VISUAL IMPACT ASSESSMENT

High Occupancy Vehicle (HOV) Lane Project Phase 2

August 4, 2016

California Department of Transportation

District 3, Sacramento County, US 50

PM L0.2 to PM R6.1

EA 03-3F360

Prepared by: Kathleen Grady
Project Landscape Associate

Revised by: James Williamson
Project Landscape Associate

Approved by: _____ **Date:** 8/5/16
Jeff Pietrzak
Caltrans District Landscape Architect
North Region - District 3

Statement of Compliance: Produced in compliance with National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) requirements, as appropriate, to meet the level of analysis and documentation that has been determined necessary for this project.

VISUAL IMPACT ASSESSMENT
Bus/Carpool Lane Project - Phase 2

PURPOSE OF STUDY AND ASSESSMENT METHOD

The purpose of this visual impact assessment (VIA) is to document potential visual impacts caused by the proposed project and propose measures to lessen any detrimental impacts that are identified. Visual impacts are demonstrated by identifying visual resources in the project area, measuring the amount of change that would occur as a result of the project, and predicting how the affected public would respond to or perceive those changes. This visual impact assessment follows the guidance outlined in the publication *Visual Impact Assessment for Highway Projects* published by the Federal Highway Administration (FHWA) in March 1981.

PROJECT DESCRIPTION

Caltrans Design has requested environmental studies for the proposed Sac 50 Bus/Carpool Lane Phase 2 Project located along US Highway (US) 50 in the City of Sacramento.

This project was originally intended to extend from the Oak Park Separation to Watt Avenue. District 3 management extended the project limits approximately two miles to the west. The new boundaries of the construction begin at the Sacramento River Viaduct (I-5 I/C) and end at Watt Avenue, PM L0.2 / R6.1.

The project proposes an HMA overlay and lane restriping to add bus/carpool lane on existing structural section. No inside or outside widening for lanes is anticipated. Median decking (widening) at 12 structures (Elmhurst Viaduct, Brighton Overhead, Folsom Boulevard Undercrossing, and State College Undercrossing) is required for the new lanes. The project also proposes to add a west-bound auxiliary lane from Stockton Boulevard off-ramp to the Stockton Boulevard overcrossing, and widen the west bound Stockton Boulevard on-ramp and a portion of the Elmhurst viaduct.

The purpose of this project is to extend contiguous high occupancy vehicle (HOV) lanes (also known as carpool lanes, diamond lanes, and transit lanes) 7.8 miles west from the existing HOV facility in Sacramento County at the Watt Avenue Interchange (I/C) to the Sacramento River Viaduct (I-5 I/C) in downtown Sacramento. This project is needed to reduce congestion on US 50 in the City of Sacramento. The alternatives proposed are as follows:

1. ***Add HOV lanes*** to the existing structural section by re-striping and signing the facility to accommodate the additional HOV lane in each direction.
2. ***Add mixed flow lanes*** which would have the same design features as HOV lanes except the additional lanes would be utilized as mixed flow vehicle lanes to add vehicle capacity.
3. ***Take-a-Lane*** would convert an existing mixed flow lane in each direction to a HOV lane.
4. ***No Build*** makes no improvements to freeway.

Alternatives 1 & 2 require median widening of 12 structures and a 0.15 ft rubberized hot mix asphalt overly to restripe the freeway since the new lane lines will not match the existing PCC joints. The Camellia City Viaduct and Brighton Overhead (OH) will require railroad involvement with Union Pacific Railroad (UPRR) and the Sacramento Regional Transit Authority (RT). UPRR & RT involvement were identified as the primary risk to project development. All build alternatives include new sound walls at the edge of shoulder in the downtown section and along state right of way east of the Oak Park Interchange as recommended by the Noise Impact Study Report. There may be permanent right of way (R/W) acquisition required. There will be some R/W relinquishment and maintenance agreements required for the sound wall work.

There are 16 locations where sound walls (SW) will be constructed. Table 1 below describes the location, height (H) and length (L) of the proposed walls, as well, as whether they are westbound (WB) or eastbound (EB). The Noise Study Report (NSR) SW Designation is listed in the first column and Project Plans Designation is in the second column; the three remaining columns provide a description, H and L of the walls.

Table 1 Preliminary SW Recommendation

NSR SW Designation	Project Plans SW Designation	Description	H (ft)	L (ft)
SW-WB-1A	“SW1”	WB 7th St. to 13th St.	8	2,464
SW-WB-1B	“SW2”	WB 13th St. to 16th St.	8	1,112
SW-WB-1C	“SW3”	WB 16th St. to 18th St.	8	936
SW-WB-1D	“SW4”	WB 18th St. to 26th St.	8	4276
SW-WB-2	“SW5A”	WB 50-51 Connector	10	1090
SW-WB-2	“SW5B”	WB on Elmhurst Viaduct	10	347
SW-EB-1A	“SW6”	EB 9th St. to 13th St.	8	1,710
SW-EB-1B	“SW7”	EB 13th St. to 16th St.	8	1,066
SW-EB-1C	“SW8”	EB 16th St. to 18th St.	8	872
SW-EB-1D	“SW9”	EB 18th St. to EB50-SB99 connector	8	4,418
SW-EB-2	“SW10A”	NB99-EB50 connector-Elmhurst Viaduct	8	1242
SW-EB-2A	“SW10B”	EB Elmhurst Viaduct to Stockton Blvd	8	1,860
SW-EB-3	"SW11A"	EB Stockton on-ramp to 39th St	8	1,107
	"SW11B"	39th St to 41st St	8	634
SW-EB-4	"SW12"	EB 41st St to 45th St	8	1,302
	"SW13"	EB 45th St to 48th St	8	978
SW-EB-5	"SW14"	EB 48th St to 51st St	8	1,153
SW-EB-6	"SW15"	EB 51st St to 59th St	8-10	2,585
SW-EB-7A	"SW16"	EB 59th St to 61st St	8	1,574
SW-EB-7B	"SW16"	EB 61st St to 65th St	8	1,058
			Total	31,784 L-ft

This project will upgrade the drainage systems, require landscaping and erosion control measures implemented in areas of ground disturbance, and include miscellaneous Intelligent Transportation Systems (ITS).

The addition and construction of sound walls along the corridor will require the removal of trees and shrubs. The restoration of these disturbed areas will need to be addressed during the design phase of the project. The exact number and amount of trees and shrubs has not been determined along the stretch of the project limits. There are some large established Eucalyptus trees along the south side of the Freeway near 53rd Street. These particular trees have a prominence due to their size and maturity. They exceed five feet in diameter at breast height. The project will require removal of these trees. During the design phase a landscape plan will be developed in which native trees will be replaced in this area. The existing trees that will be replaced are recognized as a visual resource.

The landscaping along the depressed section of the highway corridor between Stockton Boulevard and just west of the 65th Street should also be replanted in order to stabilize the steep slopes within this section (Refer to photo 1 & 5).

Photo 1 – Depressed Section of US 50 – Showing Steepness of Slope

The sound-walls will need to implement aesthetic features and colors that are similar to the recently built sound walls that exist east of the proposed project site. Photo 2 and 3 are pictures of some of these recently constructed walls.

Photo 2 – Existing Sound Wall East of Watt Ave

Photo 2 shows a style of the aesthetic features incorporated into the sound wall. This wall is along US 50 is constructed of concrete block which includes color, texture and a simple design. Photo 3 is of a concrete retaining wall constructed on the eastbound onramp at the Mather Boulevard interchange. The aesthetics on the wall consist of metal art and a textured painted surface.

Photo 3 – Retaining with Aesthetic Features

Photo 4 – Transparent Sound Barrier on an elevated section of Highway

The image that is seen in photo 4 depicts the type of sound barrier that is being considered for the elevated section of US 50. This product is a transparent noise barrier material that incorporates polyamide filaments and is typically used on bridges, viaducts and overpasses; it is also seen along roads, highways and railroads. It allows businesses and scenic vistas to remain visible to the travelling public. It is easy to install, form and fabricate. The material is extremely resistant to weathering from UV exposure and retains a high transparency for many years providing architecturally appealing structures.

Photo 5 - View from US 50 near 51st Street

PURPOSE AND NEED

The need for this project is to reduce the traffic congestion that exists along this stretch of highway. Commute travel on US 50 is heavily congested with extensive periods of stop-and-go traffic. Residential, commercial and employment development along the US 50 corridor is projected to continue growing at a substantial rate with strong job growth in downtown Sacramento, and the cities of Rancho Cordova and Folsom. Personal mobility and reliable commute times are declining in the corridor due to increasing traffic congestion. This growth is increasing the number of commuters and commute buses that travel through residential neighborhoods from freeway exits to employment sites.

The purpose of the proposed project is to improve mobility while providing an option for reliable peak period travel time and create incentives for commuters to use carpools, vanpools or buses during peak periods of travel; additionally, the intention is to use the highway facilities as efficiently as possible and coordinate with other projects and studies being conducted in the corridor.

PROJECT LOCATION AND SETTING

The project location and setting provides for the context for determining the type of changes to the existing visual environment. The proposed project is located on US 50 between the western project's boundary near the Oak Park Separation interchange and the eastern project's edge at Watt Avenue within the City and County of Sacramento, California.

The project is located in a region that is recognized as the Great Valley in which it contains the Sacramento and San Joaquin Valleys. The summers are hot and dry and winters are mild. The City of Sacramento is located at the confluence of the Sacramento and American River, and has a deep-water port connected to the San Francisco Bay by a channel through the Sacramento River Delta. It is the shipping and rail center for the Sacramento Valley. Food processing is among the major industries in the area.

The natural landscape has been altered from its original native vegetation due to the urbanization of the area. The majority of the vegetation within the vicinity of the project's location has been planted for ornamental or aesthetic value; some areas adjacent to the highway corridor have been planted for erosion control or slope stabilization.

The land use within the project corridor is primarily urban — coupled with a land use designation consisting of residential, business, commercial, and industrial development. The topography is mostly flat. The views from the road are of the surrounding development. Portions of the road are elevated that allows motorist to see the cityscape from a higher perspective; and, a portion on the eastern edge of the project is depressed and runs through an area that is framed by steep slopes. Portions of the corridor are lined with sound walls.

California State Scenic Highway System
The proposed project is not located in an area of the highway facility that is designated as a State Scenic Highway.

CRITERIA FOR VIUSAL ASSESSMENT

The visual character and quality of the region and the project site were evaluated using established FHWA criteria for visual landscape relationships. These criterions are: vividness, intactness, and unity.

- Vividness is the visual power or impressionable memory of the landscape components as they combine in striking or distinctive visual patterns.
- Intactness is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements. This factor can be present in well kept urban and rural landscapes, as well as 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 components in the artificial landscape. (Federal Highway Administration 1983)

VISUAL RESOURCES AND RESOURCE CHANGE

Visual resources of the project setting are defined and identified below by assessing *visual character* and *visual quality* in the project corridor. *Resource change* is assessed by evaluating the visual character and the visual quality of the visual resources that comprise the project corridor before and after the construction of the proposed project.

The visual character of the proposed project will be mostly compatible with the existing visual character of the corridor. The proposed improvements for US 50 will be similar to the existing highway facility in regard to its form, color and texture.

The change to the visual character and quality of the area will change slightly due to the increase in sound walls along the corridor. The vividness, intactness and unity will not be diminished by this project. The vividness of the area is not recognized as being high due to the lack of striking or distinctive visual patterns. The area lacks intactness due to the various land uses and type of developments. The landscape is moderately well kept but is not noted for its visual integrity. The unity or visual character of the landscape will not be compromised due to the fact that the area lacks a landscape that would be considered cohesive and harmonious.

Resource Change (changes to visual resources as measured by changes in visual character and visual quality) will be moderately low. The visual quality and visual character is not considered high due to the mix of different types of land uses and development within the area. The highway corridor is quite wide in areas; it does not have a view shed that is memorable or scenic. The location of highest visual quality and character is the elevated portion of the highway which provides views of adjacent tree tops, businesses/residences, along with brief views of the Sacramento City skyline through opening in the tree canopy.

VIEWERS AND VIEWER RESPONSE

Neighbors (people with views *to* the road) and *highway users* (people with views *from* the road) will not be affected by the proposed project.

Highway viewers include a mix of residential, business and commercial users/owners. The views vary depending on the location. Some the views of the highway will be eliminated due to the construction of the sound walls.

Photo 6 - View from 39th Street of Existing Sound wall with Metal Art

Photo 6 shows a view taken from the community of East Sacramento near the Regional Transit light rail station on 39th Street. This particular section of wall has incorporated metal art into the structure.

The construction of the proposed sound walls will eliminate some of the present views of the highway. The walls will enclose the highway, which is apparent east of Watt Avenue where walls have been constructed in the past several years by other highway projects.

Highway users are the drivers along US Highway 50, which includes commuters, business and residential owners of the area, and drivers destined for local and regional recreational locations. Weekly commuters tend to be local drivers traveling back and forth to work, while weekend drivers are more recreationally based partaking in a more casual drive. It is anticipated that the average response of all viewer groups will be low to moderately low.

VISUAL IMPACT

Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. Overall, the visual impacts of the project are expected to be moderately low. The visual quality of the area will not be substantially degraded by the proposed project.

The construction of the roadway improvements (sound walls) will have a greater impact due to the size and length of the proposed sites. The sound walls west of the Oak Park Interchange will see a moderate impact. These walls are proposed to be constructed on the elevated viaduct portion of the highway which block motorist's views of the city and surrounding residential and commercial areas. The sound walls constructed east of the Oak Park Interchange are expected to have a low visual impact on their own but, in addition to the existing sound walls along the corridor, will have a cumulative visual effect. This effect is expected to have a moderately low overall impact due to the lack of open views of the surrounding communities and distant horizons. These changes will not necessarily be negative, the construction of new sound walls in this area will actually increase the visual continuity slightly by creating one consistent look along the roadside instead of a mixture of fences as walls. The walls will need to be reviewed and analyzed in more detail during the design phase in order to determine the appropriate aesthetics for the structures.

The proposed project will not create a new source of light or glare which would adversely affect day or night time views in the area; however, colorization may be warranted for the new walls in order to reduce glare and provide visual continuity with the recently constructed sound walls along US 50 corridor.

Temporary Construction Visual Impacts

The construction of this project will have temporary visual impacts. The improvements made to US 50 will be visually obvious. There will also be staging areas at various locations within the highway corridor. Other inconveniences will include dust from the project and trucks hauling materials. The duration of this inconvenience and visual blight will be temporary.

Cumulative Visual Impacts

Cumulative impacts are those resulting from past, present and reasonably foreseeable future actions, combined with the potential visual impacts of this project. The cumulative impacts caused by this project will be the construction of the sound walls. Over the past several years sound walls were constructed along this corridor within close proximity to this project site. It appears these walls could become prominent as more projects are planned and constructed. This effect is expected to have a moderately low overall impact due to the lack of open views of the surrounding communities and distant horizons. These changes will not necessarily be negative, the construction of new sound walls in this area will actually increase the visual continuity slightly by creating one consistent look along the roadside instead of a mixture of fences as walls.

Visual Impact

The visual impact will be less than significant with the implementation of the minimization measures discussed below.

AVOIDANCE AND MINIMIZATION MEASURES

Avoidance or minimization measures have been identified and can lessen visual impacts caused by the project. Also, the inclusion of aesthetic features in the project design previously discussed can help generate public acceptance of a project. This section describes additional avoidance and/or minimization measures to address specific visual impacts. These will be designed and implemented with concurrence of the District Landscape Architect.

The following measures to avoid or minimize visual impacts will be incorporated into the project:

- Sound wall design will use materials similar to those incorporated into other sound walls along the project corridor and will be compatible with native materials. Similar materials, patterns, and styles are recommended to provide visual continuity and interest to the corridor landscape. Aesthetic enhancements of texture and color appropriate for the area will be considered during the design phase of this project. All of these treatments shall be approved by the Office of Landscape Architecture.
- Transparent sound barriers may be considered for the viaduct section of US 50. Consideration of this concept will be studied during the design phase of the project. The Landscape Architect will work in concert with the Project Engineer and the Structures Division in order to develop an aesthetically pleasing structure that will blend and maintain design features that will exist on the walls that are being planned in the area. If the transparent sound barriers are used in these areas, motorists would continue to have elevated views of the city as well as surrounding residential and commercial areas.
- All areas of ground disturbance used for staging, access or other construction related activities will be restored to its original condition. This can best be accomplished by contour grading the area and applying a hydro-seed consisting of an indigenous, native seed mix. This will help to blend these areas to the surrounding typography.
- Limit vegetation removal for sound wall construction
- Develop highway planting and irrigation plans to replace highway planting and irrigation removed during construction activities in order to better blend the roadside into the surrounding community, hide visually unappealing roadside elements and beatify the corridor. There are some large established Eucalyptus trees along the south side of the Freeway near 53rd Street. These particular trees have a prominence due to their size and maturity. They exceed five feet in diameter at breast height. The project will require removal of these trees. During the design phase a landscape plan will be developed in which native trees will be replaced in this area. The existing trees that will be replaced are recognized as a visual resource.
- The construction of sound walls along the corridor will require the removal of trees and shrubs. The number and amount of the trees and shrubs has not been determined at

this time but will need to be replaced, if possible. The restoration of these disturbed areas will need to be addressed during the design phase of the project.

CONCLUSIONS

The recommended minimization measures will reduce the project's visual impact as seen from US 50 and the surrounding communities. The intent of the above measures is to reduce the visual impacts caused by the proposed project discussed in this report.

The noticeable impacts are:

- The additional increase in the amount of sound walls that will be built,
- The removal of trees and shrubs in order to construct these sound walls, and
- The increase in ground disturbance caused by construction activities.

The listed minimization measures combined with proposed project features such as replacement landscaping, aesthetic treatments to and colorization of the sound walls will lessen the negative visual change to the corridor. However, some of the visual impacts will remain because of the inherent alteration of scale, increased hard surface, and loss of vegetative character. The execution of the minimization measures will reduce the visual impacts, initial change will be obvious, but overtime this change will be negligible.