3.0 PROJECT DESCRIPTION

PROJECT LOCATION AND EXISTING LAND USES

The North Connector Project (Project) consists of the construction of two sections of roadway referred to as the West End and the East End. The Project is located in Solano County (County), California. The Project area is located to the north of Interstate 80 (I-80) which is a major west-east regional freeway connecting the San Francisco Bay Area with Sacramento and points east.

The West End of the Project is defined as the portion of roadway that is located between State Route 12 (SR12) West/Red Top Road intersection and Business Center Drive and is approximately 1 mile long. The East End is defined as the portion of roadway that is located between Suisun Creek and the Chadbourne Road undercrossing of SR12 East and is approximately 2.7 miles long. As shown in Figure 3-1, between the West End and the East End are existing and planned roadways that would link the two ends to create a continuous east-west roadway north of I-80.

The West End of the Project is located within unincorporated Solano County and the City of Fairfield (City). Existing land uses in this portion of the Project area are predominately agricultural with some commercial and residential development in surrounding areas. The topography of the West End consists of rolling grass-covered hillsides with riparian corridors along local creeks.

The East End of the Project is primarily located within unincorporated Solano County. Existing land uses in this portion of the Project area consist of agricultural farms and orchards, interspersed with residences and small businesses. The topography of the East End is generally flat with a well-defined riparian corridor lining Suisun Creek.

PURPOSE AND NEED FOR THE PROJECT

Increases in commercial and residential development in the western portion of the City Fairfield (City), known as the Green Valley and Suisun Valley areas, has generated a significant increase in demand on local roadways. In addition, regional traffic on I-80 has also increased over the last decade, resulting in frequent periods of heavy congestion and backup on the freeway.

The Project is needed to address existing and future traffic congestion on both local streets and I-80 in the Project area. Currently, the section of I-80 within the Project area is functioning at or above existing capacity. For example, I-80 within the Project area is forecast to carry 19,000 vehicles per hour during the AM peak hours and 18,000 vehicles per hour during the PM peak hours which is at or exceeding the existing capacity of the freeway.[1]

One of the reasons for this heavy congestion is that I-80 is the main transportation link between downtown Fairfield and the Green Valley and Suisun Valley areas, as seen in Figure 3-2, top diagram. The only local roadway that links these two areas is Rockville Road, which is a two-lane country road located north of I-80. As a result, many trips between Downtown Fairfield and the Green Valley/Suisun Valley areas use I-80 rather than local roadways. The demand model shows that in the future, 1,028 vehicles (about 5.4 percent) during the AM peak hour and 1,306 vehicles (about 7.2 percent) during the PM peak hour would shift from I-80 and use a local

[1] Based on information obtained from the Napa Solano County Travel Demand Model.

connector road rather than I-80 to access the Green Valley/Suisun Valley area or Downtown Fairfield. Since the existing local road system cannot accommodate this shift in traffic, the goal of the Project is to provide improved local circulation so that local traffic would not have to use I-80 for local trips thereby improving traffic congestion on I-80 within the Project area (see Figure 3-2, bottom diagram). Furthermore, as Chapter IX of the Land Use and Circulation Element, Circulation and Transportation, of the Solano County General Plan states, it is the County's role to provide circulation and transportation facilities and services for inter-county and inter-city travel, the North Connector Project would maintain consistency with this goal.

PROJECT COMPONENTS

East End

The Project would extend the planned four-lane roadway being constructed as part of the Fairfield Corporate Commons Project about 1.6-miles east across Suisun Creek to connect with Abernathy Road at the I-80/Abernathy Road Interchange (see Figures 3-3 and 3-4). To cross Suisun Creek, a new bridge would be constructed. The new bridge would span across the creek (no bridge supports or pilings would be located in the creek) to reduce impacts to the creek and migrating steelhead.

East of Suisun Creek the Project would be constructed as a four-lane, at-grade roadway. The new roadway would cross Russell Road. To the north of the new roadway, Russell Road would be a cul-de-sac.[2] In this area, one or more businesses on Russell Road would be displaced to accommodate the new roadway. The Project would sever the existing access routes to several agricultural parcels in the East End. The Project includes replacing these severed access routes by providing driveway access (right in/right out only) via the North Connector. These access points are shown in Figure 3-3.

The Project alignment has been designed to accommodate the proposed future relocation and expansion of the westbound I-80 truck-scale facility.[3]

Where the Project would cross Abernathy Road, the portion of Abernathy Road to the north would be realigned to create a T-intersection with the Project. A traffic signal would be installed at this new intersection.

Other facilities constructed as part of the new roadway in this area would include drainage swales and culverts/pipelines designed to the specification/requirements of local agencies (Solano County) and/or Caltrans in addition to meeting the requirements of the Regional Water Quality Control Board (RWQCB) National Pollutant Discharge Elimination System (NPDES) Provision C.3 requirements.

[2] There would be no vehicular access connection between Russell Road and the North Connector Project.

[3] Cordelia Truck Scales Relocation Study, February 16, 2005. The relocated truck scales facility is being studied as part of the I-80/680/SR12 Interchange Project, which is a separate project that will be subject to environmental review under CEQA and NEPA, as required.

The Project also includes a multi-use path and greenway along the north side of the new roadway between Abernathy Road and Suisun Creek. The multi-use path and greenway would consist of a 10-foot wide paved path within an approximately 13-foot wide landscaped area and connect with the existing Fairfield Linear Park (Linear Park) at Suisun Creek and Abernathy Road.

Landscaping along this portion of the new roadway would include low-maintenance trees and bushes.

Abernathy Road - The Abernathy Road overcrossing would be re-striped, and would restrict left turns to the westbound I-80 on ramp. Motorists could access westbound I-80 from the westbound SR12 on-ramp at Chadbourne Road interchange. As part of the Project, traffic signals would be installed at the intersections of the I-80 on and off- ramps with Abernathy Road. A right-turn lane would be added on Abernathy Road to access the I-80 eastbound on-ramp. Traffic signals will be installed or modified at street and ramp intersections, as required.

Chadbourne Road - (Abernathy Road becomes Chadbourne Road at SR12) - A right-turn lane would be added to southbound Chadbourne Road to access the westbound SR12 on-ramp. Traffic signals would be installed or modified at street and ramp intersections, as required.

West End

Proposed improvements in the West End consist of extending Business Center Drive as a two-lane roadway westward 1.04 miles from its current terminus to connect with SR12 West at Red Top Road (see Figure 3-5) where a four-way signalized intersection would be constructed with sufficient lanes on all approaches to accommodate through, left- and right-turn movements in all directions. Both the eastbound and westbound approaches to this intersection on SR12 West would be widened to accommodate additional through and turn lanes. Existing portions of Red Top Road south of SR12 West would also be widened to accommodate new turn lanes and the existing at-grade railroad crossing on Red Top Road would be reconstructed to accommodate the wider roadway. The design of the new signalized intersection is shown in Figure 3-7.

There is an existing Class I Bicycle path that extends from the I-80/GreenValley interchange along the north side of SR12 to Red Top Road. To accommodate the new four way signalized intersection at SR12/Red Top Road/North Connector, the existing bicycle path in this area would be relocated along the north side of SR12, as it approaches the new intersection (see Figure 3-7). This would allow bicyclists to utilize the new signal to safely cross SR12 to get to Red Top Road.

Between Business Center Drive and SR12 West, the Project would be constructed as a two-lane roadway (one lane in each direction). Two undercrossings would be constructed as part of the Project in order to allow access and movement of livestock and equipment, one located on the Mangels property (northeast of the intersection of SR12 West and Red Top Road) and the other on the Dittmer property (west of the existing western end of Business Center Drive).

Other facilities to be constructed in this area that are part of the Project include a stormwater detention basin along the roadway right-of-way, which would collect and treat stormwater runoff from the new roadway. The stormwater detention basin would be designed to meet the stormwater treatment requirements of the RWQCB NPDES Provision C.3 requirements.

Landscaping along this portion of the new roadway would include planting grasses and other low-growing plant materials to control erosion and blend with the surrounding hillsides.

Solano County General Plan Amendment

Solano County has initiated a General Plan Amendment (GPA) designed to clarify that Policy 2 of Chapter III Land Use and Circulation Element, Agriculture and Open Space Land Use of the County General Plan is intended to impose limitations on the subdivision process rather than prevent public agencies from acquiring portions of small parcels for public purposes. The text of the General Plan should be amended as follows:

> "In areas designated for agricultural production where parcel sizes are smaller than the definable farmable unit, these parcels should not be allowed to be subdivided into smaller parcels for other uses such as residential home sites. Farmable units include smaller parcels which when combined with other parcels would be considered farmable." (Chapter III Agricultural and Open Space Element, Preservation of Essential Agricultural Lands, Farmable Unit, Page 34, Paragraph 3)

City of Fairfield General Plan Amendment

Because the Project includes construction of a new multi-use path and greenway between Abernathy Road and Suisun Creek (see discussion of Project Components – East End, page 3-2), the City of Fairfield has initiated a General Plan Amendment (GPA) to revise Policy OS12.7 to remove the existing Linear Park between Abernathy Road and Suisun Creek, as well as remove this portion of the Linear Park from the General Plan Land Use Diagram and show the North Connector Project as a Public Facility located within the County's jurisdiction. The Project would include the removal of the paved path within the Linear Park between Abernathy Road and Suisun Creek, however, the existing bridge across Suisun Creek would remain and public access would still be allowed. Portions of the Linear Park to the west from Suisun Creek to Solano County College and east of Abernathy Road would remain.

PROJECT ALTERNATIVES

This EIR includes discussion of three Project alternatives, including the No-Project Alternative, the Improvement of Existing Roadways Alternative, and the Enhanced Bus Service Alternative. These alternatives are discussed in Chapter 5.0 Alternatives.

PROJECT CONSTRUCTION ACTIVITIES

The Project involves construction of a new road with grading, paving, and ancillary facilities such as traffic signals, lighting, signs, landscaping and fencing. One pre-cast concrete girder bridge would be built across Suisun Creek. The bridge would have abutments on pile supported foundations, but would span the creek without center piers. Other than tree removal for the bridge, no construction activities are planned within Suisun Creek.

Construction activities would differ by roadway section. The West End would require grading for the proposed connection to SR12. The Red Top Road intersection would have to be improved while maintaining traffic flow on SR12 West. Most of the East End is on level agricultural land. Under existing conditions, the East End portion of the Project area is flooded during a 50-year storm event. The Project would be designed so that it does not flood during a 10-year flood event; however the Project would remain subject to flooding during a larger than 10-year flood event, with the exception of the bridge that would not be subject to flooding during a 50-year or higher flood event. There would be limited grading and minor access requirements for the

intersecting farm roads. The Project alignment merges with Abernathy Road on the East End, which would require staging and traffic control for construction. Construction on the East End would include removal of the paved path within the Linear Park between Suisun Creek and Abernathy Road, and removal of the associated footbridge that crosses Suisun Creek.

Construction Phasing and Timing

The Project would be constructed in two phases. It is anticipated that the first phase would involve construction of the improvements in the East End of the Project area. Improvements in the West End of the Project area, including the connection with SR12 West, are anticipated as a second phase.

The construction of the East End is anticipated to take 18 to 24 months and is anticipated to begin in 2009. Timing and duration of construction of the West End has not yet been determined.

Order of Work for Construction of Roads and Bridges

The general order of work for a typical road section is as follows:

- Relocate underground and above ground utilities (gas lines, electrical lines, water lines and sanitary sewerage) within construction area.
- If required for staging, install temporary streetlights and signals, temporary paving, and safety barriers.
- Clear and grub area to be graded. Remove existing pavements, structures and utilities within construction zone.
- Trench excavate, shore, and install underground utilities including culverts, storm drainage and conduits. Backfill as required.
- Grade roadway to final subgrade and place curb and sidewalk, and curb ramps and driveways. Place subbase and base courses.
- Place asphalt/concrete (AC) pavement and striping.
- Install new traffic signals and street lighting. Place new signs and remove temporary pavements and signs.
- Complete landscaping and fencing. Clean up site and remove equipment and remaining materials.
- Remove paved path and footbridge from Linear Park.

The general order of work for a bridge is as follows:

- Excavate and shore for abutment foundations.
- Drive piles for abutment foundations.
- Form and pour concrete abutments.
- Install pre-cast concrete girders.
- Form and pour concrete deck with barriers.
- Install conduits, signs and fencing.
- Restore site around abutments. Clean up and remove equipment and remaining materials.

Construction Staging

Construction staging would be required to construct the new North Connector/Red Top Road/SR12 West intersection in the West End of the Project area and where the Project would connect with Abernathy Road in the East End. The work would be divided into stages to maintain existing traffic flow and local roadway access. For each stage, the contractor is typically required to provide a minimum number of through lanes and possibly one turning lane to satisfactorily accommodate vehicular traffic during construction. The contractor is also typically required to maintain local vehicular access to driveways and properties, even when an existing street is closed for construction. The contractor may be allowed to close major streets and intersections at night and during the weekends.

Utility Relocations

The Project would involve utility relocations, all of which would occur within the Project area limits and footprint. The majority of relocations would occur in the vicinity of the existing SR12 West and Red Top Road intersection.

PERMITS AND APPROVALS NEEDED

Table 3-1 provides information about the permits, reviews, and approvals that would be required for construction of the Project.

Table 3-1. Required Agency Permits and Approvals

Agency	Permit/Approval	Required For	Status
California Department of Fish and Game (CDFG)	CDFG Streambed Alteration Agreement pursuant to Section 1602 of the CDFG Code	Change in the natural state of a river, stream, lake, and/or construction across	To be obtained prior to beginning construction of either the West End or East End.
United States Army Corps of Engineers (Corps)	Section 404 Clean Water Act, for work done in the vicinity of a watercourse	Discharge/dredge into a Water of the United States, including wetlands	A jurisdictional determination has been approved by the Corps. A Section 404 permit to be obtained prior to beginning construction (in West End only).
Regional Water Quality Control Board	NPDES and Water Quality Certification pursuant to CWA Section 401	Pollutant discharge and quality of stormwater runoff	A NPDES and 401 Certification will be obtained prior to beginning construction of either the West End or East End.
California Department of Transportation (Caltrans)	Encroachment Permit	Crossing, take, or activity over protected lands	An encroachment permit will be obtained for work on SR12 West (West End), at the I-80/Abernathy Road Interchange, and at the ramps at Chadbourne (East End).
United States Fish and Wildlife Service (USFWS)	Section 7 Consultation	Activities that could affect a federally listed/endangered/threatened/proposed species	The Project could potentially affect the California Red Legged Frog (West End) and VELB (East End). Consultation under section 7 would occur as part of the Corps Section 404 permit.

Source: CirclePoint, Inc.

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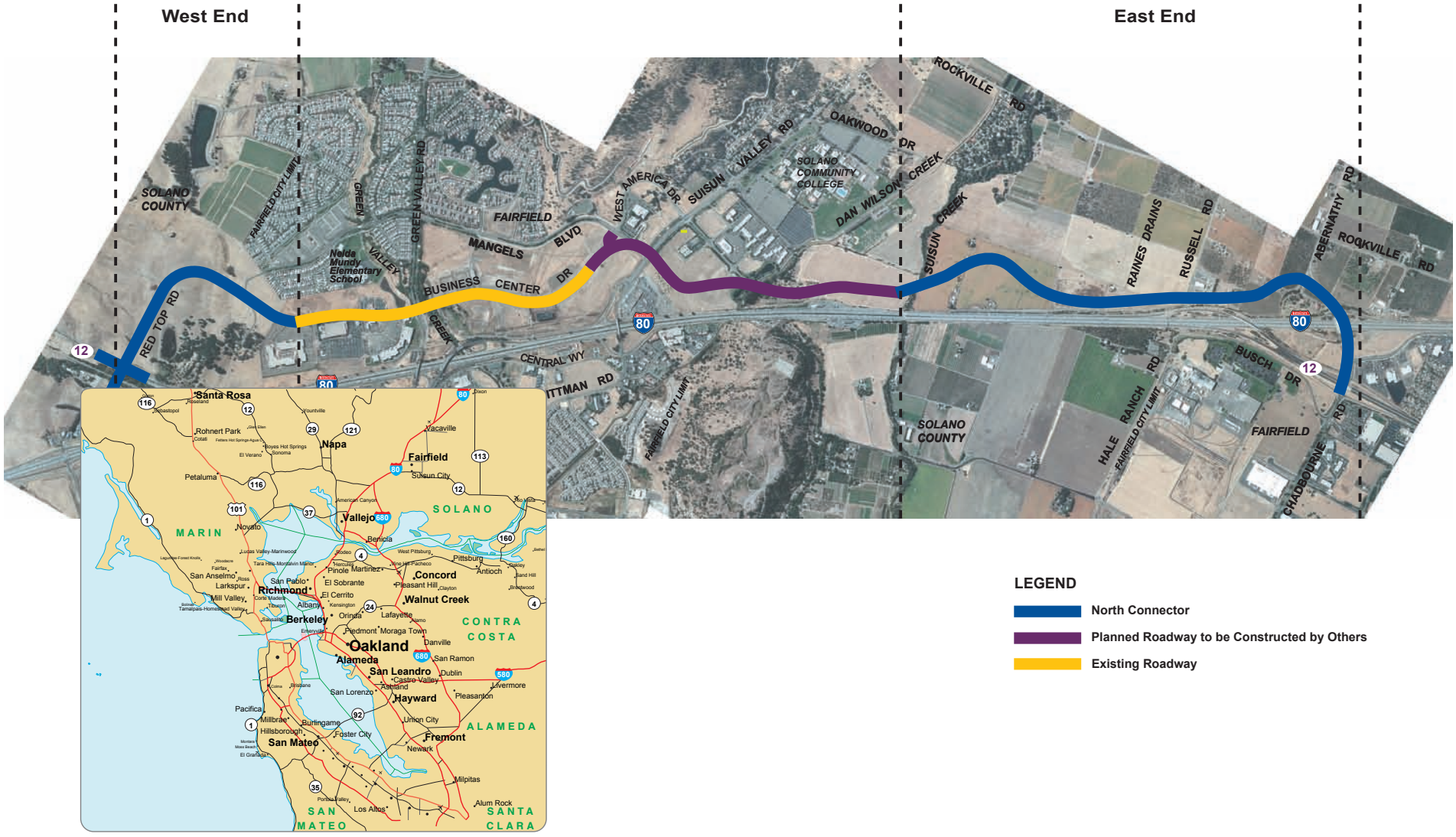


Figure 3-1. Project Location and Limits

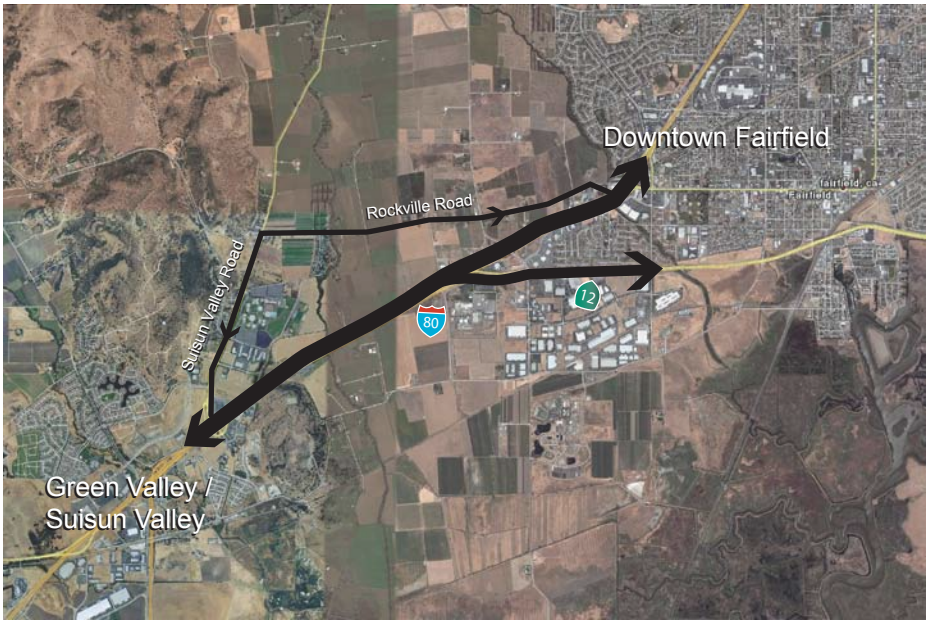
NORTH

Map not to scale

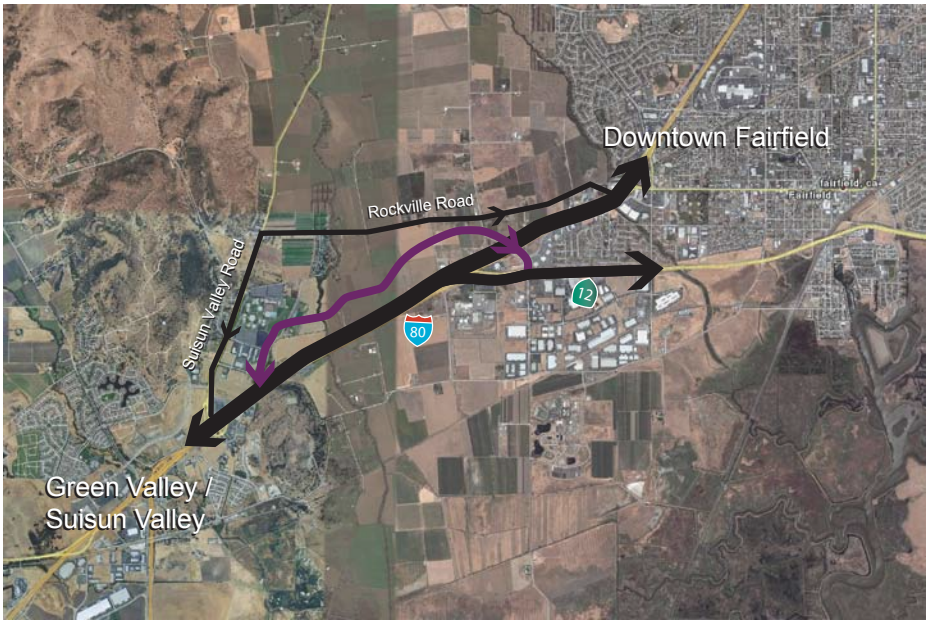
NORTH ConnectoR

Solano Transportation Authority

Source: Solano Transportation Authority



EXISTING ROUTES FROM DOWNTOWN FAIRFIELD AND GREEN VALLEY / SUISUN VALLEY



FUTURE ROUTES WITH NORTH CONNECTOR FROM DOWNTOWN FAIRFIELD AND GREEN VALLEY / SUISUN VALLEY

NORTH

Map not to scale

LEGEND

- Existing Road
- North Connector

Figure 3-2. Routes from Downtown Fairfield and Green Valley / Suisun Valley

NORTH Connector

STA Solano Transportation Authority

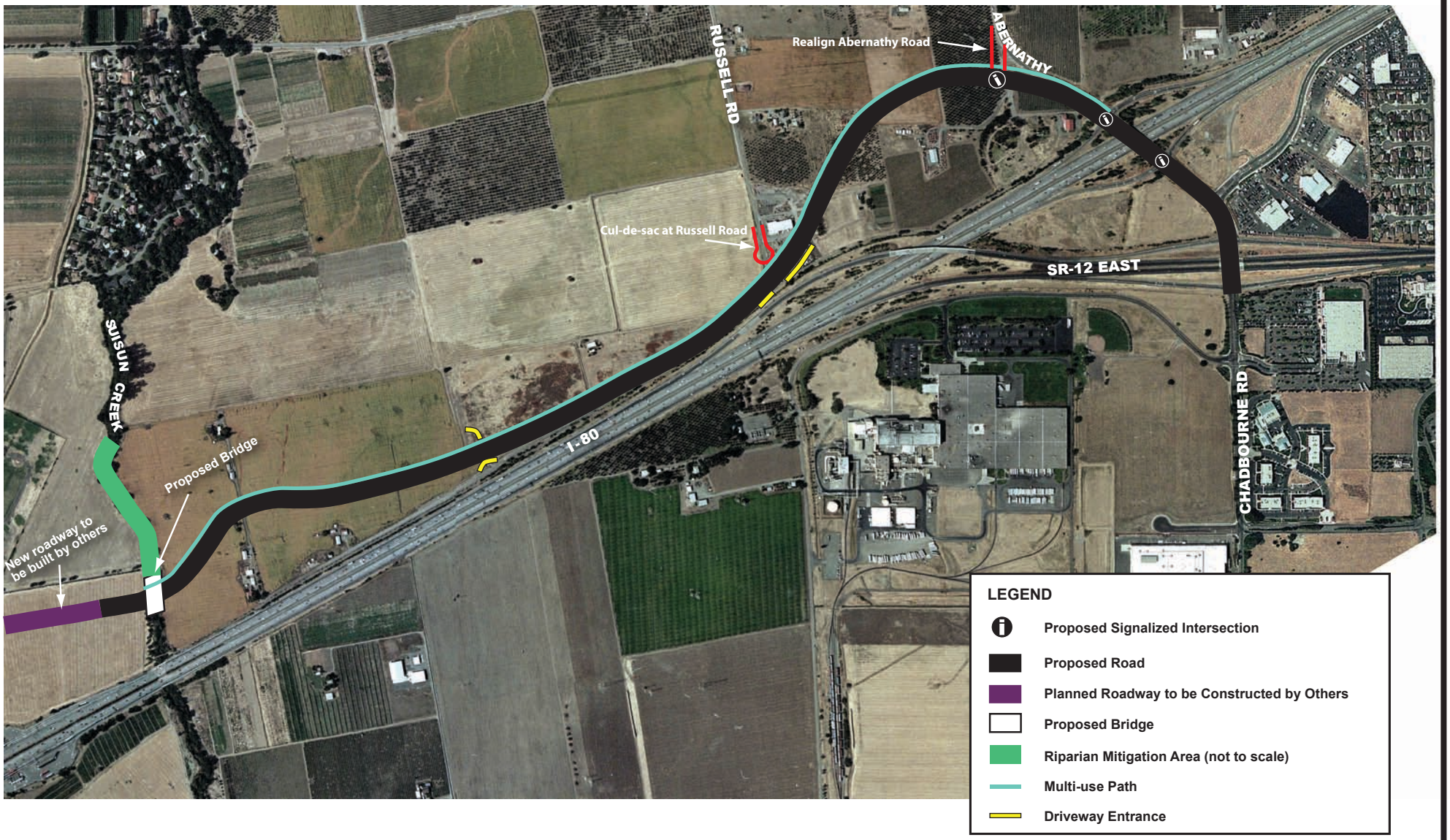


Figure 3-3. East End Alignment

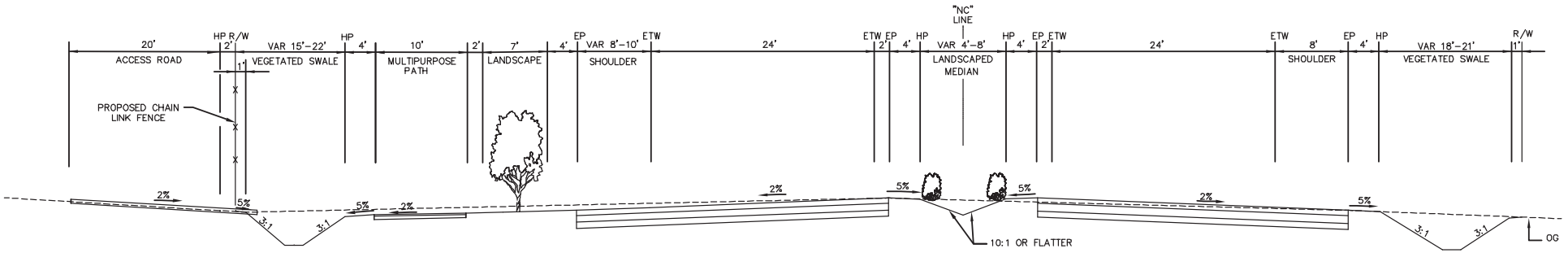
NORTH

Map not to scale

NORTH ConnectoR

STA Solano Transportation Authority

Source: Solano Transportation Authority



NORTH CONNECTOR
SECTION D-D

Note: Roadway dimensions subject to change.

Figure 3-4. Typical Cross Section East of Suisun Creek to Russell Road (Solano County)
All sections looking east

NORTH

Map not to scale

NORTH ConnectoR

Solano Transportation Authority

Source: BKF Engineering

Figure 3-5. West End Alignment

NORTH

Map not to scale

NORTH ConnectoR

STA Solano Transportation Authority

Source: Solano Transportation Authority

NORTH CONNECTOR

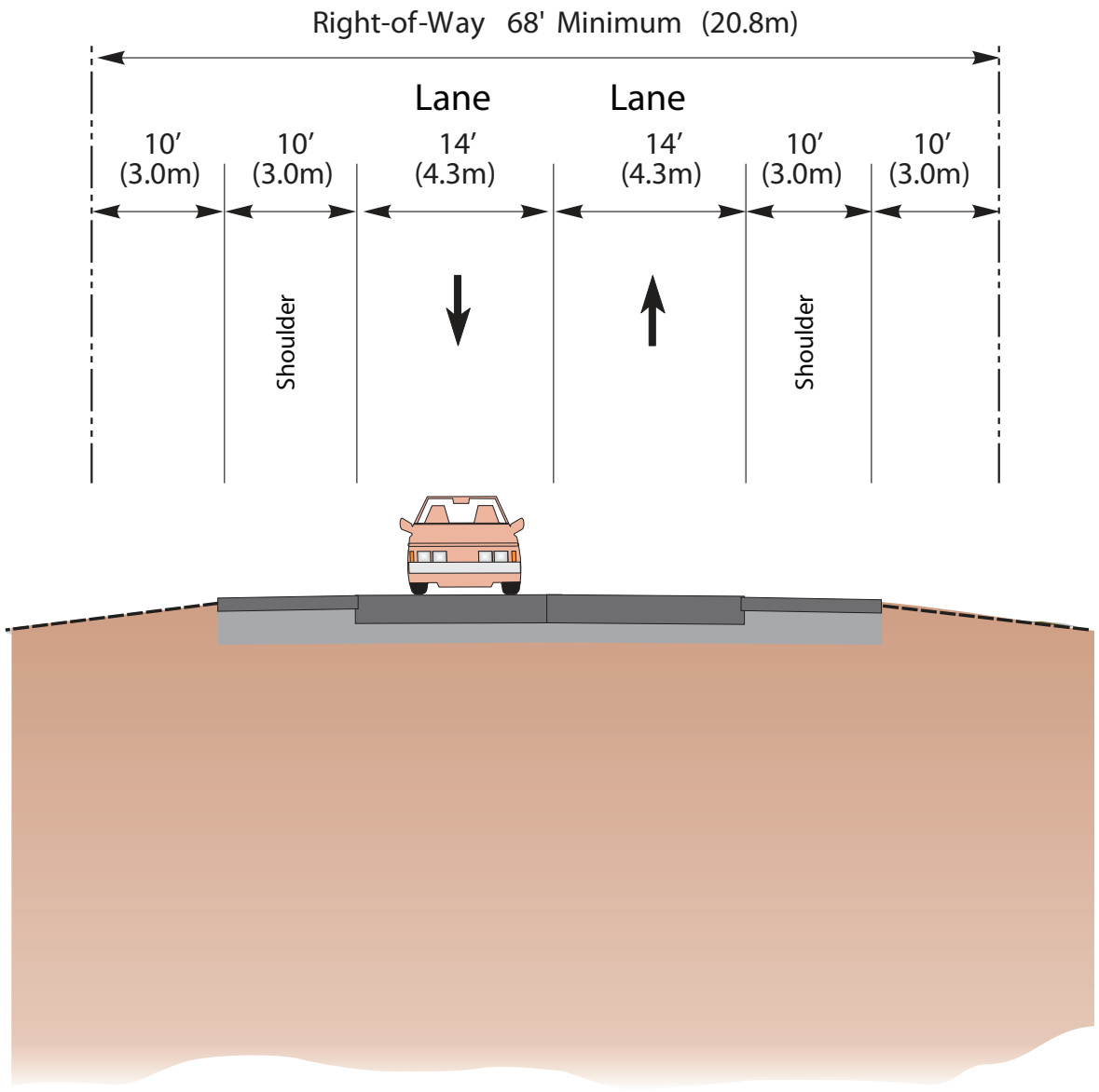


Figure 3-6. Cross Section of West End near Red Top Road (Solano County)

All sections looking east

Source: BKF Engineering

NOTES:

1. WIDENING AT SR-12W/JAMESON CANYON ROAD IS BASED ON TRUCK CLIMBING LANE PROJECT AS AN EXISTING CONDITION.
2. ALL LOCATION OF UTILITIES, RIGHT-OF-WAY AND EASMENT ARE APPROXIMATE.
3. THIS PLAN REPRESENTS THE CONCEPTUAL ENGINEERING LAYOUT AND SHALL NOT BE USED FOR EXHIBIT, PRESENTATION AND CONSTRUCTION DRAWING WITHOUT PRIOR CONSENT FROM KORVE ENGINEERING.
4. FINAL LOCATIONS OF UTILITIES AND DRAINGE SYSTEM WILL BE DETERMINED ON CONSTRUCTION DRAWINGS.

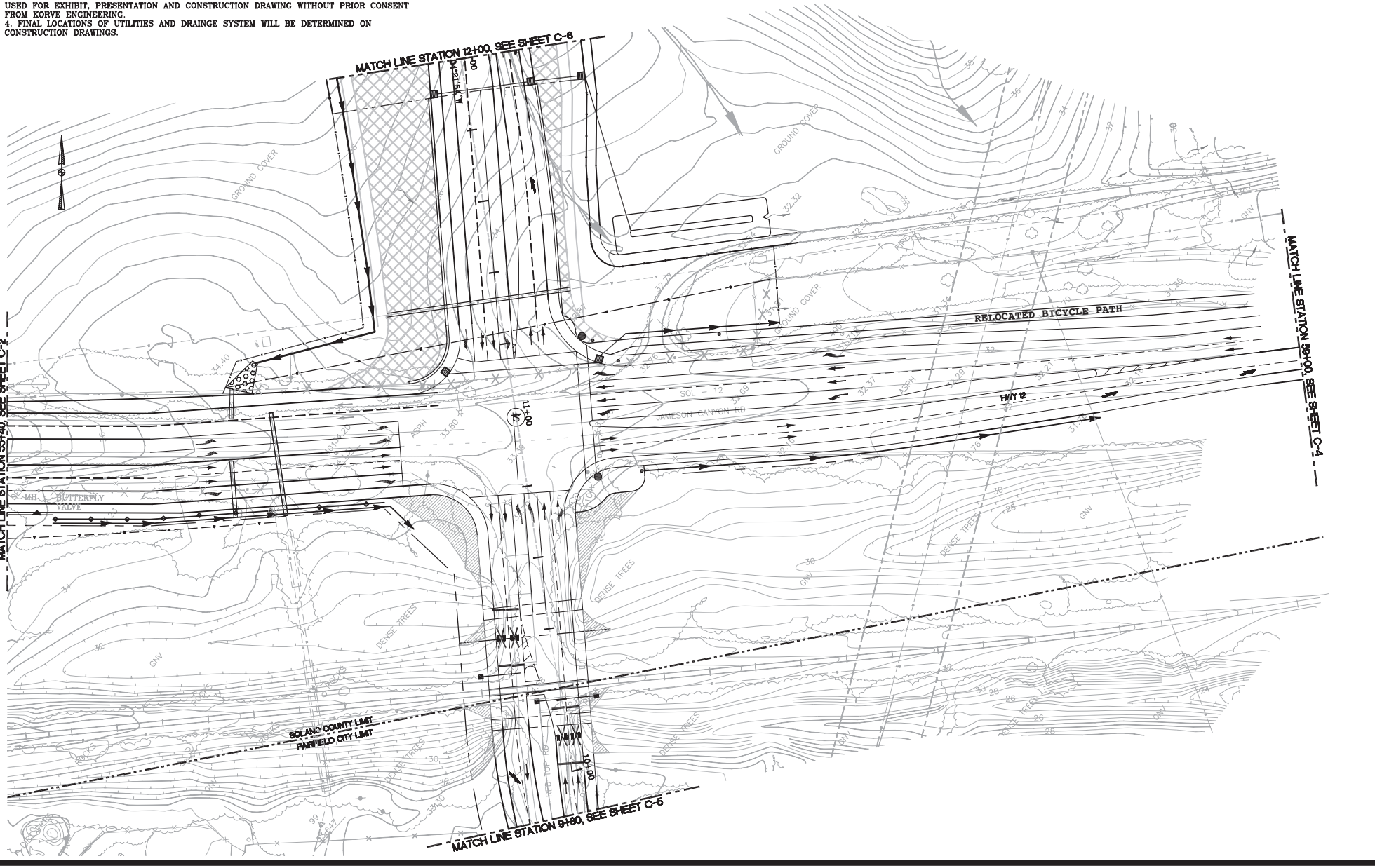


Figure 3-7. SR-12 West/Red Top Road Intersection

NORTH

Map not to scale

NORTH ConnectoR

STA Solano Transportation Authority

Source: Korve