

## **3.0 PROJECT DESCRIPTION**

### **3.1 PROJECT BACKGROUND AND LOCATION**

The Santa Ana River Riding and Hiking Trail and Santa Ana River Class I (off-road, paved) Bikeway (SAR Parkway) is a landscaped corridor with recreational facilities that is intended to provide a recreational and commuter link from the Pacific Ocean to the San Bernardino Mountains for walkers, joggers, runners, hikers, bicyclists, and equestrians. Since 1955, when the idea of the SAR Parkway was formalized, a total of 43 miles of the 110-mile trail have been completed (Santa Ana River Trail and Parkway 2010). It is estimated that over one million trail users visit the Orange County portion of the SAR Parkway each year.

The Santa Ana River Parkway Extension Project (proposed project) is located within a 2-mile stretch of the SAR Parkway. The proposed project is located on the north and south sides of the Santa Ana River (SAR). Specifically, the project area is located between Gypsum Canyon Road on the west and the Orange/Riverside/San Bernardino County boundaries on the east, and between the Burlington Northern Santa Fe (BNSF) railroad and La Palma Avenue on the north and State Route (SR) 91 on the south; refer to Figure 3-1, Regional Map, and Figure 3-2, Vicinity Map. The majority of the project area is located within the City of Yorba Linda. The easternmost portion of the project area is located within unincorporated Orange County.

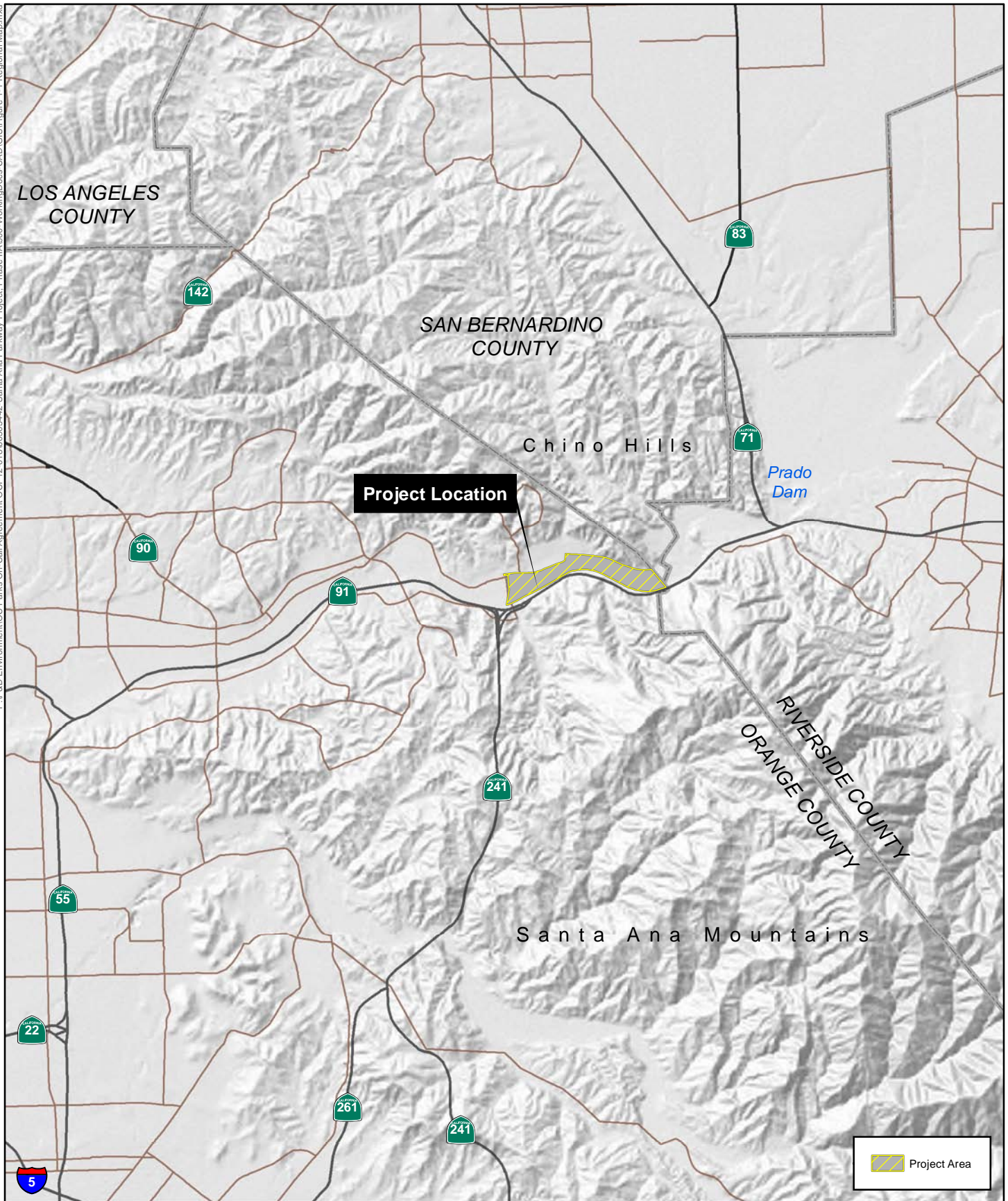
### **3.2 ENVIRONMENTAL SETTING AND EXISTING CONDITIONS**

The SAR flows westerly through the center of the project area. The project area includes levees or elevated earthen benches, a portion of a regional railroad corridor, Canyon RV Park (within Featherly Regional Park), Chino Hills State Park (CHSP), and the Green River Golf Club (GRGC). Canyon RV Park is a private leasehold with RV hookups and cabins on a portion of Orange County Parks' (OC Parks) land just north of SR-91 and adjacent to Gypsum Canyon Road. The GRGC is owned and operated by the Orange County Flood Control District (OCFCD).

The Orange County portion of the SAR Parkway includes an existing Class I (off-road, paved) Bikeway (bikeway). The bikeway begins at the Pacific Ocean and extends inland 28 miles along the SAR, to the Orange County boundary. The bikeway arrives at the project area from the west on the SAR's north bank at Gypsum Canyon Road. The bikeway then crosses south over the SAR on the Gypsum Canyon Road Bridge. From the south side of the SAR, the bikeway extends east through the project area terminating at the Orange County boundary and Green River Road. This existing portion of the bikeway primarily utilizes the 12-foot paved river levee service road that follows the south bank of the SAR. The levee service road is adjacent to the SR-91. Access points are located along this portion of the bikeway, including connections to other existing regional riding and hiking trails located outside of the project area (i.e., Gypsum Canyon Riding and Hiking Trail and Coal Canyon Riding and Hiking Trail). Several wildlife corridors (e.g., Coal Canyon, Brush Canyon, Gypsum Canyon, etc.) are also located within and/or adjacent to the project area.

The Orange County portion of the SAR Parkway also includes an existing Riding and Hiking (unpaved) Trail, which currently extends inland 26 miles from the Pacific Ocean, and arrives at the project area from the west along the north bank of the SAR, and terminates at the Gypsum Canyon Road Bridge. A 2-mile gap in the Riding and Hiking Trail exists within the project area.

P:\P&D Environment\OC Parks On-Call Agreement OCP12-01860305442-Santa Ana Parkway Project\_Phase I\A900-WorkingDocs-CAD\GIS\Figure 1-1 Regional Map.mxd

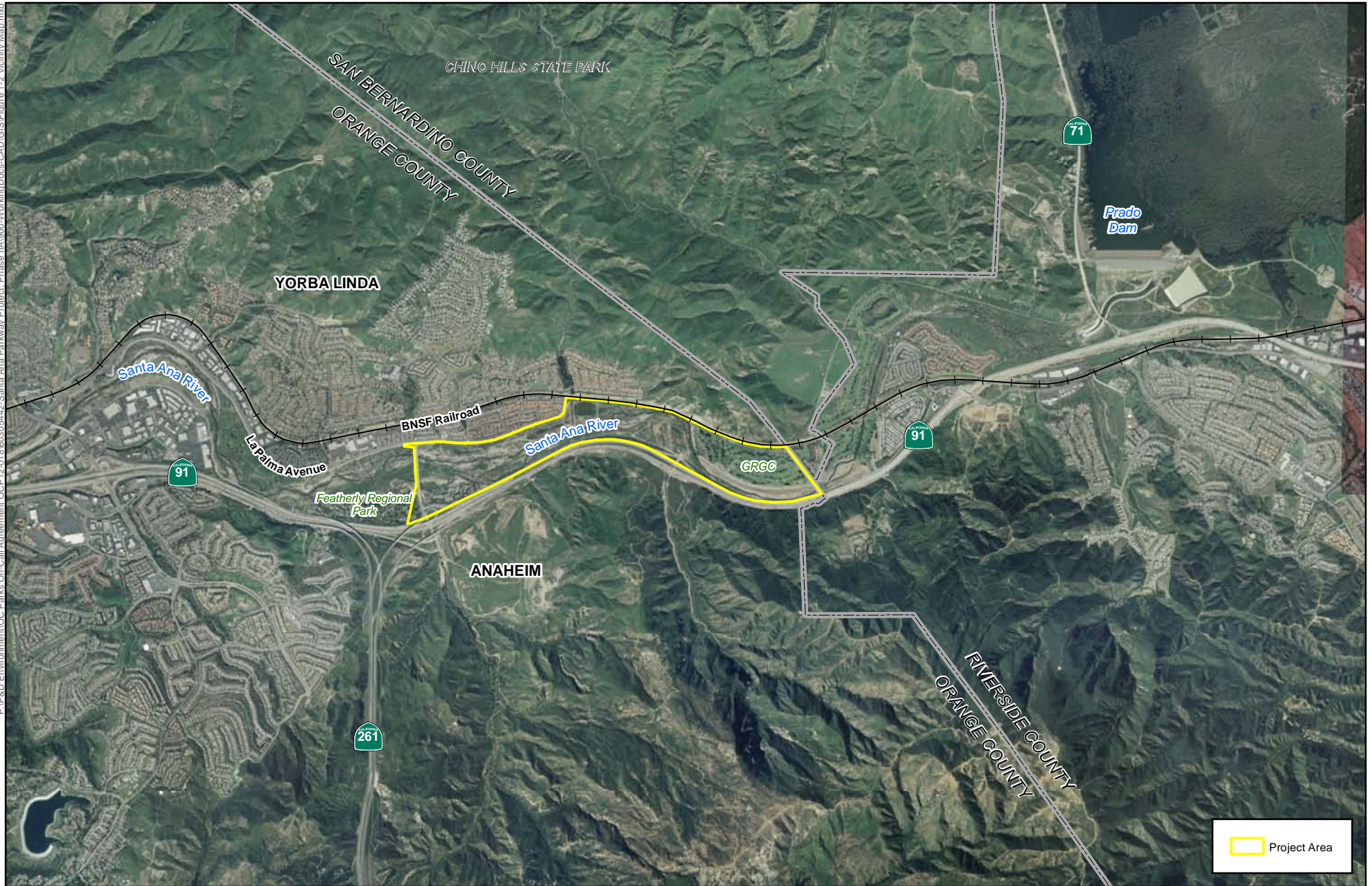


Scale 1 : 126720 0 1 2 4  
1" = 2 miles Miles

**Figure 3-1**  
**Regional Map**



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Source: Aerial Imagery: Microsoft (2010), OC Public Works (2014), and AECOM (2014).



Scale 1 : 47,520  
1" = 0.75 mile

0 0.375 0.75 1.5 2.25  
Miles

**Figure 3-2**  
**Vicinity Map**

The following land uses surround the project area:

- North. Residential uses (including the Villa del Rio neighborhood and Riverbend Apartments), open space, and a portion of the CHSP are located north of La Palma Avenue and the BNSF Railroad.
- East. Portions of the GRGC are located to the east of the project area, near the Orange County boundary.
- South. The SR-91 freeway is located directly south of the project area. South of the SR-91 freeway are Orange County parkland, CHSP, and undeveloped land within the City of Anaheim.
- West. Gypsum Canyon Road is located to the west of the project area. A portion of Canyon RV Park is located west of Gypsum Canyon Road.

### **3.3 PROJECT PURPOSE AND NEED**

On October 17, 2006, the Counties of Orange, Riverside, and San Bernardino; the Santa Ana Watershed Project Authority (SAWPA); and the Wildlands Conservancy entered into a Memorandum of Understanding (MOU) to coordinate planning along the SAR and assist in completing the SAR Parkway. When finished, this regional recreational resource would include a Class I Bikeway and a Riding and Hiking Trail. The Class I Bikeway is planned from the Pacific Ocean to the foothills of the San Bernardino Mountains. The Riding and Hiking Trail is planned from the Pacific Ocean to Big Bear Lake, high in the San Bernardino Mountains.

As described previously, the existing Orange County portion of the bikeway extends 28 miles from the Pacific Ocean to the Orange County boundary. However, the bikeway within the project area currently connects only to Green River Road on the south side of the SAR at the Orange/Riverside County boundary. Additionally, the existing Orange County portion of the 26-mile Riding and Hiking Trail also begins near the Pacific Ocean but ends approximately 2 miles west of the Orange County boundary at Gypsum Canyon Road in the City of Yorba Linda. The proposed project would complete the 2-mile gap of the Orange County portion of the Riding and Hiking Trail and provide a new Class I Bikeway on the north side of the SAR, both of which would extend to the Orange/San Bernardino County boundary just south of the BNSF railroad.

### **3.4 PROJECT OBJECTIVES**

Project objectives include the following:

- Close a critical 2-mile gap between Gypsum Canyon Road and the Orange County border in the SAR Riding and Hiking Trail for the purpose of extending and completing the Orange County portion of the SAR Parkway system and facilitating connection with planned improvements in Riverside and San Bernardino Counties.
- Provide staging, trailheads, crossroads/intersections, and other amenities that enhance the Orange County SAR Parkway and facilitate connection to adjacent existing and future recreational trails.
- Provide an enjoyable bikeway, riding and hiking experience.
- Enhance the SAR Parkway as a passive recreational destination.



- Minimize GRGC intrusion.
- Minimize Featherly Regional Park/Canyon RV Park intrusion.
- Minimize intrusion and conform to the CHSP General Plan.
- Establish a maintainable bikeway and trail system.
- Maximize bikeway and trail user safety.

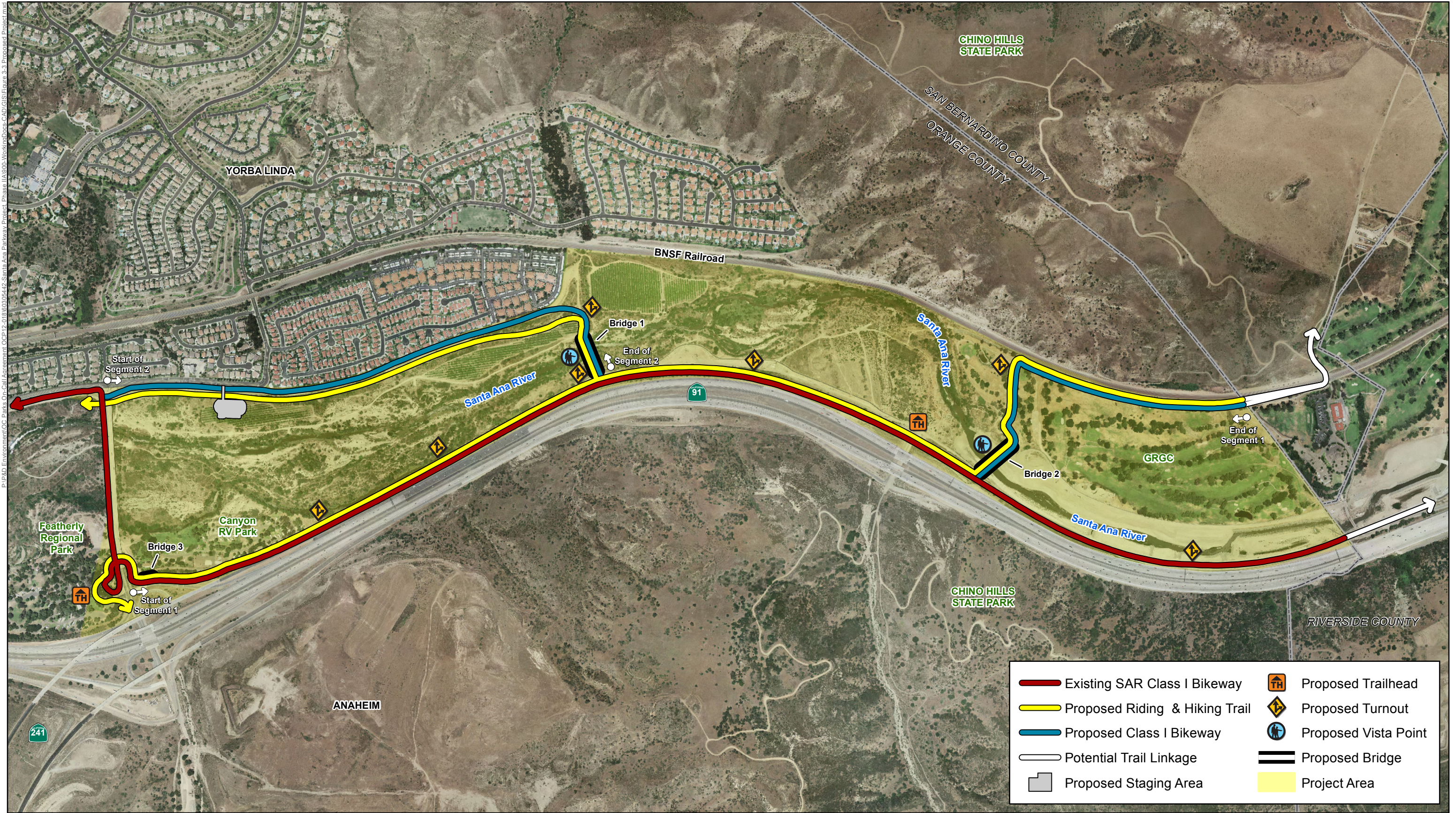
### **3.5 DESCRIPTION OF THE PROJECT**

The proposed project includes the construction of a new Class I Bikeway, Riding and Hiking Trail, and associated amenities on the north and south banks of the SAR between Gypsum Canyon Road and the Orange County boundary (refer to Figure 3-3, Proposed Project.) The proposed project's main elements are described below followed by additional detailed descriptions of some of the design features.

#### **3.5.1 SEGMENT 1**

A new 10-foot-wide Riding and Hiking Trail would be located parallel to the existing bikeway that is located on the southern bank of the SAR adjacent to the SR-91. The new Riding and Hiking Trail would begin at Gypsum Canyon Road in the southwestern-most portion of the project area. Within Canyon RV Park, at Featherly Regional Park, the new Riding and Hiking Trail would span (via Proposed Bridge #3) the existing Gypsum Canyon Channel located immediately east of Gypsum Canyon Road. Bridge #3 has a proposed width and length of 15 feet and 100 feet, respectively. Eastward from Bridge #3, the proposed Riding and Hiking Trail would meander approximately 1.75 miles between the SAR and the existing bikeway to proposed Bridge #2, which would be located approximately 0.15 mile east from the Coal Canyon Road. It should be noted that the existing bikeway would maintain its current extension eastward parallel to the SR-91 from the proposed Bridge #2 to the Orange/Riverside County boundary. Bridge #2, which would accommodate both the new Class I Bikeway and new Riding and Hiking Trail, would have a physical structure width of 25 feet and would consist of three spans, 120 feet each, for a total length of 360 feet. From Bridge #2, within the unincorporated Orange County portion of the project area, a new parallel 12-foot-wide Class I Bikeway and 10-foot-wide Riding and Hiking Trail would be constructed. The parallel Class I Bikeway and Riding and Hiking Trail would extend through a portion of the existing GRGC toward the BNSF Railroad. The new Class I Bikeway and Riding and Hiking Trail would then parallel the BNSF Railroad eastward to the Orange/San Bernardino County boundary. Approximately 3,000 linear feet of new paving would be required for the new Class I Bikeway to connect from Bridge #2 to the Orange/San Bernardino County boundary. Trailheads would be located at Featherly Regional Park and near the Coal Canyon Trail at CHSP. Five turnouts would be provided along Segment #1 at various locations throughout the project area. In addition, one turnout would be provided along the existing bikeway on the south side of the SAR, between CHSP and the Orange/Riverside County boundary. A vista point would be provided at the east end of the CHSP at the SAR overlook.





Eagle Aerial Imaging (2014), OC Public Works (2014), and AECOM (2014).



Note: Project Elements Not Drawn to Scale

**Figure 3-3**  
**Proposed Project**



### 3.5.2 SEGMENT 2

A new parallel 12-foot-wide Class I Bikeway and 10-foot-wide Riding and Hiking Trail would be located on the northern bank of the SAR, adjacent to La Palma Avenue. The new Class I Bikeway would utilize the existing, paved County service road on top of the existing levee. The new Riding and Hiking Trail would be located on the SAR side of the new Class I Bikeway. The new parallel Class I Bikeway and Riding and Hiking Trail would extend eastward from Gypsum Canyon Road approximately 0.75 mile to the end of the paved portion of the existing County service road. From this point, the new parallel Class I Bikeway and Riding and Hiking Trail would continue eastward and southward to proposed Bridge #1. Approximately 1,700 linear feet of new paving would be required for the new Class I Bikeway to connect the existing County service road to Bridge #1. Bridge #1 would cross the SAR and join Segment #1. Bridge #1, which would accommodate both the new Class I Bikeway and new Riding and Hiking Trail, would have a physical structure width of 25 feet and would consist of three spans, 115 feet each, for a total length of 345 feet. A turnout would be provided at the north end of Bridge #1 and a vista point would be provided at the midpoint of Bridge #1. A Staging Area is proposed adjacent to Segment #2, east of the La Palma Avenue and Gypsum Canyon Road intersection. It would be accessed by vehicles from La Palma Avenue. The Staging Area would be located at a lower elevation than La Palma Avenue.

### 3.5.3 DESIGN FEATURES

#### 3.5.3.1 Trails and Bikeways

The proposed bikeway alignments follow existing paths wherever possible, provided the existing paths meet the current design speeds and stopping sight distances as defined for Class I Bikeways in Chapter 1000, "Bikeway Planning and Design," of the *California Department of Transportation Highway Design Manual*, September, 2006, and the current Orange County Highway Design Manual.

#### 3.5.3.2 Bridges

All proposed bridges are narrow, non-vehicular bridges needed for Class I Bikeway and/or Riding and Hiking Trail crossings.

- Bridge #1. This bridge would connect Segments #1 and #2 of the proposed project. This bridge would be located near, but downstream of the confluence of Brush Canyon and the SAR. Bridge #1 would have a deck span of 345 feet with two piers (three spans of 115 feet each). The bridge would be designed for a 20-foot width and would have a total structure width of 25 feet.
- Bridge #2. Bridge #2 would connect the new Riding and Hiking Trail element of Segment #1 to the north and south sides of the SAR. Bridge #2 would also allow for connection of the existing bikeway on the south side of the SAR with the new Class I Bikeway on the north side. This bridge would be located just east of the CHSP/Coal Canyon Trail and would span the SAR to reach the golf course. Bridge #2 would have a deck length of 360 feet with two piers (three spans of 120 feet each). The bridge would be designed for a 20-foot width and would have a total structure width of 25 feet.
- Bridge #3. This bridge would be located within the Canyon RV Park and would span the Gypsum Canyon Channel to provide better access along the new Riding and Hiking Trail as part of Segment #1. It is anticipated that Bridge #3 would be a pre-fabricated metal truss structure that would be 100 feet long with no piers. The bridge would have a total structure width of 15 feet.

### 3.5.3.3 Staging Area

The proposed Staging Area on the north bank of the SAR would be accessed from La Palma Avenue, east of Gypsum Canyon Road. The Staging Area would provide access to the Class I Bikeway and Riding and Hiking Trail from the north side of the SAR. The staging area may include the following amenities:

- Native drought tolerant plants and shade trees
- Benches
- Picnic tables
- Bicycle racks – no long term storage
- Fencing and hitching rails
- Corral
- Water for horses
- Water for hikers, bikers, and riders
- Entry road drive and monumentation
- Interpretive and directional signage
- Trash receptacles
- Parking for 24 vehicles
- Five pull-thru parking spaces for horse trailers
- Shade structure
- Restrooms
- Minimal security lighting
- Paved parking lot and entry drive

### 3.5.3.4 Trailheads

Trailheads are non-vehicular crossroads that serve as a rest area and orientation point where two or more trails and/or bikeways meet. They are typically smaller, accommodate fewer people, and have fewer facilities than a staging area. The proposed project proposes two trailheads, which are anticipated to be located at Gypsum Canyon Road/Featherly Regional Park and Coal Canyon/CHSP.

- Trailhead for Gypsum Canyon Riding and Hiking Trail/Proposed Project. This trailhead may be located within Canyon RV Park (Featherly Regional Park) near the main entry gatehouse and adjacent to the entry drive. An optional drop off may be designed to allow hiker and bicycle unloading. No parking would be provided. The trailhead may be reached from the Gypsum Canyon Riding and Hiking Trail to the south, from Gypsum Canyon Road Bridge from the north, or from the existing bikeway and new Riding and Hiking Trail to the east.
- Trailhead for Coal Canyon Riding and Hiking Trail/Proposed Project. This trailhead would be located at CHSP within the OCFCD right-of-way next to the Coal Canyon/SR-91 underpass. This trailhead would be located in the middle of the project area and may be reached from the existing bikeway and new Riding and Hiking Trail from either the east or west, or from the Coal Canyon Riding and Hiking Trail to the south.

The trailheads would provide users with the following limited features:

- Benches (two)
- Picnic tables (two)
- Trash receptacles
- Bicycle racks (no long term storage)
- Hitching posts
- Water for horses
- Water for walkers, hikers, bicyclists, and horses
- Shade trees
- Interpretive and directional signs
- Shade structure
- Drop-off (only at Featherly Regional Park)



### 3.5.3.5 Turnouts and Vista Points

#### Turnouts

A turnout is a widened section of trail to allow faster traffic to pass or a side path that allows users to pull over and rest away from the main trail. A total of five turnouts would be provided along Segment 1 and one turnout along Segment 2. In addition, one turnout along the existing bikeway between CHSP and the Orange County boundary would also be provided.

Along Segment 1, four turnouts would be located between Canyon RV Park and CHSP, including one at the south bank entry to Bridge 1. Two other turnouts would be located in the eastern part of the project area: one would be located midway along the big bend of the existing SAR Class I Bikeway between CHSP and the Orange County boundary, and the other would be located at the bend of the new Class I Bikeway and Riding and Hiking Trail at the GRGC in the vicinity of the BNSF Railroad. On Segment 2, the turnout would be located at the north bank entry to Bridge 1.

The turnouts would include the following features:

- Widened pavement
- Bench
- Shade trees and native vegetation
- Signage – direction or mileage
- Trash receptacle
- Fencing, as needed

#### Vista Points

A vista point is a type of turnout/rest area used for orientation that is specifically focused on scenic long-distance views and overlooks either upstream, downstream, or across the project area. One opportunity for a vista point would be east of CHSP (on OCFCD land). The vista point would be located at the high point looking eastward over the GRGC and upstream along the SAR. A vista point may also be created on Bridge 1 above a mid-point pier on the west side of the bridge to look westward and downstream. A companion vista point could also be built on the other side of the bridge looking eastward and upstream.

A vista point on land would have similar features as the turnouts identified above. A vista point located on a bridge deck would be more limited with only a widened pullout and, if there is room, a bench and signage.

### 3.5.3.6 Fencing

Fencing for the proposed project would be one of the following:

- Chain link (12-feet high)
- Chain link (6-feet high)
- Wood rail – intermittent
- Landscape/sound wall buffer

A portion of the 12-foot high chain link protective fencing would be located within the floodplain. In this area, the design includes a floating fence design that would allow debris to pass during higher storm events.

### 3.5.3.7 Trail Surface Materials

Trail surfacing would typically be locally-sourced, compacted decomposed granite (DG) for the soft surface Riding and Hiking Trail.

### 3.5.3.8 Bikeway Paving Treatments

The new Class I Bikeway surface would typically be asphaltic concrete (AC), similar to the existing bikeway paving. Because bicycles are easily deflected by surface irregularities, care would be taken to maintain a smooth surface to facilitate safe cycling. Anywhere the surface must be laid down in multiple operations, longitudinal gaps would be avoided. Striping or other surface markings would be non-skid paint or tape. A regular sweeping plan would be necessary where the bikeway passes under existing bridges and is low enough to accumulate debris from winter storm flows. These specific locations may be constructed with concrete for durability.

### 3.5.3.9 Plant Materials

Plant material would be confined to developed trail features along the new Class I Bikeway and Riding and Hiking Trail, specifically at staging areas, trail heads, vista points, and turn outs. All planting would be regional native species. Trail features would occur at fairly regular intervals along the project area and native trees would be the primary shading method at these locations. Additional native shrub plantings would be incorporated into these locations to help integrate them with surrounding habitats and the overall riparian ecosystem.

### 3.5.3.10 Signage and Interpretive Boards

Project signage may be directional, distance (mileage), regulatory/advisory, or interpretive. Due to the limited number of access points within the project area, directional and other typical signage would occur primarily at staging areas, trailheads, and where users may intersect. Distance markers may occur on a regular interval of at least once per mile and, more likely, every half mile.

Interpretive signage would typically coincide with a point of public interest, but would likely be more concentrated at the staging areas, trailheads, and vista points where users are more likely to spend time off the trail surface resting or admiring the views.

For all but regulatory signs, proposed project signage would be comprehensively designed as a definitive signature element that ties the experience of this segment together with the rest of the Orange County trail system, as well as the rest of the SAR Parkway.

## 3.5.4 CONSTRUCTION

### 3.5.4.1 Construction Schedule and General Activity

Construction of the proposed project is expected to take approximately 18 months and is anticipated to begin mid-2017. A crew of approximately 20-30 construction workers (daily) will be in the project area during construction. For safety purposes, a temporary fence will be installed to secure the construction site and restrict public access while maintaining access to recreational facilities. Public use and access of the SAR Parkway would be maintained during construction. Construction activities will require grading, excavation, import of construction materials (asphalt concrete, aggregate base, decomposed granite, and fill material), soil compaction, and removal of pavement.

### 3.5.4.2 Construction Equipment

Major equipment to be used during construction includes, but is not limited to: air compressor, backhoe, concrete pump rig, crane, dozer, forklift, generator, loader, motor grader, paving machine, roller, sheeps



foot, dump truck, flatbed truck, oil/lube truck, pickup truck, water truck, 18-wheel low boy, fuel truck, and ready-mix truck.

#### 3.5.4.3 Construction Access and Construction Staging/Laydown

Construction access will be provided from Gypsum Canyon Road and La Palma Avenue on the west side of the project area, Green River Road/GRGC on the east side of the project area, and from Coal Canyon Road. Temporary construction-related staging and laydown areas would be sited in five locations within the project area: (1) at the north bank of the SAR, south of La Palma Avenue, and immediately adjacent to and west of the proposed (permanent) staging area; (2) at the north bank of the SAR, immediately south of brush canyon, situated between agricultural service roads; (3) at the south bank of the SAR, immediately adjacent to and on both the east and west sides of proposed Bridge #1; (4) at the south bank of the SAR, east of Bridge #1 within a large graded, dirt area; and (5) at the west end of the GRGC, north of the SAR and east of proposed Bridge #2.

#### 3.5.5 OPERATION AND MAINTENANCE

The SAR Class I Bikeway would operate during daylight hours only, from 7:00 AM to 6:00 PM from November 1 to February 28, and from 7:00 AM to 9:00 PM from March 1 to October 31. The hours of operation would be posted along the bikeway. No nighttime lighting would be provided along the bikeway.

A maintenance plan would be adopted as part of the proposed project. Operational maintenance activities associated with the proposed project would primarily be associated with the staging area, which would be operated by the County as a satellite facility. As such, maintenance activities would consist of daily trips for locking and unlocking the gate to the facility to maintain sunup to sundown hours. Weekly maintenance visits would be required for cleaning of the restrooms and horse corral and for overall facility inspection.