetted Portion of the Stream. No equipment shall be operated in ponded or flowing areas. When work in a flowing stream is unavoidable, the entire stream flow shall be diverted around the work area by a barrier, temporary culvert, new channel, or other means approved by CDFW. Permittee shall obtain written approval of the temporary diversion plan from the CDFW prior to commencement of project activities subject to this Agreement.

2.20 Maintain Flows. Flow diversions shall be accomplished in a manner that shall prevent pollution and/or siltation and which shall provide flows to downstream reaches. Flows to downstream reaches shall be provided during all times that the natural flow would have supported aquatic life. Said flows shall be sufficient quality and quantity, and of appropriate temperature to support aquatic life both above and below the diversion. Normal flows shall be restored to affected stream immediately upon completion of work at that location.

2.21 Excavation Dewatering. If an excavation site must be dewatered, any muddy, or otherwise contaminated, water shall be pumped into a holding facility or into a settling pond located in flat stable areas outside of the stream channel or pumped up on a stable grassy area where the water clears prior to flowing back into the stream.

Equipment and Access

2.22 Access Roads. Disturbance, removal or trimming of vegetation for equipment access and construction shall not exceed the impact limits reviewed by CDFW.

2.23 Speed Limit. A 15-mile per hour speed limit shall be observed on dirt access roads to reduce dust and allow reptiles and small mammals to disperse.

2.24 Invasive Species. Permittee shall conduct project activities in a manner that prevents the introduction, transfer, and spread of invasive species, including

plants, animals, and microbes (e.g., algae, fungi, parasites, bacteria, etc.), from one project site and/or waterbody to another. Prevention BMPs and guidelines for invasive plants can be found on the California Invasive Plant Council's website at: http://www.cal-ipc.org/ip/prevention/index.php and for invasive mussels and aquatic species can be found at the Stop Aquatic Hitchhikers website: http://www.protectyourwaters.net/.

2.25 Inspection and Cleaning of All Project Equipment. Permittee shall inspect all vehicles, tools, waders and boots, and other project-related equipment and remove all visible soil/mud, plant materials, and animal remnants prior to entering and exiting the project site and/or between each use in different waterbodies.

Fill and Spoil

2.26 Location of Spoil Sites. Spoil sites shall not be located within the stream or locations that may be subjected to high storm flows, where spoil may be washed into the stream, or where it may impact streambed habitat or riparian vegetation.

2.27 Cover Spoil Piles. Permittee shall have readily available plastic sheeting to cover exposed spoil piles and exposed areas in order to prevent loose soil from moving into the stream. These covering materials shall be applied when it is evident rainy conditions threaten to erode loose soils into the stream.

Structures

2.28 Final Construction Plans. At least 60 days prior to commencement of project activities subject to this Agreement, Permittee shall submit final construction plans of structures proposed in the stream to CDFW. No structures beyond the location, size, and materials described in the final construction plans are authorized as a part of this Agreement.

2.29 Remove Structures Before High Water Flow. Structures and associated materials not designed to withstand high surface water flows shall be moved to areas above high water before such flows occur.

Erosion, Turbidity, and Siltation

2.30 Minimize Turbidity and Siltation. Permittee shall take precautions to minimize turbidity/siltation during construction and post-construction periods. Precautions shall include, but are not limited to: pre-construction planning to identify site specific turbidity and siltation minimization measures and best management erosion control practices; best management erosion control practices during project activity; and settling, filtering, or otherwise treating silty and turbid water prior to discharge into a stream or storm drain.

2.31 Erosion Control Monitoring. Permittee shall monitor erosion control measures before, during, and after each storm event and repair and/or replace ineffective measures immediately.

Pollution, Litter, and Clean-Up

2.32 Litter and Pollution. Permittee shall comply with all litter and pollution laws. All contractors, subcontractors and employees shall also obey these laws and it shall be the responsibility of the Permittee to ensure compliance.

2.33 Secure Trash Receptacles. Permittee shall use fully covered trash receptacles with secure lids (wildlife proof) to contain all food, food scraps, food wrappers, beverage and other miscellaneous trash.

2.34 Stationary Equipment. Stationary equipment such as motors, pumps, generators, and welders located within or near the stream shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak.

2.35 Equipment Maintenance and Fueling. No equipment maintenance or fueling shall be done within or near any stream channel where petroleum products or other pollutants from the equipment may enter these areas.

2.36 Equipment and Vehicle Spills and Contaminants. Any equipment or vehicles driven or operated within or near the stream shall be checked daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life. Permittee shall maintain all vehicles and equipment in proper working condition to minimize fugitive emissions and accidental spills from motor oil, antifreeze, hydraulic fluid, grease, and other fluids or hazardous materials. All fuel or hazardous waste leaks, spills, or releases shall be stopped or repaired immediately and cleaned up at the time of occurrence. Permittee shall be responsible for spill material removal and disposal to an approved offsite landfill and spill reporting to the permitting agencies. Service construction equipment shall be stored at designated areas only. Maintenance vehicles shall carry appropriate equipment and materials to isolate and remediate leaks or spills. A spill containment kit shall be available on site for all maintenance activities.

2.37 Site Cleanup. When operations are completed, any excess materials or debris shall be removed from the work area.

3. Compensatory Measures

To compensate for adverse impacts to fish and wildlife resources identified above that cannot be avoided or minimized, Permittee shall implement each measure listed below.

3.1 Mitigation for Authorized Permanent Impacts. Mitigation for authorized permanent impacts shall be accomplished according to the *Final Compensatory Habitat Mitigation and Monitoring Plan for the Lake Forest Civic Center Project*, submitted to CDFW and dated July 2015 (HMMP), unless otherwise noted in this Agreement. As described in the HMMP, Permittee shall create a minimum of 0.56 acre southern willow riparian forest on-site, enhance a minimum of 0.5 acre of southern willow riparian forest within the on-site 0.91-acre preservation area, and enhance 1.0 acre of stream habitat through the purchase of credit at a CDFW-approved mitigation bank. Permittee shall notify CDFW of any modifications made to the project plans submitted to CDFW. At the discretion of CDFW, minor plan modifications may require an amendment to this Agreement. At the discretion of CDFW, if substantial changes are made to the original plans this Agreement becomes void and Permittee must submit a new Notification.

3.2 Mitigation Implementation Timing. All compensatory mitigation shall be initiated by the first April following initial project impacts subject to this Agreement. Delay in the initiation of compensatory mitigation will require an amendment to this Agreement and may require additional mitigation to mitigate the added temporal loss of stream habitat function.

3.3 Restoration Maintenance and Monitoring. In general, restoration of habitat shall be maintained and monitored for 5 years after installation or until established success criteria identified in the restoration plan (HMMP) and this Agreement are met by an experienced, licensed habitat restoration contractor. Maintenance, monitoring, and reporting shall be conducted following a prescribed schedule to assess progress and identify potential problems with the restoration. Remedial action (e.g., additional planting, weeding, erosion control, use of container stock, supplemental watering, etc.) shall be taken by an experienced, licensed habitat restoration contractor during the maintenance and monitoring period if necessary to ensure the success of the restoration. If the restoration fails to meet the established success criteria after the maintenance and monitoring period, maintenance and monitoring will extend beyond the 5-year period until the criteria are met or unless otherwise approved in writing by CDFW.

3.4 Restoration Success Criteria. All restoration planting shall have a minimum of 80% survival the first year, 95% the second year, and 100% survival thereafter, unless replaced by natural recruitment. Restoration planting areas shall attain 75% cover of native woody perennials after 3 years and 90% cover of native woody perennials after 5 years. At the completion of the monitoring period, the restoration site shall have received no supplemental watering for a period of 2 consecutive years; the site shall have a species richness of at least 15 native species, divided between annuals and perennials; nonnative plants shall not make up more than 5% of the entire cover of the site; no more than 5% of the site shall consist of bare ground; the site shall be free of invasive exotic plant species; and there shall be no trash or human generated debris.

3.5 Habitat Conservation. All habitat mitigation areas and avoided stream habitat shall be placed within a perpetual biological Conservation Easement or other type of formal Deed Restriction that meets the legal definition of a Conservation Easement (Civil Code Sections 815.1 and 815.2). Permittee shall submit a draft Conservation Easement or Deed Restriction for CDFW approval at least 60 days prior to its execution and initiation of impacts authorized under this Agreement. Permittee shall submit the final Conservation Easement or Deed Restriction and evidence of its recordation to CDFW. The document shall adequately demonstrate that the mitigation site will be maintained for biological value conservation without future development or encroachment on the site that could otherwise reduce the functions and values for wildlife resources. The Conservation Easement or Deed Restriction shall prohibit all residential, commercial, industrial, institutional, and transportation development. The Conservation Easement or Deed Restriction shall clearly state that no new rights or easements shall be granted within the conserved area, except as approved by CDFW. New infrastructure development to be prohibited includes, but is not limited to, additional utility lines, maintenance roads, trails, and areas of maintained landscaping for recreation, excepting any prior rights under previously recorded easements.

3.6 Long-Term Habitat Management Plan. Permittee shall submit a draft Habitat Management Plan (HMP) that clearly describes management and maintenance activities to retain habitat value for fish and wildlife resources in the project area in perpetuity. The draft HMP shall be submitted to CDFW at least 60 days prior to prior to commencement of project activities subject to this Agreement. The plan shall include at a minimum: measures to maintain the vegetation success criteria identified in this Agreement in perpetuity; regular inspection for, and removal of, trash and other human generated waste; other management activities, as needed, to retain habitat for fish and wildlife resources; and evidence of an appropriate funding mechanism which will fund the perpetual management of the mitigation site and avoided stream habitat.

3.7 Mitigation Bank Credit Bill of Sale. As a component of the compensatory mitigation, Permittee has proposed to purchase 1.00 Perennial Riparian Restoration Credit (Credit) as identified in the Final Bank Enabling Instrument for the Soquel Canyon Mitigation Bank. Permittee shall submit a bill of sale verifying the purchase of 1.00 Credit prior to commencement of project activities subject to this Agreement. Permittee shall notify CDFW of any modifications made to proposed mitigation bank credit purchase. At the discretion of CDFW, minor modifications may require an amendment to this Agreement. At the discretion of CDFW, if substantial changes are made this Agreement becomes void and Permittee must submit a new Notification.

3.8 Mitigation for Unauthorized Impacts. Permittee shall mitigate at a minimum 5:1 ratio for impacts beyond those authorized in this Agreement. In the event that

additional mitigation is required, the type of mitigation shall be determined by CDFW, and may include creation/establishment, enhancement and/or re-establishment.

3.9 Release of Mitigation Obligations. Permittee shall not be released from these maintenance and monitoring obligations until such time as Permittee has requested and received written concurrence from CDFW that the success criteria and securities identified in this Agreement have been met.

4. Reporting Measures

Permittee shall meet each reporting requirement described below. Permittee shall submit reporting measures to CDFW's South Coast Office at the address on page 1, ATTN: Streambed Alteration Program – SAA # 1600-2014-0005-R5 or alternatively by electronic mail to R5LSACompliance@wildlife.ca.gov.

4.1 Notification Prior to Work. Permittee shall notify CDFW, in writing, at least 5 days prior to initiation of construction (project) activities and at least 5 days prior to completion of construction (project) activities.

4.2 Mitigation Installation Report. Permittee shall submit a report to CDFW, within 45 days after finalizing the replanting effort, acknowledging the completion of the replanting site and documenting its as-built status. The report shall be submitted with electronic geographic information system (GIS) shapefiles (along with the appropriate metadata) of the avoided stream and mitigation areas.

4.3 Annual Mitigation, Maintenance and Monitoring Reports. Mitigation, maintenance, and monitoring reports shall be submitted annually to CDFW during the maintenance and monitoring period until mitigation has been deemed physically and functionally successful by CDFW. Annual reports shall include at a minimum: (a) maps identifying monitoring areas, transect locations, and planting zones; (b) a list of names and companies of all persons who prepared content of the annual report or participated in monitoring activities; (c) photographs taken from established photopoints; (d) survival, percentage cover, and height of planted/seeded species; (e) percentage cover of non-native vegetation; (f) the number, by species, of plants replaced; and (g) recommended remedial maintenance.

4.4 Sensitive Species Observations. Permittee shall be responsible for reporting all observations of threatened/endangered species or species of special concern to CDFW's Natural Diversity Data Base (CNDDB) within 60 days of the sighting. The form and instructions for completing the form and submitting the information are available on-line at http://www.dfg.ca.gov/biogeodata/cnddb/submitting_data_to_cnddb.asp. In addition to sending the information to CNDDB a copy should be sent to CDFW's South Coast Office, ATTN: Streambed Alteration Program – SAA #1600-2014-0005-R5.

CONTACT INFORMATION

Any communication that Permittee or CDFW submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, email, or to such other address as Permittee or CDFW specifies by written notice to the other.

To Permittee:

City of Lake Forest
Debra Rose
25550 Commercentre Drive, Suite 100
Lake Forest, California 92630
drose@lakeforestca.gov

To CDFW:

California Department of Fish and Wildlife
South Coast Region
3883 Ruffin Road
San Diego, California 92123
Attn: Lake and Streambed Alteration Program
Notification #1600-2014-0005-R5

LIABILITY

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute CDFW's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

SUSPENSION AND REVOCATION

CDFW may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before CDFW suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before CDFW suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused CDFW to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes CDFW from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects CDFW's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 et seq. (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

CDFW may amend the Agreement at any time during its term if CDFW determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and Permittee. To request an amendment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration Agreement" form and include with the completed form payment of the corresponding amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter CDFW approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with FGC section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to CDFW a completed CDFW "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). CDFW shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (FGC section 1605(f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after Permittee's signature; 2) after CDFW complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at http://www.wildlife.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall expire on November 30, 2020, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

EXHIBITS

The documents listed below are included as exhibits to the Agreement and incorporated herein by reference.

Exhibit A. "Lake Forest Civic Center; Impacts"

Exhibit B. "Lake Forest Civic Center; Mitigation Types"

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

AUTHORIZATION

This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify CDFW in accordance with FGC section 1602.

CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

FOR CITY OF LAKE FOREST

Debra Rose — 11-23-15

Debra Rose
Date

Assistant City Manager

FOR DEPARTMENT OF FISH AND WILDLIFE

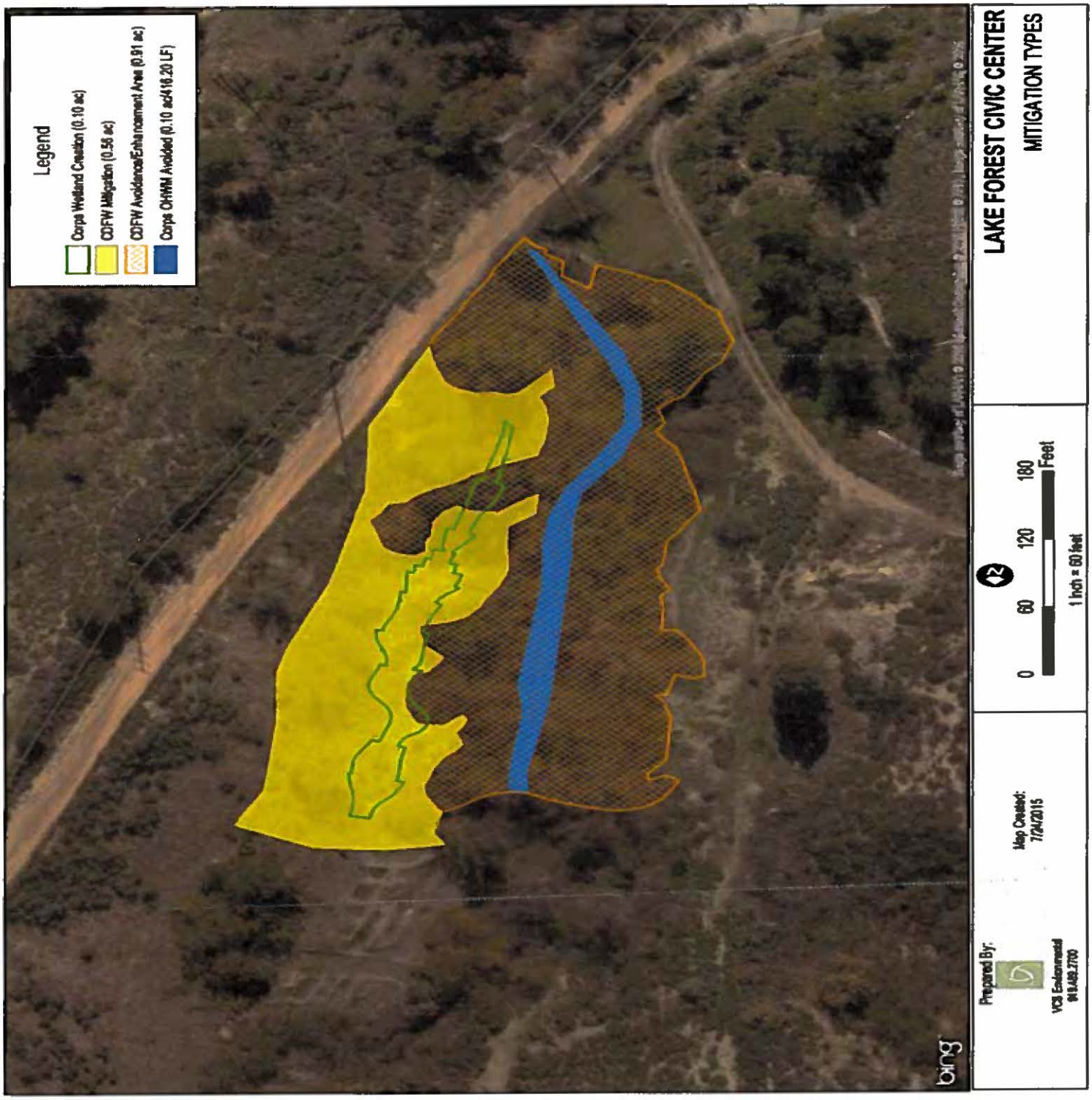
Marilyn J Luhrs for: — 12-11-15

Gail K. Sevrens
Date

Environmental Program Manager

Prepared November 2015 by Kevin Hupf, Environmental Scientist


Legend
Corps OHWM Impacted (0.095 ac/687.60 LF)
CDFW Impacted (1.10 ac)
Existing
Outlet
A1
A
Serrano Creek Tr
Sharmila
bing
LAKE FOREST CIVIC CENTER
IMPACTS


Legend
Corps Wetland Creation (0.10 ac)
CDFW Mitigation (0.56 ac)
CDFW Avoidance/Enhancement Area (0.91 ac)
Corps OHWM Avoided (0.10 ac/416.20 LF)
bing
Prepared by:
Map Created:
7/24/2015
0
60
120
180
Feet
1 Inch = 60 feet
LAKE FOREST CIVIC CENTER
MITIGATION TYPES

Appendix E
Cultural Report

Cultural and Paleontological Resources Assessment

Serrano Summit

Lake Forest, Orange County

Prepared for:

Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, California 92618

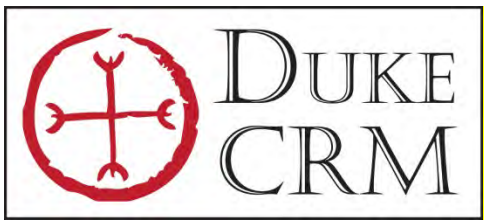
and

City of Lake Forest
25550 Commercecentre Drive, Suite 100
Lake Forest, California 92630

Prepared by:

Duke Cultural Resources Management
Gregory P. Greenberg and Curt Duke
Duke Cultural Resources Management, LLC
20371 Lake Forest Drive, Suite A2
Lake Forest, California 92630
(949) 303-0420
curt@dukecrm.com
www.DukeCRM.com

Duke CRM Project Number: C-0160



November 22, 2014

TABLE OF CONTENTS

Figures

Appendices

MANAGEMENT SUMMARY

The Irvine Ranch Water District and the City of Lake Forest propose to develop the 98.9-acre Serrano Summit property. Approximately 91.9 acres will be developed with residential neighborhoods, parks and recreation areas, a new Civic Center site, roads, and landscaping. The 91.9-acre development area is considered the area of potential effects (APE) for this project. The purpose of this report is to document identification efforts for cultural resources in the APE as required by 36 CFR 800, the regulations implementing Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The Army Corps of Engineers is the lead federal agency. This report also documents compliance efforts for the City in regards to the California Environmental Quality Act (CEQA).

A records search, Native American consultation, and a field survey were conducted. The records search did not identify any cultural resources within the project APE or Project. The field survey identified one isolated prehistoric artifact (Iso-1- a mano fragment) and one historic feature (F-1- three fence posts). As of the date of this report there have been no comments received from the Native Americans contacts. Two fossil localities were discovered during the field survey (Serrano Summit No. 01 and 02).

Both the isolate and the historic fence posts contain limited research potential and are not considered significant or eligible for the National Register of Historic Places (National Register) and or the California Register of Historical Resources (California Register). Therefore, a finding of *no historic properties affected* for the purposes of Section 106 is recommended. In addition, there are no *unique archaeological resources* or *historical resources* that will be impacted by the project as defined under CEQA. Consistent with mitigation measures CUL-1 through CUL-4 of the Serrano Summit Area Plan 2009-01 and Tentative Tract Map No. 17331, Environmental Impact Report (EIR), DUKE CRM recommends archaeological monitoring during ground disturbing activities that have the potential to impact archaeological resources within project boundaries.

Each of the paleontological finds are highly disturbed and fragmented. They are not considered significant under CEQA, but rather indicate that there is a high sensitivity for paleontological resources within the project boundaries. Consistent with mitigation measures CUL-5 through CUL-8 of the Serrano Summit Area Plan 2009-01 and Tentative Tract Map No. 17331 EIR, DUKE CRM recommends paleontological monitoring during ground disturbing activities that have the potential to impact paleontological resources within project boundaries.

If the project description changes additional studies may be warranted. In the event that remnants from an archaeological/paleontological resource are discovered during ground disturbing activities, all work shall halt temporarily until a qualified archaeologist/paleontologist can be retained by the project proponent to assess the significance of the find. If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of the origin and disposition of the remains pursuant to State Public Resources Code Section 5097.98. The County Coroner must be notified immediately.

INTRODUCTION

The Irvine Ranch Water District (IRWD) and the City of Lake Forest (City) propose to develop the Serrano Summit property. The Serrano Summit property is approximately 98.9 acres. The Project is located in Lake Forest, in Orange County, California. The Project will develop a new community of residential neighborhoods, parks and recreation areas, a new Civic Center site, roads, and landscaping. Approximately 91.9 acres will be developed. The 91.9-acre development is considered the area of potential effects (APE) for this project. The APE Map is included in Appendix A.

Project Description

IRWD proposes to develop a new community of residential neighborhoods, parks and recreation areas, and neighborhood gathering places. The City proposes to develop a new Civic Center site. Roads and landscaping will be installed for the projects. The proposed Civic Center includes a City Hall building; a Community Center; a Council Chambers/Performing Arts Theater; and up to 467 parking stalls. Approximately 56.2 acres within Serrano Summit will be devoted to medium density residential uses, including landscaping. Approximately 9.9 acres will be devoted to the Civic Center complex, including landscaping. Serrano Summit also includes the development of approximately 6.1 acres for parks and a recreation center. Approximately 19.7 acres will be devoted to development of streets and additional landscaping.

Project Location

The Project is located in Lake Forest, in south Orange County (See Appendix A, Figure 1). The vicinity is characterized by moderate density residential development to the south, east, and west, and light industrial development to the north. The project is located south of the current end of Biscayne Bay Drive and Indian Ocean Drive, west of Serrano Creek, and north of the Serrano Highlands neighborhood (Marin Lane & Wisteria Lane) in Lake Forest, in the County of Orange, California. The project occupies a portion of the *Rancho Cañada de los Alisos* land grant. The project location is depicted on USGS *El Toro* 7.5 Minute Quadrangle map (See Appendix A, Figure 2).

Regulatory Context

The purpose of this report is to document identification efforts for historic properties as required by 36 CFR 800, the regulations implementing Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The Army Corps of Engineers is the Lead Federal Agency for the purposes of Section 106 compliance. This report also documents compliance efforts for the City in regards to the California Environmental Quality Act (CEQA).

A cultural resource is evaluated for eligibility to be listed in the California/National Register according to four criteria. These criteria are very similar and generally require that the resource or property be significant at the local, state, or national level according to one or more of the following:

National Register of Historic Places

A. It is associated with events that have made a significant contribution to the broad patterns of local or regional history;
B. It is associated with the lives of persons significant in our past;
C. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values, or that represents a significant and distinguishable entity whose components lack individual distinction; and/or
D. It has yielded, or may be likely to yield, information important in prehistory or history.

California Register of Historical Resources

1. It is associated with the events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
2. It is associated with the lives of persons important to local, California, or national history;

3. It embodies the distinctive characteristics of a type, period, region, or method or construction, or represents the work of a master, or possesses high artistic values; and/or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Both the National and California Registers generally require that a resource be 50 years of age or older and possess integrity, which is defined as the ability of a property or resource to convey its significance. The aspects of integrity are location, design, setting, materials, workmanship, feeling, and association. To determine which of these factors are most important will depend on the particular criterion under which the resource is considered eligible for listing. If a cultural resource is considered eligible for the National Register it is considered a *historic property* for the purposes of Section 106; if it is eligible for the California Register, it is considered a *historical resource* under CEQA.

SETTING

Natural

The Serrano Summit project is situated in the foothills of the Santa Ana Mountains on the west side of Serrano Creek. The project site has undergone various disturbances that have altered the natural state of the property, most of which have occurred in the southern ½ of the project site. This southern area contains a water storage and treatment plant including several administrative and water treatment/storage facilities previously operated by Los Alisos Water District until it was acquired by Irvine Ranch Water District in 2001. The facilities include the former Baker Filter Treatment Building, two storage buildings, an administrative building, two above ground steel water tanks, and two below ground concrete water reservoirs. The remainder of the project has undergone minor surface disturbances. These changes can be seen on the project aerial map (See Appendix A, Figure 3).

The elevation of the project ranges from approximately 540 feet above mean sea level (amsl) on the east side of the project to almost 710 feet amsl on the northwestern side of the project. The project site slopes downward in a southern direction, toward Serrano Creek. Serrano Creek runs in a southwesterly direction on the eastern edge of the project.

California is divided into 11 geomorphic provinces, each naturally defined by unique geologic and geomorphic characteristics. The project is located in the northwestern portion of the Peninsular Ranges geomorphic province. The Peninsular Ranges province is distinguished by northwest trending mountain ranges and valleys following faults branching from the San Andreas Fault. The Peninsular Ranges are bound to the east by the Colorado Desert and extend north to the San Bernardino – Riverside county line (Norris and Webb 1976), west into the submarine continental shelf, and south to the California state line.

Orange County is bordered to the north by the Elsinore Fault Zone, and to the south by the Newport-Inglewood Fault Zone, both of which are active fault zones (Engel 1955, Hill 1971). Though Lake Forest is located in south Orange County, away from the major fault zones, minor faults do extend into the city, including the project area itself (Morton and Miller 2006). Modern sedimentation in the area is dominated by erosion of surrounding hills and mountains, exposing Miocene-Pliocene age marine sediments from the Capistrano Embayment (Ehlig 1979), some of which contain significant fossil deposits (Cooper and Eisentraut 2000). In addition, the subsequent fluvial and alluvial deposition in valleys and washes allows for the possibility of preserved archeological deposits in undisturbed sediments of lower elevations.

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS), the dominant soil compositions in the vicinity of the Project Site are classified as Cieneba sandy loam, 30 to 75 percent slopes, eroded and Capistrano sandy loam, 9 to 15 percent slopes. Cieneba soil consists of shallow, somewhat excessively well-drained soils consisting of sandy loam and weathered bedrock. The soil extends to a depth of 59" (149.9cm). Cieneba soils are found on hills and are derived from residuum weathered from granite. Permeability is very low to moderately low, and the available water capacity is very low. The depth to bedrock is typically 4" to 20" (10.2cm to 50.8cm). Capistrano soil consists of shallow, somewhat excessively

well-drained soils consisting of sandy loam. The soil extends to a depth of 65" (165.1cm). Capistrano soils are found on alluvial fans and originate from alluvium derived from igneous and sedimentary rock. Permeability is high, and the available water capacity is moderate. The depth to bedrock is typically greater than 80" (WSS 2014).

The Oso Member of the Capistrano Formation is a particularly fossiliferous deposit, producing material from marine mammals, sharks, birds, teleost fish, sea turtles, and even some land mammals (SWCA 2003, Gust and Glover 2011). Due to the abundant fossil material found in the Oso, it is considered to be one of the most paleontologically significant deposits of its age (Cooper 1976, SWCA 2003). The Oso Member was deposited between 9-5 million years ago in the Miocene and early Pliocene Epochs. Abundant fossil material was found by DUKE C R M in Oso Member sandstone during excavation for the nearby Baker Water Treatment Plant immediately south of the Serrano Summit property. Combined with the presence of fossil material at or near the surface in the project area, this suggests paleontological resources will almost certainly be encountered during ground disturbance.

Plant communities on the project include coastal sage scrub and riparian vegetation located along the site's eastern boundary, along Serrano Creek. Trees along Serrano Creek include oak (Quercus sp.) and sycamore (Platanus sp.). The natural vegetation and soil conditions that once occurred on-site have been significantly altered through past agricultural activities and development of the water storage and treatment plant facilities. Areas of the project that were historically used for agricultural purposes have not been re-planted. The project is primarily characterized by these fallow (disturbed) areas, which contain ruderal vegetation. Overall, the project is predominantly characterized as vacant land containing disturbed areas, and ruderal, mixed scrub, and ornamental vegetation.

Cultural

Prehistory

Early archaeological research focused on broad chronological sequences proposed for southern California (Wallace 1955). However, such research has undergone major changes in the last half-century. Following the technological development of radiocarbon dating and the large volume of archaeological studies as a result of contract archaeology or cultural resources management, archaeological research has become more refined and diverse in research themes. In conjunction with such advances, this report summarizes the cultural history of the southern California coastal area, providing background context for the research themes and questions that guide this research program. Wallace (1955) defined four cultural horizons for the southern California coastal province, each with characteristic local variations:

I. Early Man Horizon is described as a hunting culture based on almost exclusive evidence of chipped-stone hunting materials: dart points, scrapers, choppers, and bifaces;
II. Millingstone Horizon reflects a change to a more sedentary, plant-collecting lifestyle and is evidenced by the introduction and dominance of Millingstone artifacts, as well as a decrease in well-made projectile points;
III. Intermediate Horizon represents a lack of knowledge about what occurred during this period, not a lack of inhabitants along the southern California coast. Wallace characterizes this period by a larger dependency on hunting, introduction of the bow and arrow, and the shift from using the mano/metate to mortar/pestle;
IV. Late Prehistoric Horizon contains a more complex artifact assemblage indicative of a more complex lifestyle and an increase of population. It is characterized by a heavier use of the bow and arrow, steatite containers, pottery, circular fish hooks, perforated stones, asphaltum, diversified bone tools, ample shell ornaments, and elaborate mortuary customs.

Warren and Crabtree employ a more ecological approach to the deserts of southern California, defining five periods in prehistory (1986):

I. Lake Mojave (12000–7000 B.P.)
II. Pinto (7000–4000 B.P.)
III. Gypsum (4000–1500 B.P.)
IV. Saratoga Springs (1500–800 B.P.)
V. Shoshonean (800~200 B.P.)

Warren and Crabtree (1986) view cultural continuity and change in terms of various significant environmental shifts, defining the cultural ecological approach for archaeological research of the California deserts. Many changes in settlement pattern and subsistence focus are viewed as cultural adaptations to a changing environment, beginning with the gradual environmental warming in the late Pleistocene, the desiccation of the desert lakes during the early Holocene, the short return to pluvial conditions during the middle Holocene, and the general warming and drying trend, with periodic reversals, that continues to this day.

Early Holocene (12,000 - 7,600 BP)

Recent discoveries in the Northwest and on the California Channel Islands have demonstrated that the Western Pluvial Lakes Tradition was a seafaring tradition that migrated to the New World over 14,500 years ago. People representing this tradition were well established in the Northwest and Great Basin 14,500 years ago and in coastal California 12,000 years ago. Clovis people came from the east and were well established in California 13,500 years ago. However, their presence on the coast was much more limited than areas of interior California like the Tulare Basin of San Joaquin Valley. During the Pleistocene-Holocene transition, large Ice Age fauna died out. In Southern California the coastal dwellers moved inland and focused on the large pluvial lakes, streams, marshes, and grasslands of the Great Basin. This inland manifestation of the Western Pluvial Lakes Tradition was well established in the California Deserts and the Great Basin by 10,000 years (WPLT, Moratto 1984). For the WPLT living close to the coast, ocean resources remained important. As the Holocene climatic changes progressed, a diversification in subsistence practices occurred. People exploited a wider variety of animals, including small animals. A greater diversity of plants were also collected and processed. WPLT sites along the shores of pluvial lakes, marshes, and streams lack of millingstones, and, therefore, hard seed processing. A flaked stone industry consisting of bifacial foliate knives, stemmed points (called Silver Lake and Lake Mojave points in the Mojave Desert), lanceolate bifaces, and other flaked-stone tools and cores including crescents, domed scrapers, choppers, unidirectional single facet platform cores, hammerstones, drills, and gravers have been found on the California Coast and throughout the Great Basin (Erlandson 2013; Erlandson et al. 2013; Jenkins et al. 2012). The desert manifestation of the WPLT is the Lake Mojave Complex, while along the coast the WPLT is seen in the San Dieguito Complex, a relationship now well established. It now appears that the coastal manifestation of this tradition predates its inland occurrence. This understanding has been impeded by the rising of sea levels and the destruction of sites representing the WPLT's pioneering population. However, these rising sea levels created bays and estuaries that became very important during the Holocene. Shell midden sites remaining from the Early Holocene contain flaked cobble tools, metates, manos, discoidals, and flexed burials, representing a semi-sedentary life style (Byrd and Raab 2007).

Given recent discoveries, it is not surprising that the Paleocoastal Tradition (PCT, Davis et al. 1969) has many similarities to the WPLT. We now know that the coastal adaptation preceded the inland manifestation of the WPLT. The PCT sites that are located along bays and estuaries that formed in the early Holocene lack stratigraphic antecedents because the earlier sites were inundated by the raising of the sea levels. Subsistence patterns indicate the eating of mollusks, sea mammals, sea birds, and fish, in addition to land plants and animals. The above scenario is based on a vast amount of recent research that has been conducted along the California coast and on the Channel Islands (Byrd and Raab 2007). Evidence for a diversified sea-based economy dating from 12,200 to 11,400 years ago is documented on three sites on Santa Rosa and San Miguel Islands (Erlandson 2013; Erlandson et al. 2013). Scores of stemmed projectile points and crescents dating to 12,000 years ago have been found at these sites. The artifacts are associated with the remains of shellfish, seals, geese, cormorants, and fish. A site on San Clemente (Eel Point) indicates a PCT was entrenched at Eel point in the early Holocene, with the hunting of seals, sea lions, and dolphins, as well as the gathering of shellfish.

Middle Holocene (7,600 – 3,650 BP)

The middle Holocene is a time of change and transition. As conditions continued to warm and dry, lakes and streams in the desert disappeared. This resulted in a shift in subsistence strategies, namely a shift to the gathering of coastal plant seeds, grasses, and shellfish as the primary dietary staple. Fishing and hunting of smaller animals played a less important role in day-to-day activity. Wallace named this the Millingstone Horizon (Wallace 1955) and this name has continued among Orange County archaeologists. Large habitations are seen in the inland areas and considerable variability is seen along coastal occupation of southern California. Occupation revolved around seasonal and semi-sedentary movements in coastal Orange and San Diego counties. Trade networks are postulated by researchers that have identified Ollivella grooved rectangle beads as far north as central Oregon dating to 4900-3500 BP (Byrd and Raab 2007). Characteristics of the middle Holocene sites include ground stone artifacts (manos and metates) used for processing plant material and shellfish, flexed burials beneath rock or millingstone cairns, flaked core or cobble tools, dart points, cogged stones, discoidals, and crescentics.

Late Holocene (3,650 – 233 BP)

During the late Holocene there was a migration of Takic speakers from the Great Basin into southern California. This intrusion is known as the "Takic Wedge." Characteristics of the late Holocene include the introduction of the bow and arrow, use of ceramics, and a change in mortuary behavior from inhumations to cremations in southern California. This was also a period of climatic fluctuation. Paleoenvironmental data show that periods of drought alternated with cooler and moister periods (Vellanoweth and Grenda 2002; Byrd and Raab 2007; Jones et al. 2004). This resulted in dynamic regional cultural patterns with considerable local variation. Byrd and Raab (2007) suggest that foragers in southern California overexploited high-ranked food, such as shellfish, fish, marine and land mammals, and plant remains. This led to resource depression, causing people to forage more costly resources that were more abundant.

Ethnography

The project is located near the recognized boundary between the Juaneño and the Gabrielino Bands of Mission Indians. The Juaneño and the Gabrielino derive their name from the Mission with which each was associated—the Juaneño from the Mission San Juan Capistrano and the Gabrielino from the Mission San Gabriel de Arcángel. These groups were very similar in culture. A discussion of both groups follows.

Juaneño

The territory of the Juaneño is rather small compared to the Gabrielino, Luiseño and Cahuilla. Juaneño boundaries extend from Aliso Creek in the north, along the coast to south of San Onofre, and inland to the peaks of the Santa Ana Mountains (Kroeber 1925). The Juaneño spoke a dialect of the Luiseño language. This language was part of the Cupan group of the Takic language family and the larger Uto-Aztecan language stock. Evidence suggests that speakers of languages of the Takic family migrated west from the Great Basin into the coastal areas of Southern California. The Juaneño shared the Luiseño language with their neighbors to the north, east, and south (Shipley 1978).

Groups of Juaneño lived in villages that were autonomous from other villages. Each village had access to hunting, collecting, and fishing areas (Bean and Shipek 1978). Villages were located in protected coves or canyons near water. Acorns were the most important food for the Juaneño. Other important sources of food were grasses, other seed types, and small animals. Fauna exploited included deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, quail, doves, ducks, and other fowl.

Typically, women gathered and men hunted, although work tasks often overlapped. Each village had a chief who controlled the practice of religion, economics, and warfare. The chief had an assistant and an advisory council who assisted in important decisions and rituals. Each of these positions was hereditary, being passed down from generation to generation (Bean and Shipek 1978).

Gabrielino

The Gabrielino are one of the least known Native American groups in California. Generally, their territory included all of the Los Angeles Basin, parts of the Santa Ana and Santa Monica Mountains, the coast from Aliso Creek in the south to Topanga Canyon in the north, San Clemente Island, San Nicolas Island, and Santa Catalina Island. The environmental conditions within this territory are very diverse and include the following ecological zones: interior mountains/foothills, prairie, exposed coast, and sheltered coast. The Gabrielino were collectors and lived in villages year-round and utilized smaller camps from which they could hunt and gather, likely on a seasonal basis (logistical mobility). Villages were almost always situated near water.

The Gabrielino spoke a dialect of the Cupan group of the Takic language family like the Juaneño. Gabrielino families lived in domed, round structures with thatching made from local plants. Other structures included semi-circular, earth covered sweathouses, menstrual huts, and ceremonial structures. Villages were politically autonomous from other villages, while each village was led by a chief who would, at times, reign over several villages (Bean and Smith 1978). Acorns were the most important food for the Gabrielino, although the types and quantity of different foods varied by season and locale. Common and important types of food included acorns, piñon nuts, yucca, cacti, many varieties of seeds, deer, rabbit, jackrabbit, woodrat, mouse, ground squirrel, quail, dove, duck, other fowl, fish, shellfish, and marine mammals.

History

In California, the historic era is generally divided into three periods: the Spanish or Mission Period (1769 to 1821), the Mexican or Rancho Period (1821 to 1848), and the American Period (1848 to present). The first Europeans in Orange County comprised a Spanish expedition led by Gaspár de Portolá on July 23, 1769 (Friis 1965:3). Portola encountered Indians in Orange County as close to the current project area as Plano Trabuco (present-day Rancho Santa Margarita, approximately four miles southeast of the project area) on July 24, 1769. At this location they set-up camp as they travelled through the area north to Monterey. The name "Trabuco" is Spanish for blunderbuss (a muzzle-loading rifle with a short, large caliber barrel). On July 26, Portola's group travelled to Tomato Springs where they looked out over a huge plain, the modern day Tustin Plain.

The project is located within the former lands of Mission San Juan Capistrano. The Mission was established on November 1, 1776. Two years later, in 1778, the Mission was moved to its current location in the modern town of San Juan Capistrano (Hoover et al. 2002). The goal of the Mission system was to establish Christianity as the religion of the indigenous people of California. By 1812, there were 1,361 Christian Indians living in the Mission San Juan Capistrano territory (Friis 1965:9).

During the Mission period there were a few rancho operations that were granted by the Spanish government; these were primarily mineral extraction endeavors. These San Juan Capistrano ranchos were awarded to three retired Spanish soldiers: Manuel Nieto, Juan Pablo Grijalva, and José Antonio Yorba. They were rewards for years of service to the Spanish government in the face of grave danger and deprivation.

It was not until after Alta California came under Mexican rule that large ranchos were granted throughout Orange County (Friis 1965:10). The majority of the Santa Ana Mountains were not granted because the land was not deemed suitable for ranching activities. The Serrano Summit Project is located inside the historic *Rancho Cañada de los Alisos*. This rancho was granted to José Serrano on May 3, 1842 by Mexican Governor Juan B. Alvarado and later supplemented by Governor Pío Pico on May 27, 1846 resulting in a total of 10,668 acres.

Life on the expansive ranchos was dedicated to raising cattle for their hides and tallow (Friis 1965:33). Many of the cowboys were Native Americans who received $12-$15 per month in addition to room and board for their work. The ranchos lasted for more than 50 years. In 1846, the United States declared war on Mexico. The war, dubbed the Mexican-American War, was waged over the territories of Alta California and New Mexico. The war came to southern California with John C. Fremont's (USA) arrival in San Diego and resulted in his bloodless victory in Los Angeles. Shortly after Fremont's victory, Robert F. Stockton arrived in Los Angeles, while Mexican Governor Pío Pico fled Los Angeles for San Juan Capistrano. In 1848, the

Mexican-American War came to an end with the signing of the Treaty of Guadalupe Hidalgo, which ceded Alta California and New Mexico to the United States of America.

Rancho Cañada de los Alisos was acquired by Dwight Whiting in the 1880s and became known as the Whiting Ranch. Whiting planted 400 acres of eucalyptus trees as an answer to California's lumber shortage. Although the trees failed as a source of lumber, in the 1960s, a master planned community was created around the trees and man-made lakes. The eucalyptus provided for landscaping for modern homes and led to the "Forest" in Lake Forest. In 1992 Lake Forest became an incorporated city (KTGY 2011).

METHODS

Records Search

On October 17, 2014 Matthew Stever of DUKE C R M conducted a records search at the South Central Coastal Information Center (SCCIC). The SCCIC is part of the California Historical Resources Information System (CHRIS) and is located at California State University, Fullerton. The records search included a review of all recorded historic and prehistoric archaeological sites within a one-mile radius of the project area, as well as a review of known cultural resource survey and excavation reports. In addition, Mr. Stever examined the California State Historic Property Data File (HPDF), which includes the National Register of Historic Places (National Register), California Register of Historical Resources (California Register), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). The internal archives at DUKECRM were also inspected for relevant background information.

Native American Coordination

DUKE C R M initiated consultation with Native American groups utilizing the NAHC letter provided for the Baker Regional Water Treatment Plant (Baker WTP) completed in July, 2010. The Baker WTP is located immediately south of Serrano Summit. The Native American Heritage Commission (NAHC) was contacted on November 5, 2014 to search the Sacred Lands File (SLF) and provide an updated list of Native Americans to contact for the project. Letters were sent to Tribes to determine if they know of any cultural resources that may be impacted by the project

Field Survey

On October 29 and 30, 2014 an intensive level pedestrian survey was conducted by Douglas McIntosh, Field Director, and Matthew Stever, Field Crew. The intensive survey included the entire 98.9-acre Project. Transects spaced 10 meters apart were surveyed. Gregory Greenberg, Archaeologist and Ben Scherzer, Paleontologist, visited the site on November 7, 2014. All resources were recorded on State Department of Parks and Recreation forms (DPR 523 Series).

Personnel

The records search was conducted by Matthew Stever, B.A. The field survey was directed by Douglas McIntosh. Mr. McIntosh has more than 20 years of experience as an archaeologist. Matthew Stever served as field crew. Gregory Greenberg, M.A., authored the technical report. Ben Scherzer prepared the geology and paleontology sections of this report. Project Management, direct supervision of all phases of work, and preparation of this report were the responsibility of Curt Duke. Mr. Duke is the Principal Archaeologist of DUKE C R M. Mr. Duke meets the professional qualifications of the Secretary of the Interior for prehistoric and historical archaeology; he is also a Registered Professional Archaeologist (RPA) who has worked in all phases of archaeology (archival research, field survey, testing and data recovery excavation, laboratory analysis, construction monitoring) since 1993. Mr. Duke holds a Master of Arts degree in Anthropology with an emphasis in archaeology from California State University, Fullerton and a Bachelor of Arts degree in Anthropology from the University of California, Santa Cruz. Mr. Duke has worked throughout southern and Northern California and parts of Arizona and Nevada. Please see Appendix C for Mr. Duke's resume.

RESULTS

Records search

Map data from the SCCIC indicates that there are no archaeological resources recorded within the project boundaries. There are six cultural resources within one mile of the project. These resources are as follows:

Resource No.	Resource Type	Description	Status	NRHP Eligible	Distance (ft) from APE
CA-ORA-39	Prehistoric Archaeology	Lithic scatter; manos, metates, and cores	Extant	Undetermined	1000 SW
CA-ORA-510	Prehistoric Archaeology	Lithic scatter; 1 metate and choppers	Destroyed	Undetermined	Adjacent NE
CA-ORA-647	Prehistoric Archaeology	Large lithic scatter, flaked and ground stone	Destroyed	Undetermined	2200 W
CA-ORA-648	Prehistoric Archaeology	Lithic Scatter, flaked and ground stone	Destroyed	Undetermined	1800 W
CA-ORA-773	Prehistoric Archaeology	Lithic Scatter, flaked and ground stone	Extant	Undetermined	1600 W
CA-ORA-1064	Prehistoric Archaeology	Lithic Scatter, flaked and ground stone	Destroyed	Undetermined	Adjacent NW

Data from the SCCIC also indicates that seven prior studies were conducted within the project. Of note, Bissell (1984 and 1988) conducted archaeological testing and recommended monitoring for the two sites (CA-ORA-510 and -1064) that were located adjacent to the project and are now destroyed. Salvage excavations and archaeological monitoring were also implemented for sites CA-ORA-647 and -648, which were located within the records search radius and have also been destroyed (Del Chario et al. 1989). Surface collections and test excavations were recommended for sites CA-ORA-39 and -773, located in the records search radius (Cottrell 1978). Surveys OR-3770 and OR-3840 did not identify any cultural resources within their project areas and the studies made no further recommendations for archaeological testing or monitoring (Clark 2009; Marken 2009).

Native American Coordination

The NAHC did not identify any Native American cultural resources within or near the project. DUKE CRM contacted fifteen Native American groups recommended by the NAHC in 2010 and 2014. All fifteen Native American groups/individuals were contacted by U.S. Postal Service, Certified Mail on November 5, 2014 and November 22, 2014. Follow up letter were sent by emails. No individuals have responded to date. See Appendix B for a sample of the letters sent to the Native Americans. Following is the list of groups contacted:

Gabrielino-Tongva Tribe
Ti'At Society
Juaneño Band of Mission Indians Acjachemen Nation
Juaneño Band of Mission Indians
Gabrielino Tongva Indians of California Tribal Council
Gabrielino Tongva Nation
Gabrieleno/Tongva San Gabriel Band of Mission
United Coalition to Protect Panhe

Field Survey

The intensive pedestrian field survey of the 91.9-acre APE identified 2 cultural resources within or adjacent to the APE. These resources are one isolated prehistoric artifact (Iso-1) and a historic fence feature (F-1). Attention was given to areas of exposed soils and rodent burrows. Survey transects were 10 to 15 meters. Ground visibility ranged between 20-100 percent. Coastal sage scrub covered portions of the project. A large portion of the project is disturbed from earthmoving activities. Soils are comprised of exposed marine terrace sands, with areas of exposed cobbles as well as shale and sandstone bedrock.

Iso-1 is a granitic mano fragment. This artifact was found on top of a mechanical push pile on the eastern edge of the Project on a terrace above Serrano Creek. This artifact measures 7.5cm long x 11.0cm wide x 6.0cm thick. Light use-wear appears to be limited to a single side. Isolates by definition have limited data potential and this isolate being discovered in a disturbed context is not eligible for the National and/or

California Registers. State Department of Parks and Recreation site forms (DPR 523 series) are included as Appendix D of this report.

F-1 is comprised of three in situ 4" x 6" redwood fence posts with strands of barbed wire. These posts are located along the west edge of Serrano Creek. These in situ fence posts are remnants of historic ranching and cattle grazing activities in this region. These post range in height from 4½ to 5 feet. This feature contains minimal data potential. It represents historic 20th century ranching in the area dating likely to the Whiting Ranch tenure. There were no other artifacts and/or features found in association with these posts. In light of this limited data potential for this resource it is not eligible for the National and/or California Registers.

Fossil material was observed during the intensive pedestrian survey in two locations. In the first location (Serrano Summit No. 01), a fragment of marine mammal bone was found in an area of shallow disturbance. In the second location (Serrano Summit No. 02), multiple fragments of heavily weathered bone, likely marine mammal, was found eroding out of a natural hillside. In a subsequent visit, three additional fragments of bone were observed in the disturbed area near Serrano Summit No. 01. In all areas where fossil bone was observed, the surrounding sediment was the poorly consolidated, light-colored arkosic sandstone characteristic of the Oso Member of the Capistrano Formation (Vedder et al. 1957, Vedder 1972)

See Figures 1-4 for photographs of the project.

Figure 1: Project representative photo, view to south.

Figure 2: Project representative photo, view to west.

Figure 3: Project representative photo, view to southwest.

Figure 4: Project representative photo, view to south.

STUDY FINDINGS AND CONCLUSIONS

A records search, Native American consultation, and a field survey were conducted. The records search did not identify any cultural resources within the project APE or Project. The field survey identified one isolated prehistoric artifact (Iso-1- a mano fragment) and one historic feature (F-1- three fence posts). As of the date of this report there have been no comments received from the Native Americans contacts. Two fossil localities were discovered during the field survey (Serrano Summit No. 01 and 02).

Both the isolate and the historic fence posts contain limited research potential and are not considered significant or eligible for the National Register of Historic Places (National Register) and or the California Register of Historical Resources (California Register). Therefore, a finding of *no historic properties affected* for the purposes of Section 106 is recommended. In addition, there are no *unique archaeological resources* or *historical resources* that will be impacted by the project as defined under CEQA. Consistent with mitigation measures CUL-1 through CUL-4 of the Serrano Summit Area Plan 2009-01 and Tentative Tract Map No. 17331, Environmental Impact Report (EIR), DUKE CRM recommends archaeological monitoring during ground disturbing activities that have the potential to impact archaeological resources within project boundaries.

Each of the paleontological finds are highly disturbed and fragmented. They are not considered significant under CEQA, but rather indicate that there is a high sensitivity for paleontological resources within the project boundaries. Consistent with mitigation measures CUL-5 through CUL-8 of the Serrano Summit Area Plan 2009-01 and Tentative Tract Map No. 17331 EIR, DUKE CRM recommends paleontological monitoring during ground disturbing activities that have the potential to impact paleontological resources within project boundaries.

If the project description changes additional studies may be warranted. In the event that remnants from an archaeological/paleontological resource are discovered during ground disturbing activities, all work shall halt temporarily until a qualified archaeologist/paleontologist can be retained by the project proponent to assess the significance of the find. If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of the origin and disposition of the remains pursuant to State Public Resources Code Section 5097.98. The County Coroner must be notified immediately.

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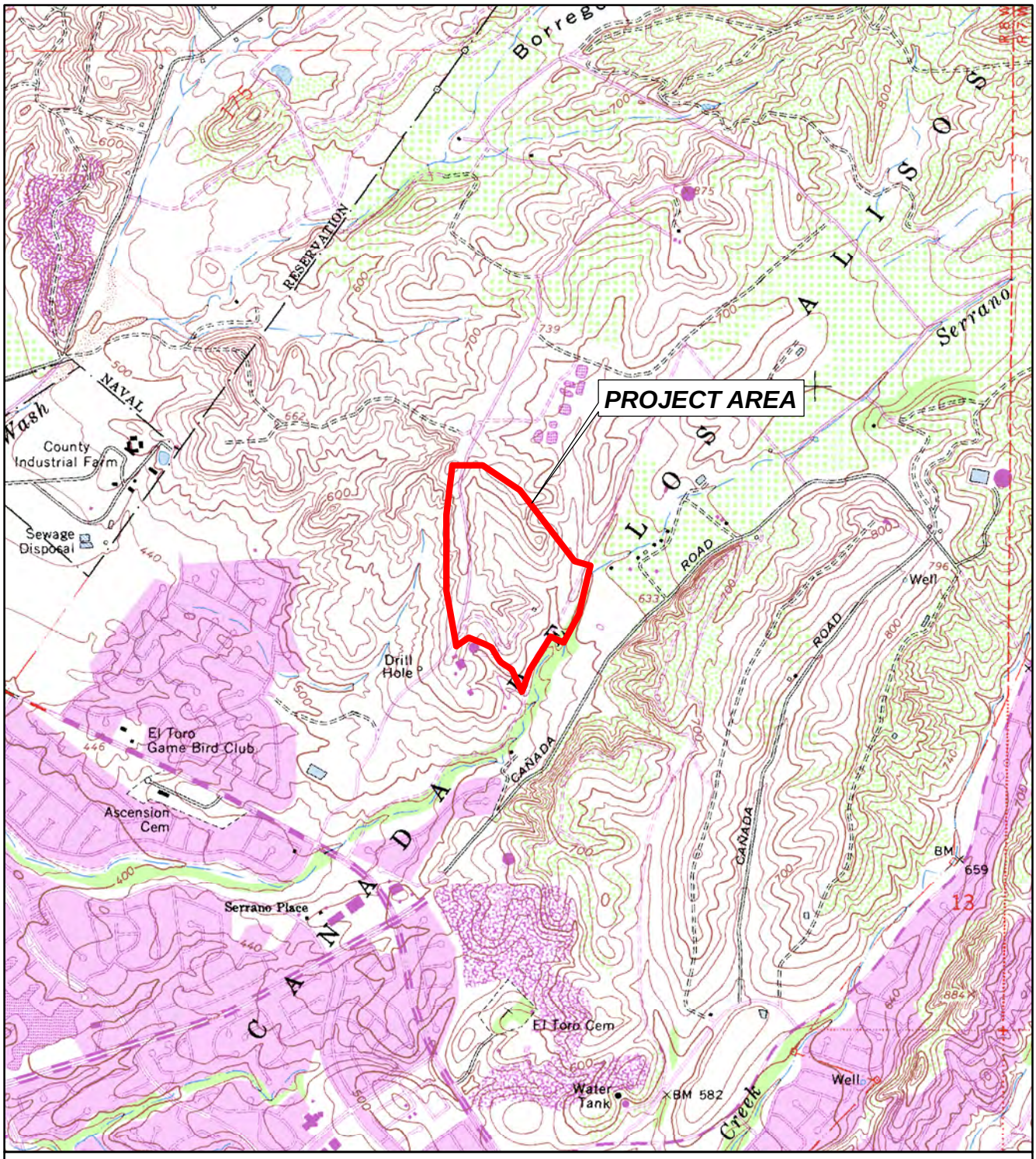
APPENDIX A
Project Maps

Figure 1 Project Vicinity Map

Serrano Summit



El Toro, Calif. 7.5' USGS Quadrangle

Figure 2 Project Location Map **Serrano Summit**

Figure 3 Aerial Photograph **Serrano Summit**

APPENDIX B
Native American Correspondence

Native American Consultation Record

Project Name: Serrano Summit Project
Project Number: C-0160
NAHC Contact Initiated: 11/5/2014
NAHC Letter Received: 11/18/2014

Results: The NAHC did not identify any Native American cultural resources in the Sacred Lands File (SLF). The NAHC recommended that we contact seven Native American groups/individuals. This was in addition to the Native Americans contacted on 11/5/14 using the 2010 NAHC Letter from the Baker WTP project.

Matrix prepared by Greg Greenberg

Group/Name	Date contact was initiated	Method of contact	Response
Juaneno Band of Mission Indians Acjachemen Nation, David Belardes, Chairperson	11/5/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/5/2014
Juaneno Band of Mission Indians Acjachemen, Teresa Romero, Chairwoman	11/22/2014	U.S. Mail; First Class	No response to letter as of 11/22/14.
Juaneno Band of Mission Indians, Adolph 'Bud' Sepulveda, Vice Chairperson	11/22/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/22/2014
Juaneno Band of Mission Indians, Sonia Johnston, Tribal Chairperson	11/5/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/5/2014
Juaneno Band of Mission Indians,Anita Espinoza	11/22/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/22/2014
United Coalition to Protect Panhe (UCPP), Rebecca Robles	11/22/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/22/2014

Group/Name	Date contact was initiated	Method of contact	Response
Juaneno Band of Mission Indians Acjachemen Nation, Joyce Perry, Representing Tribal Chairperson	11/5/2014	U.S. Mail; First Class	No response to letter as of 11/22/14.
Gabrieleno/Tongva San Gabriel Band of Mission Indians; Mr. Anthony Morales	11/5/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/5/2014
Gabrielino/Tongva Nation; Sam Dunlap	11/5/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/5/2014
Ti'At Society, Cindi Alvitri	11/5/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/5/2014
Gabrieleno/Tongva Tribe, Linda Candelaria	11/5/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/5/2014
Gabrieleno/Tongva Tribe, Bernie Acuna	11/5/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/5/2014
Juaneno Band of Mission Indians Acjachemen, Anthony Rivera	11/5/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/5/2014
Juaneno Band of Mission Indians, Alfred Cruz	11/5/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/5/2014
Gabrielino/Tongva Indians California Tribal Council, Robert F. Dorame	11/5/2014	U.S. Mail; First Class	No response to letter as of 11/22/14. Followed-up with an email with an attached copy of the Letter and a Project Topo Map were sent on 11/5/2014

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

November 18, 2014

Greg Greenberg
DUKE CRM
20371 Lakeforest Dr., Ste A2
Lake Forest, CA 92630

Email: Greenberg_greg@hotmail.com
RE: Serrano Summit Project, Lake Forest, Orange County
2 Page

Mr. Greenberg;

Government Code §65352.3 requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of protecting, and/or mitigating impacts to cultural places in creating or amending general plans, including specific plans. Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above project.

As a part of consultation, the NAHC recommends that local governments conduct record searches through the NAHC and California Historic Resources Information System (CHRIS) to determine if any cultural places are located within the area(s) affected by the proposed action. A *Sacred Lands File* search was completed with negative results. Local governments should be aware that records maintained by the NAHC and CHRIS are not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a cultural place.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: Katy.Sanchez@nahc.ca.gov.

Sincerely,

Katy Sanchez
Associate Government Program Analyst

Native American Contacts
Orange County
November 14, 2014

Juaneno Band of Mission Indians Acjachemen
David Belardes, Chairperson
32161 Avenida Los Amigos Juaneno
San Juan Capisttrano CA 92675
chiefdavidbelardes@yahoo.
(949) 493-4933 Home
(949) 293-8522

Juaneno Band of Mission Indians
Anita Espinoza
639 Holten Road Juaneno
Talent , Or 97540
neta777@sbcglobal.net
(505) 310-5850 Cell

Juaneno Band of Mission Indians Acjachemen
Teresa Romero, Chairwoman
31411-A La Matanza Street Juaneno
San Juan Capistrano CA 92675
(949) 488-3484
(949) 488-3294 Fax
(530) 354-5876 Cell

United Coalition to Protect Panhe (UCPP)
Rebecca Robles
119 Avenida San Fernando Juaneno
San Clemente CA 92672
rebrobles1@gmail.com
(949) 573-3138

Juaneno Band of Mission Indians
Adolph 'Bud' Sepulveda, Vice Chairperson
P.O. Box 25828 Juaneno
Santa Ana , CA 92799
bssepul@yahoo.net
(714) 838-3270
(714) 914-1812 Cell

Juaneno Band of Mission Indians Acjachemen Nation
Joyce Perry, Representing Tribal Chairperson
4955 Paseo Segovia Juaneno
Irvine , CA 92612
kaamalam@gmail.com
(949) 293-8522

Juaneño Band of Mission Indians
Sonia Johnston, Tribal Chairperson
P.O. Box 25628 Juaneno
Santa Ana , CA 92799
sonia.johnston@sbcglobal.
(714) 323-8312
(714) 998-0721

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed Serrano Summit Project, Lake Forest, Orange County.

DUKE CRM

22 Socorro
Rancho Santa Margarita
California 92688
949-303-0420
www.dukecrm.com

SAMPLE LETTER

November 5, 2014

Juaneno Band of Mission Indians Acjachemen Nation
David Belardes, Chairperson
32161 Avenida Los Amigos, San Juan Capistrano, CA 92675

Subject: Native American Consultation for the Proposed **Serrano Summit Project**, Located in Lake Forest, in the County of Orange, California.

Dear Mr. Belardes:

The City of Lake Forest proposes to develop 85 acres located south of the current end of Biscayne Bay Drive and Indian Ocean Drive, west of Serrano Creek, and north of the Serrano Highlands neighborhood (Marin Lane & Wisteria Lane) in Lake Forest, in the County of Orange, California. **The project occupies a portion of the Rancho Cañada de los Alisos land grant**. The project location is depicted on USGS *El Toro* 7.5 Minute Quadrangle map (Attachment 1). The project will develop a new community of residential neighborhoods combined with parks and recreation areas, neighborhood gathering places, a new Civic Center site, and existing and future Public Facilities.

DUKE CRM conducted a records search at the South Central Coastal Information Center and found no previously recorded cultural resources within the project boundaries. DUKE CRM also conducted an intensive field survey and found one isolated mano in a disturbed context within the project. In addition, the Native American Heritage Commission (NAHC) was contacted in 2010 and recommended that you be contacted.

If you know of any Native American cultural concerns with this project, please do not hesitate to contact me by telephone at (805) 440-8247, or by email at greenberg_greg@hotmail.com. If you are not the designated representative, please forward this information to the responsible person. Thank you for your assistance in this matter. I look forward to hearing from you.

Sincerely,

DUKE CULTURAL RESOURCES MANAGEMENT, LLC

Gregory P. Greenberg, M.A.
Archaeologist

Attachment: USGS 7.5 Minute Quadrangle
Aerial Photograph

APPENDIX C
Resume

22 Socorro
Rancho Santa Margarita
California 92688
949-303-0420
curt@dukecrm.com

Curt Duke

President/Archaeologist

Expertise

Cultural Resources Management
California Prehistory
Section 106 Compliance
CEQA Compliance
Native American Consultation

Education

CSU, Fullerton, M.A., Anth, 2006
SDSU, Grad Studies, Anth, 1996/97
UC Santa Cruz, B.A., Anth, 1994

Professional Registrations

RPA, No. 15969
County of Riverside (No. 151)
County of Orange

Professional Memberships

Society for California Archaeology
Society for American Archaeology
Pacific Coast Archaeological Society
Assoc. of Environmental Professionals

Professional Experience

President/Archaeologist, DUKE CRM, April 2011 to present.
Archaeologist/Principal, LSA Associates, 1997-2011.
Archaeological Technician, SRI, 1997.
Archaeological Technician, Petra Resources, 1997.
Archaeological Technician, KEA Environmental, 1997.
Archaeological Technician, Keith Companies, 1997.
Archaeological Technician, KEA Environmental, 1997.
Archaeological/Paleontological Tech., LSA Associates, 1996.
Archaeological/Paleontological Tech., Petra Resources, 1996.
Archaeological Technician, Affinis Environmental Services, 1996.
Archaeological Technician, KEA Environmental, 1996.
Archaeological Tech., Macko Archaeological Inc., 1995 to 1996.
Archaeological Technician, Heritage Resource Consultants, 1995.
Archaeological Technician, Chambers Group, 1995.
Archaeological Tech./Teachers Assistant, Cabrillo College, 1994
Anthropological Laboratory Technician, UC Santa Cruz, 1994.

Selected Project Experience

Skyridge Residential, Mission Viejo, 2011-present. Role: Project Manager/Principal Investigator. Mr. Duke conducted a Phase II test excavation of prehistoric archaeological site CA-ORA-507. This work included research, preparation of a research design/work plan, excavation, lab analysis, Native American consultation, and preparing a detailed technical report. The report was reviewed by the City, ACOE, and SHPO. Employer: DUKE CRM.

Olive View Medical Center, San Fernando, 2012-present. Mr. Duke's role on this project was Principal Investigator. Under contract to the City of Los Angeles and Chattel Architecture, Planning, and Preservation, Inc. DUKE CRM prepared a Phase I Archaeological Survey Report and conducted archaeological monitoring. For the Phase I Mr. Duke conducted the records search, field survey and report preparation. He also led the consultation efforts with Native Americans on behalf of the County and FEMA. The results of the survey were negative, meaning that no archaeological resources were identified and there were no delays to the project. However, SHPO recommended archaeological monitoring due to a perceived high potential for historical archaeological resources. Employer: DUKE CRM.

6th Street Viaduct Replacement Project, City of Los Angeles, 2013. DUKE CRM is under contract to GPA Environmental, Inc. and the City to provide archaeological and paleontological support for the construction phase of this project. The viaduct is

comprised of two bridges: 1) a bridge over the Los Angeles River and the UPRR, BNSF, Metrolink, and Metro Railroads; and 2) a bridge over U.S. Highway 101. Mr. Duke's role on this project is Project Manager and Principal Investigator for archaeology. DUKE CRM prepared an Environmentally Sensitive Area (ESA) Action Plan for archaeology and worked with Bruce Lander who prepared a Paleontological Mitigation Plan (PMP). These documents will be used to specify how archaeological and paleontological resources shall be treated during construction of this multi-year, multi-phase project. DUKE CRM will be responsible for overseeing the implementation of the archaeological and paleontological monitoring program on behalf of the City to ensure that mitigation measures are adhered to. Employer: DUKE CRM.

AT&T Mobility, On-Call, 2011-present. Role: Project Manager/ Principal Investigator. Mr. Duke conducts records searches, field surveys and prepares reports for various wireless facilities throughout southern and central California. Employer: DUKE CRM.

Sepulveda Boulevard Bridge Widening, Manhattan Beach, 2012-13. Mr. Duke's role on this project is Project Manager/Principal Investigator. Under contract to the City of Manhattan Beach and GPA Environmental, Inc. Mr. Duke is preparing a Phase I Archaeological Survey Report. He conducted the field survey, records search, and report preparation. The results of the assessment were negative, meaning that no archaeological resources were identified and there were no delays to the project. Caltrans is the lead agency for NEPA; the City is the lead agency for CEQA. Employer: DUKE CRM.

Lamb School Residential Subdivision, Huntington Beach, 2013. Mr. Duke is the Project Manager/Principal Archaeologist for this project. DUKE CRM is conducting the cultural resources mitigation measures required by the City. This includes historical documentation of the school building and site, and archaeological and paleontological construction monitoring. This work is on-going. The DPR site record will be submitted to the South Central Coastal Information Center and the monitoring report will be submitted to the City upon completion of construction. Employer: DUKE CRM.

Wardlow School Residential Subdivision, Huntington Beach, 2013. Mr. Duke is the Project Manager/Principal Archaeologist for this project. DUKE CRM is conducting the cultural resources mitigation measures required by the City. This includes historical documentation of the school building and site, and archaeological and paleontological construction monitoring. This work is on-going. The DPR site record will be submitted to the South Central Coastal Information Center and the monitoring report will be submitted to the City upon completion of construction. Employer: DUKE CRM.

Scalzo Property, San Juan Capistrano, 2012. Role: Project Manager/Principal Investigator. Mr. Duke conducted a due diligence study for this 16-acre property. This work included research, site visit, and brief letter report. Employer: DUKE CRM.

1st Street over Glendale Boulevard, Los Angeles, 2012. Mr. Duke's role on this project was Project Manager/Principal Investigator. Under contract to the City of Los Angeles and GPA Environmental, Inc. Mr. Duke prepared a Phase I Archaeological Survey Report and Historic Property Survey Report. Mr. Duke was the project manager for this project. He conducted the field survey and report preparation. The results of the assessment were negative, meaning that no archaeological resources were identified and there were no delays to the project. Employer: DUKE CRM.

San Fernando Road Widening at Balboa Road, Los Angeles, 2012. Role: Project Manager/Principal Investigator. Under contract to the City of Los Angeles and GPA Environmental, Inc. Mr. Duke prepared a

Phase I Archaeological Survey Report and Historic Property Survey Report. Mr. Duke was the project manager for this project. He conducted the research, field survey, and report preparation. The results of the assessment were negative, meaning that no archaeological resources were identified and there were no delays to the project. DUKE CRM will be preparing the Paleontological Identification Report. Employer: DUKE CRM.

Mobilitie, On-Call, 2011-12. Role: Project Manager/Principal Investigator. Mr. Duke conducts records searches, field surveys and prepares reports for various wireless facilities throughout southern and central California. Employer: DUKECRM.

California Avenue Widening, Long Beach, 2011. Role: Project Manager/Principal Investigator. Under contract to the City of Long Beach and GPA Mr. Duke prepared a Phase I Archaeological Survey Report. Mr. Duke was the project manager for this project. He conducted the research, field survey, and report preparation. The results of the assessment were negative, meaning that no archaeological resources were identified and there were no delays to the project. Employer: DUKECRM.

Palomar Mountain Fuels Modification, 2011. Role: Project Manager/ Principal Investigator. Under contract to the Palomar Mountain Fire Safe Council, Mr. Duke conducted a Phase I archaeological survey of 11.5 acres. The survey report was completed quickly and was accepted by the Palomar Mountain Fire Safe Council and the BLM without any comments. Employer: DUKE CRM.

Mid County Parkway, Riverside County, CA, 2004-2011. Role: Task Manager/ Principal Investigator. The studies for the Mid County Parkway project included a 32-mile corridor (from Interstate 15 to State Route 79) in western Riverside County. The archaeological survey covered 3,680 acres and identified 91 archaeological sites. An extended Phase I survey (limited excavation) was conducted at 79 of the sites. Ultimately Phase II excavations were conducted at eight of the sites. Four archaeological sites were determined eligible for the National Register. A built environment historic resources survey was conducted and one historic dairy was determined eligible for the National Register. This project included extensive consultation with Indian Tribes. All work was conducted in compliance with Section 106 of the NHPA, NEPA, and CEQA. FHWA, Caltrans, and RCTC were the lead agencies and Jacobs Engineering was the lead engineering firm under contract to RCTC. Employer: LSA Associates.

Colton Crossing Rail-to-Rail Grade Separation, Colton, CA, 2008-2011. Role: Project Manager/ Principal Investigator. The Colton Crossing project involved the separation of the at-grade crossing of the UP and BNSF railroads. The Colton Crossing is a historically significant railroad crossing where a stand-off between the SP and California Southern railroads took place. Despite SP's efforts the California Southern railroad was granted access across SP's right-of-way. Research showed that the project's APE contained numerous historic buildings and was very active in historic times. Under Mr. Duke's direction an archaeological survey and an extended Phase I survey (limited excavation) were conducted. Sixteen historical archaeological sites were discovered; these included building remnants and refuse deposits. None of the archaeological sites were determined eligible for the National Register. A built environment historic resources survey evaluated the UP and BNSF railroads, the SP passenger depot, the American Railway Express Company building, and the historic South Colton neighborhood; none of which were determined eligible for the National Register. All work was conducted in compliance with Section 106 of the NHPA, NEPA, and CEQA. FHWA and Caltrans were the lead agencies working in cooperation with SANBAG, FRA, UP, and BNSF. HDR was the lead engineering firm under contract to SANBAG. Employer: LSA Associates.

I-15/I-215 Interchange Project, Devore, San Bernardino County, 2008-11. Role: Task Manager. Mr. Duke was the cultural resources task manager. Under Mr. Duke's direction an ASR, HRER, and HPSR were prepared. An archaeological site was recorded immediately adjacent to the project boundaries, within the APE. Mr. Duke and his staff worked closely with the Caltrans archaeologist to record and evaluate this site for the National Register without conducting a Phase II excavation. In doing this, the client saved thousands

of dollars and almost one year on their schedule. His staff also evaluated a portion of historic Route 66 and several related historic buildings. Employer: LSA Associates.

24th Street Improvements, City of Bakersfield, 2008-2011. Mr. Duke's role on this project was Cultural Resources Task Manager/Principal Investigator. Under contract to the City of Bakersfield and Parsons Brinckerhoff, Inc. Mr. Duke prepared the Historic Property Survey Report. He managed a team of archaeologists, paleontologists, and historians to complete the HRER, ASR, PIR/PER, and APE map. He conducted the archaeological field survey. His team identified 93 historic period buildings/structures, including two historic districts. Employer: LSA Associates.

Alta East Wind Project, Mojave, Kern County, CA 2010-11. CH2M HILL, Inc., requested a paleontological resources assessment for the Alta East Wind Project northwest of the City of Mojave in southeastern Kern County, California. The project includes developing pads for wind generation turbines, turbine access and service roads, management facilities, and a transmission line running from the center of the project south to connect with an existing distribution grid. The study area includes five sections of land that contain sediments that have potential for paleontological resources. The early Pliocene Horned Toad Formation contains the late Hemphillian Warren Local Fauna, with 24 fossil mammalian taxa. The literature review identified 34 fossil localities in the Horned Toad Formation, 12 of which were verified within project boundaries. The field survey located an additional 69 localities within project boundaries. Because of the potential for direct impacts to all paleontological resource localities, mitigation procedures are summarized. A project-specific paleontological resources impact mitigation program (PRIMP), including fossil salvage by qualified paleontologists, was recommended to accompany development of this project. Employer: LSA Associates.

I-215/SR-74 Interchange Improvements Project, Perris: Paleontological Mitigation Monitoring, 2010-11. Mr. Duke was the Task Manager for this project. The scope of work included paleontological monitoring during grading operations and environmental awareness (paleontological focus) training. He was responsible for working with the qualified paleontologist and coordinating field assignments for this project. Mr. Duke and his staff worked a communication system with the grading contractor that allowed for minimal field effort while achieving compliance. This allowed for savings to the overall budget. Employer: LSA Associates.

Aliso Canyon Park Improvements, Los Angeles, 2010. Under contract to the City of Los Angeles, Bureau of Engineering Mr. Duke prepared a Phase I Archaeological Survey Report. Mr. Duke was the project manager and principal-in-charge for this project. He oversaw the research, field survey, and report preparation. The results of the assessment were negative, meaning that no archaeological resources were identified and there were no delays to the project. Employer: LSA Associates.

Five Winds Ranch Conservation/Mitigation Bank, Yucaipa, San Bernardino County, 2010. Mr. Duke served as the Principal-in-Charge for this project. He coordinated with staff biologists and archaeologists to complete a general biological survey, a waters/wetland delineation, a cultural resources survey, a Mitigation Banking Feasibility Study, a draft and final Mitigation Banking Prospectus, and a Bank Enabling Instrument. Several cultural resources were identified, both historic and prehistoric in nature. These resources were not impacted and therefore no additional work was necessary. Employer: LSA Associates.

Mammoth Lakes Parks and Recreation and Trail System Master Plan, 2010. Mr. Duke prepared a cultural resources assessment for the Draft Parks and Recreation Master Plan (PRMP) and the Draft Trail System Master Plan (TSMP) EIRs. He conducted a records search, site visits, and prepared a report documenting the effort and making management recommendations. The cultural resource assessment was completed pursuant to California Environmental Quality Act (CEQA). Employer: LSA Associates.

Rancho Vista Boulevard (Ave. P) Grade Separation Project, Palmdale, 2007-10. Mr. Duke's role was Principal Archaeologist, providing project supervision and regulatory expertise. Under contract to the City of

Palmdale and LAN Engineering, Mr. Duke's team conducted a records search and field survey, and prepared an Archaeological Survey Report and Historic Properties Survey Report which was reviewed and approved by Caltrans. The results of the assessment were negative, meaning that no archaeological resources were identified and there were no delays to the project. Employer: LSA Associates.

California Valley Solar Ranch, California Valley, San Luis Obispo County, 2009-10. Role: Principal-in-Charge. California Valley Solar Ranch is a 4,000-acre project located on the Carrizo Plain in eastern San Luis Obispo County. Mr. Duke was the Principal-in-Charge for this project. His team conducted a records search, field survey, Native American scoping, and prepared an archaeological survey report. His team identified, recorded, and evaluated several historical archaeological sites. Employer: LSA Associates.

Melrose Triangle, West Hollywood, 2009-10. Under contract to the City of West Hollywood Mr. Duke oversaw the preparation of a historic resources survey which included research, field surveys, and preparation of a historic context and survey report. Mr. Duke acted as the principal-in-charge for this project. Employer: LSA Associates.

Hollyhock House, Barnsdall Park, Los Angeles, 2009-10. Under contract to the City of Los Angeles, Bureau of Engineering Mr. Duke oversaw the preparation of a supplemental historic structure report which included research, field inspection, and preparation of a report. Mr. Duke acted as the principal-in-charge for this project. Employer: LSA Associates.

Delano-Alpaugh Water Reclamation Pipeline, Kern and Tulare Counties, 2006-2009. Mr. Duke prepared a cultural resources assessment study for the Delano-Alpaugh Water Reclamation Pipeline (DAWRP) while working for a previous employer. His role was cultural resources task manager and principal investigator. The project was approximately 11 miles Long. The research and field survey were conducted to determine whether the DAWRP project would result in impacts to any historical resources and/or unique archaeological resources. The cultural resources assessment was completed pursuant to CEQA and Section 106 of the NHPA. His team completed a cultural resources records search and a field survey. The project was immediately adjacent to Allensworth State Historic Park and National Register Historic District. The field survey identified two historical archaeological sites adjacent to the project alignment. Employer: LSA Associates.

Professional Hospital Supply, Temecula, 2008. Mr. Duke and his staff were retained by the Garrett Group to conduct an Archaeological and Paleontological Monitoring Program for the 32-acre Professional Hospital Supply Project in the City of Temecula. The construction monitoring program is the result of an agreement between the City of Temecula and the Pechanga Band of Mission Indians due to the presence of a portion of an archaeological site near the project boundaries. No cultural or paleontological resources were identified. Employer: LSA Associates.

Lancaster Highlands Project, Meridian Land Development Company, 2007. Mr. Duke oversaw the completion of a cultural resource assessment for the 1,891-acre project. All work was completed for Meridian Land Development Company. Tasks included a records search and field survey for archaeology and paleontology. Employer: LSA Associates.

Temecula 32, Archaeological Phase II Testing, 2007. Mr. Duke and his staff were retained by the Garrett Group to conduct an intensive pedestrian survey and test excavation in and around the reported location of a prehistoric lithic scatter. However, no remnants associated with the site were identified on or beneath the surface. Therefore, Mr. Duke recommended that this site should not be considered "a unique archaeological resource" or "historical resource" under CEQA. LSA worked with the Pechanga Band of Luiseño Indians and they monitored all field activities. Employer: LSA Associates.

I-15/SR-79 Interchange Project, Riverside County, 2006-10. Role: Task Manager. Mr. Duke was the cultural resources task manager. This project is located on top of a significant, National Register-listed

archaeological site that is also very sacred to the Luiseño Band of Indians. Under Mr. Duke's direction an ASR, ESA Action Plan, and HPSR were prepared. Due to the sensitivity surrounding the sacred site Mr. Duke and his staff consulted regularly with the Caltrans archaeologist, Native American Coordinator, and Native Americans. Employer: LSA Associates.

Residence "A," Barnsdall Park, Los Angeles, 2009. Under contract to the City of Los Angeles, Bureau of Engineering Mr. Duke oversaw the preparation of a historic structure report which included research, field inspection, and preparation of a report. Mr. Duke acted as the principal-in-charge for this project**.** Employer: LSA Associates**.**

Westlake Historic Resources Survey, Los Angeles, 2008-09. Under contract to the Community Redevelopment Agency of Los Angeles (CRA LA) and Chattel Architecture Planning and Preservation, Inc. Mr. Duke oversaw the preparation of a historic resources survey which included research, field surveys, and preparation of a historic context and survey report. Mr. Duke acted as the principal-in-charge for this project. Employer: LSA Associates.

Needles Highway Improvement Projects, County of San Bernardino, 2004-08. Role: Cultural Resources Task Manager. To complete this project Mr. Duke oversaw the completion of archaeological and paleontological research and field surveys along Needles Highway between the City of Needles and Aha Macav Parkway. During the study a total of 45 cultural resources identified; 14 were previously recorded and 31 were newly recorded. These resources include 33 prehistoric cultural resources, four historic cultural resources, two cultural resources with historic and prehistoric components, and six cultural resources of unknown age. All work was completed in compliance with CEQA, NEPA, and NHPA. Employer: LSA Associates

Superstition Solar I Project, Salton Sea, Imperial County, 2008. Role: Principal-in-Charge. Superstition Solar I is a 5,600-acre project located on BLM Land. Mr. Duke was the Principal-in-Charge for this project. His team conducted a records search, reconnaissance survey, Native American scoping, and prepared a Class III Intensive Survey Research Design. Employer: LSA Associates.

Thomas Mountain Fuels Reduction Project, near Idyllwild, CA, 2008. Mr. Duke and his colleague Virginia Austermann worked with the San Bernardino National Forest (SBNF) to complete a cultural resources assessment of the proposed 10,465-acre Thomas Mountain Fuels Reduction project located in the San Jacinto Ranger District of the San Bernardino National Forest, Riverside County, California. The proposed project was an undertaking that could have affected heritage resources, and the archaeological survey of the area of potential affect (APE) was conducted in compliance with Section 36 CFR Part 800 of Section 106 of the NHPA. The report presented the results of the records search, numerous field surveys completed by others from 1980 through 2007, and Native American consultation. In total nineteen cultural resources were documented and considered for planning purposes. Working with the SBNF archaeologist, our team applied the 1996 *Programmatic Agreement for Compliance with Section 106 of the National Historic Preservation Act for Undertakings on the National Forests of the Pacific Southwest Region*. Mr. Duke's role was Principal-in-Charge overseeing all contract negotiations and providing quality control. Employer: LSA Associates

Magnolia Boulevard Widening, Los Angeles, 2008. Under contract to the City of Los Angeles, Bureau of Engineering Mr. Duke prepared a Phase I Archaeological Survey Report. Mr. Duke was the project manager and principal-in-charge for this project. He oversaw the research, field survey, and report preparation. The results of the assessment were negative, meaning that no archaeological resources were identified and there were no delays to the project. Employer: LSA Associates

South District Maintenance Yard, Los Angeles, 2008. Under contract to the City of Los Angeles, Bureau of Engineering Mr. Duke oversaw the preparation of a historic resources survey which included research, field surveys, and preparation of a historic context and survey report. Mr. Duke acted as the principal-in-charge for this project. Employer: LSA Associates

Fire Station 82, Los Angeles, 2008. Under contract to the City of Los Angeles, Bureau of Engineering Mr. Duke oversaw the preparation prepared of a historic resources survey which included research, field surveys, and preparation of a historic context and survey report. Mr. Duke acted as the principal-in-charge for this project. Employer: LSA Associates

Chuckwalla Solar I Project, Desert Center, Riverside County, 2007-08. Chuckwalla Solar I is a 4,000-acre project located on BLM Land. Mr. Duke was the Principal-in-Charge for this project. His team conducted a records search, intensive field survey, Native American scoping, and prepared a Class III Intensive Survey Report. Employer: LSA Associates

McSweeny Farms, Hemet, CA, 2004-2008. Mr. Duke directed all cultural resources efforts for the McSweeny Farms project. He conducted third-party review of prior Phase I archaeological survey and extended Phase I survey. His team conducted Phase II and geoarchaeological excavations at several sites throughout the project, one of which is a large, regional prehistoric village site. Mr. Duke worked with SunCal, the City of Hemet, the Army Corps of Engineers (ACOE), and local Indian Tribes to balance the needs of each party. In addition, his team provided archaeological and paleontological monitoring for the project. He worked with Tribal monitors to document important archaeological sites, while maintaining the overall project schedule. Employer: LSA Associates

Hacienda at Fairview Valley Specific Plan, Apple Valley, Mojave Desert, CA, 2007-08. The Fairview Valley Specific Plan project is located near the Town of Apple Valley in the high desert. Under Mr. Duke's direction a team of archaeologists conducted a records search, field survey, and prepared a technical report for the County of San Bernardino. The team identified 73 cultural resources and determined that only 15 of these resources are considered significant under CEQA. The team worked with the project applicant and design team to avoid or mitigate impacts to all of the significant cultural resources. Employer: LSA Associates.

Majestic Hills Specific Plan, Hesperia, Mojave Desert, CA, 2006-07. The Majestic Hills Specific Plan project is located in the City of Hesperia in the high desert. Under Mr. Duke's direction a team of archaeologists conducted a records search, field survey, and prepared a technical report for the City. The team identified 32 cultural resources and determined that 11 of these resources are considered significant under CEQA. The team worked with the project applicant and design team to avoid or mitigate impacts to all of the significant cultural resources. Employer: LSA Associates.

Temecula Education Center, 2006. Mr. Duke and his staff were retained by the City of Temecula to conduct an Archaeological Monitoring Program for the Temecula Education Center Project. The construction monitoring program for the 40-acre site is the result of an agreement between the City of Temecula and the Pechanga Band of Mission Indians due to the presence of a portion of site CA-RIV-237 within the project boundaries. Minimal archaeological data were recovered.

Mesquite Regional Landfill, Imperial County, CA, 2004-2006. Under contract to the Sanitary Districts of Los Angeles County, Mr. Duke conducted a Class III Data Recovery project for ten Native American cultural resources within the boundaries of the proposed Mesquite Regional Landfill (MRL) Project, located in Imperial County, California. This effort was combined with a supplementary cultural resource reconnaissance of adjacent Bureau of Land Management (BLM) land to identify the extension of these resources beyond the project boundaries. Employer: LSA Associates.

20th Street West Extension, Palmdale, 2006. Mr. Duke's role was Principal Archaeologist, providing project supervision and regulatory expertise. Dr. Lange led the field survey and prepared the report. Under contract to the City of Palmdale and LAN Engineering, Mr. Duke and his team conducted a records search and field survey, and prepared an Archaeological Survey Report. The results of the assessment were negative, meaning that no archaeological resources were identified and there were no delays to the project. Employer: LSA Associates.

Southern California Edison, Southern and Central, CA, 2003-2005. Mr. Duke worked with SCE on its deteriorating poles program. As poles are deteriorating, SCE replaces them with new poles. Prior to pole replacement archaeological surveys were conducted of each pole location. The majority of this work has been conducted on federal lands. Under his direction archaeologists have surveyed over 2,000 pole locations in the Inyo National Forest, Angeles National Forest, San Bernardino National Forest, Sequoia National Forest, and under the jurisdiction of California and Arizona offices of the Bureau of Land Management (5 different field offices). In this process, his team recorded more than 35 archaeological resources ranging from isolated chipped stone to historic mining sites. His historian evaluated the Catalina Tile Company manufacturing plant on Catalina Island for the California Register of Historical Resources. Mr. Duke worked closely with SCE staff and various Federal agencies to ensure a quick review and approval of the cultural resources efforts. Employer: LSA Associates

Community and Environmental Transportation Acceptability Process (CETAP), Riverside, CA, 1999-2001. Mr. Duke participated in a reconnaissance survey that recorded over 500 prehistoric and historic resources. The results of the cultural resource efforts were reported in a HPSR, HRER and an ASR. Mr. Duke assisted in preparing the reports and provided management for the cultural resources aspect of this project. Employer: LSA Associates

Los Coches Creek Elementary School, near Alpine, CA, 2003–2006. Mr. Duke conducted a Phase I archaeological survey and oversaw subsequent Phase II test excavations. All work was conducted under the authority of the U.S. Army Corps of Engineers (ACOE). Mr. Duke worked with the El Cajon Union School District and the ACOE to avoid impacts to a majority of the cultural resources on site. Employer: LSA Associates

Whipple-Havasu Circuit, SCE, near Lake Havasu, CA, 2003. Role: Project Manager/Principal Investigator. Mr. Duke's team conducted an archaeological survey of 249 poles along 25 miles of land located on the Chemehuevi Indian Reservation and BLM lands. The project was located within the boundaries of the Desert Training Center (DTC); however, no DTC cultural resources were observed. Seven cultural resources were identified: four prehistoric sites, two prehistoric isolates, and one 1920s historic camp. All work was completed in compliance with NHPA and NEPA. Employer: LSA Associates

McCoy Circuit, SCE, Near Blythe, CA, 2003. Role: Project Manager/Principal Investigator. Mr. Duke's team conducted an archaeological survey of 388 poles along 19 miles of land located on BLM lands. The project was located within the boundaries of the Desert Training Center (DTC); however, no DTC cultural resources were observed. Four cultural resources were identified within or adjacent to the project boundaries: one historic/prehistoric site with an intaglio, two historic sites, and one prehistoric site. All work was completed in compliance with NHPA and NEPA. Employer: LSA Associates.

Orchard Hills (Planning Area 1), Irvine, 2002. Under contract to the Irvine Company, Mr. Duke conducted Phase II archaeological excavation on several sites. Mr. Duke served as the field director and co-Principal Investigator. This work was completed by Mr. Duke while with another employer.

Muddy Canyon Archaeological Project (Crystal Cove-Phase IV), Newport Coast, Orange County, 1999-02. Mr. Duke served as field crew and cartographer for the Phase II test excavations and field director and cartographer for Phase III data recovery excavations. Mr. Duke supervised up to 15 archaeologists excavating at eight prehistoric archaeological sites.

Fort Irwin, National Training Center, CA, 1999. Role: Crew Chief/Teaching Assistant. Mr. Duke assisted in a Field School for CSU, Fullerton. He instructed students in proper survey techniques, artifact identification, and site record preparation. In addition, Mr. Duke co-authored the survey report.

San Nicolas Island, Naval Base Ventura County, CA, 1997. Role: Field crew. Mr. Duke was part of an excavation and lab crew conducting test excavations at various archaeological sites. Laboratory sorting was conducted in the evenings. Employer: Petra Resources

Salton Sea Navy Test Base, CA, 1996-97. Role: Field crew. Mr. Duke was part of a survey crew conducting intensive surveys on the west shore of the Salton Sea. Excavation was conducted at sites that appeared to be significant. Employer: KEA Environmental

Chocolate Mountains Gunnery Range, CA, 1996. Role: Field crew. Mr. Duke was part of a survey crew conducting intensive surveys in the Chocolate Mountains. Employer: KEA Environmental

Other Projects

Stadium Arco Station, San Diego, 2003-04
Cingular/PBMS, ~2,000 Facilities, Southern Calif., Nevada, and Arizona, 1997-2001
AT&T Wireless, ~1,000 Facilities, Southern California, 1998-2001
Bonita Canyon Sports Park, Newport Beach, 1997
Hicks Canyon Retention Basin, Irvine, CA, 1996
Testing of Phase III, Las Trancas Canyon, Newport Coast, 1995
Data Recovery of Site CA-ORA-64, Newport Beach, 1995

Gregory P. Greenberg

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Education

M.A. Cultural Resources Management

Sonoma State University, December 2010

- Relevant Coursework: Seminar in Cultural Resource Management (CEQA, NEPA, NHPA), Praxis in National Register of Historic Places, Archaeology: History and Theory, Land Use Planning, California History, History of North American Indians, Native American Contemporary Issues

B.A. (Double Major): Anthropology (Concentration in Archaeology) and Urban Planning

University of California, San Diego, June 2008

- Relevant Coursework: Land Use Planning, Sustainable Planning, Western Environmental History, GIS, U.S. History, Archaeological Field School, Anthropological Archaeology: Method and Theory, Human Origins, World Prehistory, Zooarchaeology, Foundations of Social Complexity

Experience

- **Archaeologist II,** EBI Consulting, San Diego, CA (July 2013-Present)
  - Perform environmental surveys for telecommunications projects throughout the western U.S.
  - Conduct records searches
  - Write technical reports
  - Conduct archaeological sensitivity analysis
  - Archaeological monitoring

- **Staff Archaeologist**, Applied EarthWorks, San Luis Obispo, CA (Sept. 2011-July 2013)
  - Performed archaeological surveying, monitoring, and excavation
  - Wrote technical reports
  - Performed Native American consultation
  - Served as the GIS Specialist for the San Luis Obispo office
    - Developed archaeological sensitivity models and conducted analysis
    - Produced maps and shapefile deliverables
    - Database management
  - Served as a Crew Chief for several fieldwork projects
  - Developed scopes of work and budgets for various projects and phases of work

- **Archaeological Technician**, SWCA, Pasadena, CA (July 2011-Sept. 2011)
  - Performed Phase 2 testing
  - GPS mapping
  - Assisted with Ground Penetrating Radar work

- **Archaeological Technician,** AECOM, Camarillo, CA (May 2011-Sept. 2011)
  - Performed Phase 1 archaeological survey
  - GPS mapping
  - Completed site records
  - Created location maps for archaeological, biological, and geological surveys and testing using GIS

- **Archaeological Technician**, Anthropological Studies Center, Rohnert Park, CA (Dec. 2008 - May 2010)
  - Performed archaeological survey and excavation
  - Completed DPR site records and mapped sites using compass and GPS
  - Created location maps and site maps using GIS and Adobe Illustrator
  - Finalized site records using Microsoft Access and Microsoft Office

- **Student Worker**, San Diego County Department of Planning and Land Use (Sept. 2007 - April 2008)
  - Performed preliminary CEQA project review using GIS
  - Composed SB 18 Native American consultation paperwork
  - Performed archaeological survey

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Specialized Skills

- Mapping (GIS and GPS)
- Technical writing (cultural resource reports and archaeological site records)
- Native American consultation
- Computer software use (GIS, Adobe Acrobat/Illustrator, and Microsoft Word/Excel/Access)
- Communication (project coordination, leadership, and teamwork)
- Knowledge and application of CRM legislation (CEQA, Section 106 and 110 of NHPA, and SB 18)

Professional Reports (Select Examples)

- Greenberg, Gregory P. 2013. Archaeological Survey Report. *Cypress Mountain Drive Bridge Replacement Project, San Luis Obispo County, California.* Applied EarthWorks, Inc., San Luis Obispo, CA. Prepared for the County of San Luis Obispo, Department of Public Works.

- Greenberg, Gregory P. 2012. *Cultural Resources Study for the Oceano Drainage Project, San Luis Obispo County, California.* Applied EarthWorks, Inc., San Luis Obispo, CA. Prepared for the County of San Luis Obispo, Department of Public Works.

- Greenberg, Gregory P. 2012. *Cultural Resources Inventory of Hind River Ranch, San Luis Obispo County, California.* Applied EarthWorks, Inc., San Luis Obispo, CA. Prepared for the Hind Foundation.

- Greenberg, Gregory P. and Barry A. Price. 2012. *Cultural Resources for Portions of the PXP 12kV Distribution Line, San Luis Obispo County, California*. Applied EarthWorks, Inc., San Luis Obispo, CA. Prepared for Stillwater Sciences.

- Greenberg, Gregory P. 2012. Archaeological Survey Report. *Rincon Hill Road Bridge 51C0039 Seismic Safety Gate Project near Carpinteria, Santa Barbara and Ventura Counties, California*. Applied EarthWorks, Inc., San Luis Obispo, CA. Prepared for the County of Santa Barbara Department of Public Works.

- Greenberg, Gregory P. and Barry A. Price. 2012. *A Cultural Resources Study of Portions of Training Areas 16 and 22, Fort Hunter Liggett, Monterey County, California.* Applied EarthWorks, Inc., San Luis Obispo, CA. Prepared for Parsons, Inc.

- Blake, Michelle D. and Gregory P. Greenberg. 2009. *A Site-Specific Survey of The Palo Marin Site, CA-MRN-375, Point Reyes National Seashore, Marin County, California.* Anthropological Studies Center, Rohnert Park, CA. Prepared for the National Park Service.

Gregory P. Greenberg

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References

- Charles Cisneros
  Project Manager and Principal Investigator, Chambers Group
  Relation: Supervisor at SWCA Environmental Consultants
  (949) 261-5414, ccisneros@chambersgroupinc.com

- Adrian Praetzellis.
  Principal Investigator, Anthropological Studies Center
  Professor, Sonoma State University
  Relation: Supervisor at Anthropological Studies Center and Professor at SSU
  (707) 664-2381, adrian.praeztellis@sonoma.edu

- Adolfo Muniz, Ph.D.
  Collections Manager, San Diego Archaeological Center
  Relation: Supervisor, University of California, San Diego
  (760) 291-0370, admuniz@sandiegoarchaeology.org

APPENDIX D
DPR 523 Site Records

CONFIDENTIAL

Not For Public Disclosure

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 2 ***Resource Name or #:** ISO-1
P1. Other Identifier:
***P2. Location:** ☒ **Not for Publication** ☐ **Unrestricted** ***a. County** Orange
and
***b. USGS 7.5' Quad** El Toro **Date** 1968 San Bernardino **B.M.**
c. Address City Lake Forest Zip
d. UTM: Zone 11; 437080 mE/ 3724399 mN
e. Other Locational Data:

From the intersection of Dimension Drive and Commercecentre Drive, walk approximately 3,335' (1,017m) south on the Serrano Creek Trail. The isolate is located on top of a mechanical push pile on the west side of Serrano Creek.

***P3a. Description:**

Iso-1 is a granitic mano fragment. This artifact was found on top of a mechanical push pile on a terrace on the west side of Serrano Creek. This artifact measures 7.5cm long x 11.0cm wide x 6.0cm thick. Light use-wear appears to be limited to a single side.

***P3b. Resource Attributes:** AP16. Other: Isolate
***P4. Resources Present:** ☐Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☒Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: Close-up of mano fragment

***P6. Date Constructed/Age and Sources:** ☐Historic ☒Prehistoric ☐Both

***P7. Owner and Address:**
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

***P8. Recorded by:**
D. McIntosh and M. Stever
Duke CRM
20371 Lake Forest Drive, Ste A2
Lake Forest, California 92630

***P9. Date Recorded:** 10/29/14

***P10. Survey Type:**
Intensive Pedestrian Survey

***P11. Report Citation:** Gregory P. Greenberg and Curt Duke, 2014, *Cultural and Paleontological Resources Assessment, Serrano Summit, Lake Forest, Orange County*. Duke Cultural Resources Management, LLC, Lake Forest, California. Prepared for the City of Lake Forest, California

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (list)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

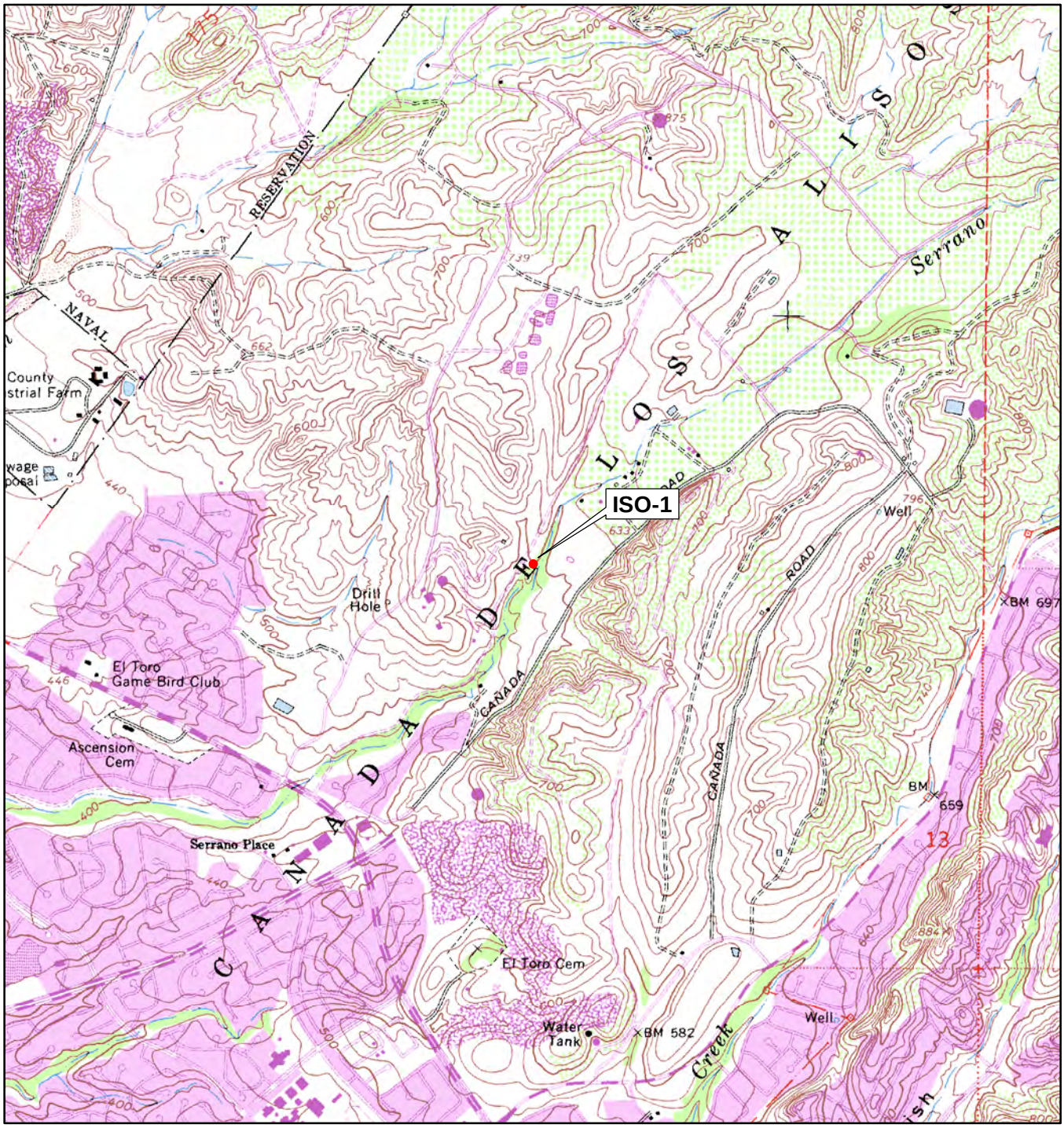
Primary #
HRI#
Trinomial

***Resource Name or #:** ISO-1

***Scale:** 1:24,000

***Map Name:** El Toro, CA, USGS 7.5' quadrangle

***Date:** 1968



SCALE 1:24,000

TRUE NORTH

1 0.5 0 1 Miles

1,000 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 Feet

1 0.5 0 1 Kilometers

*Required information