

**VISUAL IMPACT ASSESSMENT
FOR THE
YUCCA LOMA ROAD/YATES ROAD/GREEN TREE
BOULEVARD TRANSPORTATION IMPROVEMENT
PROJECT**

June 2009

District 08-SBD-STPL 5453 (011)

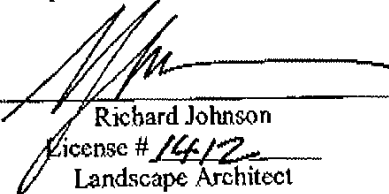
Prepared for:

Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, California 92307

and

Caltrans District 8
Office of Local Assistance
464 West 4th Street
San Bernardino, CA 92401

Prepared under the direction of:


Richard Johnson
License # 1412
Landscape Architect



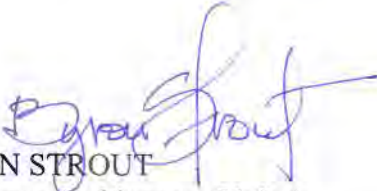
Memorandum

*Flex your power!
Be energy efficient!*

To: MR. AARON BURTON
Senior Environmental Planner
Environmental Local Assistance

Date: June 24, 2009

File: 08-SBd
City of Apple Valley
STPL 5453 (011)


From: BYRON STROUT
Landscape Architecture Unit A
MS 1062

Subject: Visual Impact Assessment

We have reviewed the Visual Impact Assessment (VIA) for the above-referenced project and have no further comments:

If you have any questions or need further assistance, please feel free to contact Alfredo Cornejo at Extension 1001, or me at Extension 5817.

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I. PURPOSE OF STUDY

The purpose of this Visual Impact Assessment (VIA) is to assess the visual impacts of the Yucca Loma Road/Yates Road/Green Tree Boulevard Transportation Improvements Project (proposed project) and to propose measures to mitigate any adverse visual impacts associated with its construction and operation.

Federal, state, and local regulations related to visual or aesthetics are the following:

Federal Regulations

- Title 23, USC 109 (h) cites “aesthetic values” as a matter that must be fully considered in developing a transportation project.
- National Environmental Policy Act (NEPA) of 1969, Title I states that it is “the continuous responsibility” of the federal government to “use all practicable means” to “assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.”
- Section 4 (f)—Section 4(f) of the U.S. Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, declares that it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project ... requiring the use of publicly-owned land of a public park, recreation area or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site or national, State, or local significance (as determined by the federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if: there is no prudent and feasible alternative to using that land; the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

- Historic Preservation Act of 1966 states that the “criteria of adverse effect” on historic resources “include the introduction of visual . . . elements that are out of character with the property or alter its setting.”

State Regulations

- Streets and Highway Code, Section 260-263 (State Scenic Highways) states that concerning State Scenic Highways, Caltrans “shall give special attention both to the impact of the highway on the landscape and to the highway’s visual appearance” and that “local governmental agency have taken such action as may be necessary to protect the scenic appearance of the scenic corridor.”

- Caltrans Standard Environmental Reference, Chapter 6, guides that:

“Examples of substantial impairment to visual or aesthetic qualities would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building, or substantially detracts from the setting of a park or historic site which derives its value in substantial part due to its setting (Caltrans, 2008).”

- According to the California Environmental Quality Act (CEQA) Guidelines Appendix G, a project would have a substantial adverse affect on aesthetics if it would:
 - Have a substantial adverse effect on a scenic vista;
 - Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
 - Substantially degrade the existing visual character or quality of the site and its surroundings; or
 - Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

II. PROJECT DESCRIPTION

The proposed project will provide a new route across the Mojave River between the Town of Apple Valley, County of San Bernardino, and City of Victorville (see Figures 1 and 2). The eastern limit of the project is at the intersection of Yucca Loma Road and Apple Valley Road. The western limit is at the intersection of Green Tree Boulevard and Hesperia Road.

The project will widen Yucca Loma Road from two to four lanes from Apple Valley Road to its current terminus east of Kasanka Trail. A new bridge crossing over the Mojave River will be constructed extending the roadway to Yates Road. This bridge will be built wide enough for an ultimate build out use of six lanes but will be striped for four lanes. The bridge will also have shoulders and sidewalks. Space for sidewalk will be allowed on both sides of Yucca Loma Road; however, it is anticipated sidewalk will only be built on one side of the street as part of this project. A new signal with crosswalks is planned at Havasu Road.

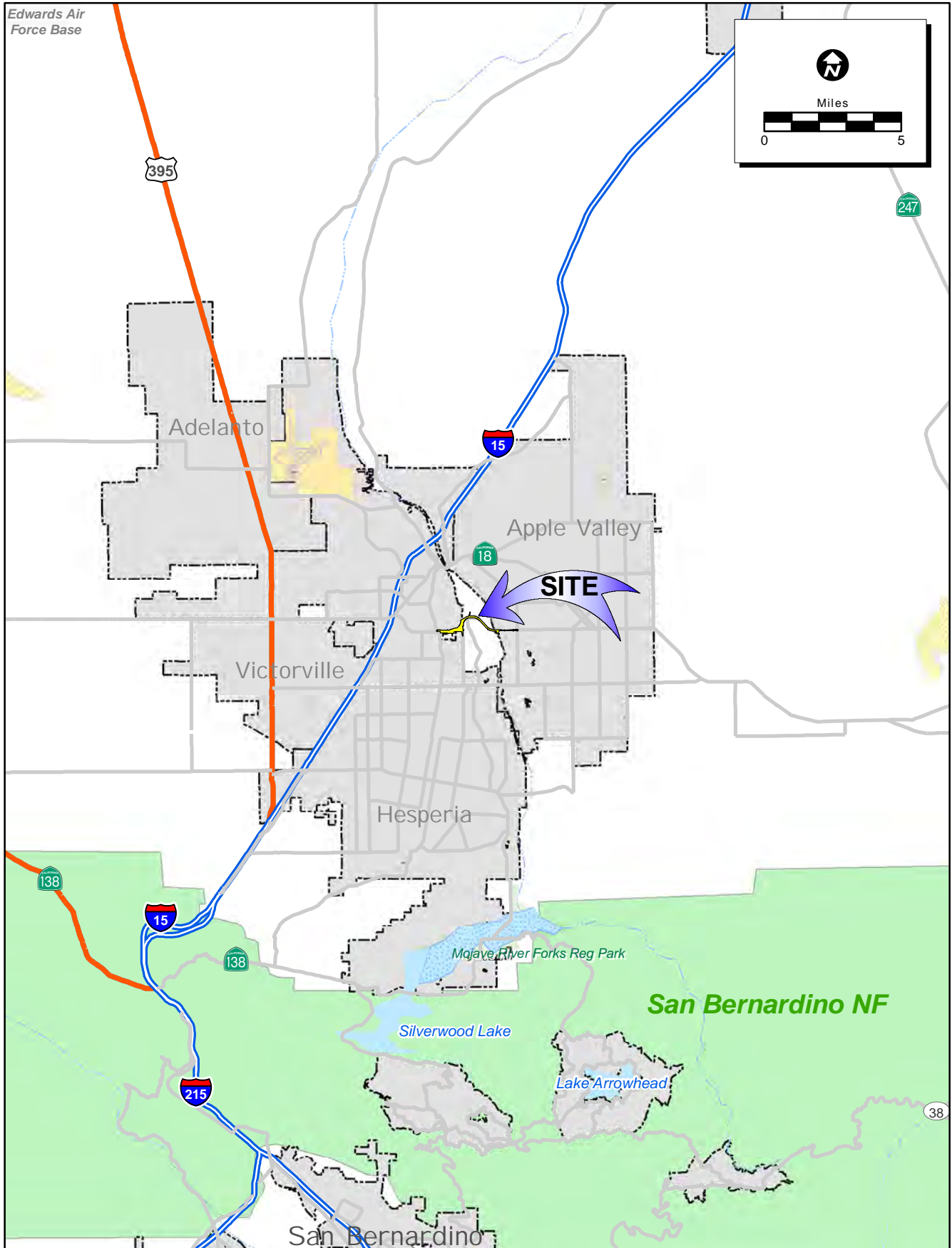
Yates Road will be widened from two lanes to four lanes. From Fortuna Lane to Park Road actual roadway widening is necessary. From Park Road to Ridgecrest Road, Yates Road is currently built wide enough for four lanes, but has been striped and used for two lanes of traffic. Pavement rehabilitation and restriping is needed in this area. Yates Road as it connects to Ridgecrest Road will be realigned to the east to allow connection to an extension of Green Tree Boulevard. A pedestrian path is planned along the north side of Yates Road, connecting from the bridge over the Mojave River to Ridgecrest Road and Green Tree Boulevard.

Ridgecrest Road will be realigned, at its current width, from approximately five hundred feet south of Chinquapin Drive to a new intersection of Yates Road and the extension of Green Tree Boulevard. Signals are planned at the new intersection and sidewalks will connect the three streets.

Green Tree Boulevard will be extended with four through travel lanes from the new Ridgecrest Road/Yates Road intersection to Hesperia Road by following one of two alternate alignments. The Green Tree South alignment, Alternative A, is centered on the existing property Section Line boundary and impacts four single family residential parcels located between the railroad right-of-way and Hesperia Road. Alternative B, the Green Tree North alignment, shifts the roadway approximately 150 feet to the north, avoiding the four single family residential parcels. New access roads would maintain access to the four parcels. Grading would allow for sidewalk to be built on both sides of the roadway; however, construction of sidewalks is anticipated to occur as development in the area occurs. Both Green Tree Boulevard alignment alternatives require the construction of a new bridge over the BNSF Railroad which will also be striped for four lanes and include sidewalks.

Various utility relocations and realignments will be necessary throughout the project.

Since the project is located in three different jurisdictions, it is anticipated construction will occur under multiple construction contracts and during different construction seasons. Construction may begin as early as 2010.

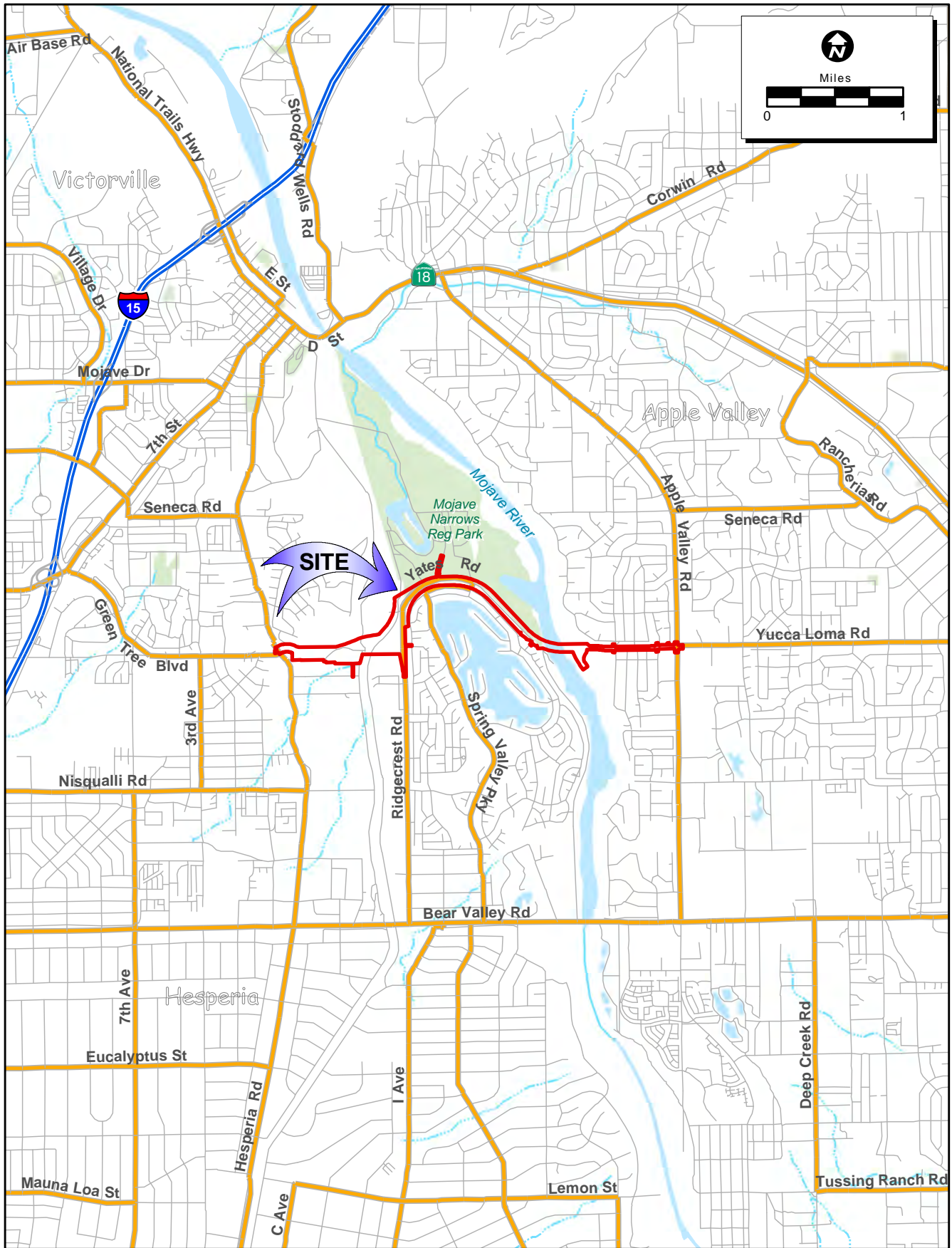


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Figure 1. Vicinity Map

Yucca Loma Road/Yates Road/Green Tree Boulevard Transportation Improvement Project



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Figure 2. Location Map

Yucca Loma Road/Yates Road/Green Tree Boulevard Transportation Improvement Project

III. ASSESSMENT METHOD

The process used in this visual impact study generally follows the guidelines outlined in the publication "Visual Impact Assessment for Highway Projects", Federal Highway Administration (FHWA), March 1981.

Six steps required to assess visual impacts were performed. They are 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.

This VIA addresses all these steps. Section IV defines the project setting and viewshed, Section VI identifies key views, Section V and VI analyze existing visual resources and viewer response, Section VI depicts the visual appearance of project alternatives and assess the visual impacts of project alternatives, and Section VII proposes methods to minimize adverse visual impacts.

IV. VISUAL ENVIRONMENT OF THE PROJECT

A. Project Setting

Regional Landscape

Regional landscapes are characterized by physical landforms, and landcover in the form of water, vegetation, and built development. The regional landscape establishes the general visual environment of the project, but the specific visual environment upon which this assessment will focus is determined by defining landscape units and the project viewshed.

Landform

The Mojave Desert Province, a geologically defined region in which Victorville and Apple Valley are located, is characterized by dry lakes (playas), alluvial fans, and low mountains. The playas consist of deposits of saturated alluvium and impervious clay and are the remnants of numerous ancient lakes that were in the region during the Pleistocene Era. The Mojave River flows northward through the region and drains from the San Bernardino Mountain chain.

The project area lies between the elevations of 2,760 and 3,000 ft amsl. In the western part of the project area, the site's topography is comprised of a fairly broad valley floor that is juxtaposed between two areas with fairly steep, rolling hills. The project area circumvents the Spring Valley Lake residential development, following Yates Road, and then crosses the Mojave River. This portion of the project area, west of the Mojave River, is comprised of mostly flatter areas, formed partially as a result of former agricultural activities, and gentle slopes associated with the Mojave

River floodplain. The Mojave River is broad and has been partially leveed to direct flood flows out of developed zones.

Landcover-Water

Water features in the project area consist of the Mojave River, broad washes draining into it, Horseshoe Lake and Pelican Lake within Mojave Narrows Regional Park, and Spring Valley Lake. Spring Valley Lake is a man-made lake fed by subsurface waters, which drains into Pelican Lake north of Yates Road. The channel draining Spring Valley Lake to Pelican Lake is a freshwater marsh. The Mojave River is an intermittent stream.

Landcover-Vegetation

The regional landscape consists of desert scrub and desert riparian vegetation along the Mojave River. Planted trees also exist at the Mojave Narrows Regional Park.

Landcover-Built Development

The proposed project is within developed areas of Apple Valley, the County of San Bernardino, and City of Victorville. In the near project vicinity, residential neighborhoods exist along Yucca Loma Road, Yates Road, and Coad Road.

B. Landscape Units

Four landscape units—Open Space, Built/Residential, Mojave Narrows Regional Park, and mountains—are in the related viewsheds of the proposed project. Open space refers to low-developed, sparsely vegetated areas generally comprised of the wash to the Mojave River and hills in the foreground of the proposed project. Built/Residential refers to the industrial buildings near western portions of the project, residential neighborhoods along the proposed project, and built landscapes in the distance. The Mojave Narrows Regional Park refers to the relatively lush area comprised of the Mojave River, Mojave Narrows, and associated riparian vegetation. “Mountains” generally refer to Quartzite Mountain roughly 7 mi to the northwest, Bell Mountain, roughly 6 mi to the north, Fairview Point, roughly 8 mi to the northeast, Round Mountain, roughly 10 mi south, and Granite Mountains, roughly 10 mi east of the project area.

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.

Key View locations were identified that best represent important visual changes. Four Key Views were identified which would best reveal the project’s components and any potential visual character change. Key Views were selected to show project components and potentially affected resources, and to represent sensitive viewer groups. Key Views were identified using a combination of site visits, aerial photos, land use maps, and interaction with local agencies. Key

Views are identified and shown in Section VI, Figures 4-9 and 10-18. Correspondingly, the potentially affected viewsheds and landscape units are also shown in Figures 4-9 and 10-18.

D. Designations Related to Visual Resources

National Forest Scenic Byway Designation

No National Scenic Byways are near the project vicinity. The nearest National Scenic Byway is Arroyo Seco Historic Parkway, which is a 9.4 mile (mi) stretch along Route 110 from Los Angeles to Pasadena (FHWA, 2009). Arroyo Seco Historic Parkway is approximately 57 mi southwest of the proposed project.

State Scenic Highway Designation

Highway 247, roughly 18 mi east of the proposed project, and Highways 58 and 40, approximately 27 mi north of the proposed project are eligible for designation as State Scenic Highways (Caltrans, 2007).

The only officially designated State Scenic Highway in San Bernardino County is a stretch along Route 38, from postmile 30.888-46.676., which is approximately 30 mi southeast of the proposed project (Caltrans, 2007).

There are no officially designated County Scenic Highways in San Bernardino (Caltrans, 2007).

Open Space designation by local agencies

Town of Apple Valley

Within the Town of Apple Valley's General Plan (1998), the Open Space/Conservation element identifies "scenic resources" as an issue to take into account. It states:

Scenic Resources: The protection of local scenic resources is necessary for the overall livability of the community. Aesthetic qualities found in the river and the surrounding knolls, hillsides, mountains and the natural desert environment is of interest to all citizens.

Apple Valley presents a map of Open Space/Resource areas, in which designation of Open Space/Resource areas "does not preclude all other use of the land...[s]uch a designation, rather, recognizes the importance of resources which need to be protected from the over development of urban uses which could upset the sensitive and potentially unstable nature of the land.

Open Space Goals and Policies

To implement the goals of the Open Space Conservation Element, the Town of Apple Valley's Ordinance, Development Code, Chapter 9.55.020 states:

Conservation Open Space District (OS-C).

The purpose of the OS-C district is to protect and conserve significant natural and visual resources within the Town, and to protect the public health, safety and welfare by establishing regulations for those areas set aside for open spaces. In general, lands in the OS-C district contains environmental conditions that have significant constraints on development, or are scenic assets to the community, or are essential in establishing and maintaining Town's image when left undisturbed.

The OS-C district is intended to:

1. Conserve significant natural features and open spaces such as major rock outcroppings and boulder fields, major ridges and peaks, fifteen (15) percent and greater slopes of mountains and knolls, prime wash habitats and native vegetation;
2. Conserve the character of the natural desert landscape and provide opportunities for passive recreational uses such as hiking, horseback riding, bicycling, and enjoyment of the natural desert setting;
3. Assure the continued existence of adequate wildlife habitat and foster the free movement of wildlife within the desert;
4. Promote a continued economic benefit to the community by protecting natural open space areas for the visual and recreational enjoyment of residents and visitors alike;
5. Provide a mechanism for recognizing and protecting private and public lands that have been designated for conservation in the Town General Plan.

City of Victorville

In its Land Use Element the City of Victorville includes the goal of maintaining “Victorville as an aesthetically pleasing community with development standards which reflect community needs (City of Victorville, 2007).” To reach this goal, Victorville’s policy is to “promote the establishment of design themes in areas deemed appropriate” by implementing “specific plans and/or redevelopment project areas in areas deemed appropriate for design themes.”

San Bernardino County

The County of San Bernardino has the following language regarding open space and aesthetic resources in its Development Code:

82.19.040 Development Criteria within Scenic Areas

- (a) **Applicability.** The criteria below shall be used to evaluate a land use proposed within a scenic area in an Open Space Overlay and shall apply to:
- (1) Areas with unique views of the County’s desert, mountain and valley areas or any other aesthetic natural land formations.
 - (2) An area extending 200 feet on both sides of the ultimate road right-of-way of State and County Designated Scenic Highways as identified in the General Plan. The area covered may vary to reflect the changing topography and vegetation along the right-of-way.
- (b) Report. A special viewshed analysis may be required if it is determined that the proposed project may have a significant negative impact on the scenic values of the subject parcel.

(c) Building and structure placement. Structure placement shall be compatible with and shall not detract from the visual setting or obstruct significant views.

(d) Review area. Intensive land development proposals, including residential facilities, commercial activities and mobile home parks/manufactured home land-lease community, shall be designed to blend into the natural landscape and maximize visual attributes of the natural vegetation and terrain. The design of development proposals shall also provide for maintenance of a natural open space parallel to and visible from the right-of-way.

(e) Access drives. Right-of-way access drives shall be minimized. Developments involving concentrations of commercial activities shall be designed to function as an integral unit with common parking and right-of-way access drives.

(f) Landscaping. The removal of native vegetation, especially timber, shall be minimized and replacement vegetation and landscaping shall be compatible with the local environment and, where practicable, capable of surviving with a minimum of maintenance and supplemental water. Landscaping and plantings shall not obstruct significant views, either when installed or when they reach mature growth.

(g) Roads, pedestrian walkways, parking and storage areas. A large-scale development should restrict the number of access points by providing common access roads. Parking and outside storage areas shall be screened from view, to the maximum extent feasible, from either the Scenic Highway or the adjacent scenic or recreational resource by existing topography, by the placement of structures, or by landscaping and plantings which are compatible with the local environment and, where practicable, are capable of surviving with a minimum of maintenance and supplemental water.

(h) Above ground utilities. Utilities shall be constructed and routed underground except in those situations where natural features prevent the underground siting or where safety considerations necessitate above ground construction and routing. Above ground utilities shall be constructed and routed to minimize detrimental effects on the visual setting of the designated area. Where it is practical, above ground utilities shall be screened from view from either the Scenic Highway or the adjacent scenic or recreational resource by existing topography, or by placement of structures.

(i) Grading. The alteration of the natural topography of the site shall be minimized and shall avoid detrimental effects to the visual setting of the designated area and the existing natural drainage system. Alterations of the natural topography shall be screened from view from either the Scenic Highway or the adjacent scenic or recreational resource by landscaping and plantings which harmonize with the natural landscape of the designated area, and which are capable of surviving with a minimum of maintenance and supplemental water.

(j) Timber harvesting. Timber harvesting within or adjacent to the right-of-way shall be

limited to that which is necessary to maintain and enhance the quality of the forest.

(k) Storage Areas. Outside storage areas associated with commercial activities shall be completely screened from view of the right-of-way with landscaping and plantings that are compatible with the local environment and are capable of surviving with a minimum of maintenance and supplemental water.

(l) Signs. Primary freestanding signs greater than 18 square feet are prohibited in the OS Overlay.

Adopted Ordinance 4011 (2007)

V. 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 in themselves. A change in visual character can not 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. 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 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 manmade components in the landscape.

B. Existing Visual Resources

1. Existing Visual Character

The existing visual character of the project area is a combination of natural and constructed elements. Constructed elements consist of the existing Yucca Loma Road, Yates Road, Ridgecrest Road, Coad Road, and adjacent residential neighborhoods. These elements also make up the Built/Residential landscape unit. Natural elements are categorized under the landscape units—Open Space, Mojave Narrows Regional Park, and mountains. Natural, open space surfaces with scrub vegetation comprise much of the adjacent visual character. The Mojave Narrows Regional Park—including the Mojave Narrows topographic feature, the Mojave River and riparian vegetation within it—create a more vivid visual character of the project area.

2. Existing Visual Quality

Existing visual quality of the project area is favorable because of the vividness, intactness, and unity of the adjacent visual elements and landscape units. The Mojave Narrows Regional Park (including Mojave Narrows topographic features, the Mojave River and riparian vegetation within it) are vivid elements that create a memorable space. The lush vegetation in this portion of the Mojave River results from the unique underlying geology (which also creates the Mojave Narrows topographic feature) forcing groundwater upwards towards the surface. Built landscape does surround the area, however, the viewshed has favorable intactness and unity due to the separation of built/man-made landscapes from the park area.

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 change in the visual resources that make up the view. Local values and goals 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 and their roles in managing the visual resource effects of a project.

D. Existing Viewer Sensitivity, Viewer Groups, Viewer Exposure, and Viewer Awareness

The viewer groups in the project vicinity are residents, recreationists, and motorists. For residents, viewer exposure is high due to their long-term and constant presence in the area. Residents' viewer awareness is also high, due to the popularity of the Mojave Narrows Regional Park, scenery provided by the Mojave Narrows topography, and mountains in the distance. It is also presumed that residents in the project area were likely drawn to this location in part because of the viewshed.

Recreationists also have a high sensitivity due to their activities at, and the aesthetic qualities of, the Mojave Narrows Regional Park. Motorists are the third viewer group, however, their sensitivity is lower due to the relatively short time span spent along the proposed project area.

VI. 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 oppose the change.

B. Definition of Visual Impact Levels

Low - 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 - Moderate adverse change to the visual resource with moderate viewer response. Impact can be mitigated within five years using conventional practices.

Moderately High - 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 - 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

Key viewpoints A, B, C, D, E, and F were selected to display the visual results of the proposed project as viewed from primary viewer groups potentially affected. The visual quality of each key view was quantified using an evaluation scale of 1-7 (1=Very Low, 4=Medium, 7=Very High) for vividness, intactness, and unity. Vividness, intactness, and unity were evaluated for landscape units 1) inside the right-of-way, 2) outside the right-of-way within the local landscape unit, and 3) outside the right-of-way outside the local landscape unit.

Key View A

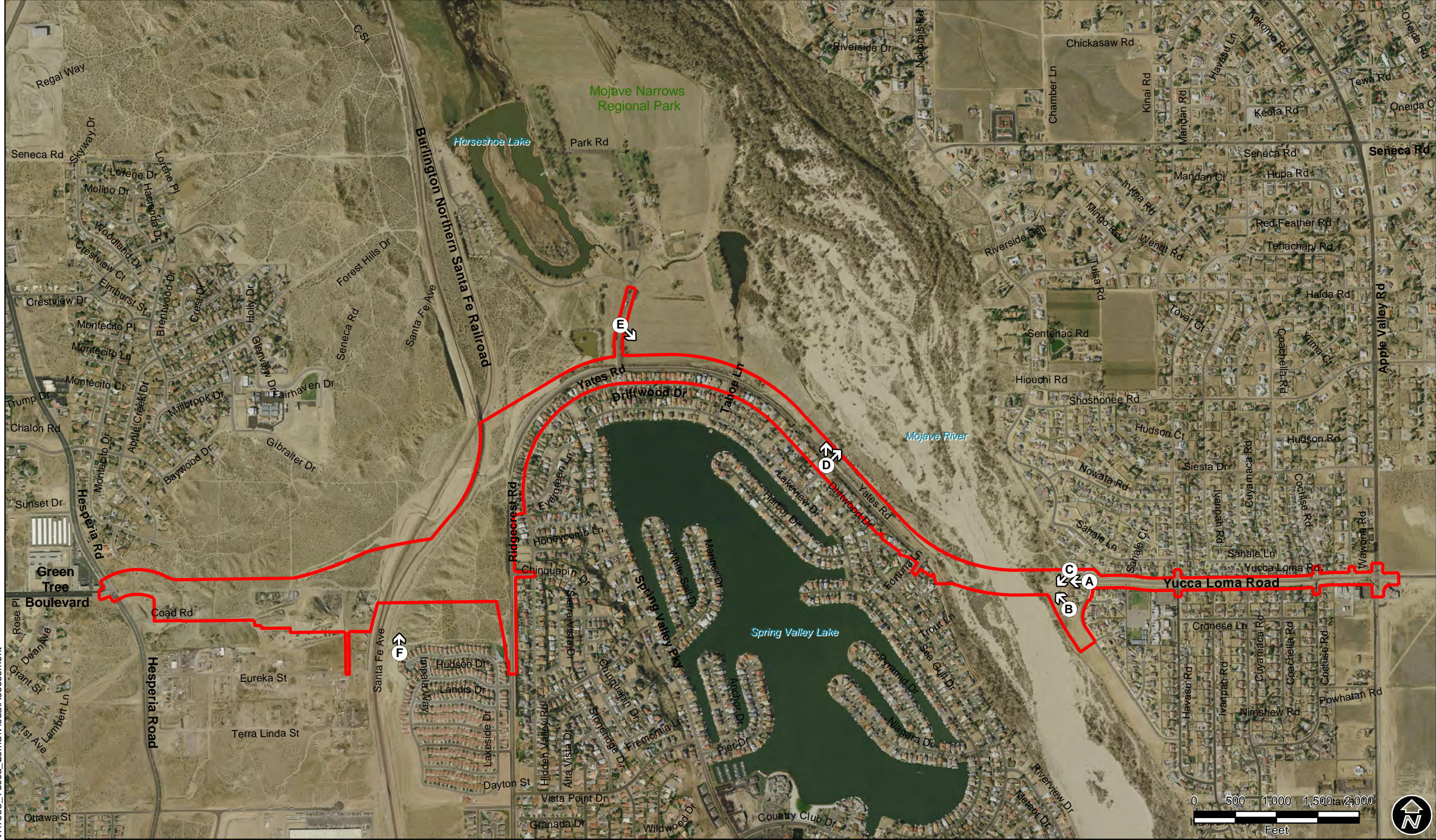
Key View A represents the view experienced by drivers east of the Mojave River looking towards the Mojave River. The Key View A photograph was taken at the existing Yucca Loma Road, facing west. Key View A is comprised of the two-lane Yucca Loma Road and adjacent neighborhoods in the foreground. Landcover in the foreground consists of sparse scrub vegetation and bare soils at the sides of Yucca Loma Road. The middle ground of the view consists of the Mojave River and Mojave Narrows Regional Park. Landcover in the middleground looks densely vegetated with trees. In the background are residences west of the Mojave River. Within the right-of-way is the Mojave Narrows Regional Park, and outside the right-of way is the Mojave Narrows Regional Park, open space, and built/residential.

Table 1: Visual Quality Comparison for Key View A

KEY VIEW		VIVIDNESS	INTACTNESS	UNITY	VISUAL QUALITY = (V+I+U)/3	VQ DIFFERENCE
A	Existing	5.17	5.83	5.33	5.67	-0.95
	Build	4.67	5	4.5	4.72	

Ratings for the existing views shown in the table above indicate visual quality is better than moderate for all three categories. The level of vividness is due to the relatively lush vegetation at the Mojave Narrows Regional Park and the Mojave River. Intactness and unity is higher than moderate due to the low amount of development within the right-of-way for this portion of the project.

Under the build condition, visual quality is lower than the existing, but still remains better than moderate for all categories. The lower visual quality is attributed to the addition of the bridge over the intact Mojave River. Visual quality still remains moderately high, however, because outside the right-of-way the Mojave Narrows Regional Park landscape unit is not blocked considerably and still remains visually homogenous.



Source: GlobalXplorer 3/1/2008 (spatial accuracy 1:2,000); Dokken Engineering 2009; Created By: K. Smith

Figure 3. Key View Locations
Yucca Loma Road/Yates Road/Green Tree Boulevard Transportation Improvement Project

— Project Area

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Figure 4: Viewpoint A--Existing Condition.
On Yucca Loma Road, facing west towards Mojave River.



Figure 5: Viewpoint A--Photosimulation of Proposed Project.
On Yucca Loma Road, facing west towards proposed bridge the Mojave River.

Key View B

Key View B represents a resident’s and recreationist’s view from along the Mojave River within the project area. Key View B was photographed facing north-northwest and was taken on the eastern bank of the Mojave River, roughly 400 ft south of the existing Yucca Loma Road terminus. In this view, the Mojave River, Mojave Narrows topographic feature, and mountains in the distance dominate the viewshed. Lush riparian vegetation in the foreground, middleground, and background is particularly striking due to the density of plants and vivid greenery, giving it a contrasting character with the surrounding desert soils and scrub. Further, the well-known and distinctive Mojave Narrows topographic feature is at a clear line-of-site and could be perceived as both a focal point and or backdrop in this view. Quartzite Mountain, to the north of Mojave Narrows, frames the view by providing an elevated, large, natural feature in the distance, with a clear, distinguishable ridgeline. The distinct changes in elevation between the Mojave River, the Mojave Narrows, and Quartzite Mountain also provide natural lines of which the landscape units are gradually defined. Overall, the elements in this view—desert soils, riparian vegetation, Mojave Narrows, and Quartzite Mountain—are comprised of complementary colors, textures, and elevations that create a harmonious landscape with few visual encroachments. Key View B, and the views it represents, is of high visual quality.

Table 2: Visual Quality Comparison for Key View B

KEY VIEW		VIVIDNESS	INTACTNESS	UNITY	VISUAL QUALITY = (V+I+U)/3	VQ DIFFERENCE
B	Existing	6	6.33	6.17	6.17	-1.01
	Build	5.05	5.25	5.17	5.16	

Ratings for the existing views shown in the table above indicate visual quality is high at a rating of 6.17 on a scale of 1-7. The high vividness rating is attributed to the expanse of natural landscape with minimal man-made hinderance, clear views of the Mojave Narrows, and lush vegetation (relatively unique in the desert region). Intactness and unity are rated high based on the minimal number of man-built features in the view and natural compatibility of the desert soils, riparian vegetation, Mojave Narrows, and Quartzite Mountain.

Under the build alternatives, the proposed Yucca Loma Bridge would span the Mojave River from the current Yucca Loma Road at the east end of the bridge to connect with Yates Road at the west end of the bridge. Key View B would change noticeably due to the addition of Yucca Loma Bridge, a man-made element that would be 1515’-6” long and 98’-4” wide. Yucca Loma Bridge and the surrounding landscape would share equal prominence in this view. In terms of form, the bridge would be a new visual mass, partially obstructing views of riparian vegetation. In contrast to somewhat jagged silhouettes of Mojave Narrows, Quartzite Mountain, and other natural elements in the photo, the bridge structure/deck would add to the view long horizontal straight lines while shorter vertical lines would be added by concrete railings (C411 concrete barrier 1’-2” wide) and bridge piers supporting the structure. Visible bridge material would be

concrete, adding greater amounts of grey. The bridge would also add a smooth man-made texture to the view, while blocking naturally grainy textures of green riparian vegetation.

Ratings for the build alternative (see Table 2 and photosimulation in Figure 7) indicate visual quality would be moderately high. Vividness decreased since the view would be less unique and more similar to the other developed areas in the region as result of adding a bridge to a largely natural landscape. Intactness also decreased due to the addition of the bridge, since the area is previously minimally-touched. Unity decreased also, based on a generally lower compatibility of man-made elements with natural landscapes. Despite these decreases, overall ratings remained moderately high since the Mojave River, riparian vegetation, Mojave Narrows, and Quartzite Mountain are still visible and the variety or number of man-made encroachments are not numerous.



Figure 6: Viewpoint B--Existing Conditions.

On eastern bank of the Mojave River, south of Yucca Loma Road terminus.



Figure 7: Viewpoint B--Photosimulation of Proposed Project.

On eastern bank of the Mojave River, south of Yucca Loma Road.

Key View C

Similar to Key View B, Key View C also represents a resident’s and recreationist’s view from along the Mojave River. Key View C was photographed with a series of photos facing south and was taken on the eastern bank of the Mojave River, roughly 200 feet northwest of the existing Yucca Loma Road terminus. In this view, visible landscape units are built/urban, the Mojave River, and mountains in the distance. In the foreground of this view is desert scrub along the banks of the river. In the middleground, closer to the center of the river channel is a greater density of plants and vivid greenery, which contrasts with surrounding exposed desert soils and alluvial wash. The ridgelines of mountains in the distance can be seen, although they are low in the horizon due to the distance (roughly 11 mi south of this Key View). Some visual encroachments in this view include man-made dirt tracks and trash in the river channel.

Table 3: Visual Quality Comparison for Key View C

KEY VIEW		VIVIDNESS	INTACTNESS	UNITY	VISUAL QUALITY = $(V+I+U)/3$	VQ DIFFERENCE
C	Existing	5.17	5.5	5.17	5.28	-0.41
	Build	4.78	4.92	4.92	4.87	

Ratings for existing views shown in the table above indicate visual quality is moderately high at a rating of 5.28 on a scale of 1-7. The moderately high rating is attributed to the vegetation in the river channel. Although the landscape is largely natural, man-made dirt tracks within the channel and trash prevented higher ratings for intactness and unity.

Under the build alternatives, the proposed Yucca Loma Bridge would span the Mojave River from the current Yucca Loma Road at the east end of the bridge (on left side of Figure 9) to connect with Yates Road at the west end of the bridge (on right side of Figure 9). Key View C would change noticeably due to the addition of Yucca Loma Bridge. Yucca Loma Bridge and the surrounding landscape would share equal prominence in this view. In terms of form, the bridge would be a new visible mass, partially obstructing views of riparian vegetation. In contrast to relatively subtle lines of vegetation and other natural elements, the bridge structure/deck would add to the view long horizontal straight lines. Shorter vertical lines would also be added by concrete railings (C411 concrete barrier 1’-2” wide) and bridge piers supporting the structure. Visible bridge material would be concrete, adding greater amounts of grey. The bridge would also add a smooth man-made texture to the view while blocking naturally grainy textures of vegetation.

Ratings for the build alternative (see Table 3 and photosimulation in Figure 9) indicate visual quality would decrease 0.41 to a VQ of 4.87, but would remain moderately high. Although the new bridge would remove, and partially block views of, vegetation, the surrounding natural areas would remain intact. Under the build alternative, the vivid, dense riparian vegetation would still be a dominant part of the view. The Yucca Loma Bridge would also not block views of mountains in the distance. All the landscape units visible in the existing view remain visible under the build alternative.

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Panoramic photo-left



Panoramic photo-center



Panoramic photo-right

Figure 8. Viewpoint C-Existing Conditions.
On eastern bank of the Mojave River, north of Yucca Loma Road, facing south.



Figure 9. Viewpoint C-Proposed Project.
On eastern bank of the Mojave River, north of Yucca Loma Road, facing south.

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Key View D

Key View D represents views experienced by residents with a backyard adjacent to, and looking out towards, Yates Road. Residential backyards along Yates Road generally allow for unobstructed views of all of the landscape units analyzed—Open Space, Built/Residential, Mojave Narrows Regional Park, and mountains. Key View D also has a view of the Mojave River in its middle ground view. Residential backyards along Yates Road typically have elevated yards that slope down to meet with an existing flood wall of varying heights. Within the right-of-way is Yates Road. Outside the right-of-way are the other landscape units described previously.

Table 4: Visual Quality Comparison for Key View D

KEY VIEW		VIVIDNESS	INTACTNESS	UNITY	VISUAL QUALITY = (V+I+U)/3	VQ DIFFERENCE
D	Existing	5.75	5.88	6.25	5.96	-1.46
	Build	4.5	4.5	4	4.5	

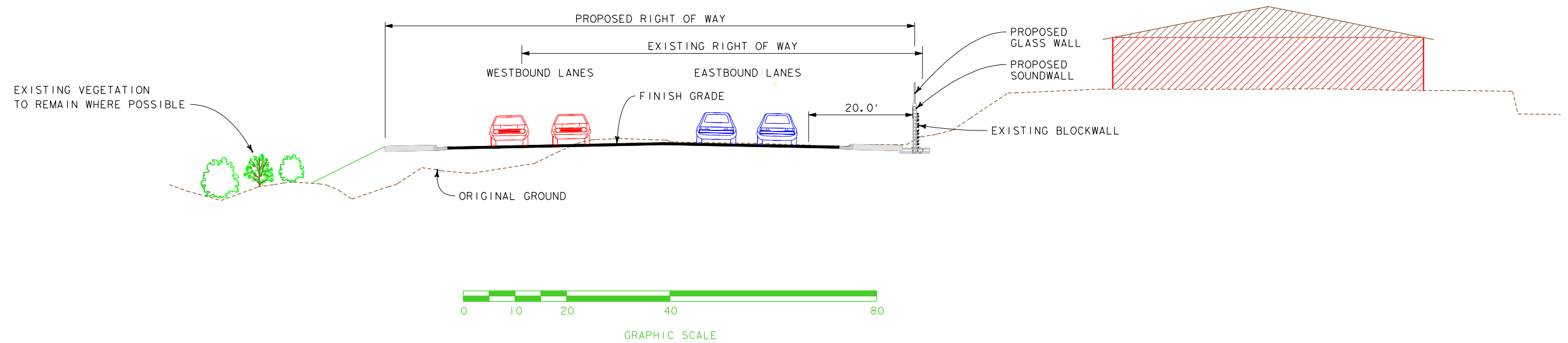
Ratings for the existing views shown in the table above indicate existing visual quality is above medium at VQ =5.96 on a scale of 1-7. Vividness ranged from 4 in the near view to quite high at 5.5 in the background (see Appendix A), due to dense riparian vegetation at the Mojave Narrows Regional Park and vistas of the Mojave Narrows and mountains in the horizon. Average intactness and unity are moderately high at 5.33 and 4.83, respectively, due to the expanse of open space and fairly homogenous landscape consisting of scrub and riparian vegetation..

Under the build alternative, visual quality would decrease due to the addition of sound walls along Yates Road. Lower portions of the sound wall would partially shield views of Yates Road, which may be a benefit. The upper portions 4 feet of this sound wall, Central Wall 2 (see Appendix B), would be comprised of see-through material in order to maintain existing views of the Open Space, which includes Mojave Narrows Regional Park, and mountain landscape units. Views would be somewhat obstructed from posts between the glass, and although meant to be transparent, the glass would likely cause a slightly more opaque (less clear, slightly dull) view of the landscape behind it. All landscape units in the existing view, including unique features such as the Mojave Narrows and Mojave Narrow Regional Park are still visible from this view. With implementation of the build alternative, the rating would decrease 0.84 from moderately high to moderate visual quality.

Figure 10 shows a typical cross section of the proposed Yates Road widening, proposed sound walls, and adjacent residence.

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CROSS SECTION



**Figure 10. Representative cross section of proposed project at Yates Road
Yucca Loma Road/Yates Road/Green Tree Boulevard Transportation Improvement Project**

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Figure 11: Viewpoint D (1)--Existing Conditions.

Representative view from a residential backyard along Yates Road. Facing northeast.

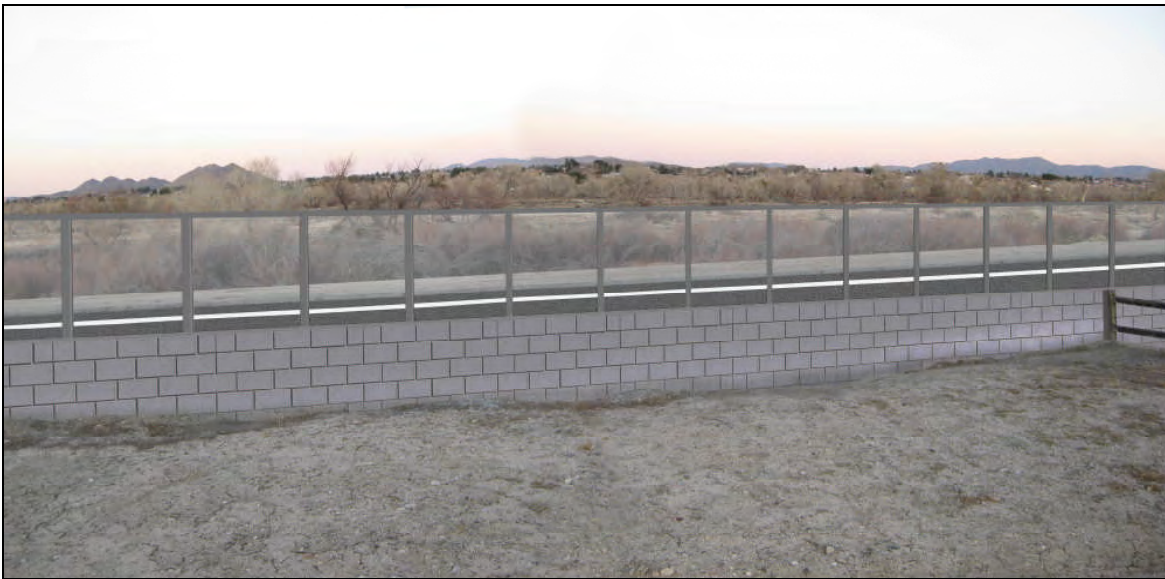


Figure 12: Viewpoint D (1)--Photosimulation of Proposed Project.

Representative view from residential backyard along Yates Road. Facing northeast.



Figure 13: Viewpoint D (2)--Existing Conditions.

Representative view from residential backyard along Yates Road. Facing north.



Figure 14: Viewpoint D (2)--Photosimulation of Proposed Project.

Representative view from residential backyard along Yates Road. Facing north.

Key View E

Key View E represents views experienced from visitors of Mojave Narrows Regional Park towards the proposed project. Key View D faces south-southeast towards Yates Road and was taken roughly 400 ft north of the park entrance. Landcover in the foreground and middleground consists of trees, agricultural fields, and scrub vegetation near Yates Road. The background consists of the Built/Residential landscape unit, here comprised of residences along Yates Road. Right-of-way here consists of Yates Road, which runs across the figure horizontally.

Table 5: Visual Quality Comparison for Key View E

KEY VIEW		VIVIDNESS	INTACTNESS	UNITY	VISUAL QUALITY = (V+I+U)/3	VQ DIFFERENCE
E	Existing	4.5	5	5	4.83	-0.05
	Build	4.33	5	5	4.78	

Ratings for the existing view indicate visual quality is moderately high at 4.83. The vividness is high due to the large, vegetated open space at the Mojave Narrows Regional Park. Intactness and unity is also moderately high due to minimal encroachment. No eyesores are in this view. Total visual quality for the existing view is 4.83.

With implementation of the proposed project, visual quality would be slightly lower than the existing at a rating of 4.78. Due to the distance, sound walls would be hardly visible in this view. Since Yates Road would be widened, an engineered slope would be created at the road's northerly edge. Grading and filling for the widening would remove existing scrub vegetation along Yates Road. Noticeable change in Key View E is the removal of scrub vegetation as a result of widening Yates Road. The simulation represents the view without re-vegetation. There would be little difference in visual quality from this representative view.



Figure 15: Viewpoint E--Existing Condition.
View from the Mojave Narrows Regional Park.



Figure 16: Viewpoint E--Photosimulation of Proposed Project.
View from Mojave Narrows Regional Park.

Key View F

Key View F represents views experienced from residents near Hudson Drive, Landis Drive, and Jubilee Place, Victorville, CA. The photograph for Key View F was taken just east of B.N.S.F. Railroad and northwest of the residences along Hudson Drive. Key View F faces north towards the Mojave Narrows and natural wash draining to the Mojave River. The Key View F photograph was taken east of the railroad tracks and just northwest of a residential neighborhood. Landcover in the foreground and middleground consists of desert scrub, exposed soils, and railroad tracks and fencing. Landcover in the background consists of green vegetation and topography at the Mojave Narrows Regional Park (and actual Mojave Narrows landform) and mountains in the distance. Within the right-of-way are open space and built/residential landscape units. Outside the right-of-way are open space, built/residential, Mojave Narrows Regional Park, and mountain landscape units.

Table 6: Visual Quality Comparison for Key View F

Key View		Vividness	Intactness	Unity	Visual Quality = $(V+I+U)/3$	VQ Difference
F	Existing	4.56	5.5	5	5.02	-0.78
	Build	3.89	4.83	4	4.24	

Ratings for the existing view indicate visual quality is medium to above medium for for all three categories. Vividness is higher than medium due to mountains in the horizon. Intactness and unity is fairly high due to amount of open space landscape in the foreground and natural landscape seen in the background. Total visual quality for the existing view is above medium at 5.02.

Visual quality is slightly lower, at VQ=4.24, under the build condition. The lower visual quality is attributed to the addition of the bridge to a viewshed with little development, and the fact that the new bridge blocks the view of vegetation at the Mojave Narrows Regional Park. Visual quality is still slightly above medium at 4.24 however, due to the unblocked view of the mountains in the horizon and the remaining expanse of desert landscape outside the project's right-of-way.



Figure 17: Viewpoint F--Existing Conditions.

From north of Hudson Drive facing north towards Mojave Narrows Regional Park and Quartzite Mountain.



Figure 18: Viewpoint F--Photosimulation of Proposed Project.

From north of Hudson Drive, facing north towards the proposed bridge over BNSF railroad in the middle ground and Mojave Narrows Regional Park and Quartzite Mountain in the background.

D. Summary of Project Impacts

By analyzing the existing setting and effects on the viewshed from the proposed project, the proposed project is not anticipated to have a significant impact on visual resources. Key View A would change from a high to a moderately high, Key View B would change from high to moderately high, Key View C would remain moderately high, Key View D would change from high to moderately high, Key View E would remain moderate, and Key View F would change from moderately high to moderate visual quality. All views would have at least a moderate visual quality with the proposed project.

Except for Key View B, the proposed project would result in moderate visual quality. Key View B would decrease from high visual quality to moderately high visual quality. For Key View C visual quality would remain moderately high. For Key View D, visual quality would decline from high to moderately high, because project components would obstruct some landscape units currently visible. Specifically, residents along east portions of Yates Road (represented by Key View D) would experience partially obstructed views of all the landscape units due to proposed sound wall, Central Wall 2 (see Appendix B). Central Walls 1 and 3 would not be tall enough to break line-of-site from adjacent backyards. The obstruction is minimized, however, because at Central Wall 2, the upper 4 feet would be made of see-through material, likely glass. For Key View F, which represents potential views by residents near Hudson Drive, Landis Drive, and Jubilee Place, Victorville, CA, the view of Mojave Narrows Regional park may be obstructed from the proposed bridge over BNSF railroad and its approach roadways.

Table 7, below, summarizes the visual quality comparison between the “existing” and “build” conditions. Descriptive change was identified by rounding the VQ (i.e. $VQ\ 5.39 = VQ\ 5$) and using the evaluation scale in FHWA’s *Visual Impact Assessment for Highway Projects* as a guide.

Table 7: Visual Quality Comparison for all Key Views

Key View		Vividness	Intactness	Unity	Visual Quality = $(V+I+U)/3$	VQ Difference	Descriptive Change*
A	Existing	5.17	5.83	5.33	5.67	-0.95	High to Moderately High
	Build	4.67	5	4.5	4.72		
B	Existing	6	6.33	6.17	6.17	-1.01	High to Moderately High
	Build	5.05	5.25	5.17	5.16		
C	Existing	5.17	5.5	5.17	5.28	-0.41	Moderately High to Moderately High
	Build	4.78	4.92	4.92	4.87		

D	Existing	5.75	5.88	6.25	5.96	-1.46	High to Moderately High
	Build	4.5	4.5	4	4.5		
E	Existing	4.5	5	5	4.83	0.05	Moderate to Moderate
	Build	4.33	5	5	4.78		
F	Existing	4.33	5.5	5	4.94	-0.78	Moderately High to Moderate
	Build	3.89	4.83	4	4.24		
<p>The evaluation scale is: VQ = 1 (Very Low); VQ = 2 (Low); VQ = 3 (Moderately Low); VQ = 4 (Average/medium/moderate); VQ = 5 (Moderately High); VQ = 6 (High); VQ = 7 (Very High), based on FHWA, 1988).</p> <p>*To determine Descriptive Change, VQ was rounded to the nearest whole number, and assigned the descriptive term (Very Low, Low, Moderately Low, Moderate, Moderately High, High, or Very High) for existing and build. For example, Key View A-Existing VQ=5.67, which rounds to VQ=6, which is "High". Key View A-Build had a VQ=4.83, which rounds to 5, which is "Moderately High". Therefore, the descriptive change for Key View A from Existing to Build was "High" to "Moderately High".</p>							

The proposed project is not expected to have significant impacts on visual resources or cause substantial adverse affect on aesthetics due to the following:

- No National Scenic Byways, State Scenic Highways, or County Scenic Highways are designated near the project vicinity.
- As shown in Table 7, visual quality in the project vicinity would be moderate with implementation of the proposed project. This includes use of see-through material at the upper 4 feet of Central Wall 2 (see Appendix B).
- Affects to a Section 4 (f) resources would occur on the Mojave Narrows Regional Park, however, the Section 4 (f) Evaluation for the proposed project determined that although there would be a permanent use of approximately 5.99 acres of land owned by the Mojave Narrows Regional Park, this use would not constitute a substantive impact to the park and its recreational facilities. The land proposed for use is 0.71% of the total 840 acres and has been substantially disturbed by previous construction and the presence of human activities in the area. The Section 4 (f) evaluation finds that there is no other prudent and feasible alternative other than the proposed project and that all measures to minimize harm have been taken (Dokken Engineering, 2009a).
- A portion (see Central Wall 2 in Appendix B) along Yates Road would incorporate see-through material at the upper 4 feet to maintain views outward from residential backyards.

- Standard street lighting on the Yucca Loma Bridge would add a new source of lighting to the area. Standard safety lighting would also be placed at intersections. Lighting would be shielded with downcasting. Substantial light or glare is not anticipated due to adherence with Caltrans lighting standards.

E. Cumulative Impacts

Cumulative impacts are determined by analyzing the project affects along with past, present, and reasonably foreseeable actions. The Mojave Narrows Regional Park area in the project vicinity is designated as Open Space in applicable General Plans for the Town of Apple Valley and Victorville. The County of San Bernardino designates the Mojave River as Open Space (Wildlife Corridor), and the Mojave Narrows Regional Park as Open Space (Parks). Existing residential areas south of Yates Road and along Yucca Loma Road are fully developed. Based on land uses in the Victorville General Plan, potential developments in the future are low-density residential and light industrial north of Coad Road and near the BNSF Railroad. Because foreseeable developments are not located at the Mojave Narrows Regional Park, future development would most likely not obstruct key views or add elements to key view sheds. Therefore, no cumulative significant impacts on visual resources are anticipated.

VII. VISUAL MITIGATION MEASURES

Caltrans and the FHWA mandate that a qualitative/aesthetic approach should 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.

Visual mitigation 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 mitigation will be designed and implemented with the concurrence of the District Landscape Architect.

Sound Walls

A portion of the sound wall (Central Wall 2) along Yates Road, which would hinder a direct-line-of site from corresponding backyards would incorporate see-through material at the upper 4 feet to maintain views.

Lighting

A lighting plan shall be developed that requires project lighting to be appropriately shielded. The project's lighting design shall be consistent with Caltrans, County, and City lighting guidelines and standards and will be developed in coordination with Caltrans Landscape Architecture staff for areas within state right-of-way as well as with City and County staff.

Architectural Aesthetics

Architectural features, developed with Caltrans, County, and City aesthetic standards, shall be considered for the bridge structure, sound walls, and exposed concrete areas, as appropriate, to meet the desired goals of the Town of Apple Valley, City of Victorville, San Bernardino County, and Caltrans. The aesthetic features shall be developed in coordination with Caltrans Landscape Architecture staff for areas within state right-of-way as well as with County and City staff.

Re-vegetation

A replanting plan shall be developed to address re-vegetation and shading in coordination with Caltrans Landscape Architecture staff for areas within state right-of-way as well as with County and City staff.

VIII. REFERENCES

California Department of Transportation. 2007. *Officially Designated State Scenic Highways and Historic Parkways*, http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm (obtained March 2009).

California Department of Transportation. 2008. *Standard Environmental Reference*.

California Streets and Highway Code, Section 260-263 (State Scenic Highways). 2008. <http://www.leginfo.ca.gov/calaw.html>.

City of Victorville. 2007. General Plan.

County of San Bernardino. 2007. Development Code.

Dokken Engineering. 2009a. Programmatic Section 4 (f) Evaluation, Yucca Loma Road, Yates Road, Green Tree Boulevard Extension Project, San Bernardino, California.

Dokken Engineering. 2009b. Noise Abatement Decision Report.

Federal Highway Administration. 2009. *National Scenic Byways Online*, <http://www.byways.org>.

Town of Apple Valley. 2009 (obtained). Ordinance, Development Code.

Town of Apple Valley. 1998. General Plan.

U.S.D.O.T., Federal Highway Administration, Office of Environmental Policy, Visual Impact Assessment for Highway Projects, U. S. Department of Transportation Washington D. C. March 1981.

APPENDIX A
Visual Quality Evaluation Forms

VISUAL QUALITY EVALUATION - VIEW FROM THE ROAD - EXISTING CONDITION

Evaluation Scale: 1-7

1 = Very Low
4 = Medium

Project Name: Yucca Loma Road/Yates Road/Green Tree Boulevard
S.R. No. _____

Evaluator: Zamora
Date: Form prepared March 2, 2009

Assessment Unit: _____
Weather: _____
7 = Very High

Observer Viewpoint	VIEW ZONE	VISUAL QUALITY														
		VIVIDNESS			FEATURES			INTACTNESS		ENCROACHMENT		UNITY				
		Landform	Water	Vegetation	Manmade Develop.	Vividness (1-7)	Absence of Encroachment	Overall Intactness	Intactness (Av. 1-7)	Man/Natural	Overall Unity	Importance (1-3)	(V+I+U)/3	Visual Quality		
A	Inside ROW I/S Unit O/S Unit	5.00		6.00	*	5.50	Mojave River, vegetation	7.00	6.00	6.50	None	6.00	7.00	6.50	6.17	
		5.00		5.00	*	5.00	Mojave River, vegetation	5.00	6.00	5.50	Adjacent residential areas	5.00	5.00	5.00	5.17	5.67
		5.00		5.00	*	5.00	Mojave River, vegetation	5.00	6.00	5.50	Adjacent residential areas	5.00	4.00	4.50	5.00	
B	Inside ROW I/S Unit O/S Unit	5.00	X	6.00	6.00	5.67	Mojave River channel, dense vegetation	7.00	6.50	6.75	Open channel, Encroachment limited to drainage features and dirt trails.	7.00	7.00	6.75	6.39	
		5.00	X	7.00	6.00	6.00	Landscape unit is open space/Mojave Narrows Regional Park. High rating for vegetation and low man-made development	6.50	6.00	6.25	Built/residential is visible.	6.50	6.50	6.25	6.17	6.17
		6.00	X	7.00	6.00	6.33	All landscape units represented. Vivid and memorable landscape of Mojave Narrows, Mojave River, and mountains in the distance.	6.00	6.00	6.00	Built/residential is visible.	6.00	6.00	5.50	5.94	
C	Inside ROW I/S Unit O/S Unit	5.00	X	6.00	*	5.50	Mojave River, vegetation	7.00	6.00	6.50	Open channel, Encroachment limited to drainage features and dirt trails.	6.00	5.50	5.50	5.83	
		5.00	X	5.00	*	5.00	Mojave River, vegetation	5.00	5.00	5.00	Man-made dirt tracks and trash.	5.00	5.00	5.00	5.00	5.28
		5.00	X	5.00	*	5.00	Mojave River, vegetation, mountains	5.00	5.00	5.00	Man-made dirt tracks and trash.	5.00	4.00	5.00	5.00	

* Absent from View

VISUAL QUALITY EVALUATION - VIEW FROM THE ROAD - EXISTING CONDITION

Evaluation Scale: 1-7
 1 = Very Low
 4 = Medium
 7 = Very High

Project Name: Yucca Loma Road/Yates Road/Green Tree Boulevard
 S.R. No.:
 Assessment Unit:

Evaluator: Zamora
 Date: Form prepared March 2, 2009
 Weather:

Observer Viewpoint	VIEW ZONE	VISUAL QUALITY										(V+I+U)/3	Importance (1-3)	Visual Quality			
		VIVIDNESS			FEATURES		INTACTNESS		ENCROACHMENT		UNITY						
		Landform	Water	Vegetation	Manmade Develop.	Vividness (1-7)	Absence of Encroachment	Overall Intactness	Overall Intactness	Man/Natural	Overall Unity				Unity (Av. 1-7)		
D	O/S ROW	Inside ROW	X	X	X	X	X	X	X	X	X	X	X	X	X	5.96	
		I/S Unit	5.00	X	6.50	5.00	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00	5.67	5.96
		O/S Unit	6.50	X	6.50	5.00	6.00	6.00	6.00	6.25	6.50	6.50	6.50	6.50	6.50	6.25	6.25
E	O/S ROW	Inside ROW	X	X	X	X	X	X	X	X	X	X	X	X	X	4.83	
		I/S Unit	5.00	X	5.00	4.00	4.67	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.89	4.83
		O/S Unit	4.00	X	5.00	4.00	4.33	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.78	4.78
F	O/S ROW	Inside ROW	6.00		4.00	4.00	4.67	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.06	5.06
		I/S Unit	4.00		4.00	4.00	4.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	4.83	5.02
		O/S Unit	7.00		4.00	4.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.17	5.17

*Absent from view
 X = For Key View D, Inside of ROW was not rated because with the build condition, the ROW would be similar. Including the ROW ratings in this view would give the VQ a lower rating.

VISUAL QUALITY EVALUATION - VIEW FROM THE ROAD - PROPOSED

Evaluation Scale: 1-7

Project Name: Yucca Loma Road/Yates Road/Green Tree Boulevard
 S.R. No. Assessment: _____
 Unit: _____

Evaluator: Zanzora
 Date: Form prepared March 2, 2009
 Weather: _____

1 = Very Low
 4 = Medium
 7 = Very High

Observer Viewpoint	VIEW ZONE	VISUAL QUALITY										Importance (1-3)	(V+I+U)/3	Visual Quality		
		VIDUENESS					INTACTNESS								UNITY	
		Landform	Water	Vegetation	Manmade Develop.	Vividness (1-7)	Features	Criteria	Intactness (Av. 1-7)	Encroachment	Man/Natural				Overall Unity	Unity (Av. 1-7)
A	Inside ROW	4.00		X	4.00	4.00	Mojave River vegetation	4.00	4.00	4.00	Bridge structure dominates landscape until within ROW	4.00	4.50	4.17		
	I/S Unit	5.00		5.00	5.00	5.00	Mojave River vegetation	5.00	6.00	5.50	Bridge would be a new element in Mojave Narrows Regional Park/Mojave River landscape	5.00	4.50	5.00	4.72	
	O/S Unit	5.00		5.00	5.00	5.00	Mojave River vegetation	5.00	6.00	5.50	Bridge would be a new element in Mojave Narrows Regional Park/Mojave River landscape	5.00	4.50	5.00		
B	Inside ROW	4.50	X	3.00	4.00	3.83	Decrease in vividness due to bridge as a new element.	5.00	5.00	5.00	Decrease in intactness due to bridge as a new element in open space.	5.00	5.00	4.61		
	I/S Unit	5.00	X	6.00	5.00	5.33	Dense riparian vegetation. And Mojave Narrows still viewable.	5.00	5.00	5.00	Decrease in intactness due to bridge as a new element in open space.	5.00	5.50	5.11	5.16	
	O/S Unit	6.00	X	6.00	6.00	6.00	Dense riparian vegetation. And Mojave Narrows still viewable.	5.50	6.00	5.75	Decrease in intactness due to bridge as a new element in open space. Unity is still high however, since not a lot of other man-made elements in this view.	5.00	5.50	5.75		
C	Inside ROW	4.00	X	4.00	4.00	4.00	Decrease in vividness due to bridge as a new element.	5.00	5.00	5.00	Decrease in intactness due to bridge as a new element in open space.	5.00	5.00	4.67		
	I/S Unit	5.00	X	5.00	5.00	5.00	Dense riparian vegetation.	5.00	5.00	5.00	Decrease in intactness due to bridge as a new element in open space.	5.00	5.00	5.00	4.87	
	O/S Unit	5.00	X	5.00	6.00	5.33	Dense riparian vegetation. Mountains in distance still viewable.	5.00	4.50	4.75	Decrease in intactness due to bridge as a new element in open space. Unity is still high, however, since not a lot of other man-made elements in this view.	5.00	4.75	4.94		

*Absent from View

VISUAL QUALITY EVALUATION - VIEW FROM THE ROAD - BUILD CONDITION

Evaluation Scale: 1-7
 1 = Very Low
 4 = Medium
 7 = Very High

Project Name
 S.R. No.
 Assessment Unit

Yucca Loma Road/Yates Road/Green Tree Boulevard

Evaluator
 Date
 Weather

Zamora
 Form prepared 2/3/09

Observer Viewpoint	VIEW ZONE	VISUAL QUALITY										Visual Quality (Average)						
		VIVIDNESS					INFATNESS			UNITY			Importance (1-3)	(V+I+U)/3				
		Landform	Water	Vegetation	Manmade Develop.	General Visual Quality	FEATUES	CRITERIA	Overall Intactness	Intactness (Av. 1-7)	ENCROACHMENT				Man/Natural	Overall Unity	Unity (Av. 1-7)	
D	O/S ROW	Inside ROW	X	X	X	X	X	ROW consists of road and shoulder.	X	X	X	4.00	4.00	4.00	4.00	X	4.39	4.50
		I/S Unit	5.00	X	5.00	4.00	4.67	Landscape unit is Built/Residential. Features vary greatly per backyard. Assumed "medium" vividness for vegetation and built.	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.61	
		O/S Unit	6.00	X	6.00	4.00	5.33	Vividness decreases to moderate due to soundwall.	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.78	
E	O/S ROW	Inside ROW	X	X	X	X	X	Trees, fencing, vegetation	X	X	X	4.00	4.00	4.00	4.00	X	4.78	4.78
		I/S Unit	5.00	X	4.00	4.00	4.33	Trees, fencing, vegetation	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.78	
		O/S Unit	4.00	X	5.00	4.00	4.33	Trees, fencing, vegetation	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.22	
F	O/S ROW	Inside ROW	5.00		2.00	4.00	3.67	Wash, vegetation, hills	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.94	4.24
		I/S Unit	4.00		2.00	4.00	3.33	Mojave Narrows, mountains, open desert landscape	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.56	
		O/S Unit	6.00		4.00	4.00	4.67	Mojave Narrows, mountains, open desert landscape	5.00	5.00	5.00	5.00	5.00	4.00	4.00	4.00		

*Absent from view

VISUAL QUALITY EVALUATION - EXISTING COMPARED WITH BUILD ALTERNATIVE

Evaluation Scale: 1-7

- 1 = Very Low
- 4 = Medium
- 7 = Very High

Project Name: Yucca Loma Road/Yates Road/Green Tree Boulevard
 S.R. No. _____
 Assessment Unit _____

Evaluator: Zamora
 Date: _____
 Weather: _____

Form prepared March 17, 2009

Observer Viewpoint	VIEW SETTING			VISUAL QUALITY			IMPACT			
	Alternatives 1 and 4/Existing	Land Use	Observer Position	General Visual Quality	VIDUENESS	INTACTNESS	UNITY	Visual Quality Difference	Positive Impact	Negative Impact
A	E	TRA	N	F	5.17	5.83	5.33	5.67	0.95	X
	Build Alternative		N	F	4.67	5.00	4.50	4.72		
B	E	TRA	N	F	6.00	6.33	6.17	6.17	1.01	X
	Build Alternative		N	F	5.05	5.25	5.17	5.16		
C	E	TRA	N	F	5.17	5.50	5.17	5.28	-0.41	X
	Build Alternative		N	F	4.78	4.92	4.92	4.87		

VISUAL QUALITY EVALUATION - EXISTING COMPARED WITH BUILD ALTERNATIVE

Project Name: Yucca Loma Road/Yates Road/Green Tree Boulevard Evaluator: Zamora
 S.R. No.: _____ Date: Form prepared March 17, 2009
 Assessment Unit: _____ Weather: _____

Evaluation Scale: 1-7
 1 = Very Low
 4 = Medium
 7 = Very High

Observer Viewpoint	VIEW SETTING		VISUAL QUALITY				IMPACT			
	Land Use	Observer Position	Road Distance	General Visual Quality	VIDIDNESS	INTACTNESS	UNITY	Visual Quality Difference	Positive Impact	Negative Impact
D	Alternatives 1 and 4/Existing	N	F	General Visual Quality	Overall Vidiness	General Intactness	Overall Unity	ELEMENTS	-1.46	X
					FEATUERS	ENCROACHMENT	5.96			
E	Build Alternative	N	F	General Visual Quality	Overall Vidiness	General Intactness	Overall Unity	ELEMENTS	-1.46	X
					FEATUERS	ENCROACHMENT	4.50			
E	Build Alternative	N	F	General Visual Quality	Overall Vidiness	General Intactness	Overall Unity	ELEMENTS	-0.05	N/A
					FEATUERS	ENCROACHMENT	4.83			
F	Build Alternative	N	F	General Visual Quality	Overall Vidiness	General Intactness	Overall Unity	ELEMENTS	-0.78	X
					FEATUERS	ENCROACHMENT	4.24			

APPENDIX B

Potential Sound Wall Locations

(from Noise Abatement Decision Report, February 26, 2009b)

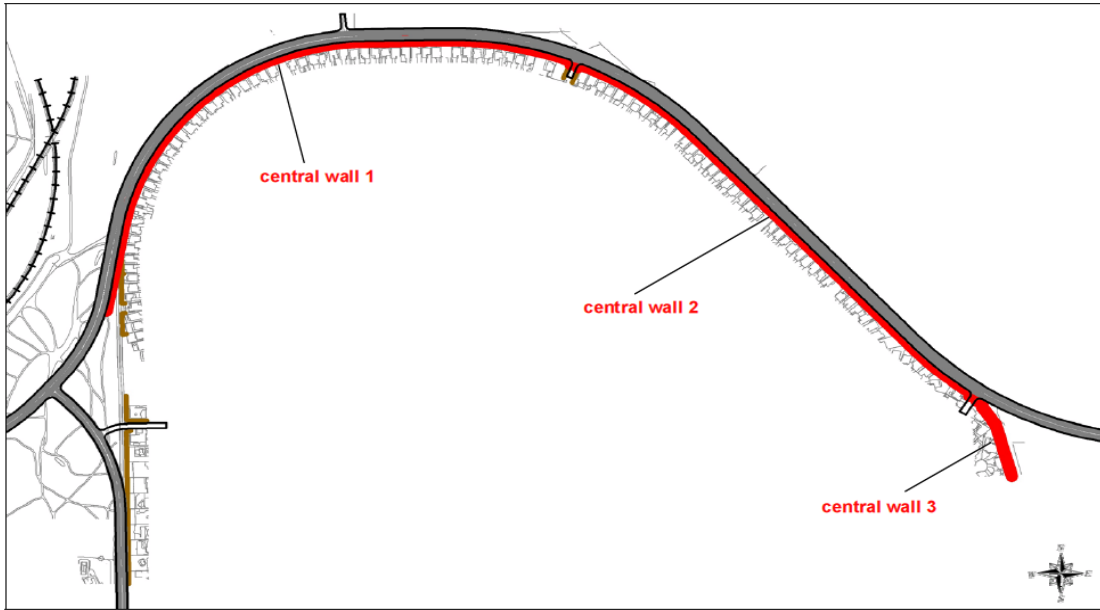


Figure I. Central Wall

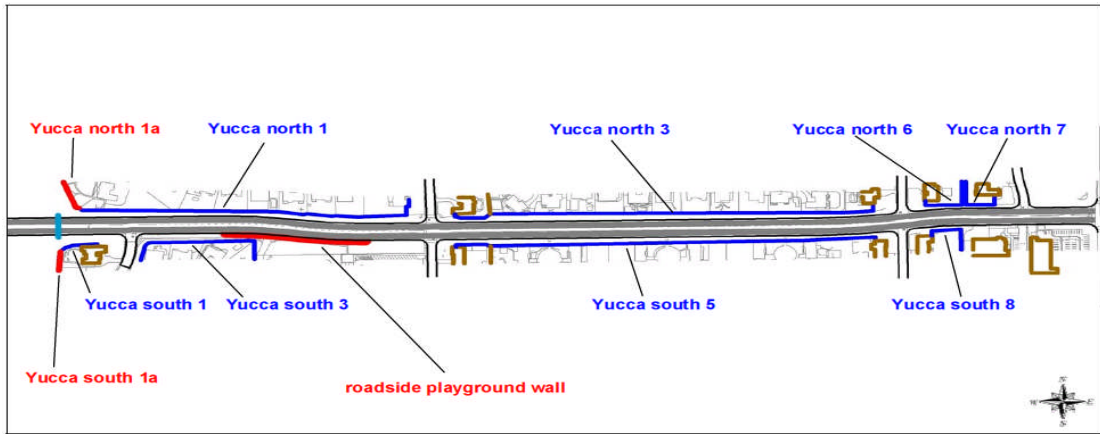


Figure II. Yucca Loma Wall Locations

