VISUAL/AESTHETICS REPORT
VISUAL/AESTHETICS REPORT
FOR THE
INTERSTATE 805 (I-805) AND INTERSTATE 5 (I-5) STUDY CORRIDORS

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INTRODUCTION

The following report is intended to provide SANDAG with a preliminary scenic and visual resources constraints analysis for the Interstate 805 (I-805) and Interstate 5 (I-5) study corridors. Primary goals of the study are to identify the key visual resource issues associated with the project and make recommendations for future studies. Fieldwork was accomplished by a windshield survey on June 11, 2004. Potential modifications to the visual environment associated with project related improvements were evaluated by a licensed landscape architect experienced with the preparation Visual Impact Assessments for Caltrans and Federal Highway Administration (FHWA) projects. Topics discussed in this constraint analysis includes the following:

- Project Description
- Method of Assessment of Project Related Visual Resource Impacts
  - Project Setting/Viewsheds
  - Assessment of Visual Resources
  - Identification of Viewer Response to Visual Resources
  - Existing Visual Resources
  - Predicting Viewer Response
  - Assessing Project Impacts
- Design Recommendations
- Agency Coordination and Permit Requirements
- Recommendations for Future Studies
- Summary

Project Description

Interstate 805 (I-805) and Interstate 5 (I-5) are the principal north-south interregional freeways for people and the movement of goods in the San Diego region. They also are important regional freeways connecting the San Diego metropolitan area with Mexico and Los Angeles. Both the I-805 and I-5 south of State Route (SR) 54 are extensively used commuter and truck routes, providing access to major employment centers in the region (Downtown San Diego, Sorrento Valley/Sorrento Mesa, Kearny Mesa and Otay Mesa). The I-805 and I-5 south of SR 54 are general purpose roads with no high occupancy vehicle (HOV) lanes. Currently, both freeways are operating at or near capacity during the weekday peak periods that typically spans 3.5 hours in the morning and 2.5 hours in the afternoon.¹ Commercial vehicles experience the same congested travel conditions as commuters. In addition, projected population and employment growth in the region, particularly in the South Bay subregion, will result in additional travel demand on the I-805/I-5 corridors.² In early 2003 SANDAG and Caltrans assembled an I-805/I-5 Corridor Study Technical Working Group that selected and analyzed eight options/alternatives for corridor-wide improvements to enhance the mobility of inter-regional and regional trips along the I-805 and I-5. Through a screening process, the Technical Working Group selected three build alternatives and a No Build alternative for further study.

The I-805/I-5 Corridor Study Project examined in this Environmental Constraints Report consists of three lane widening alternatives (3, 5 and 6) proposed by SANDAG and Caltrans for both the I-805

¹ Peak period is the duration of average freeway travel speeds reduced to 35-45 mph. The PM peak period is shorter in duration due to many return trips being distributed outside of the peak hours.
² According to SANDAG’s, 2030 Regional Transportation Plan.
and the I-5. Overall the lane-widening alternatives would add a combination of general purpose lanes plus HOV lanes or managed lanes. General purpose lanes are considered the main through-lanes of a freeway providing lanes for all types of vehicles including cars, trucks, buses, motorcycles, etc. Managed lanes are defined as dedicated lanes for one or more user groups that typically have a higher LOS during peak hours. Carpools, vanpools, and transit vehicles as well as solo drivers who pay a fee typically use these lanes. HOV lanes are exclusive road or traffic lanes limited to HOVs, and typically have higher operating speeds and lower traffic volumes than freeway lanes. Vehicles that typically use HOV lanes include carpools, vanpools, buses, other multi-passenger vehicles, motorcycles and emergency vehicles.

The study area for the I-5 corridor is the segment of I-5 that traverses San Diego County (County) between the intersection with SR 54 and the SR 905 intersection; a distance of approximately 7 miles. Alternatives 3, 5 and 6 for the I-5 corridor would generally consist of a freeway that consists of eight freeway lanes plus two HOV lanes. The Area of Potential Effect (APE) and new Right-of-Way (ROW) needed for construction are about the same for all three alternatives. There are slight differences between the alternatives due to different locations of Direct Access Ramps (DARs) for transit and carpools, the width of the medians and new lanes, and the different locations of proposed lane widening along the freeway.

The study area for the I-805 corridor is the entire distance (approximately 32 miles) of the highway that traverses the County from the intersection with I-5 to the intersection with SR 905 (Figure 1). In general, Alternatives 3 and 5 would consist of a freeway with eight general purpose lanes plus four managed lanes (ML), and Alternative 6 would consist of a freeway with eight to ten general purpose lanes plus four ML. The APE and ROW reflect the differences needed for constructing each alternative.

The proposed lane configurations for each corridor alternative are stated in Table 1 below. Table 1 also notes which alternatives would require HOV to HOV connectors and DARs for transit and carpools, as well as associated structures (bridges, ramps, over-crossings, undercrossings, etc.) that would need to be widened, rebuilt, or built.

**METHOD OF ASSESSMENT OF PROJECT RELATED VISUAL RESOURCE IMPACTS**

The visual importance of roadways requires that visual impacts be adequately assessed and considered when a roadway project is proposed. Future visual studies will be required to assess the visual impacts of the selected alternative for each corridor and to propose measures to mitigate any adverse visual impacts associated with the construction of the project on the surrounding visual environment and the users of the freeway system.

Currently, the methodology that will be required to be used in future visual impact studies generally follows the guidelines outlined in the 1981 FHWA publication "Visual Impact Assessment for Highway Projects." Six principal steps are required as part of this visual assessment methodology. Three of the steps address existing conditions and three address potential future conditions. Major components of the process include: (1) definition of the project setting and viewshed, (2) assessment of the visual resources of the project area, and (3) identification of the viewer response to those resources. These components define the existing or baseline conditions.
## Table 1
**Widening Alternatives**

### I-805 Corridor

#### Alternatives 3 & 5

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<tr>
<th>SEGMENT</th>
<th>EXISTING LANES</th>
<th>PROPOSED ADDITIONAL LANES</th>
<th>OTHER STRUCTURES</th>
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</table>
| SR 905 to SR 54 | 8 F           | 4 ML                       | **Structures To Widen:** Del Sol UC, Oray River Bridge, Main St UC, Naples St UC, Telegraph Canyon UC, Bonita Rd UC, Sweetwater River Bridge and SR 54 Separation.  
**Structures To Replace:** J St OC, Palm Ave OC, Orange Ave OC, Palomar St OC, H St OC and SR 54 Separation. |
| SR 54 to I-8   | 8 F           | 4 ML                       | **Structures To Widen:** SR 54 Separation, Sweetwater Rd UC, Euclid Ave UC, Plaza Blvd UC, 8th St UC, Division St UC, 47th St UC, Market St On-ramp, Federal Blvd UC, Home Ave UC, Ohio/ Madison/Adams Ave On-ramp.  
**Structures To Replace:** E SR 54/N I-805 Connector, Sweetwater Rd Off-ramp & On-ramp, 22nd St Pedestrian Bridge, N I-805/43rd St Off-ramp OC & 43rd St On-ramp OC/I-805, Logan Ave OC, Oceanview Blvd OC, Imperial Ave OC, Greenwood (SD Trolley) UC, Market St OC, Hilltop Dr OC, N I-805/WSR 94 OC, Home Ave Off-ramp, W SR 94/N I-805 Connector, Ralene St OC, I-805/I-15 Separation OH, S 1-15 to S I-805 OC, Landis St OC, University Ave OC, Lincoln Ave OC, Orange Ave OC, El Cajon Blvd OC, Meade Ave OC and Adam Ave OC.  
**ALT. 5 ONLY - Replace 16th St with DAR.**  
**New Structures To Build:** Abutment retaining walls for 18th St OC and SR 94 Separation OH, W SR 94/S I-805 OC.  
**ALT. 5 ONLY - Abutment retaining walls for Market St DAR.**  
**Realignment:** Imperial Ave/N I-805 Off-ramp, Market St/N I-805 Off-ramp and N I-805/N SR 94 Connector. |
| Mission Valley Viaduct | 8 F           | 4 ML                       | **Structures To Build:** Elevated road structure over existing Viaduct, 84 feet wide x 4,200 feet long. |
| I-8 to I-5     | 8 F           | 4 ML                       | **Structures To Widen:** Mission Center UC, Governor Dr UC, Rose Canyon OH, Mira Mesa OH, Carroll Canyon OH, Mira Mesa Blvd UC, Sorento Valley UC and Los Peñasquitos Bridge.  
**Structures To Replace:** Murray Ridge OC, Kearny Villa Rd OC, SR 163 Separation, SR 163 E & W Connector, Linda Vista Rd OC, Othello St Pedestrian OC, Balboa Ave OC, Clairemont Mesa OC, SR 52 Separation, Nobel Dr OC, La Jolla Village Dr OC and I-5 Separation. |
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| 1-8 to I-5   | 8 F           | 4 ML                       | **New Structures To Build:** Abutment retaining walls for Eastgate Mall OC. DARs for Balboa Ave, Clairemont Mesa Blvd & Nobel Dr.  
**Freeway-to-Freeway Direct HOV Connectors:** I-5-to-I-5 @ I-805 - North-to-North, South-to-South. I-805 @ SR 52 - West to North, South to East. |
| SR 905 to Telegraph | 8 F         | 4 ML                       | **Structures To Widen:** Otay River Bridge, Otay River Overflow Channel Bridge, J Street UC, J Street Channel, & Sweetwater Bridge.  
**Structures To Replace:** Palm Ave OC, Orange Ave OC, Palomar St OC and DAR.  
**Structures To Build:** New structures to serve Plaza Bonita DAR |
| Telegraph to I-8 | 8 F         | 2 FL + 4 ML                | **Structures To Widen:** Telegraph Canyon UC, Bonita Rd UC Sweetwater River Bridge, SR 54 Separation, Sweetwater Rd UC, Euclid Ave UC, Plaza Blvd UC, 8th Street UC, Division Street UC, 47th St UC, Market St On-ramp, Federal Blvd UC, Home Ave UC, I-805/I-15 Sep OH.  
**Structures To Replace:** J St OC, H Street OC, SR 54 Connector, E SR 54/N I-805 Connector, Sweetwater Rd Off-ramp and On-ramp, Grove St OC, 22nd St Pedestrian Bridge, 18th St OC, 16th St OC, 4th St OC, N I-805/43rd Street Off-ramp OC & 43rd Street On-ramp OC/N805, Logan Ave OC, Oceanview Blvd OC, Imperial Ave OC, Greenwood (San Diego Trolley) Under Pass, Market St OC, Hilltop Dr. OC, N I-805/W SR 94 OC, Home Ave Off-ramp, Ralene/Tulip St OC, S I-15 to S I-805 OC, Landis St OC, University Ave OC, Lincoln Ave OC, Orange Ave OC, El Cajon Blvd OC, Meade Ave OC, & Adams Ave OC.  
**New Structures To Build:** Abutment retaining walls for SR 94 Sep OH, SR 94 W/I-805 S OC.  
**Realignments:** Imperial Ave/N805 Off-ramp, Market St/N805 Off-ramp and On-ramp, & I-805 N/SR 94 Connector |
| Mission Valley Viaduct | 8 F       | 4 ML                       | **New Structures To Build:** Elevated road structure over existing Viaduct, 84 feet wide x 4,200 feet long. |
## Table 1 (cont.)
### WIDENING ALTERNATIVES

#### I-805 CORRIDOR (cont.)

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<tr>
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</table>
| I-8 to I-5 | 8 F            | 2 FL + 4 ML               | Structures To Widen: Mission Center UC, Governor Dr UC, Rose Canyon OH, Mira Mesa/Soledad Canyon OH, Mira Mesa Blvd UC, Sorrento Valley UC and Los Peñasquitos Bridge.  
Freeway-to-Freeway Direct HOV Connectors: I-5 @ SR 54 - North to East, South to East, West to South & West to North; I-805 @ SR 54 - South to East, West to North, West to South, West to East & East to South; I-805 @ SR 94 - West to East, East to South & North to West; I-805 @ SR 163 – North to North & South to South; I-805 @ SR 52 – West to North and East to South. |

#### I-5 CORRIDOR

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</table>
| SR 905 to SR 54 | 8 F            | 2 HOV                     | Structures To Widen: Otay River Bridge, Otay River Overflow Bridge, J St UC, J St Channel, Sweetwater Bridge.  
Structures To Replace: Coronado Ave OC, Palm Ave OC, SR 75 OC, SR 75/N I-5 OC, L St OC, H St OC, F St Trolley, E St OC, NB On-Ramp/E St. |

#### ALTERNATIVES 3 & 5

#### ALTERNATIVE 6

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</table>
| SR 905 to SR 54 | 8 F            | 2 HOV                     | Structures To Widen: Otay River Bridge, Otay River Overflow Channel Bridge, J St UC, J St Channel, & Sweetwater Bridge.  
Structures To Replace: Coronado Ave OC, Palm Ave OC, SR 75 OC, SR 75/I-5 N OC, L St OC, H St OC, F St Trolley OC, E St OC, N On-Ramp/E St.  
New Structures To Build: New structures to serve San Ysidro Border Crossing DAR. |

Notes: FL = General Purpose Lanes; HOV = High Occupancy Vehicle Lanes; ML = Managed Lanes; OC = Overcrossing; UC = Undercrossing; OH = Overhead
Once the existing conditions are established, (4) the anticipated changes to visual resources introduced by the project, as well as the anticipated viewer response(s) to them, are used to (5) determine the degree of visual impact, and (6) mitigation measures are then proposed, as appropriate. Components 1 - 5 are discussed briefly below:

1. **Project Setting/Viewshed**

Visual effects are assessed relative to the setting in which they occur. The regional landscape described below establishes the general visual environment of the project. The specific visual environment upon which this assessment is focused is based on defining project-specific landscape units and the project viewed, both described below.

Currently, the visual resources that define the study corridors are typical of much of the freeway systems within San Diego County. Eight travel lanes (four north, four south) with a center median (concrete k-rail) and improved road shoulders provide access to surface streets and occasional freeway interchanges. In part due to extensive grading, both freeways are relatively flat (usually 6 percent or less). This often results in the creation of large manufactured cut and fill slopes. Landscaping within the right-of-way consists of groundcovers, shrub massing and tree plantings. Occasionally, the center median is planted with large mounding shrubs. Dominant within the freeway corridors is signage providing users with surface street and regional highway information. These linear transportation corridors can widen considerably at undercrossings and overcrossings where access to local streets is provided. Where freeway interchanges occur, views from the travel lanes and surrounding properties are of concrete superstructures with multiple elevated access lanes.

A viewshed is comprised of all the surface areas visible from an observer’s viewpoint. For federally funded roadways projects, the limits of a viewshed are defined as the visual limits of the views located from the proposed project (i.e., drivers), as well as the locations of viewers likely to be affected by visual changes brought about by project features (e.g., nearby residences).

The viewshed of the I-805/I-5 Corridor Study Project generally is limited to the freeway right-of-way and the surface streets that connect to it at the various interchanges, although some more distant views are available.

2. **Assessment of Visual Resources**

Existing visual conditions are typically defined through assessment of project character and quality.

**Visual Character** - Visual character generally can be defined through objective descriptions of visual attributes within a project’s existing landscape. This is a descriptive and non-evaluative exercise (i.e., it is based on defined attributes that are neither good nor bad in themselves). 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. Visual attributes are often distinguished at two levels: pattern elements and pattern character components. Pattern elements are the basic art composition elements such as form, line, color and texture. For example, the large massing of trees and shrubs within the landscaped slopes are a good example of form, while fencing or signs may provide line elements. Pattern character refers to the dominance, scale, diversity and continuity of the landscape. An example would
be the varying landscapes a motorist would experience based on the adjacent neighborhoods that the freeway traveled through. Physical character factors relevant to the study area include:

- **Landform**—often defined by edge and outline
- **Vegetation**—habitats (riparian, chaparral, developed landscaping, etc.) that differ in appearance
- **Color**—differentiation between otherwise identical elements based on hues
- **Diversity**—the number, variety and intermixing of viewed elements

The visual character of the project study area was evaluated using a brief windshield survey and review of aerial photographs. The landscape character represents the diversity that one would expect when traveling along a linear corridor within the variable topographic conditions of the study area. The study corridor undulates both horizontally and vertically through the landscape and captures views of the regions diverse native habitats as well as lush ornamental plantings.

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<th>TABLE 2</th>
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<td><strong>EXISTING CONDITIONS</strong></td>
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<td><strong>I-805 CORRIDOR</strong></td>
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<tr>
<td><strong>SEGMENT</strong></td>
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<td>SR 905 to SR 54</td>
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<td>SR 54 to I-8</td>
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<td>Mission Valley Viaduct</td>
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<td>I-8 to I-5</td>
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| **I-5 CORRIDOR** |
| **SEGMENT** | |
| SR 905 to SR 54 | Variable aesthetic conditions including landscaped slopes, screening planting adjacent to commercial and residential areas. Expansive views occur at SR 905 Interchange, Oro Vista OC, Coronado Ave OC, Palm Ave OC, Otay Valley Regional Park, Main Street OC, Palomar Street OC, and SR 54. Notable view includes views of Sweetwater Marsh National Wildlife Refuge. |

Notes: OC = Overcrossing; UC = Undercrossing; OH = Overhead

**Visual Quality** - Visual quality is evaluated by identifying how vivid, intact and unified views are in the viewed. The 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 or roadway improvement is necessarily
an eyesore. This approach to evaluating visual quality also can help identify specific methods for mitigating specific adverse impacts that may occur as a result of a project. The three criteria for evaluating visual quality can be defined as follows:

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

- **Intact** 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** (or unified) is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual components in the landscape.

Other elements for evaluating visual quality may include harmony (a proportionate combination of form, line, color and texture) and adjacent scenery (areas beyond the current view that affects perception of the area being viewed and/or the scarcity of occurrence of a view within a region).

Visual quality within the project study area ranges from low quality (unscreened commercial areas) to high quality (views of preserved wetland habitats).

3. **Viewer Response to Visual Resources**

The identification of 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 change in the visual resources that make up the views. Local values and goals may confirm visual significance of landscape components and areas that would otherwise appear unexceptional in a visual resource analysis. If there is a public preference for the established visual character of a regional landscape and a resistance to a project that would contrast that character, then changes in the visual character can be evaluated. Even when the existing appearance of a project site is uninspiring, a community may object to projects that fall short of its visual goals.

For the I-805/I-5 Corridor Study, viewer sensitivity preliminarily has been identified based on the landscape architect’s experience in similar settings. Refinement to the assessment will occur, as appropriate, throughout the evaluation and selection of a preferred alternative based on public input obtained at project scoping meetings and as a result of public review of CEQA/NEPA compliance documents.

**Viewer exposure** is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, duration of the view, the 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 and their roles in managing the visual resource effects of a project.
Viewers of the study area from adjacent communities using the freeway system would be expected to be more sensitive to changes in the immediate viewshed. For these viewers, the roadway setting can provide an often seen and intimately known view that contributes to the sense of home or the broader community. These viewers are expected to be extremely aware of most changes associated with proposed project improvements. While some are expected to welcome improvements in driving time and safety associated with the proposed project, past experience has shown that a number of these residents will strongly desire retention of existing conditions.

4. Anticipated Changes

Visual Resources - While the assessment of specific visual impacts to the I-805/I-5 corridors is beyond the scope of this report, and only possible after more detailed design alternatives are prepared, the following discussion of the methods of determining potential impacts is provided to aid planners in the preparation of visually sensitive designs. The visual impacts of project alternatives are determined by assessing the visual resource change due to the project in conjunction with the anticipated viewer response to that change. Traditionally, issues related to publicly owned preserves, recreation areas and historic locales receive heightened scrutiny.

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.

Viewer Response - Based on the relatively long distance of the proposed improvements and the extensive improvements being proposed and local residential interest in maintaining existing patterns, an overall high viewer response to the project is anticipated.

5. Degree of Visual Impacts

The resulting level of visual impact is determined by combining the severity of resource change with the degree to which people are likely to oppose the change. Goals and guidelines for visual impact assessment have been established in accordance with the National Environmental Policy Act (NEPA) and by the local jurisdictions that the project would impact.

Adverse visual impacts would be assessed if the project will: (1) obstruct any scenic vista, view or view corridor open to the public or result in creation of an aesthetically offensive site open to public view, and/or (2) destroy or substantially modify a scenic route or scenic resource, and/or (3) fail to conform to a City ordinance designed to protect visual amenities in the City. Assessed impacts may vary in intensity, as indicated below.

- **Low Impact** - Minor adverse change to the existing visual resource, with low viewer response to change in the visual environment. May or may not require mitigation

- **Moderate Impact** - Moderate adverse change to the visual resource with moderate viewer response. Impact can be mitigated within five years using conventional practices
• **Moderately High Impact** - Moderate adverse visual resource change with high viewer response or high adverse visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required will generally take longer than five years to mitigate.

• **High Impact** - 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.

**Typical Project Features That Modify Visual Resources**

**Roadway Improvements** - It is anticipated that the visual experience for viewers would change simply due to the widening of the freeway corridor. Existing freeway systems represent a dominant visual element in our regional landscape. The width and limited access points often result in community and neighborhood boundaries being defined by the limits of their right-of-way. The construction of additional travel lanes incrementally adds to this condition. While some viewers would find the more open experience to be pleasant, an adverse impact assessment is assigned to this issue based on change from existing conditions.

**Mature Landscape Removal** - Landscaping within our existing freeway corridors significantly improves the quality of the visual experience. Often, as additional lanes and other improvements are constructed, landscape areas are reduced or eliminated. The removal of mature vegetation, even temporarily, usually evokes a negative response from viewers. It is not clear at this preliminary stage of the planning process if there will be a net loss of vegetation. As part of project design, there would be an opportunity to implement a replacement landscape program that was more drought tolerant and representative of the historic landscapes of the region. A neutral impact assessment has been assigned to this issue.

**Walls, Overpasses and Other Hardscape Improvements** - As existing lanes are added, often walls are required to accommodate the required grading or to mitigate for noise related impacts. It is not clear at this conceptual stage the amount and locations of hardscape improvement. However, given the constraints, both natural and built environments associated with the expansion within the study corridor it is anticipated that these structures will represent significant visual challenges within the viewshed.

**Obstruction of Views** - Existing views of positive the positive visual components within the landscape are highly important to viewers. An analysis of the preservation of these views will need to be accomplished once grading and hardscape plans are developed.

**DESIGN RECOMMENDATIONS**

Caltrans and the FHWA mandate that a qualitative/aesthetic approach be taken to mitigate 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 mitigation that can more readily generate public acceptance of the project.
The following design guidelines should be incorporated into the conceptual design process:

- Grading for the project will result in the creation of variable ratio slopes to better represent natural landform conditions;

- Retaining walls should be enhanced. This shall be accomplished through use of either pattern staining or concrete molds, implemented during the construction of the walls and in coordination with the project landscape architect;

- A landscape master plan should be prepared to replace lost vegetation and to screen residential and commercial areas, and drought-tolerant and historic landscapes should be encouraged;

- A landscape master plan should be prepared to replace lost vegetation and to screen residential and commercial areas;

- Local communities should be encouraged to participate in the development of design concepts for the enhancement of project improvements.

Implementation of the above-cited mitigation measures for the specified alternatives would result in assessed impacts being lowered to acceptable levels for the I-805/I-5 Corridor Study. All visual mitigation should be designed and implemented with the concurrence of the District Landscape Architect.

**AGENCY COORDINATION AND PERMIT REQUIREMENTS**

Once an alternative is finalized and selected for programming into the Regional Transportation Improvement Program (RTIP), and preliminary designs completed, evaluation of the potential environmental effects of the proposed action and project alternatives would be prepared. Because federal monies are typically involved in funding construction projects on interstate highways, the selected alternative would be subject to federal, as well as state, environmental review requirements. Depending on whether the proposed widening project is implemented as a Local Assistance Program or a State program, the local jurisdictions (Cities of Chula Vista, Imperial Beach, National City, and San Diego, and the County of San Diego) or Caltrans would be a co-lead agency along with the Federal Highway Administration (FHWA). The lead agencies would be responsible for preparing environmental compliance documents pursuant to both the California Environmental Quality Act (CEQA), and the National Environmental Policy Act (NEPA). Caltrans would assist FHWA, acting as its agent and providing oversight for NEPA processing.

**RECOMMENDATIONS FOR FUTURE STUDIES**

As previously discussed, the project will require the preparation of a Visual Impact Assessment (VIA) following the guidelines outlined in the 1981 FHWA publication "Visual Impact Assessment for Highway Projects." This study will be used in the preparation of other required documents such as environmental compliance documents pursuant to both CEQA and NEPA.
CONCLUSION

The infrastructure improvements anticipated for all project alternatives will significantly modify the existing visual resources within the project's viewshed. The extent of the visual change (positive and negative) cannot be determined until more detailed design studies are prepared. Critical to the assessment of impacts is the analysis of grading plans to determine the location and height of slopes, the placement of walls, and the encroachment or elimination of existing visual resources. Through the incorporation of proven design guidelines during the preliminary stages of project development, many potentially negative impacts can be greatly reduced or eliminated.