

2.5 VISUAL / AESTHETICS

The information below summarizes the visual impact analysis for the North Connector project. The purpose of the visual analysis is to determine the potential visual impacts and to mitigate adverse visual impacts associated with the construction of the project on the surrounding visual environment. The Visual Analysis Report is available for public which is available at Caltrans District 4, 111 Grand Avenue, Oakland, CA 94610, and the Solano Transportation Authority, One Harbor Center, Suite 130, Suisun City, CA 94585 during normal business hours.

Regulatory Setting

NEPA establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings [42 U.S.C. 4331(b)(2)]. To further emphasize this point, the Federal Highway administration in its implementation of NEPA [23 U.S.C. 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, the California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities.” [CA Public Resources Code Section 21001(b)]

Affected Environment

Visual resources are those physical features that make up the visual landscape, including land, water, vegetation and man-made elements. These elements are the stimuli upon which actual visual experience is based. Visual resources are not, however, limited to the elements or features that are of outstanding visual quality. A location or element in the visual environment can have values attributed to it by its viewers regardless of its quality. Viewer sensitivity or local values can confer visual significance on landscape features and areas that would otherwise appear unexceptional. Whenever a change is made to the existing environment – either man made or natural – a systematic process may be applied to determine the degree of impact to the existing visual resources.

Regional Vicinity Visual Character

The proposed project is located within one mile north of I-80. The project area is located in the flat alluvial plain at the mouth of Green Valley and base of north-northwest trending foothills of the southern North Coast Ranges. In recent years, this portion of Solano County and the City of Fairfield have experienced growth pressures consistent with many of California’s inland communities. Once primarily agricultural farmland, much of the surrounding area is now a mixture of, industrial, commercial and residential development.

Solano County is one of nine counties in the San Francisco Bay Area Region and is located halfway between San Francisco and Sacramento. The proposed project is within Solano County and encompasses portions of Solano County and the City of Fairfield. The regional area is surrounded by undeveloped hills on its western and northern borders, grazing and grasslands to the east and northeast, and I-80 and Suisun Marsh to the south. The county has retained much of its agricultural character; however the City

of Fairfield is experiencing rapid growth of new residential neighborhoods, and office and commercial developments have become obvious visual features in the area.

Viewsheds

For the purpose of this analysis the project area has been divided into two viewsheds: Jameson Canyon and Green Valley/Suisun Valley. A viewshed is generally defined as a visual envelope or broad-range view from a specific viewing location and are generally quite large (see Figure 2.5-1).

Viewscape 1-Jameson Canyon

The Jameson Canyon viewshed is within Solano County and begins at the I-80/SR12 West Interchange to the first ridge line along SR12 (west). The area is rural and is defined by rolling hills, ranches, and a dairy and horse boarding facility. SR12 is a busy highway that runs through this viewpoint. Twin Sisters, a double-peaked mountain at 2,200 feet elevation, is located to the north and forms a backdrop to this viewshed.

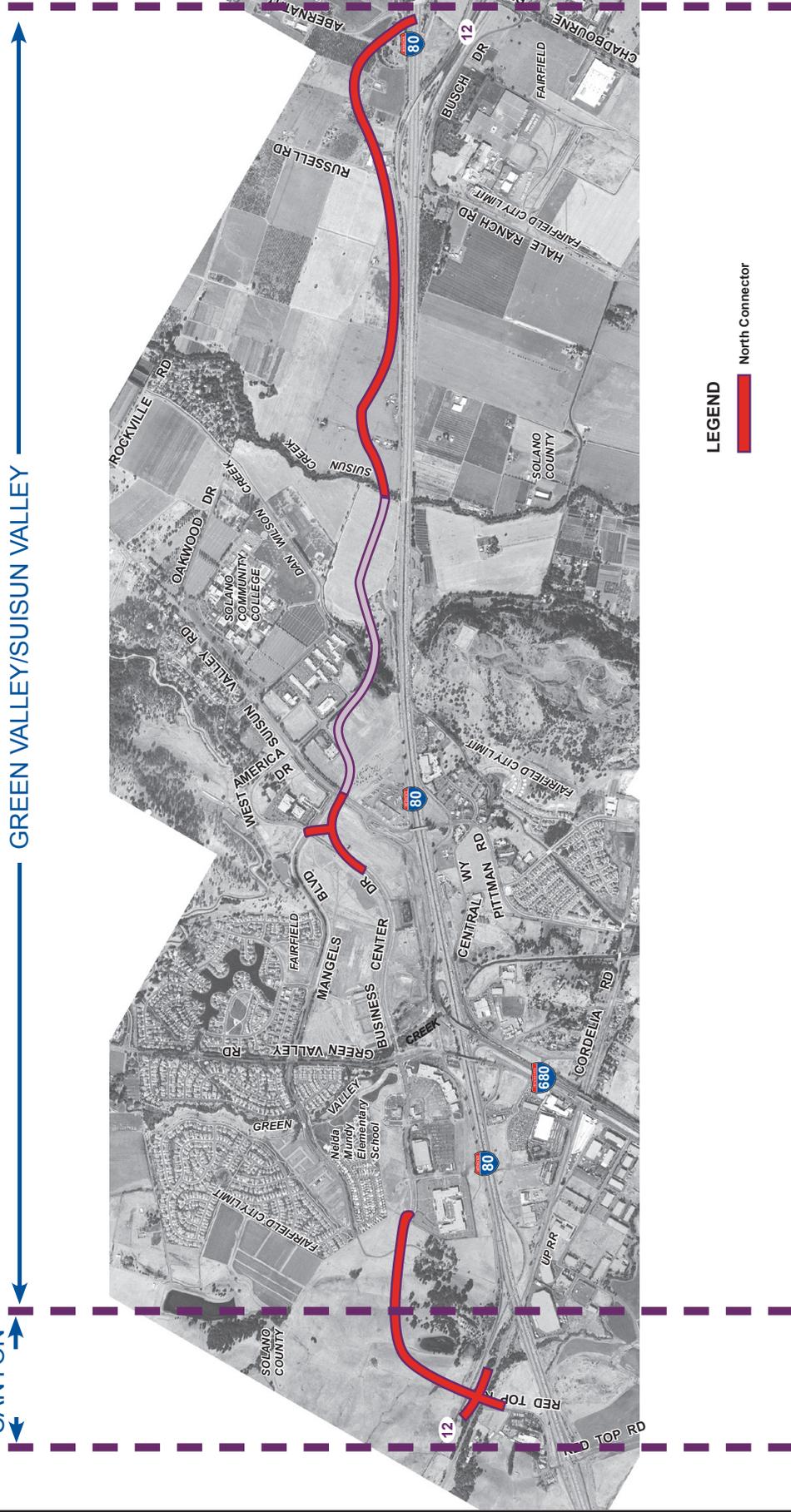
Viewscape 2-Green Valley/Suisun Valley

The Green Valley/Suisun Valley viewshed is within both Solano County and the City of Fairfield. This viewshed extends from Abernathy Road to the East to the I-80/SR12 West Interchange. The character of the area varies greatly within this viewshed. Heading east to west, agricultural uses give way to highly developed residential and commercial areas, which give way to undeveloped hillsides and ranches.

Suisun Valley is a highly scenic agricultural area that extends in a north/south direction from Twin Peaks to south of I-80. Within the project area Suisun Valley is visible from Suisun Valley Road and I-80.

JAMESON
CANYON

GREEN VALLEY/SUISUN VALLEY



LEGEND
North Connector

↑ north
Map not to scale

Figure 2.5-1. Viewsheds

The process used in this visual analysis generally follows the guidelines outlined in the publication, Visual Impact Assessment for Highway Projects, Federal Highway Administration (FHWA), March 1981. This process, along with other established procedures for visual assessments, identifies existing or “baseline” conditions which can be used to assess the resource change that would be introduced by the project and the associated viewer response. Five principal visual steps required to assess visual impacts were carried out.

1. Define the project setting and the viewshed

The analysis describes the existing visual environment of Solano County and the City of Fairfield in the vicinity of the project, and the three specific areas that make up the project area: 1) the West End, from SR12 West at Red Top Road to Business Center Drive; 2) Central Section, areas west of Suisun Valley Road; and west at Red Top Road; and 3) the East End, from Suisun Creek to Abernathy Road.

2. Identify key views for visual assessment

The analysis identifies the regional character of the project area and then breaks the corridor into viewsheds, landscape units, and viewpoints to identify key views.

Visual quality and significant features are identified within the landscape units. Viewpoints have been identified along the corridor where the project could potentially affect the existing visual quality for the viewer from certain locations.

3. Analyze existing visual resources and viewer response

The analysis uses the FHWA Method of Visual Resource Analysis to assess existing visual resources and viewer response to a change of the visual resources.

Identify Visual Character

Visual character is descriptive and non-evaluative, which means it is based on defined attributes that are neither good nor bad. A change in visual character 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 a resistance to the 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 viewpoint. 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 planning a project such as the North Connector because it does not necessarily assume that a highway project is an undesirable visual feature. This approach to evaluating visual quality can also help identify specific methods for mitigating specific adverse impacts that may occur as a result of the 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 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 components in the landscape.

4. Depict the visual appearance of project alternatives

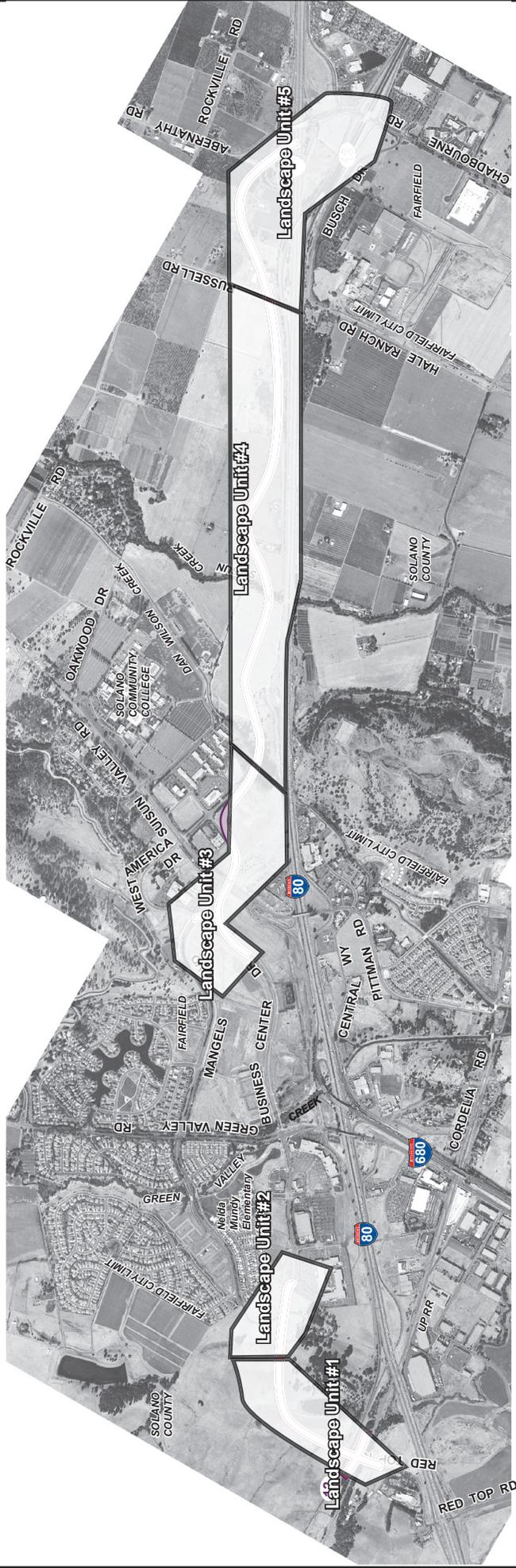
Three viewpoints were chosen to depict the visual appearance of the proposed project. These viewpoints were chosen because the view of the project from these locations is most likely to have the greatest affects on the viewer. Four computer generated visual simulations of the various alternatives were prepared from these viewpoints. The simulations will show three-dimensional renderings of the roadway and bridges in various locations.

5. Assess the visual impacts of the project alternatives

Identify potential impacts and propose mitigation measures to reduce these impacts.

Landscape Units

Landscape units are smaller distinct sections of the project corridor within the viewsheds. Landscape units have a consistent or cohesive visual or physical character, although they may contain diverse visual resources. Their boundaries are often marked by distinct changes in visual character or spatial experience, such as a change in a land use pattern. Five landscape units were identified within the project area (see Figure 2.5-2). The following discussion describes the visual setting in each landscape unit, focusing on visual elements within the landscape that could be affected by the proposed project; including scenic resources (see Figure 2.5-2).



LEGEND
 North Connector

↑ north
 Map not to scale

Figure 2.5-2. Landscape Units



Red Top Road and SR12

This landscape unit begins just south of the intersection of Red Top Road and SR12 West in a rural area. There is a dairy and horse boarding facility on Red Top Road, and railroad tracks cross Red Top Road near the busy intersection of Red Top Road and SR12 West. A stream and riparian corridor line the track on the south side of SR12. The rural scenery, the presence of the riparian corridor, and the views of the hills in the distance create a vivid visual experience. However, SR12 West with its steady flow of traffic interrupts the visual experience and lowers the intactness and unity of the landscape unit.

VISUAL QUALITY	RATING
Vividness	High
Intactness	Medium
Unity	Medium

Landscape Unit 2: West End



Grazing Land

This landscape unit primarily consists of grazing land and rolling hills. It exhibits a rural character which contains one old rock wall, a large sheep barn and cattle fencing. However, a line of large power poles runs thorough this landscape unit and detracts from the intactness and unity of the rural elements within this landscape unit.

VISUAL QUALITY	RATING
Vividness	High
Intactness	Medium
Unity	Medium

Landscape Unit 3: Business Center Drive



Mangels Boulevard and West America Drive

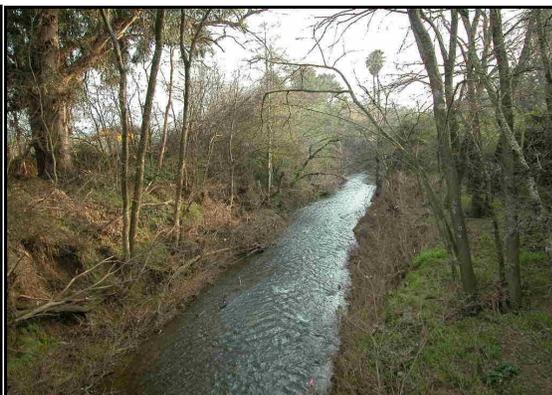
This landscape unit contains a variety of suburban aesthetics, including wide roads with landscaped medians, street lights, new office development, and vacant land that has been readied for development. As a result, there are few distinctive visual elements within this landscape unit.

VISUAL QUALITY	RATING
Vividness	Low
Intactness	Medium
Unity	Medium

Landscape Unit 4: Suisun Creek to Russell Road



Agricultural Land



Suisun Creek

Landscape Unit 4 encompasses mainly active agricultural land and one creeks. The topography is mostly level and contains sectioned parcels of agricultural land used primarily for row crops. Suisun Creek runs in a north to south direction. Its banks are vegetated with willow trees and contain typical riparian habitat. A local bike path (Linear Park Bicycle Path) runs along Suisun Creek and turns eastward at I-80. Between Suisun Creek and Russell Road are one residence and several outbuildings associated with the agricultural operations in this area. The agricultural aesthetic of this area is quite vivid, given the suburban surroundings to the east and west.

VISUAL QUALITY	RATING
Vividness	High-medium
Intactness	Medium
Unity	High-medium

Landscape Unit 5: Russell Road to Abernathy Road



Abernathy Road Overcrossing and Orchards

This landscape unit contains a wide variety of aesthetics including: 1) commercial uses such as Moore Tractor Company, Concrete Pipe Distributors, and Green Valley Tractor; 2) agricultural uses including orchards, row crops and vineyards; and 3) residential uses. Large power lines also cross this landscape unit as well as the linear park/bike path which travels along the north side of I-80 and crosses under Abernathy Road. The overall aesthetic character is rural, but with many intrusions and visually distracting features so that intactness and unity are low.

VISUAL QUALITY	RATING
Vividness	Medium
Intactness	Low
Unity	Low

Viewer Groups and Viewpoints

Three viewer groups were identified that would be affected by the change in visual quality along the project corridor: motorists, residents, and recreational users. Motorists include both drivers and passengers traveling on local highways and roadways in the project area. Residents include those who live along or near the project, and recreational users include pedestrians and bicyclists who use the bike path.

Viewpoints are locations of high visual sensitivity along the project corridor. A viewpoint is comprised of all the surface areas visible from one particular location. Locations of viewpoints were chosen based on the viewer's visual exposure to the project area.

Three viewpoints have been identified along the project corridor where the proposed project could impact visual quality. These viewpoints are listed below, with maps identifying their location and a photograph representing the existing view.

Viewpoint 1: Red Top Road and SR12 looking North. Viewpoint 1 is looking north from the intersection of Red Top Road and SR12. In the foreground are the willow trees of the riparian corridor and stream which run parallel to the railroad tracks. The railroad tracks cross Red Top Road just south of SR12. Across SR12 rolling hills and grassland used for cattle grazing are visible. Twin Peaks, a double peaked mountain, is in the distance and provides a scenic backdrop for this viewpoint. A potentially historic barn is visible from this viewpoint. The motorist would experience this view when traveling east on Red Top Road to SR12 (see Figure 2.5-3).

Viewpoint 2: West End. This viewpoint is located behind the rear yards of homes on Venus Drive off of Mangels Boulevard. The foreground and middle ground views consist of flat to rolling grassland. Stands of eucalyptus and oak trees are visible in the distance on a small hill (see Figure 2.5-4).

Viewpoint 3: This viewpoint is from the Linear Park Bicycle Path which travels east to west along I-80. This view looks to the northwest with agricultural lands in the foreground. In the distance a house and several outbuildings are visible. The riparian corridor of Suisun Creek and a view of the distant hills form a backdrop. This is the view pedestrians and bicyclists would experience when utilizing the bike path (see Figure 2.5-5).

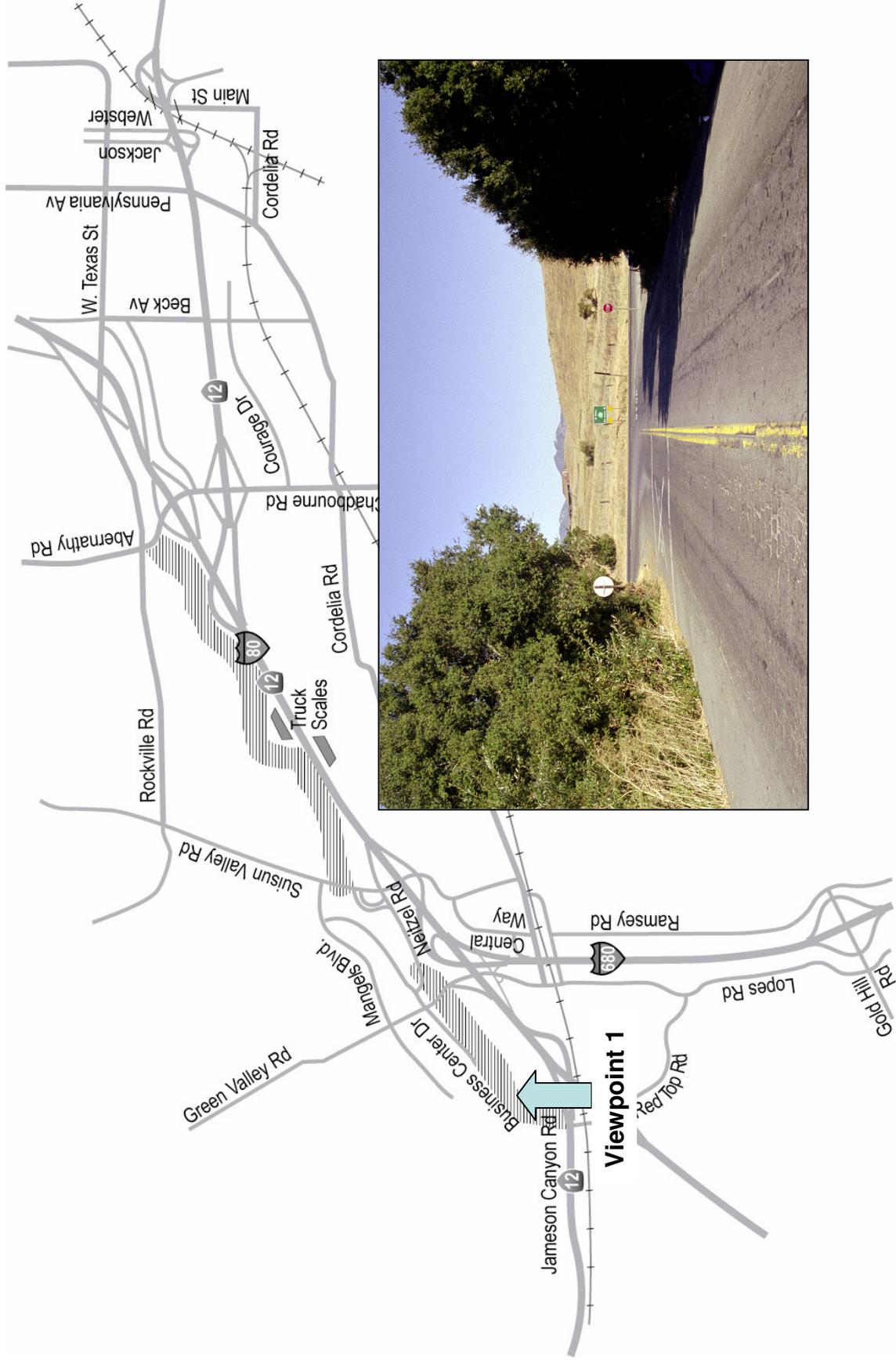


Figure 2.5-3: Viewpoint 1



NORTH
ConnectoR

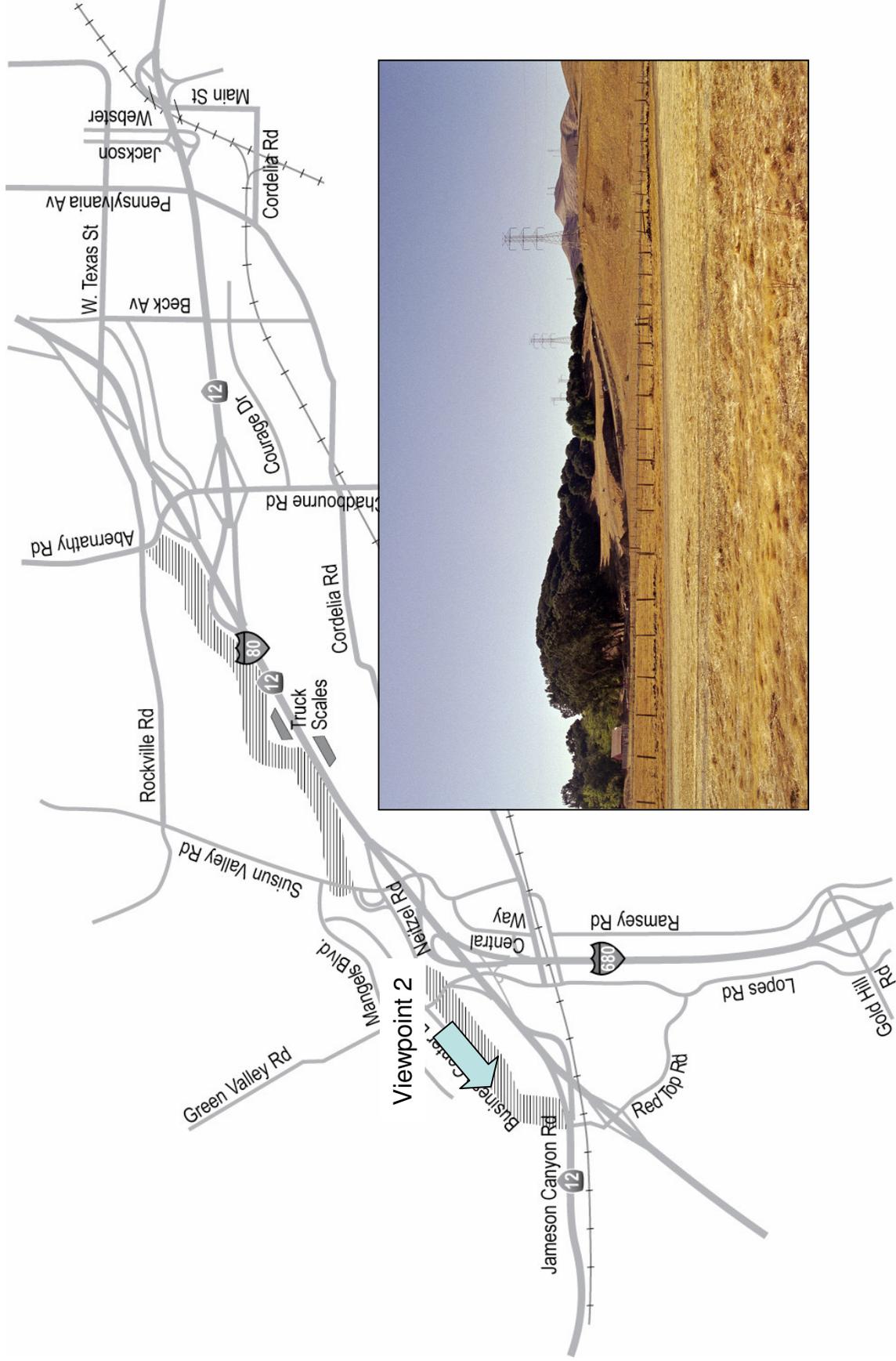


Figure 2.5-4: Viewpoint 2



NORTH
ConnectoR

Impacts

Visual changes within landscape units were identified by conducting site visits and comparing photographs to current plans and profiles for the proposed North Connector Project.

The project area is not located within the state scenic highway system and does not adversely affect any scenic vistas discussed in the relevant plans and policies.

Avoidance, Minimization and Mitigation Measures

West End

Impact VIS1: The road widening, signalization and development of a new road over rolling grasslands would substantially change the rural character of this area.

Mitigation VIS1a: In areas of rolling grasslands, contour grading would be utilized to minimize alteration of the natural terrain. Slope rounding would also be employed in conjunction with contour grading as to provide a smoother and more natural appearing finished grade and smoother transition between grade slopes and natural topography.

Mitigation VIS1b: Replacement landscaping would be minimal and native species would be used to reflect the rural character of the surrounding areas. Graded slopes would be re-seeded with native grasses.

Impact VIS2: The proposed project would involve grading activities and hillsides, and the potential for car lights to show on residences.

Mitigation VIS2: Mitigation measures VIS1a and VIS1b (listed above) should also be applied to roadway development in this landscape unit to reduce long-term visual impacts of the new roadway.

The implementation of mitigation measures VIS1, VIS1a, VIS1b, and VIS2 would reduce Impact VIS1 to a less than significant level.

East End

Impact VIS3: East of Suisun Creek, the alignment would result in introducing new roadway facilities into an area that exhibits a fairly intact agricultural aesthetic.

Mitigation Measure VIS3: The alignment east of Suisun Creek should be constructed with minimal landscaping and no curb or gutter to provide a more rural character. Roadside ditches or drainage swales would be used to control runoff. Landscaping would include simple grasses and low shrubs so that views to the north are not blocked from I-80, from the Linear Park Bicycle Path, or for motorists traveling on the North Connector.

The implementation of mitigation measure VIS3 would reduce Impact VIS3 to a less than significant level.

Landscape Unit 1: Red Top Road/SR12

Impact VIS4 Visual Quality: The road widening, signalization and development of a new road over rolling grasslands could substantially change the rural character of this landscape unit.

Mitigation Measure VIS1a and VIS1b (listed above) would reduce this potential impact to a less than significant impact.

Landscape Unit 2: West End

The proposed project would involve grading activities on hillsides, which could substantially change the rural character of this landscape unit.

Mitigation Measures VIS1a and VIS1b (listed above) should also be applied to roadway development in this landscape unit to reduce long-term visual impacts of the new roadway, and would reduce this impact to a less than significant impact.

Landscape Unit 3: Intersection of Mangels Boulevard and Business Center Drive

The proposed roadway would appear as a logical extension of the existing road network. The proposed roadway in this area would include a landscaped median which would be consistent with other roads in the area. It would not remove any significant visual features or detract from the existing visual character. As a result, the project would not result in a substantial visual change within this landscape unit.

Landscape Unit 4: Dan Wilson Creek to Russell Road

Between Dan Wilson and Suisun Creeks the new roadway would require substantial grading and removal of native vegetation on a small hill located just north of I-80. This small hill provides a unique visual element along I-80 that includes rock outcroppings and native oak trees. As a result, the project would have a substantial effect on the visual character of this landscape unit.

East of Suisun Creek, alignment option ET3 would result in introducing new roadway facilities into an area that exhibits a fairly intact agricultural aesthetic. Overall, however, both alignment options would result in a substantial effect on the agricultural aesthetic, by introducing a major new transportation facility in this area.

Mitigation Measure VIS4: The eastern alignment of Suisun Creek should be constructed with minimal landscaping and no curb or gutter to provide a more rural character. Roadside ditches or drainage swales should be used to control runoff. Landscaping should include simple grasses and low shrubs so that views to the north are not blocked from I-80, the Linear Park Bicycle Path or for motorists traveling on the North Connector.

Mitigation Measure VIS4 would reduce this potential impact to a less than significant impact.

Landscape Unit 5: Russell Road to Abernathy Road.

Several new visual elements would be introduced into this landscape unit. The visual elements are as follows:

- The proposed project would be constructed as a four-to-six lane roadway between Russell Road and Abernathy Road.
- The proposed project would require removal of one commercial business located on Russell Road.

The aesthetic of this landscape unit is quite mixed with rural, agricultural, and commercial uses. As a result, introduction of the roadway into this area would not substantially degrade the existing visual character. Removal of one commercial business along Russell Road under Alignment Option ET3 would also have little effect on the overall visual character as this business is not a unique scenic resource.

Viewpoint 1: Red Top Road

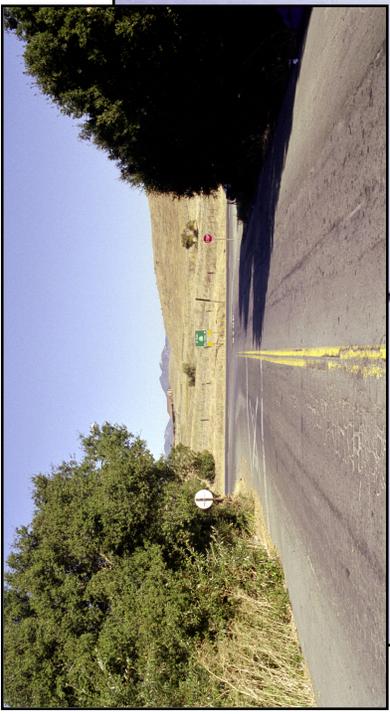
This viewpoint is located on Red Top Road looking north toward the intersection with State Route 12. The primary viewer groups from this viewpoint would be motorists, bicyclists, and pedestrians (see Figure 2.5-6).

The proposed project would dramatically change the visual character of this location (see Figure 2.5-6). The current aesthetic of a two-lane country road and stop-signed intersection would be replaced by a much wider signalized intersection more typical of a suburban setting. Construction of the new roadway to the north would introduce a substantial new visual element into the hillside aesthetic, greatly reducing the intactness and unity of the views and visual character to the north of SR12.

Development of the proposed project would detract from the scenic character of SR12 in this area. However, motorists, pedestrians and bicyclists would continue to be able to view grasslands, hillsides and riparian corridors along SR12, which are the primary elements which make SR12 a designated scenic roadway in Solano County.

Mitigation Measures VIS1a and VIS1b discussed above would help reduce the visual effect of grading which would be necessary to construct the new improvements to a less than significant level.

Existing Viewpoint



Simulation of Proposed Project

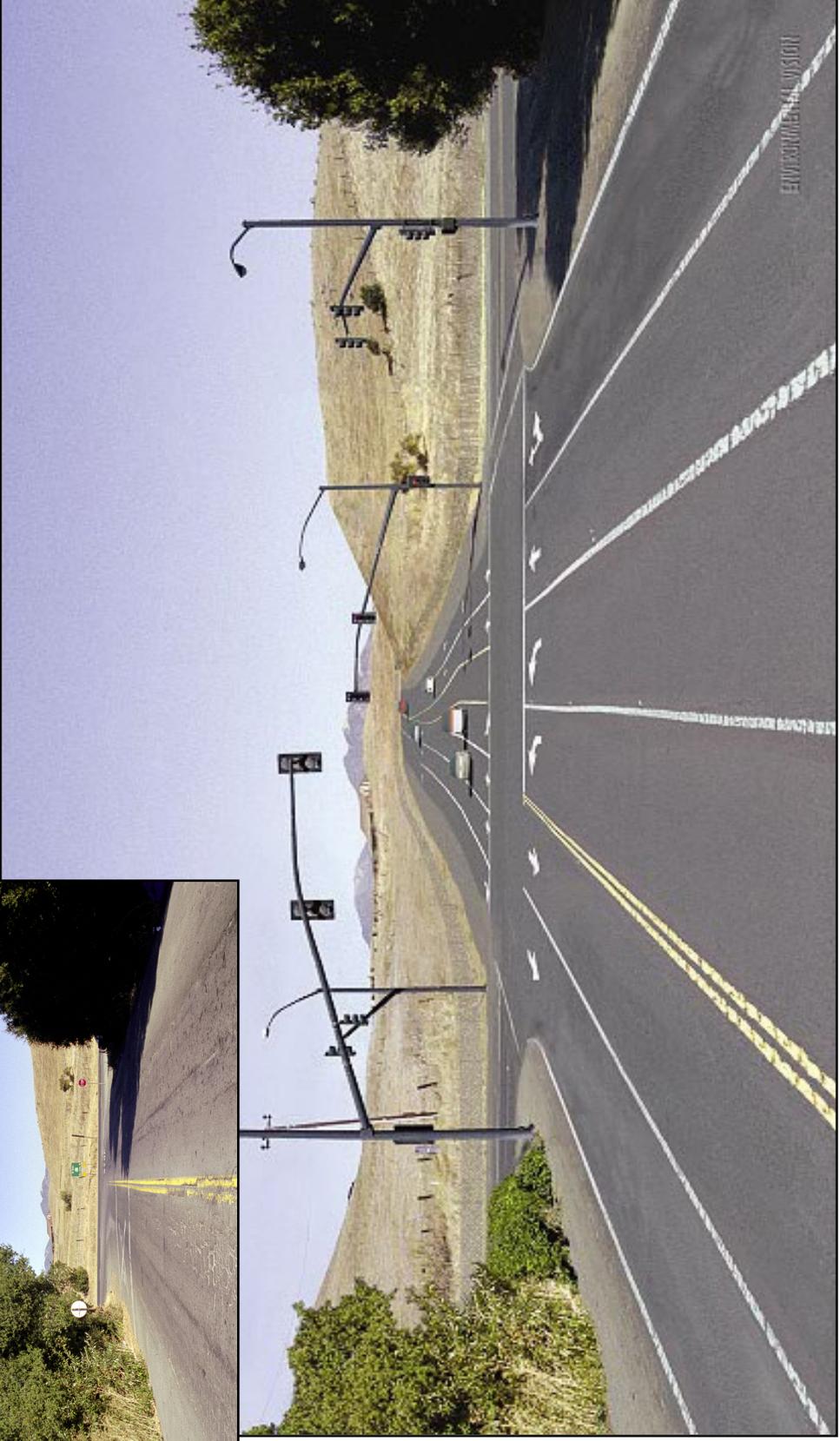


Figure 2.5-6: Viewpoint 1 Red Top Road

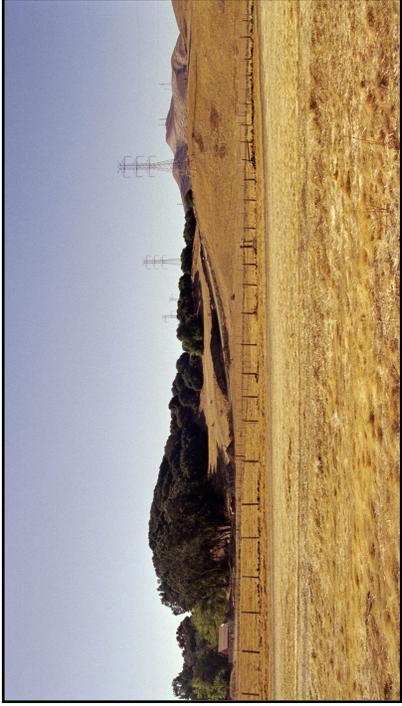
Viewpoint 2: West End

This viewpoint is located adjacent to the residential neighborhood located along Mangels Boulevard looking to the southwest (see Figure 2.5-7).

The new roadway would introduce a new visual element that would detract from the rural character of this area and view; however, the primary scenic elements within this view (rolling hills, grassland, and wooded hillside) would not be removed or substantially degraded. The roadway would introduce a visual element that would detract from these features and reduce the intactness and unity of the overall view.

Mitigation Measures VIS1a and VIS1b discussed above would help to reduce the long-term visual effects of the new roadway to less than significant.

Existing Viewpoint



Simulation of
Proposed Project

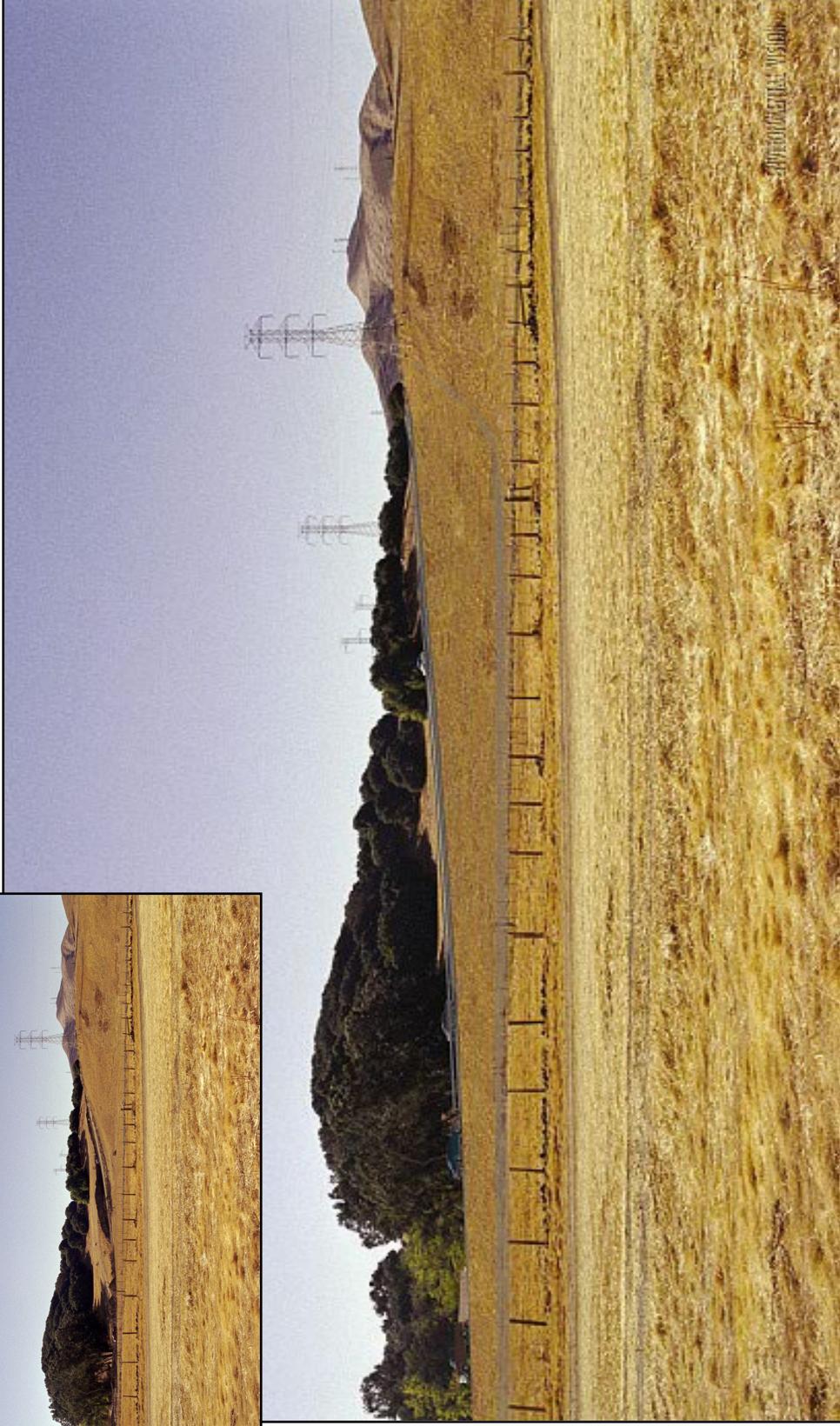


Figure 2.5-7: Viewpoint 2 Business Center Drive

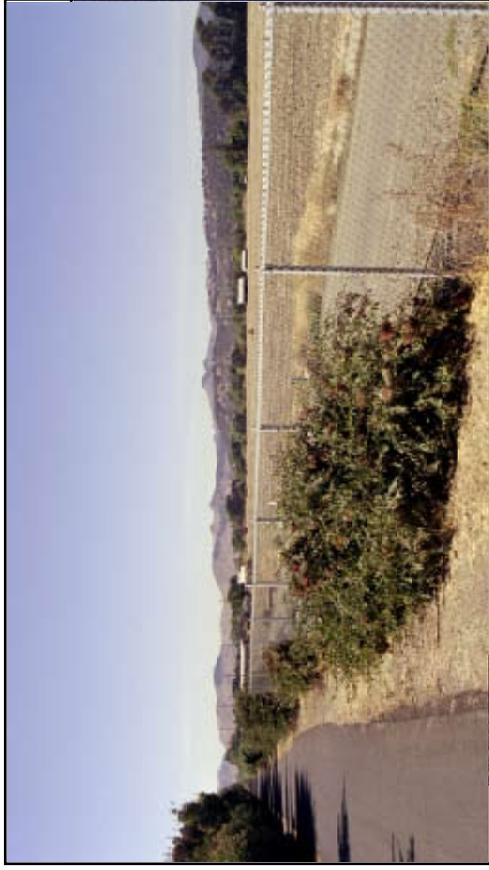
Viewpoint 3: East End

This viewpoint is located along the Fairfield Linear about midway between Russell Road and Suisun Creek within Landscape Unit 4. The view is looking to the west toward Suisun Creek (see Figure 2.5-8).

From this viewpoint, the roadway would be approximately 0.25-mile north of I-80. The roadway's dominance within the view is relatively low due to the distance. The land between I-80 and the new roadway provides a visual buffer or transition zone and provides a visual break between the different transportation facilities (I-80, bike path, North Connector).

Mitigation Measures VIS1a and VIS1b discussed above would help reduce the dominance of the new roadway within this view to a less than significant impact.

Existing Viewpoint



Simulation of E1 and E2



Figure 2.5-8. Viewpoint 3 Linear Park Bike Path