

**FINAL  
VISUAL IMPACT ASSESSMENT**

**Interstate 5 HOV Lane Extension Project**

**July 2010**

District 12-ORA-5  
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**TABLE OF CONTENTS**

**I. PURPOSE OF THE STUDY..... 1**

**II. PROJECT LOCATION ..... 1**

**III. PROJECT DESCRIPTION ..... 1**

    A. Purpose and Need..... 5

**IV. ASSESSMENT METHOD ..... 6**

**V. VISUAL ENVIRONMENT OF THE PROJECT ..... 6**

    A. Project Setting ..... 6

    B. Landscape Units ..... 6

    C. Project Viewshed..... 7

**VI. EXISTING VISUAL RESOURCES AND VIEWER RESPONSE ..... 9**

    A. FHWA Method of Visual Resource Analysis ..... 9

    B. Existing Visual Resources..... 9

    C. Methods of Predicting Viewer Response ..... 11

    D. Existing Viewer Sensitivity..... 12

    E. Existing Viewer Groups, Viewer Exposure, and Viewer Awareness ..... 18

**VII. VISUAL IMPACT ASSESSMENT ..... 21**

    A. Method of Assessing Project Impacts ..... 21

    B. Definition of Visual Impact Levels ..... 22

    C. Analysis of Key Views..... 23

    D. Summary of Project Impacts ..... 39

    E. Cumulative Impacts..... 46

**VIII. AVOIDANCE AND MINIMIZATION MEASURES..... 47**

**IX. REFERENCES ..... 48**

**LIST OF EXHIBITS**

---

Figure 1 – Regional Vicinity..... 50

Figure 2a – Site Plan ..... 51

Figure 2b – Site Plan..... 52

Figure 3 – Landscape Units ..... 53

Figure 4a – Viewshed Map – Landscape Unit 1 ..... 54

Figure 4b – Viewshed Map – Landscape Unit 2..... 55

Figure 4c – Viewshed Map – Landscape Unit 3 ..... 56

Figure 5 – Key View Locations Map..... 57

Figure 6a – Key View 1 Existing Condition..... 58

Figure 6b – Key View 1 Proposed Condition – Option A ..... 59

Figure 6c – Key View 1 Proposed Condition – Option B..... 60

Figure 7a – Key View 2 Existing Condition..... 61

Figure 7b – Key View 2 Proposed Condition – Alternative 2 ..... 62

Figure 7c – Key View 2 Proposed Condition – Alternative 3 ..... 63

Figure 7d – Key View 2 Proposed Condition – Alternative 4 ..... 64

Figure 8a – Key View 3 Existing Condition..... 65

Figure 8b – Key View 3 Proposed Condition – Alternative 2 ..... 66

Figure 8c – Key View 3 Proposed Condition – Alternative 3 ..... 67

Figure 8d – Key View 3 Proposed Condition – Alternative 4 ..... 68

Figure 9a – Key View 4 Existing Condition..... 69

Figure 9b – Key View 4 Proposed Condition – Alternative 2 ..... 70

Figure 9c – Key View 4 Proposed Condition – Alternative 3 ..... 71

Figure 9d – Key View 4 Proposed Condition – Alternative 4 ..... 72

Figure 10a – Key View 5 Existing Condition..... 73

Figure 10b – Key View 5 Proposed Condition – Alternative 2 ..... 74

Figure 10c – Key View 5 Proposed Condition – Alternative 3 ..... 75

Figure 10d – Key View 5 Proposed Condition – Alternative 4 ..... 76

Figure 11a – Key View 6 Existing Condition..... 77

Figure 11b – Key View 6 Proposed Condition – Alternative 2 ..... 78

Figure 11c – Key View 6 Proposed Condition – Alternative 3 ..... 79

Figure 11d – Key View 6 Proposed Condition – Alternative 4 ..... 80

**LIST OF TABLES**

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Table 1: Key View Impact Summary ..... 40

**LIST OF APPENDICIES**

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- A) SITE PLANS
- B) VISUAL QUALITY EVALUATION FORMS

## ACRONYMS AND ABBREVIATIONS

Caltrans	California Department of Transportation
FHWA	Federal Highway Administration
HOV	High-Occupancy Vehicle
IS/EA	Initial Study/Environmental Assessment
LU	Landscape Unit
OC	Overcrossing
OCTA	Orange County Transportation Authority
PCH	Pacific Coast Highway
PM	Post Mile
UC	Undercrossing

## I. PURPOSE OF THE STUDY

The purpose of this study is to assess the potential visual impacts of the proposed Interstate 5 HOV Lane Extension Project (herein referenced as the “project”). The study contains proposed measures to mitigate any adverse visual impacts on the surrounding visual environment associated with the construction of the project.

## II. PROJECT LOCATION

The study area lies within the cities of San Clemente, Dana Point, and San Juan Capistrano, Orange County (County), State of California; refer to Figure 1 (Regional Vicinity). The project proposes improvements on Interstate 5 (I-5) from 0.4 mile south of the Avenida Pico Undercrossing (UC) (Post Mile [PM] 3.30) to 0.1 mile south of the San Juan Creek Road UC (PM 8.70); refer to Figures 2a and 2b (Site Plan).

## III. PROJECT DESCRIPTION

The Orange County Transportation Authority (OCTA), in cooperation with the California Department of Transportation (Caltrans), the City of Dana Point, City of San Clemente, and City of San Juan Capistrano, is proposing to widen I-5 between Avenida Pico and San Juan Creek Road. The proposed project is designed to achieve the following objectives: provide continuity of the I-5 mainline high-occupancy vehicle (HOV) network within the project limits; maximize overall performance within the project limits by minimizing weaving conflicts at the terminus of the HOV lanes; maintain travel speeds for HOV lane users; provide intermittent auxiliary lanes, where needed, to relieve congestion at diverge and merge locations; minimize right-of-way acquisition; relieve congestion within interchange areas, on- and off-ramps, and local intersections; and reduce congestion on I-5 within the project limits.

The project limits on I-5 extend from 0.4 mile south of the Avenida Pico UC (PM 3.0) to 0.1 mile south of the San Juan Creek Road UC (PM 8.7). The proposed project will add one HOV lane in each direction on I-5 throughout the project limits, reestablish existing auxiliary lanes and construct new auxiliary lanes, and improve several existing on- and off-ramps.

Four alternatives, including the No Build Alternative, will be analyzed as part of the Draft Initial Study/Environmental Assessment (IS/EA). The project alternatives are described below.

### **Alternative 1 (No Build)**

The No Build Alternative proposes no improvements to I-5, maintaining the existing four general purpose lanes throughout the project limits in the northbound and southbound directions. All freeway facilities will remain as-is, with the exception of proposed projects that are under development or currently in construction.

### **Alternative 2**

*Auxiliary Lanes.* Alternative 2 proposes to remove the existing I-5 paved shoulders and construct a new travel way and new shoulder pavement to the outside of the northbound and southbound lanes to accommodate HOV lanes. This alternative proposes full standard widths, including a 10-

foot inside shoulder, 12-foot HOV lane, 4-foot buffer, four 12-foot general purpose lanes, and a 10-foot outside shoulder throughout the majority of the project limits. Additionally, the existing auxiliary lanes through the project limits will be reestablished, and new auxiliary lanes will be constructed at the following locations (at the specified lengths):

- To Avenida Vista Hermosa southbound off-ramp (1,300 feet);
- From Avenida Vista Hermosa northbound on-ramp (1,600 feet); and
- From Camino de Estrella southbound on-ramp (1,600 feet).

*Avenida Pico Interchange Improvements.* In addition to providing an HOV lane through the I-5/Avenida Pico interchange, the interchange configuration will also be improved. There are two options under consideration for reconfiguration of the interchange, both of which require replacement of the Avenida Pico Overcrossing (OC) structure.

- *Design Option A – Modified Tight Diamond Interchange.* Under this option, the on- and off-ramps at Avenida Pico will be realigned and the northbound on-ramp will be widened to three lanes. The overall configuration of the interchange will be similar to the existing configuration. Additionally, Avenida Pico will be improved under the structure to provide dual left-turn lanes to both the northbound and southbound on-ramps. This alternative will incorporate an interconnect line to optimize signal timing and operations for the closely spaced intersections at the interchange. The geometry of Avenida Pico will also be improved on the east side of I-5 to remove the existing reversing curves. Bicycle lanes and standard outside shoulders will be provided throughout the majority of the interchange in both the eastbound and westbound directions. A sidewalk will be provided through the interchange in the eastbound direction. In the westbound direction, space will be provided to accommodate future construction of a 12-foot lane and sidewalk through the interchange.
- *Design Option B – Northbound Loop On-Ramp/Realigned Northbound Off-Ramp.* Under this option, a northbound loop on-ramp will be added, allowing for the removal of the existing left-turn lane for traffic heading eastbound on Avenida Pico to access northbound I-5. The existing directional on-ramp will remain in place, allowing traffic heading westbound to access northbound I-5. Additionally, the northbound off-ramp will be reconfigured around the loop, resulting in a partial cloverleaf configuration. The southbound ramps will be realigned and the geometry of Avenida Pico will be improved as proposed in Design Option A. Dual left-turn lanes will be provided under the structure to the southbound on-ramp. Bicycle lanes and standard outside shoulders will be provided throughout the majority of the interchange in both the eastbound and westbound directions. A sidewalk will be provided through the interchange in the eastbound direction. In the westbound direction, space will be provided to accommodate future construction of a 12-foot lane and sidewalk through the interchange.

*Ramps.* All ramps within the project limits will be modified in order to accommodate the HOV lanes, which will include improvements ranging from restriping to complete reconstruction. Specifically, ramp modifications under this alternative will include the following:

*Avenida Pico*

- Modify ramps as described in Design Options A and B above.

*Avenida Vista Hermosa*

- Restripe the northbound and southbound loop on-ramps; and
- Restripe the northbound on- and off-ramps and southbound off-ramp.

*Camino de Estrella*

- Realign, reconstruct, and widen the southbound off-ramp to a two-lane ramp;
- Realign and reconstruct the northbound and southbound on-ramps and northbound loop on-ramp; and
- Realign the northbound off-ramp.

*Camino Las Ramblas/Pacific Coast Highway (PCH)*

- Realign, reconstruct, and widen the southbound on-ramp to a two-lane ramp;
- Realign and reconstruct the southbound loop on-ramp;
- Realign the southbound off-ramp and northbound on- and off-ramps; and
- Realign the northbound I-5 connector.

*Camino Capistrano (Stonehill Drive)*

- Realign and reconstruct the northbound on-ramp.

Structures.*Via California*

- Reduced shoulder widths are proposed under the Via California structure in order to avoid replacement of the existing Via California OC (Bridge No. 55-225). The inside shoulder will be reduced to approximately four feet at the minimum location and the HOV buffer will be eliminated in the northbound direction.

*Avenida Pico*

- This alternative also proposes to replace the Avenida Pico UC structure (Bridge No. 55-205) to accommodate the HOV lane in each direction through the interchange. In order to achieve minimum vertical clearance for this structure, the I-5 mainline profile will be raised through the interchange area. Additionally, the I-5 centerline will be realigned westerly approximately 20 feet through the interchange to ensure that all existing mainline lanes are open during construction.

*Avenida Vaquero UC (Bridge No. 55-223)*

- Structure widening.

*Northbound I-5 to northbound PCH Connector (Bridge No. 55-226)*

- Structure widening.

*Route 5/Camino Las Ramblas UC (Bridge No. 55-510)*

- Structure widening.

*Camino Capistrano UC (Stonehill Drive) (Bridge No. 55-227L and 55-227R)*

- Structure widening.

Other Improvements. Alternative 2 proposes to improve the existing compound curve between 0.3 mile south of Stonehill Drive and PCH. This alternative will provide a wide inside shoulder (26 feet at the maximum width) throughout the southern portion of the curve, along with increasing the radius from 2,000 to 2,200 feet to accommodate full standard stopping sight distance in the southbound direction. For the northern portion of the curve, the existing radius will be increased from 3,200 to 3,300 feet, with a 16-foot shoulder, in order to achieve a standard stopping sight distance through this portion of the compound curve. To accommodate the improvements to this compound curve, the median will be reconstructed.

### **Alternative 3**

Alternative 3 is very similar in nature to Alternative 2. The differences are noted below:

Auxiliary Lanes. New auxiliary lanes will be constructed at the same locations as noted in Alternative 2.

Avenida Pico Interchange Improvements. Design options for the Avenida Pico interchange reconfiguration are the same as those noted under Alternative 2.

Ramps. Ramp modifications are the same as those noted under Alternative 2, with the exception that the Camino Capistrano (Stonehill Drive) ramp will not be impacted.

Structures. Modifications and improvements to structures are the same as those noted under Alternative 2, with the exception that I-5 northbound Camino Capistrano UC (Stonehill Drive) (Bridge No. 55-227R) will not be widened.

Other Improvements. Unlike Alternative 2, in Alternative 3, for the northern portion of the compound curve, the existing radius will not be changed and a two-foot median shoulder will be provided, resulting in a non-standard stopping sight distance. To accommodate the improvements to this compound curve, the median will be reconstructed.

### **Alternative 4**

Alternative 4 includes many of the improvements common to Alternatives 2 and 3, with a few modifications. Alternative 4 proposes no buffer instead of the four-foot buffer proposed in Alternatives 2 and 3. Under the no buffer scenario, the HOV lane will accommodate continuous access throughout the project limits.

Auxiliary Lanes. New auxiliary lanes will be constructed at the same locations as noted in Alternatives 2 and 3.

Avenida Pico Interchange Improvements. Design options for the Avenida Pico interchange reconfiguration will be the same as those noted under Alternatives 2 and 3.

Ramps. Ramp modifications will be the same as those noted under Alternative 3.

Structures. Modifications and improvements to structures are the same as those noted under Alternative 3.

Other Improvements. Unlike Alternatives 2 and 3, for the northern portion of the compound curve, the existing radius will not be changed and a standard 10-foot median shoulder will be

provided, which will minimize impacts but result in a non-standard stopping sight distance condition. To accommodate the improvements to this compound curve, the median will be reconstructed.

## **A. Purpose and Need**

### **Purpose**

The purpose of the project is to improve existing and future traffic operations on I-5 from San Juan Creek Road to Avenida Pico while minimizing environmental and economic impacts. The following key issues represent general deficiencies of I-5 within the project limits, and the potential solutions/opportunities for improvements:

- Achieve higher person carrying capacity within the corridor by increasing the vehicle occupancy rate;
- Reduce pollution and improve air quality along this corridor;
- Promote ride sharing and the use of HOVs such as carpools, vanpools, and bus services;
- Provide another lane option allowing for more consistent and predictable travel times for carpools, vanpools, buses, transit services, and emergency vehicles during peak periods;
- Relieve congestion due to the merge and diverge points for successive on- and off-ramps in both directions;
- Reduce delay due to the existing HOV termini location;
- Improve the capacity of the on- and off-ramps within the project limits, where needed; and
- Relieve congestion between successive ramps at several interchanges.

The project objectives include the following:

- Provide continuity of the I-5 mainline HOV network within the project limits;
- Maximize overall performance within the project limits by minimizing weaving conflicts at the termini of the HOV lanes and maintaining travel speeds for HOV lane users;
- Provide intermittent auxiliary lanes, where needed, to relieve congestion at diverge and merge locations;
- Minimize right-of-way acquisition;
- Relieve local street congestion within interchange areas, on- and off-ramps, and local intersections; and
- Reduce congestion on I-5 within the project limits.

### **Need**

Without this project, the efficiency of the regional HOV system will be reduced because HOV traffic will be required to merge into mixed-flow traffic lanes. Delay in completion of this project will contribute to traffic congestion on I-5 within the cities of San Clemente, Dana Point, and San Juan Capistrano. The proposed project is needed to address:

- A high level of traffic during the weekdays as well as weekends/holidays through this section;
- Congestion due to the termination of the existing HOV lane in both directions;
- Delay due to weaving and merging of HOV at the current termini in both directions;
- Congestion at the on/off ramps due to high traffic demands at the ramps; and
- Congestion due to weaving and merging between the successive ramps at several interchanges.

#### **IV. ASSESSMENT METHOD**

The assessment method used in this visual impact study generally follows the guidelines outlined in the Federal Highway Administration (FHWA) publication, *Visual Impact Assessment for Highway Projects*, dated January 1988.

Six steps required to assess visual impacts were performed, as follows:

- A. Define the project setting and viewshed.
- B. Identify key views for visual assessment.
- C. Analyze existing visual resources and viewer response.
- D. Depict the visual appearance of project alternatives.
- E. Assess the visual impacts of project alternatives.
- F. Propose methods to mitigate adverse visual impacts.

#### **V. VISUAL ENVIRONMENT OF THE PROJECT**

##### **A. Project Setting**

The regional landscape establishes the general visual environment of the project; however, the specific visual environment upon which this assessment focuses is determined by defining landscape units and the project viewshed.

The regional landscape of the southern portion of the County is characterized by the coastal valley, Pacific Ocean coastline, coastal bluffs, rolling hills, and distant mountains. The project site is located in a sloping area of the County and is surrounded by a mix of uses including commercial, residential, recreational, institutional, and transportation uses.

##### **B. Landscape Units**

A landscape unit is a portion of the regional landscape and can be thought of as an outdoor room that exhibits a distinct visual character. A landscape unit will often correspond to a place or district that is commonly known among local viewers. The project site can be separated into three distinct landscape units, based on the different views and character experienced within each; refer to Figure 3 (Landscape Units).

### Landscape Unit 1: San Juan Creek

Landscape Unit 1 (LU1) is located in the northern portion of the project area in the City of San Juan Capistrano. LU1 lies within a stretch of land along I-5 from the northern boundary of the project site (San Juan Creek Road) to approximately 0.3 mile north of Stonehill Drive. LU1 is gently sloping to the south and west, with elevations ranging from approximately 30 to 325 feet above mean sea level (msl). LU1 consists of the I-5 corridor and surrounding areas, and is located to the east of San Juan Creek and west of an undeveloped hillside area of San Juan Capistrano. Uses within LU1 include roadway, commercial, residential, and recreational land uses.

LU1 includes urban land consisting of commercial and residential uses, and San Juan Creek to the north and west; commercial, residential, and undeveloped hillside uses to the east; and residential uses to the south. Although man-made features (e.g., residential and commercial development) exist within LU1, San Juan Creek, valleys, and surrounding rolling hills are also prominent features in LU1. Other hardscape features (e.g., soundwalls, retaining walls, barriers) are also present along the project area. Several mature trees and other streetscape are located within LU1 and along the I-5 corridor.

### Landscape Unit 2: Coastal Bluffs

Landscape Unit 2 (LU2) is located within the northern portion of the project site in a sloping area, and extends from the southern boundary of LU1 to the Via California OC in the City of Dana Point. Elevations in LU2 range from approximately 25 to 400 feet above msl. LU2 includes commercial and residential uses to the north and east; residential and undeveloped land uses to the west; and residential uses to the south. The Pacific Ocean is also located to the west of LU2. The project site, within LU2, is surrounded by commercial, residential, and recreational uses. Other man-made features within LU2 include roadways, soundwalls, retaining walls, barriers, and commercial structures (i.e., residential, auto dealerships, and office buildings).

### Landscape Unit 3: Boca de la Playa

Landscape Unit 3 (LU3) is located within the southern portion of the project site, and extends from the Via California OC to the southern boundary of the project site (in the City of San Clemente). This landscape unit consists of residential uses to the north and south of the I-5 corridor, and commercial, institutional (i.e., San Clemente High School), and recreational uses in the east, south, and western portions of LU3. The Pacific Ocean is also located to the west of LU3. Man-made features within LU3 include residential, commercial, and institutional structures, commercial signage, and soundwalls and retaining walls. LU3 is located in a sloping area, with elevations ranging from approximately 30 to 420 feet above msl.

## **C. Project Viewshed**

A viewshed is a subset of a landscape unit and is comprised of all the surface areas visible from an observer's viewpoint. The limits of a viewshed are defined as the visual limits of the views located from the proposed project. The viewshed also includes the locations of viewers likely to be affected by visual changes brought about by project features.

Based upon a site visit conducted on October 15, 2009, scattered views are afforded from surrounding urban land uses within a one-mile radius of the project site. Views of the project site are afforded by adjoining residential, commercial, and institutional uses. Views from the project site are afforded by motorists traveling along northbound and southbound I-5 travel lanes.

#### Landscape Unit 1: San Juan Creek

Views of the project site within LU1 are afforded by residents to the east and west located at a higher elevation along adjacent bluffs. Views of the project site are also afforded from surrounding commercial uses adjacent to I-5, as they are located at similar elevations as I-5. Views from the project site are afforded by travelers in the northbound and southbound lanes of I-5. Views within LU1 consist of the I-5 northbound and southbound travel lanes, surrounding residential and commercial uses, valleys, and surrounding hillsides. Also, minimal views to San Juan Creek are afforded from the northern portion of LU1. However, the majority of these views are screened by commercial structures and mature trees; refer to Figure 4a (Viewshed Map – LU1).

#### Landscape Unit 2: Coastal Bluffs

Views of the project site within LU2 are afforded by residential uses atop the bluffs to the west of I-5 (in the vicinity of Del Obispo Street). Also, views from the project site are afforded from travelers in the northbound and southbound lanes of I-5, the Camino Las Ramblas off-ramp, the Via California OC, and residential uses situated atop the hills above I-5 to the east near Via California. As I-5 is located at a higher elevation than uses to the south, and soundwalls are situated along portions of I-5, views of the project site from surrounding residential uses to the south are considerably limited. The majority of partial views afforded from these locations include berms along the western side of I-5; freeway travel lanes are not visible due to topography. Views within LU2 generally consist of the I-5 northbound and southbound travel lanes, soundwalls, residential uses atop surrounding bluffs, surrounding hillsides, vegetation, and partial views to the Pacific Ocean; refer to Figure 4b (Viewshed Map – LU2).

#### Landscape Unit 3: Boca de la Playa

Views of the project site within LU3 are afforded by adjoining commercial uses along I-5 and residential uses atop the hillsides to the east of I-5. Also, views from the project site are afforded by travelers in the northbound and southbound lanes of I-5, the Via California OC, the Camino de Estrella OC, travelers along Avenida Pico, and all on- and off-ramps throughout LU3. Uses to the west of I-5 are generally lower in elevation than the project site; therefore, views of the project site from these uses are generally screened by intervening structures, vegetation, and topography. Partial views from these locations are afforded to berms along the west of I-5; however, views of I-5 travel lanes are not afforded. Views within LU3 generally consist of I-5 northbound and southbound travel lanes, surrounding commercial and residential structures, soundwalls, retaining walls, and hillsides. Partial views to the Pacific Ocean are afforded from I-5 travel lanes in few locations throughout LU3; refer to Figure 4c (Viewshed Map – LU3).

## VI. EXISTING VISUAL RESOURCES AND VIEWER RESPONSE

### A. FHWA Method of Visual Resource Analysis

**Identify Visual Character** – Visual character is descriptive and non-evaluative, which means it is based on defined attributes that are neither good nor bad. A change in visual character cannot be described as having good or bad attributes until it is compared with the viewer response to that change. If there is public preference for the established visual character of a regional landscape and resistance to a project that would contrast that character, then changes in the visual character can be evaluated.

**Assess Visual Quality** – Visual quality is evaluated by identifying the vividness, intactness, and unity present in the viewshed. FHWA states that this method should correlate with public judgments of visual quality well enough to predict those judgments. This approach is particularly useful in highway planning because it does not presume that a highway project is necessarily an eyesore. This approach to evaluating visual quality can also help identify specific methods for mitigating each adverse impact that may occur as a result of a project. The three criteria for evaluating visual quality can be defined as follows:

**Vividness** is the visual power or memorability of landscape components as they combine in distinctive visual patterns.

**Intactness** is the visual integrity of the natural and man-built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.

**Unity** is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual man-made components in the landscape.

### B. Existing Visual Resources

#### **Existing Visual Character**

##### Landscape Unit 1: San Juan Creek

Existing visual resources within LU1 include San Juan Creek, surrounding hillsides, and valleys. Vegetation within LU1 consists of ornamental trees and landscaping along the eastern and western sides of I-5, as well as within surrounding commercial and residential uses. Mature vegetation located along San Juan Creek to the west of the project site is partially visible. A portion of the San Juan Hills Country Club golf course and associated trees and vegetation is also visible within LU1, to the northeast of the project site.

The visible form and line of the valleys and distant ridgelines (associated with the Cleveland National Forest) to the north of LU1 and the color and texture of the vegetated hillsides adjacent to the east enhance the visual character of LU1. Man-made features within LU1 consist of urban development. Signage associated with I-5 and the various commercial uses are also visible within LU1. Surrounding roadways are visible within

LU1. Existing retaining walls and fencing along I-5 in LU1 include architectural treatments that also increase the existing intactness and unity with this landscape unit.

#### Landscape Unit 2: Coastal Bluffs

Visual resources within LU2 include the surrounding hillsides, coastal bluffs, and the Pacific Ocean. Mature ornamental landscaping is present along I-5 and within commercial and residential land uses in LU2. Vegetation is also located along existing soundwalls throughout LU2. Vegetated hillsides and mature trees are present along the east side of I-5 in LU2. The varying color and texture of the vegetated hillsides and coastal bluffs in LU2 increase the vividness within this view. Grasses, shrubs, and mature trees are present in the vicinity of the Camino Las Ramblas on- and off-ramps in the southern portion of LU2. Terraced residential developments are located along the coastal bluffs to the west of the project site, creating increased vividness and unity between the natural and urban landscape.

#### Landscape Unit 3: Boca de la Playa

Existing visual resources within LU3 include the surrounding hillsides. Landscaped berms, mature trees, and vegetation along soundwalls are present. The continuous presence of soundwalls throughout LU3 detracts from the continuity of the colors and texture of mature trees and vegetation (located beyond the retaining walls and soundwalls) throughout the LU3 corridor. However, portions of existing retaining walls and soundwalls contain vegetation along the wall features, which increases intactness in these areas. Residential uses atop bluffs to the east and commercial structures to the east and west are visible from several locations throughout LU3. The varying line, form, and texture of the developed hillsides and mature vegetation along I-5 create increased intactness throughout LU3.

### **Existing Visual Quality**

#### Landscape Unit 1: San Juan Creek

The average visual quality within LU1 is considered to be high. Drivers utilizing the northbound and southbound travel lanes of I-5 generally have views of roadway uses, adjacent commercial development that is fairly unified, surrounding hillsides, valleys, and distant mountains. The existing commercial signage throughout LU1 appears to detract from the project area's intactness. Distant background views are afforded to vivid ridgetops associated with the Santa Ana Mountains and the Cleveland National Forest located north-northeast of the project site, which create a distinctive visual pattern to those traveling in the northbound direction. Sitton Peak (elevation 3,273 feet), Los Pinos Peak (elevation 4,510 feet), and Sugarloaf Peak (elevation 3,227 feet) are among the ridgetops visible from within LU1. Southbound views are afforded through the valley to coastal bluffs and the Pacific Ocean.

San Juan Creek is located within the western portion of LU1; however, it is only partially visible from the northern portion of LU1. Motorists traveling in northbound and southbound lanes of I-5 have views to undeveloped hillsides to the east of I-5, and to ornamental landscaping along the eastern and western sides of I-5. Commercial uses to the east and west, freeway signage, and power transmission lines adjacent to the west side

of I-5 appear to encroach on views from travelers along I-5. Visual unity is inhibited by the varying character of development to the east (vegetated hillsides and commercial uses) and west (commercial uses, auto dealerships, and associated signage) sides of I-5 within LU1. Encroachment from soundwalls, retaining walls, and combination soundwall/retaining walls on views from I-5 travelers within LU1 is reduced by aesthetic and landscaped wall treatments. Existing streetscape along Camino Capistrano further increases intactness in the area.

#### Landscape Unit 2: Coastal Bluffs

The average existing visual quality within LU2 is considered to be high. LU2 consists of commercial and residential uses, hillsides, coastal bluffs, and mature trees and vegetation. Northbound travelers along I-5 have background views to rolling hills and coastal bluff residential developments. San Juan Creek is located to the west of LU2; however, it is not visible due to intervening topography. The Pacific Ocean is also located to the west of LU2, and is visible at the PCH UC. Mature trees and ornamental landscaping are visible along the east and west sides of I-5, which increases unity throughout LU2. Overhead power lines in the northern portion of LU2 and large freeway signage throughout LU2 appear to encroach on views from I-5 motorists. Soundwalls and combination soundwall/retaining walls along the west side of I-5 and retaining walls along the east side of I-5 have mature vine treatments and textured concrete pattern, reducing the visible encroachment.

#### Landscape Unit 3: Boca de la Playa

The average existing visual quality within LU3 is considered to be moderately high. LU3 is characterized by residential, commercial, recreational, and institutional uses. Views from motorists traveling along I-5 include surrounding mature trees and ornamental landscaping, as well as vivid rolling hills to the east of I-5. Soundwalls, retaining walls, and combination sound/retaining walls are interspersed throughout LU3. Many walls include aesthetic or landscape treatments, which reduce encroachment on views in the project area. Although the Pacific Ocean is located one mile to the west of the project site, it is not visible from freeway travelers. Some residents to the east of I-5 in LU3 (located at higher elevations than the project site) have views to the Pacific Ocean and I-5. Two roadway OC bridge structures are located within LU3, and are visible to freeway travelers and surrounding uses. Overhead power lines in interspersed portions of LU3 and large freeway signage throughout LU3 appear to encroach on views from I-5 motorists.

### **C. Methods of Predicting Viewer Response**

Viewer response is composed of two elements: viewer sensitivity and viewer exposure. These elements combine to form a method of predicting how the public might react to visual changes brought about by a highway project.

**Viewer sensitivity** is defined both as the viewers' concern for scenic quality and the viewers' response to changes in the visual resources that make up the view. Local values and objectives may confer visual significance on landscape components and areas that would otherwise appear unexceptional in a visual resource analysis. Even when the existing appearance of a project site is uninspiring, a community may still object to projects that fall short of its visual goals. Analysts can learn about these

special resources and community aspirations for visual quality through citizen participation procedures, as well as from local publications and planning documents.

**Viewer exposure** is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, duration of their view, speed at which the viewer moves, and position of the viewer. High viewer exposure heightens the importance of early consideration of design, art, and architecture, along with their roles in managing the visual resource effects of a project.

#### **D. Existing Viewer Sensitivity**

Multiple sensitive viewers adjoin the project site, the majority of which consist of residential, commercial, and recreational uses. Views to designated visual resources are protected through a combination of development review, zoning, design programs, design review, and proper management of park and open space areas within each city. The cities of San Juan Capistrano, Dana Point, and San Clemente have developed policies and objectives pertaining to scenic resources within their respective General Plans, which include the following:

##### San Juan Capistrano General Plan

According to the San Juan Capistrano General Plan, San Juan Capistrano is situated within a coastal valley, approximately one mile from the Pacific Ocean. The City of San Juan Capistrano is divided by I-5, which trends north and south through the City. As development has occurred over the past 25 years within San Juan Capistrano, the City has maintained distinctive open space character by acquiring land to preserve its defining ridgelines, hillsides, and trails.

##### *Land Use Element*

Two major issues that are addressed in the goals, policies, and implementation actions of the Land Use Element are (3) *protecting open space areas to protect the public safety and the visual quality of the community*, and (5) *enhancing and preserving the character of the existing neighborhoods*.

Policy 4.3: Preserve designated ridgelines and the immediate adjacent area to maintain the open space character of the community.

The Land Use Element also states: *The City contains a number of distinct neighborhoods defined by natural and man-made physical features, including San Juan, Oso, and Trabuco Creeks, steeply sloped areas defining the west and east portions of the community, Interstate 5, and the railroad line. Recognition of these areas can encourage more focused neighborhood-level planning and improvements in the future, particularly in older neighborhoods.*

Policy 7.2: Ensure that new development is compatible with the physical characteristics of its site, surrounding land uses, and available public infrastructure.

### *Conservation and Open Space Element*

Based on the Conservation and Open Space Element, some of San Juan Capistrano's most valuable assets include the City's parks, creeks, agricultural land, hillsides, ridgelines, and canyons. Major issues identified in this Element include (1) *preserving and enhancing open space resources*; (4) *preventing incompatible development*; and (5) *maintaining community scale and identity*.

Conservation and Open Space Goal 1: Preserve and enhance open space resources.

Conservation and Open Space Goal 4: Prevent incompatible development in areas which should be preserved for scenic, historic, conservation, or public safety purposes.

Policy 4.1: Assure incompatible development is avoided in those areas which are designated to be preserved for scenic, historic, conservation, or public safety purposes.

Conservation and Open Space Goal 5: Shape and guide development in order to achieve efficient growth and maintain community scale and identity.

Policy 5.2: Ensure that new development integrates and preserves areas designated for scenic, historic, conservation, or public safety reasons.

### *Community Design Element*

The Community Design Element addresses the conservation and enhancement of the visual quality of San Juan Capistrano's environment. Major issues include (1) *the protection of the natural hillside and various views created by the hillsides*; (3) *the preservation and enhancement of the historical character of the community*; (4) *the harmonious incorporation of new development into existing public and private development*; and (5) *the maintenance of the community's "small-village, rural atmosphere"*.

Community Design Goal 2: Preserve the historic character of the community.

Policy 2.1: Encourage development which complements the City's traditional, historic character through site design, architecture, and landscaping.

Community Design Goal 3: Preserve and enhance natural features.

Policy 3.1: Limit development of important natural characteristics such as ridgelines, unique hillside features and creeks.

Policy 3.3: Preserve and enhance scenic transportation corridors, including Interstate 5 and the railroad.

Policy 3.4: Preserve important viewsheds.

### Dana Point General Plan

According to the Dana Point General Plan, Dana Point is a coastal city located along the Pacific Ocean extending almost seven miles from Laguna Beach on the north to San Clemente on the south. This interface between water and land is characterized by rugged coastal bluffs separated by two major freshwater drainages, San Juan Creek and Salt Creek, which empty into the Pacific Ocean.

#### *Land Use Element*

GOAL 4: Encourage the preservation of the natural environmental resources of the City of Dana Point.

Policy 4.6: Ensure land uses within designated and proposed scenic corridors are compatible with scenic enhancement and preservation. (Coastal Act/30251)

Policy 4.7: Coordinate with appropriate Park, Recreation and Harbor Agencies to enhance Open Space trails and bike paths. (Coastal Act/30210-212.5)

Policy 4.9: Encourage the preservation of significant natural areas as cohesive open space.

#### *Conservation and Open Space Element*

The Conservation and Open Space Element addresses the preservation and use of Dana Point's important natural resources and open space areas. A substantial portion of Dana Point's natural open space and biological habitat has been replaced with urban development. However, there are significant portions of the community that remain in a natural state. These areas include, but are not limited to, the San Juan Creek Basin. Although portions of this area are planned to be developed in the future, the conservation of open space and the natural landforms can help to preserve the character of the area.

The natural features in the Dana Point area have helped to create the desirable character of the area. Topographical features such as the San Juan Creek watershed, the bluffs, and inland hills should be protected from insensitive development. Public views should be conserved and the natural vegetation retained as much as possible.

GOAL 2: Conserve significant topographical features, important watershed areas, resources, soils and beaches.

Policy 2.2: Site and architectural design shall respond to the natural landform whenever possible to minimize grading and visual impact. (Coastal Act/30250)

Policy 2.3: Control erosion during and following construction through proper grading techniques, vegetation replanting, and the installation of proper drainage and erosion control improvements. (Coastal Act/30243)

Policy 2.4: Require the practice of proper soil management techniques to reduce erosion, sedimentation, and other soil-related problems. (Coastal Act/30243)

Policy 2.9: Preserve significant natural features as part of new development. Permitted development shall be sited and designed to minimize the alteration of natural landforms. Improvements adjacent to beaches shall protect existing natural features and be carefully integrated with landforms. (Coastal Act/30240, 30250, 30251)

Policy 2.13: Bluff repair and erosion control measures such as retaining walls and other similar devices shall be limited to those necessary to protect existing structures in danger from erosion to minimize risks to life and property and shall avoid causing significant alteration to the natural character of the bluffs. (Coastal Act/30251, 30253)

Policy 3.8: Development in areas adjacent to parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas through, among other methods, creative site planning and minimizing visual impacts, and shall be compatible with the continuance of those parks and recreation areas. (Coastal Act 30240)

GOAL 6: Encourage open space areas to preserve natural resources.

Policy 6.2: Protect and preserve the public views of the Dana Point Harbor. (Coastal Visual Resources/30251)

Policy 6.4: Preserve and protect the scenic and visual quality of the coastal areas as a resource of public importance as depicted in figure COS-5 “Scenic Overlooks from Public Lands”, of this Element. Permitted development shall be sited and designed to protect public views from identified scenic overlooks on public lands to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. (Coastal Act/30251)

#### *Urban Design Element*

GOAL 1: Create Citywide visual linkages and symbols to strengthen Dana Point's identity as a city.

Policy 1.4: Preserve public views from streets and public places. (Coastal Act/30251)

#### San Clemente General Plan

According to the San Clemente General Plan, San Clemente is bounded geographically by the foothills of the Santa Ana Mountains to the northwest, San Mateo Creek to the east, the Pacific Ocean to the southwest, and San Juan Creek to the northwest. The northwest boundary follows the irregular city limits shared with the City of San Juan Capistrano and Dana Point. The southern boundary is shared with the Camp Pendleton Marine Reservation.

#### *Land Use Chapter*

Objective 1.9: Preserve open spaces for the City's residents which provide visual relief, amenity and recreational opportunities, protect environmental resources, protect the population from environmental hazards, and are in balance with new development.

Policy 1.9.14: Require that significant ridgelines be preserved as a visual and open space resource in accordance with the Aesthetic Resources Element policies (I 1.1, I 1.2, I 1.5, I 1.6, I 1.8, and I 1.9).

*Environmental Resources Chapter*

B. Aesthetic Resources Goal: Maintain the visual character of the City.

Objective 10.2: Preserve the aesthetic resources of the City, including coastal bluffs, visually significant ridgelines and coastal canyons, and significant public views.

Policy 10.2.7: Promote the preservation of significant public view corridors to the ocean (I 10.12).

Policy 10.2.8: Require that development be designed and sited to maintain the natural topographic and physiographic characteristics of the City's hillsides and canyons; including the:

- a. minimization of the area and height of cuts and fills;
- b. minimization of pad sizes;
- c. encouragement of the "stair-stepping" of structures to conform to slopes (by use of retaining walls and other elements); and
- d. configuration of sites to reflect natural topography, by the clustering of sites and units on lesser slopes and avoiding extensive fragmentation of steeper slopes and/or other techniques (I 10.13 and I 10.14).

*Scenic Highways Chapter*

The City contains corridors and locations from which scenic vistas can be viewed. Development along these corridors has the potential to impact significant views since all of these are not protected.

Objective 5.1: Enhance existing view corridors along scenic corridors and identify opportunities for the designation of new corridors.

Objective 5.3: Ensure that development is sited and designed to protect scenic corridors and open space/landscape areas; blending man-made and man-introduced features with the natural environment.

*Urban Design Chapter*

Objective 2.14: Develop freeway interchanges as City entrances with a consistent design vocabulary.

Policy 2.14.1: Implement the proposed improvements to all freeway interchanges and increase the density of the freeway edge plantings including the provisions of the Scenic Corridors Master Landscape Plan, which establishes a consistent design character for all of the City's nine freeway interchanges. The concept is to heighten the experience of the City's entrances by using plant materials which reflect San Clemente's "Spanish Village by-the-Sea" character. The plant vocabulary includes Mexican Fan Palms, the Coral Tree, Nerium Oleander and Bougainvillea (I 2.4 and I 2.6).

Policy 2.14.3: Work with Caltrans to enlist State support for additional edge plantings that screen Freeway fences and walls. It is the State's responsibility to repair the damage inflicted by freeway, and the City should exert whatever pressure is necessary to mitigate the freeway's impacts (I 2.4 and I 2.6).

Policy 2.14.4: Initiate a street tree planting program at all freeway "gateway" locations. Street tree and median planting should be used to create a visual structure on Camino de Los Mares, Avenida Pico, Avenida Presidio, Avenida de la Estrella, Avenida Palizada, Avenida Magdalena, El Camino Real and the new Avenida Vista Hermosa. Each gateway street should use a consistent tree species planted at a regular interval to unify street spaces and adjacent developments (I 2.4 and I 2.6).

The following is a discussion of designated visual resources that are located within each landscape unit for the project site, as well as a discussion of State designated scenic highways.

#### Landscape Unit 1: San Juan Creek

The northern stretch of the project site (LU1) is located in the City of San Juan Capistrano. The *City of San Juan Capistrano General Plan (San Juan Capistrano General Plan)* considers major ridgelines, creeks, and associated floodplain areas as valued scenic resources within the City.

The City of San Juan Capistrano values ridgelines and creeks as their most prominent visual resources. Distant ridgetops associated with the Santa Ana Mountains, San Juan Creek (partial views afforded by I-5 travelers and commercial users), hillsides, and mature vegetation are located within the viewshed of LU1. Views of the project site within LU1 are afforded by travelers along I-5, Valle Road, Camino Capistrano, and adjacent commercial users. Viewer sensitivity of these viewer groups is considered to be moderate.

#### Landscape Unit 2: Coastal Bluffs

The central portion of the project site (LU2) is located within the City of Dana Point. The *City of Dana Point General Plan (Dana Point General Plan)* identifies blufftops in the project area which offer panoramic views of the coastline as important scenic resources. The Circulation Element of the *Dana Point General Plan* identifies PCH as a type three urbanscape corridor, which is defined as “a corridor traversing an urban area with a defined visual corridor offering a view of attractive and existing urban scenes, and has recreational value for its visual relief as a result of nature or the designed efforts of man.”

The City of Dana Point values blufftops as important visual resources. Blufftops to the east of I-5 are visibly prominent from several locations within LU2. Views to the project site within LU2 are afforded by freeway travelers, commercial users, and residents atop the hillside to the east of I-5 (in the vicinity of Via California). Viewer sensitivity of the freeway and commercial viewers is considered to be moderate, while the viewer sensitivity for the residents is considered to be high.

### Landscape Unit 3: Boca de la Playa

The southern portion of the project site (LU3) is located in the City of San Clemente. The *City of San Clemente General Plan (San Clemente General Plan)* identifies coastal bluffs, coastal canyons, hillsides, ridgelines, rock outcroppings, and beaches as visual resources within the City. The *San Clemente General Plan* includes a Scenic Highways Element, which includes policies pertaining to creating visual corridors, integrating scenic highways with open spaces and recreational corridors, and siting and designing future development of scenic highways to protect visual corridors.

The City of San Clemente identifies coastal bluffs, coastal canyons, hillsides, ridgelines, rock outcrops, and beaches as important visual resources. Hillsides and ridgelines are visible in LU3. Views to the project site within LU3 are afforded by freeway travelers, residents, and commercial users to the east of I-5. Viewer sensitivity of the freeway and commercial viewers is considered to be moderate, while the viewer sensitivity for the residents is considered to be high.

### State Designated Scenic Highways

According to the California Department of Transportation, a state route must be included on the list of highways eligible for scenic highway designation in Streets and Highways Code Section 263. It can then be nominated for official designation by the local governing body. The project site does not include any eligible or officially designated State scenic highways.<sup>1</sup>

## **E. Existing Viewer Groups, Viewer Exposure, and Viewer Awareness**

### **Freeway Travelers**

Freeway travelers view the project site through all three landscape units. Drivers utilizing I-5 in the project area have long duration, direct views of the project site. Existing daily traffic volumes on I-5 within the project site range from approximately 192,600 to 241,200 vehicles per day, with peak hour volumes ranging from 5,820 to 8,870 vehicles.

I-5 serves as the primary regional transportation corridor in the project area. Motorists using I-5 experience direct views to the project site. Visible designated visual resources include distant ridgetops, hillsides, blufftops, and San Juan Creek. Daily commuters along I-5 may have an increased awareness of the project due to the daily exposure to the project area. These travelers will be moderately sensitive to project changes.

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<sup>1</sup> California Department of Transportation, *California Scenic Highway Mapping System*, accessed at [http://www.dot.ca.gov/hq/LandArch/scenic\\_highways/index.htm](http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm) on February 8, 2010.

## **Community Residents**

### Landscape Unit 1: San Juan Creek

Residents located in the vicinity of LU1 adjacent to the east of I-5 near San Juan Creek and along the hillsides to the west have short-duration or no views of the project area. The majority of views to I-5 from nearby residents are not afforded due to view blockage from existing commercial structures, soundwalls, and mature trees. However, some residents located atop hillsides to the east of I-5 are afforded long-duration, partial views to the project site. Visible designated visual resources include the Pacific Ocean, San Juan Creek, and ridgetops. Most residents in LU1 are likely to have a moderate concern for the project and its effect on views from their homes and neighborhoods. Conversely, those residents with ocean views from hillside developments are likely to have a high concern for the proposed project.

### Landscape Unit 2: Coastal Bluffs

There are several residents located in the vicinity of LU2 adjacent to the east (i.e., Capistrano Pointe Apartments and the new Blue Harbor residential development) and west (off of Camino Capistrano) of I-5. However, all residents in LU2 to the west and some residents to the east of I-5 do not have views due to obstruction by topography, retaining walls, soundwalls, and mature vegetation. Residents within the Blue Harbor development to the east of I-5 atop the adjacent hillsides have long-duration middleground views of I-5. Visible designated visual resources include surrounding bluffs. These residents are likely to have a high concern for the project and its effect on views from their location.

### Landscape Unit 3: Boca de la Playa

There are numerous residents located in the vicinity of LU3 adjacent to the east and west of I-5. Residents to the west of I-5 in LU3 do not currently have views as a result of obstruction by topography, retaining walls, soundwalls, and mature vegetation. However, some residents to the east have long duration views to the project site, depending on their location and elevation. These include residents to the east along Via Manzana, within Sea Pointe Estates (located off of Camino de los Mares), within the Marblehead development, and residents of multiple other developments to the east of I-5. Visible designated visual resources include hillsides and ridgelines. These residents with views are likely to have a high concern for the project and its effect on their views.

## **Commercial Area Employees and Customers**

### Landscape Unit 1: San Juan Creek

A variety of commercial uses, ranging from highway service commercial to neighborhood commercial uses, are located in the vicinity of LU1. Visible designated visual resources include San Juan Creek and ridgetops. Commercial employees and clientele would likely have short to moderate duration views and moderate awareness of the project, as views are afforded to the project site from commercial uses to the east and west of I-5.

### Landscape Unit 2: Coastal Bluffs

Highway service commercial and neighborhood commercial uses are located within LU2 to the west of I-5. Visible designated visual resources include surrounding bluffs. Commercial employees and clientele in LU2 are likely to have short to moderate duration views and moderate awareness of the project, as some views are afforded to the project site, while others are currently obstructed by topography, retaining walls, and soundwalls.

### Landscape Unit 3: Boca de la Playa

Regional commercial uses (i.e., Ralphs shopping center) are located in the vicinity of LU3. Commercial employees and clientele to the east of I-5 along Camino de los Mares are likely to have short to moderate duration views and moderate awareness of the project. Commercial uses to the west of I-5 (i.e., Sears shopping center) along Camino de Estrella and Camino Mira Costa will not have views to the project site, as they are blocked by topography and mature trees and vegetation. Visible designated visual resources include hillsides and ridgelines.

## **Local Street Users**

### Landscape Unit 1: San Juan Creek

Camino Capistrano is located adjacent to the west of I-5 in LU1. Camino Capistrano is a heavily traveled roadway that provides access to the commercial uses adjacent to the freeway. Valle Road is located adjacent to the east of I-5 in LU1, and provides access to the residential and commercial uses along the east side of I-5. Local street users along Camino Capistrano and Valle Road have direct, moderate duration views to the project site. Streets within commercial use areas (i.e., Via De Anza and Avenida Aeropuerto) of LU1 that are perpendicular to I-5 will have short duration views to the project site. Camino Capistrano, which parallels I-5 to the west, contains a Class II bike lane. Bikers along Camino Capistrano will have direct views to the project site. A Class II bike lane also exists along San Juan Creek; however, views to the project site are limited from this bike lane due to intervening topography and commercial structures. Visible designated visual resources include San Juan Creek and ridgetops. Local street users in LU1 will have a moderate awareness of the project.

### Landscape Unit 2: Coastal Bluffs

Direct, moderate duration views from the project site within LU2 are afforded from the northern portion of Camino Capistrano, which trends parallel to the west of I-5. Views from the southern portion of Camino Capistrano in LU2 are not afforded due to intervening topography and vegetation. Motorists along Camino Las Ramblas, which traverses I-5 in an east-west direction in LU2, will have direct, moderate duration views to the project site. Pedestrians and motorists traveling along Via California (located atop the undeveloped hill to the east of I-5) will have direct, moderate duration views to the project site. Also, those traveling across the Via California OC, which traverses the project site in an east-west direction at the southern boundary of LU2, will have direct, moderate duration views of the project site. The portion of LU2 within San Juan Capistrano also contains the Class II bike lane along Camino Capistrano. Bikers along the northern portion of Camino Capistrano within LU2 will have views to the project site, while views from along the southern portion of Camino Capistrano will not be afforded

due to topography. Visible designated visual resources include surrounding blufftops. Local street users in LU2 would have a moderate awareness of the project.

#### Landscape Unit 3: Boca de la Playa

Local street users along the Via California, Camino de Estrella, and Avenida Vista Hermosa OCs and the Avenida Vaquero and Avenida Pico UCs will also have direct, moderate duration views to the site. Views from other surrounding roadways in LU3 are currently blocked by topography, soundwalls, barriers, vegetation, and structures. A Class II bike lane exists along Avenida Vaquero, which traverses the central portion of LU3 in an east-west direction. Also, a Class II bike lane is located to the east of LU3, and a Class III bike lane is located to the west of LU3, both along Avenida Pico. These bike lanes do not traverse the project site. Views to the project site from the bike lanes are limited due to intervening topography, structures, and mature trees and vegetation. Visible designated visual resources include hillsides and ridgelines. Local street users in LU3 will have a moderate awareness of the project.

### **Recreation Uses**

#### Landscape Unit 1: San Juan Creek

Four parks (Arce, Descanso Veterans, Bonita, and Mission Bell) are located within LU1; however, views to the project site are not afforded from these locations due to topography, structures, and vegetation. Also, the San Juan Hills Country Club is located within LU1, to the northeast of the project site. Recreational users of the club's public golf course will not have views to the project site due to topography and existing structures and mature vegetation. Visible designated visual resources include San Juan Creek and ridgetops.

#### Landscape Unit 2: Coastal Bluffs

Via Canon Park is located within the southern portion of LU2. Views to the project site from the park are limited due to obstruction of intervening trees and vegetation. Visible designated visual resources include surrounding blufftops.

#### Landscape Unit 3: Boca de la Playa

Five parks (Sunset, Mira Costa, San Gorgonio, Verde, and Bonita Canyon) are located within LU3. Users of these recreational areas will not have views of the project site due to topography, soundwalls, retaining walls, structures, and mature trees and vegetation. Visible designated visual resources include hillsides and ridgelines.

## **VII. VISUAL IMPACT ASSESSMENT**

### **A. Method of Assessing Project Impacts**

The visual impacts of project alternatives are determined by assessing the visual resource change due to the project and predicting viewer response to that change.

Visual resource change is the sum of the change in visual character and change in visual quality. The first step in determining visual resource change is to assess the compatibility of the proposed project with the visual character of the existing landscape. The second step is to compare the visual quality of the existing resources with projected visual quality after the project is constructed.

The viewer response to project changes is the sum of viewer exposure and viewer sensitivity to the project as determined in the preceding section.

The resulting level of visual impact is determined by combining the severity of resource change with the degree to which people are likely to be adversely affected by the change.

## **B. Definition of Visual Impact Levels**

For the purpose of this assessment, project impacts are assessed for each Key View selected. Visual resource change is measured using the Visual Quality Evaluation Form, administered by the FHWA; refer to Appendix B (Visual Quality Evaluation Forms). The Visual Quality Evaluation Form allows the analyst to assign a numerical value to existing visual conditions, as well as assess the resulting visual quality upon project implementation. A scaled rating system of 1 through 7 was used to designate a numerical value. The numerical value of 1 represents a very low unit of measurement, and 7 represents a very high unit of measurement. A numerical value for vividness, intactness, and unity is given for existing and proposed conditions within each Key View selected.

The potential for an adverse impact depends upon the severity of resource change and the degree to which people are likely to be adversely affected by the change. Therefore, the following criteria is utilized for determining the resulting visual impacts at each Key View, based on comparing the difference in visual quality to the predicted viewer response, which is as follows:

**Low** – Minor adverse change to the existing visual resource, with low viewer response to change in the visual environment. May or may not require avoidance or minimization measures.

**Moderate** – Moderate adverse change to the visual resource with moderate viewer response. Impact can be mitigated within five years using conventional practices (i.e., landscaping, architectural treatments, use of a variety of building materials, directional lighting techniques, etc.).

**Moderately High** – Moderate adverse visual resource change with high viewer response or high adverse visual resource change with moderate viewer response. Extraordinary avoidance or minimization practices may be required. Landscape treatment required will generally take longer than five years to mitigate.

**High** – A high level of adverse change to the resource or a high level of viewer response to visual change such that architectural design and landscape treatment cannot mitigate the impacts. Viewer response level is high. An alternative project design may be required to avoid highly adverse impacts.

### C. Analysis of Key Views

Because it is not feasible to analyze all the views in which the proposed project will be seen, it is necessary to select a number of Key Views that will most clearly display the visual effects of the project. Key Views represent the primary viewer groups that will potentially be affected by the project, and are generally situated within the viewshed of major project features (e.g., proposed wall features, ramp re-configuration, areas of roadway widening, etc.). Key View locations were selected after completion of site reconnaissance on October 15, 2009. Refer to Figure 5 (Key View Locations Map) for a visual representation of the selected Key View locations and their orientation.

Photographic simulations are utilized to analyze views at a conceptual level of detail of “Existing” and “Proposed” conditions for the proposed project. Key Views represent public views from both public right-of-way and publicly accessible areas located next to the project site. According to the Federal Highway Administration, *Visual Impact Assessment for Highway Projects*, characteristics within each Key View are defined within foreground, middleground, and background views.

- **Foreground (0 to ¼-½ mile):** Characteristics located within foreground views are located at close range and tend to dominate the view. These characteristics can be designated with clarity and simplicity.
- **Middleground (¼-½ to 3-5 miles):** Characteristics located within middleground views are distinguishable, yet not as sharp as those characteristics located within foreground views.
- **Background (3-5 to infinite miles):** Features located within background views have few details and distinctions in landform and surface features. The emphasis of background views is an outline or edge. Objects in the background eventually fade to obscurity with increasing distance.

RBF Consulting (RBF) staff visited the site to take photographs and make observations from Key Views that were selected. The camera locations were recorded utilizing Global Positioning System (GPS) equipment. Primary photographs were taken using a Nikon D1X digital camera with a fixed 50 millimeter lens. A backup Fuji G-617 Panoramic camera with a 1:8/105 millimeter lens was used, as it yields an accurate representation of human visual perception.

The project engineer created a three-dimensional wire frame model using Computer Aided Design and Drafting (CADD) files. Imaging software was used to align the computer model to the site photographs. The computer model was then superimposed over photographs from each of the Key Views, and minor camera alignment changes were made to all known reference points within view. Foreground masking of objects was performed with Adobe Photoshop to enhance realism.

Appendix A contains project site plans for Alternatives 2, 3, and 4, including Design Options A and B. The site plans depict existing retaining walls, soundwalls, combination retaining wall/soundwalls, existing right-of-way, and roadway OCs and UCs. Also portrayed on the project site plans are walls to be removed with project implementation, as well as proposed retaining walls, soundwalls, and combination retaining wall/soundwalls; refer to Appendix A.

## **Key View #1 (Viewers from the Road)**

### *Orientation*

Key View 1 was taken from the east side of I-5 along Avenida Pico. This view is looking west toward the I-5/Avenida Pico Interchange within LU3; refer to Figure 6a (Key View 1 – Existing Condition).

### *Existing Visual Character*

Based on the Visual Quality Evaluation conducted at this Key View, vividness is rated at 4, intactness is rated at 4, and unity is rated at 5, resulting in an overall quality rating of 4.3; refer to Appendix B. The existing visual quality and character of this view is considered moderate (generally rated at 4).

The Avenida Pico roadway and ornamental landscaping are visible within the foreground of this Key View. Ornamental landscaping screens views to a large retaining wall located to the north of Avenida Pico. Foreground and middleground views also include commercial uses, a landscaped median, mature trees, street lights, and minimal commercial and freeway signage. Middleground views are afforded to the Avenida Pico UC. No background views are afforded in this Key View. The commercial structures consist of concrete and stucco materials and vary in color. The commercial structures along the roadway appear to reduce the intactness of this Key View due to the color variation and visible rooftop equipment. Street lights and signage along the roadway also encroach on views. Ornamental landscaping along the northern side of the roadway is consistent in color, texture, and height, and helps detract from the hardscape along Avenida Pico (i.e., retaining wall). The existing streetscape (i.e., existing trees, ornamental landscaping) along Avenida Pico in this Key View increases the unity of this view.

### *Proposed Project Features*

All of the proposed Alternatives include two design options (Design Options A and B) to be considered for development.

#### *Design Option A*

Design Option A proposes a modified tight diamond interchange. In this Key View the existing retaining wall along the northern side of Avenida Pico will be relocated (up to 30 feet in height), and Avenida Pico will be widened and restriped.

#### *Design Option B*

Design Option B proposes a northbound on-ramp loop and realigned northbound off-ramp. Under Design Option B, visible project features include the widened and restriped Avenida Pico, the relocation of the existing retaining wall (up to 30 feet in height), and the realigned northbound off-ramp. Also, two existing structures (Carrows Restaurant and the Mobil Gas Station) will be demolished to accommodate Design Option B improvements.

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## *Changes to Visual Quality/Character*

### *Design Option A*

Visual changes to quality and character at Key View 1 under Design Option A would be considered low due to the similar appearance of hardscape features and minimal removal of landscaping (resulting in an overall quality rating of 4 after implementation of the proposed project); refer to Figure 6b (Key View 1 – Proposed Condition, Option A).

Foreground views to the roadway and ornamental landscaping remain. Commercial structures, the landscaped median, mature trees, and street lights in the middleground views remain. Removal of ornamental landscaping along the northern side of Avenida Pico to accommodate the relocated retaining wall will increase the appearance of hardscape features in the middleground. Hardscape features of the Avenida Pico UC/I-5 OC slightly increase in middleground views due to the realigned on- and off-ramps. The scale and massing of the roadway remains similar to existing conditions. Unity in this view remains moderate, as the majority of trees and landscaping remain visible. Implementation of Minimization Measure (MM) 1 will require the planting of compatible landscaping along the proposed retaining wall similar to existing conditions. Also, an aesthetic treatment (i.e., color, texture, vine treatment, etc.) will be added to the wall structure (MM-2) to minimize aesthetic, light reflectivity, and glare impacts from the retaining wall.

### *Design Option B*

Visual changes to quality and character at Key View 1 under Design Option B will be considered moderate due to the increased appearance of hardscape features and removal of trees and structures (resulting in an overall quality rating of 3.7 after implementation of the proposed project); refer to Figure 6b (Key View 1 – Proposed Condition, Option B).

Foreground views to the roadway and ornamental landscaping remain. One commercial structure is visible, and two commercial structures have been removed to accommodate the new loop on-ramp and off-ramp. The landscaped median in the middleground view remains, and new extended areas of the median are visible. MM-2 will require similar architectural and landscape treatments to the extended areas of the median.

Middleground views to ornamental landscaping and mature trees on both sides of Avenida Pico have been replaced with the hardscape features of the new on- and off-ramps and retaining wall. The removal of ornamental landscaping and trees decrease intactness within this Key View. An aesthetic treatment (i.e., color, texture, vine treatment, etc.) will be added to the wall structure (MM-2) to minimize aesthetic, light reflectivity, and glare impacts from the new wall. Hardscape features of the Avenida Pico UC/I-5 OC increase in middleground views due to the realigned on- and off-ramps. The scale and massing of the roadway remains similar to existing conditions, although two left-turn outlets have been removed and replaced by the concrete median. Unity in this view is moderately low due to the removal of trees and landscaping.

*Viewer Response**Design Option A*

Sensitivity to visual change will be moderate for Avenida Pico and I-5 travelers and commercial users. Under Design Option A, travelers along Avenida Pico and I-5 will have short duration views of the project features, while commercial users would have moderate duration views of the proposed project features (i.e., the proposed retaining wall). Viewers will be moderately aware of proposed project features. The resulting response for Avenida Pico and I-5 travelers and commercial users will be moderate under Design Option A.

*Design Option B*

Sensitivity to visual change under Design Option B will be moderate for commercial users and travelers. Commercial users will have moderate duration views of the proposed project features (i.e., the proposed retaining wall, demolished structures). Under Design Option B, travelers along Avenida Pico and I-5 will have short duration views of the project features. Viewers will be moderately aware of proposed project features. The resulting response for Avenida Pico and I-5 travelers and commercial users will be moderate under Design Option B.

*Resulting Visual Impact**Design Option A*

Project improvements will minimally affect existing views of the project site from this Key View under Design Option A (rated difference of -0.3). Sensitive viewers will have a moderate viewer response to project changes, as the proposed condition increases the appearance of hardscape features. The impacts associated with the increased hardscape from the new retaining wall will be reduced upon implementation of compatible landscaping (MM-1) and the aesthetic treatment recommendation (MM-2).

*Design Option B*

Project improvements will moderately affect existing views under Design Option B (rated difference of -1.0). Sensitive viewers will have a moderate viewer response to project changes, as the proposed condition increases the appearance of hardscape features and two structures have been demolished. The hardscape appearance of the new retaining wall will be reduced upon implementation of compatible landscaping (MM-1) and the aesthetic treatment recommendation (MM-2).

**Key View #2 (Viewers of the Road)***Orientation*

Key View 2 was taken from the east shoulder of I-5 near adjacent residential uses. This view looks to the southeast, toward I-5 travel lanes within LU3; refer to Figure 7a (Key View 2 – Existing Condition).

### *Existing Visual Quality/Character*

Based on the Visual Quality Evaluation conducted at this Key View, vividness is rated at 6, intactness is rated at 5, and unity is rated at 6, resulting in an overall quality rating of 5.7; refer to Appendix B. The existing visual quality and character of the site is high (generally rated at 6). Although hardscape features are visible in this Key View, the dominant mature trees and vegetation elevate vividness, intactness, and unity to moderately high.

One soundwall (ranging from 8 to 16 feet in height) with ornamental landscaping is visible along the west side of I-5. No other structures are visible within this Key View. Mature ornamental and ruderal vegetation are visible along the west side of I-5, and bare ground and ornamental vegetation are visible to the east of I-5. Development within this Key View consists of roadway uses and a soundwall. One street sign is visible within foreground views. Middleground views include I-5 travel lanes, trees, and a soundwall. Mature trees and shrubs varying in color and height provide a high degree of visual contrast. Background views are not afforded in this Key View. Intactness within this Key View is considered to be moderately high. I-5 travel lanes and ornamental trees and landscaping along I-5 appear cohesive. Intactness is reduced by the presence of the soundwall along the west side of I-5. This Key View is dominated by the ornamental landscape, and the trees and vegetation increase the unity of the view. Overall, mature trees and vegetation along I-5 unify the features throughout this Key View.

### *Proposed Project Features*

#### *Alternative 2*

Under Alternative 2, visible project features include one additional northbound I-5 HOV travel lane, and the replacement of the existing soundwall with a combination retaining wall/soundwall of up to 17 feet in height. Also visible in the southern portion of this Key View is a relocated combination retaining wall/soundwall of up to 18 feet in height. The expanded freeway will have 12-foot travel lanes and a 10-foot shoulder. Alternative 2 contains a four-foot buffer between the new HOV lane and the auxiliary lanes. The retaining wall/soundwall will extend along the western shoulder of I-5 throughout the northern portion of this Key View.

#### *Alternative 3*

Refer to Alternative 2, above, as visible project features in Alternative 3 are similar to those proposed under Alternative 2 in this Key View.

#### *Alternative 4*

Refer to Alternative 2, above, as visible project features in Alternative 4 are similar to those proposed under Alternative 2 in this Key View, with the exception of the HOV lane/auxiliary lane buffer. Alternative 4 proposes continuous access between the new HOV lane and the auxiliary lanes.

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### *Changes to Visual Quality/Character*

#### Alternative 2

The project changes are consistent with the existing condition of the area; refer to Figure 7b (Key View 2 – Proposed Condition, Alternative 2). Visual changes to the quality and character at this Key View will be low (resulting in an overall quality rating of 5.3 after implementation of the proposed project), as the proposed conditions appear similar to the existing condition.

Vividness remains moderately high, as conditions appear similar to the existing scenario. Hardscape features in this Key View have increased as a result of the new northbound HOV lane and the widened freeway in this Key View. Alternative 2 contains a four-foot buffer between the new HOV lane and the auxiliary lanes. Foreground views continue to include the I-5 travel lanes and bare ground along the east side of I-5. Middleground views include the new retaining wall/soundwall along the west side of I-5. Also, part of the relocated combination retaining wall/soundwall in the southern portion of this Key View is visible. Views to some mature trees and vegetation remain in the middleground, although some trees have been removed along the east side of I-5. The proposed retaining wall/soundwall and widened freeway minimally increases the visible hardscape in foreground and middleground views. Intactness remains moderately high. Overall, unity in this Key View is high and remains similar to the existing condition.

As landscaping along the existing wall feature will be removed to relocate the retaining wall/soundwall, implementation of compatible landscaping (MM-1) will reduce these impacts. Also, implementation of the aesthetic treatment recommendation (MM-2) will reduce aesthetic, light reflectivity, and glare impacts resulting from the new retaining wall/soundwall.

#### Alternative 3

The project changes under Alternative 3 are consistent with those described in Alternative 2, above; refer to Figure 7c (Key View 2 – Proposed Condition, Alternative 3) and the discussion above.

#### Alternative 4

The project changes are generally consistent with those described in Alternative 2; refer to Figure 7d (Key View 2 – Proposed Condition, Alternative 4) and the discussion above. However, Alternative 4 proposes continuous access between the HOV and auxiliary lanes. Although the freeway appears slightly narrower in Alternative 4 due to the lack of a buffer, visual changes appear similar to those described in Alternative 2.

### *Viewer Response*

#### Alternative 2

Sensitivity to visual change for I-5 travelers will be moderate. Northbound and southbound travelers will have moderate to long duration views of the new HOV lanes due to the length of the project site. Southbound travelers will have short duration views

to the new retaining wall/soundwall. Overall, motorists will be moderately aware of project changes. The resulting viewer response for I-5 travelers will be moderate.

Residential uses to the east of I-5 will have a high sensitivity to project changes based on the long duration views to the proposed improvements. Residents to the west will have a low sensitivity to project changes, due to intervening topography, vegetation, and soundwalls. Therefore, the overall viewer response for residential uses to project changes in this Key View will be high.

#### Alternative 3

Viewer response to project changes in Alternative 3 is consistent with those described in Alternative 2; refer to the discussion above.

#### Alternative 4

Viewer response to project changes in Alternative 4 is consistent with those described in Alternative 2; refer to the discussion above.

#### *Resulting Visual Impact*

#### Alternative 2

Project improvements will minimally affect existing views of the project from this Key View (rated difference of -0.4), and sensitive viewers will have a moderate viewer response to project changes. Implementation of the proposed project would minimally increase hardscape features within the area by adding the additional HOV lane and proposed retaining wall/soundwall. Although hardscape features have increased, views to existing mature trees and vegetation remain. To reduce the appearance of hardscape features of this Key View and potential light reflectivity and glare from the retaining wall/soundwall, compatible landscaping (MM-1) and the aesthetic treatment recommendation (MM-2) would reduce impacts from the new wall feature.

#### Alternative 3

The resulting visual impact of Alternative 3 is consistent with that described in Alternative 2; refer to the discussion above.

#### Alternative 4

The resulting visual impact of Alternative 4 is consistent with that described in Alternative 2; refer to the discussion above.

### **Key View #3 (Viewers from the Road)**

#### *Orientation*

Key View 3 was taken from the southbound number one lane of I-5, to the south of the Avenida Vaquero OC within LU3. This Key View looks south along the I-5 southbound travel lanes toward the proposed project; refer to Figure 8a (Key View 3 – Existing Condition).

### *Existing Visual Character*

Based on the Visual Quality Evaluation conducted at this Key View, vividness is rated at 6, intactness is rated at 5, and unity is rated at 5, resulting in an overall quality rating of 5.3; refer to Appendix B. The existing visual quality and character of the views are moderately high (generally rated at 5).

Overall vividness in this Key View appears to be moderately high. Foreground and middleground views include the southbound I-5 travel lanes, a soundwall (10 feet in height) to the west of I-5, a concrete center divide rail, and one electronic freeway sign. Mature trees and vegetation varying in form, color, and texture are visible to the east of I-5. The soundwall to the west of I-5 contains a landscaped treatment. Background views include distant vegetated hillsides. Intactness within this Key View is considered to be moderately high. The freeway sign and soundwall appear to encroach upon southbound I-5 travelers. Unity in this Key View is moderately high. Although unity is slightly reduced by the hardscape features of I-5 and the soundwall, the presence of mature ornamental trees and vegetation within the large areas of right-of-way along the I-5 corridor allow unity within this Key View to remain moderately high.

### *Proposed Project Features*

#### *Alternative 2*

Under Alternative 2, visible project features include a new soundwall and retaining wall/soundwall which have replaced an existing soundwall of up to 17 feet in height, and an additional southbound HOV travel lane. The soundwall and retaining wall/soundwall are visible throughout the Key View along the western shoulder of I-5.

#### *Alternative 3*

Refer to Alternative 2, above, as visible project features in Alternative 3 are similar to those proposed under Alternative 2 in this Key View.

#### *Alternative 4*

Refer to Alternative 2, above, as visible project features in Alternative 4 are similar to those proposed under Alternative 2 in this Key View, with the exception of the buffer. Alternative 4 proposes continuous access between the new HOV lane and the general purpose lanes.

### *Changes to Visual Quality/Character*

#### *Alternative 2*

The project changes in Alternative 2 consist of construction of a soundwall of up to 17 feet in height to replace the existing wall, and an additional southbound HOV lane; refer to Figure 8b (Key View 3 – Proposed Condition, Alternative 2). Alternative 2 contains a four-foot buffer between the new HOV lane and the auxiliary lanes. The presence of the buffer minimally affects views from this location, as the amount of visible hardscape does not appear to noticeably increase. Visual changes to the quality and character in this

Key View will be minimal, as features appear similar to the existing condition (resulting in an overall quality rating of 5 after implementation of the proposed project).

The new soundwall and combination retaining wall/soundwall increases the dominance of hardscape features in this Key View. The hardscape appearance of the I-5 travel lanes remains generally similar to the existing condition. Some mature trees and vegetation remain visible in the foreground and middleground views. However, vegetation along the existing wall feature has been removed to accommodate the widened freeway and new soundwall and retaining wall/soundwall. Encroaching features have increased due to the soundwall and retaining wall/soundwall and the lack of landscaped treatment. Background views to distant hillsides remain. Unity remains moderately high, as views to mature trees and vegetation (to the east) and distant hillsides remain.

To reduce the appearance of hardscape features (i.e., widened freeway and new wall feature) of this Key View and potential light reflectivity and glare from the new soundwall and retaining wall/soundwall, aesthetic or landscape treatments will be required (MM-2).

#### Alternative 3

The project changes are consistent with those described in Alternative 2, above; refer to Figure 8c (Key View 3 – Proposed Condition, Alternative 3) and the discussion above.

#### Alternative 4

The project changes are consistent with those described in Alternative 2; refer to Figure 8d (Key View 3 – Proposed Condition, Alternative 4) and the discussion above. However, Alternative 4 proposes continuous access between the HOV and general purpose lanes. Alternative 4 will result in slightly less hardscape than Alternatives 2 and 3. However, impacts will appear similar to those described in Alternative 2.

#### *Viewer Response*

##### Alternative 2

Viewer sensitivity of residents to the east of the project site will be high. Under Alternative 2, residents to the east of I-5 will have long duration views to the freeway and new soundwall and retaining wall/soundwall, as they are at a higher elevation than I-5. However, the additional travel lanes will be minimally noticeable due to distance, and the new soundwall and retaining wall/soundwall will appear similar to the existing wall residents' perspective. Nonetheless, residents to the east will be highly aware of project changes. Project features will not be visible to residents to the west due to distance, intervening topography, and mature trees and vegetation. Overall viewer response of residents will be high.

Viewer sensitivity for freeway travelers will be moderate in this Key View. Freeway travelers will have long duration views of the proposed southbound HOV lane due to the length of the project site, although these views will appear similar to existing conditions. Travelers will have short duration views to the new soundwall and retaining wall/soundwall. I-5 travelers will be moderately aware of project changes. Due to the

number of viewers and duration of views affected, the overall viewer response to change from I-5 travelers will be moderate.

#### Alternative 3

Viewer response to project changes in Alternative 3 is consistent with those described in Alternative 2; refer to the discussion above.

#### Alternative 4

Viewer response to project changes in Alternative 4 is consistent with those described in Alternative 2; refer to the discussion above.

#### *Resulting Visual Impact*

##### Alternative 2

Project improvements will minimally alter the existing views of the project site from this Key View (rated difference of -0.6). Residents to the east will have a high sensitivity to the proposed changes, while freeway travelers will have a moderate sensitivity to changes. The appearance of the widened freeway will appear similar to the existing condition, and views to the new soundwall and retaining wall/soundwall will be short in duration. The increased hardscape appearance of the soundwall and retaining wall/soundwall will be reduced upon implementation of the aesthetic treatment (MM-2).

##### Alternative 3

The resulting visual impact of Alternative 3 is consistent with that described in Alternative 2; refer to the discussion above.

##### Alternative 4

The resulting visual impact of Alternative 4 is consistent with that described in Alternative 2; refer to the discussion above.

#### **Key View #4 (Viewers from the Road)**

##### *Orientation*

Key View 4 was taken from the Camino de Estrella northbound on-ramp. This view is looking north along the on-ramp toward the proposed project within LU3; refer to Figure 9a (Key View 4 – Existing Condition).

##### *Existing Visual Character*

Based on the Visual Quality Evaluation conducted at this Key View, vividness is rated at 6, intactness is rated at 5, and unity is rated at 5, resulting in an overall quality rating of 5.3; refer to Appendix B. The existing visual quality and character of the views is considered moderately high (generally rated at 5).

Vividness in this Key View is considered high due to the middleground views to mature trees, vegetation, and grasses that vary in color, texture, and height. The majority of views to the soundwall located west of the on-ramp are screened by topography and vegetation. Background views include distant mature trees. Overall intactness within this Key View is considered to be moderately high. Although views are afforded to hardscape features of I-5 and street lights, the abundance of mature trees and vegetation present throughout the view detracts from encroaching features. Overall unity is moderately high.

#### *Proposed Project Features*

##### Alternative 2

Under Alternative 2, visible project features in this Key View include the realigned freeway travel lanes, with a buffer between the HOV and auxiliary lanes. The proposed 16-foot soundwall to the east of the on-ramp along the existing residential uses is not visible due to intervening topography and trees.

##### Alternative 3

Refer to Alternative 2, above, as visible project features in Alternative 3 are similar to those proposed under Alternative 2 in this Key View.

##### Alternative 4

Refer to Alternative 2, above, as visible project features in Alternative 4 are similar to those proposed under Alternative 2 in this Key View, with the exception of the buffer. Alternative 4 proposes continuous access between the new HOV lane and the auxiliary general purpose lanes; however, this change is minimally visible in this Key View.

#### *Changes to Visual Quality/Character*

##### Alternative 2

Visual changes to quality and character within Key View 4, Alternative 2, will be considered minimal (resulting in an overall quality rating of 5 after implementation of the proposed project); refer to Figure 9b (Key View 4 – Proposed Condition, Alternative 2).

Vividness remains high in this Key View, as the contrasting natural features remain visible. The expanded travel lanes of I-5 are visible to the west of the on-ramp. The buffer between the HOV and general purpose lanes is minimally detectable. The proposed soundwall located to the east of the on-ramp is not visible due to intervening topography and landscaping. The residents located behind this soundwall do not currently have ocean views due to intervening trees, and the new soundwall would screen views to the freeway. Therefore, introduction of a soundwall could be a beneficial impact. Background views continue to consist of distant mature trees. Overall intactness within this Key View is considered to be moderate, as the widening of the I-5 travel lanes has increased hardscape features in this Key View. Overall unity remains moderately high due to the presence of mature trees and landscaping.

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### Alternative 3

The project changes are consistent with those described in Alternative 2, above; refer to Figure 9c (Key View 4 – Proposed Condition, Alternative 3) and the discussion above.

### Alternative 4

The project changes are consistent with those described in Alternative 2; refer to Figure 9d (Key View 4 – Proposed Condition, Alternative 4) and the discussion above. However, Alternative 4 proposes continuous access between the HOV and general purpose lanes. Although the freeway appears narrower in Alternative 4 due to the lack of buffer, visual changes appear similar to those described in Alternative 2.

### *Viewer Response*

#### Alternative 2

Viewer sensitivity of residents to the east will be moderately high. Under Alternative 2, residents to the east of I-5 will have long duration views to the expanded freeway and new soundwall to the east of the on-ramp, as they are at a higher elevation than I-5. However, the additional travel lanes will be minimally noticeable due to distance, and the new soundwall will appear similar to adjacent existing walls and would block partial freeway views. Residents to the east will be moderately aware of project changes. Views to project features from residents to the west in this Key View will not be afforded due to distance, intervening topography, and mature trees and vegetation. These residents will be minimally aware of project changes. Overall, viewer response to change from residents will be moderate.

Viewer sensitivity for freeway travelers will be moderate in this Key View. Freeway travelers will have long duration views of the proposed southbound HOV lane due to the length of the project site, although these views will appear similar to existing conditions. These viewers will be moderately aware of project changes. Travelers will not have views to the new soundwall to the east of the on-ramp due to intervening topography and trees. Due to the number of viewers and duration of views affected, the overall viewer response to change from travelers will be moderate.

#### Alternative 3

Viewer response to project changes in Alternative 3 is consistent with those described in Alternative 2; refer to the discussion above.

#### Alternative 4

Viewer response to project changes in Alternative 4 is consistent with those described in Alternative 2; refer to the discussion above.

### *Resulting Visual Impact*

Project improvements will minimally alter the existing views of the project site from this Key View (rated difference of -0.3). Residents to the east will have a high sensitivity to the proposed changes, while freeway travelers will have a moderate sensitivity to

changes. The appearance of the widened freeway will appear similar to the existing condition, and views to the new soundwall will be afforded by only the adjacent residents. As implementation of Alternative 2 will not introduce considerable changes or amount of visible hardscape features, no avoidance or minimization measures are necessary.

### Alternative 3

The resulting visual impact of Alternative 3 is consistent with that described in Alternative 2; refer to the discussion above.

### Alternative 4

The resulting visual impact of Alternative 4 is consistent with that described in Alternative 2; refer to the discussion above.

## **Key View #5 (Viewers of the Road)**

### *Orientation*

Key View 5 was taken from the corner of Avenida California and Via La Jolla, near a new residential development (Blue Harbor) within LU2. This view looks west toward the proposed project; refer to Figure 10a (Key View 5 – Existing Condition).

### *Existing Visual Character*

Based on the Visual Quality Evaluation conducted at this Key View, vividness is rated at 6, intactness is rated at 7, and unity is rated at 7, resulting in an overall quality rating of 6.7; refer to Appendix B. The existing visual quality and character of the views is considered high (generally rated at 7).

Mature trees and residential structures are visible in the foreground and middleground. The roofing materials of the residential structures are visible and are uniform in color and texture. Middleground views also include limited views to I-5 travel lanes and the Via California OC. Mature trees and vegetation are visible throughout the view which vary in color, height, and texture, providing for high vividness. Limited background views to the Pacific Ocean are afforded. The presence of mature trees throughout this Key View minimizes the visual intrusion of the hardscape features. There are no considerable encroaching features present within this view. Overall intactness within this Key View is considered to be high. Unity is high in this Key View, as the mature trees throughout the view reduce hardscape features and unify the view.

### *Proposed Project Features*

### Alternative 2

Visible changes from proposed project features under Alternative 2 consist of the new northbound and southbound HOV lanes, the realigned Camino Las Ramblas on-ramp, and the widened I-5 OC over Camino Las Ramblas. Multiple soundwalls are proposed in the vicinity of Key View 5 of up to 16 feet in height. However, due to distance and intervening topography, mature trees, and vegetation, these project features are not

visible in this Key View under Alternative 2; refer to Figure 9d (Key View 4 – Proposed Condition, Alternative 4). Alternative 2 also proposes a wider freeway radius in the northern portion of LU2 which would require the existing combination retaining wall/soundwall to be relocated; however, these changes are not perceptible in this Key View. Also, the buffer between the HOV and general purpose lanes in Alternative 2 is not perceptible in this Key View due to distance.

### Alternative 3

Project changes under Alternative 3 will be similar to those of Alternative 2. However, existing combination retaining wall/soundwall relocation and freeway radius will be less extensive than that proposed under Alternative 2. Visual changes to quality and character in Key View 5 under Alternative 3 will be the same as those discussed above under Alternative 2; refer to Figure 10c (Key View Point 5 – Proposed Condition, Alternative 3).

### Alternative 4

Visual changes to quality and character in Key View 5 under Alternative 4 will be the same as those discussed above under Alternative 3; refer to Figure 10d (Key View Point 5 – Proposed Condition, Alternative 4).

### *Changes to Visual Quality/Character*

#### Alternatives 2, 3, and 4

Under Alternatives 2, 3, and 4, visible project changes are minimal in this Key View. The freeway travel lanes and I-5 OC have been widened and the Camino Las Ramblas on- and off-ramps have been realigned. However, these changes are minimally noticed from this Key View location due to distance and intervening topography, mature trees, and vegetation.

### *Viewer Response*

#### Alternatives 2, 3, and 4

Under Alternatives 2, 3, and 4, surrounding residents in this Key View will have a low sensitivity to project changes. The duration of views toward the project site from these residential locations will be long. However, residents will be minimally aware of project changes due to distance and intervening topography and structures. Overall viewer response to change will be low.

Motorists traveling along I-5 in this Key View will have moderate sensitivity to project changes. The view duration of the project site will be long and travelers would be moderately aware of project changes. Overall viewer response to project changes from travelers will be moderate.

### *Resulting Visual Impact*

Project improvements will minimally affect existing views of the project site from this Key View under Alternatives 2, 3, and 4 (rated difference of -0.4). Views to the Pacific

Ocean will remain. Sensitive viewers will be minimally aware of project changes and the resultant impacts will not require avoidance or minimization measures.

### **Key View #6 (Viewers of the Road)**

#### *Orientation*

Key View 6 was taken from the east side of I-5, on Vista Marina near Valle Road from a new residential development (Blue Harbor) within LU1. This view is looking west toward the proposed project; refer to Figure 11a (Key View 6 – Existing Condition).

#### *Existing Visual Character*

Based on the Visual Quality Evaluation conducted at this Key View, vividness is rated at 6, intactness is rated at 6, and unity is rated at 7, resulting in an overall quality rating of 6.3; refer to Appendix B. The existing visual quality and character of the views is considered high (generally rated at 6).

Vividness in this Key View is considered to be high. Brush and grasses are visible within the foreground of this Key View. I-5 travel lanes, mature trees, grasses, commercial structures, and street lights are visible in the middleground views. Background views include distant hillsides, residential development, and mature trees. The visible commercial structures vary in color and texture. The panoramic views to distant hillsides contrast in form and color. Overall intactness within this Key View is high. I-5 minimally encroaches on the adjacent commercial and residential uses. There are no detracting features within this view that reduce overall intactness. The interspersed mature trees and vegetation reduce the appearance of hardscape features. Overall unity is very high.

#### *Proposed Project Features*

##### Alternative 2

Project features within this Key View under Alternative 2 consist of the restriped I-5 southbound travel lanes. However, these changes are not perceptible due to distance.

##### Alternative 3

Project features within this Key View under Alternative 3 are the same as those discussed in Alternative 2; refer to the discussion above.

##### Alternative 4

The project does not propose any changes in this Key View under Alternative 4. Views will remain the same as existing conditions.

#### *Changes to Visual Quality/Character*

##### Alternative 2

Visual changes to quality and character in Key View 6 under Alternative 2 will be considered minimal, as changes are not readily perceptible at this Key View location

(resulting in an overall quality rating of 0 after implementation of the proposed project); refer to Figure 11b (Key View Point 6 – Proposed Condition, Alternative 2). The additional lane is slightly visible from this Key View location due to distance, intervening trees, and the freeway’s center divide rail. Therefore, foreground, middleground, and background views remain similar to existing conditions. Views to mature trees, shrubs, and distant hillsides remain. There are no new encroaching features in the Key View. Unity remains very high.

### Alternative 3

Visual changes to quality and character in Key View 6 under Alternative 3 would be the same as those discussed above under Alternative 2; refer to Figure 11c (Key View Point 6 – Proposed Condition, Alternative 3).

### Alternative 4

No visual changes to quality and character in Key View 6 would occur under Alternative 4, as this portion of the project site would remain the same as the existing condition. Refer to Figure 11d (Key View Point 6 – Proposed Condition, Alternative 4).

### *Viewer Response*

#### Alternative 2

Residential uses to the east of I-5 will have a low sensitivity to project changes in this Key View, as views to the restriped southbound lanes will not be perceptible due to distance, intervening trees, and the center divide rail. These residential uses located atop the adjacent hillside (Blue Harbor development) will experience long duration views of the project site. These residents will be moderately aware of project changes. Overall viewer response to change from these residential uses will be considered low.

Travelers along southbound lanes of I-5 will have moderate sensitivity to project changes in this Key View. Travelers will experience long duration views of the restriped freeway travel lanes and additional HOV lane and will be moderately aware of the project. Although there will be a high number of viewers affected, the viewer response from freeway travelers to change will be moderate, as views will appear similar to the existing condition.

#### Alternative 3

Viewer response to project changes in Alternative 3 is consistent with those described in Alternative 2; refer to the discussion above.

#### Alternative 4

No project changes are visible in this Key View under Alternative 4; therefore, no viewer response would occur.

### *Resulting Visual Impact*

#### Alternative 2

Project improvements under Alternative 2 will not affect existing views of the project site from this Key View (rated difference of 0), as the restriped southbound freeway travel lanes are not perceptible and views appear similar to the existing condition. Sensitive viewers will have a moderate viewer response to project changes. Project changes will generally appear similar to existing conditions. No avoidance or minimization measures are required.

#### Alternative 3

The resulting visual impact of Alternative 3 is consistent with that described in Alternative 2; refer to the discussion above.

#### Alternative 4

No visible changes under Alternative 4 will result in this Key View. Therefore, no impact will occur.

## **D. Summary of Project Impacts**

### **Short-Term Construction Impacts**

Implementation of the proposed project will expose sensitive uses to views of the project site. Construction-related vehicle access and staging of construction materials will occur within Caltrans right-of-way and disturbed or developed areas along the length of the project site. The project area currently experiences lighting typical of urban areas and freeways. Primary sources of light and glare in the area include motor vehicle headlights, streetlights, parking lot and exterior security lighting, interior building lighting, and illuminated signs. Currently, light and glare exists throughout LU1, LU2, and LU3. Additionally, surrounding commercial uses in LU1 and LU3 utilize signage and security lighting during the evening/nighttime hours.

The project construction will expose surfaces, construction debris, equipment, and truck traffic to nearby sensitive viewers. Construction vehicle access and staging of construction materials will be visible from motorists traveling along the project site as well as residents located in the project vicinity at elevations higher than I-5. These impacts are short-term and will cease upon project completion. Adhering to Caltrans Standard Specifications for Construction will minimize visual impacts through the use of opaque temporary construction fencing that will be situated around construction staging areas.

### **Long-Term Operational Impacts**

Table 1 (Key View Impact Summary) presents a summary of the resulting long-term operational impacts for each Key View analyzed. Long-term impacts from the project will be experienced differently in each landscape unit. LU1 includes motorists and commercial users that will have low to moderate viewer sensitivity to project changes. Residents, commercial users, and motorists located throughout LU2 and LU3 will range from moderate to high viewer response to project changes.

**Table 1  
Key View Impact Summary**

Key View	Existing Visual Quality Rating	Proposed Visual Quality Rating	Impact (difference from existing)	Viewer Group/Sensitivity	Viewer Response	Resultant Impact
<b>Key View 1 (LU3)</b>						
Alternatives 2, 3, and 4, Design Option A	4.3	4	-0.3	Motorists/Moderate	Moderate	Reduced With Minimization Measures
				Commercial Users/Moderate		
Alternatives 2, 3, and 4, Design Option B	4.3	3.3	-1.0	Motorists/Moderate	Moderate	Reduced With Minimization Measures
				Commercial Users/Moderate		
<b>Key View 2 (LU3)</b>						
Alternative 2	5.7	5.3	-0.4	Residents/High	High	Reduced With Minimization Measures
				Motorists/Moderate	Moderate	
Alternative 3	5.7	5.3	-0.4	Residents/High	High	Reduced With Minimization Measures
				Motorists/Moderate	Moderate	
Alternative 4	5.7	5.3	-0.4	Residents/High	High	Reduced With Minimization Measures
				Motorists/Moderate	Moderate	
<b>Key View 3 (LU3)</b>						
Alternative 2	5.3	4.7	-0.6	Motorists/Moderate	Moderate	Reduced With Minimization Measures
				Residents/High	High	
Alternative 3	5.3	4.7	-0.6	Motorists/Moderate	Moderate	Reduced With Minimization Measures
				Residents/High	High	
Alternative 4	5.3	4.7	-0.6	Motorists/Moderate	Moderate	Reduced With Minimization Measures
				Residents/High	High	
<b>Key View 4 (LU3)</b>						
Alternative 2	5.3	5.0	-0.3	Motorists/Moderate	Moderate	Reduced With Minimization Measures
				Residents/Moderately High		
Alternative 3	5.3	5.0	-0.3	Motorists/Moderate	Moderate	Reduced With Minimization Measures
				Residents/Moderately High		
Alternative 4	5.3	5.0	-0.3	Motorists/Moderate	Moderate	Reduced With Minimization Measures
				Residents/Moderately High		
<b>Key View 5 (LU2)</b>						
Alternative 2	6.7	6.3	-0.4	Motorists/Moderate	Moderate	Impacts would not be considerable
				Residents/Low	Low	
Alternative 3	6.7	6.3	-0.4	Motorists/Moderate	Moderate	Impacts would not be considerable
				Residents/Low	Low	

**Table 1 (continued)  
Key View Impact Summary**

Key View	Existing Visual Quality Rating	Proposed Visual Quality Rating	Impact (difference from existing)	Viewer Group/Sensitivity	Viewer Response	Resultant Impact
Alternative 4	6.7	6.3	-0.4	Motorists/Moderate	Moderate	Impacts would not be considerable
				Residents/Low	Low	
<b>Key View 6 (LU1)</b>						
Alternative 2	6.3	6.3	0	Motorists/ Moderate	Moderate	Impacts would not be considerable
				Residents/Low	Low	
Alternative 3	6.3	6.3	0	Motorists/ Moderate	Moderate	Impacts would not be considerable
				Residents/Low	Low	
Alternative 4	6.3	6.3	0	Motorists/ Moderate	N/A (no visible changes)	Impacts would not be considerable
				Residents/Low		

Landscape Unit 1

Changes in LU1 are represented in Key View 6.

*Alternative 2*

Alternative 2 proposes southbound lane restriping throughout LU1, and northbound lane restriping in the central and southern portions of LU1. The majority of existing wall structures along I-5 in LU1 will remain; however, an existing retaining wall/soundwall will be replaced with a retaining wall along the western side of I-5 within the southern portion of LU1.

Views from commercial users located to the east and west of the project site will be minimally impacted by the proposed retaining wall, as it will replace an existing wall feature. The proposed freeway restriping will not alter views as compared to the existing condition.

Residential uses to the east of I-5 in LU1 will have long duration views to the project site. However, due to distance and intervening trees and vegetation, these viewers will not be substantially impacted. Residential viewer response to change is anticipated to be moderate.

Freeway travelers in LU1 will have long duration views to the restriped travel lanes due to the length of the project site, and short duration views to the retaining wall. Travelers will be moderately aware of project changes; however, the proposed condition will appear similar to existing conditions. Therefore, as views will remain similar to existing conditions, impacts will not be considerable and no avoidance or minimization measures are required.

### *Alternative 3*

Alternative 3 proposes southbound travel lane restriping throughout LU1. Northbound lanes will remain the same as existing conditions. The majority of soundwall and retaining wall structures will remain. However, one retaining wall/soundwall along the western side of I-5 will be removed in the southern portion of LU1 and partially replaced with a retaining wall. Visual impacts to residents and commercial users in Alternative 3 will be similar to those discussed under Alternative 2, above. Northbound freeway travelers under Alternative 3 will be less aware of project changes, as no northbound travel lane restriping will occur. Therefore, as views will remain similar to existing conditions, impacts will not be considerable and no avoidance or minimization measures are required.

### *Alternative 4*

Alternative 4 proposes the restriping of the southbound lanes in the southern portion of LU1. The northbound lanes will remain the same, as will the majority of soundwall and retaining wall structures. However, one soundwall along the western side of I-5 will be removed in the southern portion of LU1 and replaced with a retaining wall. Visual impacts to residents and commercial users in Alternative 3 will be similar to those discussed under Alternative 2, above. Northbound freeway travelers under Alternative 4 will be less aware of project changes, as no northbound travel lane restriping will occur. Therefore, as views will remain similar to existing conditions, impacts will not be considerable and no avoidance or minimization measures are required.

## Landscape Unit 2

Changes in LU2 are represented in Key View 5.

### *Alternative 2*

Alternative 2 in LU2 proposes the widening and restriping of northbound and southbound travel lanes, and the Camino Las Ramblas off- and on-ramps. The Camino Las Ramblas OC will also be widened. An existing retaining wall/soundwall will be removed and replaced with a continuous retaining wall along the west side of I-5 in the northern portion of LU2 to accommodate the widening. A retaining wall is proposed along the PCH on-ramp in the southern portion of LU2. Soundwalls are also proposed along portions of residential uses to the east of I-5 in LU2. All other existing wall features will remain.

Views from residential uses atop hillsides to the east of I-5 in LU2 will be moderately impacted by the proposed project features. These residents will notice nominal changes to the widened freeway due to distance and intervening trees, vegetation, and structures. However, specific soundwall materials will be considered by the Aesthetic Design Review Team (ADRT) (MM-3) where sensitive receptors currently have panoramic views. Residents to the west of I-5 in LU2 will not have views to project changes due to topography and retaining wall and soundwall features.

Commercial users in LU2 located to the west of the project site will also be minimally impacted by the proposed project. Views to the restriped travel lanes will be blocked by the retaining wall and change in topography. Commercial users will notice the new

retaining wall feature in the northern portion of LU2; however, it will appear similar to the existing condition. The project changes under Alternative 2 within LU2 will not substantially alter views from residents and commercial users.

Changes along I-5 within LU2 visible by motorists will include the northbound and southbound lane, and off- and on-ramp restriping and widening. Freeway travelers will not notice a change in views as a result of the new retaining wall in the northern portion of LU2, as it will appear similar to the existing condition. Those traveling on the off- and on-ramps within LU2 will be aware of the restriped and widened ramps, as well as the new retaining wall in the southern portion of LU2. Visual impacts to motorists in LU2 under Alternative 2 will not be considerable.

Implementation of MM-1 will require the installation of compatible landscaping along disturbed areas of the project site. MM-2 will apply wall treatments (i.e., architectural treatment, color, texture, and/or vegetation, etc.) to the new walls in order to reduce the dominance of the hardscape. With implementation of MM-1 through MM-3, impacts will not be considerable in this regard.

#### *Alternative 3*

Proposed improvements in LU2 under Alternative 3 are the same as those identified in Alternative 2. However, Alternative 3 will remove and replace a smaller portion of the existing retaining wall/soundwall in the northern portion of LU2. Nevertheless, visual impacts to residents, commercial users, and freeway travelers in Alternative 3 will be similar to those discussed under Alternative 2, above. Therefore, with implementation of MM-1 through MM-3, impacts will not be considerable.

#### *Alternative 4*

Proposed improvements in LU2 under Alternative 4 are the same as those identified in Alternative 2. Visual impacts to residents, commercial users, and freeway travelers in Alternative 4 would be similar to those discussed under Alternative 2, above. Therefore, with implementation of MM-1 through MM-3, impacts would not be considerable.

#### Landscape Unit 3

Changes in LU3 are represented in Key Views 1, 2, 3, and 4.

#### *Alternative 2*

Alternative 2 proposes northbound and southbound widening and restriping. Alternative 2 also proposes the widening and restriping of the Camino Las Ramblas northbound off-ramp, Camino de Estrella northbound and southbound on- and off-ramps, and Avenida Vista Hermosa northbound and southbound on- and off-ramps. The Avenida Vaquero OC will also be widened. Three soundwalls and two combination walls along the west side of I-5 in LU3 will be removed, while five soundwalls and one combination retaining wall/soundwall along the east side of I-5 in LU3 will be removed. The removed soundwalls and combination retaining wall/soundwalls will be replaced with new retaining walls, soundwalls, and combination walls. Also, multiple retaining walls, soundwalls, and combination walls are proposed along I-5 and adjoining uses in areas where walls are not currently located.

The Avenida Pico interchange is located in the southern portion of LU3. Design Option A for the Avenida Pico interchange proposes the realignment of Avenida Pico northbound and southbound on- and off-ramps and widening of the northbound on-ramp. The interchange will be a modified tight diamond, similar to the existing condition. Avenida Pico to the north and south of I-5 will be restriped. Multiple retaining walls are proposed along the east and west sides of I-5 and along northbound and southbound on- and off-ramps. A combination retaining wall/soundwall will be removed and replaced with a retaining wall along the northbound off-ramp. The existing retaining wall along the north side of Avenida Pico will be relocated and extended along the northbound on-ramp.

Design Option B for the Avenida Pico interchange proposes the widening and restriping of Avenida Pico northbound and southbound on- and off-ramps. A northbound loop on-ramp will be constructed, and the northbound off-ramp will be reconfigured around the loop ramp. Two structures will be demolished along Avenida Pico, to the east of I-5. Avenida Pico improvements and removed and proposed wall features will remain the same as those discussed under Design Option A.

Views from commercial users located to the east and west of the project site in LU3 will be moderately impacted by the project features. Views to the proposed freeway restriping from these locations will generally appear similar to the existing condition. However, the introduction of new wall structures will alter views from commercial uses to the east and west of the project site. Commercial users in the Avenida Pico interchange location will have moderate awareness of the project, with short to moderate duration views.

Residential uses located atop hillsides and bluffs to the east of I-5 in LU3 will have long duration views to the project site and a high awareness of the project. Depending on location and elevation, residents may notice the change in freeway width and additional HOV travel lane. However, the freeway mainline will generally appear similar to the existing condition. Also, new wall structures located along the east and west sides of I-5 will be noticed by adjacent residents, in particular those located at higher elevations than I-5. There are multiple locations of proposed soundwalls along residential properties that have panoramic views (including those to the Pacific Ocean) to the east of I-5. However, specific soundwall materials will be considered by the ADRT (MM-3) in areas where soundwalls are proposed where sensitive receptors currently have panoramic views. Residents to the west of I-5 may notice new wall features. However, views to the freeway mainline will be limited due to intervening topography, structures, trees, and wall features. Residents situated atop bluffs to the east of I-5 in the vicinity of the Avenida Pico interchange may have partial views to the project features.

Freeway travelers in LU3 will have long duration views to the widened and restriped travel lanes due to the length of the project site, and short duration views to proposed retaining walls and soundwalls. Travelers will be moderately aware of the realigned travel lanes, as the proposed condition will appear similar to existing conditions. To maintain the context of the project area, MM-1 will require the installation of compatible landscaping along the project site in any areas of disturbance. Also, with implementation of MM-2, wall treatments (i.e., color or landscape) will be required to reduce the hardscape appearance of the new walls. Also, implementation of MM-3 will preserve existing panoramic views afforded by sensitive receptors to the east of I-5 in LU3. Therefore, with implementation of MM-1 through MM-3, impacts will not be considerable.

### *Alternative 3*

In LU3, Alternative 3 proposes the same changes as described in Alternative 2. However, Alternative 3 will remove two soundwalls along the west side of I-5 within the northern portion of LU3, and replace them with extended soundwalls and combination retaining wall/soundwalls. Freeway travelers will notice the soundwall removal and replacement in these areas. All other views from freeway travelers, residents, and commercial users will remain the same as those discussed in Alternative 2, above. With implementation of MM-1 through MM-3, compatible landscaping, wall treatments, and soundwall design (in areas where sensitive receptors currently have panoramic views) should be considered to reduce the hardscape appearance of the new walls. Therefore, with implementation of MM-1 through MM-3, impacts will not be considerable. Overall, the resulting visual impacts for Design Options A and B for the Avenida Pico interchange remain the same as discussed under Alternative 2.

### *Alternative 4*

In LU3, Alternative 4 proposes the same changes as described in Alternative 2. However, Alternative 4 will remove and replace two soundwalls along the west side of I-5 within the northern portion of LU3 described in Alternative 3. Alternative 4 lacks the retaining wall included in Alternatives 2 and 3 along the northbound Avenida Vista Hermosa on-ramp; therefore, conditions remain the same as the existing conditions. All other views from freeway travelers, residents, and commercial users will remain the same as those discussed in Alternative 2, above. With implementation of MM-1 through MM-3, compatible landscaping, wall treatments, and soundwall design (in areas where sensitive receptors currently have panoramic views) should be considered to reduce the hardscape appearance of the new walls. Therefore, with implementation of MM-1 through MM-3, impacts will not be considerable. Overall, the resulting visual impacts for Design Options A and B for the Avenida Pico interchange remain the same as discussed under Alternative 2.

## **Light and Glare**

### Short-Term Construction Impacts

The proposed project may require nighttime construction activities in select portions of the project area. Light and glare from nighttime construction lighting will potentially cause a nuisance to nearby residents and motorists traveling along the project site. These activities may be required to take place for several months. However, the project area contains existing sources of light (i.e., vehicle headlights, street lights, park lighting, commercial and residential lights, etc.).

Night closures will be required throughout the duration of the project, and all work intervals will be defined by the District Traffic Operations Manager. Any work requiring a temporary lane, ramp, or freeway closure will only be allowed during nighttime hours. One to two travel lanes may need to be closed during nighttime construction to protect the safety of the construction workers and to expedite the project. Nighttime construction will be limited to the hours of 10:00 p.m. to 6:00 a.m., in accordance with Caltrans regulations. Necessary lighting for safety and construction purposes will be directed away from land uses outside the project area, and contained and directed toward the specific area of construction. With implementation of Minimization Measure 4 (MM-4),

construction lighting types, plans, and placement will be reviewed at the discretion of the District Landscape Architect. Implementation of MM-4 will ensure that appropriate lighting controls will be applied to reduce light and glare impacts.

#### Long-Term Operational Impacts

Implementation of the proposed project will introduce additional sources of light and glare associated with vehicle headlights. No additional traffic signals or street lighting will be installed. Light and glare impacts from new soundwalls and retaining walls will be introduced along I-5. With implementation of MM-2, walls will be required to apply a treatment that would reduce reflective light and glare impacts. Residents in the vicinity of the project site will generally experience similar sources of light and glare, as compared to existing conditions. Thus, impacts in this regard will be reduced with implementation of MM-2.

Commercial uses along I-5 will not experience a considerable increase in light and glare. Upon project completion, light and glare in this area will appear similar to the existing condition. Impacts will not be considerable in this regard.

### **E. Cumulative Impacts**

The project area is highly developed. Due to the developed nature of the project site and surrounding area, cumulative projects in the vicinity will not be directly visible from the project site. There are two identified projects listed in the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTIP) in the cities of San Juan Capistrano and San Clemente:

- **Multi-Use Trail** – Construct a 2.6 mile multi-use trail in the City of San Clemente parallel to the railroad tracks.
- **Del Obispo Widening** – Widen Del Obispo Street from Alipaz Street to Camino Capistrano in the City of San Juan Capistrano to accommodate bike lanes and sidewalks in each direction.

The Multi-Use Trail project will be located approximately 0.70-miles west of the project site. The Del Obispo Widening project will be located approximately 0.50-miles west of the project site. These projects will not be visible from any portion of the project site due to distance, topography, and intervening trees, structures, and wall features. Therefore, as a viewer travels along I-5 through the project site, the RTIP projects will not be encountered. Other cumulative projects in the vicinity may be encountered on a singular basis. Thus, other cumulative projects will not be experienced in one encounter, but rather as a series of experiences.

The cumulative projects are predominately located in developed areas, do not substantially change the capacity of the transportation system, and are not anticipated to result in adverse environmental impacts in the project area. Additionally, identified projects will be evaluated on a project-by-project basis, and will be subject to similar stipulations as those analyzed in this VIA. Therefore, the extent of the impacts arising from the cumulative projects is considered to be minor. Landscape palettes will be selected to be consistent with the nature of the project area. With implementation of recommended minimization measures (MM-1 through MM-4), impacts pertaining to

cumulative projects will be reduced. Also, the project will not cumulatively contribute to light and glare impacts in the area.

## VIII. AVOIDANCE AND MINIMIZATION MEASURES

Caltrans and the FHWA mandate that a qualitative/aesthetic approach be taken to avoid and minimize for visual quality loss in the project area. This approach fulfills the letter and the spirit of FHWA requirements because it addresses the actual cumulative loss of visual quality that will occur in the project viewshed when the project is implemented. It also constitutes avoidance and minimization that can more readily generate public acceptance of the project.

Avoidance and minimization measures for adverse project impacts addressed in the key view assessments and summarized in the previous section will consist of adhering to the following design requirements in cooperation with the District Landscape Architect. The requirements are arranged by project feature and include design options in order of effectiveness. All visual avoidance and minimization will be designed and implemented with the concurrence of the District Landscape Architect.

- MM-1 To maintain the context of the project area (color, form, and texture) the project shall install landscaping that is compatible with the existing landscape along the portion of I-5 in the project vicinity and surrounding area. Landscaping shall include specimen sized trees and/or shrub/groundcover mass planting, and landscape treatment along walls to soften the hardscape features and glare and radiant heat from the walls. The landscape concept, plan, and plant palette shall be determined in consultation with, and approved by, the District Landscape Architect during the Plans, Specifications, and Estimate (PS&E) phase. The planting plan shall be reviewed and approved by the Department Biologist to avoid the use of invasive plant species.

Replacement planting implementation shall be under a separate contract within a two-year period following the completion of construction in accordance with Department policies. Trees in the interchange, in conflict with the roadway improvement design, shall be transplanted in the project area in a location in conformance with the planting policy requirements of the Department. The District Landscape Architect shall make the determination and the approval of the tree transplantation.

In areas where sound walls are visible from adjacent residential land use, vines and landscape shall be utilized to screen views to the wall. All vine and landscape proposed shall conform with the planting policy requirements of the Department.

- MM-2 To minimize visual quality loss and to minimize the visual disruption from the elements of the highway construction, architectural treatments shall be provided to the walls in accordance with the *Master Plan of Freeway and Transit Corridor Enhancements: Creating a Quality Environment Along Orange County's Transportation Network*. All wall aesthetics shall be approved by the District Landscape Architect.
- MM-3 The District 12 Landscape Architecture Branch shall administer and chair an Aesthetic Design Review Team (ADRT) that includes local agency representatives

to ensure the project landscape and structural elements are in compliance with the aesthetic requirements of the *Master Plan of Freeway and Transit Corridor Enhancements: Creating a Quality Environment Along Orange County's Transportation Network*.

- MM-4 Construction lighting types, plans, and placement shall be reviewed at the discretion of the District Landscape Architect in order to minimize light and glare impacts on surrounding sensitive uses.

## **IX. REFERENCES**

### **LIST OF PREPARERS**

#### **RBF CONSULTING**

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David Jacobus, GISP, GIS Analyst, RBF Consulting  
Gary Gick, Word Processing, RBF Consulting  
Debby Hutchinson, Graphics, RBF Consulting

#### **Subconsultant**

Richard Johnston, Photosimulation Specialist

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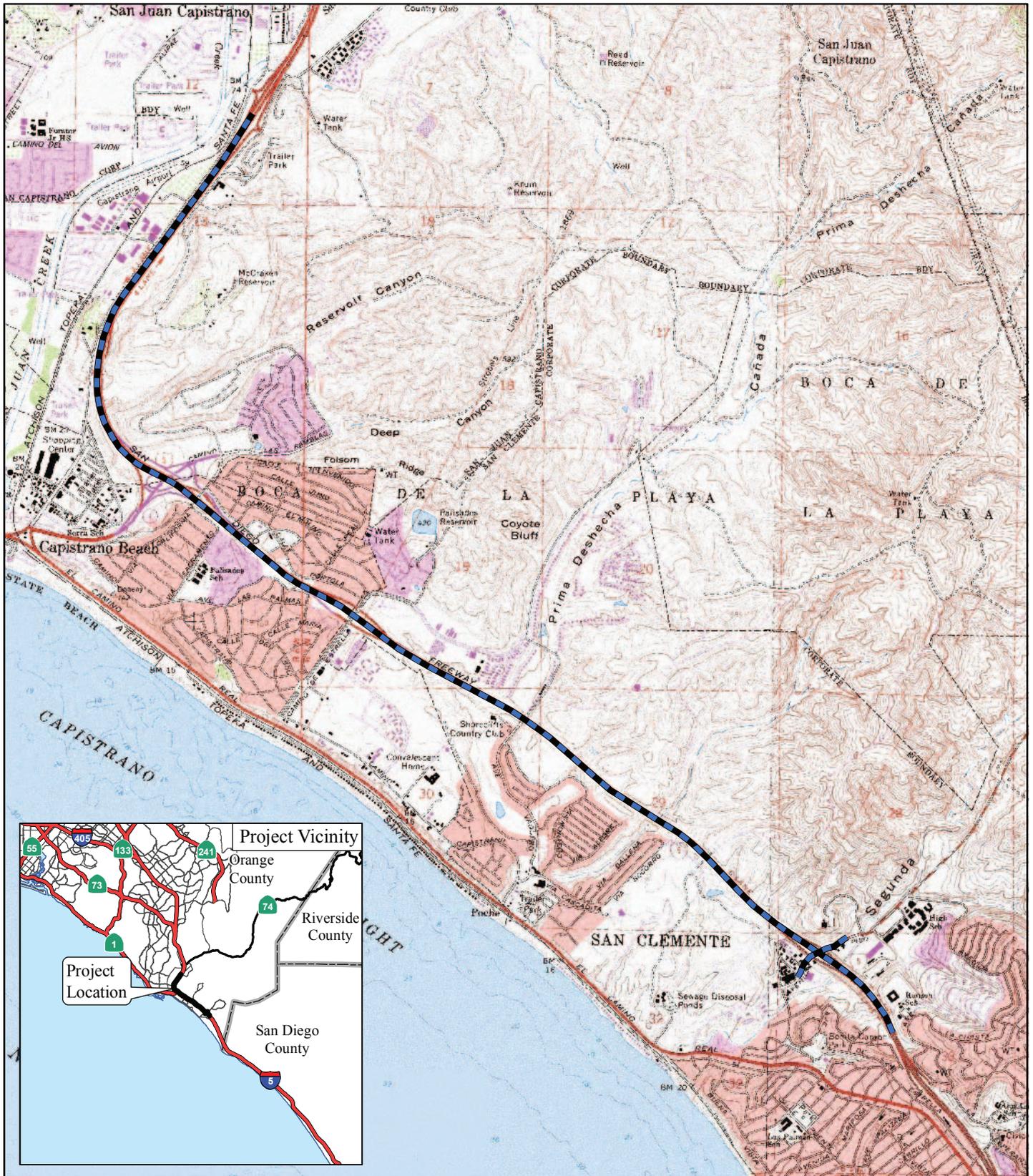
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## **FIGURES**



SOURCE: USGS 7.5' QUAD - Dana Point (75); San Clemente (75)

 Project Location



3/24/10JN 10-106626-16422 MAS

I-5 HOV LANE EXTENSION PROJECT  
VISUAL IMPACT ASSESSMENT  
**Regional Vicinity**

**Figure 1**



- LEGEND**
- Mainline Widening
  - Ramp Widening
  - Ramp Reconstruct
  - Bridge Replacement
  - Bridge Widening

I-5 HOV LANE EXTENSION PROJECT  
VISUAL IMPACT ASSESSMENT

**Site Plan**

Figure 2a

not to scale



**LEGEND**

- Mainline Widening
- Ramp Widening/Re-alignment
- Ramp Reconstruct
- Bridge Replacement
- Bridge Widening

MATCH LINE STA 285+50  
(see Exhibit 3a)

not to scale

3/24/10 JN 10-106626-16422 MAS

I-5 HOV LANE EXTENSION PROJECT  
VISUAL IMPACT ASSESSMENT

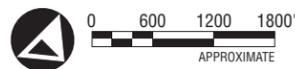
**Site Plan**

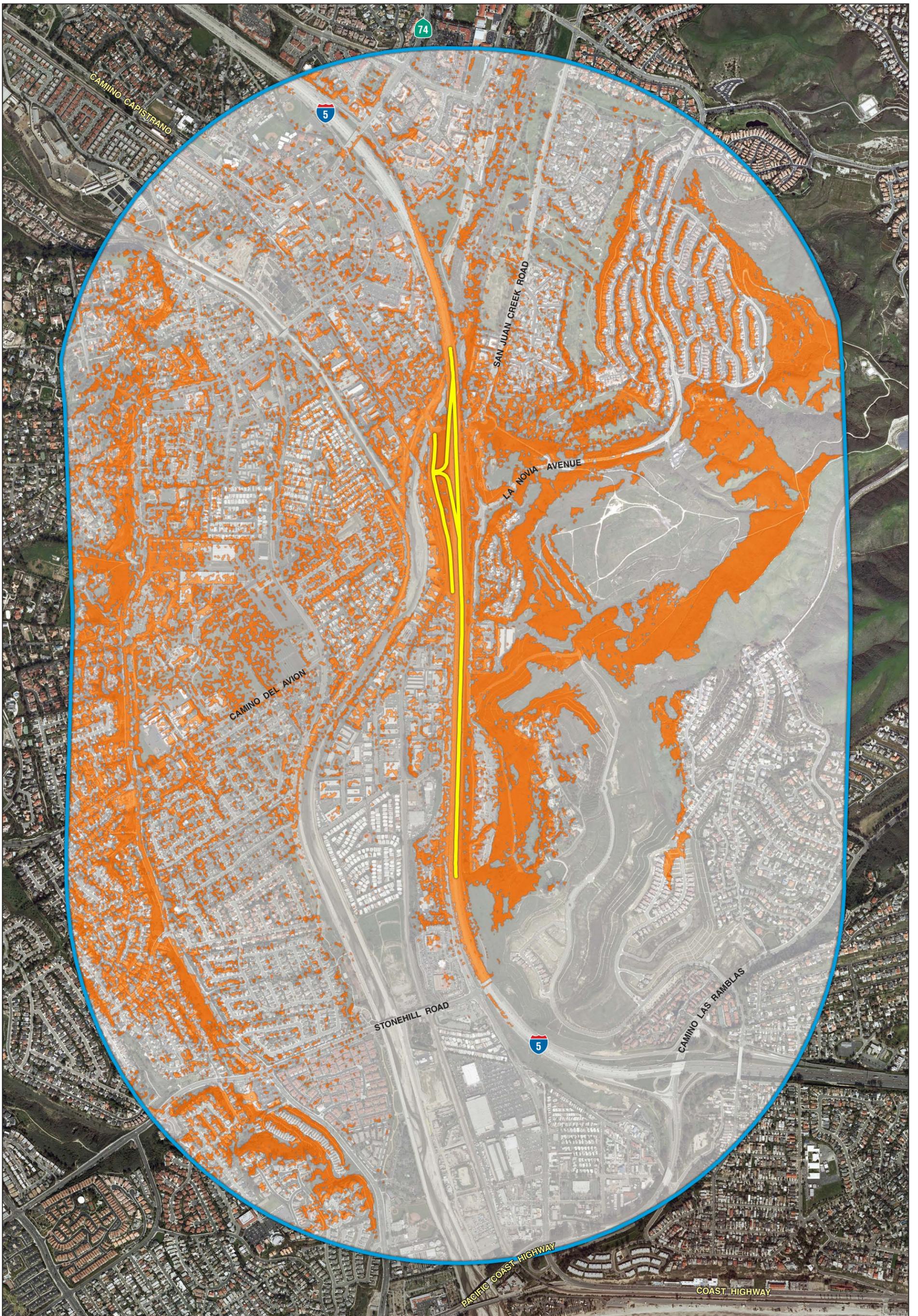
Figure 2b



**LEGEND**

- Landscape Unit 1
- Landscape Unit 2
- Landscape Unit 3
- Project Location





- |   |  |
|---|--|
|  Centerline Within Landscape Unit |  Area Not Visible |
|  One Mile Radius Zone             |  Area Visible     |



3/26/10 JN 10-106626-16422 MAS

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Viewshed Map • Landscape Unit 1**

Figure 4a



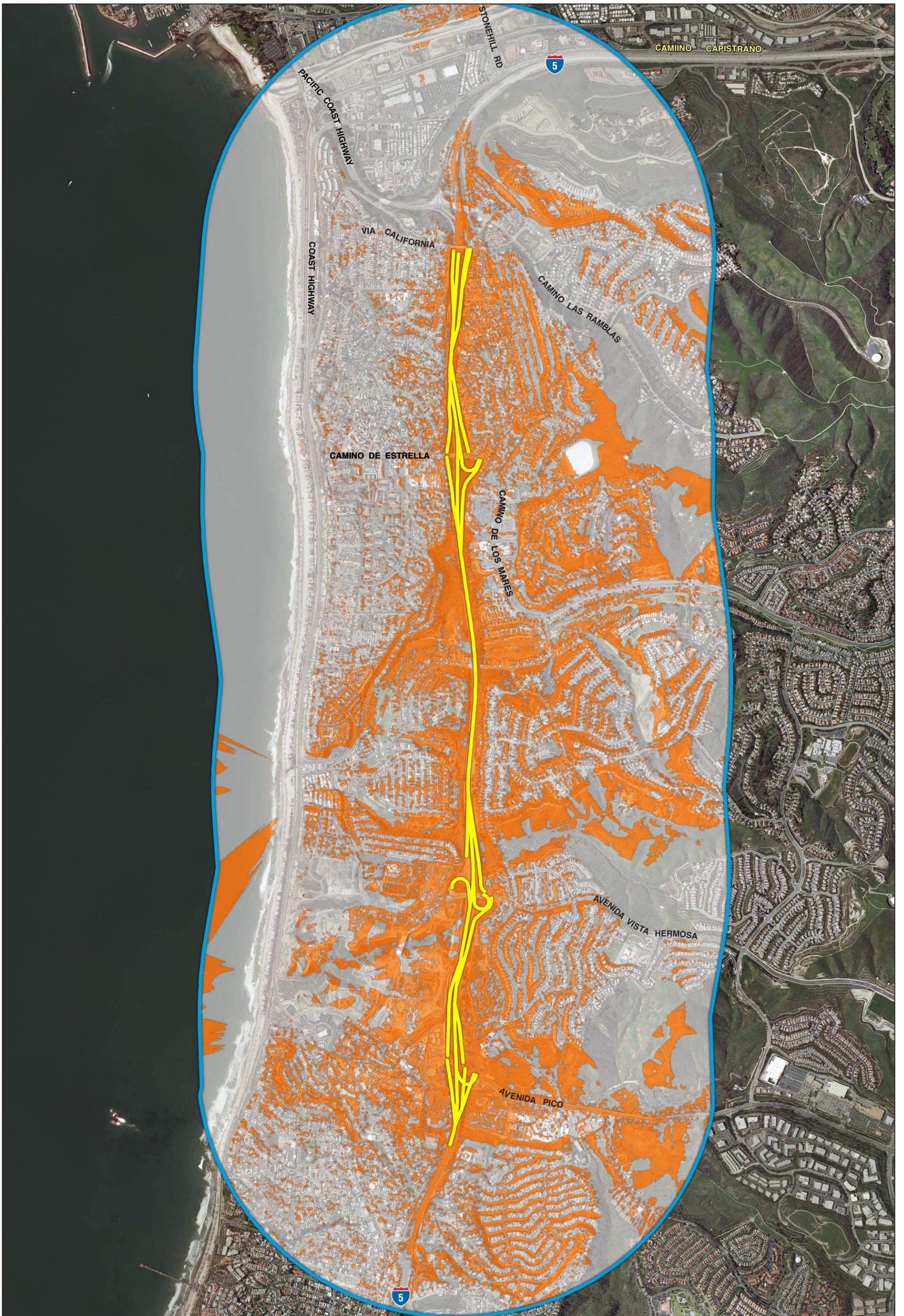
- Centerline Within Landscape Unit
- One Mile Radius Zone
- Area Not Visible
- Area Visible



3/26/10 JN 10-106626-16422 MAS

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Viewshed Map • Landscape Unit 2**

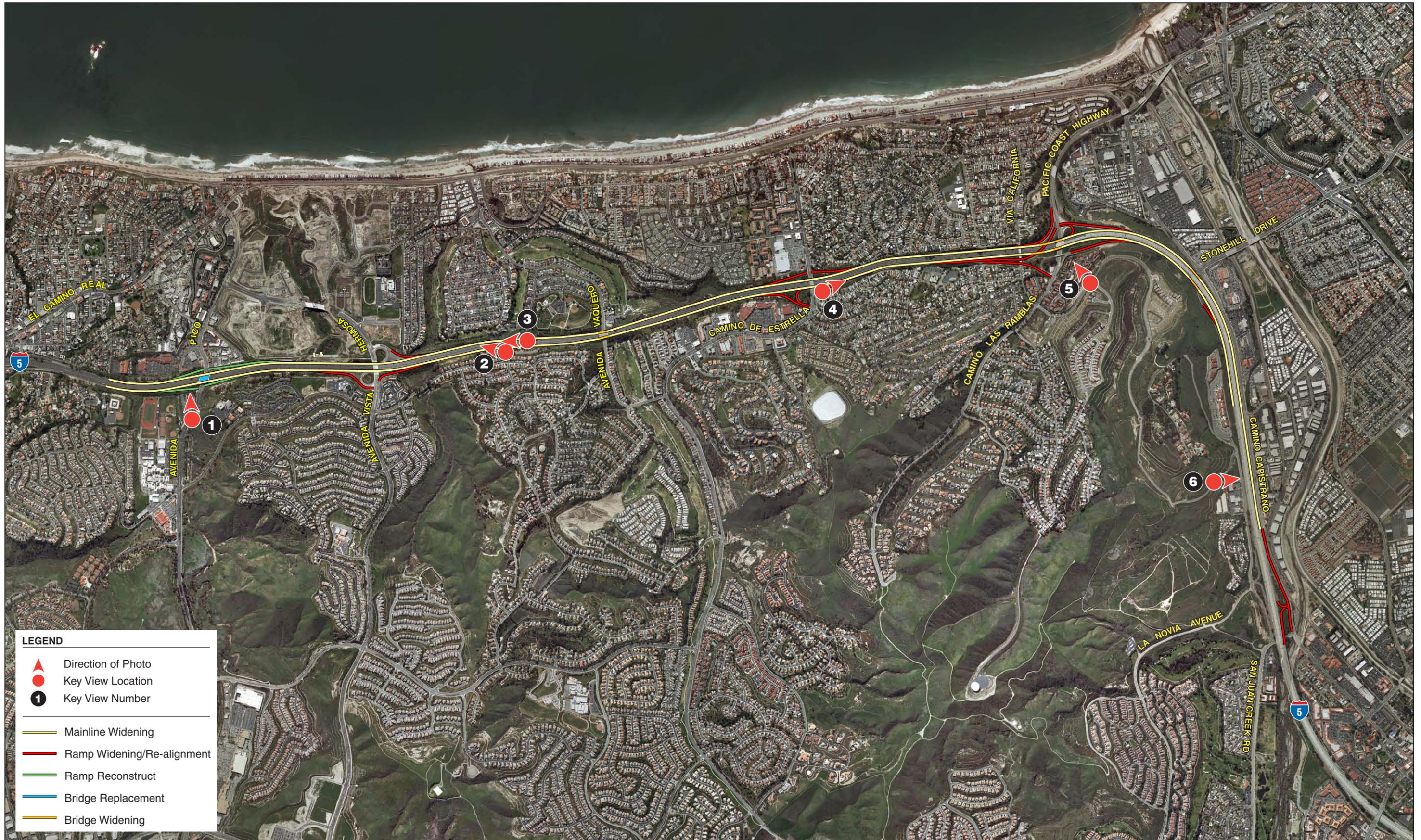
Figure 4b



- Centerline Within Landscape Unit
- One Mile Radius Zone
- Area Not Visible
- Area Visible



I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Viewshed Map • Landscape Unit 3**

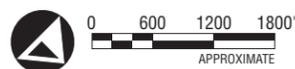


**LEGEND**

- ▲ Direction of Photo
- Key View Location
- 1 Key View Number

---

- Mainline Widening
- Ramp Widening/Re-alignment
- Ramp Reconstruct
- Bridge Replacement
- Bridge Widening



3/25/10 JN 10-106626-16422 MAS

I-5 HOV LANE EXTENSION PROJECT  
VISUAL IMPACT ASSESSMENT

## Key View Locations Map

Figure 5



- ▲ Direction of Photo
- Key View Location
- 1 Key View Number

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 1 Existing Condition**



"For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."

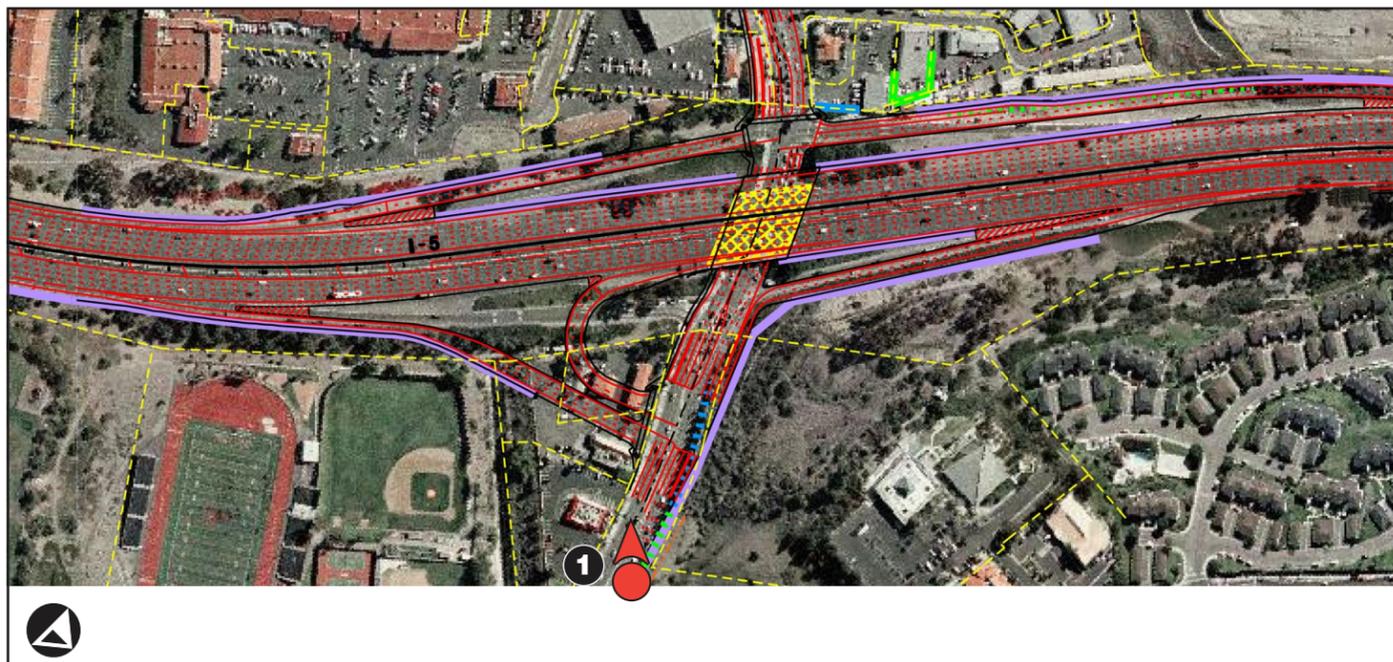


-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 1 Proposed Condition**  
**- Option A**



"For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."



-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 1 Proposed Condition**  
**- Option B**



-  Direction of Photo
-  Key View Location
-  Key View Number

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 2 Existing Condition**



"For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."

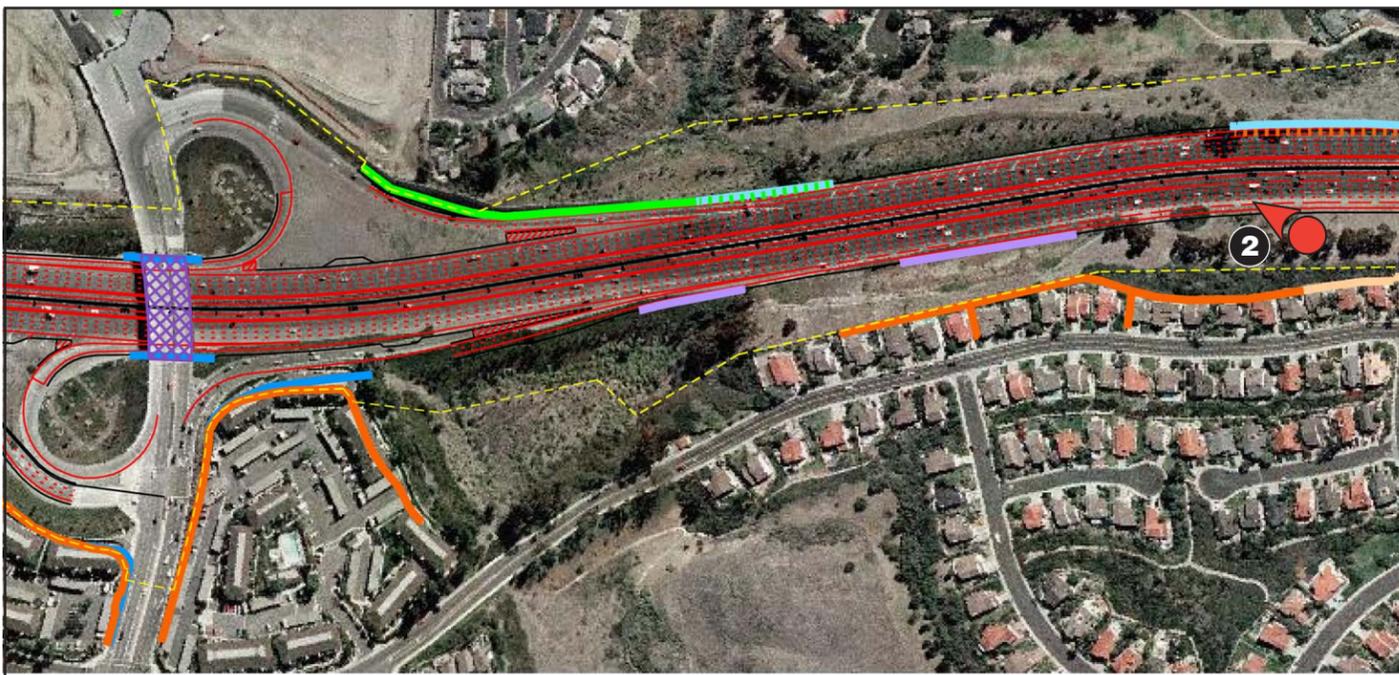


-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 2 Proposed Condition**  
**- Alternative 2**



"For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."

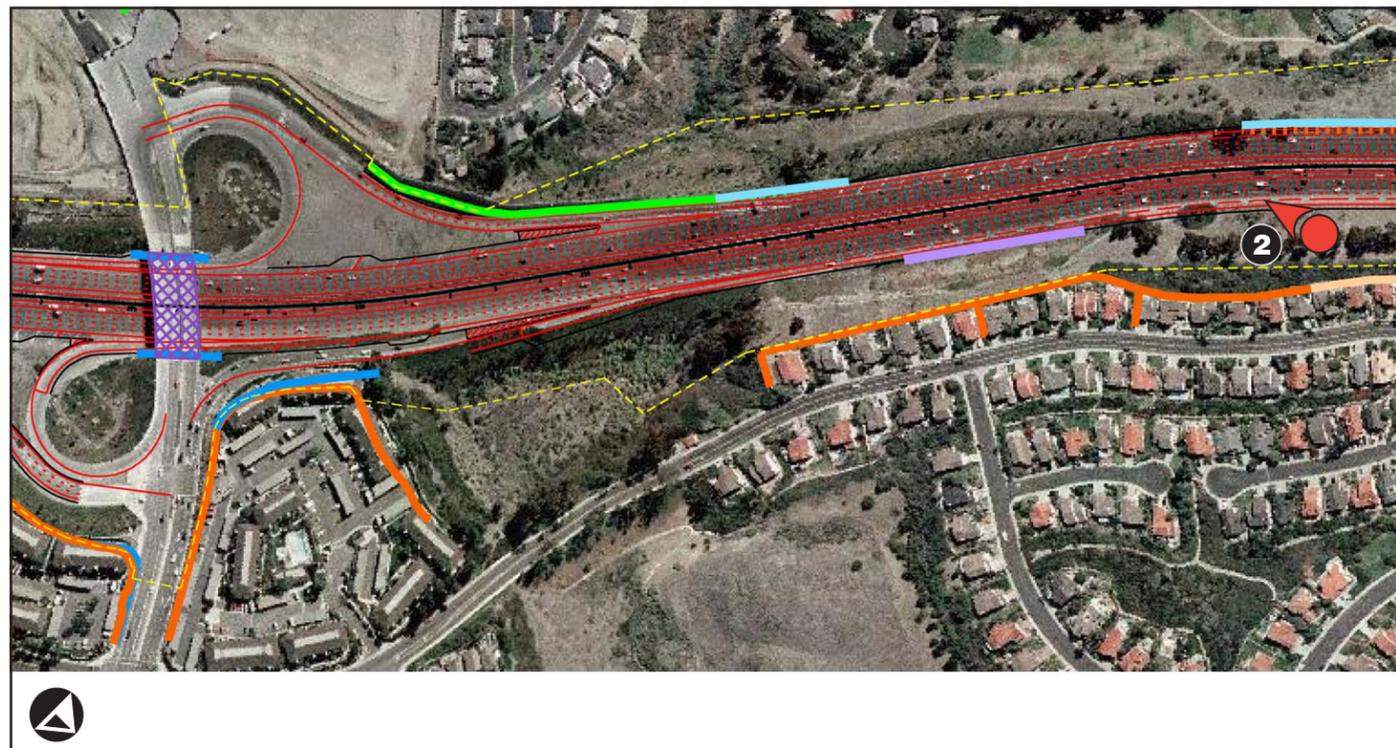


- Direction of Photo
- Key View Location
- Key View Number
- Existing Soundwall
- Existing Retaining Wall
- Existing Retaining Wall/Soundwall
- Remove Existing Soundwall
- Remove Existing Retaining Wall
- Remove Existing Retaining Wall/Soundwall
- Future Soundwall
- Existing Right-of-Way
- Proposed Retaining Wall
- Proposed Retaining Wall / Soundwall
- Roadway Undercrossing
- Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 2 Proposed Condition**  
**- Alternative 3**



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-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 2 Proposed Condition**  
**- Alternative 4**



-  Direction of Photo
-  Key View Location
-  Key View Number

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 3 Existing Condition**



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-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 3 Proposed Condition**  
**- Alternative 2**



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-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 3 Proposed Condition**  
**- Alternative 3**



"For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."



-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 3 Proposed Condition**  
**- Alternative 4**



-  Direction of Photo
-  Key View Location
-  Key View Number

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 4 Existing Condition**



"For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."



-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 4 Proposed Condition**  
**- Alternative 2**



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-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 4 Proposed Condition**  
**- Alternative 3**



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-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 4 Proposed Condition**  
**- Alternative 4**



- ▲ Direction of Photo
- Key View Location
- 5 Key View Number

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 5 Existing Condition**



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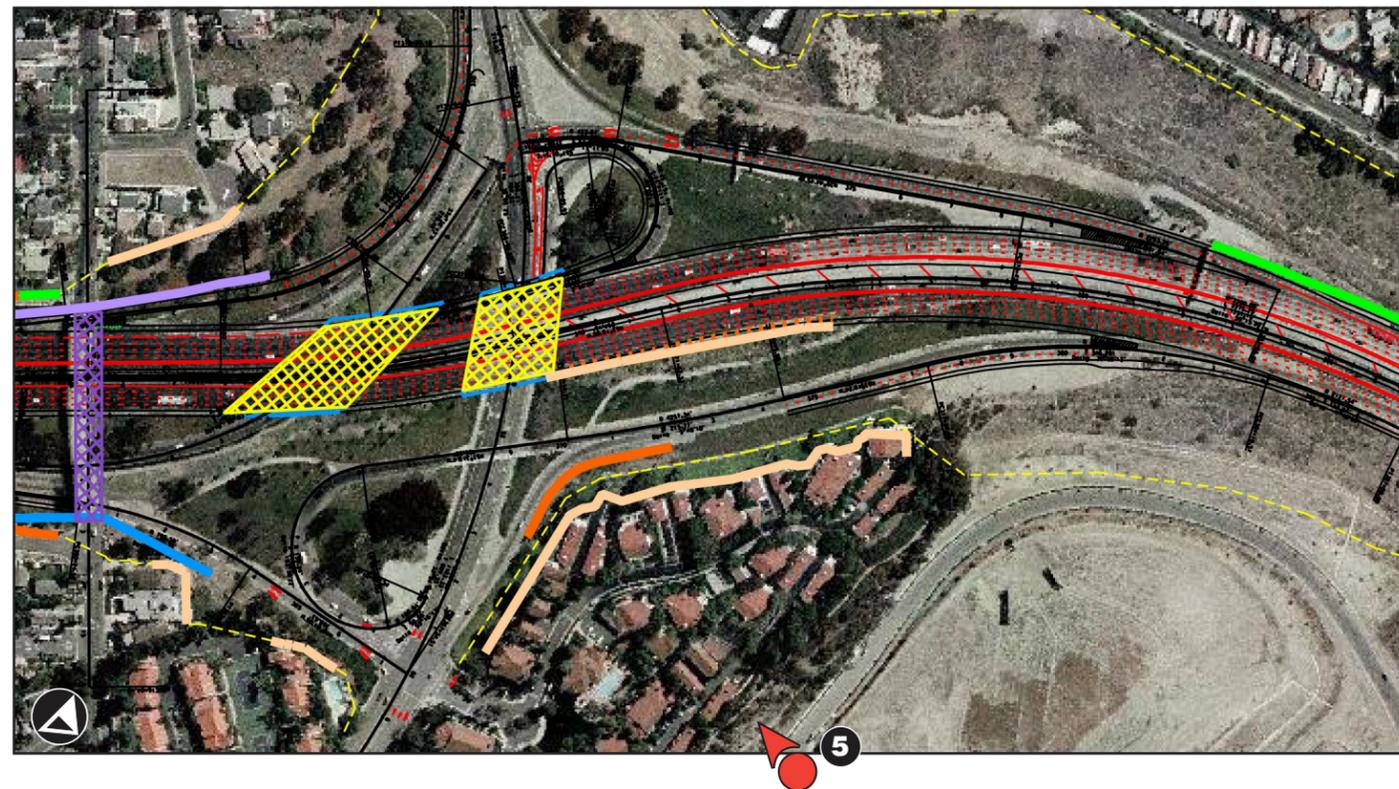


-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 5 Proposed Condition**  
**- Alternative 2**



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-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 5 Proposed Condition**  
**- Alternative 3**



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-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 5 Proposed Condition**  
**- Alternative 4**



-  Direction of Photo
-  Key View Location
-  Key View Number

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 6 Existing Condition**



"For comparative purposes, site photographs are utilized to demonstrate the general character at different points of the project area. These simulations are subject to change and are intended to provide the reader with information on the form, size, and scale of the proposed improvements within the project area. Specific project design features are subject to change during the plans, specifications, and estimates (PS&E) phase for the project."

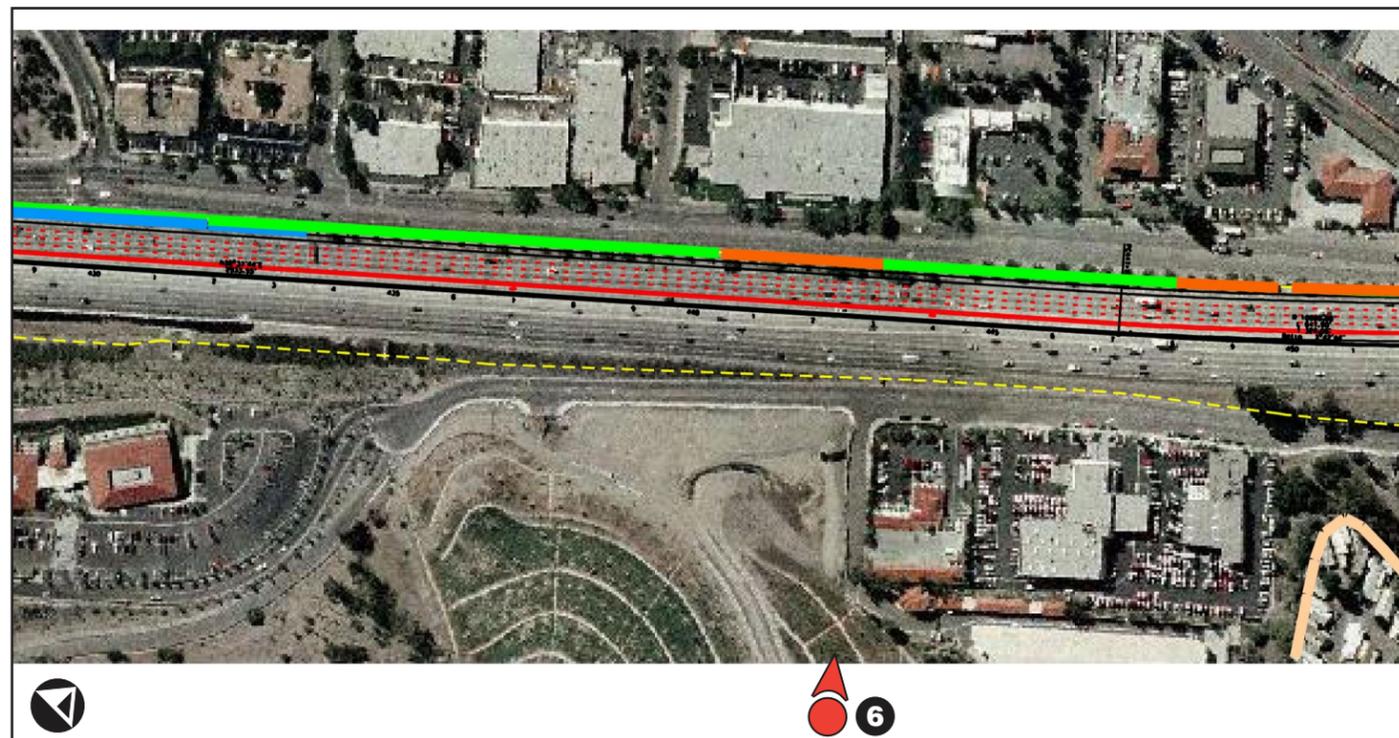


-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 6 Proposed Condition**  
**- Alternative 2**



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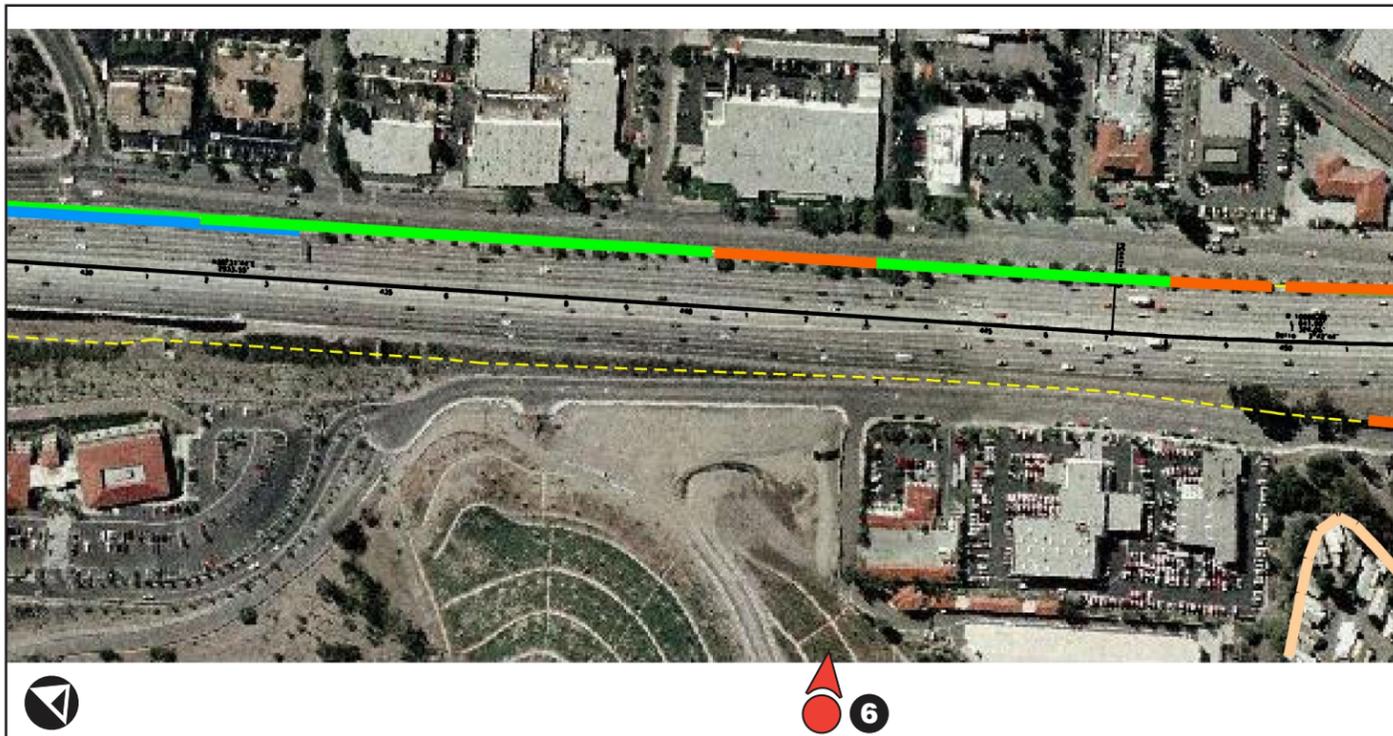


-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall / Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall / Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
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I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 6 Proposed Condition**  
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-  Direction of Photo
-  Key View Location
-  Key View Number
-  Existing Soundwall
-  Existing Retaining Wall
-  Existing Retaining Wall/Soundwall
-  Remove Existing Soundwall
-  Remove Existing Retaining Wall
-  Remove Existing Retaining Wall/Soundwall
-  Future Soundwall
-  Existing Right-of-Way
-  Proposed Retaining Wall
-  Proposed Retaining Wall / Soundwall
-  Roadway Undercrossing
-  Roadway Overcrossing

I-5 HOV LANE EXTENSION PROJECT • VISUAL IMPACT ASSESSMENT  
**Key View 6 Proposed Condition**  
**- Alternative 4**

## **APPENDIX**

## **A) Visual Quality Evaluation Forms**

### Visual Quality Evaluation – View From The Road

Project Name: Interstate 5 HOV Lane Extension Project	Evaluator: Kristen Bogue	Evaluation Scale: 1 – 7
Assessment Unit: Along I-5 within San Juan Capistrano, Dana Point, and San Clemente	Date: 10/15/09	1 = Very Low
	Weather: Fair	4 = Medium 7 = Very High

View		Visual Quality							Impact			
Key View	Proposed / Existing	General Visual Quality	Vividness		Intactness		Unity		(V+I+U) / 3 = Q	Visual Quality Difference	Positive Impact	Negative Impact
			Overall Vividness	Features	General Intactness	Encroachment	Overall Unity	Elements				
1	E	4	4	<ul style="list-style-type: none"> <li>▪ Moderately high vividness</li> <li>▪ Foreground views to the roadway and ornamental landscaping</li> <li>▪ Middleground views to commercial uses, a landscaped median, ornamental landscaping, mature trees, street lights, minimal signage, and the Avenida Pico UC/I-5 OC</li> <li>▪ Ornamental vegetation is fairly consistent in color, texture, and height</li> <li>▪ Building materials of commercial structures vary in texture and color</li> </ul>	4	<ul style="list-style-type: none"> <li>▪ Moderate intactness</li> <li>▪ Development consists of the Avenida Pico roadway throughout the view, commercial structures in the middleground, and the Avenida Pico UC/I-5 OC in the background</li> <li>▪ Color variation and hardscape features of commercial structures increase encroachment</li> <li>▪ Street lights minimally encroach upon views from roadway travelers</li> <li>▪ The ornamental landscaping along the northern side of the roadway detracts from encroaching features</li> </ul>	5	<ul style="list-style-type: none"> <li>▪ Moderate unity</li> <li>▪ Commercial structures in the middleground interrupt the unity of this view</li> <li>▪ Trees and ornamental landscaping lining the roadway throughout the view reduce the appearance of hardscape features and increase unity</li> </ul>	4.3			
	Design Option A	4	4	<ul style="list-style-type: none"> <li>▪ Moderately high vividness</li> <li>▪ Foreground views to the roadway and ornamental landscaping remain</li> <li>▪ Middleground views to</li> </ul>	4	<ul style="list-style-type: none"> <li>▪ Moderate intactness</li> <li>▪ The increased hardscape of the Avenida Pico UC/I-5 OC and the new retaining wall increase encroachment</li> </ul>	4	<ul style="list-style-type: none"> <li>▪ Moderate unity</li> <li>▪ Commercial structures in the middleground continue to interrupt the unity of this view</li> <li>▪ Mature trees and ornamental</li> </ul>	4	-0.3	0	-0.3

View		Visual Quality								Impact		
Key View	Proposed / Existing	General Visual Quality	Vividness		Intactness		Unity		(V+I+U) / 3 = Q	Visual Quality Difference	Positive Impact	Negative Impact
			Overall Vividness	Features	General Intactness	Encroachment	Overall Unity	Elements				
				<p>commercial uses, a landscaped median, mature trees, street lights, and minimal signage remain</p> <ul style="list-style-type: none"> <li>Ornamental landscaping in middleground views along the northern side of the roadway has been removed to accommodate the new retaining wall</li> <li>Middleground views to the Avenida Pico UC/I-5 OC include increased hardscape due to the realigned on- and off-ramps</li> </ul>				landscaping along the roadway help unify the view and reduce visible hardscape				
	Design Option B	3	3	<ul style="list-style-type: none"> <li>Moderately low vividness</li> <li>Foreground views to the roadway and ornamental landscaping remain</li> <li>Middleground views now include only one commercial use</li> <li>The landscaped median in middleground views remains, and has been extended in portions to include decorative concrete</li> <li>Views to middleground ornamental landscaping and mature trees on both sides of Avenida Pico have been replaced with the new on- and off-ramps and a new retaining</li> </ul>	3	<ul style="list-style-type: none"> <li>Moderately low intactness</li> <li>Street lights continue to minimally encroach upon views</li> <li>The new retaining wall and hardscape appearance of the Avenida Pico UC/I-5 OC increase encroachment</li> </ul>	4	<ul style="list-style-type: none"> <li>Moderately low unity</li> <li>The removal of mature trees and ornamental landscaping reduce the unity of this view and increase views to hardscape features</li> </ul>	3.3	-1.0	0	-1.0

View		Visual Quality							Impact			
Key View	Proposed / Existing	General Visual Quality	Vividness		Intactness		Unity		(V+I+U) / 3 = Q	Visual Quality Difference	Positive Impact	Negative Impact
			Overall Vividness	Features	General Intactness	Encroachment	Overall Unity	Elements				
				<ul style="list-style-type: none"> <li>wall</li> <li>▪ Middleground views to the Avenida Pico UC/I-5 OC include increased hardscape features</li> </ul>								
3	E	5	6	<ul style="list-style-type: none"> <li>▪ Moderately high vividness</li> <li>▪ Foreground and middleground views include SB I-5 travel lanes, a soundwall to the west of I-5, a center divide rail, and one freeway sign</li> <li>▪ Mature trees and vegetation are visible to the east of I-5</li> <li>▪ The soundwall to the west of I-5 contains landscaped treatment</li> <li>▪ Background views include distant vegetated hillsides which increase the memorability of the view</li> </ul>	5	<ul style="list-style-type: none"> <li>▪ Moderately high intactness</li> <li>▪ Development within the Key View consists of I-5 and a soundwall</li> <li>▪ The freeway sign and sound wall appear to encroach upon I-5 travelers</li> <li>▪ The view is free of any other encroaching features</li> <li>▪ Encroaching features are minimized by background views to distant hillsides</li> </ul>	5	<ul style="list-style-type: none"> <li>▪ Moderately high unity</li> <li>▪ Mature trees and vegetation unify this Key View</li> <li>▪ Distant views to hillsides distract travelers from visual intrusions</li> <li>▪ Unity is reduced by the appearance of hardscape features of I-5 and the soundwall</li> </ul>	5.3			
	Alt. 2	5	5	<ul style="list-style-type: none"> <li>▪ Vividness remains moderately high</li> <li>▪ Foreground and middleground views remain similar to existing conditions</li> <li>▪ The freeway has been widened and the new SB HOV lane is visible</li> <li>▪ The existing soundwall has been removed and replaced to accommodate the new HOV lane</li> </ul>	4	<ul style="list-style-type: none"> <li>▪ Moderately high intactness</li> <li>▪ Hardscape features have increased as a result of the new HOV lane and the soundwall</li> <li>▪ Encroachment has increased from the new soundwall, as it lacks aesthetic/landscape treatment</li> <li>▪ Encroaching features are minimized by background views to distant hillsides</li> </ul>	5	<ul style="list-style-type: none"> <li>▪ Moderately high unity</li> <li>▪ Mature trees and vegetation help unify this Key View</li> <li>▪ Distant views to hillsides remain</li> <li>▪ Unity is reduced by the appearance of hardscape features of I-5 and the new soundwall</li> </ul>	4.7	-0.6	0	-0.6

View		Visual Quality								Impact		
Key View	Proposed / Existing	General Visual Quality	Vividness		Intactness		Unity		(V+U) / 3 = Q	Visual Quality Difference	Positive Impact	Negative Impact
			Overall Vividness	Features	General Intactness	Encroachment	Overall Unity	Elements				
				<ul style="list-style-type: none"> <li>The new wall lacks aesthetic/landscape treatment</li> <li>Mature trees and vegetation remain visible to the east of I-5</li> <li>Background views remain</li> </ul>								
	Alt. 3	5	5	Refer to Alt. 2	4	Refer to Alt. 2	5	Refer to Alt. 2	4.7	-0.6	0	-0.6
	Alt. 4	5	5	Refer to Alt. 2	4	Refer to Alt. 2	5	Refer to Alt. 2	4.7	-0.6	0	-0.6
4	E	5	6	<ul style="list-style-type: none"> <li>High vividness</li> <li>Foreground views to the roadway and grasses</li> <li>Middleground views to mature trees and vegetation, grasses, street lights, and minimal signage</li> <li>Background views include distant mature trees</li> <li>Contrasting vegetation varies in color, texture, and height</li> <li>The natural landscape and the roadway are harmonious in line</li> <li>Minimal hardscape (I-5) in middleground views</li> <li>Varying form of the trees and vegetation increase vividness</li> </ul>	5	<ul style="list-style-type: none"> <li>Moderately high intactness</li> <li>Development consists of the I-5 NB on-ramp in the foreground and I-5 travel lanes and the on-ramp in the middleground</li> <li>Street lights minimally encroach upon views from freeway travelers</li> <li>The abundance of mature trees and vegetation throughout this Key View detracts from encroaching features</li> </ul>	5	<ul style="list-style-type: none"> <li>Moderately high unity</li> <li>Mature trees and vegetation throughout the view reduce the appearance of hardscape features and increase unity</li> </ul>	5.3			
	Alt. 2	5	6	<ul style="list-style-type: none"> <li>High vividness remains</li> <li>Foreground views remain similar to those in the existing condition</li> </ul>	4	<ul style="list-style-type: none"> <li>Moderate intactness</li> <li>Views to the I-5 NB on-ramp remain in the foreground and middleground</li> </ul>	5	<ul style="list-style-type: none"> <li>Moderately high unity</li> <li>Mature trees and vegetation remain and increase unity in this Key View</li> </ul>	5	-0.3	0	-0.3

View		Visual Quality								Impact		
Key View	Proposed / Existing	General Visual Quality	Vividness		Intactness		Unity		(V+I+U) / 3 = Q	Visual Quality Difference	Positive Impact	Negative Impact
			Overall Vividness	Features	General Intactness	Encroachment	Overall Unity	Elements				
				<ul style="list-style-type: none"> <li>▪ Middleground views remain similar to those in the existing condition</li> <li>▪ Middleground views also include increased hardscape from the widened travel lanes of I-5; a buffer is visible between the HOV and auxiliary lanes</li> <li>▪ Distant trees remain in background views</li> <li>▪ The proposed soundwall to the east of the on-ramp is not visible due to intervening topography and trees</li> </ul>		<ul style="list-style-type: none"> <li>▪ Encroachment from hardscape features has increased due to the widened I-5 travel lanes</li> <li>▪ Mature trees and vegetation throughout this Key View remain and detract from encroaching features</li> </ul>						
	Alt. 3	5	6	Refer to Alt. 2	4	Refer to Alt. 2	5	Refer to Alt. 2	5	-0.3	0	-0.3
	Alt. 4	5	5	<ul style="list-style-type: none"> <li>▪ High vividness remains</li> <li>▪ Foreground views remain similar to those in the existing condition</li> <li>▪ Middleground views remain generally similar to those in the existing condition</li> <li>▪ Middleground views also include increased hardscape from the widened travel lanes of I-5; there is no buffer between the HOV and auxiliary lanes</li> <li>▪ Distant trees remain in background views</li> </ul>	4	Refer to Alt. 2	5	Refer to Alt. 2	5	-0.3	0	-0.3

View		Visual Quality							Impact			
Key View	Proposed / Existing	General Visual Quality	Vividness		Intactness		Unity		(V+I+U) / 3 = Q	Visual Quality Difference	Positive Impact	Negative Impact
			Overall Vividness	Features	General Intactness	Encroachment	Overall Unity	Elements				
				<ul style="list-style-type: none"> <li>The proposed soundwall to the east of the on-ramp is not visible due to intervening topography and trees</li> </ul>								

### Visual Quality Evaluation – View Of The Road

Project Name: Interstate 5 HOV Lane Extension Project	Evaluator: Kristen Bogue	Evaluation Scale: 1 – 7
Assessment Unit: Along I-5 within San Juan Capistrano, Dana Point, and San Clemente	Date: 10/15/09	1 = Very Low
	Weather: Fair	4 = Medium 7 = Very High

View		Visual Quality							Impact			
Key View	Proposed / Existing	General Visual Quality	Vividness		Intactness		Unity		$(V+I+U) / 3 = Q$	Visual Quality Difference	Positive Impact	Negative Impact
			Overall Vividness	Features	General Intactness	Encroachment	Overall Unity	Elements				
2	E	6	6	<ul style="list-style-type: none"> <li>▪ High vividness</li> <li>▪ Foreground views include bare ground to the east of I-5</li> <li>▪ Middleground views include I-5 travel lanes, ornamental and ruderal vegetation varying in color, and a soundwall</li> <li>▪ No background views afforded</li> <li>▪ Views to one freeway sign in the middleground on the west side of I-5</li> <li>▪ Varying heights of mature trees provide high visual contrast</li> </ul>	5	<ul style="list-style-type: none"> <li>▪ Intactness within this Key View is considered to be moderately high</li> <li>▪ I-5 travel lanes and ornamental landscaping appear intact</li> <li>▪ The soundwall along the west side of I-5 increases encroachment on travelers</li> </ul>	6	<ul style="list-style-type: none"> <li>▪ Overall unity is high</li> <li>▪ The Key View is dominated by landscape features</li> <li>▪ Vegetation along the east and west sides of I-5 increases the overall unity of the view</li> <li>▪ The linear patterns of I-5 and the landscape features provide for a harmonious visual pattern</li> <li>▪ Visual intrusion from I-5 and the soundwall is significantly minimized by the abundance of mature trees and vegetation</li> </ul>	5.7			
	Alt. 2	6	6	<ul style="list-style-type: none"> <li>▪ High vividness</li> <li>▪ The freeway has been widened and the new NB HOV lane is visible</li> <li>▪ The freeway shoulder appears smaller</li> <li>▪ Middleground views now include a new soundwall that replaced the existing soundwall</li> <li>▪ No background views afforded</li> <li>▪ Views to mature trees remain</li> </ul>	4	<ul style="list-style-type: none"> <li>▪ Intactness within this Key View remains moderately high</li> <li>▪ The widened freeway minimally encroaches on the shoulder</li> <li>▪ I-5 travel lanes and ornamental landscaping still appear intact</li> <li>▪ The new soundwall and retaining wall along the west</li> </ul>	6	<ul style="list-style-type: none"> <li>▪ Overall unity remains high</li> <li>▪ The Key View is still dominated by landscape features</li> <li>▪ Vegetation along the east and west sides of I-5 increases the overall unity of the view</li> <li>▪ Visual intrusion from I-5 and the new soundwall is significantly minimized by the abundance of mature trees and vegetation</li> </ul>	5.3			

View		Visual Quality								Impact		
Key View	Proposed / Existing	General Visual Quality	Vividness		Intactness		Unity		(V+I+U) / 3 = Q	Visual Quality Difference	Positive Impact	Negative Impact
			Overall Vividness	Features	General Intactness	Encroachment	Overall Unity	Elements				
						side of I-5 increase encroachment on travelers						
	Alt. 3	6	6	Refer to Alt. 2	4	Refer to Alt. 2	6	Refer to Alt. 2	5.3	0	0	0
	Alt. 4	6	6	Refer to Alt. 2	4	Refer to Alt. 2	6	Refer to Alt. 2	5.3	0	0	0
5	E	7	6	<ul style="list-style-type: none"> <li>▪ High vividness</li> <li>▪ Residential uses and mature trees are visible in foreground and middleground views</li> <li>▪ Roofing materials of the residential structures are visible in foreground and middleground views, which are uniform in color and texture</li> <li>▪ Middleground views also include limited views to I-5 travel lanes and an overcrossing</li> <li>▪ Mature trees and vegetation are visible throughout the view which vary in color, height, and texture</li> <li>▪ Limited background views to the Pacific Ocean are afforded</li> </ul>	7	<ul style="list-style-type: none"> <li>▪ Very high intactness</li> <li>▪ Development consists of residential uses and I-5</li> <li>▪ The presence of mature trees throughout the view minimizes the visual intrusion of hardscape features</li> <li>▪ No significant encroaching features are present within this view</li> </ul>	7	<ul style="list-style-type: none"> <li>▪ Very high unity</li> <li>▪ The mature trees visible throughout the view reduce the appearance of hardscape features of the residential structures, overcrossing, and I-5 travel lanes</li> <li>▪ The residential uses, mature trees, and I-5 appear to be unified</li> </ul>	6.7			
	Alts. 2, 3, 4	6	6	<ul style="list-style-type: none"> <li>▪ Project changes are minimally perceptible from this location due to intervening trees; views remain generally similar to the existing condition</li> </ul>	6	<ul style="list-style-type: none"> <li>▪ Although project changes are minimally perceptible in this Key View, the freeway has been widened and has minimally increased encroachment on nearby uses</li> </ul>	7	<ul style="list-style-type: none"> <li>▪ As project changes are minimally perceptible from this Key View, unity has not changed, and remains similar to the existing condition</li> </ul>	6.3	-0.4	0	-0.4

View		Visual Quality							Impact			
Key View	Proposed / Existing	General Visual Quality	Vividness		Intactness		Unity		(V+I+U) / 3 = Q	Visual Quality Difference	Positive Impact	Negative Impact
			Overall Vividness	Features	General Intactness	Encroachment	Overall Unity	Elements				
6	F	6	6	<ul style="list-style-type: none"> <li>High vividness</li> <li>Foreground views include brush and grasses</li> <li>Middleground views consist of I-5 travel lanes, mature trees, grasses, commercial structures, and street lights</li> <li>Background views include distant hillsides, residential development, and mature trees</li> <li>Visible commercial structures vary in color and texture</li> <li>Mature trees and vegetation are visible throughout the view and vary in color and texture</li> <li>The expansive views to hillsides and visual contrast in form and color provide for high memorability</li> </ul>	6	<ul style="list-style-type: none"> <li>High intactness</li> <li>Development consists of commercial and residential uses, and I-5</li> <li>I-5 minimally encroaches on adjacent uses and views within this Key View</li> <li>The mature trees, vegetation, grasses, and structures appear to be intact</li> <li>There are no significant visual intrusions within this view</li> </ul>	7	<ul style="list-style-type: none"> <li>Very high unity</li> <li>Mature trees and vegetation interspersed throughout the Key View reduce the appearance of hardscape features of structures and I-5</li> <li>The abundance of visible trees and expansive views to distant hillsides unify this view</li> </ul>	6.3			
	Alt. 2	7	6	<ul style="list-style-type: none"> <li>The restriping of the southbound 5 travel lanes is minimally visible</li> </ul>	6	<ul style="list-style-type: none"> <li>Intactness remains high</li> <li>Minimal encroachment from I-5 on adjacent uses and views remains</li> <li>The mature trees, vegetation, grasses, and structures remain intact</li> <li>There are no new significant visual intrusions within this view</li> </ul>	7	<ul style="list-style-type: none"> <li>Unity remains high</li> <li>Mature trees and vegetation interspersed throughout the Key View continue to reduce the appearance of hardscape features of structures and I-5</li> <li>The abundance of visible trees and expansive views to distant hillsides continue to unify this view</li> </ul>	6.3	0	0	0
	Alt. 3	7	7	Refer to the Existing Condition; project changes are not visible.	6	Refer to the Existing Condition; project changes are not visible.	7	Refer to the Existing Condition; project changes are not visible.	6.3	0	0	0

View		Visual Quality								Impact		
Key View	Proposed / Existing	General Visual Quality	Vividness		Intactness		Unity		(V+I+U) / 3 = Q	Visual Quality Difference	Positive Impact	Negative Impact
			Overall Vividness	Features	General Intactness	Encroachment	Overall Unity	Elements				
	Alt. 4	7	7	Refer to the Existing Condition; project changes are not visible.	6	Refer to the Existing Condition; project changes are not visible.	7	Refer to the Existing Condition; project changes are not visible.	6.3	0	0	0