

19.1 Environmental Setting/Affected Environment

19.1.1 Potential Environmental Effects Area

The study area (the area in which impacts may occur) for transportation consists of the Plan Area (the area covered by the BDCP), as well as other roadway segments that could be affected by construction activities associated with the project, as shown in Figures 19-1 and 19-2a through 19-2c. Roadway, marine, rail, air, and transit transportation facilities serve the Delta. The potential effects of the proposed construction, operations, and maintenance of the water conveyance system (CM1) on these facilities are evaluated at the project level, and the effects of CM2–CM22 are evaluated at the program level, consistent with the approach described in Chapter 4, *Approach to the Environmental Analysis*.

Transportation systems in areas outside the study area—upstream of the Delta and the SWP and CVP export service areas—would not be affected by the proposed water conveyance system or other BDCP conservation measures.

19.1.2 Roadway Facilities

A total of 114 roadway segments in the study area were selected for analysis based on the likelihood that they would be utilized for construction-related activities or by personnel involved in maintenance and operation of the facilities following construction. Table 19-1 lists the study roadway segments considered in the traffic analysis and their jurisdiction, location, and functional classification. Under existing [baseline year 2009] conditions, State Route (SR) 4 traveled through downtown Brentwood and Oakley. However, in January 2012, this section of SR 4 was relinquished to the cities of Brentwood and Oakley, and Contra Costa County, and Caltrans adopted the SR 4 Bypass as the new SR 4. Because the BDCP construction and operation would occur after the relinquishment and new route adoption, the study roadway segments have been categorized under their post-relinquishment jurisdiction.

Figures 19-2a through 19-2c show where each roadway facility is in relation to the study area. The unique IDs for each roadway segment on these figures correspond to the segment IDs shown in Table 19-1. A technical report analyzing construction traffic is provided in Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*.

1 **Table 19-1. Roadway Study Segments**

| Segment ID* | Roadway | From | To | Jurisdiction | Location | Analysis Functional Classification |
|-------------|------------------------------|---------------------------------------|---------------------------------------|--|------------------------------------|------------------------------------|
| ALA 01 | Byron Hwy | Contra Costa Co./ Alameda Co. Line | Alameda Co./ San Joaquin Co. Line | Alameda Co. | Alameda Co. | Major 2-lane Highway |
| BRE 01 | Brentwood Blvd (old SR 4) | Delta Rd (Oakley City Limits) | Balfour Rd | Caltrans D4/ City of Brentwood ^a | Brentwood | 2-lane Arterial |
| BRE 02 | Brentwood Blvd (old SR 4) | Balfour Rd | Brentwood City Limits (South) | Caltrans D4/ City of Brentwood ^a | Brentwood | 4-lane Arterial Divided |
| BRE 03 | Balfour Rd | Brentwood Blvd (Old SR 4) | Brentwood City Limits | City of Brentwood | Brentwood | 4-lane Arterial Divided |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | Contra Costa Co. | Contra Costa Co. | Major 2-lane Highway |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | Contra Costa Co. | Contra Costa Co. | Major 2-lane Highway |
| CC 03 | Old SR 4 | Brentwood City Limits (South) | Marsh Creek Rd | Caltrans D4/ Contra Costa Co. ^a | Contra Costa Co. | Major 2-lane Highway |
| CC 04 | Byron Hwy | Delta Rd | Old SR 4 | Contra Costa Co. | Contra Costa Co. | Major 2-lane Highway |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./ Alameda Co. Line | Contra Costa Co. | Byron | Major 2-lane Highway |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | Caltrans D3 | Sacramento | 3-lane Freeway |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | Caltrans D3 | Sacramento | 3-lane Freeway |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | Caltrans D3 | Sacramento | 3-lane Freeway |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | Caltrans D3 | Sacramento | 3-lane Freeway |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | Caltrans D3 | Elk Grove | 2-lane Freeway |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | Caltrans D3 | Elk Grove | 2-lane Freeway |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | Caltrans D3 | Sacramento Co. | 2-lane Freeway |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | Caltrans D3 | Sacramento Co. | 2-lane Freeway |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | Caltrans D3 | Sacramento Co. | 2-lane Freeway |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | Caltrans D3 | Sacramento Co. | 2-lane Freeway |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | Caltrans D10 | Sacramento Co. | 2-lane Freeway |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | Caltrans D10 | Sacramento Co. | 2-lane Freeway |
| CT 13 | I-5 NB | Walnut Grove Rd | Peltier Rd | Caltrans D10 | Sacramento Co./ San Joaquin Co. | 2-lane Freeway |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | Caltrans D10 | Sacramento Co./ San Joaquin Co. | 2-lane Freeway |

| Segment ID* | Roadway | From | To | Jurisdiction | Location | Analysis Functional Classification |
|-------------|-----------------------------------|----------------------------------|----------------------------------|--------------|-----------------------------|------------------------------------|
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | Caltrans D10 | San Joaquin Co. | 2-lane Freeway |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | Caltrans D10 | San Joaquin Co. | 2-lane Freeway |
| CT 17 | I-5 NB | Turner Rd | SR 12 | Caltrans D10 | San Joaquin Co. | 2-lane Freeway |
| CT 18 | I-5 SB | Turner Rd | SR 12 | Caltrans D10 | San Joaquin Co. | 2-lane Freeway |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | Caltrans D10 | San Joaquin Co. | 3-lane Freeway |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | Caltrans D10 | San Joaquin Co. | 3-lane Freeway |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | Caltrans D10 | Stockton | 3-lane Freeway |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | Caltrans D10 | Stockton | 3-lane Freeway |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | Caltrans D3 | Sacramento Co. | Minor 2-lane Highway |
| CT 24 | SR 160 (Freeport Blvd/River Rd) | Freeport Bridge | Scribner Rd | Caltrans D3 | Sacramento Co. | Minor 2-lane Highway |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | Caltrans D3 | Sacramento Co. | Minor 2-lane Highway |
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | Caltrans D3 | Sacramento Co. | Minor 2-lane Highway |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | Caltrans D3 | Sacramento Co. | Minor 2-lane Highway |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | Caltrans D3 | Sacramento Co./ Yolo Co. | Minor 2-lane Highway |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | Caltrans D3 | Sacramento Co. | Minor 2-lane Highway |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | Caltrans D3 | Isleton | Minor 2-lane Highway |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | Caltrans D3 | Sacramento Co. | Minor 2-lane Highway |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | Caltrans D3 | Sacramento Co. | Major 2-lane Highway |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | Caltrans D3 | Yolo Co. | Minor 2-lane Highway |
| CT 34 | SR 84 (Courtland Rd/ Ryer Ave) | Courtland Rd | Cache Slough Ferry | Caltrans D4 | Yolo Co./Solano Co. | Minor 2-lane Highway |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | Caltrans D4 | Fairfield | 5-lane Freeway + HOV |
| CT 36 | I-80 WB | SR 12 | Suisun Valley Rd | Caltrans D4 | Fairfield | 5-lane Freeway + HOV |
| CT 37 | SR 12 EB | I-80 | Beck Ave | Caltrans D4 | Fairfield | 2-lane Freeway |
| CT 38 | SR 12 WB | Beck Ave | I-80 | Caltrans D4 | Fairfield | 2-lane Freeway |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/Grizzly Island Rd | Caltrans D4 | Suisun City | 4-lane Multilane Highway |
| CT 40 | SR 12 | Sunset Ave/ Grizzly Island Rd | Walters Rd/ Lawler Ranch Pkwy | Caltrans D4 | Suisun City | 4-lane Multilane Highway |

| Segment ID* | Roadway | From | To | Jurisdiction | Location | Analysis Functional Classification |
|-------------|-----------------------------|----------------------------------|--------------------------------|---|--------------------------------------|------------------------------------|
| CT 41 | SR 12 | Walters Rd/ Lawler Ranch Pkwy | SR 113 | Caltrans D4 | Solano Co. | Major 2-lane Highway |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | Caltrans D4 | Rio Vista/Solano Co. | Major 2-lane Highway |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | Caltrans D4 | Sacramento Co./ Rio Vista | 2-lane Arterial |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./ SJ Co. Line | Caltrans D3 | Sacramento Co. | Major 2-lane Highway |
| CT 45 | SR 12 | Sacramento Co./SJ Co. Line | I-5 | Caltrans D10 | San Joaquin Co. | Major 2-lane Highway |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | Caltrans D4 | Dixon | 3-lane Freeway |
| CT 47 | I-80 WB | Pedrick Rd | SR 113 | Caltrans D4 | Dixon | 3-lane Freeway |
| CT 48 | SR 113 | I-80 | Dixon City Limits | Caltrans D4 | Dixon | 4-lane Arterial, Divided |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | Caltrans D4 | Solano Co. | Minor 2-lane Highway |
| CT 50 | SR 4 (Marsh Creek Rd) | Vasco Rd | Byron Hwy (Old SR 4) | Contra Costa Co./ Caltrans D4 ^b | Contra Costa Co. | Major 2-lane Highway |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | Caltrans D4 | Contra Costa Co. | Major 2-lane Highway |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | Caltrans D4 | Contra Costa Co./ San Joaquin Co. | Major 2-lane Highway |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | Caltrans D10 | San Joaquin Co./ Stockton | Minor 2-lane Highway |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | Caltrans D10 | Stockton | 4-lane Freeway |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | Caltrans D10 | Stockton | 4-lane Freeway |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | Caltrans D10 | Stockton | 3-lane Freeway |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | Caltrans D10 | Stockton | 3-lane Freeway |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | Caltrans D10 | Mountain House | 3-lane Freeway |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | Caltrans D10 | Mountain House | 3-lane Freeway |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | Caltrans D10 | Mountain House/ Tracy | 3-lane Freeway |
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | Caltrans D10 | Mountain House/ Tracy | 3-lane Freeway |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | Caltrans D10 | Tracy | 3-lane Freeway |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | Caltrans D10 | Tracy | 3-lane Freeway |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | Caltrans D10 | Tracy | 3-lane Freeway |

| Segment ID* | Roadway | From | To | Jurisdiction | Location | Analysis Functional Classification |
|-------------|----------------------------------|--|--|---|-----------------------------|------------------------------------|
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | Caltrans D10 | Tracy | 3-lane Freeway |
| ISL 01 | A St/4th St/Jackson Blvd. | SR 160 | Isleton City Limits | City of Isleton | Isleton | Major 2-lane Highway |
| OAK 01 | Main Street (Old SR 4) | SR 160 | Cypress Rd | Caltrans D4/ City of Oakley ^a | Oakley | 4-lane Arterial Divided |
| OAK 02 | Main Street (Old SR 4) | Cypress Rd | Delta Road (Oakley City Limits) | Caltrans D4/ City of Oakley ^a | Oakley | 2-lane Arterial |
| OAK 03 | Cypress Rd | Main Street (Old SR 4) | Bethel Island Rd | City of Oakley | Oakley | Major 2-lane Highway |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | City of Oakley | Oakley | Minor 2-lane Highway |
| OAK 05 | Delta Rd | Main Street (Old SR 4) | Byron Hwy | City of Oakley | Oakley | Minor 2-lane Highway |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | City of Sacramento | Sacramento | 4-lane Arterial Divided |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | City of Sacramento | Sacramento | 2-lane Arterial |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | Sacramento Co./Yolo Co. | Sacramento Co./ Yolo Co. | Minor 2-lane Highway |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | Sacramento Co. | Sacramento Co. | Major 2-lane Highway |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | Sacramento Co. | Sacramento Co. | Minor 2-lane Highway |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | Sacramento Co. | Sacramento Co. | Minor 2-lane Highway |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | Sacramento Co. | Sacramento Co. | Minor 2-lane Highway |
| SC 06 | Twin Cities Rd | River Rd | I-5 | Sacramento Co. | Sacramento Co. | Minor 2-lane Highway |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | Sacramento Co. | Sacramento Co. | Minor 2-lane Highway |
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./ Yolo Co. Line | Paintersville Bridge | Sacramento Co. | Sacramento Co. | Minor 2-lane Highway |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | Sacramento Co. | Sacramento Co. | Minor 2-lane Highway |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | Sacramento Co. | Sacramento Co. | Major 2-lane Highway |
| SC 11 | Walnut Grove Rd/ River Rd | Walnut Grove Bridge | Sacramento Co./ SJ Co. Line | Sacramento Co. | Walnut Grove | Minor 2-lane Highway |
| SC 12 | Isleton Rd | River Rd (Walnut Grove)/Isleton Rd Bridge | 1.5 miles west of Isleton Rd Bridge | Sacramento Co. | Sacramento Co. | Minor 2-lane Highway |
| SC 13 | Race Track Rd/Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | Sacramento Co. | Sacramento Co. | Minor 2-lane Highway |
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | Sacramento Co. | Sacramento Co. | Minor 2-lane Highway |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | Sacramento Co. | Sacramento Co. | Minor 2-lane Highway |

| Segment ID* | Roadway | From | To | Jurisdiction | Location | Analysis Functional Classification |
|-------------|---|--------------------------------------|----------------------------------|----------------------------|-----------------|------------------------------------|
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | Sacramento Co. | Sacramento Co. | Minor 2-lane Highway |
| SJ 01 | Walnut Grove Rd | Sacramento Co./ SJ Co. Line | I-5 | San Joaquin Co. | San Joaquin Co. | Major 2-lane Highway |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | San Joaquin Co. | San Joaquin Co. | Minor 2-lane Highway |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | San Joaquin Co. | San Joaquin Co. | Major 2-lane Highway |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | San Joaquin Co. | San Joaquin Co. | Major 2-lane Highway |
| SJ 05 | Byron Hwy | Alameda Co./ San Joaquin Co. Line | Mountain House Pkwy | San Joaquin Co. | Mountain House | Major 2-lane Highway |
| SJ 06 | Mountain House Pkwy | Byron Hwy | Arnaudo Blvd | San Joaquin Co. | Mountain House | Minor 2-lane Highway |
| SJ 07 | Mountain House Pkwy | Arnaudo Blvd | I-205 | San Joaquin Co. | Mountain House | 4-lane Arterial, Divided |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | City of Stockton | Stockton | 2-lane Arterial |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | City of Tracy | Tracy | 2-lane Arterial |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | City of West Sacramento | West Sacramento | 4-lane Arterial Divided |
| WS 02 | Industrial Blvd/Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | City of West Sacramento | West Sacramento | 4-lane Arterial Divided |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | City of West Sacramento | West Sacramento | 4-lane Arterial Divided |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | City of West Sacramento | West Sacramento | Minor 2-lane Highway |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | Yolo Co. | Yolo Co. | Minor 2-lane Highway |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./ Yolo Co. Line | Yolo Co. | Yolo Co. | Minor 2-lane Highway |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | Yolo Co. | Yolo Co. | Minor 2-lane Highway |

Source: Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*

^a Facility is analyzed as a Caltrans facility under baseline year 2009 conditions and a local facility under Baseline Plus Background Growth Plus Project (BPBGPP) conditions – roadway is relinquished to local jurisdiction in 2012 after baseline year 2009.

^b Facility is analyzed as a local facility under baseline year 2009 conditions and a Caltrans facility under BPBGPP conditions – roadway is adopted as a State facility in 2012 after baseline year 2009.

* Segment ID naming convention refers to jurisdiction and segment number. Segment IDs correspond to the roadway segment IDs shown on Figures 19-2a through 19-2c.

19.1.2.1 Existing Levels of Service

Existing traffic volumes were estimated for each roadway study segment using procedures and methodologies contained in the *2000 Highway Capacity Manual (HCM)* (Transportation Research Board 2000). The volumes are used to measure traffic operating conditions using level of service (LOS), which is a qualitative measure of traffic operating conditions whereby a letter grade is used to represent the level of comfort and convenience associated with driving. In general, LOS A represents free flowing traffic with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions.

Traffic data were collected for all roadway study segments to estimate the weekday hourly LOS from 6:00 AM to 7:00 PM for existing (baseline year 2009) conditions. Traffic volume estimates for Existing Conditions were obtained from traffic counts collected between 2008 and 2012. Data sources included Caltrans, previous transportation studies, and new counts conducted for the BDCP (Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*). Approximately half of the study roadway segments required new counts, which were collected between February and April 2012. Where possible, 2008 counts were factored up to create 2009 traffic volume estimates. The 2012 traffic counts were not adjusted because historical counts were not available for these locations and, in many cases, the traffic growth patterns were uncertain due to the 2008–09 recession effects.

None of the jurisdictions have established hourly LOS traffic volume thresholds specific to the roadway study segments; therefore, existing hourly traffic volume thresholds were developed based on the 2000 HCM methodology (Appendix 19A). Table 19-2 displays the roadway functional class (facility type) and the hourly capacity threshold (number of vehicles per hour) associated with each LOS category in the study area.

Table 19-2. Hourly Level of Service Thresholds for Roadway Type

| Facility Type (Functional Class) | Vehicles per Hour | | | | |
|---|-------------------|-------|-------|--------|--------|
| | A | B | C | D | E |
| Minor two-lane highway | 90 | 200 | 680 | 1,410 | 1,740 |
| Major two-lane highway | 120 | 290 | 790 | 1,600 | 2,050 |
| Four-lane, multilane highway | 2,140 | 3,520 | 5,060 | 6,560 | 7,300 |
| Two-lane arterial | – | – | 970 | 1,760 | 1,870 |
| Four-lane arterial, divided | – | – | 1,920 | 3,540 | 3,740 |
| Two-lane freeway ^a | 1,110 | 2,010 | 2,880 | 3,570 | 4,010 |
| Three-lane freeway ^a | 1,700 | 3,080 | 4,400 | 5,410 | 6,060 |
| Four-lane freeway ^a | 2,320 | 4,200 | 5,950 | 7,280 | 8,140 |
| Five-lane freeway plus high occupancy vehicle (HOV) lane ^a | 3,300 | 5,970 | 8,350 | 10,160 | 11,320 |

Source: Appendix 19A, based on Highway Capacity Manual 2000.

Note: The numbers in this table represent the upper limits to reach a specific Level of Service. Numbers higher than those shown for Level of Service E would be considered Level of Service F.

– = LOS is not achievable due to the type of facility.

^a LOS capacity threshold is for one direction.

As shown in Table 19-3, under Existing Conditions, LOS thresholds are exceeded on a total of **15** roadway segments for at least 1 hour during the 6:00 AM to 7:00 PM analysis period (see entries in **bold text**).

1 **Table 19-3. Existing Levels of Service in the Study Area**

| Segment ID* | Segment | From | To | LOS Threshold ^d | LOS Hourly Volume Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
|---------------|--|--------------------------------------|------------------------------------|----------------------------|-----------------------------|----------------------------------|--|
| ALA 01 | Byron Hwy | Contra Costa Co./ Alameda Co. Line | Alameda Co./ San Joaquin Co. Line | D | 1,600 | 385 to 656 | - |
| BRE 01 | SR 4 (Brentwood Blvd)^a | Delta Rd (Oakley City Limits) | Balfour Rd | C | 970 | 586 to 1,516 | 11 (7-9AM; 10AM-7PM) |
| BRE 02 | SR 4 (Brentwood Blvd) ^a | Balfour Rd | Brentwood City Limits (South) | C | 1,920 | 369 to 1,013 | - |
| BRE 03 | Balfour Rd | SR 4 (Brentwood Blvd) | Brentwood City Limits | D | 3,540 | 437 to 1,300 | - |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | D | 1,600 | 124 to 330 | - |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | D | 1,600 | 90 to 297 | - |
| CC 03 | SR 4^a | Brentwood City Limits (South) | Marsh Creek Rd | C | 790 | 1,133 to 1,682 | 13 (6AM-7PM) |
| CC 04 | Byron Hwy | Delta Rd | SR 4 | D | 1,410 | 108 to 240 | - |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./ Alameda Co. Line | D | 1,600 | 483 to 907 | - |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | F | 6,060 | 2,589 to 5,820 | - |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | F | 6,060 | 1,647 to 5,705 | - |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | F | 6,060 | 2,359 to 5,156 | - |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | F | 6,060 | 1,543 to 5,243 | - |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | F | 4,010 | 1,820 to 3,339 | - |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | F | 4,010 | 1,254 to 3,332 | - |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | F | 4,010 | 1,504 to 2,162 | - |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | F | 4,010 | 1,217 to 2,236 | - |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | F | 4,010 | 1,414 to 1,851 | - |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | F | 4,010 | 1,207 to 1,964 | - |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | C | 2,880 | 1,312 to 1,720 | - |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | C | 2,880 | 1,111 to 1,813 | - |
| CT 13 | I-5 NB | Walnut Grove Rd | Peltier Rd | C | 2,880 | 1,374 to 1,803 | - |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | C | 2,880 | 1,128 to 1,894 | - |
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | C | 2,880 | 1,421 to 1,885 | - |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | C | 2,880 | 1,145 to 1,974 | - |

| Segment ID* | Segment | From | To | LOS Threshold ^d | LOS Hourly Volume Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
|--------------|--------------------------------------|--------------------------------|------------------------------|----------------------------|-----------------------------|----------------------------------|--|
| CT 17 | I-5 NB | Turner Rd | SR 12 | C | 2,880 | 1,288 to 1,985 | - |
| CT 18 | I-5 SB | Turner Rd | SR 12 | C | 2,880 | 1,124 to 1,482 | - |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | C | 4,400 | 1,533 to 2,267 | - |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | C | 4,400 | 1,243 to 2,070 | - |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | D | 5,410 | 1,937 to 3,452 | - |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | D | 5,410 | 1,817 to 2,760 | - |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | E | 1,740 | 136 to 476 | - |
| CT 24 | SR 160 (Freeport Blvd/River Rd) | Freeport Bridge | Scribner Rd | E | 1,740 | 94 to 180 | - |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | E | 1,740 | 41 to 125 | - |
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | E | 1,740 | 105 to 170 | - |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | E | 1,740 | 69 to 122 | - |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | E | 1,740 | 75 to 150 | - |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | E | 1,740 | 78 to 128 | - |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | E | 1,740 | 173 to 465 | - |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | E | 1,740 | 193 to 378 | - |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | F | 1,740 | 530 to 894 | - |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | B | 200 | 40 to 169 | - |
| CT 34 | SR 84 (Courtland Rd/Ryer Ave) | Courtland Rd | Cache Slough Ferry | C | 680 | 10 to 25 | - |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | C | 8,350 | 3,079 to 6,994 | - |
| CT 36 | I-80 WB | Suisun Valley Rd | SR 12 | C | 8,350 | 5,751 to 8,892 | 2 (6-8AM) |
| CT 37 | SR 12 EB | I-80 | Beck Ave | C | 2,880 | 528 to 1,847 | - |
| CT 38 | SR 12 WB | I-80 | Beck Ave | C | 2,880 | 829 to 1,625 | - |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/Grizzly Island Rd | C | 5,060 | 2,408 to 3,573 | - |
| CT 40 | SR 12 | Sunset Ave/Grizzly Island Rd | Walters Rd/Lawler Ranch Pkwy | C | 5,060 | 1,607 to 2,353 | - |

| Segment ID* | Segment | From | To | LOS Threshold ^d | LOS Hourly Volume Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
|--------------|---|-------------------------------------|------------------------------------|----------------------------|-----------------------------|----------------------------------|--|
| CT 41 | SR 12 | Walters Rd/Lawler Ranch Pkwy | SR 113 | C | 790 | 627 to 1,075 | 10 (6-8AM; 9-1PM; 2-6PM) |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | C | 790 | 1,073 to 1,544 | 13 (6AM-7PM) |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | C | 970 | 1,135 to 1,685 | 13 (6AM-7PM) |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./ SJ Co. Line | C | 790 | 704 to 1,030 | 12 (6AM-6PM) |
| CT 45 | SR 12 | Sacramento Co./ SJ Co. Line | I-5 | C | 790 | 773 to 1,164 | 12 (6AM-6PM) |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | C | 4,400 | 2,508 to 4,632 | 2 (3-5 PM) |
| CT 47 | I-80 WB | SR 113 | Pedrick Rd | C | 4,400 | 3,068 to 4,191 | - |
| CT 48 | SR 113 | I-80 | Dixon City Limits | C | 1,920 | 569 to 1,341 | - |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | C | 680 | 174 to 294 | - |
| CT 50 | Marsh Creek Rd (Future SR 4) ^b | Vasco Rd | SR 4 (Byron Hwy) | D | 1,600 | 442 to 733 | - |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | D | 1,600 | 554 to 1,224 | - |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | C | 790 | 412 to 746 | - |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | D | 1,410 | 867 to 1,492 | 1 (4-5PM) |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | D | 7,280 | 2,552 to 4,815 | - |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | D | 7,280 | 4,550 to 5,913 | - |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | D | 5,410 | 2,430 to 4,586 | - |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | D | 5,410 | 4,333 to 5,631 | 3 (7-8AM; 4-6PM) |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | C | 4,400 | 1,350 to 5,071 | 4 (3-7PM) |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | C | 4,400 | 1,873 to 4,867 | 2 (6-8AM) |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | C | 4,400 | 1,431 to 5,068 | 4 (3-7PM) |

| Segment ID* | Segment | From | To | LOS Threshold ^d | LOS Hourly Volume Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
|---------------|-----------------------------------|---|--------------------------------------|----------------------------|-----------------------------|----------------------------------|--|
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | C | 4,400 | 1,875 to 4,117 | - |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | D | 5,410 | 1,525 to 4,200 | - |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | D | 5,410 | 1,852 to 3,079 | - |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | D | 5,410 | 1,511 to 4,182 | - |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | D | 5,410 | 2,083 to 3,446 | - |
| ISL 01 | A St/4th St/Jackson Blvd. | SR 160 | Isleton City Limits | D | 1,410 | 17 to 75 | - |
| OAK 01 | SR 4 (Main St) ^a | SR 160 | Cypress Rd | C | 1,920 | 752 to 1,663 | - |
| OAK 02 | SR 4 (Main St)^a | Cypress Rd | Delta Rd (Oakley City Limits) | C | 970 | 722 to 1,335 | 10 (7-9AM; 11AM-7PM) |
| OAK 03 | Cypress Rd | SR 4 (Main Street) | Bethel Island Rd | D | 1,600 | 304 to 764 | - |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | D | 1,410 | 140 to 367 | - |
| OAK 05 | Delta Rd | SR 4 (Main Street) | Byron Hwy | D | 1,410 | 155 to 334 | - |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | D | 3,540 | 789 to 2,191 | - |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | D | 1,760 | 152 to 492 | - |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | D | 1,410 | 98 to 346 | - |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | D | 1,410 | 77 to 137 | - |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | D | 1,410 | 10 to 29 | - |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | D | 1,410 | 19 to 38 | - |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | D | 1,410 | 41 to 71 | - |
| SC 06 | Twin Cities Rd | River Rd | I-5 | D | 1,410 | 130 to 248 | - |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | D | 1,410 | 141 to 318 | - |
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./ Yolo Co. Line | Paintersville Bridge | D | 1,410 | 51 to 113 | - |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | D | 1,410 | 85 to 134 | - |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | D | 1,600 | 223 to 365 | - |
| SC 11 | Walnut Grove Rd/River Rd | Walnut Grove Bridge | Sacramento Co./SJ Co. Line | D | 1,410 | 175 to 332 | - |
| SC 12 | Isleton Rd | River Rd (Walnut Grove)/Isleton Rd Bridge | 1.5 miles west of Isleton Rd Bridge | D | 1,410 | 61 to 283 | - |
| SC 13 | Race Track Rd/Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | D | 1,410 | 17 to 34 | - |

| Segment ID* | Segment | From | To | LOS Threshold ^d | LOS Hourly Volume Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
|-------------|--|----------------------------------|------------------------------|----------------------------|-----------------------------|----------------------------------|--|
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | D | 1,410 | 14 to 39 | - |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | D | 1,410 | 4 to 53 | - |
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | D | 1,410 | 16 to 52 | - |
| SJ 01 | Walnut Grove Rd | Sacramento Co./SJ Co. Line | I-5 | C | 790 | 141 to 232 | - |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | C | 680 | 8 to 23 | - |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | C | 790 | 108 to 209 | - |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | C | 790 | 69 to 171 | - |
| SJ 05 | Byron Hwy ^c | Alameda Co./San Joaquin Co. Line | Mountain House Pkwy | D | 1,600 | 521 to 824 | - |
| SJ 06 | Mountain House Pkwy ^c | Byron Hwy | Arnaudo Blvd | D | 1,410 | 190 to 298 | - |
| SJ 07 | Mountain House Pkwy ^c | Arnaudo Blvd | I-205 | D | 3,540 | 418 to 769 | - |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | E | 1,870 | 309 to 769 | - |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | E | 1,870 | 309 to 759 | - |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | D | 3,540 | 1,140 to 2,317 | - |
| WS 02 | Industrial Blvd/ Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | C | 1,920 | 773 to 1,858 | - |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | C | 1,920 | 546 to 1,718 | - |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | C | 680 | 42 to 146 | - |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | C | 680 | 74 to 249 | - |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./Yolo Co. Line | C | 680 | 25 to 63 | - |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | C | 680 | 28 to 77 | - |

Source: Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*

* Segment IDs correspond to the roadway segment IDs shown on Figures 19-2a through 19-2c.

^a Facility is analyzed as a Caltrans facility under baseline year 2009 conditions – roadway is relinquished to local jurisdiction after baseline year 2009.

^b Facility is analyzed as a local facility under baseline year 2009 conditions – roadway is adopted as a State facility after baseline year 2009.

^c Roadways within the Mountain House Community Service District have a LOS D threshold, compared to the LOS C threshold used in the remainder of unincorporated San Joaquin County.

^d Levels of Service identified in this column do not necessarily represent current Levels of Service but reflect Caltrans' long-term (20-year) projections based on population projections in the affected region.

19.1.2.2 Existing Pavement Conditions

Typically, physical roadway impacts such as pavement deterioration are not evaluated for construction traffic because of the temporary nature of construction activities. Chapter 610 of the Caltrans Highway Design Manual (2009) provides guidance on pavement engineering considerations including roadway rehabilitation techniques to extend the life of pavement. As stated in Chapter 613.1 of the manual, “pavements are engineered to carry the truck traffic loads expected during the pavement design life. Truck traffic...is the primary factor affecting pavement design life and its serviceability.” Further, information obtained from local jurisdictions suggests that some roadways identified as potential construction site access routes do not currently have adequate engineered pavement sections to withstand construction traffic, particularly heavy vehicles. Therefore, because of the estimated amount of truck trips that could occur during the relatively lengthy construction period for the alternatives, information was obtained on existing pavement conditions on the study area roadways.

Existing pavement conditions of the study area roadway segments were obtained from most jurisdictions (refer to Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*, for more information). Many jurisdictions have a pavement management system, which typically includes routine visual inspection of roadway facilities. For most local jurisdictions included in this analysis, the calculated Pavement Condition Index (PCI) is used as the metric to describe the condition of a roadway section. Pavement conditions with the study area vary greatly by jurisdiction and by roadway. Facilities range from engineered pavement sections constructed in accordance with a design life of 20 or more years to local agricultural routes and levee roads with minimally engineered sections.

The Metropolitan Transportation Commission (MTC) has published two manuals, *Pavement Condition Index Distress Identification Manual for Asphalt and Surface Treatment Pavements* (February 1986) and *Pavement Condition Index Distress Identification Manual for Jointed Portland Cement Concrete Pavements* (October 1991). Both provide guidance to assist pavement inspectors in determining surface distress and severity levels. The inspection method is designed to facilitate the calculation of the PCI, which is a composite rating index. The PCI is expressed as a number from 0 to 100, with 100 being new pavement. MTC uses the PCI scale presented in Table 19-4 to rate pavement condition. A PCI of 55 represents the threshold between “Fair/Good” condition. A PCI greater than 70 is considered “Very Good”.

Table 19-4. Pavement Condition Index (PCI) Rating Scale

| Pavement Condition Index | Rating |
|--------------------------|-----------|
| 100–86 | Excellent |
| 85–71 | Very Good |
| 70–56 | Good |
| 55–41 | Fair |
| 40–26 | Poor |
| 25–11 | Very Poor |
| 10–0 | Failed |

Sources: Metropolitan Transportation Commission 1986, 1991.

1 The City of Sacramento utilizes a different pavement management application, which results in the
2 calculation of the segment's overall condition represented by the Pavement Quality Index (PQI). The
3 PQI is a composite score of three indicators for ride comfort, surface distress and structural
4 adequacy. A PQI greater than 50 is considered "Fair". A PQI greater than 70 is considered "Good".

5 San Joaquin County updates pavement conditions every two years. Their pavement management
6 system calculates the Overall Condition Index (OCI) based on a number of factors, including surface
7 distress, patching, ride and drainage condition. An OCI greater than 60 is considered "Fair". An OCI
8 greater than 70 is considered "Good".

9 Finally, Caltrans applies a different methodology for assessing pavement condition. The Caltrans
10 2011 State of Pavement Report (December 2011) states that an annual Pavement Condition Survey
11 (PCS) is conducted to continually monitor the State Highway System. The PCS consists of a visual
12 inspection of the pavement surface by a team of pavement analysts and the use of an automated
13 data collection system. The result is an International Roughness Index (IRI) for roadway segments,
14 which is a measure of ride quality. IRI units are measured by inches per mile and the data measures
15 relative vertical movement of the vehicle. On rough pavements, IRI values are high. Caltrans has
16 adopted the Federal Highway Administration (FHWA) threshold of an IRI value of less than or equal
17 to 170 inches per mile as "acceptable". According to the FHWA, the IRI value must be less than 95
18 to be rated "good". IRI values, reflective of 2009 pavement conditions, were obtained from Caltrans
19 Division of Maintenance. Pavement conditions vary greatly by Caltrans District and by facility. IRI
20 values were recorded in the physical conditions spreadsheet. Caltrans roadway segments were
21 identified as "acceptable" if the IRI was less than or equal to 170. Facilities with IRI values greater
22 than 170 were recorded as "deficient". It's important to note that the PCI and IRI scales are opposite
23 of each other, meaning that a high PCI is good but a high IRI equates to a poor condition.

24 For the purpose of this analysis, existing pavement conditions in most local jurisdictions are
25 identified as acceptable if their PCI is greater than 55. For roadway segments within the City of
26 Sacramento, a PQI greater than 70 is considered acceptable. For roadway segments within San
27 Joaquin County, an OCI greater than 70 is considered acceptable, except in the Mountain House
28 Community Service District (CSD), which uses the PCI metric. Existing pavement conditions for
29 Caltrans roadway segments are identified as acceptable if the IRI was less than or equal to 170. As
30 shown in Table 19-5, a total of **60** roadway segments have deficient pavement under Existing
31 Conditions (see entries in **bold text**).

1 **Table 19-5. Existing Pavement Conditions in the Study Area**

| Segment ID* | Roadway | From | To | Condition | Extent of Deficiency ^a | Notes |
|--------------|------------------------------------|--------------------------------------|--|------------------|-----------------------------------|--|
| ALA 01 | Byron Hwy | Contra Costa Co./Alameda Co. Line | Alameda Co./San Joaquin Co. Line | Acceptable | - | PCI 100. Improvement project out to bid for summer 2012. |
| BRE 01 | SR 4 (Brentwood Blvd) ^a | Delta Rd (Oakley City Limits) | Balfour Rd | Acceptable | - | PCI range from 79 to 87. |
| BRE 02 | SR 4 (Brentwood Blvd) ^a | Balfour Rd | Brentwood City Limits (South) | Acceptable | - | PCI range from 79 to 87. |
| BRE 03 | Balfour Rd | SR 4 (Brentwood Blvd) | Brentwood City Limits | Acceptable | - | PCI range from 76 to 81. |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | Deficient | Majority | PCI range from 43 to 75. PCI 43 for 3,000 feet. PCI 50 to 60 for 2,900 feet. PCI 70+ for 2,700'. |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | Deficient | Majority | PCI range from 34 to 41. |
| CC 03 | SR 4^a | Brentwood City Limits (South) | Marsh Creek Rd | Deficient | Majority | IRI range 156 to 280. Minority of segment length is acceptable. |
| CC 04 | Byron Hwy | Delta Rd | SR 4 | Acceptable | - | PCI range from 66 to 72. Approximately 15,000 feet (majority of segment length) better than PCI 70. |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./Alameda Co. Line | Deficient | Minority | PCI range from 51 to 85. Little more than half study segment (19,850 feet greater than PCI 70). |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | Deficient | Majority | IRI range from 152 to 177. Approximately 1 mile exceeds IRI 170 threshold (majority of segment length). |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | Deficient | Minority | IRI range from 152 to 189. Approximately 0.1 mile exceeds IRI 170 threshold. Vast majority of segment is acceptable. |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | Deficient | Minority | IRI range from 118 to 207. Approximately 0.6 mile exceeds IRI 170 threshold. Majority of segment is acceptable. |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | Deficient | Minority | IRI range from 142 to 208. Approximately 0.6 mile exceeds IRI 170 threshold. Majority of segment is acceptable. |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | Deficient | All | IRI range from 182 to 278. All of segment exceeds IRI 170 threshold level. |

| Segment ID* | Roadway | From | To | Condition | Extent of Deficiency ^a | Notes |
|--------------|--|-------------------------------|-------------------------|------------------|-----------------------------------|---|
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | Deficient | Minority | IRI range from 106 to 172. Majority of segment better than acceptable IRI 170. Approximately 0.4 mile at IRI 172. |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | Acceptable | - | IRI range from 96 to 118. |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | Acceptable | - | IRI range from 114 to 151. |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | Deficient | Majority | IRI range from 124 to 246. Approximately half better than acceptable IRI 170. |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | Deficient | Minority | IRI range from 134 to 208. Approximately 5 miles better than acceptable IRI 170 (majority of segment). |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | Deficient | Minority | IRI range from 94 to 182. Approximately 0.5 mile exceeds IRI 170 threshold. Majority of segment at better than acceptable range. |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | Acceptable | - | IRI range from 102 to 164. |
| CT 13 | I-5 NB | Walnut Grove Rd | Peltier Rd | Acceptable | - | IRI range from 82 to 122. |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | Acceptable | - | IRI range from 97 to 123. |
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | Acceptable | - | IRI range from 86 to 132. |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | Acceptable | - | IRI range from 100 to 140. |
| CT 17 | I-5 NB | Turner Rd | SR 12 | Acceptable | - | IRI range from 106 to 144. |
| CT 18 | I-5 SB | Turner Rd | SR 12 | Acceptable | - | IRI range from 109 to 154. |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | Deficient | Majority | IRI range from 160 to 266. |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | Acceptable | - | IRI range from 140 to 167. |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | Deficient | Majority | IRI range from 146 to 206. Approximately half of segment length exceeds acceptable level. |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | Acceptable | - | IRI range from 148 to 192. Approximately 0.25 miles exceeds IRI 170 threshold. Majority of segment length better than acceptable level. |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | Deficient | Minority | IRI range from 139 to 184. Majority of segment length better than acceptable level. |
| CT 24 | SR 160 (Freeport Blvd/River Rd) | Freeport Bridge | Scribner Rd | Deficient | Minority | IRI range from 113 to 184. Approximately 1.5 miles at or exceeds IRI 170 threshold. Majority of segment is acceptable. |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | Deficient | Majority | IRI range from 144 to 242. Approximately half segment length exceeds IRI 170 threshold. |

| Segment ID* | Roadway | From | To | Condition | Extent of Deficiency ^a | Notes |
|-------------|-------------------------------|------------------------------|------------------------------|----------------|-----------------------------------|--|
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | Deficient | Majority | IRI range from 166 to 214. Approximately 0.5 mile better than acceptable IRI 170 threshold (minority of segment length). |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | Deficient | Majority | IRI range from 146 to 221. Approximately 1 mile better than acceptable IRI 170 threshold (minority of segment length). |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | Not Applicable | - | Bridge |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | Acceptable | - | IRI range from 132 to 139. |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | Deficient | All | IRI range from 219 to 236. |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | Deficient | Majority | IRI range from 161 to 234. Approximately 1.2 miles better than acceptable IRI 170 (minority of segment length). |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | Deficient | Majority | IRI range from 131 to 178. Approximately half segment length better than acceptable IRI threshold. |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | Deficient | Majority | IRI range from 157 to 294. Approximately 1 mile better than acceptable (minority of segment length). |
| CT 34 | SR 84 (Courtland Rd/Ryer Ave) | Courtland Rd | Cache Slough Ferry | Deficient | Majority | IRI range from 122 to 432. Approximately 6 miles better than acceptable (minority of segment length). |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | Acceptable | - | IRI range from 68 to 114. |
| CT 36 | I-80 WB | SR 12 | Suisun Valley Rd | Acceptable | - | IRI range from 92 to 147. |
| CT 37 | SR 12 EB | I-80 | Beck Ave | Acceptable | - | IRI range from 65 to 167. |
| CT 38 | SR 12 WB | Beck Ave | I-80 | Acceptable | - | IRI range from 63 to 167. |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/Grizzly Island Rd | Acceptable | - | IRI range from 93 to 156. |
| CT 40 | SR 12 | Sunset Ave/Grizzly Island Rd | Walters Rd/Lawler Ranch Pkwy | Acceptable | - | IRI range from 100 to 118. |
| CT 41 | SR 12 | Walters Rd/Lawler Ranch Pkwy | SR 113 | Deficient | Minority | IRI range from 94 to 249. Approximately 1 mile exceeds IRI 170 threshold (minority of segment length). |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | Deficient | Majority | IRI range 165 to 258. Approximately 2 miles better than acceptable (minority of segment length). |

| Segment ID* | Roadway | From | To | Condition | Extent of Deficiency ^a | Notes |
|--------------|--|-----------------------------------|-----------------------------------|------------------|-----------------------------------|--|
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | Not Applicable | - | Bridge |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./SJ Co. Line | Deficient | Majority | IRI range from 135 to 236. Approximately 2.5 miles better than acceptable (minority of segment length). |
| CT 45 | SR 12 | Sacramento Co./SJ Co. Line | I-5 | Deficient | Majority | IRI range from 106 to 325. Approximately 3 miles better than acceptable (minority of segment length). |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | Deficient | Minority | IRI range from 145 to 172. Majority of segment better than acceptable. |
| CT 47 | I-80 WB | Pedrick Rd | SR 113 | Acceptable | - | IRI range from 142 to 169. |
| CT 48 | SR 113 | I-80 | Dixon City Limits | Acceptable | - | IRI range from 54 to 162. |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | Deficient | Majority | IRI range from 158 to 250. Approximately 1 mile better than acceptable (minority of segment length). |
| CT 50 | Marsh Creek Rd (Future SR 4) ^b | Vasco Rd | SR 4 (Byron Hwy) | Acceptable | - | PCI 91. |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | Deficient | Majority | IRI range from 135 to 248. Approximately half segment length better than acceptable 170 IRI. |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | Deficient | Minority | IRI range from 133 to 293. Approximately 5.5 miles better than acceptable 170 IRI (majority of segment length). |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | Deficient | Majority | IRI range from 82-301. Approximately 1.5 miles better than acceptable 170 IRI (minority of segment length). |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | Deficient | All | IRI range from 174 to 205. |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | Deficient | All | IRI range from 192 to 303. |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | Acceptable | - | IRI range from 55 to 137. |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | Acceptable | - | IRI range from 78 to 103. |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | Acceptable | - | IRI range from 71 to 133. |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | Acceptable | - | IRI range from 63 to 132. |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | Acceptable | - | IRI range from 70 to 91. |

| Segment ID* | Roadway | From | To | Condition | Extent of Deficiency ^a | Notes |
|---------------|---------------------------------------|---------------------------|--------------------------------------|------------------|-----------------------------------|--|
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | Acceptable | - | IRI range from 64 to 96. |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | Acceptable | - | IRI range from 80 to 108. |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | Acceptable | - | IRI range from 77 to 121. |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | Acceptable | - | IRI range from 77 to 108. |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | Acceptable | - | IRI range from 72 to 112. |
| ISL 01 | A St/4th St/ Jackson Blvd. | SR 160 | Isleton City Limits | Deficient | Unknown | PCI not available from agency. Observations from Google Maps indicate deficient conditions (image date August 2007). |
| OAK 01 | SR 4 (Main St)^a | SR 160 | Cypress Rd | Deficient | Majority | IRI range from 156 to 260 (minority of segment length acceptable). Pavement conditions supplied by Caltrans. Facility relinquished to local agency in January 2012. |
| OAK 02 | SR 4 (Main St)^a | Cypress Rd | Delta Rd (Oakley City Limits) | Deficient | All | IRI 235. Pavement conditions supplied by Caltrans. Facility relinquished to local agency in January 2012. |
| OAK 03 | Cypress Rd | SR 4 (Main Street) | Bethel Island Rd | Acceptable | - | PCI range from 65 to 80. |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | Deficient | Majority | PCI range from 55 to 80. |
| OAK 05 | Delta Rd | SR 4 (Main Street) | Byron Hwy | Deficient | Majority | PCI 89 from Oakley city limits to Sellers Ave. East of Sellers Ave. (Contra Costa County) PCI range from 61-67. |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | Deficient | All | PQI 70. |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | Acceptable | - | PQI 84. |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | Not Applicable | - | Bridge |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | Deficient | Majority | PCI range from 45 to 67. PCI 45 within Hood (approximately 1000'). |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | Acceptable | - | PCI 56. |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | Deficient | Majority | PCI range from 35 to 59. At least 1 mile at PCI 35. |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | Deficient | All | PCI 32. |
| SC 06 | Twin Cities Rd | River Rd | I-5 | Acceptable | - | PCI 84. |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | Deficient | All | PCI 45. |

| Segment ID* | Roadway | From | To | Condition | Extent of Deficiency ^a | Notes |
|---------------|--------------------------------------|---|-------------------------------------|------------------|-----------------------------------|---|
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./Yolo Co. Line | Paintersville Bridge | Deficient | All | PCI 24. |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | Deficient | Majority | PCI range from 43 to 100. PCI 43 and 54 for approximately 1 mile on southernmost section south of Vorden and for one mile south of Paintersville Bridge. |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | Deficient | Minority | PCI range from 48 to 64. Majority of segment length has a PCI of 64. Section through Walnut Grove south of Center Avenue has a PCI of 48. |
| SC 11 | Walnut Grove Rd/River Rd | Walnut Grove Bridge | Sacramento Co./SJ Co. Line | Acceptable | - | PCI 64. |
| SC 12 | Isleton Rd | River Rd (Walnut Grove)/Isleton Rd Bridge | 1.5 miles west of Isleton Rd Bridge | Acceptable | - | PCI 85. |
| SC 13 | Race Track Rd/Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | Deficient | Majority | PCI range from 36 to 94. Race Track Road has a PCI of 94. All of Tyler Island has PCI 36 (majority of study segment). |
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | Deficient | All | PCI range from 20 to 36. Tyler Island Bridge Road (Approximately 3,500 feet PCI 20, which on the MTC scale is very poor). |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | Acceptable | - | PCI range from 86 to 94. |
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | Acceptable | - | PCI 86. |
| SJ 01 | Walnut Grove Rd | Sacramento Co./SJ Co. Line | I-5 | Deficient | Minority | OCI range from 55 to 86. |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | Deficient | All | OCI range from 56 to 60. |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | Acceptable | - | OCI 74. |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | Acceptable | - | OCI range from 78 to 93. |
| SJ 05 | Byron Hwy ^c | Alameda Co./San Joaquin Co. Line | Mountain House Pkwy | Acceptable | - | PCI 68. |
| SJ 06 | Mountain House Pkwy ^c | Byron Hwy | Arnaudo Blvd | Acceptable | - | PCI 100. |
| SJ 07 | Mountain House Pkwy ^c | Arnaudo Blvd | I-205 | Acceptable | - | PCI 100. |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | Deficient | Majority | PCI range from 15 to 85 projected from 2009 conditions. 6,920 feet of PCI 15 along westernmost extent said to be in poor condition in need of major work. Extensive skin patching last done in 2010. |

| Segment ID* | Roadway | From | To | Condition | Extent of Deficiency ^a | Notes |
|---------------|--|-----------------------------------|-------------------------------------|------------------|-----------------------------------|---|
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | Deficient | Majority | PCI range from 54 to 89. |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | Acceptable | - | PCI 81. (Last measured in 2005) |
| WS 02 | Industrial Blvd/ Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | Acceptable | - | PCI 94. (Last measured in 2005) |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | Deficient | Unknown | Segment between Lake Washington Blvd and Marshall Rd new in 2005. Recent PCI is not available from agency. Observations from Google Maps indicate deficient conditions south of Marshall Road (image date August 2011). |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | Deficient | Unknown | Recent PCI is not available from agency. Observations from Google Maps indicate deficient conditions (image date September 2011) |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | Deficient | Majority | PCI unknown for majority of segment per County. PCI near 100 for section between CR 141 and 142. Comment made that most County roads do not have adequate engineering pavement section constructed to a particular TI and are therefore subject to damage under truck loads. Deficiency assumed. |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./Yolo Co. Line | Deficient | Majority | PCI unknown per County. Comment made that most County roads do not have adequate engineering pavement section constructed to a particular TI and are therefore subject to damage under truck loads. Deficiency assumed. |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | Deficient | Majority | PCI unknown per County. Comment made that most County roads do not have adequate engineering pavement section constructed to a particular TI and are therefore subject to damage under truck loads. Deficiency assumed. |

Source: Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*.

* Segment IDs correspond to the roadway segment IDs shown on Figures 19-2a through 19-2c.

^a Facility is analyzed as a Caltrans facility under baseline year 2009 conditions – roadway is relinquished to local jurisdiction after baseline year 2009.

^b Facility is analyzed as a local facility under baseline year 2009 conditions – roadway is adopted as a State facility after baseline year 2009.

^c The Mountain House CSD maintains the roadways within the Mountain House Master Plan area, and uses the PCI rating system as opposed to the OCI rating system that is used in the remainder of unincorporated San Joaquin County.

19.1.2.3 Bicycle Routes

Several bicycle routes traverse the transportation study area. Bicycle routes may be separated non-motorized paths (Class I); marked bike lanes on a street or highway (Class II); or designated signed routes without a marked lane operating in mixed flow with motorized traffic (Class III). Bicycles may also operate legally on any roadway, regardless of whether or not a bike route class designation exists. Designated bicycle routes are located along SR 4, SR 12, and SR 160 and River Road through the Delta (Figure 19-1), consisting primarily of Class II and Class III facilities; however, some bicycle traffic may be found on all primary and secondary roadways within the transportation study area.

19.1.3 Marine Facilities

19.1.3.1 M5/580 Marine Highway Corridor

Marine facilities represent substantial transportation capacity within the transportation study area. Navigable coastal waters parallel the entire I-5 corridor, including numerous deep and safe rivers, bays, and ports and serving as extensions of the surface transportation system, particularly for freight and goods movement. Figure 19-1 illustrates the location of the commercial marine facilities within the transportation study area. These include facilities that are part of the Marine Highway Program overseen by the U.S. Department of Transportation Maritime Division.¹

Two designated Marine Highway (M-) corridors lie within the study area vicinity, the M-5 corridor and the M-580 corridor.

- The M-5 corridor includes the Pacific Ocean coastal waters, connecting commercial navigation channels, ports, and harbors from San Diego to the US-Canada border north of Seattle. It spans Washington, Oregon and California along the West Coast. It connects to the M-84 corridor at Astoria, Oregon, and the M-580 Connector at Oakland.
- The M-580 corridor includes the San Joaquin River, Sacramento River, and connecting commercial navigation channels, ports, and harbors in Central California from Sacramento to Oakland. It connects to the M-5 Corridor at Oakland.

Most commercial barge traffic within the transportation study area travels along the Sacramento River Deep Water Ship Channel (SRDWSC), which begins in Sacramento and heads southwest toward Suisun Bay, where the canal ends. Once outside of the channel, ships use the Sacramento River for service to Sacramento or the San Joaquin River for access to the Port of Stockton. A new Marine Highway container barge service may begin operating between the Ports of West Sacramento, Oakland, and Stockton, although the service start date is currently unknown.

19.1.3.2 Port of Stockton

The Port of Stockton is located on the Stockton Deepwater Ship Channel, 75 nautical miles due east of the Golden Gate Bridge. The port is a major transportation center with berthing space for 17 vessels, 1.1 million square feet of dockside transit sheds and shipside rail trackage, and 7.7 million

¹ The Marine Highway Program was fully implemented in April 2010 through publication of a Final Rule in the Federal Register (<http://edocket.access.gpo.gov/2010/pdf/2010-7899.pdf>). The Secretary's designations were made pursuant to the Final Rule, as required by the Energy Independence and Security Act of 2007.

1 square feet of warehousing served by rail. The Port of Stockton has three traveling, multi-purpose
2 bridge cranes to handle cargo from vessels direct to truck and rail. (Port of Stockton 2012)

3 River access to the port is through the Suisun Bay, San Joaquin River, and the Stockton Deep Water
4 Channel. The Stockton Deep Water Channel connects the Disappointment Slough with the Port of
5 Stockton marine terminal facilities (State Water Resources Control Board 2010), a distance of
6 approximately 14 miles. Stockton's deepwater channel has an average depth of 35 feet, and an
7 average depth at high tide of 40 feet (Port of Stockton 2012).

8 The port is located approximately one mile from I-5 and is easily accessible by other major
9 interstates in the region. It is served by two Class I rail companies, UPRR and BNSF. Rail service is
10 also provided to each warehouse within the port facility by the port's railroad, operated by the
11 Central California Traction Company (CCT) (described in Section 19.1.4, *Rail Facilities*).

12 **19.1.3.3 Port of West Sacramento**

13 The Port of West Sacramento is located in West Sacramento 79 nautical miles northeast of San
14 Francisco via rivers and shipping channels. The port has a mobile harbor crane for handling
15 container cargo.

16 River access is available by entering the SRDWSC from Suisun Bay. The SRDWSC connects the
17 marine terminal facilities of the Port of Sacramento along the navigable portion of the Sacramento
18 River to the Contra Costa County boundary, a distance of 46.5 miles (U.S. Army Corps of Engineers
19 2010). The current channel provides for a navigable depth of 30 feet; the Army Corps of Engineers
20 has proposed to deepen the channel to a navigable depth of 35 feet. Three rail companies serve the
21 port with a 200-railcar terminal: BNSF, UPRR, and Sierra Northern Railway. The port is adjacent to I-
22 80 and less than 2 miles from I-5. SR 84 is also located within one mile of the port (Port of West
23 Sacramento 2012).

24 **19.1.3.4 Ferry Services**

25 Five public access ferry services operate within the transportation study area (Figure 19-1). Two of
26 the ferries act as a part of the California highway system and are operated by Caltrans. One of these
27 ferries, the Howard Landing Ferry, is located on SR 220 and crosses Steamboat Slough. The other
28 ferry connects SR 84 in Solano County. The Ryer Island Ferry crosses the Cache Slough. The
29 remaining three ferries transport passengers to private islands. One crosses the Little Connection
30 Slough, another crosses the Middle River to Woodward Island, and the other travels from Jersey
31 Island to both Webb Tract and Bradford Island (California Delta Chambers and Visitors
32 Bureau 2009; California Department of Transportation 2009b).

33 **19.1.3.5 Draw Bridges**

34 Twenty-four draw bridges located throughout the Delta on both rail and road facilities are
35 summarized in Table 19-6. Drawbridge clearance varies with the tides.

1 **Table 19-6. Roadway and Rail Draw Bridges in the Study Area**

| Bridge ID | Bridge Name | Route | Span (feet) | Year Built | Bridge Type | Mean High Water (feet) | Mean Lower Low Water (feet) |
|-----------|----------------------------------|--------------------------|-------------|------------|-------------|------------------------|-----------------------------|
| 22C0153 | Sacramento River | "I" Street | 853 | 1911 | Swing | 30 | 32 |
| 22 0021 | Sacramento River (Tower Bridge) | SR 275 | 738 | 1934 | Lift | 30 | 32 |
| 24C0001 | Sacramento River (Freeport) | Freeport | 653 | 1929 | Bascule | 29 | 32 |
| 24 0053 | Sacramento River (Paintersville) | SR 160 | 588 | 1923 | Bascule | 24 | 27 |
| 24 0052 | Steamboat Slough | SR 160 | 343 | 1924 | Bascule | 21 | 24 |
| 23 0035 | Miner Slough | SR 84 | 367 | 1933 | Swing | 17 | 21 |
| 24C0005 | Sacramento River (Walnut Grove) | Walnut Grove Xing | 302 | 1952 | Bascule | 21 | 24 |
| 24C0039 | Georgiana Slough | Isleton Road | 289 | 1962 | Swing | 14 | 17 |
| 29C0131 | Mokelumne River (Millers Ferry) | Walnut Grove Road | 239 | 1955 | Swing | 12 | 15 |
| 24 0051 | Sacramento River (Isleton) | SR 160 | 624 | 1923 | Bascule | 15 | 18 |
| 24C0042 | Georgiana Slough | Tyler Island Bridge Road | 354 | 1940 | Swing | 10 | 13 |
| 29 0043 | Mokelumne River | SR 12 | 1,436 | 1942 | Swing | 7 | 10 |
| 29 0101 | Little Potato Slough | SR 12 | 2,980 | 1991 | Swing | 35 | 38 |
| 24 0121 | Three Mile Slough | SR 160 | 749 | 1949 | Lift | 10 | 16 |
| 29C0219 | White Slough (Honker Canal) | Eight Mile Road | 479 | 1936 | Swing | 7 | 11 |
| 29C0114 | Bishop Canal | Eight Mile Road | 322 | 1989 | Swing | NA | NA |
| 29C0108 | Middle River | Bacon Island Road | 974 | 1995 | Swing | 9 | 12 |
| 29 0050 | San Joaquin River (Garwoods) | SR 4 | 302 | 1933 | Swing | NA | NA |
| 29 0045 | Old River | SR 4 | 528 | 1915 | Swing | 12 | 16 |
| 29 0049 | Middle River (Santa Fe) | SR 4 | 547 | 1915 | Swing | 11 | 14 |
| 29C0022 | Grant Line Canal | Tracy Boulevard | 472 | 1959 | Bascule | 16 | 19 |
| 24C0053 | Snodgrass Slough | Twin Cities Road | 1,037 | 1931 | Swing | 12 | 18 |
| 24C0011 | Sutter Slough | Sutter Slough BR Rd. | 397 | 1939 | Swing | NA | NA |
| 29C0023 | San Joaquin River | Navy Drive | 272 | 1941 | Swing | NA | NA |

Sources: California Department of Transportation 2009b; Snug Harbor Resorts LLC 2009; T-Parks Marine 2010.

Notes: "Bridge ID" is a unique identifier for all bridges in the state bridge log. The first two digits indicate the county where the bridge is located (i.e., 33 = Alameda County, 28 = Contra Costa County, 23 = Sacramento County, 29 = San Joaquin County, and 22 = Yolo County). State-owned bridges have a space as the third character of the Bridge ID. County-owned bridges have a "C" as the third character. "Mean High Water" is the clearance underneath the bridge span to the top of the high water level when the bridge is in its operating position for the crossing road or rail facility. "Mean Lower Low Water" is the clearance underneath the bridge span to the top of the low lower water level when the bridge is in its operating position for the crossing road or rail facility.

19.1.4 Rail Facilities

Northern California has a rail network that provides freight and passenger services to various points in the continental United States and within the region. California is served by two private, transcontinental railroad companies: Union Pacific Railroad (UPRR) and BNSF. These two railroads own right-of-way and operate freight services over their own systems of main lines, branch lines, rail yards, and terminals. While the two railroads compete with each other for freight business, they also share routes and utilize each other's tracks under operating agreements.

In addition to providing freight services—with as many as 60 trains per day travelling over their respective routes—both railroads host extensive inter-city and long-haul passenger services that operate on their lines under agreement. The Capital Corridor passenger service between San José and Sacramento and the Amtrak long-distance interstate service are among these passenger operators (see Section 19.1.4.2, *Passenger Service*).

Railroads in the transportation study area are shown in Figure 19-1.

19.1.4.1 Freight Service

Union Pacific Railroad

UPRR's Martinez Subdivision runs between Oakland and Roseville. The double-track route travels along the eastern shore of San Francisco Bay through Berkeley, Richmond, Hercules, and Martinez. At Martinez, the route crosses the Carquinez Strait and continues through the wetlands along Suisun Bay to Fairfield. From Fairfield, the route generally runs parallel to I-80 into Sacramento and then goes on to Roseville. The main line tracks cross over the Yolo Bypass Wildlife Area and the Sacramento and American rivers on the way to Roseville (Altamont Press 2009).

The UPRR Tracy Subdivision runs between Martinez and Tracy. It generally runs inland of and parallel to the shoreline along Suisun Bay through Pittsburg, where the line turns southeast through Brentwood, Byron, and on to Tracy. While much of this line has not been in service recently, UPRR may return it to freight service in the future. Portions of the right-of-way may be used for the eBART extension in Contra Costa County (Altamont Press 2009).

Near Tracy, UPRR operates an intermodal yard at Lathrop. The UPRR facilities in the Delta have been designated in the 2025 Statewide Transportation Plan as a "Major International Trade Route" (California Department of Transportation 2006).

Burlington Northern Santa Fe Railway

The BNSF main line follows an inland route between Richmond and Port Chicago. At Port Chicago, the BNSF main line and UPRR Tracy Subdivision cross, and the BNSF route continues along the shoreline of Suisun Bay and the western edge of the Delta to Oakley. There, the BNSF main line turns southeast towards Stockton, crossing over numerous Delta tracts and islands. At Stockton, the BNSF main line route runs down the Central Valley to Barstow and then east (BNSF Railway 2012).

BNSF operates a large intermodal facility in Stockton called the Mariposa Intermodal facility. It is located east of SR 99 along Mariposa and Arch Road within the Stockton city limits. This site is capable of being expanded and providing opportunities for rail-related industrial development.

1 BNSF also has a smaller classification yard south of SR 4 near downtown Stockton. That facility is
2 called the Mormon Yard for its location near the Mormon Slough (BNSF Railway 2012).

3 BNSF facilities in the Delta have been designated in the 2025 Statewide Transportation Plan as a
4 “Major International Trade Route” (California Department of Transportation 2006).

5 **The Central California Traction Company**

6 The CCT is a short-line railroad which operates in the Stockton area with connections to both UPRR
7 and BNSF (Central California Traction Company 2008a, 2008b). CCT operates the Port of Stockton
8 rail connecting the port to the BNSF main line.

9 **19.1.4.2 Passenger Service**

10 Passenger rail service within the Delta and adjacent areas is provided by Amtrak and the Altamont
11 Corridor Express (ACE). The San Francisco Bay Area Rapid Transit District (BART) has a planned
12 extension to Antioch in the transportation study area.

13 **Amtrak**

14 Amtrak provides passenger rail service between Stockton, Sacramento, and Oakland over tracks
15 owned by UPRR and BNSF. Amtrak also connects these cities in the Delta area to points north, east,
16 and south. Amtrak’s service is provided by the following routes.

- 17 • San Joaquin
- 18 • California Zephyr
- 19 • Capitol Corridor
- 20 • Coast Starlight

21 Each route has a different frequency of service and serves different markets. The California Zephyr
22 and Coast Starlight routes are part of Amtrak’s national service that spans the country, while the San
23 Joaquin route is a northern California regional service. The Capitol Corridor route acts more like a
24 commuter train (Amtrak 2009). These services may be affected if effects on water transportation
25 results in an increase in freight rail use within the Delta which could result in impacts on passenger
26 service provision.

27 The San Joaquin connects either Oakland or Sacramento with Bakersfield and passes through
28 Stockton. There are four trains daily that start or end in Oakland and two trains daily that start or
29 end in Sacramento (Amtrak 2009).

30 The California Zephyr starts at the Emeryville station and passes through Davis and Sacramento on
31 its multiday trip to Chicago, Illinois. As part of the Amtrak national system, this route provides one
32 trip in each direction daily. On the trip from the east to Emeryville, Amtrak does not pick up
33 passengers in Sacramento or Davis. (Amtrak 2009).

34 The Coast Starlight is the north–south equivalent of the California Zephyr. The Coast Starlight
35 connects Los Angeles with Seattle, Washington through Oakland and Sacramento. Like the California
36 Zephyr, the Coast Starlight operates as one northbound and one southbound train daily
37 (Amtrak 2009).

1 The Capitol Corridor train service is primarily a commuter service connecting San José with
 2 Sacramento via Oakland. This service provides several trips per day with shorter headways (the
 3 time between trips on the same transit route) during the morning and evening peak travel demand
 4 periods (when compared with midday service). On the Capitol Corridor trains, reservations are not
 5 required and tickets can be purchased either at select stations or on the train. Over the course of the
 6 day, 16 trains operate in each direction between Oakland and Sacramento (Amtrak 2009).

7 **Altamont Corridor Express**

8 Altamont Corridor Express operates rail commuter service between Stockton and San José through
 9 Tracy at the southern end of the Delta. The trains operate in the westbound direction in the morning
 10 and in the eastbound direction in the afternoon (Altamont Corridor Express 2011).

11 **San Francisco Bay Area Rapid Transit District**

12 The San Francisco Bay Area Rapid Transit District (BART) currently operates a rapid transit rail line
 13 to its Pittsburg-Bay Point terminus station. Although the present BART line is not currently within
 14 the transportation study area, BART is currently planning a project that will extend BART
 15 service beyond the Pittsburg/Bay Point Station into the transportation study area. The extended
 16 track alignment will go down the median of SR 4, through Pittsburg and Antioch and terminate
 17 east of Hillcrest Avenue in Antioch just within the transportation study area. BART expects to
 18 complete the extension in 2015. (Bay Area Rapid Transit 2011).

19 **19.1.5 Air Transportation Facilities**

20 Numerous air facilities are located within or adjacent to the transportation study area (Figure 19-1).
 21 Many of these are small air strips associated with ranching or farming operations and charter flight
 22 and recreational enterprises. The following public use airports are within or adjacent to the
 23 transportation study area.

- 24 ● Byron Airport
- 25 ● Franklin Field
- 26 ● Lodi Airport
- 27 ● Nut Tree Airport
- 28 ● Rio Vista Municipal Airport
- 29 ● Sacramento Executive Airport
- 30 ● Sacramento International Airport
- 31 ● Stockton Metropolitan Airport
- 32 ● Tracy Municipal Airport
- 33 ● Travis Air Force Base
- 34 ● University Airport

19.1.5.1 Byron Airport

The Byron Airport (Federal Aviation Administration [FAA] identifier C83) is owned and operated by Contra Costa County. The airport is located between Byron and Tracy just south of Discovery Bay and west of Clifton Court Forebay. The airport has a 4,500 foot main runway and a 3,000 foot crosswind runway. For the 12 months ending October 2011, Byron Airport recorded an average of 164 aircraft operations per day, with most (92%) of those being general aviation aircraft based at Byron, (8%) being general aviation aircraft based elsewhere, and less than 1% military. No scheduled commercial flights depart from this airport. (AirNav 2012a.)

Byron Airport is located largely within the boundaries of Conservation Zone (CZ) 8. For a description and map of the Conservation Zones, see Chapter 3, *Description of Alternatives*, and Figure 3-1.

19.1.5.2 Franklin Field

Franklin Field is a public use airport owned and operated by the County of Sacramento (FAA identifier F72). The airfield is located 4 miles southeast of Franklin, CA. The facility does not have an air traffic control tower or personnel and serves the general aviation community exclusively. It has two runways of similar length: Runway 18/36 is 11,001 feet long and Runway 9/27 is 10,992 feet long. For 12 months ending in August 2011, the airport had an average of 89 aircraft operations per day. These operations were primarily visiting general aviation (94%) and aircraft based at the airport (6%). No scheduled commercial flights depart from this airport. (AirNav 2012b.)

Franklin Field is located less than 0.25 mile directly adjacent to the east Plan Area boundary.

19.1.5.3 Lodi Airport

Lodi Airport (FAA identifier 103) is a privately owned airfield open to the public. The airport is located 4 miles north of Lodi, CA. The airport has two runways: Runway 8/26 is 3,735 feet long and Runway 12/30 is 2,723 feet long. For 12 months ending December 2011, there were 81 aircraft operations on average per day. Those operations were split between general aviation aircraft based at the airport (52%) and those based elsewhere (47%), with a small percentage (2%) air taxi. No scheduled commercial flights depart from this airport. (AirNav 2012c.)

Lodi Airport is located approximately 5.5 miles east of the Plan Area boundary, adjacent to SR 99.

19.1.5.4 Nut Tree Airport

Nut Tree Airport (FAA identifier KVCB) is owned and operated by Solano County. The airport is located 2 miles north of Vacaville, CA. The airport has no control tower and the one runway is approximately 4,700 feet long. For 12 months ending July 2011, there were 278 aircraft operations on average per day. These operations were primarily visiting general aviation (59%) and aircraft based at the airport (39%) and a small percentage (1%) air taxi. No scheduled commercial flights depart from this airport. (AirNav 2012d.)

Nut Tree Airport is located more than 6 miles west of the Plan Area boundary, near the I-80/I-505 junction.

19.1.5.5 Rio Vista Municipal Airport

The Rio Vista Municipal Airport (FAA identifier O88) is owned and operated by the City of Rio Vista. This general aviation airport is located north and west of Rio Vista on SR 12. The main runway is 4,200 feet long, and there is a 2,200 foot crosswind runway and a 180 by 180 foot helipad. For 12 months prior to July 2010, there were 96 aircraft operations on average per day. Those operations were split evenly between general aviation aircraft based at Rio Vista and those based elsewhere. No scheduled commercial flights depart from this airport (AirNav 2012e).

This airport is located within the boundaries of CZ 1.

19.1.5.6 Sacramento Executive Airport

Located in Sacramento between the I-5 and SR 99 corridors and directly on SR 160, Sacramento Executive Airport (FAA identifier SAC) is owned by the City of Sacramento and operated by Sacramento County. The airport has three runways and a 60 by 60 foot helipad. The main runway is 5,503 feet long and there are two shorter runways—crosswind Runway 12–30 (3,826 feet long) and Runway 16–34 (3,485 feet long). For 12 months prior to September 2010, the airport had an average of 248 aircraft operations per day. These operations were primarily visiting general aviation (75%). Aircraft based at the airport were 20%, and air taxi operations (unscheduled charter passenger or freight service flights) constituted 5% of the operations. A small number of flights were military in nature (<1%) (AirNav 2012f).

This airport is located outside the transportation study area, and less than 1 mile from the boundary of CZ 3.

19.1.5.7 Sacramento International Airport

The Sacramento International Airport (FAA identifier SMF) is owned and operated by Sacramento County and is located north and west of Sacramento on I-5. It has two parallel runways of approximately equal length (approximately 8,600 feet). For the 12 months ending in June 2011, the airport averaged 322 operations per day, with a majority being regularly scheduled commercial flights (72%), 15% being air taxi flights, 7% being general aviation flights based elsewhere, 4% being Sacramento-based general aviation flights, and 3% military flights. (AirNav 2012g.)

Sacramento International Airport is the largest airport within or adjacent to the Delta that has regularly scheduled commercial passenger service and also serves as an air freight terminal. In the calendar year ending in December 2008, over 153 million pounds of air freight was handled at this airport. The volume of air freight declined by over 10% from calendar year 2007 (Sacramento County 2009).

The Sacramento International Airport Critical Zone encompasses a 5-mile radius from the farthest edge of the Sacramento International Airport's area of operations, allowing the airport to have review responsibility and influence over specific land uses within this zone. The purpose of the review role is to ensure that land uses do not result in the attraction of wildlife that could present hazards for air operations. Air wildlife/plane collisions are more frequent at Sacramento International Airport than any other California airport and monitoring land uses amounts to preemptive avoidance of the obvious contributors to these occurrences. Risk associated land uses include specific types of agriculture such as livestock production and crops such as corn or rice. It also includes other potentially high wildlife attractors such as solid waste disposal facilities, water

1 treatment and management facilities, wetlands and other uses requiring water bodies. Waterfowl
 2 species are singled out as the greatest threat to air operations because of the size, weight and flight
 3 patterns of these bird species.

4 This airport lies outside the transportation study area to the north. The 10,000-foot critical flight
 5 zone for this airport is outside the transportation study area; however, the 5-mile general flight zone
 6 lies partially within the boundaries of CZ 2.

7 **19.1.5.8 Stockton Municipal Airport**

8 The Stockton Municipal Airport (FAA identifier SCK) is owned and operated by San Joaquin County
 9 and is located south of Stockton between the I-5 and SR 99 corridors. It has a 70 foot by 70 foot
 10 helipad and two parallel runways, with one notably longer than the other. Runway 11L-29R is
 11 10,650 feet long and Runway 11R 29L is 4,454 feet long. For the 12 months ending in January 2011,
 12 the airport averaged 129 operations per day, consisting of general aviation flights not based in
 13 Stockton (69%), 25% Stockton-based general aviation flights, 10% military flights, 4% air taxi
 14 flights, and 2% scheduled commercial flights (AirNav 2012h). According to a press release, the
 15 airport was in the top third of all airports nationwide in freight volume in 2003 and 2004. Stockton
 16 Municipal Airport handled 30.3 million pounds of freight in 2003 and 33.8 million pounds of freight
 17 in 2004 (San Joaquin County 2009).

18 This airport is located outside the transportation study area, less than 2.5 miles from the boundary
 19 of CZ 7.

20 **19.1.5.9 Tracy Municipal Airport**

21 The City of Tracy owns and operates this general aviation airport (FAA identifier TCY) located at the
 22 southern edge of the city in the southern portion of the “Tracy Triangle” formed by I-5, I-205, and I
 23 580. It has two runways of similar length: Runway 8–26 is 4,005 feet long and Runway 12–80, is
 24 4,001 feet long. For the 12 months ending April 2008, Tracy Municipal Airport averaged 164 aircraft
 25 operations a day, with 65% of those operations being general aviation aircraft not based at the
 26 airport. The balance was airport-based general aviation aircraft (35%) with less than 1% being air
 27 taxi operations (City of Tracy 2009; AirNav 2012i).

28 This airport is located outside the transportation study area; however, a portion of the approach
 29 zone lies within the boundaries of CZ 7.

30 **19.1.5.10 Travis Air Force Base**

31 The U.S. Air Force owns and operates this private use airfield (FAA identifier SUU) located
 32 approximately 3 miles east of Fairfield, CA. It has two runways of similar length: Runway 3L/21R is
 33 3,123 feet long and Runway 3R/21L is 3,031 feet long. No use statistics are available. (AirNav
 34 2012j.) The Airport Land Use Compatibility Plan for this airport specifies that land uses that may
 35 cause visual, electronic, or bird strike hazards to aircraft in flight shall not be permitted within
 36 12,500 feet of the Travis Air Force Base runways.

37 Although Travis Air Force Base is located outside the transportation study area in Solano County,
 38 the FAR 77 Surface Boundaries for this air base lie partially within transportation the study area. A
 39 portion of the approach/ departure area lies within the boundaries of CZ 1 (in the vicinity of SR

1 113). A substantial portion of the approach/ departure area is located within the boundaries of CZ
2 11, near Grizzly Bay.

3 **19.1.5.11 University Airport**

4 University Airport (FAA identifier KEDU) is owned and operated by the University of California. The
5 airport is located 2 miles west of Davis, CA and is open to the public. The airport has no control
6 tower and one 3,176 foot long runway. For the 12 months ending June 2010, the airport averaged 67
7 aircraft operations per day, consisting of general aviation flights based locally (49%) and based
8 elsewhere (41%), 10% being air taxi flights, and <1% military flights. (AirNav 2012k). This airport
9 is located approximately 6 miles to the west of the Plan Area boundary.

10 **19.1.6 Transit Facilities**

11 Greyhound Bus Lines operate regularly scheduled intercity bus service in the vicinity of the Delta
12 between the cities of Oakland, Sacramento, Stockton, and points beyond using I-80, I-580/I-205, I-5,
13 and SR 99 (Greyhound Bus Lines 2009a). Between seven and nine bus trips are scheduled daily
14 between these cities. Some of these are express trips that do not stop in intervening cities served by
15 Greyhound. For example, of the nine trips daily between Oakland and Sacramento, four stop in
16 Vacaville while five stop in Suisun City. In the case of the seven daily trips between Oakland and
17 Stockton, only two stop in Tracy (one trip very early in the morning and one in the late afternoon).
18 For the trips between Stockton and Sacramento, two of the eight daily trips stop in Lodi (Greyhound
19 Bus Lines 2009b). Within the cities of the Delta, a variety of intra-city and/or intra-county transit
20 services is provided. Some of these transit operators also provide short distance intercity service.
21 Transit agencies serving the transportation study area with bus services include Tri-Delta Transit,
22 South County Transit (SCT), and Rio Vista Transit. Transit routes in the transportation study area
23 are illustrated in Figure 19-1.

24 **19.2 Regulatory Setting**

25 This section describes the applicable transportation regulatory requirements for the proposed
26 alternatives.

27 **19.2.1 Federal Plans, Policies, and Regulations**

28 **19.2.1.1 Federal Highway Administration**

29 The Federal Highway Administration (FHWA) coordinates highway transportation in cooperation
30 with states and other partners to enhance the country's safety, economic vitality, quality of life and
31 the environment. Among the program areas of the FHWA is the Federal-Aid Highway Program,
32 which provided federal financial assistance to states for construction and improvement of the
33 National Highway System (NHS), urban and rural roads, and bridges. This program provides for
34 general improvements and development of safe highways and roads. Some of the roadways within
35 the study area could be recipients of federal funds, requiring FHWA approval.

36 Nationally, the NHS has over 163,000 miles of roadway but that system is only 4% of road miles but
37 it carries approximately 40% of the traffic volume (Federal Highway Administration 2010).

19.2.1.2 Federal Aviation Administration

The Federal Aviation Administration (FAA) is the agency of the U.S. Department of Transportation charged with regulating air commerce to promote its safety and development; achieving the efficient use of navigable airspace of the United States; promoting, encouraging and developing civil aviation; developing and operating a common system of air traffic control and air navigation for both civilian and military aircraft; and promoting the development of a national system of airports.

Under the provisions of the FAA for the development and operation of the common air traffic control system, airports operate under the authority and guidance of the FAA. Any potential project-related effect on aviation and any measures to address such effects would be subject to the regulations of the FAA (Federal Aviation Administration 2005).

19.2.1.3 Rivers and Harbors Act of 1899

The Rivers and Harbors Act of 1899, Section 10 requires that all obstructions to the navigable capacity of navigable waters of the United States must be authorized by Congress. The U.S. Army Corps of Engineers (USACE) must authorize any construction outside established harbor lines or where no harbor lines exist. USACE must also authorize any alterations within the limits of any breakwater or channel of any navigable water of the United States (U.S. Fish and Wildlife 2010).

19.2.1.4 United States Coast Guard

Title 14 of the United States Code (USC), and Title 33, and other portions of the Code of Federal Regulations (CFR) give the U.S. Coast Guard authority for maritime law enforcement on the navigable waters of the United States, as well as responsibilities for search and rescue, among other roles. Specific to the Delta, Title 33: Navigation and Navigable Waters, Part 162: Inland Waters Navigation Regulations, provides regulations for the navigation by both commercial and noncommercial vessels on the San Joaquin River Deep Water Ship Channel (between Suisun Bay and Stockton), and the SRDWSC (between Suisun Bay and West Sacramento).

19.2.2 State and Regional Plans, Policies, and Regulations

19.2.2.1 Public Resources Code

In accordance with CEQA Public Resources Code (PRC) Section 21092.4, the lead agency for a project that would have statewide, regional, or area-wide significance is required to consult with the regional transportation planning agency and public agencies that have transportation facilities which could be affected. Statewide, regional, or area-wide significance is defined in CEQA Guidelines Section 15206. All transportation agencies directly affected by the BDCP alternatives were consulted during the development stages of this analysis. All correspondence with staff was summarized in an outreach matrix (Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*). The most appropriate staff contacts at each agency were verified.

19.2.2.2 Delta Protection Commission's Land Use and Resource Management Plan

The Delta Protection Act of 1992 (Act) established the Delta Protection Commission (DPC), a State entity to plan for and guide the conservation and enhancement of the natural resources of the Delta,

1 while sustaining agriculture and meeting increased recreational demand. The Act defines a Primary
 2 Zone, which comprises the principal jurisdiction of the Delta Protection Commission. The Act
 3 requires the Commission to prepare and adopt a Land Use and Resource Management Plan for the
 4 Primary Zone of the Delta (1995), which must meet specific goals.

5 The Utilities and Infrastructure section includes the following relevant policy.

6 **P-5.** Maintain roads within the Delta to serve the existing agricultural uses and supporting
 7 commercial uses, recreational users, and Delta residents. Promote the maintenance and
 8 enhancement of major thoroughfares already used as cross-Delta corridors.

9 **19.2.2.3 Metropolitan Planning Organizations**

10 Metropolitan planning organizations (MPO) coordinate transportation analysis, standards, and
 11 Federally funded capital investment across a number of transportation system owners and
 12 operators (e.g., state, counties, cities, and transit operators). There are three MPOs in the affected
 13 environment area:

- 14 • **Metropolitan Transportation Commission (MTC).** MTC is the transportation planning,
 15 coordinating, and financing agency for the nine-county San Francisco Bay Area, which includes
 16 Alameda, Contra Costa, and Solano counties in the Delta area. The MTC developed the current
 17 Transportation Improvement Program (TIP), which programs funds for the federal fiscal year
 18 (FY) 2008–2009 through FY 2011–2012. The MTC planning region includes nine roadway and
 19 transit improvement projects within the Delta area—three of which are federally funded
 20 (Metropolitan Transportation Commission 2009). None of these projects are expected to be
 21 affected by the BDCP alternatives.
- 22 • **Sacramento Area Council of Governments (SACOG).** SACOG oversees Sacramento and Yolo
 23 counties in the Delta area, including the cities of West Sacramento, Elk Grove, and Galt. SACOG
 24 developed the 2011/14 Metropolitan Transportation Improvement Program², which identifies
 25 30 roadway and transit projects, including nine federally funded projects in the Delta area
 26 (Sacramento Area Council of Governments 2009). None of these projects are expected to be
 27 affected by the BDCP alternatives.
- 28 • **San Joaquin Council of Governments (SJCOG).** SJCOG oversees an eight-county region in the
 29 San Joaquin Valley, which includes San Joaquin County in the Delta area. SJCOG developed the
 30 current Federal Transportation Improvement Program, which covers FY 2008–2009 through
 31 2011–2012. SJCOG planning region includes roadway and transit improvement projects within
 32 the Delta area that are federally funded (San Joaquin Council of Governments 2009). As with
 33 other MPOs, none of these projects are expected to be affected by the BDCP alternatives.

34 **19.3 Environmental Consequences**

35 This section describes the potential effects of the action alternatives on the transportation facilities
 36 in the study area. Effects are evaluated for severity and, where appropriate, mitigation measures are
 37 identified. This section describes potential direct and reasonably foreseeable indirect effects on
 38 transportation facilities that would result with implementation of each alternative. Potential effects
 39 are categorized into two categories: effects related to the physical and structural components of

² <http://www.sacog.org/mtip/2011-2014/adoption/>

1 water conveyance facilities, which are project-level features, and potential effects related to other
 2 conservation measures, which are program-level features. Direct or indirect effects on
 3 transportation facilities in areas upstream of the Delta or in the SWP/CVP export service areas are
 4 not anticipated because none of the BDCP conservation measures would be implemented in these
 5 project areas; thus, transportation facilities in these areas are not discussed further in this section.

6 Additionally, six of the proposed conservation measures related to supporting covered species and
 7 reducing effects from environmental stressors (listed below and described in Chapter 3, *Description*
 8 *of the Alternatives*), which would be implemented under all action alternatives, are not anticipated to
 9 result in any meaningful effects on transportation facilities in the study area because the actions
 10 implemented under these conservation measures are not, for the most part, land-based or land-
 11 focused activities, nor would they be expected to result in any direct or indirect effects on
 12 transportation in the study area. As such, these measures will not be addressed further in this
 13 analysis.

- 14 • Methylmercury Management (CM12)
- 15 • Stockton Deep Water Ship Channel Dissolved Oxygen Levels (CM14)
- 16 • Illegal Harvest Reduction (CM17)
- 17 • Conservation Hatcheries (CM18)
- 18 • Urban Stormwater Treatment (CM19)
- 19 • Avoidance and Minimization Measures (CM22)

20 **19.3.1 Methods for Analysis**

21 Section 19.3.2, *Determination of Effects*, addresses the potential for effects associated with
 22 temporary construction activities (i.e., effects limited to those during the 9-year construction
 23 period), the footprint of disturbance of new water conveyance facilities (CM1) and other
 24 conservation measures (CM2–CM22), and the permanent operation of the BDCP alternatives within
 25 the study area (i.e., effects occurring after construction and during the project lifetime).

26 This analysis uses a range of methodological approaches to evaluate effects stemming from the
 27 BDCP alternatives. First, geospatial data was used to identify the transportation facilities that would
 28 be affected by construction and operation of all components of the proposed BDCP alternatives,
 29 including water conveyance facilities and conservation measures.

30 Because activities associated with implementation of BDCP Conservation Measures 2–22 planned
 31 within the study area are conceptual, transportation effects of these measures were evaluated
 32 programmatically, using similar analytical approaches and tools as for the conveyance facilities
 33 (CM1). These effects are included in Section 19.3.3, *Effects and Mitigation Approaches* and they will
 34 also be discussed in greater detail and specificity in subsequent project-level environmental
 35 documentation once the specific locations for their implementation are determined.

36 Trip generation estimates were derived from construction estimates for the construction period and
 37 assumptions on the number of personnel needed for routine maintenance and operational activities
 38 following construction, which were developed by the engineering and design team for the air
 39 quality/GHG analysis. The estimates determined that construction of the conveyance facilities would
 40 generate substantially more trips on study area roadways, compared to other trips using other
 41 transportation systems (e.g., rail, transit, marine, or air). Additionally, vehicle trip generation from

1 construction would be substantially higher than trip generation during routine operation and
 2 maintenance activities following construction. Therefore, this analysis focuses on construction
 3 vehicle trip generation as the primary mechanism for impact.

4 The analysis that follows assesses the potential for construction activities associated with the BDCP
 5 to directly or indirectly affect transportation systems during the construction period. This section
 6 relies upon geospatial information identifying temporary ground-disturbing activities necessary for
 7 alternative construction, as well as the current LOS and pavement condition of transportation
 8 facilities within the study area. The analysis accounts for where construction access roads will
 9 connect to the existing roadway system, as well as the potential effect access roads may have on
 10 vehicle trip distribution.

11 Effects were determined by comparing the anticipated changes in Existing Conditions (baseline year
 12 2009, as identified in Tables 19-3 and 19-5) in the transportation system that would result from
 13 construction and operation of the alternatives. The construction traffic analysis in Appendix 19A
 14 assumed the following.

- 15 • Construction will occur over a period of 9-years for the pipeline/tunnel, modified
 16 pipeline/tunnel, east canal, and west canal, and over a period of 7-years for the Through
 17 Delta/Separate Corridors alignment.
- 18 • All construction employees are expected to generate two trips per day – one arriving to the
 19 construction site and one departing the construction site.
- 20 • All construction related trucks are expected to generate eight trips per day.
- 21 • To model a reasonable “worst-case” scenario, all construction truck and employee trips are
 22 assigned to the roadway network for each analysis hour.
- 23 • Background traffic growth was included for the traffic operations analysis based on the
 24 anticipated year of construction activity. The final result is a set of volumes representing
 25 baseline plus background growth (BPBG) and baseline plus background growth plus project
 26 (BPBGPP) traffic conditions.³
- 27 • Pavement conditions analysis is based on BPBG and BPBGPP traffic conditions.

28 An intersection-level analysis was not performed because sufficient information regarding
 29 construction traffic patterns is not available for this level of analysis and it would be speculative and
 30 potentially misleading to assign construction related traffic by turning movement. The roadway
 31 segment analysis is sufficient to identify project impacts and to develop mitigation measures given
 32 the information available regarding construction traffic. By conducting an hourly “worst-case”
 33 scenario segment analysis, the traffic impact study identified critical time periods during the day
 34 that may need to be avoided or where physical improvements may be required. These critical
 35 periods include peak commute hours for the study roadways.

³ The regional models forecast traffic volume changes based on population and employment growth, as well as changes in the transportation network. Given the amount of time that will pass before construction begins, these scenarios represent likely traffic conditions when project construction is expected to occur and provide the most meaningful basis for identifying potential project impacts. Only improvements for which the relevant jurisdiction has fully funded and explicitly committed to constructing prior to the anticipated start of construction for the project are assumed in the baseline scenario.

1 Routine maintenance and operation of the facilities would generate a low volume of daily vehicle
 2 trips (see Appendix 22A, *Air Quality Analysis Assumptions*). Trips generated by long-term
 3 employment would be spread throughout the region, with several occurring near the intakes and
 4 associated urbanized areas. Permanent alteration of transportation patterns during operations and
 5 maintenance is evaluated based on the estimated number of long-term employment trips, as well as
 6 the geographical dispersion of those trips throughout the Plan Area.

7 **19.3.2 Determination of Effects**

8 Potential transportation impacts were assessed in relation to relevant thresholds of significance
 9 established by agencies with jurisdictional authority, and/or applicable laws and regulations. An
 10 effect was considered to be adverse under NEPA and significant under CEQA, if it would result in any
 11 of the following conditions.

- 12 • Cause an increase in traffic or result in delays that are substantial in relation to the existing level
 13 of service conditions (Table 19-3). For the purposes of this analysis, an “increase in traffic” or
 14 “substantial delay” occurs when the hourly traffic volumes generated by the BPPGPP exceeds an
 15 acceptable LOS threshold (Table 19-7) or exacerbates an already unacceptable LOS under BPPG
 16 conditions during the 6:00 AM to 7:00 PM analysis period. If a roadway segment has sufficient
 17 reserve capacity to accommodate construction traffic within any applicable LOS threshold
 18 (Table 19-7), then no traffic operations impact was identified. If construction vehicle trips would
 19 cause the total hourly volume to exceed the LOS threshold (Table 19-7) for any analysis hour, a
 20 potential impact is identified.
- 21 • Cause a substantial deterioration of the roadway surface due to construction activities, in
 22 relation to existing pavement conditions (Table 19-5). For the purposes of this analysis, a
 23 “substantial deterioration of the roadway surface” occurs when the BPPGPP would result in a
 24 pavement change above the applicable thresholds shown in Table 19-7. If construction traffic is
 25 added to a roadway segment that has an existing pavement rating below the applicable
 26 threshold an impact is identified (Table 19-7).
- 27 • Interfere with emergency management and evacuation routes. For the purposes of this analysis,
 28 an increase in the amount of trucks using the transportation system in the study area is defined
 29 as a potential interference with emergency services.
- 30 • Disrupt marine traffic during construction or operations. For the purposes of this analysis, a
 31 marine traffic disruption would occur if construction activities required modification to existing
 32 water channel, substantially interfered with port navigation, and/or substantially increased the
 33 volume of barge movement within the study area.
- 34 • Disrupt rail traffic during construction or operations. For the purposes of this analysis,
 35 disruptions to rail traffic would occur if construction activities required modification to an
 36 existing or proposed rail line, or resulted in physical line crosses that substantially affect rail
 37 service.
- 38 • Disrupt transit service during construction. For the purposes of this analysis, disruptions to
 39 transit service would occur if traffic detours substantially delay transit service or if significant
 40 congestion occurs during lane closures and other construction activities.

- 1 • Interfere with bicycle routes during construction. For the purposes of this analysis, an
2 “interference” is defined as a substantial disruption to bicycle facilities as a result of increased
3 roadway traffic and/or roadway closures.
- 4 • Increase traffic volumes and delays during operations. For the purposes of this analysis, an
5 increase in traffic volume or delay would occur if there is substantial increases in permanent
6 project-related employment.
- 7 • Result in the permanent alteration of transportation patterns during operations. For the
8 purposes of this analysis, a permanent alteration would occur if there is construction of new
9 bridges, marine structures, or surface intersections with public roadways, state routes, or
10 railroads.

11 For purposes of applying thresholds, and in accordance with PRC 21092.4, all transportation
12 agencies directly affected by the BDCP alternatives were consulted during the development stages of
13 this analysis. Agencies were sent a list of proposed study segments for review and comment, and
14 were requested to supply any existing information on the segments within their jurisdiction. Agency
15 representatives were also asked about potential mitigation approaches. The information obtained
16 from the transportation agencies, provided in Appendix 19A, *Bay Delta Conservation Plan*
17 *Construction Traffic Impact Analysis*, was used in the impact analysis and development of mitigation
18 in this chapter. The LOS and pavement thresholds for each jurisdictions are identified in Table 19-7.

19 **Table 19-7. Roadway Study Segment LOS and Pavement Thresholds**

| Jurisdiction | Level of Service (LOS) | Pavement Condition |
|-----------------------------|---|--|
| City of Brentwood | Cause traffic operations to deteriorate from LOS D (or better) to LOS E (or worse) or exacerbate LOS E (or worse) conditions. | Add construction vehicle trips to any roadway segment with a PCI rating at or below 55 |
| City of Isleton Roadways | Cause traffic operations to deteriorate from LOS D (or better) to LOS E (or worse) or exacerbate LOS E (or worse) conditions. | Add construction vehicle trips to any roadway segment with a PCI rating at or below 55 |
| City of Oakley Roadways | Cause traffic operations to deteriorate from LOS D (or better) to LOS E (or worse) or exacerbate LOS E (or worse) conditions. | Add construction vehicle trips to any roadway segment with a PCI rating at or below 55 |
| City of Tracy Roadways | Cause traffic operations to deteriorate from LOS D (or better) to LOS E (or worse) or exacerbate LOS E (or worse) conditions | Add construction vehicle trips to any roadway segment with a PCI rating at or below 55 |
| City of Sacramento Roadways | Cause traffic operations to deteriorate from LOS D (or better) to LOS E (or worse) or exacerbate LOS E (or worse) conditions. | Add construction vehicle trips to any roadway segment with a PQI rating at or below 70 |
| City of Stockton Roadways | Cause traffic operations to deteriorate from LOS E (or better) to LOS F or exacerbate LOS F conditions. | Add construction vehicle trips to any roadway segment with a PCI rating at or below 55 |

| Jurisdiction | Level of Service (LOS) | Pavement Condition |
|----------------------------------|---|--|
| City of West Sacramento Roadways | Cause traffic operations to deteriorate from LOS C (or better) to LOS D (or worse) or exacerbate LOS D (or worse) conditions (Jefferson Boulevard and Industrial Boulevard/Lake Washington Boulevard [WS 02, WS 03, and WS 04]) Cause traffic operations to deteriorate from LOS D (or better) to LOS E (or worse) or exacerbate LOS E (or worse) conditions (Harbor Boulevard [WS 01]) | Add construction vehicle trips to any roadway segment with a PCI rating at or below 55 |
| Alameda County Roadways | Cause traffic operations to deteriorate from LOS D (or better) to LOS E (or worse) or exacerbate LOS E (or worse) conditions | Add construction vehicle trips to any roadway segment with a PCI rating at or below 55 |
| Contra Costa County Roadways | Cause traffic operations to deteriorate from LOS D (or better) to LOS E (or worse) or exacerbate LOS E (or worse) conditions | Add construction vehicle trips to any roadway segment with a PCI rating at or below 55 |
| Sacramento County Roadways | Cause traffic operations to deteriorate on a rural roadway segment from LOS D (or better) to LOS E (or worse) or exacerbate LOS E (or worse) conditions. Cause traffic operations to deteriorate on an urban roadway segment from LOS E (or better) to LOS F or exacerbate LOS F conditions. | Add construction vehicle trips to any roadway segment with a PCI rating at or below 55 |
| San Joaquin County Roadways | Cause traffic operations to deteriorate from LOS C (or better) to LOS D (or worse) or exacerbate LOS D (or worse) conditions (Walnut Grove Road, Peltier Road, and Tracy Boulevard [SJ 01, SJ 02, SJ 03, and SJ 04]). | Add construction vehicle trips to any roadway segment with a OCI rating at or below 70 (Walnut Grove Road, Peltier Road, and Tracy Boulevard [SJ 01, SJ 02, SJ 03, and SJ 04]) |
| Mountain House | Cause traffic operations to deteriorate from LOS D (or better) to LOS E (or worse) or exacerbate LOS E (or worse) conditions (Byron Highway and Mountain House Parkway [SJ 05, SJ 06, and SJ 07]) | Add construction vehicle trips to any roadway segment with a PCI rating at or below 55 (Byron Highway and Mountain House Parkway [SJ 05, SJ 06, and SJ 07]) |
| Yolo County | Cause traffic operations to deteriorate from LOS C (or better) to LOS D (or worse) or exacerbate LOS D (or worse) conditions | Add construction vehicle trips to any roadway segment with a PCI rating at or below 55 |
| Caltrans | Cause traffic operations to deteriorate from LOS B to LOS C (or worse) along SR-84 between the West Sacramento city limits and Courtland Road Cause traffic operations to deteriorate from LOS C (or better) to LOS D (or worse) or exacerbate a LOS condition worse than LOS C (I-5 between Twin Cities Road and Eight Mile Road, I-205 between I-580 and Eleventh Street, SR-4 between Discovery Bay Boulevard and Tracy Boulevard, SR-84 between Courtland Road and Cache Slough Ferry, SR-12 between Walters Road/Lawler Ranch Parkway and I-5, SR-113 between SR-12 and I-80, SR-12 between I-80 and Walters Road/Lawler Ranch Parkway, I-80 between Suisun Valley Road and SR-12, I-80 between SR-113 and Pedrick Road, I-5 between Eight Mile Road and Eighth Street) | Add construction vehicle trips to any roadway segment with an IRI rating greater than 170 |

| Jurisdiction | Level of Service (LOS) | Pavement Condition |
|--------------|--|--------------------|
| | Cause traffic operations to deteriorate from LOS D (or better) to LOS E (or worse) or exacerbate a LOS condition worse than LOS D (I-205 between Grant Line Road and MacArthur Drive, SR-4 between SR-160 and Discovery Bay Boulevard, SR-4 between Tracy Boulevard and I-5) | |
| | Cause traffic operations to deteriorate from LOS E (or better) to LOS F (or worse) or exacerbate a LOS condition worse than LOS F (SR-160 between Sacramento City limits and SR-12) | |
| | Cause traffic operations to exacerbate a condition of LOS F (I-5 between Florin Road and Twin Cities Road, SR-160 between Brannan Island Road and SR-12) | |

1

2 19.3.3 Effects and Mitigation Approaches

3 19.3.3.1 No Action Alternative

4 **NEPA Effects:** The No Action Alternative describes expected future conditions as of the year 2060
5 resulting from a continuation of existing policies and programs by federal, state, and local agencies
6 in the absence of the BDCP alternatives. As described in Chapter 3, *Description of Alternatives*, the No
7 Action Alternative assumptions are limited to Existing Conditions, programs adopted during the
8 early stages of development of the EIR/EIS, facilities that are permitted or under construction
9 during the early stages of development of the EIR/EIS, and foreseeable changes in development that
10 would occur with or without the BDCP. A complete list and description of programs and plans
11 considered under the No Action Alternative is provided in Appendix 3D, *Defining Existing Conditions,*
12 *the No Action/No Project Alternative, and Cumulative Impact Conditions.* For a representation of
13 conditions during the construction period in the absence of the project, please see Appendix 19A,
14 *Bay Delta Conservation Plan Traffic Impact Analysis.*

15 As described in the discussion of the “background traffic growth,” in general, traffic volumes on
16 selected roadway segments are anticipated to increase over the construction period for the project
17 due to population increases in the region. Under the No Action Alternative, any currently underway
18 or planned project within the study area that involves construction and operation and maintenance
19 activities may result in potential effects on transportation facilities from movement of personnel,
20 delivery of construction equipment, and delivery of goods and services. The effects could include
21 increased delays on already congested roadways or accelerated deterioration of roadway surfaces.
22 However, without the estimated trip generation from implementation of the large-scale construction
23 effort associated with the project, construction traffic impacts are likely to be lessened under the No
24 Action Alternative, in comparison to the BDCP alternatives.

25 Roadways currently experiencing congestion and delays, as identified in Table 19-3, would continue
26 to experience level of service impacts unless capacity enhancements are undertaken. Roadway
27 segments with currently deficient pavement conditions are likely to continue to physically
28 deteriorate. The portion of SR 4 that was relinquished by Caltrans to the Cities of Brentwood and
29 Oakley and to Contra Costa County would no longer be maintained by the state and in the absence of
30 mitigation agreements that are likely to be established with implementation of the project

1 alternatives, improvement to deteriorating roadways segments throughout the study area may be
2 delayed or may not occur under the No-Action Alternative. Although traffic congestion is likely to
3 increase in future years as growth occurs in the Bay Area and the Central Valley, there would be no
4 project-related change in the characteristics of the transportation systems over state highways, local
5 roadways, or navigation through Delta channels in the MTPs or RTP. No intake facilities or
6 conveyance systems would be constructed that could result in short-term conflicts with users of the
7 transportation corridors in the Delta.

8 Activities associated with operations and maintenance of the existing SWP and CVP systems and
9 facilities upstream of the Delta would continue, but there would be no changes attributable to the
10 BDCP that could affect transportation systems in these areas. Construction of wildlife habitat in
11 Suisun Marsh or elsewhere as a result of implementation of the USFWS and NMFS Biological
12 Opinions would potentially create localized transportation effects and could affect access to
13 farmland.

14 There would be no project-related change in the characteristics of the transportation systems in the
15 transportation study area and thus there would be no adverse effects.

16 The Delta and vicinity are within a highly active seismic area, with a generally high potential for
17 major future earthquake events along nearby and/or regional faults, and with the probability for
18 such events increasing over time. Based on the location, extent and minimally engineered nature of
19 many existing levee structures in the Delta area, the potential for significant damage to, or failure of,
20 these structures during a major local seismic event is generally moderate to high. For major
21 earthquakes along larger faults, ground rupture can extend for considerable distances (hundreds or
22 thousands of feet), with associated risks for surface structures such as roadways. (See Appendix 3E,
23 *Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies* for more detailed discussion)
24 In instances of a catastrophic event due to climate change or a seismic event, there would also be a
25 potential for adverse effect on transportation (such as decreased level of service) or closure of
26 roadways and other transportation systems in the affected portion of the study area.

27 **CEQA Conclusion:** Under the No Action Alternative, the projects and programs that are assumed to
28 continue in the absence of implementing the proposed BDCP alternatives and potential growth in
29 traffic volumes on study area roadways are expected to have minimal effect on study area
30 transportation facilities because none of the projects or programs assumed for this analysis would
31 create new growth that would be expected to substantially effect study area traffic volumes and
32 because the traffic generated under this alternative would not result in delays or deterioration of
33 pavement conditions that are substantial in relation to the existing level of service and pavement
34 conditions. The impacts on other transportation modes such as bicycle, marine, rail, bus, and air
35 traffic are also not expected to be substantially affected because of the minimal traffic volume
36 growth expected under this alternative. This impact would be less than significant.

19.3.3.2 Alternative 1A–Dual Conveyance with Pipeline/Tunnel and Intakes 1–5 (15,000 cfs; Operational Scenario A)

A total of five intakes would be constructed on the east bank of the Sacramento River under Alternative 1A. For the purposes of this analysis, Alternative 1A was assumed to entail construction of Intakes 1–5. This alternative would also include an intermediate forebay, and the conveyance facility would be a buried pipeline/tunnel (see Figures 3-2 and 3-3 in Chapter 3, *Description of the Alternatives*).

Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS Conditions

NEPA Effects: As shown in Table 19-8, under BPBG conditions, a total of 23 roadway segments would exceed LOS for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. As also shown in Table 19-8, construction associated with Alternative 1A would cause LOS thresholds to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM analysis period on a total of 33 roadway segments under BPBGPP conditions (see entries in **bold** type). Alternative 1A would therefore exacerbate an already unacceptable LOS under BPBG conditions on **10** roadway segments (33 minus the 23 that would already be operating at an unacceptable LOS under BPBG conditions). Figure 19-3a shows the study roadway segments that could experience substantial roadway operation (LOS) impacts.

The decrease in LOS below applicable thresholds during construction would be adverse at the locations identified in Table 19-8 because construction associated with Alternative 1A would cause LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. Alternative 1A would also exacerbate an already unacceptable LOS under BPBG conditions at **10** roadway segments (33 minus the 23 that would already be operating at an unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur throughout the study area, the highest concentration of roadway segments below applicable LOS threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be exceeded on several local roadways, include all segments studied in West Sacramento.

Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively, these measures include requirements to avoid or reduce circulation effects, notify the public of construction activities, provide alternate access routes, require direct haulers to pull over in the event of an emergency, limit/prohibit the amount of construction activity on congested roadways, and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete funding of required improvements. If an improvement that is identified in any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed before the project's contribution to the effect is made, an adverse effect in the form of unacceptable LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to avoid adverse effects prove to be feasible and any necessary agreements are completed before the project's contribution to the effect is made, effects would not be adverse.

1 **Table 19-8. Level of Service for Pipeline/Tunnel Alternatives (1A, 2A, 3, 5, 6A, 7, and 8)**

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume Threshold | Baseline Conditions | | Baseline Plus Background Growth Conditions | | BPBGPP Conditions | |
|--------|--|------------------------------------|----------------------------------|---------------|-----------------------------|----------------------------------|--|--|--|----------------------------------|--|
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| | | | | | | | | | | | |
| ALA 01 | Byron Hwy | Contra Costa Co./ Alameda Co. Line | Alameda Co./San Joaquin Co. Line | D | 1,600 | 385 to 656 | - | 477 to 813 | - | 1,049 to 1,385 | - |
| BRE 01 | Brentwood Blvd (old SR 4) ¹ | Delta Rd (Oakley City Limits) | Balfour Rd | C | 970 | 586 to 1,516 | 11 (7-9AM; 10AM-7PM) | - | - | - | - |
| | | | | D | 1,760 | - | - | 598 to 1,547 | - | 1,170 to 2,119 | 9 (8-9AM; 11AM-7PM) |
| BRE 02 | Brentwood Blvd (old SR 4) ¹ | Balfour Rd | Brentwood City Limits (South) | C | 1,920 | 369 to 1,013 | - | - | - | - | - |
| | | | | D | 3,540 | - | - | 301 to 825 | - | 873 to 1,397 | - |
| BRE 03 | Balfour Rd | Brentwood Blvd (Old SR 4) | Brentwood City Limits | D | 3,540 | 437 to 1,300 | - | 437 to 1,300 | - | 437 to 1,300 | - |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | D | 1,600 | 124 to 330 | - | 124 to 330 | - | 124 to 330 | - |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | D | 1,600 | 90 to 297 | - | 90 to 297 | - | 90 to 297 | - |
| CC 03 | Old SR 4 ¹ | Brentwood City Limits (South) | Marsh Creek Rd | C | 790 | 1,133 to 1,682 | 13 (6AM-7PM) | - | - | - | - |
| | | | | D | 1,600 | - | - | 1,320 to 1,959 | 4 (7-8AM; 3-6PM) | 1,892 to 2,531 | 13 (6AM-7PM) |
| CC 04 | Byron Hwy | Delta Rd | Old SR 4 | D | 1,410 | 108 to 240 | - | 108 to 240 | - | 108 to 240 | - |

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume Threshold | Baseline Plus Background | | | | | |
|--------------|------------------|------------------|---|---------------|-----------------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./ Alameda Co. Line | D | 1,600 | 483 to 907 | - | 599 to 1,125 | - | 1,171 to 1,697 | 3 (8-9AM; 3-4PM; 5-6PM) |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | F | 6,060 | 2,589 to 5,820 | - | 2,987 to 6,714 | 1 (7-8AM) | 3,216 to 6,943 | 1 (7-8AM) |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | F | 6,060 | 1,647 to 5,705 | - | 1,870 to 6,479 | 2 (4-6PM) | 2,099 to 6,708 | 2 (4-6PM) |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | F | 6,060 | 2,359 to 5,156 | - | 2,359 to 5,156 | - | 2,359 to 5,156 | - |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | F | 6,060 | 1,543 to 5,243 | - | 1,543 to 5,243 | - | 1,543 to 5,243 | - |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | F | 4,010 | 1,820 to 3,339 | - | 1,820 to 3,339 | - | 1,820 to 3,339 | - |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | F | 4,010 | 1,254 to 3,332 | - | 1,254 to 3,332 | - | 1,254 to 3,332 | - |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | F | 4,010 | 1,504 to 2,162 | - | 1,751 to 2,517 | - | 2,102 to 2,868 | - |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | F | 4,010 | 1,217 to 2,236 | - | 1,425 to 2,619 | - | 1,776 to 2,970 | - |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | F | 4,010 | 1,414 to 1,851 | - | 1,623 to 2,125 | - | 2,056 to 2,558 | - |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | F | 4,010 | 1,207 to 1,964 | - | 1,405 to 2,285 | - | 1,838 to 2,718 | - |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | C | 2,880 | 1,312 to 1,720 | - | 1,561 to 2,047 | - | 1,912 to 2,398 | - |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | C | 2,880 | 1,111 to 1,813 | - | 1,322 to 2,158 | - | 1,673 to 2,509 | - |
| CT 13 | I-5 NB | Walnut Grove | Peltier Rd | C | 2,880 | 1,374 to | - | 1,649 to | - | 1,730 to | - |

| ID | Segment | From Rd | To | LOS Threshold | LOS Hourly Volume Threshold | Baseline Plus Background | | | | | |
|-------|----------------------------------|------------------------|------------------|---------------|-----------------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| | | | | | | 1,803 | | 2,164 | | 2,245 | |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | C | 2,880 | 1,128 to 1,894 | - | 1,354 to 2,273 | - | 1,435 to 2,354 | - |
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | C | 2,880 | 1,421 to 1,885 | - | 1,421 to 1,885 | - | 1,421 to 1,885 | - |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | C | 2,880 | 1,145 to 1,974 | - | 1,145 to 1,974 | - | 1,145 to 1,974 | - |
| CT 17 | I-5 NB | Turner Rd | SR 12 | C | 2,880 | 1,288 to 1,985 | - | 1,623 to 2,501 | - | 1,698 to 2,576 | - |
| CT 18 | I-5 SB | Turner Rd | SR 12 | C | 2,880 | 1,124 to 1,482 | - | 1,416 to 1,867 | - | 1,491 to 1,942 | - |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | C | 4,400 | 1,533 to 2,267 | - | 1,870 to 2,766 | - | 1,945 to 2,841 | - |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | C | 4,400 | 1,243 to 2,070 | - | 1,516 to 2,525 | - | 1,591 to 2,600 | - |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | D | 5,410 | 1,937 to 3,452 | - | 1,937 to 3,452 | - | 1,937 to 3,452 | - |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | D | 5,410 | 1,817 to 2,760 | - | 1,817 to 2,760 | - | 1,817 to 2,760 | - |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | E | 1,740 | 136 to 476 | - | 153 to 536 | - | 611 to 994 | - |
| CT 24 | SR 160 (Freeport Blvd/ River Rd) | Freeport Bridge | Scribner Rd | E | 1,740 | 94 to 180 | - | 94 to 180 | - | 552 to 638 | - |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | E | 1,740 | 41 to 125 | - | 41 to 125 | - | 499 to 583 | - |
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | E | 1,740 | 105 to 170 | - | 124 to 201 | - | 826 to 903 | - |

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume Threshold | Baseline Plus Background | | | | | |
|--------------|--------------------------------|------------------------------------|--------------------------|---------------|-----------------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | E | 1,740 | 69 to 122 | - | 77 to 136 | - | 779 to 838 | - |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | E | 1,740 | 75 to 150 | - | 81 to 163 | - | 783 to 865 | - |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | E | 1,740 | 78 to 128 | - | 97 to 161 | - | 799 to 863 | - |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | E | 1,740 | 173 to 465 | - | 173 to 465 | - | 1,038 to 1,330 | - |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | E | 1,740 | 193 to 378 | - | 193 to 378 | - | 1,058 to 1,243 | - |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | F | 1,740 | 530 to 894 | - | 578 to 975 | - | 1,578 to 1,975 | 4 (6-7AM; 3-6PM) |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | B | 200 | 40 to 169 | - | 46 to 194 | - | 618 to 766 | 13 (6AM-7PM) |
| CT 34 | SR 84 (Courtland Rd/ Ryer Ave) | Courtland Rd | Cache Slough Ferry | C | 680 | 10 to 25 | - | 10 to 25 | - | 10 to 25 | - |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | C | 8,350 | 3,079 to 6,994 | - | 3,880 to 8,812 | 3 (3-6PM) | 4,380 to 9,312 | 3 (3-6PM) |
| CT 36 | I-80 WB | Suisun Valley Rd | SR 12 | C | 8,350 | 5,751 to 8,892 | 2 (6-8AM) | 7,246 to 11,204 | 6 (6-9AM; 3-6PM) | 7,746 to 11,704 | 9 (6-10AM; 1-6PM) |
| CT 37 | SR 12 EB | I-80 | Beck Ave | C | 2,880 | 528 to 1,847 | - | 676 to 2,364 | - | 1,176 to 2,864 | - |
| CT 38 | SR 12 WB | I-80 | Beck Ave | C | 2,880 | 829 to 1,625 | - | 1,061 to 2,080 | - | 1,561 to 2,580 | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------------|---------------------------------|--------------------------------------|--------------------------------------|---------------|----------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/ Grizzly Island Rd | C | 5,060 | 2,408 to 3,573 | - | 3,046 to 4,519 | - | 4,046 to 5,519 | 2 (4-6PM) |
| CT 40 | SR 12 | Sunset Ave/ Grizzly Island Rd | Walters Rd/ Lawler Ranch Pkwy | C | 5,060 | 1,607 to 2,353 | - | 2,057 to 3,012 | - | 3,057 to 4,012 | - |
| CT 41 | SR 12 | Walters Rd/ Lawler Ranch Pkwy | SR 113 | C | 790 | 627 to 1,075 | 10 (6-8AM; 9-1PM; 2-6PM) | 803 to 1,376 | 13 (6AM-7PM) | 1,803 to 2,376 | 13 (6AM-7PM) |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | C | 790 | 1,073 to 1,544 | 13 (6AM-7PM) | 1,373 to 1,976 | 13 (6AM-7PM) | 2,373 to 2,976 | 13 (6AM-7PM) |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | C | 970 | 1,135 to 1,685 | 13 (6AM-7PM) | 1,453 to 2,157 | 13 (6AM-7PM) | 2,453 to 3,157 | 13 (6AM-7PM) |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./ SJ Co. Line | C | 790 | 704 to 1,030 | 12 (6AM-6PM) | 845 to 1,236 | 13 (6AM-7PM) | 995 to 1,386 | 13 (6AM-7PM) |
| CT 45 | SR 12 | Sacramento Co./ SJ Co. Line | I-5 | C | 790 | 773 to 1,164 | 12 (6AM-6PM) | 840 to 1,264 | 13 (6AM-7PM) | 990 to 1,414 | 13 (6AM-7PM) |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | C | 4,400 | 2,508 to 4,632 | 2 (3-5PM) | 3,108 to 5,741 | 6 (7-9AM; 2-6PM) | 3,394 to 6,027 | 7 (7-9AM; 1-6PM) |
| CT 47 | I-80 WB | SR 113 | Pedrick Rd | C | 4,400 | 3,068 to 4,191 | - | 3,563 to 4,867 | 4 (7-8AM; 3-6PM) | 3,849 to 5,153 | 6 (6-9AM; 3-6PM) |
| CT 48 | SR 113 | I-80 | Dixon City Limits | C | 1,920 | 569 to 1,341 | - | 569 to 1,341 | - | 1,141 to 1,913 | - |

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume Threshold | Baseline Plus Background | | | | | |
|-------|------------------------------------|---------------------|----------------------|---------------|-----------------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | C | 680 | 174 to 294 | - | 216 to 365 | - | 788 to 937 | 13 (6AM-7PM) |
| CT 50 | SR 4 (Marsh Creek Rd) ² | Vasco Rd | Byron Hwy (Old SR 4) | D | 1,600 | 442 to 733 | - | - | - | - | - |
| | | | | C | 790 | - | - | 548 to 909 | 2 (4-6PM) | 1,120 to 1,481 | 13 (6AM-7PM) |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | D | 1,600 | 554 to 1,224 | - | 654 to 1,445 | - | 1,226 to 2,017 | 11 (8AM-7PM) |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | C | 790 | 412 to 746 | - | 412 to 746 | - | 984 to 1,318 | 13 (6AM-7PM) |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | D | 1,410 | 867 to 1,492 | 1 (4-5PM) | 867 to 1,492 | 1 (4-5PM) | 1,439 to 2,064 | 13 (6AM-7PM) |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | D | 7,280 | 2,552 to 4,815 | - | 3,201 to 6,039 | - | 3,487 to 6,325 | - |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | D | 7,280 | 4,550 to 5,913 | - | 5,747 to 7,468 | 2 (7-8AM; 5-6PM) | 6,033 to 7,754 | 4 (7-8AM; 2-3PM; 4-6PM) |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | D | 5,410 | 2,430 to 4,586 | - | 3,159 to 5,962 | 3 (3-6PM) | 3,445 to 6,248 | 4 (2-6PM) |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | D | 5,410 | 4,333 to 5,631 | 3 (7-8AM; 4-6PM) | 5,633 to 7,320 | 13 (6AM-7PM) | 5,919 to 7,606 | 13 (6AM-7PM) |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | C | 4,400 | 1,350 to 5,071 | 4 (3-7PM) | 1,629 to 6,118 | 5 (2-7PM) | 1,915 to 6,404 | 5 (2-7PM) |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | C | 4,400 | 1,873 to 4,867 | 2 (6-8AM) | 2,270 to 5,898 | 3 (6-9AM) | 2,556 to 6,184 | 3 (6-9AM) |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | C | 4,400 | 1,431 to 5,068 | 4 (3-7PM) | 1,803 to 6,386 | 5 (2-7PM) | 2,089 to 6,672 | 5 (2-7PM) |

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume Threshold | Baseline Plus Background | | | | | |
|---------------|---|----------------------------|--|---------------|-----------------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | C | 4,400 | 1,875 to 4,117 | - | 2,363 to 5,187 | 2 (6-8AM) | 2,649 to 5,473 | 3 (6-9AM) |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | D | 5,410 | 1,525 to 4,200 | - | 1,891 to 5,208 | - | 1,983 to 5,300 | - |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | D | 5,410 | 1,852 to 3,079 | - | 2,296 to 3,818 | - | 2,388 to 3,910 | - |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | D | 5,410 | 1,511 to 4,182 | - | 1,874 to 5,186 | - | 1,966 to 5,278 | - |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | D | 5,410 | 2,083 to 3,446 | - | 2,583 to 4,273 | - | 2,675 to 4,365 | - |
| ISL 01 | A St/4th St/ Jackson Blvd. | SR 160 | Isleton City Limits | D | 1,410 | 17 to 75 | - | 17 to 75 | - | 17 to 75 | - |
| OAK 01 | Main Street (Old SR 4) ¹ | SR 160 | Cypress Rd | C | 1,920 | 752 to 1,663 | - | - | - | - | - |
| | | | | D | 3,540 | - | - | 882 to 1,951 | - | 1,454 to 2,523 | - |
| OAK 02 | Main Street (Old SR 4)¹ | Cypress Rd | Delta Rd (Oakley City Limits) | C | 970 | 722 to 1,335 | 10 (7-9AM; 11AM-7PM) | - | - | - | - |
| | | | | D | 1,760 | - | - | 939 to 1,736 | - | 1,511 to 2,308 | 11 (7-9AM; 10AM-7PM) |
| OAK 03 | Cypress Rd | Main Street (Old SR 4) | Bethel Island Rd | D | 1,600 | 304 to 764 | - | 304 to 764 | - | 304 to 764 | - |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | D | 1,410 | 140 to 367 | - | 140 to 367 | - | 140 to 367 | - |
| OAK 05 | Delta Rd | Main Street (Old SR 4) | Byron Hwy | D | 1,410 | 155 to 334 | - | 155 to 334 | - | 155 to 334 | - |

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume Threshold | Baseline Plus Background | | | | | |
|--------|----------------------------|-------------------------------|-----------------------------|---------------|-----------------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | D | 3,540 | 789 to 2,191 | - | 789 to 2,191 | - | 1,247 to 2,649 | - |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | D | 1,760 | 152 to 492 | - | 176 to 571 | - | 634 to 1,029 | - |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | D | 1,410 | 98 to 346 | - | 98 to 346 | - | 98 to 346 | - |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | D | 1,410 | 77 to 137 | - | 82 to 146 | - | 947 to 1,011 | - |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | D | 1,410 | 10 to 29 | - | 12 to 34 | - | 714 to 736 | - |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | D | 1,410 | 19 to 38 | - | 20 to 40 | - | 722 to 742 | - |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | D | 1,410 | 41 to 71 | - | 41 to 71 | - | 41 to 71 | - |
| SC 06 | Twin Cities Rd | River Rd | I-5 | D | 1,410 | 130 to 248 | - | 135 to 257 | - | 297 to 419 | - |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | D | 1,410 | 141 to 318 | - | 141 to 318 | - | 141 to 318 | - |
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./ Yolo Co. Line | Paintersville Bridge | D | 1,410 | 51 to 113 | - | 63 to 140 | - | 635 to 712 | - |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | D | 1,410 | 85 to 134 | - | 86 to 136 | - | 161 to 211 | - |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | D | 1,600 | 223 to 365 | - | 231 to 378 | - | 393 to 540 | - |
| SC 11 | Walnut Grove Rd/River Rd | Walnut Grove Bridge | Sacramento Co./ SJ Co. Line | D | 1,410 | 175 to 332 | - | 183 to 347 | - | 345 to 509 | - |
| SC 12 | Isleton Rd | River Rd (Walnut | 1.5 miles west of | D | 1,410 | 61 to 283 | - | 61 to 283 | - | 142 to 364 | - |

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume Threshold | Baseline Plus Background | | | | | |
|--------|--------------------------------|----------------------------------|------------------------------|---------------|-----------------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| | | Grove)/Isleton Rd Bridge | Isleton Rd Bridge | | | | | | | | |
| SC 13 | Race Track Rd/ Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | D | 1,410 | 17 to 34 | - | 18 to 35 | - | 99 to 116 | - |
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | D | 1,410 | 14 to 39 | - | 14 to 39 | - | 14 to 39 | - |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | D | 1,410 | 4 to 53 | - | 4 to 53 | - | 4 to 53 | - |
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | D | 1,410 | 16 to 52 | - | 16 to 52 | - | 16 to 52 | - |
| SJ 01 | Walnut Grove Rd | Sacramento Co./ SJ Co. Line | I-5 | C | 790 | 141 to 232 | - | 147 to 242 | - | 309 to 404 | - |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | C | 680 | 8 to 23 | - | 8 to 23 | - | 8 to 23 | - |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | C | 790 | 108 to 209 | - | 108 to 209 | - | 292 to 393 | - |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | C | 790 | 69 to 171 | - | 84 to 209 | - | 268 to 393 | - |
| SJ 05 | Byron Hwy | Alameda Co./San Joaquin Co. Line | Mountain House Pkwy | D | 1,600 | 521 to 824 | - | 646 to 1,022 | - | 1,218 to 1,594 | - |
| SJ 06 | Mountain House Pkwy | Byron Hwy | Arnaudo Blvd | D | 1,410 | 190 to 298 | - | 236 to 370 | - | 808 to 942 | - |
| SJ 07 | Mountain House Pkwy | Arnaudo Blvd | I-205 | D | 3,540 | 418 to 769 | - | 543 to 1,000 | - | 1,115 to 1,572 | - |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | E | 1,870 | 309 to 769 | - | 309 to 769 | - | 309 to 769 | - |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | E | 1,870 | 309 to 759 | - | 377 to 926 | - | 561 to 1,110 | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------------|--|-----------------------------|------------------------------------|---------------|----------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | D | 3,540 | 1,140 to 2,317 | - | 1,374 to 2,793 | - | 1,946 to 3,365 | - |
| WS 02 | Industrial Blvd/ Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | C | 1,920 | 773 to 1,858 | - | 959 to 2,304 | 2 (7-8AM; 5-6PM) | 1,531 to 2,876 | 9 (7-9AM; 12-7PM) |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | C | 1,920 | 546 to 1,718 | - | 665 to 2,094 | 1 (5-6PM) | 1,237 to 2,666 | 6 (7-9AM; 3-7PM) |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | C | 680 | 42 to 146 | - | 50 to 174 | - | 622 to 746 | 5 (7-9AM; 2-3PM; 4-6PM) |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | C | 680 | 74 to 249 | - | 74 to 249 | - | 74 to 249 | - |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./ Yolo Co. Line | C | 680 | 25 to 63 | - | 31 to 78 | - | 603 to 650 | - |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | C | 680 | 28 to 77 | - | 35 to 95 | - | 607 to 667 | - |

Source: Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*

* Segment IDs correspond to the segment IDs mapped on Figures 19-2a through 19-2c.

Notes:

- (1) Facility is analyzed as a Caltrans facility under Baseline Conditions and a local facility under Baseline Plus Construction Conditions – roadway is relinquished to local jurisdiction after Baseline Year (2009). LOS Threshold is LOS C under Baseline Conditions and changes to LOS D under Baseline Plus Construction Conditions.
- (2) Facility is analyzed as a local facility under Baseline Conditions and a Caltrans facility under Baseline Plus Construction Conditions – roadway is adopted as a State facility after Baseline Year (2009). LOS Threshold is LOS D under Baseline Conditions and changes to LOS C under Baseline Plus Construction Conditions.

1 **CEQA Conclusion:** Construction under Alternative 1A would add hourly traffic volumes to study
 2 area roadways that would exceed acceptable LOS threshold (Table 19-8). As shown in Table 19-8,
 3 traffic volumes during construction of Alternative 1A would exacerbate already unacceptable LOS
 4 under BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-
 5 1a through TRANS-1c would reduce the severity of this impact, but not to less-than-significant
 6 levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 7 constructed prior to the project's contribution to the impact. If an improvement that is identified in
 8 any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 9 constructed before the project's contribution to the impact is made, a significant impact in the form
 10 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 11 however, all improvements required to avoid significant impacts prove to be feasible and any
 12 necessary agreements are completed before the project's contribution to the effect is made, impacts
 13 would be less than significant.

14 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 15 **Plan**

16 Prior to construction, the BDCP proponents will be responsible for project management and
 17 may contract with one or more construction management firms to assist in ensuring that
 18 construction contractors' crews and schedules are coordinated and that the plans and
 19 specifications are being followed. The BDCP proponents will also ensure development of site-
 20 specific construction traffic management plans (TMPs) that address the specific steps to be
 21 taken before, during, and after construction to minimize traffic impacts, including the mitigation
 22 measures and environmental commitments identified in this EIR/EIS. This will include potential
 23 expansion of the study area identified in this EIR/EIS to capture all potentially significantly
 24 affected roadway segments.

25 The BDCP proponents will be responsible for developing the TMPs in consultation with the
 26 applicable transportation entities, including the following.

- 27 • Caltrans for state and federal roadway facilities;
- 28 • local agencies for local roads;
- 29 • transit providers;
- 30 • rail operators;
- 31 • the U.S. Coast Guard;
- 32 • city and county parks departments; and
- 33 • the California Department of Parks and Recreation (DPR).

34 The BDCP proponents will also ensure that the TMPs are implemented prior to beginning
 35 construction at a site, including in-water construction sites. If necessary to minimize unexpected
 36 operational impacts or delays experienced during real-time construction, the BDCP proponents
 37 will also be responsible for modifying the traffic management plan to reduce these effects.

38 Each TMP will address the following, as needed. Implementation of this measure will ensure
 39 operational traffic impacts and delays experienced during construction will be minimized to the
 40 greatest extent feasible.

- 1 ● Signage warning of roadway surface conditions such as loose gravel, steel plates or similar
2 conditions that could be hazardous to road cycling activity on roadways open to bicycle
3 traffic.
- 4 ● Signage and barricades to be used around the work sites.
- 5 ● In-water work areas will be indicated by buoys, signage, or other effective means to warn
6 boaters of their presence and restrict access. Warning devices and signage (e.g., “boats keep
7 out” or “no wake zone” labeled buoys) will be in compliance with the U.S. Coast Guard
8 Private Aid to Navigation requirements (U.S. Coast Guard 2012) and effective during non-
9 daylight hours and periods of dense fog.
- 10 ● Use of flag people or temporary traffic signals/signage as necessary to slow or detour traffic.
- 11 ● Notifications for the public, emergency providers, cycling organizations, bike shops, and
12 schools, the U.S. Coast Guard, boating organizations, marinas, city and county parks
13 departments, and DPR, where applicable, describing construction activities that could affect
14 transportation and water navigation.
- 15 ● Outreach (via public meetings and/or flyers and other advertisements)
- 16 ● Procedures for construction area evacuation in the case of an emergency declared by county
17 or other local authorities.
- 18 ● Alternate access routes via detours and bridges to maintain continual circulation for local
19 travelers in and around construction zones, including bicycle riders, pedestrians, and
20 boaters, where applicable.
- 21 ● Description of construction staging areas, material delivery routes, and specification of
22 construction vehicle travel hour limits.
- 23 ● Notifications to commercial and leisure boating community of proposed barge operations in
24 the waterways, including posting notices at Delta marinas and public launch ramps. This
25 information will provide details regarding construction site location(s), construction
26 schedules, and identification of no-wake zone, speed restricted zones, and/or detours,
27 where applicable.
- 28 ● No-wake zone and speed-restrictions will be established as part of development of the site-
29 specific plans and will be determined to protect the safety of construction workers and
30 recreationists.
- 31 ● Designation of areas where nighttime construction will occur.
- 32 ● Plans to relocate school bus drop-off and pick-up locations if they will be affected during
33 construction.
- 34 ● Scheduling for oversized material deliveries to the work site and haul routes.
- 35 ● Provisions that direct haulers are to pull over in the event of an emergency. If an emergency
36 vehicle is approaching on a narrow two-way roadway, specify measures to ensure that
37 appropriate maneuvers will be conducted by the construction vehicles to allow continual
38 access for the emergency vehicles at the time of an emergency.
- 39 ● Control for any temporary road closure, detour, or other disruption to traffic circulation,
40 including any temporary partial water channel closures.
- 41 ● Designated offsite vehicle staging and parking areas.

- 1 ● Posted information for contact in case of emergency or complaint.
- 2 ● Daily construction time windows during which construction is restricted or rail operations
- 3 would need to be suspended for any activity within railroad rights of way.
- 4 ● Coordination with rail providers (BNSF Railway, Amtrak, and UPRR) to develop alternative
- 5 interim transportation modes (e.g., trucks or buses) that could be used to provide freight
- 6 and/or passenger service during any longer term railroad closures.
- 7 ● Coordination with transit providers (SCT, Tri-Delta, Rio Vista, and Greyhound Bus Lines) to
- 8 develop, where feasible, daily construction time windows during which transit operations
- 9 would not be either detoured or significantly slowed.
- 10 ● Routinely post information to the 511.org website regarding construction delays and
- 11 detours.
- 12 ● Other actions to be identified and developed as may be needed by the construction
- 13 manager/resident engineer to ensure that temporary impacts on transportation facilities
- 14 are minimized.

15 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
16 **Congested Roadway Segments**

17 Where feasible, limit construction activity to fit within available reserve capacity or shift
18 construction activity to hours with more reserve capacity so as to achieve acceptable LOS
19 conditions (see Table 19-7). The BDCP proponents will include in the bid specifications a
20 requirement that the contractor submit a proposal for a process for determining when the hours
21 of construction can feasibly be limited to avoid operational deficiencies on identified roadway
22 segments as specified in Table 19-9.

1 **Table 19-9. Roadway Traffic Operations Mitigation Summary**

| Segment ID* | Segment | From | To | Applicable Mitigation Measures in Addition to TRANS-1a (Time period for construction traffic to avoid and Maximum number of hourly construction trips, if applicable) ^a | | | | |
|-------------|------------------------------|---------------------------------------|---------------------------------------|---|---|---|---|---|
| | | | | Pipeline/Tunnel– Alternatives 1A, 2A, 3, 5, 6A, 7, and 8 | Modified Pipeline/Tunnel– Alternative 4 | East Alignment– Alternatives 1B, 2B, and 6B | West Alignment– Alternatives 1C, 2C, and 6C | Through Delta/Separate Corridors– Alternative 9 |
| ALA 01 | Byron Hwy | Contra Costa Co./ Alameda Co. Line | Alameda Co./ San Joaquin Co. Line | | | | TRANS-1b (avoid 6–10AM & 3–7PM) | TRANS-1b (892 max hourly trips) |
| BRE 01 | Brentwood Blvd (old SR 4) | Delta Road (Oakley City Limits) | Balfour Road | TRANS-1b (381 max hourly trips between 6AM–3PM;& 4–7PM; avoid 3–4 PM) | TRANS-1b (avoid 8–9AM & 11–7PM) | TRANS-1b (399 max hourly trips between 6AM–3PM;& 4–7PM; avoid 3–4 PM) | TRANS-1b (234 max hourly trips; avoid 7AM–7PM) | TRANS-1b (399 max hourly trips between 6 AM–3PM; & 4–7 PM; avoid 3–4 PM) |
| BRE 02 | Brentwood Blvd (old SR 4) | Balfour Road | Brentwood City Limits (South) | | | | | TRANS-1b (6–7AM; 9AM–4PM or max 2,590 hourly trips) |
| BRE 03 | Balfour Road | Brentwood Blvd (Old SR 4) | Brentwood City Limits | | | | | |
| CC 01 | Bethel Island Road | Oakley City Limits | End | | | | | |
| CC 02 | Balfour Road | Brentwood City Limits | Byron Hwy | | | | | |
| CC 03 | Old SR 4 | Brentwood City Limits (South) | Marsh Creek Road | TRANS-1b (163 max hourly trips between 6–7AM; 9AM–2PM; & 6–7PM; avoid 7–9AM & 2–6PM) | TRANS-1b (163 max hourly trips between 6–7AM, 9AM–2PM, & 6–7PM; avoid 7–9AM & 2–6PM) | TRANS-1b (165 max hourly trips between 6–7AM; 8AM–3PM; & 6–7PM; avoid 7–8AM & 3–6PM) | TRANS-1b (165 max hourly trips between 6–7AM, 8AM–3PM, & 6–7PM; avoid 7–8AM & 3–6PM) | TRANS-1b (165 max hourly trips between 6–7AM; 8AM–3PM; & 6–7PM; avoid 7–8AM & 3–6PM) |
| CC 04 | Byron Hwy | Delta Road | Old SR 4 | | | | | |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./ Alameda Co. Line | TRANS-1b (avoid 8–9AM, 3–4PM, & 5–6PM) | TRANS-1b (avoid 8–9AM, 3–4PM, & 5–6PM) | | TRANS-1b (620 max hourly trips; avoid 6–11AM & 12–7PM) | TRANS-1b (620 max hourly trips) |
| CT 01 | I-5 NB | Florin Road | Pocket Road | TRANS-1b (avoid 7–8AM) | TRANS-1b (avoid 7–8AM) | TRANS-1b (avoid 7–8AM) | TRANS-1b (avoid 7–9AM) | |
| CT 02 | I-5 SB | Florin Road | Pocket Road | TRANS-1b (avoid 4–6PM) | TRANS-1b (avoid 4–6PM) | TRANS-1b (avoid 4–6PM) | TRANS-1b (avoid 4–6PM) | |
| CT 03 | I-5 NB | Pocket Road | Laguna Blvd | | | | | |
| CT 04 | I-5 SB | Pocket Road | Laguna Blvd | | | | | |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | | | | | |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | | | | | |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Road | | | | | |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Road | | | | | |
| CT 09 | I-5 NB | Hood Franklin Road | Twin Cities Road | | | | | |
| CT 10 | I-5 SB | Hood Franklin Road | Twin Cities Road | | | | | |
| CT 11 | I-5 NB | Twin Cities Road | Walnut Grove Road | | | | | |
| CT 12 | I-5 SB | Twin Cities Road | Walnut Grove Road | | | | | |
| CT 13 | I-5 NB | Walnut Grove Road | Peltier Road | | | | TRANS-1b (avoid 4–5PM) | |
| CT 14 | I-5 SB | Walnut Grove Road | Peltier Road | | | | TRANS-1b (avoid 3–5PM) | |
| CT 15 | I-5 NB | Peltier Road | Turner Road | | | | | |
| CT 16 | I-5 SB | Peltier Road | Turner Road | | | | | |
| CT 17 | I-5 NB | Turner Road | SR 12 | | | | | |
| CT 18 | I-5 SB | Turner Road | SR 12 | | | | | |
| CT 19 | I-5 NB | SR 12 | Eight Mile Road | | | | | |
| CT 20 | I-5 SB | SR 12 | Eight Mile Road | | | | | |
| CT 21 | I-5 NB | Eight Mile Road | Hammer Lane | | | | | |
| CT 22 | I-5 SB | Eight Mile Road | Hammer Ln | | | | | |

| Segment ID* | Segment | From | To | Applicable Mitigation Measures in Addition to TRANS-1a (Time period for construction traffic to avoid and Maximum number of hourly construction trips, if applicable) ^a | | | | |
|-------------|---------------------------------------|------------------------------------|------------------------------------|---|--|---|---|---|
| | | | | Pipeline/Tunnel- Alternatives 1A, 2A, 3, 5, 6A, 7, and 8 | Modified Pipeline/Tunnel- Alternative 4 | East Alignment- Alternatives 1B, 2B, and 6B | West Alignment- Alternatives 1C, 2C, and 6C | Through Delta/Separate Corridors- Alternative 9 |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | | | | TRANS-1b (1,234 max hourly trips) | |
| CT 24 | SR 160 (Freeport Blvd/ River Road) | Freeport Bridge | Scribner Road | | | | | |
| CT 25 | SR 160 (River Road) | Scribner Road | Hood Franklin Road | | | | | |
| CT 26 | SR 160 (River Road) | Hood Franklin Road | Lambert Road | | | | | |
| CT 27 | SR 160 (River Road) | Lambert Road | Paintersville Bridge | | | | | |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Road | SR 160 (River Road) | | | | | |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | | | TRANS-1b (1,593 max hourly trips) | TRANS-1b (1,593 max hourly trips) | TRANS-1b (1,593 max hourly trips) |
| CT 30 | SR 160 (River Road) | Walnut Grove Bridge | A St (Isleton) | | | TRANS-1b (1,275 max hourly trips) | TRANS-1b (1,275 max hourly trips) | TRANS-1b (1,275 max hourly trips) |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | | | TRANS-1b (1,362 max hourly trips) | TRANS-1b (1,362 max hourly trips) | TRANS-1b (1,362 max hourly trips) |
| CT 32 | SR 160 | SR 12 | Brannan Island Road | TRANS-1b (avoid 6-7AM & 3-6PM) | TRANS-1b (avoid 6-10AM & 2-7PM) | TRANS-1b (814 max hourly trips) | TRANS-1b (814 max hourly trips) | TRANS-1b (814 max hourly trips) |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Road | TRANS-1b (92 max hourly trips between 6-8AM, 9AM-5PM, & 6-7PM; avoid 8-9AM & 5-6PM) | TRANS-1b (92 max hourly trips between 6-8AM, 9AM-5PM, & 6-7PM; avoid 8-9AM & 5-6PM) | TRANS-1b (101 max hourly trips between 6-8AM, 9AM-5PM, & 6-7PM; avoid 8-9AM & 5-6PM) | TRANS-1b (101 max hourly trips between 6-8AM, 9AM-5PM, & 6-7PM; avoid 8-9AM & 5-6PM) | TRANS-1b (101 max hourly trips between 6-8AM, 9AM-5PM, & 6-7PM; avoid 8-9AM & 5-6PM) |
| CT 34 | SR 84 (Courtland Road/ Ryer Ave) | Courtland Road | Cache Slough Ferry | | | | | |
| CT 35 | I-80 EB | Suisun Valley Road | SR 12 | TRANS-1b (avoid 3-6PM) | TRANS-1b (avoid 3-6PM) | TRANS-1b (avoid 3-6PM) | TRANS-1b (avoid 2-6PM) | TRANS-1b (avoid 2-7PM) |
| CT 36 | I-80 WB | Suisun Valley Road | SR 12 | TRANS-1b (421 max hourly trips between 10AM-2PM; & 6-7PM; avoid 6-10AM & 2-6 PM) | TRANS-1b (avoid 6-10AM & 1-6PM) | TRANS-1b (801 max hourly trips between 9AM-3PM; & 6-7PM; avoid 6-9 AM & 3-6 PM) | TRANS-1b (801 max hourly trips between 9AM-3PM; & 6-7PM; avoid 6-9 AM & 3-6 PM) | TRANS-1b (801 max hourly trips between 9AM-3PM; & 6-7PM; avoid 6-9 AM & 3-6 PM) |
| CT 37 | SR 12 EB | I-80 | Beck Ave | | TRANS-1b (avoid 5-7PM) | TRANS-1b (737 max hourly trips) | TRANS-1b (avoid 11AM-7PM) | TRANS-1b (737 max hourly trips) |
| CT 38 | SR 12 WB | I-80 | Beck Ave | | | TRANS-1b (avoid 6-8AM) | TRANS-1b (avoid 6-10AM) | TRANS-1b (995 max hourly trips) |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/Grizzly Island Road | TRANS-1b (avoid 4-6PM) | TRANS-1b (avoid 3-6PM) | TRANS-1b (946 max hourly trips) | TRANS-1b (946 max hourly trips) | TRANS-1b (946 max hourly trips) |
| CT 40 | SR 12 | Sunset Ave/ Grizzly Island Road | Walters Road/ Lawler Ranch Pkwy | | | | TRANS-1b (2,331 max hourly trips; avoid 6-9AM & 10AM-7PM) | TRANS-1b (2,331 max hourly trips) |
| CT 41 | SR 12 | Walters Road/ Lawler Ranch Pkwy | SR 113 | TRANS-1c | TRANS-1c | TRANS-1c | TRANS-1c | TRANS-1c |
| CT 42 | SR 12 | SR 113 | SR 84 (River Road) | TRANS-1c | TRANS-1c | TRANS-1c | TRANS-1c | TRANS-1c |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Road) | SR 160 (River Road) | TRANS-1c | TRANS-1c | TRANS-1c | TRANS-1c | TRANS-1c |

| Segment ID* | Segment | From | To | Applicable Mitigation Measures in Addition to TRANS-1a (Time period for construction traffic to avoid and Maximum number of hourly construction trips, if applicable) ^a | | | | |
|-------------|----------------------------|--------------------------------|--------------------------------|---|--|--|--|--|
| | | | | Pipeline/Tunnel- Alternatives 1A, 2A, 3, 5, 6A, 7, and 8 | Modified Pipeline/Tunnel- Alternative 4 | East Alignment- Alternatives 1B, 2B, and 6B | West Alignment- Alternatives 1C, 2C, and 6C | Through Delta/Separate Corridors- Alternative 9 |
| CT 44 | SR 12 | SR 160 (River Road) | Sacramento Co./ SJ Co. Line | TRANS-1c | TRANS-1c | TRANS-1c | TRANS-1c | TRANS-1c |
| CT 45 | SR 12 | Sacramento Co./ SJ Co. Line | I-5 | TRANS-1c | TRANS-1c | TRANS-1c | TRANS-1c | TRANS-1c |
| CT 46 | I-80 EB | SR 113 | Pedrick Road | TRANS-1b (avoid 7-9AM & 1-6PM) | TRANS-1b (avoid 7-9AM & 1-6PM) | TRANS-1b (avoid 7-8AM & 2-6PM) | TRANS-1b (avoid 7-8AM & 2-6PM) | TRANS-1b (664 max hourly trips between 6-7AM; 9AM-2PM; & 6-7PM; avoid 7-9 AM & 2-6 PM) |
| CT 47 | I-80 WB | Pedrick Road | SR 113 | TRANS-1b (avoid 6-9AM & 3-6PM) | TRANS-1b (avoid 6-9AM & 3-6PM) | TRANS-1b (avoid 7-8AM & 3-6PM) | TRANS-1b (avoid 6-8AM & 3-6PM) | TRANS-1b (457 max hourly trips between 6-7AM; 8AM-3PM; & 6-7PM; avoid 7-8AM & 3-6PM) |
| CT 48 | SR 113 | I-80 | Dixon City Limits | | TRANS-1b (avoid 5-6PM) | TRANS-1b (avoid 4-6PM) | TRANS-1b (579 max hourly trips; avoid 7-9AM & 10AM-7PM) | TRANS-1b (579 max hourly trips) |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | TRANS-1b (315 max hourly trips) | TRANS-1b (315 max hourly trips) | TRANS-1b (362 max hourly trips) | TRANS-1b (362 max hourly trips) | TRANS-1b (362 max hourly trips) |
| CT 50 | SR 4 (Marsh Creek Road) | Vasco Road | Byron Hwy (Old SR 4) | TRANS-1b (101 max hourly trips between 6-7AM; & 9AM-3PM; avoid 7-9AM & 3-7PM) | TRANS-1b (101 max hourly trips between 6-7AM; & 9AM-3PM; avoid 7-9AM & 3-7PM) | TRANS-1b (115 max hourly trips between 6AM-4PM & 6-7PM; avoid 4-6PM) | TRANS-1b (115 max hourly trips between 6AM-4PM & 6-7PM; avoid 4-6PM) | TRANS-1b (115 max hourly trips between 6AM-4PM & 6-7PM; avoid 4-6PM) |
| CT 51 | SR 4 | Marsh Creek Road | Discovery Bay Blvd | TRANS-1b (314 max hourly trips between 6AM-3PM & 6-7PM; avoid 3-6PM) | TRANS-1b (314 max hourly trips between 6AM-3PM & 6-7PM; avoid 3-6PM) | TRANS-1b (273 max hourly trips) | TRANS-1b (273 max hourly trips) | TRANS-1b (273 max hourly trips) |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | TRANS-1b (174 max hourly trips between 6AM-3PM & 6-7PM; avoid 3-6PM) | TRANS-1b (174 max hourly trips between 6AM-3PM & 6-7PM; avoid 3-6PM) | TRANS-1b (174 max hourly trips between 6AM-3PM & 6-7PM; avoid 3-6PM) | TRANS-1b (174 max hourly trips between 6AM-3PM & 6-7PM; avoid 3-6PM) | TRANS-1b (174 max hourly trips between 6AM-3PM & 6-7PM; avoid 3-6PM) |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | TRANS-1b (161 max hourly trips between 6AM-3PM & 6-7PM; avoid 3-6PM) | TRANS-1b (161 max hourly trips between 6AM-3PM & 6-7PM; avoid 3-6PM) | TRANS-1b (161 max hourly trips between 6AM-3PM & 6-7PM; avoid 3-6PM) | TRANS-1b (161 max hourly trips between 6AM-3PM & 6-7PM; avoid 3-6PM) | TRANS-1b (161 max hourly trips between 6AM-3PM & 6-7PM; avoid 3-6PM) |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | | | | | |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | TRANS-1b (avoid 7-8AM; 2-3PM; & 4-6PM) ^b | TRANS-1b (avoid 7-8AM; 2-6PM) ^b | | | TRANS-1b (959 max hourly trips between 6-7AM, 8AM-4PM, & 6-7PM; avoid 7-8AM & 4-6PM) ^b |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | TRANS-1b (avoid 2-6PM) ^b | TRANS-1b (avoid 2-6PM) ^b | TRANS-1b (avoid 3-6PM) ^b | TRANS-1b (avoid 3-6PM) ^b | TRANS-1b (avoid 1-6PM) ^b |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | TRANS-1c ^b | TRANS-1c ^b | TRANS-1c ^b | TRANS-1c ^b | TRANS-1c ^b |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | TRANS-1b (avoid 2-7PM) | TRANS-1b (avoid 2-7PM) | TRANS-1b (avoid 3-7PM) | TRANS-1b (avoid 2-7PM) | TRANS-1b (avoid 2-7PM) |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | TRANS-1b (avoid 6-9AM) | TRANS-1b (avoid 6-9AM) | TRANS-1b (avoid 6-9AM) | TRANS-1b (avoid 6-9AM) | TRANS-1b (avoid 6-10AM) |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | TRANS-1b (avoid 2-7PM) | TRANS-1b (avoid 2-7PM) | TRANS-1b (avoid 2-7PM) | TRANS-1b (avoid 2-7PM) | TRANS-1b (avoid 2-7PM) |
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | TRANS-1b (avoid 6-9AM) | TRANS-1b (avoid 6-9AM) | TRANS-1b (avoid 6-7AM) | TRANS-1b (avoid 6-8AM) | TRANS-1b (avoid 6-9AM) |
| CT 62 | I-205 EB | Grant Line Road | Tracy Blvd | | | | | |
| CT 63 | I-205 WB | Grant Line Road | Tracy Blvd | | | | | |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | | | | | |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | | | | | |

| Segment ID* | Segment | From | To | Applicable Mitigation Measures in Addition to TRANS-1a (Time period for construction traffic to avoid and Maximum number of hourly construction trips, if applicable) ^a | | | | |
|-------------|------------------------------------|---|---------------------------------------|---|--|--|---|---|
| | | | | Pipeline/Tunnel- Alternatives 1A, 2A, 3, 5, 6A, 7, and 8 | Modified Pipeline/Tunnel- Alternative 4 | East Alignment- Alternatives 1B, 2B, and 6B | West Alignment- Alternatives 1C, 2C, and 6C | Through Delta/Separate Corridors- Alternative 9 |
| ISL 01 | A St/4th St/ Jackson Blvd. | SR 160 | Isleton City Limits | | | | | |
| OAK 01 | Main St (old SR 4) | SR 160 | Cypress Road | | | | | TRANS-1b (1,781 max hourly trips) |
| OAK 02 | Main St (old SR 4) | Cypress Road | Delta Road (Oakley City Limits) | TRANS-1b (190 max hourly trips between 6-8AM; 9AM-2PM;& 4-7PM; avoid 8-9AM & 2-4PM) | TRANS-1b (190 max hourly trips between 6-8AM, 9AM-2PM, & 4-7PM; avoid 8-9AM & 2-4PM) | TRANS-1b (avoid 8-9AM; 2-6PM) | TRANS-1b (238 max hourly trips) | TRANS-1b (238 max hourly trips) |
| OAK 03 | Cypress Road | Main St (Old SR 4) | Bethel Island Road | | | | | |
| OAK 04 | Bethel Island Road | Cypress Road | Oakley City Limits | | | | | |
| OAK 05 | Delta Road | Main St (Old SR 4) | Byron Hwy | | | | | |
| SAC 01 | Pocket Road | I-5 | Freeport Blvd (Old SR 160) | | | | TRANS-1b (avoid 8-9AM; 2-6PM or max 1,349 hourly trips) | |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Road | Sacramento City Limits | | | | TRANS-1b (1,229 max hourly trips) | |
| SC 01 | Freeport Bridge | River Road | SR 160 (Freeport Blvd) | | | | TRANS-1b (1,039 max hourly trips) | |
| SC 02 | Hood Franklin Road | SR 160 (River Road) | I-5 | | | TRANS-1b (1,268 max hourly trips) | | |
| SC 03 | Lambert Road | SR 160 (River Road) | Herzog Road | | | | | |
| SC 04 | Lambert Road | Herzog Road | Franklin Blvd | | | | | |
| SC 05 | Franklin Blvd | Lambert Road | Twin Cities Road | | | | | |
| SC 06 | Twin Cities Road | River Road | I-5 | | | | TRANS-1b (1,157 max hourly trips) | |
| SC 07 | Twin Cities Road | I-5 | Franklin Blvd | | | | | |
| SC 08 | Sutter Slough Bridge Road | Sacramento Co./Yolo Co. Line | Paintersville Bridge | | | | TRANS-1b (1,288 max hourly trips) | TRANS-1b (1,288 max hourly trips) |
| SC 09 | River Road (Sac Co.) | Paintersville Bridge | Twin Cities Road | | | | | |
| SC 10 | River Road (Sac Co.) | Twin Cities Road | Walnut Grove Bridge | | | | | |
| SC 11 | Walnut Grove Road/River Road | Walnut Grove Bridge | Sacramento Co./SJ Co. Line | | | | TRANS-1b (1,070 max hourly trips) | |
| SC 12 | Isleton Road | River Road (Walnut Grove)/Isleton Road Bridge | 1.5 miles west of Isleton Road Bridge | | | | | |
| SC 13 | Race Track Road/ Tyler Island Road | Walnut Grove Road | Southern End of Tyler Island | | | | | |
| SC 14 | Tyler Island Road | Southern End of Tyler Island | SR 160 (River Road) | | | | | |
| SC 15 | Jackson Slough Road | Isleton City Limits | SR 12 | | | | | |
| SC 16 | Jackson Slough Road | Brannan Island Road | SR 12 | | | | | |
| SJ 01 | Walnut Grove Road | Sacramento Co./ SJ Co. Line | I-5 | | | | TRANS-1b (552 max hourly trips) | TRANS-1b (551 max hourly trips) |
| SJ 02 | Peltier Road | Blossom Road | I-5 | | | | | |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Road | | | TRANS-1b (581 max hourly trips) | | TRANS-1b (581 max hourly trips) |

| Segment ID* | Segment | From | To | Applicable Mitigation Measures in Addition to TRANS-1a (Time period for construction traffic to avoid and Maximum number of hourly construction trips, if applicable) ^a | | | | |
|-------------|--|--------------------------------------|-------------------------------|---|--|--|--|--|
| | | | | Pipeline/Tunnel- Alternatives 1A, 2A, 3, 5, 6A, 7, and 8 | Modified Pipeline/Tunnel- Alternative 4 | East Alignment- Alternatives 1B, 2B, and 6B | West Alignment- Alternatives 1C, 2C, and 6C | Through Delta/Separate Corridors- Alternative 9 |
| SJ 04 | Tracy Blvd | Clifton Court Road | Tracy City Limits | | | TRANS-1b (605 max hourly trips) | | TRANS-1b (612 max hourly trips) |
| SJ 05 | Byron Hwy | Alameda Co./ San Joaquin Co. Line | Mountain House Pkwy | | TRANS-1b (avoid 7-8AM) | | TRANS-1b (710 max hourly trips) | TRANS-1b (710 max hourly trips) |
| SJ 06 | Mountain House Pkwy | Byron Hwy | Arnaudo Blvd | | | | | TRANS-1b (1,088 max hourly trips) |
| SJ 07 | Mountain House Pkwy | Arnaudo Blvd | I-205 | | | | | |
| STK 01 | Eight Mile Road | Stockton City Limits | I-5 | | | | | |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | | | | | TRANS-1b (1,081 max hourly trips) |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | | | | TRANS-1b (1,064 max hourly trips; avoid 7-10AM; 12-7PM) | TRANS-1b (1,064 max hourly trips) |
| WS 02 | Industrial Blvd/ Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | TRANS-1b (387 max hourly trips between 6-7AM; & 9AM-4PM; avoid 7-9AM & 4-7PM) | TRANS-1b (avoid 7-9AM & 12-7PM) | TRANS-1b (avoid 7-8AM; 4-6PM) | TRANS-1b (372 max hourly trips between 6-7 AM, 9AM-5PM, & 6-7PM; avoid 7-9AM & 5-6PM) | TRANS-1b (372 max hourly trips between 6-7 AM, 9AM-5PM, & 6-7PM; avoid 7-9AM & 5-6PM) |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | TRANS-1b (623 max hourly trips between 6-7AM; & 9AM-3PM; avoid 8-9AM & 3-7PM) | TRANS-1b (avoid 7-9AM & 3-7PM) | TRANS-1b (avoid 8-9AM & 4-6PM) | TRANS-1b (307 max hourly trips between 6AM-5PM, & 6-7PM; avoid 5-6PM) | TRANS-1b (380 max hourly trips between 6-8 AM, 9AM-5PM, & 6-7PM; avoid 8-9AM & 5-6PM) |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | TRANS-1b (avoid 7-9AM; 2-3PM; & 4-6PM) | TRANS-1b (avoid 7-9AM & 2-6PM) | | TRANS-1b (525 max hourly trips) | TRANS-1b (525 max hourly trips) |
| YOL 01 | River Road (Yolo Co.) | Freeport Bridge | Courtland Road | | | | TRANS-1b (426 max hourly trips) | |
| YOL 02 | River Road (Yolo Co.) | Courtland Road | Sacramento Co./Yolo Co. Line | | | | TRANS-1b (612 max hourly trips) | TRANS-1b (612 max hourly trips) |
| YOL 03 | Courtland Road | SR 84 (Jefferson Blvd) | River Road | | | | TRANS-1b (597 max hourly trips) | TRANS-1b (597 max hourly trips) |

* Segment IDs correspond to the roadway segment IDs shown on Figures 19-2a through 19-2c.

^a For Mitigation Measure TRANS-1b, the maximum number of hourly construction trips is shown in parentheses within the specified time period, if applicable. If only a time period is shown, that time period is to be avoided.

^b I-5 North Stockton Widening is currently under construction and would eliminate the operational impact at CT 55, 56, and 57 if it is completed prior to BDCP construction.

1
2

1 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 2 **Agreements to Enhance Capacity of Congested Roadway Segments**

3 Prior to commencement of construction activities substantially affecting transportation
 4 facilities, the BDCP proponents will make a good faith effort to enter into mitigation agreements
 5 with affected state, regional, or local agencies (“affected agencies”) to verify the location, extent,
 6 timing, and fair share cost to be paid for capacity enhancements to the identified roadway
 7 segments specified in Table 19-9.

8 Implementation of this measure is intended to provide funding from BDCP proponents sufficient
 9 to provide their fair share of the cost of capacity expansion so that traffic operating conditions
 10 (i.e., LOS) on study area roadways do not operate at a level of service or delay that is worse than
 11 the pre-project conditions (to the extent feasible in light of costs, logistics, and other factors).
 12 The BDCP proponents will include in the bid specifications requirements that the contractor(s)
 13 ensure that all enhancements are conducted in compliance with applicable standards of affected
 14 agencies and with any applicable mitigation agreements, as described below.

15 In attempting in good faith to enter into mitigation agreements with affected agencies, BDCP
 16 proponents shall be guided by the following principles. The BDCP proponents shall be
 17 responsible for their fair share costs of all feasible capacity-expanding physical improvements
 18 jointly determined by BDCP proponents and the affected agencies to be necessary, feasible, and
 19 available to reduce the severity of the BDCP’s significant construction-related transportation
 20 impacts. Fair share calculations shall account not only for traffic levels as they existed at the
 21 time of the public release of the BDCP Draft EIR/EIS, but also for “background growth” between
 22 that time frame and the commencement of BDCP construction activities, as well as any probable
 23 future projects in the affected agency or neighboring agencies that will likely contribute to the
 24 need for, and directly benefit from, increased capacity.

25 The BDCP proponents’ contribution toward such improvements may take any, or some
 26 combination, of the following forms:

- 27 1. Construction of improvements, which may be subject to fee credits and/or reimbursement,
 28 coordinated by the affected agency, from other fee-paying development projects if available
 29 with respect to improvements that would also benefit such fee-paying development
 30 projects;
- 31 1) 2. The payment of impact fees to the affected agency in amounts that constitute
 32 the BDCP proponents’ fair share contributions to the construction of the required
 33 improvements, consistent with the affected agency’s Capital Improvement Program
 34 (“CIP”) or other funding program that meets the definition of a “reasonable plan for
 35 mitigation” under CEQA case law (i.e., a plan that ensures that (i) the fees collected from
 36 the BDCP proponents will be used for their intended purposes, and (ii) the
 37 improvements will actually be built within a reasonable period of time);
- 38 2) 3. The payment of adopted regional impact fees that would provide funding for
 39 transportation facilities that are affected by multiple agencies, except where the BDCP
 40 proponents’ payments of other fees or construction of improvements within the affected
 41 agency will create credit against the payment of regional impact fees;

- 1 3) 4. The payment of impact fees to the affected agency in amounts that constitute
 2 the BDCP proponents' fair share contributions to the construction of improvements
 3 within other agencies and not the affected agency, which payments to the affected
 4 agency and transmittal of fees to other agency would occur through one or more
 5 enforceable agreements, provided that for each required improvement there is a
 6 reasonable plan for mitigation that ensures that (i) the fees collected from the BDCP
 7 proponents will be used for their intended purposes, and (ii) the improvements will
 8 actually be built within a reasonable period of time; and/or
- 9 4) 5. The payment of impact fees to the California Department of Transportation
 10 ("Caltrans") in amounts that constitute the BDCP proponents' fair share contributions to
 11 the construction of improvements on federal or state highways or freeways needed in
 12 part because of the BDCP, to be made available to Caltrans if and when Caltrans, DWR,
 13 and any other the affected agency enter into an enforceable agreement consistent with
 14 state law, provided that, for each required improvement, Caltrans has a reasonable
 15 mitigation plan that ensures that (i) the fees collected from the BDCP proponents will be
 16 used for their intended purposes, and (ii) the improvements will actually be built within
 17 a reasonable period of time.

18 In order to obtain the most fair, accurate, and up-to-date calculations of the BDCP proponents'
 19 fair share of the costs of required improvements, the agreement(s) reached between BDCP
 20 proponents and the affected agency or agencies shall also provide for the following: (i) that the
 21 traffic models to be used be operated by transportation consultant mutually acceptable to both
 22 BDCP proponents and the affected agency or agencies; and (ii) that the calculations account for
 23 (A) newly approved projects cumulatively that contribute to transportation-related impacts and
 24 that therefore should contribute to the funding of necessary improvements, and (B) up-to-date
 25 cost calculations for the construction of needed improvements based on recent changes in the
 26 costs of materials, labor, and other inputs.

27 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement** 28 **Conditions**

29 **NEPA Effects:** Construction truck traffic may damage roadway surfaces. During construction,
 30 various materials would be transported to and from the construction areas in load-bearing trucks.
 31 As shown in Table 19-10, construction of Alternative 1A would contribute to further deterioration of
 32 the existing pavement condition, to less than the acceptable PCI or similar applicable threshold (see
 33 Table 19-7), on a total of **43** roadway segments (see table entries in **bold type**). Figure 19-4 shows
 34 all of the study roadway segments that could experience substantial pavement condition effects.

1 **Table 19-10. Pavement Conditions for Pipeline/Tunnel Alternatives (1A, 2A, 3, 5, 6A, 7, and 8)**

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPGPP Conditions | |
|--------------|---------------------------|--------------------------------------|---|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| ALA 01 | Byron Hwy | Contra Costa Co./ Alameda Co. Line | Alameda Co./ San Joaquin Co. Line | Acceptable | Yes | No |
| BRE 01 | Brentwood Blvd (old SR 4) | Delta Rd (Oakley City Limits) | Balfour Rd | Acceptable | Yes | No |
| BRE 02 | Brentwood Blvd (old SR 4) | Balfour Rd | Brentwood City Limits (South) | Acceptable | Yes | No |
| BRE 03 | Balfour Rd | Brentwood Blvd (Old SR 4) | Brentwood City Limits | Acceptable | No | No |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | Deficient | No | No |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | Deficient | No | No |
| CC 03 | Old SR 4 | Brentwood City Limits (South) | Marsh Creek Rd | Deficient | Yes | Yes |
| CC 04 | Byron Hwy | Delta Rd | Old SR 4 | Acceptable | No | No |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./ Alameda Co. Line | Deficient | Yes | Yes |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | Deficient | Yes | Yes |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | Deficient | Yes | Yes |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | Deficient | No | No |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | Deficient | No | No |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | Deficient | No | No |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | Deficient | No | No |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | Acceptable | Yes | No |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | Acceptable | Yes | No |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | Deficient | Yes | Yes |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | Deficient | Yes | Yes |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | Deficient | Yes | Yes |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | Acceptable | Yes | No |
| CT 13 | I-5 NB | Walnut Grove Rd | Peltier Rd | Acceptable | Yes | No |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | Acceptable | Yes | No |
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | Acceptable | No | No |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | Acceptable | No | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPBGPP Conditions | |
|--------------|--|-------------------------------------|------------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| CT 17 | I-5 NB | Turner Rd | SR 12 | Acceptable | Yes | No |
| CT 18 | I-5 SB | Turner Rd | SR 12 | Acceptable | Yes | No |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | Deficient | Yes | Yes |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | Acceptable | Yes | No |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | Deficient | No | No |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | Acceptable | No | No |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | Deficient | Yes | Yes |
| CT 24 | SR 160 (Freeport Blvd/River Rd) | Freeport Bridge | Scribner Rd | Deficient | Yes | Yes |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | Deficient | Yes | Yes |
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | Deficient | Yes | Yes |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | Deficient | Yes | Yes |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | Not Applicable | Yes | No |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | Acceptable | Yes | No |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | Deficient | Yes | Yes |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | Deficient | Yes | Yes |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | Deficient | Yes | Yes |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | Deficient | Yes | Yes |
| CT 34 | SR 84 (Courtland Rd/Ryer Ave) | Courtland Rd | Cache Slough Ferry | Deficient | No | No |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | Acceptable | Yes | No |
| CT 36 | I-80 WB | SR 12 | Suisun Valley Rd | Acceptable | Yes | No |
| CT 37 | SR 12 EB | I-80 | Beck Ave | Acceptable | Yes | No |
| CT 38 | SR 12 WB | Beck Ave | I-80 | Acceptable | Yes | No |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/Grizzly Island Rd | Acceptable | Yes | No |
| CT 40 | SR 12 | Sunset Ave/Grizzly Island Rd | Walters Rd/Lawler Ranch Pkwy | Acceptable | Yes | No |
| CT 41 | SR 12 | Walters Rd/Lawler Ranch Pkwy | SR 113 | Deficient | Yes | Yes |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | Deficient | Yes | Yes |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPBGPP Conditions | |
|---------------|-------------------------------|-----------------------------------|--------------------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | Not Applicable | Yes | No |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./SJ Co. Line | Deficient | Yes | Yes |
| CT 45 | SR 12 | Sacramento Co./SJ Co. Line | I-5 | Deficient | Yes | Yes |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | Deficient | Yes | Yes |
| CT 47 | I-80 WB | Pedrick Rd | SR 113 | Acceptable | Yes | No |
| CT 48 | SR 113 | I-80 | Dixon City Limits | Acceptable | Yes | No |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | Deficient | Yes | Yes |
| CT 50 | SR 4 (Marsh Creek Rd) | Vasco Rd | Byron Hwy (Old SR 4) | Acceptable | Yes | No |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | Deficient | Yes | Yes |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | Deficient | Yes | Yes |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | Deficient | Yes | Yes |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | Deficient | Yes | Yes |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | Deficient | Yes | Yes |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | Acceptable | Yes | No |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | Acceptable | Yes | No |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | Acceptable | Yes | No |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | Acceptable | Yes | No |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | Acceptable | Yes | No |
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | Acceptable | Yes | No |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | Acceptable | Yes | No |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | Acceptable | Yes | No |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | Acceptable | Yes | No |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | Acceptable | Yes | No |
| ISL 01 | A St/4th St/Jackson Blvd. | SR 160 | Isleton City Limits | Deficient | No | No |
| OAK 01 | Main Street (Old SR 4) | SR 160 | Cypress Rd | Deficient | Yes | Yes |
| OAK 02 | Main Street (Old SR 4) | Cypress Rd | Delta Rd (Oakley City Limits) | Deficient | Yes | Yes |
| OAK 03 | Cypress Rd | Main Street (Old SR 4) | Bethel Island Rd | Acceptable | No | No |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | Deficient | No | No |
| OAK 05 | Delta Rd | Main Street (Old SR 4) | Byron Hwy | Deficient | No | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPBGPP Conditions | |
|---------------|--------------------------------------|---|-------------------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | Deficient | Yes | Yes |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | Acceptable | Yes | No |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | Not Applicable | No | No |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | Deficient | Yes | Yes |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | Acceptable | Yes | No |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | Deficient | Yes | Yes |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | Deficient | No | No |
| SC 06 | Twin Cities Rd | River Rd | I-5 | Acceptable | Yes | No |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | Deficient | No | No |
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./Yolo Co. Line | Paintersville Bridge | Deficient | Yes | Yes |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | Deficient | Yes | Yes |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | Deficient | Yes | Yes |
| SC 11 | Walnut Grove Rd/River Rd | Walnut Grove Bridge | Sacramento Co./SJ Co. Line | Acceptable | Yes | No |
| SC 12 | Isleton Rd | River Rd (Walnut Grove)/Isleton Rd Bridge | 1.5 miles west of Isleton Rd Bridge | Acceptable | Yes | No |
| SC 13 | Race Track Rd/Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | Deficient | Yes | Yes |
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | Deficient | No | No |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | Acceptable | No | No |
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | Acceptable | No | No |
| SJ 01 | Walnut Grove Rd | Sacramento Co./SJ Co. Line | I-5 | Deficient | Yes | Yes |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | Deficient | No | No |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | Acceptable | Yes | No |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | Acceptable | Yes | No |
| SJ 05 | Byron Hwy | Alameda Co./San Joaquin Co. Line | Mountain House Pkwy | Acceptable | Yes | No |
| SJ 06 | Mountain House Pkwy | Byron Hwy | Arnaudo Blvd | Acceptable | Yes | No |
| SJ 07 | Mountain House Pkwy | Arnaudo Blvd | I-205 | Acceptable | Yes | No |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | Deficient | No | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPBGPP Conditions | |
|---------------|--|-------------------------------|--|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | Deficient | Yes | Yes |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | Acceptable | Yes | No |
| WS 02 | Industrial Blvd/ Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | Acceptable | Yes | No |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | Deficient | Yes | Yes |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | Deficient | Yes | Yes |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | Deficient | No | No |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./ Yolo Co. Line | Deficient | Yes | Yes |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | Deficient | Yes | Yes |

Source: Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*

* Segment IDs correspond to the roadway segment IDs shown on Figures 19-2a through 19-2c.

1 As shown in Table 19-10, construction during Alternative 1A would contribute to substantial
 2 deterioration of pavement conditions of 43 roadway segments that would exceed applicable
 3 thresholds summarized in Table 19-7. Damage to roadway pavement is expected throughout the
 4 study area (Figure 19-4) on various local and state roads, as well as on a few interstates. The effect
 5 of roadway damage to these segments during construction would be adverse. Mitigation Measures
 6 TRANS-2a through TRANS-2c are available to reduce this effect, but not necessarily to a level that
 7 would not be adverse, as the BDCP proponents cannot ensure that the agreements or encroachment
 8 permits will be obtained from the relevant transportation agencies. If an agreement or
 9 encroachment permit is not obtained, an adverse effect in the form of deficient pavement conditions
 10 would occur. Accordingly, this effect could remain adverse. If, however, mitigation agreement(s) or
 11 encroachment permit(s) providing for the improvement or replacement of pavement are obtained
 12 and any other necessary agreements are completed, adverse effects could be avoided. Collectively,
 13 these measures include stipulations to limit/prohibit construction activity on deficient roadways
 14 and improve the physical condition of affected segments.

15 **CEQA Conclusion:** Construction traffic would result in a significant impact to pavement conditions.
 16 As shown in Table 19-10, construction would add trips, exacerbating unacceptable pavement
 17 conditions to below acceptable thresholds (Table 19-7) at the 43 locations shown. Mitigation
 18 Measures TRANS-2a through TRANS-2c would reduce the severity of this impact, but not necessarily
 19 to less-than-significant levels, as the BDCP proponents cannot ensure that the agreements or
 20 encroachment permits will be obtained from the relevant transportation agencies. If an agreement
 21 or encroachment permit is not obtained, a significant impact in the form of deficient pavement
 22 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 23 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 24 of pavement are obtained and any other necessary agreements are completed, impacts would be
 25 reduced to less than significant.

26 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 27 **Roadway Segments**

28 The BDCP proponents will, to the extent feasible include in the bid specifications prohibitions
 29 against construction traffic from using roadway segments with pavement conditions below the
 30 thresholds identified in this study (i.e., an IRI rating greater than 170 or a PCI rating worse than
 31 55). Implementation of this measure would prohibit all construction traffic on the physically
 32 deficient roadway segments listed in Table 19-10, if feasible.

33 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 34 **Roadway Segments**

35 If complete avoidance of physically deficient roadway segments as described in Mitigation
 36 Measure TRANS-2a is not feasible, construction activity will be limited to the extent feasible on
 37 the deficient roadways identified in Table 19-10. Implementation of this measure will reduce
 38 continuing deterioration of pavement conditions on the most damaged roadways in the study
 39 area. The BDCP proponents will include in the bid specifications requirements that limit the
 40 amount of construction traffic on roadway segments with pavement conditions below the
 41 thresholds identified in this study (i.e., an IRI rating greater than 170 or a PCI rating worse than
 42 55), if feasible. Trucks would be prohibited and construction traffic would be limited to

1 passenger vehicles on travel routes with pavement conditions worse than the thresholds
2 identified in this study (i.e., an IRI rating greater than 170 or a PCI rating worse than 55).

3 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments** 4 **as Stipulated in Mitigation Agreements or Encroachment Permits**

5 If use of physically deficient roadways cannot be avoided or limited as specified in Mitigation
6 Measures TRANS-2a and TRANS-2b, it may be necessary to improve the deficient roadways
7 identified in Table 19-10 or make other necessary infrastructure improvements, if any, before
8 construction to make them suitable for use during construction. Additionally, all affected
9 roadways would be returned to preconstruction condition or better following construction.
10 Implementation of this measure will ensure that construction activities will not worsen
11 pavement conditions, relative to Existing Conditions.

12 Prior to construction, the BDCP proponents will make a good faith effort to enter into mitigation
13 agreements with or to obtain encroachment permits from affected agencies to verify what the
14 location, extent, timing, and fair share cost to be paid by the BDCP proponents for any necessary
15 pre- and post-construction physical improvements. The fair share amount would be either the
16 cost to return the affected roadway segment to its preconstruction condition or a contribution to
17 programmed planned improvements. Repairs may occur before or after construction and may
18 include overlays, other surface treatments, or roadway reconstruction. The flood protection
19 benefits of roadways will also be considered in developing and implementing activities pursuant
20 to this measure.

21 Pre-construction analyses of existing pavement conditions will be conducted just prior to
22 starting construction for any proposed construction traffic travel routes. The preconstruction
23 pavement analysis will establish the baseline for required improvements and will be based on
24 the PCI or IRI methodologies described in this EIR/EIS or an equivalent method as agreed to by
25 the BDCP proponents and the affected agencies. Relevant flood protection agencies will also be
26 consulted during the design of roadway improvements.

27 The BDCP proponents will include in the bid specifications stipulations that require the
28 contractor(s) to conduct the pre-construction pavement analysis and conduct all improvements
29 in compliance with applicable standards of affected agencies, as stipulated in the mitigation
30 agreements or encroachment permits.

31 It is not anticipated that project construction could cause the need for major transportation
32 infrastructure improvements, such as the need to upgrade or repair existing bridges or the need
33 to construct new highway interchanges. To the extent that construction activities could cause
34 the need for such major transportation infrastructure improvements, the BDCP proponents
35 retain the flexibility to seek alternative means of transporting people, equipment, and materials
36 to construction sites, such as via barges, to avoid the need for such major infrastructure
37 improvements, if any.

38 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes** 39 **during Construction**

40 **NEPA Effects:** Alternative 1A would require a heavy volume of materials to be hauled to the
41 construction work zones, increasing the number of trucks using the transportation system in the
42 study area. The increase in heavy construction traffic on local roadways would increase the

1 potential for safety hazards such as conflicts with recreational and commuter traffic and with
 2 farming operations. The increase in heavy construction traffic using emergency routes could result
 3 in interference with emergency service response times. Emergency routes in the study area are
 4 identified in Table 19-11.

5 **Table 19-11. Emergency Routes in the Study Area, by County**

| County | Designated Emergency Routes |
|--------------|---|
| Alameda | None identified |
| Contra Costa | Emergency routes are designated at the time of emergency by staff in the Emergency Operations Center in conjunction with Emergency Services |
| Sacramento | I-5, I-80, SR 50, SR 99, SR 160 |
| San Joaquin | I-5, SR 4, SR 12, SR 26, SR 88, SR 99, SR 120 |
| Solano | Emergency routes are designated at the time of emergency by staff in the Emergency Operations Center in conjunction with Emergency Services |
| Yolo | I-5, I-80, SR 84, SR 113, County Road 22, County Road 98 |

Sources: Sacramento County 2008, San Joaquin County 1992, Solano County 2008, County of Yolo 2009.

6
 7 As discussed above and in Chapter 22, *Air Quality and Greenhouse Gases*, construction of Alternative
 8 1A would increase the amount of trucks using the transportation system in the study area. The effect
 9 of increased safety hazards from increased heavy construction traffic on local roadways and
 10 emergency routes identified in Table 19-11 would be adverse. Although TRANS-1c will reduce the
 11 severity of this effect, the BDCP proponents are not solely responsible for the timing, nature, or
 12 complete funding of required improvements. If an improvement identified in the mitigation
 13 agreement(s) is not fully funded and constructed before the project’s contribution to the effect is
 14 made, an adverse effect in the form of increased safety hazards would occur. Accordingly, this effect
 15 would be adverse. If, however, all improvements required to avoid adverse effects prove to be
 16 feasible and any necessary agreements are completed before the project’s contribution to the effect
 17 is made, effects would not be adverse.

18 **CEQA Conclusion:** Construction of Alternative 1A would increase the amount of trucks using the
 19 transportation system in the study area. This increase in heavy truck traffic could interfere with
 20 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
 21 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
 22 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 23 prior to the project’s contribution to the impact. If an improvement identified in the mitigation
 24 agreement(s) is not fully funded and constructed before the project’s contribution to the impact is
 25 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
 26 effect would be significant and unavoidable. If, however, all improvements required to avoid
 27 significant impacts prove to be feasible and any necessary agreements are completed before the
 28 project’s contribution to the effect is made, impacts would be less than significant.

29 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 30 **Agreements to Enhance Capacity of Congested Roadway Segments**

31 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

1 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

2 **NEPA Effects:** Under Alternative 1A, commercial barges would be used to transport construction
3 materials and equipment from the ports to temporary barge unloading facilities near construction
4 sites. The materials and equipment would then be unloaded and trucked to the construction sites.
5 Temporary barge unloading facilities for construction materials are planned at the following
6 locations.

- 7 • SR 160 west of Walnut Grove
- 8 • Venice Island
- 9 • Bacon Island
- 10 • Woodward Island
- 11 • Victoria Island
- 12 • Tyler Island

13 Approximately 3,000 barge trips are projected to carry construction materials from ports to the
14 sites listed above via the Sacramento River, averaging approximately 1 trip per day through a 9-
15 year-long construction period. Although barges are relatively slow and have less maneuverability
16 than smaller vessels, commercial barge operators on the Sacramento River are required to operate
17 in compliance with navigational guidelines. The majority of commercial barge activity in the Delta
18 travels from the San Francisco Bay to the Sacramento area via the SRDWSC (Delta Protection
19 Commission 2012).

20 Alternative 1A would avoid direct effects on this barge traffic because the alternative features would
21 be located along the Sacramento River (not the Deep Water Channel) and no modifications to the
22 Deep Water Channel would be required. The barge unloading facility by Venice Island would not be
23 expected to interfere with navigation to the Port of Stockton because it would be outside the main
24 channel and would be designed to facilitate barge operations. The barge unloading facilities would
25 be temporary and removed following construction. Increased barge traffic related to delivery of
26 materials to the alternative work site would average approximately 1 barge trip per day over the 9-
27 year-long construction period and is not anticipated to cause impediments to the passage of other
28 vessels. There is 135 feet of open air clearance at the Antioch UPRR bridge and 144 feet at the Rio
29 Vista bridge, and additional raising of draw bridges in the study area would not be required.

30 Although some in-water work would be necessary for intake construction, the Sacramento River
31 would remain open to boat traffic at all times during construction. The intake cofferdams would
32 extend into the river channel up to 120 feet, depending on location. The width of the river near the
33 intakes (approximately 500–700 feet) would therefore allow for passage of the types of boats
34 typically observed on the Sacramento River (channel width during construction 380–580 feet).
35 (Refer to Chapter 15, *Recreation*, for additional discussion of the effects of intake construction on
36 boating.).

37 This potential effect is not considered adverse because construction of Alternative 1A would not
38 require modification to existing deep water channels, interfere with Port of Stockton navigation, or
39 substantially increase the volume of barge movement within the study area, such that existing
40 marine traffic would be disrupted (on average, only 1 additional barge trip per day is expected
41 through the 9-year construction period). As noted in Chapter 15, *Recreation*, Impact REC-3,
42 temporary barge unloading facilities would occupy between 800 to 2,000 feet of riverbank,

1 depending on the location. Based on the river channel width, all barge facilities except the San
 2 Joaquin River facility could occupy substantial portions of the waterway. However, all barge routes
 3 and landing sites will be selected to maximize continuous waterway access and a minimum
 4 waterway width greater than 100 feet. Moreover, Mitigation Measure TRANS-1a would reduce any
 5 potential disruptions as it includes stipulations to notify the commercial and leisure boating
 6 community of proposed barge operations in the waterways.

7 **CEQA Conclusion:** Construction of Alternative 1A would not require modification to existing deep
 8 water channels, interfere with Port of Stockton navigation, or substantially increase the volume of
 9 barge movement within the study area such that existing marine traffic would be disrupted (on
 10 average, only 1 additional barge trip per day is expected through the 9-year construction period).
 11 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
 12 stipulations to notify the commercial and leisure boating community of proposed barge operations
 13 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would
 14 be less than significant. No additional mitigation is required.

15 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 16 **Plan**

17 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

18 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

19 **NEPA Effects:** The proposed Alternative 1A conveyance crosses under the existing BNSF/Amtrak
 20 San Joaquin line between Bacon Island and Woodward Island. Maintaining freight and passenger
 21 service on the BNSF line is included in the design, and the effect of this crossing would be minimal to
 22 non-existent because the proposed conveyance would traverse the railroad in a deep bore tunnel.

23 The Union Pacific Railroad (UPRR) Tracy Subdivision (branch line) runs parallel to Byron Highway,
 24 between the highway and the proposed new forebay (Byron Tract Forebay) adjacent to the existing
 25 Clifton Court Forebay. The construction impact of the new forebay would be unlikely to disrupt rail
 26 service because much of this line has not been in service recently. The UPRR may return it to freight
 27 service in the future. Table 19-12 identifies potentially affected railroads.

28 **Table 19-12. Construction Impacts on Rail Traffic for Pipeline/Tunnel Alternatives (1A, 2A, 3A, 5,**
 29 **6A, 7, and 8)**

| Affected Railroad | Crosses and/or Immediately Adjacent to Construction Zone | Level of Train Volume | Construction Impacts on Rail Traffic |
|--|--|-----------------------|--|
| BNSF Railway and Amtrak San Joaquin Line | Yes | High | Minimal to Non-Existent (conveyance crosses railroad well below grade in deep bore tunnel) |
| Union Pacific Railroad-- Tracy Subdivision | Yes | Low (Out of Service) | Minimal to Non-Existent |

30
 31 Construction of water conveyance facilities associated with BDCP would not physically cross or
 32 require modification to an existing or proposed railroad. Rather, the water conveyance will cross the

1 BNSF Railway and Amtrak San Joaquin Line well below grade in a deep bore tunnel. Accordingly,
 2 construction would not be likely to disrupt rail service. However, if the UPRR Tracy Subdivision
 3 branch line is reopened prior to construction, the continuity of rail traffic could be managed, if
 4 needed, through implementation of Mitigation Measure TRANS-1a, which includes stipulations to
 5 coordinate with rail providers (BNSF Railway, Amtrak, and UPRR) to develop alternative interim
 6 transportation modes (e.g., trucks or buses) that could be used to provide freight and/or passenger
 7 service during any longer term railroad closures and daily construction time windows during which
 8 construction would be restricted or rail operations would need to be suspended for any activity
 9 within railroad rights of way.

10 **CEQA Conclusion:** Construction of water conveyance facilities associated with BDCP would not
 11 physically cross or require modification to an existing or proposed railroad. Rather, the water
 12 conveyance will cross the BNSF Railway and Amtrak San Joaquin Line well below grade in a deep
 13 bore tunnel. Accordingly, construction would not be likely to disrupt rail service. However, if the
 14 UPRR Tracy Subdivision branch line is reopened prior to construction, traffic associated with of the
 15 Byron Tract forebay may minimally impact rail service through vehicle crossing. Implementation of
 16 Mitigation Measure TRANS-1a would ensure this impact remains less than significant.

17 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 18 **Plan**

19 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

20 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 21 **Agreements to Enhance Capacity of Congested Roadway Segments**

22 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

23 **Impact TRANS-6: Disruption of Transit Service during Construction**

24 **NEPA Effects:** Construction of conveyances and other project elements may affect various roadways
 25 upon which transit service operates. To the extent that construction detours are necessary and/or
 26 significant congestion occurs during lane closures and other construction activities, transit routes
 27 and schedules would be affected. Table 19-13 summarizes the transit service potentially affected by
 28 Alternative 1A.

29 **Table 19-13. Construction Impacts on Bus Routes for Pipeline/Tunnel Alternatives (1A, 2A, 3,5, 6A,**
 30 **7, and 8)**

| Affected Transit Service | Roadway Operated on and Location | Estimated Trips per Day | Construction Impacts on Bus Routes |
|--------------------------|----------------------------------|---|---|
| SCT/Link Delta Route | SR 12 across Bouldin Island | 4 trips per weekday (2 in each direction) | Marginal, if any—deep bore tunnel construction below the roadway. A shaft location is identified adjacent to SR 12. |

31
 32 As shown in Table 19-8, construction activities would decrease LOS below applicable thresholds, as
 33 well as exacerbate already unacceptable LOS conditions along 6 segments on SR-12. Accordingly,
 34 tunnel construction could substantially affect operation of the SCT Link/Delta Route, and

1 construction of the shaft adjacent to SR 12 would affect traffic on that facility. Intercity Greyhound
 2 bus lines primarily operate on the interstate highway system in this vicinity. To the extent that other
 3 roadways affected by Alternative 1A construction also carry Greyhound bus lines, those routes may
 4 be affected as well. The effect of disruption to transit service during construction would be adverse.
 5 Mitigation Measure TRANS-1a, which includes stipulations to maintain continual circulation in and
 6 around construction zones and coordinate with transit providers (SCT, Tri-Delta, Rio Vista, and
 7 Greyhound Bus Lines) to develop daily construction time windows during which transit operations
 8 would be either detoured or significantly slowed is available to reduce this effect. Mitigation
 9 Measures TRANS-1b and TRANS-1c would also reduce the severity of this effect; however, the BDCP
 10 proponents are not solely responsible for the timing, nature, or complete funding of required
 11 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
 12 constructed before the project's contribution to the effect is made, an adverse effect in the form of
 13 disruptions to transit service would occur. Therefore, this effect would be adverse.

14 **CEQA Conclusion:** Construction activities associated with Alternative 1A would decrease LOS below
 15 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 6 segments
 16 on SR-12 (see Table 19-8). Accordingly, tunnel construction could significantly affect operation of
 17 the SCT Link/Delta Route, and construction of the shaft adjacent to SR 12 would affect traffic on that
 18 facility. To the extent that other roadways affected by Alternative 1A construction also carry
 19 Greyhound bus lines, those routes may be affected as well. Mitigation Measures TRANS-1a through
 20 TRANS-1c would minimize the severity of this impact, but not to less-than-significant levels. Under
 21 Mitigation Measure TRANS-1a, the BDCP proponents would coordinate with transit providers to
 22 develop, to the extent feasible, daily construction time windows during which transit operations
 23 would not be either detoured or significantly slowed, avoiding a substantial disruption of transit
 24 service. Additionally, under Mitigation Measure TRANS-1b, construction traffic would be minimized
 25 around peak periods, to the extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP
 26 proponents would make good faith efforts to enter into mitigation agreements to enhance the
 27 capacity of congested roadway segments, likely reducing associated disruptions to transit service.
 28 However, the BDCP proponents cannot ensure that the improvements will be fully funded or
 29 constructed prior to the project's contribution to the impact. If an improvement identified in the
 30 mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 31 constructed before the project's contribution to the impact is made, a significant impact in the form
 32 disruptions to transit service would occur. Therefore, this impact would be significant and
 33 unavoidable. However, such impacts are likely to occur during the middle of the day because
 34 construction traffic would be minimized around peak periods.

35 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 36 **Plan**

37 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

38 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 39 **Congested Roadway Segments**

40 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

1 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
2 **Agreements to Enhance Capacity of Congested Roadway Segments**

3 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

4 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

5 **NEPA Effects:** Increased traffic and vehicle delays during construction (see Table 19-8) could
6 temporarily disrupt bicycle routes on SR 160/River Road and potentially on SR 12. Additionally,
7 some bicycle traffic may be found on all primary and secondary roadways in the transportation
8 study area. The temporary detour of SR 160 would continue to serve as a temporary bicycle route
9 during construction and bicycles would be allowed on the completed and re-aligned SR 160. The
10 effect of disruption to bicycle routes during construction would be adverse. Mitigation Measure
11 TRANS-1a is available to reduce this effect. Under this measure, BDCP proponents would provide
12 alternate access routes via detours or bridges to maintain continual circulation for local travelers in
13 and around construction zones, including bicycle riders; provide signage warning of loose gravel,
14 steel plates, or other conditions that could be hazardous to road cycling activity on roadways open
15 to bicycle traffic; provide signage, barricades, and flag people as necessary to slow or detour traffic
16 around construction sites; and notify the public, including cycling organizations and bike shops, of
17 construction activities that could affect transportation. Additionally, another project commitment, as
18 described in Appendix 3B, *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance
19 recreational access to areas in the vicinity of the proposed intakes, including enhancement of bicycle
20 and foot access to the Delta and the potential conversion of an abandoned rail line between
21 Sacramento and Walnut Grove into a bicycle path.

22 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-8) could
23 temporarily disrupt bicycle routes on SR 160/River Road and potentially on SR 12 and result in a
24 significant impact. However, Mitigation Measure TRANS-1a would reduce the severity of this impact
25 to less-than-significant levels because BDCP proponents would provide alternate access routes via
26 detours or bridges to maintain continual circulation for local travelers in and around construction
27 zones, including bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could
28 be hazardous to road cycling activity on roadways open to bicycle traffic; provide signage,
29 barricades, and flag people as necessary to slow or detour traffic around construction sites; and
30 notify the public, including cycling organizations and bike shops, of construction activities that could
31 affect transportation. Additionally, another project commitment, as described in Appendix 3B,
32 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
33 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
34 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
35 bicycle path. Because implementation of this mitigation measure and project commitment would
36 avoid a substantial disruption to bicycle facilities as a result of increased roadway traffic and/or
37 roadway closures, this impact would be less than significant.

38 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
39 **Plan**

40 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance

NEPA Effects: Maintaining and operating BDCP facilities could affect roadway operations in the vicinity by increasing vehicle trips. However, operations and maintenance activities would only require minimal labor. Consistent with the assumptions used for the air quality/GHG analyses in Chapter 22, *Air Quality and Greenhouse Gases*, of this EIR/EIS, it was estimated that routine operations and maintenance activities and yearly maintenance activities would require the crews and equipment identified in Tables 19-14 and 19-15.

Table 19-14. Routine O&M Assumptions for Alternatives 1A-C, 2B-C, and 6A-C

| Crew Type | Number of Employees | Vehicles (number) | Equipment (number) |
|-------------|---------------------|--|--------------------|
| Maintenance | 5 | Crew Truck (1) Foreman Truck (1) | - |
| Management | 3 | - | - |
| Repair | 7 | Crew Truck (1) Foreman Truck (1) 600 truckloads ^a | Backhoe (1) |
| Operating | 9 | - | - |

^a 600 truckloads would be required per intake.

Table 19-15. Yearly Maintenance Assumptions for Alternatives 1A-C, 2B-C, 3, 4, 5, 6A-C, 7, and 8

| O&M Type | Number of Employees | Vehicles (number) | Equipment (number) |
|--------------------|--|-------------------|--------------------|
| Annual Inspections | 6 | 1 crew truck | Crane (1) |
| Tunnel Dewatering | 18 (sediment crew) 11 (inspection crew) | 1 crew truck | Crane (2) |

The analysis of socioeconomic effects took a different approach to estimating O&M employment, based on use of the IMPLAN model (refer to Chapter 16, *Socioeconomics*, for additional information). The O&M activities are likely to be less labor intensive than shown in Table 19-16 because IMPLAN considers direct, indirect, and induced demand outside the Delta. The information is offered here to provide the possible range of O&M employment.

Table 19-16. O&M Employment

| Alternative | Direct Employment | Total Employment |
|-------------|-------------------|------------------|
| 1A | 187 | 269 |
| 1B | 204 | 294 |
| 1C | 187 | 269 |
| 9 | 121 | 177 |

Source: Chapter 16, *Socioeconomics*.

O&M activities would occur along the entire alternative alignment. Even assuming the higher employment range in Table 19-16, given the limited number of workers involved and the large

1 number of work sites, it is not anticipated that routine operations and maintenance activities or
2 major inspections would result in substantial increases of traffic volumes or roadway congestion.
3 The intake design includes parking for employees during operations and maintenance. The small
4 amount of added vehicle trips for facility maintenance and operations would not substantially
5 contribute to traffic volumes and increase roadway congestion. The effect of increased traffic
6 volumes and delays during operations would not be adverse.

7 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
8 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
9 activities or major inspections would result in substantial increases of traffic volumes or roadway
10 congestion. The impact of increased traffic volumes and delays during operations would therefore
11 be less than significant. No mitigation is required.

12 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and** 13 **Maintenance**

14 **NEPA Effects:** Due to the buried tunnel configuration, Alternative 1A does not intersect public
15 roadways, state routes, railroads, and bridges except for the intake areas where the SR 160 and
16 Randall Island Road would be permanently rerouted.

17 Each intake/pumping plant site would require realignment of the levee road (SR 160) adjacent to
18 Intakes 1–5. The levee road adjacent to Intake 5 is Randall Island Road. A project study report (PSR)
19 prepared by the California Department of Transportation (Caltrans) describes the assumptions and
20 requirements for the permanent realignment of SR 160.

21 Except for the intakes, Alternative 1A does not have surface intersections with public roadways,
22 state routes, or railroads, and would not require bridges. Impacts on public roadways would be
23 limited to the intake areas and would not substantially alter traffic patterns. The design and
24 construction of all project components (i.e., conveyances, intakes, and forebays) would provide for
25 on-going continuity of all rail operations following completion of construction. Structures would be
26 constructed as necessary to provide connectivity across canals (either bridges or siphons) for active
27 railroads to cross without disruption. Water operations would not modify the river stage above the
28 water levels seen in the river today. Therefore, no change would be expected to affect boat traffic
29 associated with changes in water levels. Operations and maintenance of the facilities would not have
30 any substantive impact on barge traffic (or the roadway network) due to operation of moveable
31 bridges. Impediments to boat traffic associated with the intakes would continue for the life of the
32 project, but would not substantially impact boat passage or usage (refer to Chapter 15, *Recreation*,
33 for more discussion of effects on boating.) The effect of permanent alteration of transportation
34 patterns during operations would not be adverse.

35 **CEQA Conclusion:** Each intake/pumping plant site constructed under Alternative 1A would require
36 realignment of the levee road (SR 160) adjacent to Intakes 1–5. Impacts on public roadways would
37 be limited to the intake areas and would not substantially alter traffic patterns. The design and
38 construction of all project components (i.e., conveyances, intakes, and forebays) would provide for
39 on-going continuity of all rail operations following completion of construction. Water operations
40 would not modify the river stage above the water levels seen in the river today. Operations and
41 maintenance of the facilities would not have any substantive impact on barge traffic (or the roadway
42 network) due to operation of moveable bridges. Impediments to boat traffic associated with the
43 intakes would continue for the life of the project, but would not substantially impact boat passage or

1 usage. Accordingly, the impact of permanent alteration of transportation patterns during operations
2 would be less than significant. No mitigation is required.

3 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

4 **NEPA Effects:** Habitat restoration and enhancement conservation measures are anticipated to
5 include a number of construction and maintenance activities. In particular, implementation of CM2
6 and CM3–CM10 would generate traffic on area roadways during construction and maintenance due
7 to transport of construction vehicles, equipment, and employees to and from the sites for the
8 purposes of modifying or installing new facilities, or making changes in operation of existing
9 facilities. Because the specific areas for implementing these conservation measures have not been
10 determined, this effect is evaluated qualitatively.

11 For the purposes of the EIR/EIS, it is assumed that during implementation, temporary impacts on
12 roadways could result in circulation delays or the inability to maintain adequate vehicular access in
13 or around restoration or enhancement work zones. Roads and highways in and around Suisun
14 Marsh and the Yolo Bypass could experience increases in traffic volumes, resulting in localized
15 congestion and conflicts with local traffic. These roadways could function as haul routes or to bring
16 construction personnel to the work sites. Maintenance and monitoring of the restoration areas
17 would also generate some vehicle trips. Roadways in the Delta subregion that are anticipated to be
18 affected include the following.

- 19 ● Interstate 680
- 20 ● State Route 12
- 21 ● Chadbourne Road
- 22 ● Ramsey Road
- 23 ● Jacksnipe Road
- 24 ● Collinsville Road
- 25 ● Grizzly Island Road
- 26 ● Gum Tree Road
- 27 ● Van Sickle Road
- 28 ● Joyce Island Road
- 29 ● Branscombe Road
- 30 ● Potrero Hills Lane
- 31 ● Scally Road
- 32 ● Shiloh Road
- 33 ● Little Honker Bay Road

34 The effect would vary according to the amount of traffic generated by the implementation of the
35 specific conservation measure, the location and timing of the actions called for in the conservation
36 measure, and the roadway and traffic conditions at the time of implementation. The effect of
37 increased traffic volumes during implementation of CM2–CM22 would be adverse. Although TRANS-
38 1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not solely

1 responsible for the timing, nature, or complete funding of required improvements. If an
 2 improvement identified in the mitigation agreement(s) contemplated by Mitigation Measure
 3 TRANS-1c is not fully funded and constructed before the project's contribution to the effect is made,
 4 an adverse effect would occur. Therefore, this effect would be adverse. If, however, all
 5 improvements required to avoid adverse effects prove to be feasible and any necessary agreements
 6 are completed before the project's contribution to the effect is made, effects would not be adverse.

7 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
 8 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
 9 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
 10 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
 11 function as haul routes or to bring construction personnel to the work sites. Maintenance and
 12 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
 13 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
 14 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
 15 significant levels. Therefore, the project's impacts to roadway segment LOS would be conservatively
 16 significant and unavoidable. If, however, all improvements required to avoid significant impacts
 17 prove to be feasible and any necessary agreements are completed before the project's contribution
 18 to the effect is made, impacts would be less than significant.

19 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 20 **Plan**

21 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

22 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 23 **Congested Roadway Segments**

24 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

25 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 26 **Agreements to Enhance Capacity of Congested Roadway Segments**

27 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

28 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 29 **Conservation Measures with Plans and Policies**

30 **NEPA Effects:** Constructing the proposed water conveyance facilities (CM1) and implementing CM2–
 31 CM22 could result in the potential for incompatibilities with plans and policies related to
 32 transportation and circulation. A number of plans and policies that coincide with the study area
 33 provide guidance for transportation resource issues as overviewed in *Section 17.2, Regulatory*
 34 *Setting*. This overview of plan and policy compatibility evaluates whether Alternative 1A is
 35 compatible or incompatible with such enactments, rather than whether impacts are adverse or not
 36 adverse or significant or less than significant. If the incompatibility relates to an applicable plan,
 37 policy, or regulation adopted to avoid or mitigate traffic effects, then an incompatibility might be
 38 indicative of a related significant or adverse effect under CEQA and NEPA, respectively. Such
 39 physical effects of Alternative 1A on transportation resources are addressed in Impacts TRANS-1
 40 through TRANS-10. The following is a summary of compatibility evaluations related to
 41 transportation resources for plans and policies relevant to the BDCP. Note that as discussed in

1 Chapter 13, *Land Use*, Section 13.2.3, state and federal agencies are not generally subject to local
 2 land use regulations; incompatibilities with plans and policies are not, by themselves, physical
 3 consequences to the environment.

- 4 ● The BDCP facilities would be constructed and operated consistent with regulations related to
 5 transportation and circulation enforced by local (including the local MPOs) and federal
 6 (including the FHWA and FAA) agencies. The alternative would not be incompatible with the
 7 *Rivers and Harbor Act of 1899* or the Title 33: Navigation and Navigable Waters, Part 162: Inland
 8 Waters Navigation Regulations.
- 9 ● Consistent with the PRC Section 21092.4, the BDCP proponents have consulted with regional
 10 transportation planning agency and public agencies that have transportation facilities which
 11 could be affected by the project (see Appendix 19A, *Bay Delta Conservation Plan Construction*
 12 *Traffic Impact Analysis*). Accordingly, the project is compatible with the PRC.
- 13 ● The *Land Use and Resource Management Plan for the Primary Zone of the Delta* (1995) identifies
 14 a policy to maintain roads in the Delta to serve the existing agricultural uses and supporting
 15 commercial uses, recreational users, and Delta residents. As discussed in Impact TRANS-2,
 16 damage to pavement associated with construction of water conveyance facilities associated with
 17 BDCP will be mitigated through implementation of Mitigation Measure TRANS-2a through
 18 Mitigation Measure TRANS-2c. Accordingly, the project would be compatible with the Delta
 19 Protection Act of 1992.
- 20 ● The three MPOs in the study area (MTC, SACOG, and SJCOG) have developed transportation
 21 improvement programs to identify and fund transportation projects within their jurisdiction.
 22 Alternative 1A is not expected to affect any of these projects and would be consistent with all
 23 MPO improvement plans.
- 24 ● In November 2009, the California Legislature enacted SB 1 X7, also known as the Sacramento–
 25 San Joaquin Delta Reform Act. The Delta bill created a new Delta Stewardship Council (DSC) and
 26 gave this body broad oversight of Delta planning and resource management, and tasked the DSC
 27 with developing, adopting, and implementing a long-term plan (the “Delta Plan”) which will be
 28 legally enforceable. The Proposed Final Delta Plan, adopted by the DSC in May 2013, contains a
 29 set of recommendations and regulatory policies that cover five topic areas and goals: increased
 30 water supply reliability, restoration of the Delta ecosystem, improved water quality, reduced
 31 risks of flooding in the Delta, and protection and enhancement of the Delta. The following
 32 recommendations in the Delta Plan relate to transportation in the Delta (Delta Stewardship
 33 Council 2013):
 - 34 ○ DP R2: The California Department of Transportation should seek designation of State Route
 35 160 as a National Scenic Byway and prepare and implement a scenic byway plan for it.
 - 36 ○ DP R5: The California Department of Transportation, local agencies, and utilities should plan
 37 infrastructure, such as roads and highways, to meet needs of development consistent with
 38 sustainable community strategies, local plans, Delta Protection Commission’s Land Use and
 39 Resource Management Plan for the Primary Zone of the Delta, and the Delta Plan.
 - 40 ○ DP R6: The Delta Stewardship Council, as part of the prioritization of State levee
 41 investments called for in Water Code 85306RR P1, should consult with the California
 42 Department of Transportation as provided in Water Code section 85307(c) to consider the
 43 effects of flood hazards and sea level rise on State highways in the Delta.

1 As discussed in Impact TRANS-7, interference with bicycle routes during construction
 2 associated with BDCP will be mitigated through implementation of Mitigation Measure TRANS-
 3 1a. Accordingly, the project would be compatible with the Delta Plan. As discussed in Impact
 4 TRANS-9, permanent alteration of transportation patterns during operations and maintenance
 5 associated with the BDCP will not occur. Accordingly, the project would be compatible with the
 6 Delta Plan.

7 **CEQA Conclusion:** The inconsistencies identified in the analysis indicate the potential for a physical
 8 consequence to the environment. The physical effects are discussed in impacts TRANS-1 through
 9 TRANS-10, above and no additional CEQA conclusion is required related to the consistency of the
 10 alternative with relevant plans and policies. The relationship between plans, policies, and regulations
 11 and impacts on the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

12 **19.3.3.3 Alternative 1B—Dual Conveyance with East Alignment and Intakes** 13 **1–5 (15,000 cfs; Operational Scenario A)**

14 During construction, temporary impacts on roadways under Alternative 1B would be similar to
 15 those described for Alternative 1A. As with Alternative 1A, a total of five intakes would be
 16 constructed (Intakes 1–5). Under Alternative 1B, no intermediate forebay would be constructed. The
 17 primary difference between Alternative 1A and 1B is the type and location of the conveyance facility,
 18 which under Alternative 1B would be a canal on the east side of the Sacramento River (Figures 3-4
 19 and 3-5 in Chapter 3, *Description of Alternatives*).

20 **Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS** 21 **Conditions**

22 **NEPA Effects:** As shown in Table 19-17, under BPBG conditions, a total of 19 roadway segments
 23 would exceed LOS for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. As also shown
 24 in Table 19-17, construction associated with Alternative 1B would cause LOS thresholds to be
 25 exceeded for at least 1 hour during the 6:00 AM to 7:00 PM analysis period on a total 39 roadway
 26 segments under BPBGPP conditions (see entries in **bold** type). Alternative 1B would therefore
 27 exacerbate an already unacceptable LOS under BPBG conditions on **20** roadway segments (39 minus
 28 the 19 that would already be operating at an unacceptable LOS under BPBG conditions). Figure 19-
 29 3a shows the study roadway segments that could experience substantial roadway operation effects.

1 **Table 19-17. Level of Service for East Alignment Alternatives (1B, 2B, and 6B)**

| ID | Segment | From | To | LOS Threshold | LOS Volume | Baseline Conditions | | Baseline Plus Background Growth Conditions | | BPGPP Conditions | |
|--------------|--|------------------------------------|------------------------------------|---------------|--------------|-----------------------|----------------------|--|------------------|-----------------------|--------------------------|
| | | | | | | Hourly Volume | Hourly Range | Hourly Volume | Hourly Range | Hourly Volume | Hourly Range |
| | | | | | | Worse Than | LOS Threshold | Worse Than | LOS Threshold | Worse Than | LOS Threshold |
| ALA 01 | Byron Hwy | Contra Costa Co./ Alameda Co. Line | Alameda Co./ San Joaquin Co. Line | D | 1,600 | 385 to 656 | - | 416 to 708 | - | 798 to 1,090 | - |
| BRE 01 | Brentwood Blvd (old SR 4) ¹ | Delta Rd (Oakley City Limits) | Balfour Rd | C | 970 | 586 to 1,516 | 11 (7-9AM; 10AM-7PM) | - | - | - | - |
| | | | | D | 1,760 | - | - | 590 to 1,526 | - | 1,080 to 2,016 | 7 (8-9AM; 12-6PM) |
| BRE 02 | Brentwood Blvd (old SR 4) ¹ | Balfour Rd | Brentwood City Limits (South) | C | 1,920 | 369 to 1,013 | - | - | - | - | - |
| | | | | D | 3,540 | - | - | 346 to 950 | - | 836 to 1,440 | - |
| BRE 03 | Balfour Rd | Brentwood Blvd (Old SR 4) | Brentwood City Limits | D | 3,540 | 437 to 1,300 | - | 437 to 1,300 | - | 437 to 1,300 | - |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | D | 1,600 | 124 to 330 | - | 124 to 330 | - | 124 to 330 | - |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | D | 1,600 | 90 to 297 | - | 90 to 297 | - | 90 to 297 | - |
| CC 03 | Old SR 4 ¹ | Brentwood City Limits (South) | Marsh Creek Rd | C | 790 | 1,133 to 1,682 | 13 (6AM-7PM) | - | - | - | - |
| | | | | D | 1,600 | - | - | 1,220 to 1,811 | 3 (3-6PM) | 1,710 to 2,301 | 13 (6AM-7PM) |
| CC 04 | Byron Hwy | Delta Rd | Old SR 4 | D | 1,410 | 108 to 240 | - | 108 to 240 | - | 108 to 240 | - |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./ Alameda Co. Line | D | 1,600 | 483 to 907 | - | 522 to 980 | - | 904 to 1,362 | - |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | F | 6,060 | 2,589 to 5,820 | - | 2,842 to 6,389 | 1 (7-8AM) | 3,309 to 6,856 | 1 (7-8AM) |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------------|---------------|------------------|------------------|---------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPPGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | F | 6,060 | 1,647 to 5,705 | - | 1,789 to 6,198 | 2 (4-6PM) | 2,256 to 6,665 | 2 (4-6PM) |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | F | 6,060 | 2,359 to 5,156- | - | 2,359 to 5,156- | - | 2,359 to 5,156- | - |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | F | 6,060 | 1,543 to 5,243- | - | 1,543 to 5,243- | - | 1,543 to 5,243- | - |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | F | 4,010 | 1,820 to 3,339- | - | 1,820 to 3,339- | - | 1,820 to 3,339- | - |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | F | 4,010 | 1,254 to 3,332- | - | 1,254 to 3,332- | - | 1,254 to 3,332- | - |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | F | 4,010 | 1,504 to 2,162- | - | 1,637 to 2,353- | - | 2,107 to 2,823- | - |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | F | 4,010 | 1,217 to 2,236- | - | 1,329 to 2,442- | - | 1,799 to 2,912- | - |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | F | 4,010 | 1,414 to 1,851- | - | 1,560 to 2,043- | - | 2,342 to 2,825- | - |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | F | 4,010 | 1,207 to 1,964- | - | 1,333 to 2,169- | - | 2,115 to 2,951- | - |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | C | 2,880 | 1,312 to 1,720- | - | 1,485 to 1,946- | - | 1,762 to 2,223- | - |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | C | 2,880 | 1,111 to 1,813- | - | 1,257 to 2,052- | - | 1,534 to 2,329- | - |
| CT 13 | I-5 NB | Walnut Grove Rd | Peltier Rd | C | 2,880 | 1,374 to 1,803- | - | 1,594 to 2,091- | - | 1,714 to 2,211- | - |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | C | 2,880 | 1,128 to 1,894- | - | 1,308 to 2,197- | - | 1,428 to 2,317- | - |
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | C | 2,880 | 1,421 to 1,885- | - | 1,677 to 2,224- | - | 1,848 to 2,395- | - |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | C | 2,880 | 1,145 to 1,974- | - | 1,351 to 2,329- | - | 1,522 to 2,500- | - |
| CT 17 | I-5 NB | Turner Rd | SR 12 | C | 2,880 | 1,288 to 1,985- | - | 1,494 to 2,303- | - | 1,614 to 2,423- | - |
| CT 18 | I-5 SB | Turner Rd | SR 12 | C | 2,880 | 1,124 to 1,482- | - | 1,304 to 1,719- | - | 1,424 to 1,839- | - |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | C | 4,400 | 1,533 to 2,267- | - | 1,717 to 2,539- | - | 1,980 to 2,802- | - |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | C | 4,400 | 1,243 to 2,070- | - | 1,392 to 2,318- | - | 1,655 to 2,581- | - |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | D | 5,410 | 1,937 to 3,452- | - | 2,169 to 3,866- | - | 2,366 to 4,063- | - |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | D | 5,410 | 1,817 to 2,760- | - | 2,035 to 3,091- | - | 2,232 to 3,288- | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------------|----------------------------------|------------------------------------|----------------------------|---------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | E | 1,740 | 136 to 476 | - | 145 to 506 | - | 1,077 to 1,438 | - |
| CT 24 | SR 160 (Freeport Blvd/ River Rd) | Freeport Bridge | Scribner Rd | E | 1,740 | 94 to 180 | - | 94 to 180 | - | 1,026 to 1,112 | - |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | E | 1,740 | 41 to 125 | - | 41 to 125 | - | 973 to 1,057 | - |
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | E | 1,740 | 105 to 170 | - | 116 to 188 | - | 1,570 to 1,642 | - |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | E | 1,740 | 69 to 122 | - | 72 to 128 | - | 1,526 to 1,582 | - |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | E | 1,740 | 75 to 150 | - | 77 to 154 | - | 1,531 to 1,608 | - |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | E | 1,740 | 78 to 128 | - | 89 to 147 | - | 1,925 to 1,983 | 13 (6AM-7PM) |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | E | 1,740 | 173 to 465 | - | 173 to 465 | - | 2,117 to 2,409 | 13 (6AM-7PM) |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | E | 1,740 | 193 to 378 | - | 193 to 378 | - | 2,137 to 2,322 | 13 (6AM-7PM) |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | F | 1,740 | 530 to 894 | - | 549 to 926 | - | 2,709 to 3,086 | 13 (6AM-7PM) |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | B | 200 | 40 to 169 | - | 42 to 177 | - | 424 to 559 | 13 (6AM-7PM) |
| CT 34 | SR 84 (Courtland Rd/ Ryer Ave) | Courtland Rd | Cache Slough Ferry | C | 680 | 10 to 25 | - | 10 to 25 | - | 10 to 25 | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|-------|--------------------------|----------------------------------|----------------------------------|---------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | C | 8,350 | 3,079 to 6,994 | - | 3,510 to 7,973 | - | 4,591 to 9,054 | 3 (3-6PM) |
| CT 36 | I-80 WB | Suisun Valley Rd | SR 12 | C | 8,350 | 5,751 to 8,892 | 2 (6-8AM) | 6,556 to 10,137 | 2 (6-8AM) | 7,637 to 11,218 | 8 (6-10AM; 2-6PM) |
| CT 37 | SR 12 EB | I-80 | Beck Ave | C | 2,880 | 528 to 1,847 | - | 612 to 2,143 | - | 1,693 to 3,224 | 4 (3-7PM) |
| CT 38 | SR 12 WB | I-80 | Beck Ave | C | 2,880 | 829 to 1,625 | - | 962 to 1,885 | - | 2,043 to 2,966 | 2 (6-8AM) |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/ Grizzly Island Rd | C | 5,060 | 2,408 to 3,573 | - | 2,772 to 4,114 | - | 4,932 to 6,274 | 10 (7-9AM; 11AM-7PM) |
| CT 40 | SR 12 | Sunset Ave/ Grizzly Island Rd | Walters Rd/ Lawler Ranch Pkwy | C | 5,060 | 1,607 to 2,353 | - | 1,864 to 2,729 | - | 4,024 to 4,889 | - |
| CT 41 | SR 12 | Walters Rd/ Lawler Ranch Pkwy | SR 113 | C | 790 | 627 to 1,075 | 10 (6-8AM; 9-1PM; 2-6PM) | 727 to 1,247 | 12 (6AM-6PM) | 2,887 to 3,407 | 13 (6AM-7PM) |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | C | 790 | 1,073 to 1,544 | 13 (6AM-7PM) | 1,245 to 1,791 | 13 (6AM-7PM) | 3,405 to 3,951 | 13 (6AM-7PM) |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | C | 970 | 1,135 to 1,685 | 13 (6AM-7PM) | 1,317 to 1,955 | 13 (6AM-7PM) | 3,477 to 4,115 | 13 (6AM-7PM) |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./ SJ Co. Line | C | 790 | 704 to 1,030 | 12 (6AM-6PM) | 774 to 1,133 | 12 (6AM-6PM) | 905 to 1,264 | 13 (6AM-7PM) |
| CT 45 | SR 12 | Sacramento Co./ SJ Co. Line | I-5 | C | 790 | 773 to 1,164 | 12 (6AM-6PM) | 806 to 1,214 | 13 (6AM-7PM) | 937 to 1,345 | 13 (6AM-7PM) |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | C | 4,400 | 2,508 to 4,632 | 2 (3-5PM) | 2,765 to 5,107 | 3 (3-6PM) | 3,064 to 5,406 | 5 (7-8AM; 2-6PM) |

| ID | Segment | From | To | LOS Threshold | Baseline Plus Background | | | | | | |
|-------|------------------------------------|--------------------|----------------------|---------------|--------------------------|----------------|----------------------------------|--|----------------------------------|--|----------------------------------|
| | | | | | Baseline Conditions | | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | LOS Threshold | Hourly Volume | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) |
| CT 47 | I-80 WB | SR 113 | Pedrick Rd | C | 4,400 | 3,068 to 4,191 | - | 3,280 to 4,481 | 2 (4-6PM) | 3,579 to 4,780 | 4 (7-8AM; 3-6PM) |
| CT 48 | SR 113 | I-80 | Dixon City Limits | C | 1,920 | 569 to 1,341 | - | 569 to 1,341 | - | 1,167 to 1,939 | 2 (4-6PM) |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | C | 680 | 174 to 294 | - | 188 to 318 | - | 786 to 916 | 13 (6AM-7PM) |
| CT 50 | SR 4 (Marsh Creek Rd) ² | Vasco Rd | Byron Hwy (Old SR 4) | D | 1,600 | 442 to 733 | - | - | - | - | - |
| | | | | C | 790 | - | - | 477 to 792 | 1 (4-5PM) | 1,515 to 1,830 | 13 (6AM-7PM) |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | D | 1,600 | 554 to 1,224 | - | 601 to 1,327 | - | 1,639 to 2,365 | 13 (6AM-7PM) |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | C | 790 | 412 to 746 | - | 412 to 746 | - | 1,450 to 1,784 | 13 (6AM-7PM) |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | D | 1,410 | 867 to 1,492 | 1 (4-5PM) | 867 to 1,492 | 1 (4-5PM) | 1,905 to 2,530 | 13 (6AM-7PM) |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | D | 7,280 | 2,552 to 4,815 | - | 2,855 to 5,386 | - | 3,374 to 5,905 | - |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | D | 7,280 | 4,550 to 5,913 | - | 5,108 to 6,639 | - | 5,627 to 7,158 | - |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | D | 5,410 | 2,430 to 4,586 | - | 2,770 to 5,228 | - | 3,289 to 5,747 | 3 (3-6PM) |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | D | 5,410 | 4,333 to 5,631 | 3 (7-8AM; 4-6PM) | 4,940 to 6,419 | 8 (6-9AM; 1-6PM) | 5,459 to 6,938 | 13 (6AM-7PM) |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | C | 4,400 | 1,350 to 5,071 | 4 (3-7PM) | 1,480 to 5,560 | 4 (3-7PM) | 1,671 to 5,751 | 4 (3-7PM) |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | C | 4,400 | 1,873 to 4,867 | 2 (6-8AM) | 2,058 to 5,348 | 3 (6-9AM) | 2,249 to 5,539 | 3 (6-9AM) |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|---------------|---|----------------------------|--|---------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|-----------------------------|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | C | 4,400 | 1,431 to 5,068 | 4 (3-7PM) | 1,574 to 5,575 | 5 (2-7PM) | 1,765 to 5,766 | 5 (2-7PM) |
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | C | 4,400 | 1,875 to 4,117 | - | 2,063 to 4,529 | 1 (6-7AM) | 2,254 to 4,720 | 1 (6-7AM) |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | D | 5,410 | 1,525 to 4,200- | - | 1,678 to 4,620- | - | 2,006 to 4,948- | - |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | D | 5,410 | 1,852 to 3,079- | - | 2,037 to 3,387- | - | 2,365 to 3,715- | - |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | D | 5,410 | 1,511 to 4,182- | - | 1,662 to 4,600- | - | 1,990 to 4,928- | - |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | D | 5,410 | 2,083 to 3,446- | - | 2,291 to 3,791- | - | 2,619 to 4,119- | - |
| ISL 01 | A St/4th St/ Jackson Blvd. | SR 160 | Isleton City Limits | D | 1,410 | 17 to 75 | - | 17 to 75 | - | 17 to 75 | - |
| OAK 01 | Main Street (Old SR 4) ¹ | SR 160 | Cypress Rd | C | 1,920 | 752 to 1,663 | - | - | - | - | - |
| | | | | D | 3,540 | - | - | 795 to 1,759 | - | 1,285 to 2,249- | - |
| OAK 02 | Main Street (Old SR 4)¹ | Cypress Rd | Delta Rd (Oakley City Limits) | C | 970 | 722 to 1,335 | 10 (7-9AM; 11AM-7PM) | - | - | - | - |
| | | | | D | 1,760 | - | - | 823 to 1,522 | - | 1,313 to 2,012 | 5 (8-9AM; 2-6PM) |
| OAK 03 | Cypress Rd | Main Street (Old SR 4) | Bethel Island Rd | D | 1,600 | 304 to 764 | - | 304 to 764 | - | 304 to 764 | - |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | D | 1,410 | 140 to 367 | - | 140 to 367 | - | 140 to 367 | - |
| OAK 05 | Delta Rd | Main Street (Old SR 4) | Byron Hwy | D | 1,410 | 155 to 334 | - | 155 to 334 | - | 155 to 334 | - |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | D | 3,540 | 789 to 2,191 | - | 789 to 2,191 | - | 1,721 to 3,123- | - |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | D | 1,760 | 152 to 492 | - | 164 to 531 | - | 1,096 to 1,463- | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------------|-------------------------------|---|-------------------------------------|---------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | D | 1,410 | 98 to 346 | - | 98 to 346 | - | 626 to 874 | - |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | D | 1,410 | 77 to 137 | | 80 to 142 | - | 1,534 to 1,596 | 13 (6AM-7PM) |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | D | 1,410 | 10 to 29 | - | 11 to 31 | - | 347 to 367 | - |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | D | 1,410 | 19 to 38 | - | 19 to 39 | - | 355 to 375 | - |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | D | 1,410 | 41 to 71 | - | 41 to 72 | - | 377 to 408 | - |
| SC 06 | Twin Cities Rd | River Rd | I-5 | D | 1,410 | 130 to 248 | - | 133 to 253 | - | 241 to 361 | - |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | D | 1,410 | 141 to 318 | - | 151 to 340 | - | 487 to 676 | - |
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./Yolo Co. Line | Paintersville Bridge | D | 1,410 | 51 to 113 | - | 55 to 122 | - | 437 to 504 | - |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | D | 1,410 | 85 to 134 | - | 85 to 134 | - | 85 to 134 | - |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | D | 1,600 | 223 to 365 | - | 228 to 373 | - | 336 to 481 | - |
| SC 11 | Walnut Grove Rd/River Rd | Walnut Grove Bridge | Sacramento Co./SJ Co. Line | | 1,410 | 175 to 332 | - | 182 to 345 | - | 341 to 504 | - |
| SC 12 | Isleton Rd | River Rd (Walnut Grove)/Isleton Rd Bridge | 1.5 miles west of Isleton Rd Bridge | | 1,410 | 61 to 283 | - | 61 to 283 | - | 61 to 283 | - |
| SC 13 | Race Track Rd/Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | | 1,410 | 17 to 34 | - | 17 to 34 | - | 17 to 34 | - |
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | D | 1,410 | 14 to 39 | - | 14 to 39 | - | 14 to 39 | - |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | D | 1,410 | 4 to 53 | - | 4 to 53 | - | 4 to 53 | - |
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | D | 1,410 | 16 to 52 | - | 16 to 52 | - | 16 to 52 | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------------|--|----------------------------------|-----------------------------------|---------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------------|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than |
| SJ 01 | Walnut Grove Rd | Sacramento Co./ SJ Co. Line | I-5 | C | 790 | 141 to 232 | - | 146 to 241 | - | 647 to 742 | - |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | C | 680 | 8 to 23 | - | 8 to 23 | - | 350 to 365 | - |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | C | 790 | 108 to 209 | - | 108 to 209 | - | 764 to 865 | 6 (6-7AM; 2-7PM) |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | C | 790 | 69 to 171 | - | 75 to 185 | - | 731 to 841 | 8 (9-11AM; 12-1PM; 2-7PM) |
| SJ 05 | Byron Hwy | Alameda Co./San Joaquin Co. Line | Mountain House Pkwy | D | 1,600 | 521 to 824 | - | 563 to 890 | - | 945 to 1,272 | - |
| SJ 06 | Mountain House Pkwy | Byron Hwy | Arnaudo Blvd | D | 1,410 | 190 to 298 | - | 205 to 322 | - | 587 to 704 | - |
| SJ 07 | Mountain House Pkwy | Arnaudo Blvd | I-205 | D | 3,540 | 418 to 769 | - | 477 to 877 | - | 859 to 1,259 | - |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | E | 1,870 | 309 to 769 | - | 340 to 846 | - | 734 to 1,240 | - |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | E | 1,870 | 309 to 759 | - | 334 to 820 | - | 990 to 1,476 | - |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | D | 3,540 | 1,140 to 2,317 | - | 1,218 to 2,476 | - | 1,600 to 2,858 | - |
| WS 02 | Industrial Blvd/ Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | C | 1,920 | 773 to 1,858 | - | 835 to 2,007 | 1 (5-6PM) | 1,217 to 2,389 | 3 (7-8AM; 4-6PM) |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | C | 1,920 | 546 to 1,718 | - | 586 to 1,843 | - | 968 to 2,225 | 3 (8-9AM; 4-6PM) |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | C | 680 | 42 to 146 | - | 45 to 155 | - | 427 to 537 | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------|---------------------|------------------------|--------------------------------|---------------|----------------------|--------------------------|----------------------------|---------------------|----------------------------|---------------------|----------------------------|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range | Hours Operating Worse Than | Hourly Volume Range | Hours Operating Worse Than | Hourly Volume Range | Hours Operating Worse Than |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | C | 680 | 74 to 249 | - | 74 to 249 | - | 74 to 249 | - |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./C Yolo Co. Line | | 680 | 25 to 63 | - | 27 to 68 | - | 409 to 450 | - |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | C | 680 | 28 to 77 | - | 30 to 83 | - | 412 to 465 | - |

Source: Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*

* Segment IDs correspond to the roadway segment IDs shown on Figures 19-2a through 19-2c.

¹ Facility is analyzed as a Caltrans facility under Baseline Conditions and a local facility under Baseline Plus Construction Conditions – roadway is relinquished to local jurisdiction after Baseline Year (2009). LOS Threshold is LOS C under Baseline Conditions and changes to LOS D under Baseline Plus Construction Conditions.

² Facility is analyzed as a local facility under Baseline Conditions and a Caltrans facility under Baseline Plus Construction Conditions – roadway is adopted as a State facility after Baseline Year (2009). LOS Threshold is LOS D under Baseline Conditions and changes to LOS C under Baseline Plus Construction Conditions.

1 The decrease in LOS below applicable thresholds during construction would be adverse at the
 2 locations identified in Table 19-17 because construction associated with Alternative 1B would cause
 3 LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM
 4 analysis period. Alternative 1B would also exacerbate an already unacceptable LOS under BPBG
 5 conditions at **20** roadway segments (39 minus the 19 that would already be operating at an
 6 unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur
 7 throughout the study area, the highest concentration of roadway segments below applicable LOS
 8 threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be
 9 exceeded on several local roadways.

10 Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively,
 11 these measures include requirements to avoid or reduce circulation effects, notify the public of
 12 construction activities, provide alternate access routes, require direct haulers to pull over in the
 13 event of an emergency, limit/prohibit the amount of construction activity on congested roadways,
 14 and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity
 15 of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
 16 funding of required improvements. If an improvement that is identified in any mitigation
 17 agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed
 18 before the project's contribution to the effect is made, an adverse effect in the form of unacceptable
 19 LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to
 20 avoid adverse effects prove to be feasible and any necessary agreements are completed before the
 21 project's contribution to the effect is made, effects would not be adverse.

22 **CEQA Conclusion:** Construction under Alternative 1B would add hourly traffic volumes to study
 23 area roadways that would exceed acceptable LOS threshold (Table 19-17). As shown in Table 19-17,
 24 traffic volumes during construction of Alternative 1B would exacerbate already unacceptable LOS
 25 under BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-
 26 1a through TRANS-1c would reduce the severity of this impact, but not to less-than-significant
 27 levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 28 constructed prior to the project's contribution to the impact. If an improvement that is identified in
 29 any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 30 constructed before the project's contribution to the impact is made, a significant impact in the form
 31 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 32 however, all improvements required to avoid significant impacts prove to be feasible and any
 33 necessary agreements are completed before the project's contribution to the effect is made, impacts
 34 would be less than significant.

35 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 36 **Plan**

37 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

38 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 39 **Congested Roadway Segments**

40 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

1 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
2 **Agreements to Enhance Capacity of Congested Roadway Segments**

3 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

4 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
5 **Conditions**

6 **NEPA Effects:** Construction truck traffic may damage roadway surfaces. During construction,
7 various materials would be transported to and from the construction areas in load-bearing trucks.
8 As shown in Table 19-18, construction of Alternative 1B would contribute to further deterioration of
9 the existing pavement condition, to less than the acceptable PCI or similar applicable threshold (see
10 Table 19-7), on a total of **46** roadway segments (see table entries in **bold** type). Figure 19-4a shows
11 all of the study roadway segments that could experience substantial pavement condition effects.

1 **Table 19-18. Pavement Condition for East Alignment Alternatives (1B, 2B, and 6B)**

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPGPP Conditions | |
|--------------|---------------------------|--------------------------------------|---|-------------------------------|--|--|
| | | | | | Project Results in Construction Trips Added to Roadway | Project Results in Impact on Deficient Roadway |
| ALA 01 | Byron Hwy | Contra Costa Co./ Alameda Co. Line | Alameda Co./San Joaquin Co. Line | Acceptable | Yes | No |
| BRE 01 | Brentwood Blvd (old SR 4) | Delta Rd (Oakley City Limits) | Balfour Rd | Acceptable | Yes | No |
| BRE 02 | Brentwood Blvd (old SR 4) | Balfour Rd | Brentwood City Limits (South) | Acceptable | Yes | No |
| BRE 03 | Balfour Rd | Brentwood Blvd (Old SR 4) | Brentwood City Limits | Acceptable | No | No |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | Deficient | No | No |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | Deficient | No | No |
| CC 03 | Old SR 4 | Brentwood City Limits (South) | Marsh Creek Rd | Deficient | Yes | Yes |
| CC 04 | Byron Hwy | Delta Rd | Old SR 4 | Acceptable | No | No |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./ Alameda Co. Line | Deficient | Yes | Yes |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | Deficient | Yes | Yes |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | Deficient | Yes | Yes |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | Deficient | No | No |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | Deficient | No | No |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | Deficient | No | No |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | Deficient | No | No |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | Acceptable | Yes | No |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | Acceptable | Yes | No |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | Deficient | Yes | Yes |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | Deficient | Yes | Yes |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | Deficient | Yes | Yes |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | Acceptable | Yes | No |
| CT 13 | I-5 NB | Walnut Grove Rd | Peltier Rd | Acceptable | Yes | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPGPP Conditions | |
|--------------|--|------------------------------------|-----------------------------|-------------------------------|--|--|
| | | | | | Project Results in Construction Trips Added to Roadway | Project Results in Impact on Deficient Roadway |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | Acceptable | Yes | No |
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | Acceptable | Yes | No |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | Acceptable | Yes | No |
| CT 17 | I-5 NB | Turner Rd | SR 12 | Acceptable | Yes | No |
| CT 18 | I-5 SB | Turner Rd | SR 12 | Acceptable | Yes | No |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | Deficient | Yes | Yes |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | Acceptable | Yes | No |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | Deficient | Yes | Yes |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | Acceptable | Yes | No |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | Deficient | Yes | Yes |
| CT 24 | SR 160 (Freeport Blvd/River Rd) | Freeport Bridge | Scribner Rd | Deficient | Yes | Yes |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | Deficient | Yes | Yes |
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | Deficient | Yes | Yes |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | Deficient | Yes | Yes |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | Not Applicable | Yes | No |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | Acceptable | Yes | No |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | Deficient | Yes | Yes |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | Deficient | Yes | Yes |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | Deficient | Yes | Yes |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | Deficient | Yes | Yes |
| CT 34 | SR 84 (Courtland Rd/Ryer Ave) | Courtland Rd | Cache Slough Ferry | Deficient | No | No |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | Acceptable | Yes | No |
| CT 36 | I-80 WB | SR 12 | Suisun Valley Rd | Acceptable | Yes | No |
| CT 37 | SR 12 EB | I-80 | Beck Ave | Acceptable | Yes | No |
| CT 38 | SR 12 WB | Beck Ave | I-80 | Acceptable | Yes | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPBGPP Conditions | |
|--------------|---------------------------|-------------------------------------|-----------------------------------|-------------------------------|--|--|
| | | | | | Project Results in Construction Trips Added to Roadway | Project Results in Impact on Deficient Roadway |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/Grizzly Island Rd | Acceptable | Yes | No |
| CT 40 | SR 12 | Sunset Ave/Grizzly Island Rd | Walters Rd/Lawler Ranch Pkwy | Acceptable | Yes | No |
| CT 41 | SR 12 | Walters Rd/Lawler Ranch Pkwy | SR 113 | Deficient | Yes | Yes |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | Deficient | Yes | Yes |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | Not Applicable | Yes | No |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./SJ Co. Line | Deficient | Yes | Yes |
| CT 45 | SR 12 | Sacramento Co./SJ Co. Line | I-5 | Deficient | Yes | Yes |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | Deficient | Yes | Yes |
| CT 47 | I-80 WB | Pedrick Rd | SR 113 | Acceptable | Yes | No |
| CT 48 | SR 113 | I-80 | Dixon City Limits | Acceptable | Yes | No |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | Deficient | Yes | Yes |
| CT 50 | SR 4 (Marsh Creek Rd) | Vasco Rd | Byron Hwy (Old SR 4) | Acceptable | Yes | No |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | Deficient | Yes | Yes |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | Deficient | Yes | Yes |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | Deficient | Yes | Yes |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | Deficient | Yes | Yes |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | Deficient | Yes | Yes |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | Acceptable | Yes | No |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | Acceptable | Yes | No |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | Acceptable | Yes | No |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | Acceptable | Yes | No |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | Acceptable | Yes | No |
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | Acceptable | Yes | No |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | Acceptable | Yes | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPGPP Conditions | |
|---------------|--------------------------------|---|--------------------------------------|-------------------------------|--|--|
| | | | | | Project Results in Construction Trips Added to Roadway | Project Results in Impact on Deficient Roadway |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | Acceptable | Yes | No |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | Acceptable | Yes | No |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | Acceptable | Yes | No |
| ISL 01 | A St/4th St/Jackson Blvd. | SR 160 | Isleton City Limits | Deficient | No | No |
| OAK 01 | Main Street (Old SR 4) | SR 160 | Cypress Rd | Deficient | Yes | Yes |
| OAK 02 | Main Street (Old SR 4) | Cypress Rd | Delta Rd (Oakley City Limits) | Deficient | Yes | Yes |
| OAK 03 | Cypress Rd | Main Street (Old SR 4) | Bethel Island Rd | Acceptable | No | No |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | Deficient | No | No |
| OAK 05 | Delta Rd | Main Street (Old SR 4) | Byron Hwy | Deficient | No | No |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | Deficient | Yes | Yes |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | Acceptable | Yes | No |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | Not Applicable | No | No |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | Deficient | Yes | Yes |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | Acceptable | Yes | No |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | Deficient | Yes | Yes |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | Deficient | Yes | Yes |
| SC 06 | Twin Cities Rd | River Rd | I-5 | Acceptable | Yes | No |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | Deficient | Yes | Yes |
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./ Yolo Co. Line | Paintersville Bridge | Deficient | Yes | Yes |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | Deficient | No | No |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | Deficient | Yes | Yes |
| SC 11 | Walnut Grove Rd/River Rd | Walnut Grove Bridge | Sacramento Co./SJ Co. Line | Acceptable | Yes | No |
| SC 12 | Isleton Rd | River Rd (Walnut Grove)/Isleton Rd Bridge | 1.5 miles west of Isleton Rd Bridge | Acceptable | No | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPBGPP Conditions | |
|---------------|--------------------------------------|-----------------------------------|-------------------------------------|-------------------------------|--|--|
| | | | | | Project Results in Construction Trips Added to Roadway | Project Results in Impact on Deficient Roadway |
| SC 13 | Race Track Rd/Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | Deficient | No | No |
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | Deficient | No | No |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | Acceptable | No | No |
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | Acceptable | No | No |
| SJ 01 | Walnut Grove Rd | Sacramento Co./SJ Co. Line | I-5 | Deficient | Yes | Yes |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | Deficient | Yes | Yes |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | Acceptable | Yes | No |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | Acceptable | Yes | No |
| SJ 05 | Byron Hwy | Alameda Co./San Joaquin Co. Line | Mountain House Pkwy | Acceptable | Yes | No |
| SJ 06 | Mountain House Pkwy | Byron Hwy | Arnaudo Blvd | Acceptable | Yes | No |
| SJ 07 | Mountain House Pkwy | Arnaudo Blvd | I-205 | Acceptable | Yes | No |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | Deficient | Yes | Yes |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | Deficient | Yes | Yes |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | Acceptable | Yes | No |
| WS 02 | Industrial Blvd/Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | Acceptable | Yes | No |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | Deficient | Yes | Yes |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | Deficient | Yes | Yes |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | Deficient | No | No |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./Yolo Co. Line | Deficient | Yes | Yes |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | Deficient | Yes | Yes |

Source: Appendix 19A, Bay Delta Conservation Plan Construction Traffic Impact Analysis

1 As shown in Table 19-18, construction during Alternative 1B would contribute to substantial
 2 deterioration of pavement conditions on 46 roadway segments that would exceed applicable
 3 thresholds summarized in Table 19-7. Damage to roadway pavement is expected throughout the
 4 study area (Figure 19-4a) on various local and state roads, as well as on a few interstates. The effect
 5 of roadway damage to these segments during construction would be adverse. Mitigation Measures
 6 TRANS-2a through TRANS-2c are available to reduce this effect, but not necessarily to a level that
 7 would not be adverse, as the BDCP proponents cannot ensure that the agreements or encroachment
 8 permits will be obtained from the relevant transportation agencies. If an agreement or
 9 encroachment permit is not obtained, an adverse effect in the form of deficient pavement conditions
 10 would occur. Accordingly, this effect could remain adverse. If, however, mitigation agreement(s) or
 11 encroachment permit(s) providing for the improvement or replacement of pavement are obtained
 12 and any other necessary agreements are completed, adverse effects could be avoided. Collectively,
 13 these measures include stipulations to limit/prohibit construction activity on deficient roadways
 14 and improve the physical condition of affected segments.

15 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 16 below acceptable thresholds (Table 19-7) at the 46 locations shown in Table 19-18. The impact of
 17 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
 18 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
 19 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
 20 permits will be obtained from the relevant transportation agencies. If an agreement or
 21 encroachment permit is not obtained, a significant impact in the form of deficient pavement
 22 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 23 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 24 of pavement are obtained and any other necessary agreements are completed, impacts would be
 25 reduced to less than significant.

26 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 27 **Roadway Segments**

28 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

29 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 30 **Roadway Segments**

31 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

32 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
 33 **as Stipulated in Mitigation Agreements or Encroachment Permits**

34 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

35 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
 36 **during Construction**

37 **NEPA Effects:** Alternative 1B would require a heavy volume of materials to be hauled to the
 38 construction work zones, increasing the amount of trucks using the transportation system in the
 39 study area. The increase in heavy construction traffic on local roadways would increase the
 40 potential for safety hazards such as conflicts with recreational and commuter traffic and with

1 farming operations. The increase in heavy construction traffic using emergency routes could result
 2 in interference with emergency service response times. Emergency routes in the study area are
 3 identified in Table 19-11.

4 As discussed above and in Chapter 22, *Air Quality and Greenhouse Gases*, construction of Alternative
 5 1B would increase the amount of trucks using the transportation system in the study area.
 6 Compared to Alternative 1A, construction trips would be higher due to culvert installation;
 7 therefore, the effects under Alternative 1B would be the similar to the effect under Alternative 1A,
 8 but greater in magnitude. The effect of increased safety hazards from increased heavy construction
 9 traffic on local roadways and emergency routes identified in Table 19-11 would be adverse.
 10 Although TRANS-1c will reduce the severity of this effect, the BDCP proponents are not solely
 11 responsible for the timing, nature, or complete funding of required improvements. If an
 12 improvement identified in the mitigation agreement(s) is not fully funded and constructed before
 13 the project's contribution to the effect is made, an adverse effect in the form of increased safety
 14 hazards would occur. Accordingly, this effect would be adverse. If, however, all improvements
 15 required to avoid adverse effects prove to be feasible and any necessary agreements are completed
 16 before the project's contribution to the effect is made, effects would not be adverse.

17 **CEQA Conclusion:** Construction of Alternative 1B would increase the amount of trucks using the
 18 transportation system in the study area. This increase in heavy truck traffic could interfere with
 19 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
 20 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
 21 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 22 prior to the project's contribution to the impact. If an improvement identified in the mitigation
 23 agreement(s) is not fully funded and constructed before the project's contribution to the impact is
 24 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
 25 effect would be significant and unavoidable. If, however, all improvements required to avoid
 26 significant impacts prove to be feasible and any necessary agreements are completed before the
 27 project's contribution to the effect is made, impacts would be less than significant.

28 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 29 **Agreements to Enhance Capacity of Congested Roadway Segments**

30 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

31 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

32 **NEPA Effects:** Under Alternative 1B a temporary barge unloading facility for construction material is
 33 planned on the San Joaquin River at Hog Island. Approximately 4,500 barge trips are projected to
 34 carry construction materials to this unloading facility, a substantial increase over the estimated
 35 3,000 trips for Alternative 1A (averaging approximately less than 2 barge trips per day over the
 36 estimated 9-year-long construction period). Barge traffic would occur primarily in San Joaquin
 37 River. Although barges are relatively slow and have less maneuverability than smaller vessels,
 38 commercial barge operators are required to operate in compliance with navigational guidelines. The
 39 barge unloading facilities would be temporary and removed following construction. Increased barge
 40 traffic related to delivery of materials to the project site is not anticipated to cause impediments to
 41 the passage of other vessels, and would not require additional raising of draw bridges in the study
 42 area.

1 Although some in-water work would be necessary for intake construction along the Sacramento
 2 River, the river would remain open to boat traffic at all times during construction. The intake
 3 cofferdams would extend into the river channel up to 120 feet, depending on location. The width of
 4 the river near the intakes (approximately 500–700 feet) would therefore allow for passage of the
 5 types of boats typically observed on the Sacramento River (channel width during construction 380–
 6 580 feet). (Refer to Chapter 15, *Recreation*, for additional discussion of the effects of intake
 7 construction on boating.)

8 This potential effect is not considered adverse because construction of Alternative 1B would not
 9 substantially increase the volume of barge movement within the study area, such that existing
 10 marine traffic would be disrupted (on average, only 2 additional barge trips per day are expected
 11 through the 9-year construction period). As noted in Chapter 15, *Recreation*, Impact REC-3, the
 12 temporary barge unloading facility would occupy 1,000 feet of riverbank. The slough is about 150
 13 feet wide at this location. Therefore, the barge facility and barge operations would occupy a
 14 substantial portion of the slough. However, all barge routes and landing sites will be selected to
 15 maximize continuous waterway access and a minimum waterway width greater than 100 feet.
 16 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
 17 stipulations to notify the commercial and leisure boating community of proposed barge operations
 18 in the waterways.

19 **CEQA Conclusion:** Construction of Alternative 1B would not substantially increase the volume of
 20 barge movement within the study area such that existing marine traffic would be disrupted (on
 21 average, only 2 additional barge trips per day are expected through the 9-year construction period).
 22 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
 23 stipulations to notify the commercial and leisure boating community of proposed barge operations
 24 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would
 25 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
 26 mitigation is required.

27 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 28 **Plan**

29 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

30 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

31 **NEPA Effects:** The potential for Alternative 1B to disrupt rail service on the UPRR Tracy Subdivision
 32 branch line would be the same as Alternative 1A with regard to construction of the new forebay.
 33 (See Table 19-19 for construction impacts on rail lines). Both conveyance alignments would cross
 34 the existing BNSF Railway/Amtrak line just East of Holt. Maintaining freight and passenger service
 35 on the BNSF railroad line with canal construction would be achieved by way of a siphon to be
 36 constructed under the railroad. Construction of the siphon may temporarily affect BNSF/Amtrak
 37 railroad operations.

38 If the currently out of service UPRR Tracy Subdivision branch line is reopened prior to construction,
 39 the continuity of rail traffic can be managed, if needed, through implementation of Mitigation
 40 Measure TRANS-1a. Construction could interfere with operation of the BNSF line. The effect would
 41 be adverse. Mitigation Measure TRANS-1a is available to reduce this effect.

1 **Table 19-19. Construction Impacts on Rail Traffic for East Alignment Alternatives (1B, 2B, and 6B)**

| Affected Railroad | Crosses and/or Immediately Adjacent to Construction Zone | Level of Train Volume | Construction Impacts on Rail Traffic |
|---|--|-----------------------|---|
| BNSF Railway and Amtrak San Joaquin Line | Yes | High | Substantial—railroad crosses construction of new canal and siphon just east of Holt |
| Union Pacific Railroad--Tracy Subdivision | Yes | Low (Out of Service) | Minimal to Non-Existent |

2

3 **CEQA Conclusion:** Construction of east canal siphons may temporarily affect BNSF/Amtrak railroad
 4 operations through physical railroad crosses. If the UPRR Tracy Subdivision branch line is reopened
 5 prior to construction, traffic associated with of the Byron Tract forebay may minimally impact rail
 6 service through vehicle crossing. This is a potentially significant impact. Implementation of
 7 Mitigation Measure TRANS-1a would reduce this impact to a less than significant level.

8 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 9 **Plan**

10 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

11 **Impact TRANS-6: Disruption of Transit Service during Construction**

12 **NEPA Effects:** Construction of the canal conveyances and other project elements under Alternative
 13 1B could require construction detours or contribute to congestion during lane closures and other
 14 construction activities, thereby affecting transit routes and schedules. Table 19-20 summarizes the
 15 transit service potentially affected under Alternative 1B.

16 **Table 19-20. Construction Impacts on Bus Routes for East Alignment Alternatives (1B, 2B, and 6B)**

| Affected Transit Service | Roadway Operated On and Location | Estimated Trips per Day | Construction Impacts on Bus Route |
|--------------------------|----------------------------------|---|--|
| SCT/Link Delta Route | SR 12 just west of I-5 | 4 trips per weekday (2 in each direction) | Construction of the new canal as it intersects with SR 12 work area. |

17

18 As shown in Table 19-17, construction activities would decrease LOS below applicable thresholds, as
 19 well as exacerbate already unacceptable LOS conditions along 8 segments on SR-12. Accordingly,
 20 construction could affect operation of the SCT Link/Delta Route. Intercity Greyhound bus lines
 21 primarily operate on the interstate highway system in this vicinity and are not anticipated to be
 22 delayed. The effect of disruption to transit service during construction would be adverse. Although
 23 Mitigation Measures TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP
 24 proponents are not solely responsible for the timing, nature, or complete funding of required
 25 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
 26 constructed before the project’s contribution to the effect is made, an adverse effect in the form of
 27 disruptions to transit service would occur. Therefore, this effect would be adverse.

1 **CEQA Conclusion:** Construction activities associated with Alternative 1B would decrease LOS below
 2 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 8 segments
 3 on SR-12 (see Table 19-17). Accordingly, construction could significantly affect operation of the SCT
 4 Link/Delta Route. To the extent that other roadways affected by Alternative 1B construction also
 5 carry Greyhound bus lines, those routes may be affected as well. Mitigation Measures TRANS-1a
 6 through TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels.
 7 Under Mitigation Measure TRANS-1a, the BDCP proponents would coordinate with transit providers
 8 to develop, to the extent feasible, daily construction time windows during which transit operations
 9 would not be either detoured or significantly slowed, avoiding a substantial disruption of transit
 10 service. Additionally, under Mitigation Measure TRANS-1b, construction traffic would be minimized
 11 around peak periods, to the extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP
 12 proponents would make good faith efforts to enter into mitigation agreements to enhance the
 13 capacity of congested roadway segments, likely reducing associated disruptions to transit service.
 14 However, the BDCP proponents cannot ensure that the improvements will be fully funded or
 15 constructed prior to the project's contribution to the impact. If an improvement identified in the
 16 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
 17 impact is made, a significant impact in the form disruptions to transit service would occur.
 18 Therefore, this impact would be significant and unavoidable. However, such impacts are likely to
 19 occur during the middle of the day because construction traffic would be minimized around peak
 20 periods.

21 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 22 **Plan**

23 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

24 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 25 **Congested Roadway Segments**

26 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

27 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 28 **Agreements to Enhance Capacity of Congested Roadway Segments**

29 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

30 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

31 **NEPA Effects:** Increased traffic and vehicle delays during construction (see Table 19-17) could
 32 interfere with bicycle routes along SR 12. The effect of disruption to bicycle routes during
 33 construction would be adverse. Mitigation Measure TRANS-1a is available to reduce this effect.
 34 Under this measure, BDCP proponents would provide alternate access routes via detours or bridges
 35 to maintain continual circulation for local travelers in and around construction zones, including
 36 bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could be hazardous to
 37 road cycling activity on roadways open to bicycle traffic; provide signage, barricades, and flag people
 38 as necessary to slow or detour traffic around construction sites; and notify the public, including
 39 cycling organizations and bike shops, of construction activities that could affect transportation.
 40 Additionally, another project commitment, as described in Appendix 3B, *Environmental*
 41 *Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas in the vicinity
 42 of the proposed intakes, including enhancement of bicycle and foot access to the Delta and the

1 potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a bicycle
2 path.

3 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-17) could
4 interfere with bicycle routes along SR 12, resulting in a significant impact. However, Mitigation
5 Measure TRANS-1a would reduce the severity of this impact to less-than-significant levels because
6 BDCP proponents would provide alternate access routes via detours or bridges to maintain
7 continual circulation for local travelers in and around construction zones, including bicycle riders;
8 provide signage warning of loose gravel, steel plates, etc. that could be hazardous to road cycling
9 activity on roadways open to bicycle traffic; provide signage, barricades, and flag people as
10 necessary to slow or detour traffic around construction sites; and notify the public, including cycling
11 organizations and bike shops, of construction activities that could affect transportation. Additionally,
12 another project commitment, as described in Appendix 3B, *Environmental Commitments*, and
13 Chapter 15, *Recreation*, could enhance recreational access to areas in the vicinity of the proposed
14 intakes, including enhancement of bicycle and foot access to the Delta and the potential conversion
15 of an abandoned rail line between Sacramento and Walnut Grove into a bicycle path. Because
16 implementation of this mitigation measure and project commitment would avoid a substantial
17 disruption to bicycle facilities as a result of increased roadway traffic and/or roadway closures, this
18 impact would be less than significant.

19 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
20 **Plan**

21 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

22 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

23 **NEPA Effects:** The effect of maintaining and operating the facilities roadway operations under
24 Alternative 1B would be the same as under Alternative 1A (see Tables 19-14, 19-15, and 19-16).
25 Like Alternative 1A, O&M activities would occur along the entire alternative alignment. Even
26 assuming the higher employment range in Table 19-16, given the limited number of workers
27 involved and the large number of work sites, it is not anticipated that routine operations and
28 maintenance activities or major inspections would result in substantial increases of traffic volumes
29 or roadway congestion. The effect of increased traffic volumes and delays during operations would
30 not be adverse.

31 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
32 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
33 activities or major inspections would result in substantial increases of traffic volumes or roadway
34 congestion. The impact of increased traffic volumes and delays during operations would therefore
35 be less than significant. No mitigation is required.

36 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and**
37 **Maintenance**

38 **NEPA Effects:** Similar to Alternative 1A, Alternative 1B would require realignment of SR 160 and
39 Randall Island Road at the intakes. Because of canal construction, multiple bridges would be
40 constructed across the alignment to maintain connectivity. Alternative 1B would intersect several
41 public roadways, state routes, and one railroad requiring bridges at most of these locations to
42 maintain connectivity along the canal.

- 1 ● Blossom Road: The canal would intersect Blossom Road between Barber Road and Walnut
2 Grove Road. Several options for re-routing Blossom Road on the east side of the canal are
3 available.
- 4 ● Holt Road: Holt Road between Neugebauer Road and W McDonald Road is within the canal
5 footprint in a couple of places and would be realigned.
- 6 ● Bonetti Road: The canal would intersect Bonetti Road near the intersection with Clifton Court
7 Road. Bonetti Road would be realigned along the canal to utilize the new Clifton Court Road
8 bridge.

9 The design and construction of all project components (i.e., conveyances, intakes, and forebays)
10 would provide for on-going continuity of all transportation facilities following completion of
11 construction. Structures would be constructed as necessary to provide connectivity across canals
12 (either bridges or siphons) for active railroads to cross without disruption. Water operations would
13 not modify the river stage above the water levels seen in the river today. Therefore, no change
14 would be expected to affect boat traffic associated with changes in water levels. Operations and
15 maintenance of the facilities would not have any substantive impact on barge traffic (or the roadway
16 network) due to operation of moveable bridges. Impediments to boat traffic associated with the
17 intakes would continue for the life of the project, but would not substantially impact boat passage or
18 usage (refer to Chapter 15, *Recreation*, for more discussion of effects on boating.) The effect of
19 permanent alteration of transportation patterns during operations would not be adverse.

20 **CEQA Conclusion:** Alternative 1B would require realignment of SR 160 and Randall Island Road at
21 the intakes. Because of canal construction, multiple bridges would be constructed across the
22 alignment to maintain connectivity. Alternative 1B would intersect several public roadways, state
23 routes, and one railroad requiring bridges. The design and construction of all project components
24 (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all transportation
25 facilities following completion of construction. Water operations would not modify the river stage
26 above the water levels seen in the river today. Therefore, no change would be expected to affect boat
27 traffic associated with changes in water levels. Operations and maintenance of the facilities would
28 not have any substantive impact on barge traffic. Accordingly, the impact of permanent alteration of
29 transportation patterns during operations would be less than significant. No mitigation is required.

30 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

31 **NEPA Effects:** At the program-level of analysis, the impact under Alternative 1B would be the same
32 as Alternative 1A because the acreage of conservation is identical. Impacts on roadways could result
33 in circulation delays or the inability to maintain adequate vehicular access in or around restoration
34 or enhancement work zones. Roads and highways in and around Suisun Marsh and the Yolo Bypass
35 could experience increases in traffic volumes, resulting in localized congestion and conflicts with
36 local traffic. These roadways could function as haul routes or to bring construction personnel to the
37 work sites. Maintenance and monitoring of the restoration areas would also generate some vehicle
38 trips. The effect of increased traffic volumes during implementation of CM2–CM22 would be
39 adverse. Although TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP
40 proponents are not solely responsible for the timing, nature, or complete funding of required
41 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
42 constructed before the project's contribution to the effect is made, an adverse effect would occur.
43 Therefore, this effect would be adverse. If, however, all improvements required to avoid adverse

1 effects prove to be feasible and any necessary agreements are completed before the project's
2 contribution to the effect is made, effects would not be adverse.

3 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
4 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
5 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
6 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
7 function as haul routes or to bring construction personnel to the work sites. Maintenance and
8 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
9 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
10 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
11 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
12 constructed prior to the project's contribution to the impact. If an improvement identified in the
13 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
14 impact is made, a significant impact would occur. Therefore, the project's impacts to roadway
15 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
16 required to avoid significant impacts prove to be feasible and any necessary agreements are
17 completed before the project's contribution to the effect is made, impacts would be less than
18 significant.

19 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
20 **Plan**

21 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

22 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
23 **Congested Roadway Segments**

24 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

25 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
26 **Agreements to Enhance Capacity of Congested Roadway Segments**

27 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

28 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
29 **Conservation Measures with Plans and Policies**

30 **NEPA Effects:** The potential for inconsistencies with plans or polices would be similar to the
31 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 1B
32 would be compatible with applicable plans and policies related to transportation and circulation.

33 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
34 and no additional CEQA conclusion is required related to the consistency of the alternative with
35 relevant plans and polices. The relationship between plans, policies, and regulations and impacts on
36 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

19.3.3.4 Alternative 1C—Dual Conveyance with West Alignment and Intakes W1–W5 (15,000 cfs; Operational Scenario A)

A total of five intakes would be constructed under Alternative 1C. They would be sited on the west bank of the Sacramento River, directly opposite the locations identified for the tunnel and east canal alignments. This alternative would also include an intermediate forebay, and the conveyance facility would be a canal and buried pipeline (see Figures 3-6 and 3-7 in Chapter 3, *Description of Alternatives*).

Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS Conditions

NEPA Effects: As shown in Table 19-21, under BPBG conditions, a total of 19 roadway segments would exceed LOS for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. As also shown in Table 19-21, construction associated with Alternative 1C would cause LOS thresholds to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM analysis period on a total of 56 roadway segments under BPBGPP conditions (see entries in **bold** type). Alternative 1C would therefore exacerbate an already unacceptable LOS under BPBG conditions on **37** roadway segments (56 minus the 19 that would already be operating at an unacceptable LOS under BPBG conditions). Figure 19-3a shows the study roadway segments that could experience substantial roadway operation effects.

The decrease in LOS below applicable thresholds during construction would be adverse at the locations identified in Table 19-21 because construction associated with Alternative 1C would cause LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. Alternative 1C would also exacerbate an already unacceptable LOS under BPBG conditions at 37 roadway segments (56 minus the 19 that would already be operating at an unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur throughout the study area, the highest concentration of roadway segments below applicable LOS threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be exceeded on several local roadways, including all segments studied in West Sacramento and Yolo County.

Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively, these measures include requirements to avoid or reduce circulation effects, notify the public of construction activities, provide alternate access routes, require direct haulers to pull over in the event of an emergency, limit/prohibit the amount of construction activity on congested roadways, and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete funding of required improvements. If an improvement that is identified in any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed before the project's contribution to the effect is made, an adverse effect in the form of unacceptable LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to avoid adverse effects prove to be feasible and any necessary agreements are completed before the project's contribution to the effect is made, effects would not be adverse.

1 **Table 19-21. Level of Service for West Alignment Alternatives (1C, 2C, and 6C)**

| ID | Segment | From | To | LOS | LOS Threshold | Baseline Conditions | | Baseline Plus Background Growth Conditions | | BPGPP Conditions | |
|---------------|--|---|---|----------|---------------|---------------------|--------------------------|--|--------------------------|-----------------------|--------------------------|
| | | | | | | Hourly Volume | Hours Operating | Hourly Volume | Hours Operating | Hourly Volume | Hours Operating |
| | | | | | | Range (6AM to 7PM) | Worse Than LOS Threshold | Range (6AM to 7PM) | Worse Than LOS Threshold | Range (6AM to 7PM) | Worse Than LOS Threshold |
| ALA 01 | Byron Hwy | Contra Costa Co./ Alameda Co. Line | Alameda Co./San Joaquin Co. Line | D | 1,600 | 385 to 656 | - | 416 to 708 | - | 1,491 to 1,522 | 6 (6-10AM; 3-7PM) |
| BRE 01 | Brentwood Blvd (old SR 4)¹ | Delta Rd (Oakley City Limits) | Balfour Rd | C | 970 | 586 to 1,516 | 11 (7-9AM; 10AM-7PM) | - | - | - | - |
| | | | | D | 1,760 | - | - | 590 to 1,526 | - | 1,665 to 2,601 | 12 (7AM-7PM) |
| BRE 02 | Brentwood Blvd (old SR 4) ¹ | Balfour Rd | Brentwood City Limits (South) | C | 1,920 | 369 to 1,013 | - | - | - | - | - |
| | | | | D | 3,540 | - | - | 346 to 950 | - | 1,421 to 2,025 | - |
| BRE 03 | Balfour Rd | Brentwood Blvd (Old SR 4) | Brentwood City Limits | D | 3,540 | 437 to 1,300 | - | 481 to 1,430 | - | 774 to 1,723 | - |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | D | 1,600 | 124 to 330 | - | 139 to 370 | - | 291 to 522 | - |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | D | 1,600 | 90 to 297 | - | 99 to 327 | - | 392 to 620 | - |
| CC 03 | Old SR 4¹ | Brentwood City Limits (South) | Marsh Creek Rd | C | 790 | 1,133 to 1,682 | 13 (6AM-7PM) | - | - | - | - |
| | | | | D | 1,600 | - | - | 1,220 to 1,811 | 3 (3-6PM) | 2,295 to 2,886 | 13 (6AM-7PM) |
| CC 04 | Byron Hwy | Delta Rd | Old SR 4 | D | 1,410 | 108 to 240 | - | 106 to 236 | - | 732 to 862 | - |

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume | Baseline Plus Background | | | | | |
|--------------|------------------|------------------|---|---------------|-------------------|----------------------------|--|----------------------------|--|----------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./ Alameda Co. Line | D | 1,600 | 483 to 907 | - | 522 to 980 | - | 1,597 to 2,055 | 12 (6-11AM; 12-7PM) |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | F | 6,060 | 2,589 to 5,820 | - | 2,842 to 6,389 | 1 (7-8AM) | 3,894 to 7,441 | 2 (7-9AM) |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | F | 6,060 | 1,647 to 5,705 | - | 1,789 to 6,198 | 2 (4-6PM) | 2,841 to 7,250 | 2 (4-6PM) |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | F | 6,060 | 2,359 to 5,156 | - | 2,513 to 5,492 | - | 2,839 to 5,818 | - |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | F | 6,060 | 1,543 to 5,243 | - | 1,651 to 5,611 | - | 1,977 to 5,937 | - |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | F | 4,010 | 1,820 to 3,339 | - | 1,820 to 3,339 | - | 1,820 to 3,339 | - |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | F | 4,010 | 1,254 to 3,332 | - | 1,254 to 3,332 | - | 1,254 to 3,332 | - |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | F | 4,010 | 1,504 to 2,162 | - | 1,504 to 2,162 | - | 1,504 to 2,162 | - |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | F | 4,010 | 1,217 to 2,236 | - | 1,217 to 2,236 | - | 1,217 to 2,236 | - |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | F | 4,010 | 1,414 to 1,851 | - | 1,602 to 2,097 | - | 1,678 to 2,173 | - |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | F | 4,010 | 1,207 to 1,964 | - | 1,369 to 2,227 | - | 1,445 to 2,303 | - |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | C | 2,880 | 1,312 to 1,720 | - | 1,446 to 1,896 | - | 2,172 to 2,622 | - |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | C | 2,880 | 1,111 to 1,813 | - | 1,225 to 1,999 | - | 1,951 to 2,725 | - |

| ID | Segment | From | To | LOS | LOS Threshold | Baseline Plus Background | | | | | |
|--------------|---------------------------------|-------------------------------|------------------------|----------|------------------|--|--|--|--|--|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| CT 13 | I-5 NB | Walnut Grove Rd | Peltier Rd | C | 2,880 | 1,374 to 1,803 | - | 1,566 to 2,055 | - | 2,449 to 2,938 | 1 (4-5PM) |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | C | 2,880 | 1,128 to 1,894 | - | 1,286 to 2,159 | - | 2,169 to 3,042 | 2 (3-5PM) |
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | C | 2,880 | 1,421 to 1,885 | - | 1,421 to 1,885 | - | 1,421 to 1,885 | - |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | C | 2,880 | 1,145 to 1,974 | - | 1,145 to 1,974 | - | 1,145 to 1,974 | - |
| CT 17 | I-5 NB | Turner Rd | SR 12 | C | 2,880 | 1,288 to 1,985 | - | 1,520 to 2,342 | - | 1,879 to 2,701 | - |
| CT 18 | I-5 SB | Turner Rd | SR 12 | C | 2,880 | 1,124 to 1,482 | - | 1,326 to 1,749 | - | 1,685 to 2,108 | - |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | C | 4,400 | 1,533 to 2,267 | - | 1,748 to 2,584 | - | 1,900 to 2,736 | - |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | C | 4,400 | 1,243 to 2,070 | - | 1,417 to 2,360 | - | 1,569 to 2,512 | - |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | D | 5,410 | 1,937 to 3,452 | - | 1,937 to 3,452 | - | 1,937 to 3,452 | - |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | D | 5,410 | 1,817 to 2,760 | - | 1,817 to 2,760 | - | 1,817 to 2,760 | - |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | E | 1,740 | 136 to 476 | - | 145 to 506 | - | 2,246 to 2,607 | 13 (6AM-7PM) |
| CT 24 | SR 160 (Freeport Blvd/River Rd) | Freeport Bridge | Scribner Rd | E | 1,740 | 94 to 180 | - | 94 to 180 | - | 94 to 180 | - |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | E | 1,740 | 41 to 125 | - | 41 to 125 | - | 41 to 125 | - |

| ID | Segment | From | To | LOS | LOS Hourly Volume Threshold | Baseline Plus Background | | | | | |
|--------------|---------------------------------------|--|--------------------------------|----------|--------------------------------------|--|--|--|--|--|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | E | 1,740 | 105 to 170 | - | 105 to 170 | - | 105 to 170 | - |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | E | 1,740 | 69 to 122 | - | 69 to 122 | - | 69 to 122 | - |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | E | 1,740 | 75 to 150 | - | 77 to 154 | - | 1,528 to 1,605- | - |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | E | 1,740 | 78 to 128 | - | 89 to 147 | - | 3,265 to 3,323 | 13 (6AM-7PM) |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | E | 1,740 | 173 to 465 | - | 173 to 465 | - | 3,349 to 3,641 | 13 (6AM-7PM) |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | E | 1,740 | 193 to 378 | - | 193 to 378 | - | 3,369 to 3,554 | 13 (6AM-7PM) |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | F | 1,740 | 530 to 894 | - | 549 to 926 | - | 3,725 to 4,102 | 13 (6AM-7PM) |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | B | 200 | 40 to 169 | - | 42 to 177 | - | 1,926 to 2,061 | 13 (6AM-7PM) |
| CT 34 | SR 84 (Courtland Rd/ Ryer Ave) | Courtland Rd | Cache Slough Ferry | C | 680 | 10 to 25 | - | 11 to 26 | - | 239 to 254 | - |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | C | 8,350 | 3,079 to 6,994 | - | 3,510 to 7,973 | - | 5,100 to 9,563 | 4 (2-6PM) |
| CT 36 | I-80 WB | Suisun Valley Rd | SR 12 | C | 8,350 | 5,751 to 8,892 | 2 (6-8AM) | 6,556 to 10,137 | 2 (6-8AM) | 8,146 to 11,727 | 12 (6AM-6PM) |
| CT 37 | SR 12 EB | I-80 | Beck Ave | C | 2,880 | 528 to 1,847 | - | 612 to 2,143 | - | 2,202 to 3,733 | 8 (11AM-7PM) |
| CT 38 | SR 12 WB | I-80 | Beck Ave | C | 2,880 | 829 to 1,625 | - | 962 to 1,885 | - | 2,552 to 3,475 | 4 (6-10AM) |

| ID | Segment | From | To | LOS | LOS Threshold | Baseline Plus Background | | | | | |
|-------|-----------------------------|-------------------------------------|-------------------------------------|-----|------------------|--|--|--|--|--|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/ Grizzly Island Rd | C | 5,060 | 2,408 to 3,573 | - | 2,772 to 4,114 | - | 5,948 to 7,290 | 13 (6AM-7PM) |
| CT 40 | SR 12 | Sunset Ave/ Grizzly Island Rd | Walters Rd/ Lawler Ranch Pkwy | C | 5,060 | 1,607 to 2,353 | - | 1,864 to 2,729 | - | 5,040 to 5,905 | 12 (6-9AM; 10AM-7PM) |
| CT 41 | SR 12 | Walters Rd/ Lawler Ranch Pkwy | SR 113 | C | 790 | 627 to 1,075 | 10 (6-8AM; 9- 1PM; 2- 6PM) | 727 to 1,247 | 12 (6AM-6PM) | 3,903 to 4,423 | 13 (6AM-7PM) |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | C | 790 | 1,073 to 1,544 | 13 (6AM-7PM) | 1,245 to 1,791 | 13 (6AM-7PM) | 4,421 to 4,967 | 13 (6AM-7PM) |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | C | 970 | 1,135 to 1,685 | 13 (6AM-7PM) | 1,317 to 1,955 | 13 (6AM-7PM) | 4,493 to 5,131 | 13 (6AM-7PM) |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./ SJ Co. Line | C | 790 | 704 to 1,030 | 12 (6AM-6PM) | 788 to 1,154 | 12 (6AM-6PM) | 1,658 to 2,024 | 13 (6AM-7PM) |
| CT 45 | SR 12 | Sacramento Co./ SJ Co. Line | I-5 | C | 790 | 773 to 1,164 | 12 (6AM-6PM) | 813 to 1,224 | 13 (6AM-7PM) | 1,683 to 2,094 | 13 (6AM-7PM) |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | C | 4,400 | 2,508 to 4,632 | 2 (3-5PM) | 2,765 to 5,107 | 3 (3-6PM) | 3,303 to 5,645 | 6 (7-9AM; 2- 6PM) |
| CT 47 | I-80 WB | SR 113 | Pedrick Rd | C | 4,400 | 3,068 to 4,191 | - | 3,280 to 4,481 | 2 (4-6PM) | 3,818 to 5,019 | 5 (6-8AM; 3- 6PM) |
| CT 48 | SR 113 | I-80 | Dixon City Limits | C | 1,920 | 569 to 1,341 | - | 569 to 1,341 | - | 1,644 to 2,416 | 11 (7-9AM; 10AM-7PM) |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | C | 680 | 174 to 294 | - | 188 to 318 | - | 1,263 to 1,393 | 13 (6AM-7PM) |

| ID | Segment | From | To | LOS Threshold | Baseline Plus Background | | | | | | |
|-------|---------------------------------------|------------------------|-------------------------|------------------|--|--|--|--|--|--|-----------------|
| | | | | | Baseline Conditions | | Growth Conditions | | BPPGPP Conditions | | |
| | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | |
| CT 50 | SR 4 (Marsh Creek Rd) ² | Vasco Rd | Byron Hwy (Old SR 4) | D | 1,600 | 442 to 733 | - | - | - | - | |
| | | | | C | 790 | - | - | 477 to 792 | 1 (4-5PM) | 1,552 to 1,867 | 13 (6AM-7PM) |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | D | 1,600 | 554 to 1,224 | - | 601 to 1,327 | - | 1,676 to 2,402 | 13 (6AM-7PM) |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | C | 790 | 412 to 746 | - | 412 to 746 | - | 1,487 to 1,821 | 13 (6AM-7PM) |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | D | 1,410 | 867 to 1,492 | 1 (4-5PM) | 867 to 1,492 | 1 (4-5PM) | 1,942 to 2,567 | 13 (6AM-7PM) |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | D | 7,280 | 2,552 to 4,815 | - | 2,855 to 5,386 | - | 3,393 to 5,924 | - |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | D | 7,280 | 4,550 to 5,913 | - | 5,108 to 6,639 | - | 5,646 to 7,177 | - |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | D | 5,410 | 2,430 to 4,586 | - | 2,770 to 5,228 | - | 3,308 to 5,766 | 3 (3-6PM) |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | D | 5,410 | 4,333 to 5,631 | 3 (7-8AM; 4-6PM) | 4,940 to 6,419 | 8 (6-9AM; 1-6PM) | 5,478 to 6,957 | 13 (6AM-7PM) |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | C | 4,400 | 1,350 to 5,071 | 4 (3-7PM) | 1,480 to 5,560 | 4 (3-7PM) | 2,018 to 6,098 | 5 (2-7PM) |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | C | 4,400 | 1,873 to 4,867 | 2 (6-8AM) | 2,058 to 5,348 | 3 (6-9AM) | 2,596 to 5,886 | 3 (6-9AM) |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | C | 4,400 | 1,431 to 5,068 | 4 (3-7PM) | 1,574 to 5,575 | 5 (2-7PM) | 2,112 to 6,113 | 5 (2-7PM) |
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | C | 4,400 | 1,875 to 4,117 | - | 2,063 to 4,529 | 1 (6-7AM) | 2,601 to 5,067 | 2 (6-8AM) |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | D | 5,410 | 1,525 to 4,200 | - | 1,525 to 4,200 | - | 1,525 to 4,200 | - |

| ID | Segment | From | To | LOS | LOS Hourly Volume Threshold | Baseline Conditions | | Baseline Plus Background Growth Conditions | | BPPGPP Conditions | |
|---------------|---|---------------------------|--|----------|--------------------------------------|--|--|---|--|--|--|
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| | | | | | | | | | | | |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | D | 5,410 | 1,852 to 3,079 | - | 1,852 to 3,079 | - | 1,852 to 3,079 | - |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | D | 5,410 | 1,511 to 4,182 | - | 1,511 to 4,182 | - | 1,511 to 4,182 | - |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | D | 5,410 | 2,083 to 3,446 | - | 2,083 to 3,446 | - | 2,083 to 3,446 | - |
| ISL 01 | A St/4th St/ Jackson Blvd. | SR 160 | Isleton City Limits | D | 1,410 | 17 to 75 | - | 17 to 75 | - | 17 to 75 | - |
| OAK 01 | Main Street (Old SR 4) ¹ | SR 160 | Cypress Rd | C | 1,920 | 752 to 1,663 | - | - | - | - | - |
| | | | | D | 3,540 | - | - | 795 to 1,759 | - | 1,870 to 2,834 | - |
| OAK 02 | Main Street (Old SR 4)¹ | Cypress Rd | Delta Rd (Oakley City Limits) | C | 970 | 722 to 1,335 | 10 | - | - | - | - |
| | | | | D | 1,760 | - | - | 823 to 1,522 | - | 1,898 to 2,597 | 13 (6AM-7PM) |
| OAK 03 | Cypress Rd | Main Street (Old SR 4) | Bethel Island Rd | D | 1,600 | 304 to 764 | - | 340 to 856 | - | 906 to 1,422 | - |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | D | 1,410 | 140 to 367 | - | 157 to 411 | - | 309 to 563 | - |
| OAK 05 | Delta Rd | Main Street (Old SR 4) | Byron Hwy | D | 1,410 | 155 to 334 | - | 129 to 278 | - | 755 to 904 | - |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | D | 3,540 | 789 to 2,191 | - | 789 to 2,191 | - | 2,890 to 4,292 | 8 (7-9AM; 1- 7PM) |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | D | 1,760 | 152 to 492 | - | 164 to 531 | - | 2,265 to 2,632 | 13 (6AM-7PM) |

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume | Baseline Plus Background | | | | | |
|--------------|---------------------------------|---|-------------------------------------|---------------|-------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | D | 1,410 | 98 to 346 | - | 105 to 371 | - | 2,206 to 2,472 | 13 (6AM-7PM) |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | D | 1,410 | 77 to 137 | - | 77 to 137 | - | 77 to 137 | - |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | D | 1,410 | 10 to 29 | - | 10 to 29 | - | 10 to 29 | - |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | D | 1,410 | 19 to 38 | - | 19 to 38 | - | 19 to 38 | - |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | D | 1,410 | 41 to 71 | - | 41 to 71 | - | 41 to 71 | - |
| SC 06 | Twin Cities Rd | River Rd | I-5 | D | 1,410 | 130 to 248 | - | 133 to 253 | - | 1,584 to 1,704 | 13 (6AM-7PM) |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | D | 1,410 | 141 to 318 | - | 141 to 318 | - | 141 to 318 | - |
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./ Yolo Co. Line | Paintersville Bridge | D | 1,410 | 51 to 113 | - | 55 to 122 | - | 3,231 to 3,298 | 13 (6AM-7PM) |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | D | 1,410 | 85 to 134 | - | 86 to 135 | - | 1,537 to 1,586 | 13 (6AM-7PM) |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | D | 1,600 | 223 to 365 | - | 230 to 377 | - | 382 to 529 | - |
| SC 11 | Walnut Grove Rd/River Rd | Walnut Grove Bridge | Sacramento Co./ SJ Co. Line | D | 1,410 | 175 to 332 | - | 179 to 340 | - | 1,943 to 2,104 | 13 (6AM-7PM) |
| SC 12 | Isleton Rd | River Rd (Walnut Grove)/Isleton Rd Bridge | 1.5 miles west of Isleton Rd Bridge | D | 1,410 | 61 to 283 | - | 61 to 283 | - | 61 to 283 | - |
| SC 13 | Race Track Rd/ Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | D | 1,410 | 17 to 34 | - | 17 to 34 | - | 17 to 34 | - |

| ID | Segment | From | To | LOS | LOS Threshold | Baseline Plus Background | | | | | |
|--------------|----------------------------|---|----------------------------|----------|------------------|--|--|--|--|--|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPPGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | D | 1,410 | 14 to 39 | - | 14 to 39 | - | 14 to 39 | - |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | D | 1,410 | 4 to 53 | - | 4 to 53 | - | 4 to 53 | - |
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | D | 1,410 | 16 to 52 | - | 16 to 52 | - | 16 to 52 | - |
| SJ 01 | Walnut Grove Rd | Sacramento Co./ SJ Co. Line | I-5 | C | 790 | 141 to 232 | - | 145 to 238 | - | 1,909 to 2,002 | 13 (6AM-7PM) |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | C | 680 | 8 to 23 | - | 8 to 23 | - | 8 to 23 | - |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | C | 790 | 108 to 209 | - | 108 to 209 | - | 108 to 209 | - |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | C | 790 | 69 to 171 | - | 69 to 171 | - | 69 to 171 | - |
| SJ 05 | Byron Hwy | Alameda Co./San Joaquin Co. Line | Mountain House Pkwy | D | 1,600 | 521 to 824 | - | 563 to 890 | - | 1,638 to 1,965 | 13 (6AM-7PM) |
| SJ 06 | Mountain House Pkwy | Byron Hwy | Arnaudo Blvd | D | 1,410 | 190 to 298 | - | 205 to 322 | - | 1,280 to 1,397 | - |
| SJ 07 | Mountain House Pkwy | Arnaudo Blvd | I-205 | D | 3,540 | 418 to 769 | - | 477 to 877 | - | 1,552 to 1,952 | - |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | E | 1,870 | 309 to 769 | - | 309 to 769 | - | 309 to 769 | - |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | E | 1,870 | 309 to 759 | - | 309 to 759 | - | 309 to 759 | - |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | D | 3,540 | 1,140 to 2,317 | - | 1,218 to 2,476 | - | 3,102 to 4,360 | 10 (7-10AM; 12-7PM) |

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume | Baseline Plus Background | | | | | |
|--------|---------------------------------------|------------------------|-------------------------------|---------------|-------------------|----------------------------|--|----------------------------|--|----------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| WS 02 | Industrial Blvd/ Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | C | 1,920 | 773 to 1,858 | - | 835 to 2,007 | 1 (5-6PM) | 2,719 to 3,891 | 13 (6AM-7PM) |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | C | 1,920 | 546 to 1,718 | - | 586 to 1,843 | - | 2,470 to 3,727 | 13 (6AM-7PM) |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | C | 680 | 42 to 146 | - | 45 to 155 | - | 1,929 to 2,039 | 13 (6AM-7PM) |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | C | 680 | 74 to 249 | - | 76 to 254 | - | 2,177 to 2,355 | 13 (6AM-7PM) |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./ Yolo Co. Line | C | 680 | 25 to 63 | - | 27 to 68 | - | 3,203 to 3,244 | 13 (6AM-7PM) |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | C | 680 | 28 to 77 | - | 30 to 83 | - | 1,914 to 1,967 | 13 (6AM-7PM) |

Source: Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*

* Segment IDs correspond to the roadway segment IDs shown on Figures 19-2a through 19-2c.

Notes: Facility is analyzed as a Caltrans facility under Baseline Conditions and a local facility under Baseline Plus Construction Conditions – roadway is relinquished to local jurisdiction after Baseline Year (2009). LOS Threshold is LOS C under Baseline Conditions and changes to LOS D under Baseline Plus Construction Conditions.

Facility is analyzed as a local facility under Baseline Conditions and a Caltrans facility under Baseline Plus Construction Conditions – roadway is adopted as a State facility after Baseline Year (2009). LOS Threshold is LOS D under Baseline Conditions and changes to LOS C under Baseline Plus Construction Conditions.

1 **CEQA Conclusion:** Construction under Alternative 1C would add hourly traffic volumes to study area
 2 roadways that would exceed acceptable LOS threshold (Table 19-21). As shown in Table 19-21,
 3 traffic volumes during construction of Alternative 1C would exacerbate already unacceptable LOS
 4 under BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-
 5 1a through TRANS-1c would reduce the severity of this impact, but not to less-than-significant
 6 levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 7 constructed prior to the project's contribution to the impact. If an improvement that is identified in
 8 any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 9 constructed before the project's contribution to the impact is made, a significant impact in the form
 10 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 11 however, all improvements required to avoid significant impacts prove to be feasible and any
 12 necessary agreements are completed before the project's contribution to the effect is made, impacts
 13 would be less than significant.

14 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 15 **Plan**

16 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

17 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 18 **Congested Roadway Segments**

19 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

20 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 21 **Agreements to Enhance Capacity of Congested Roadway Segments**

22 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

23 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
 24 **Conditions**

25 **NEPA Effects:** The effect under Alternative 1C would be similar to the effects under Alternatives 1A
 26 and 1B, but greater in magnitude because of the higher amount of truck traffic. As shown in Table
 27 19-22, Alternative 1C would cause physical condition thresholds (see Table 19-7) to be exceeded on
 28 a total of **43** roadway segments (see entries in **bold** text). Figure 19-4a shows all of the study
 29 roadway segments that could experience substantial pavement condition effects.

30

1 **Table 19-22. Pavement Conditions for West Alignment Alternatives (1C, 2C, and 6C)**

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPGPP Conditions | |
|--------------|---------------------------|--------------------------------------|---|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| ALA 01 | Byron Hwy | Contra Costa Co./ Alameda Co. Line | Alameda Co./ San Joaquin Co. Line | Acceptable | Yes | No |
| BRE 01 | Brentwood Blvd (old SR 4) | Delta Rd (Oakley City Limits) | Balfour Rd | Acceptable | Yes | No |
| BRE 02 | Brentwood Blvd (old SR 4) | Balfour Rd | Brentwood City Limits (South) | Acceptable | Yes | No |
| BRE 03 | Balfour Rd | Brentwood Blvd (Old SR 4) | Brentwood City Limits | Acceptable | Yes | No |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | Deficient | Yes | Yes |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | Deficient | Yes | Yes |
| CC 03 | Old SR 4 | Brentwood City Limits (South) | Marsh Creek Rd | Deficient | Yes | Yes |
| CC 04 | Byron Hwy | Delta Rd | Old SR 4 | Acceptable | Yes | No |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./ Alameda Co. Line | Deficient | Yes | Yes |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | Deficient | Yes | Yes |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | Deficient | Yes | Yes |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | Deficient | Yes | Yes |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | Deficient | Yes | Yes |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | Deficient | No | No |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | Deficient | No | No |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | Acceptable | No | No |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | Acceptable | No | No |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | Deficient | Yes | Yes |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | Deficient | Yes | Yes |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | Deficient | Yes | Yes |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | Acceptable | Yes | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPGPP Conditions | |
|--------------|--------------------------------------|------------------------------------|---------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| CT 13 | I-5 NB | Walnut Grove Rd | Peltier Rd | Acceptable | Yes | No |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | Acceptable | Yes | No |
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | Acceptable | No | No |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | Acceptable | No | No |
| CT 17 | I-5 NB | Turner Rd | SR 12 | Acceptable | Yes | No |
| CT 18 | I-5 SB | Turner Rd | SR 12 | Acceptable | Yes | No |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | Deficient | Yes | Yes |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | Acceptable | Yes | No |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | Deficient | No | No |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | Acceptable | No | No |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | Deficient | Yes | Yes |
| CT 24 | SR 160 (Freeport Blvd/River Rd) | Freeport Bridge | Scribner Rd | Deficient | No | No |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | Deficient | No | No |
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | Deficient | No | No |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | Deficient | No | No |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | Not Applicable | Yes | No |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | Acceptable | Yes | No |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | Deficient | Yes | Yes |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | Deficient | Yes | Yes |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | Deficient | Yes | Yes |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | Deficient | Yes | Yes |
| CT 34 | SR 84 (Courtland Rd/Ryer Ave) | Courtland Rd | Cache Slough Ferry | Deficient | Yes | Yes |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | Acceptable | Yes | No |
| CT 36 | I-80 WB | SR 12 | Suisun Valley Rd | Acceptable | Yes | No |
| CT 37 | SR 12 EB | I-80 | Beck Ave | Acceptable | Yes | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPBGPP Conditions | |
|--------------|---------------------------|-------------------------------------|-----------------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| CT 38 | SR 12 WB | Beck Ave | I-80 | Acceptable | Yes | No |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/Grizzly Island Rd | Acceptable | Yes | No |
| CT 40 | SR 12 | Sunset Ave/Grizzly Island Rd | Walters Rd/Lawler Ranch Pkwy | Acceptable | Yes | No |
| CT 41 | SR 12 | Walters Rd/Lawler Ranch Pkwy | SR 113 | Deficient | Yes | Yes |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | Deficient | Yes | Yes |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | Not Applicable | Yes | No |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./SJ Co. Line | Deficient | Yes | Yes |
| CT 45 | SR 12 | Sacramento Co./SJ Co. Line | I-5 | Deficient | Yes | Yes |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | Deficient | Yes | Yes |
| CT 47 | I-80 WB | Pedrick Rd | SR 113 | Acceptable | Yes | No |
| CT 48 | SR 113 | I-80 | Dixon City Limits | Acceptable | Yes | No |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | Deficient | Yes | Yes |
| CT 50 | SR 4 (Marsh Creek Rd) | Vasco Rd | Byron Hwy (Old SR 4) | Acceptable | Yes | No |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | Deficient | Yes | Yes |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | Deficient | Yes | Yes |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | Deficient | Yes | Yes |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | Deficient | Yes | Yes |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | Deficient | Yes | Yes |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | Acceptable | Yes | No |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | Acceptable | Yes | No |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | Acceptable | Yes | No |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | Acceptable | Yes | No |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | Acceptable | Yes | No |
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | Acceptable | Yes | No |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | Acceptable | No | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPGPP Conditions | |
|---------------|--------------------------------|---|--------------------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | Acceptable | No | No |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | Acceptable | No | No |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | Acceptable | No | No |
| ISL 01 | A St/4th St/Jackson Blvd. | SR 160 | Isleton City Limits | Deficient | No | No |
| OAK 01 | Main Street (Old SR 4) | SR 160 | Cypress Rd | Deficient | Yes | Yes |
| OAK 02 | Main Street (Old SR 4) | Cypress Rd | Delta Rd (Oakley City Limits) | Deficient | Yes | Yes |
| OAK 03 | Cypress Rd | Main Street (Old SR 4) | Bethel Island Rd | Acceptable | Yes | No |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | Deficient | Yes | Yes |
| OAK 05 | Delta Rd | Main Street (Old SR 4) | Byron Hwy | Deficient | Yes | Yes |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | Deficient | Yes | Yes |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | Acceptable | Yes | No |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | Not Applicable | Yes | No |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | Deficient | No | No |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | Acceptable | No | No |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | Deficient | No | No |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | Deficient | No | No |
| SC 06 | Twin Cities Rd | River Rd | I-5 | Acceptable | Yes | No |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | Deficient | No | No |
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./Yolo Co. Line | Paintersville Bridge | Deficient | Yes | Yes |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | Deficient | Yes | Yes |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | Deficient | Yes | Yes |
| SC 11 | Walnut Grove Rd/River Rd | Walnut Grove Bridge | Sacramento Co./SJ Co. Line | Acceptable | Yes | No |
| SC 12 | Isleton Rd | River Rd (Walnut Grove)/Isleton Rd Bridge | 1.5 miles west of Isleton Rd Bridge | Acceptable | No | No |
| SC 13 | Race Track Rd/Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | Deficient | No | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPGPP Conditions | |
|---------------|--------------------------------------|-----------------------------------|-------------------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | Deficient | No | No |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | Acceptable | No | No |
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | Acceptable | No | No |
| SJ 01 | Walnut Grove Rd | Sacramento Co./SJ Co. Line | I-5 | Deficient | Yes | Yes |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | Deficient | No | No |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | Acceptable | No | No |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | Acceptable | No | No |
| SJ 05 | Byron Hwy | Alameda Co./San Joaquin Co. Line | Mountain House Pkwy | Acceptable | Yes | No |
| SJ 06 | Mountain House Pkwy | Byron Hwy | Arnaudo Blvd | Acceptable | Yes | No |
| SJ 07 | Mountain House Pkwy | Arnaudo Blvd | I-205 | Acceptable | Yes | No |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | Deficient | No | No |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | Deficient | No | No |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | Acceptable | Yes | No |
| WS 02 | Industrial Blvd/Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | Acceptable | Yes | No |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | Deficient | Yes | Yes |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | Deficient | Yes | Yes |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | Deficient | Yes | Yes |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./Yolo Co. Line | Deficient | Yes | Yes |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | Deficient | Yes | Yes |

Source: Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*

* Segment IDs correspond to the roadway segment IDs shown on Figures 19-2a through 19-2c.

1 As shown in Table 19-22, construction during Alternative 1C would contribute to substantial
 2 deterioration of pavement conditions on 43 roadway segments that would exceed applicable
 3 thresholds summarized in Table 19-7. Damage to roadway pavement is expected throughout the
 4 study area (Figure 19-4a) on various local and state roads, as well as on a few interstates. The effect
 5 of roadway damage to these segments during construction would be adverse. Mitigation Measures
 6 TRANS-2a through TRANS-2c are available to reduce this effect, but not necessarily to a level that
 7 would not be adverse, as the BDCP proponents cannot ensure that the agreements or encroachment
 8 permits will be obtained from the relevant transportation agencies. If an agreement or
 9 encroachment permit is not obtained, an adverse effect in the form of deficient pavement conditions
 10 would occur. Accordingly, this effect could remain adverse. If, however, mitigation agreement(s) or
 11 encroachment permit(s) providing for the improvement or replacement of pavement are obtained
 12 and any other necessary agreements are completed, adverse effects could be avoided. Collectively,
 13 these measures include stipulations to limit/prohibit construction activity on deficient roadways
 14 and improve the physical condition of affected segments.

15 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 16 below acceptable thresholds (Table 19-7) at the 43 locations shown in Table 19-22. The impact of
 17 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
 18 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
 19 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
 20 permits will be obtained from the relevant transportation agencies. If an agreement or
 21 encroachment permit is not obtained, a significant impact in the form of deficient pavement
 22 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 23 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 24 of pavement are obtained and any other necessary agreements are completed, impacts would be
 25 reduced to less than significant.

26 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 27 **Roadway Segments**

28 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

29 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 30 **Roadway Segments**

31 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

32 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
 33 **as Stipulated in Mitigation Agreements or Encroachment Permits**

34 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

35 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
 36 **during Construction**

37 **NEPA Effects:** Alternative 1C would require a heavy volume of materials to be hauled to the
 38 construction work zones, increasing the amount of trucks using the transportation system in the
 39 study area. The increase in heavy construction traffic on local roadways would increase the
 40 potential for safety hazards such as conflicts with recreational and commuter traffic and with

1 farming operations. The increase in heavy construction traffic using emergency routes could result
 2 in interference with emergency service response times. Emergency routes in the study area are
 3 identified in Table 19-11.

4 As discussed above and in Chapter 22, *Air Quality and Greenhouse Gases*, construction of Alternative
 5 1C would increase the amount of trucks using the transportation system in the study area. The effect
 6 under Alternative 1C would be the similar to the effect under Alternatives 1A and 1B, but greater in
 7 magnitude because the higher amount of total construction-related trips and locations of LOS
 8 effects. The effect of increased safety hazards from increased heavy construction traffic on local
 9 roadways and emergency routes would be adverse. Although TRANS-1c will reduce the severity of
 10 this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
 11 funding of required improvements. If an improvement identified in the mitigation agreement(s) is
 12 not fully funded and constructed before the project's contribution to the effect is made, an adverse
 13 effect in the form of increased safety hazards would occur. Accordingly, this effect would be adverse.
 14 If, however, all improvements required to avoid adverse effects prove to be feasible and any
 15 necessary agreements are completed before the project's contribution to the effect is made, effects
 16 would not be adverse.

17 **CEQA Conclusion:** Construction of Alternative 1C would increase the amount of trucks using the
 18 transportation system in the study area. This increase in heavy truck traffic could interfere with
 19 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
 20 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
 21 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 22 prior to the project's contribution to the impact. If an improvement identified in the mitigation
 23 agreement(s) is not fully funded and constructed before the project's contribution to the impact is
 24 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
 25 effect would be significant and unavoidable. If, however, all improvements required to avoid
 26 significant impacts prove to be feasible and any necessary agreements are completed before the
 27 project's contribution to the effect is made, impacts would be less than significant.

28 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 29 **Agreements to Enhance Capacity of Congested Roadway Segments**

30 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

31 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

32 **NEPA Effects:** Under Alternative 1C a temporary barge unloading facility for construction material is
 33 planned on the Sacramento River adjacent to SR 160 west of Isleton. Approximately 4,500 barge
 34 trips are projected to carry construction materials to this unloading facility, the same amount as
 35 estimated for Alternative 1B (on average, only 2 additional barge trips per day are expected through
 36 the 9-year construction period) and substantially more than the 3,000 trips estimated for
 37 Alternative 1A. Although barges are relatively slow and have less maneuverability than smaller
 38 vessels, commercial barge operators are required to operate in compliance with navigational
 39 guidelines. The barge unloading facilities would be temporary and removed following construction.
 40 Increased barge traffic related to delivery of materials to the project site is not anticipated to cause
 41 impediments to the passage of other vessels, and would not require additional raising of draw
 42 bridges in the study area.

1 Although some in-water work would be necessary for intake construction along the Sacramento
2 River, the river would remain open to boat traffic at all times during construction. The intake
3 cofferdams would extend into the river channel up to 120 feet, depending on location. The width of
4 the river near the intakes (approximately 500–700 feet) would therefore allow for passage of the
5 types of boats typically observed on the Sacramento River (channel width during construction 380–
6 580 feet). (Refer to Chapter 15, *Recreation*, for additional discussion of the effects of intake
7 construction on boating.)

8 This potential effect is not considered adverse because construction of Alternative 1C would not
9 substantially increase the volume of barge movement within the study area, such that existing
10 marine traffic would be disrupted (on average, only 2 additional barge trips per day are expected
11 through the 9-year construction period). As noted in Chapter 15, *Recreation*, Impact REC-3, the
12 Cache Slough barge facility would occupy between 1,200 feet of riverbank. The slough is about 650
13 feet wide at this location. Therefore, even if the barge facility and barge operations at this location
14 occupied a substantial portion of the river. However, all barge routes and landing sites will be
15 selected to maximize continuous waterway access and a minimum waterway width greater than
16 100 feet. Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it
17 includes stipulations to notify the commercial and leisure boating community of proposed barge
18 operations in the waterways.

19 **CEQA Conclusion:** Construction of Alternative 1C would not substantially increase the volume of
20 barge movement within the study area such that existing marine traffic would be disrupted (on
21 average, only 2 additional barge trips per day are expected through the 9-year construction period).
22 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
23 stipulations to notify the commercial and leisure boating community of proposed barge operations
24 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would
25 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
26 mitigation is required.

27 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 28 **Plan**

29 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

30 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

31 **NEPA Effects:** The potential for Alternative 1C to disrupt rail service on the UPRR Tracy Subdivision
32 branch line would be the same as Alternative 1A and 1B with regard to construction of the new
33 forebay. The proposed conveyance (new canal and siphon) crosses the existing BNSF
34 Railway/Amtrak San Joaquin Line approximately between Sunset Road and Orwood Road. Because
35 this crossing is in a major work area, the train operations along the BNSF Railway/Amtrak San
36 Joaquin Line could be affected. (See Table 19-23 for construction impacts on rail lines).

1 **Table 19-23. Construction Impacts on Rail Traffic for West Alignment Alternatives (1C, 2C, and 6C)**

| Affected Railroad | Crosses and/or Immediately Adjacent to Construction Zone | Level of Train Volume | Construction Impacts on Rail Traffic |
|---|--|-----------------------|---|
| BNSF Railway and Amtrak San Joaquin Line | Yes | High | Significant—railroad crosses construction of proposed new canal and siphon between Sunset Road and Orwood Road in a proposed major work area. |
| Union Pacific Railroad--Tracy Subdivision | Yes | Low (Out of Service) | Minimal to Non-Existent |

2
 3 If the UPRR Tracy Subdivision branch line is reopened prior to construction, the continuity of rail
 4 traffic can be managed, if needed, through implementation of Mitigation Measure TRANS-1a.
 5 Construction would temporarily disrupt rail operations on the BNSF. The effect of disruption to rail
 6 traffic during construction would be adverse. Mitigation Measure TRANS-1a, which includes
 7 stipulations to coordinate with rail providers to develop alternative interim transportation modes
 8 (e.g., trucks or buses) that could be used to provide freight and/or passenger service during any
 9 longer term railroad closures and daily construction time windows during which construction is
 10 restricted or rail operations would need to be suspended for any activity within railroad rights of
 11 way is available to reduce the effect.

12 **CEQA Conclusion:** The proposed conveyance (new canal and siphon) crosses the existing BNSF
 13 Railway/Amtrak San Joaquin Line approximately between Sunset Road and Orwood Road. Because
 14 this crossing is in a major work area, the train operations along the BNSF Railway/Amtrak San
 15 Joaquin Line could be affected. Likewise, if the UPRR Tracy Subdivision branch line is reopened prior
 16 to construction, traffic associated with of the Byron Tract forebay may minimally impact rail service
 17 through vehicle crossing. This is a potentially significant impact. Implementation of Mitigation
 18 Measure TRANS-1a would reduce this impact to a less than significant level.

19 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 20 **Plan**

21 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

22 **Impact TRANS-6: Disruption of Transit Service during Construction**

23 **NEPA Effects:** Construction of the canal conveyances and other project elements under Alternative
 24 1C could require construction detours or contribute to congestion during lane closures and other
 25 construction activities, thereby affecting transit routes and schedules. Table 19-24 summarizes the
 26 transit service potentially affected under Alternative 1C.

1 **Table 19-24. Construction Impacts on Bus Routes for West Alignment Alternatives (1C, 2C, and 6C)**

| Affected Transit Service | Roadway Operated On and Location | Estimated Trips per Day | Construction Impacts on Bus Routes |
|-----------------------------|----------------------------------|---|---|
| Tri-Delta Transit—Route 386 | SR 4 west of Bixler Road | 6 trips per weekday (3 in each direction) | Affected by canal construction at SR 4. |
| Rio Vista Transit—Route 50 | SR 160, west of Isleton | 4 trips per weekday (2 in each direction) | Marginal (if any)—Deep bore tunnel construction below the roadway |

2
 3 The Tri-Delta Transit Route 386 could experience delays during construction as a result of
 4 decreased delay on SR-4 (see Table 19-21). The effect of disruption to transit service during
 5 construction would be adverse. Although Mitigation Measures TRANS-1a through TRANS-1c would
 6 reduce the severity of this effect, the BDCP proponents are not solely responsible for the timing,
 7 nature, or complete funding of required improvements. If an improvement identified in the
 8 mitigation agreement(s) is not fully funded and constructed before the project’s contribution to the
 9 effect is made, an adverse effect in the form of disruptions to transit service would occur. Therefore,
 10 this effect would be adverse.

11 **CEQA Conclusion:** Construction activities associated with Alternative 1C would decrease LOS below
 12 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 4 segments
 13 on SR-4 (see Table 19-21). Accordingly, construction could significantly affect operation of the Tri-
 14 Delta Transit Route 386. Mitigation Measures TRANS-1a through TRANS-1c would reduce the
 15 severity of this impact, but not to less-than-significant levels. Under Mitigation Measure TRANS-1a,
 16 the BDCP proponents would coordinate with transit providers to develop, to the extent feasible,
 17 daily construction time windows during which transit operations would not be either detoured or
 18 significantly slowed, avoiding a substantial disruption of transit service. Additionally, under
 19 Mitigation Measure TRANS-1b, construction traffic would be minimized around peak periods, to the
 20 extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP proponents would make
 21 good faith efforts to enter into mitigation agreements to enhance the capacity of congested roadway
 22 segments, likely reducing associated disruptions to transit service. However, the BDCP proponents
 23 cannot ensure that the improvements will be fully funded or constructed prior to the project’s
 24 contribution to the impact. If an improvement identified in the mitigation agreement(s) is not fully
 25 funded and constructed before the project’s contribution to the impact is made, a significant impact
 26 in the form disruptions to transit service would occur. Therefore, this impact would be significant
 27 and unavoidable. However, such impacts are likely to occur during the middle of the day because
 28 construction traffic would be minimized around peak periods.

29 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 30 **Plan**

31 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

32 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 33 **Congested Roadway Segments**

34 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

1 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 2 **Agreements to Enhance Capacity of Congested Roadway Segments**

3 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

4 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

5 **NEPA Effects:** Increased traffic and vehicle delays during construction (see Table 19-21) could
 6 temporarily disrupt bicycle routes on SR 160, River Road, and SR 12 (and potentially SR 220). The
 7 effect of disruption to bicycle routes during construction would be adverse. Mitigation Measure
 8 TRANS-1a is available to reduce this effect. Under this measure, BDCP proponents would provide
 9 alternate access routes via detours or bridges to maintain continual circulation for local travelers in
 10 and around construction zones, including bicycle riders; provide signage warning of loose gravel,
 11 steel plates, etc. that could be hazardous to road cycling activity on roadways open to bicycle traffic;
 12 provide signage, barricades, and flag people as necessary to slow or detour traffic around
 13 construction sites; and notify the public, including cycling organizations and bike shops, of
 14 construction activities that could affect transportation. Additionally, another project commitment, as
 15 described in Appendix 3B, *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance
 16 recreational access to areas in the vicinity of the proposed intakes, including enhancement of bicycle
 17 and foot access to the Delta and the potential conversion of an abandoned rail line between
 18 Sacramento and Walnut Grove into a bicycle path.

19 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-21) could
 20 temporarily disrupt bicycle routes on SR 160, River Road, and SR 12 (and potentially SR 220),
 21 resulting in a significant impact. However, Mitigation Measure TRANS-1a would reduce the severity
 22 of this impact to less-than-significant levels because BDCP proponents would provide alternate
 23 access routes via detours or bridges to maintain continual circulation for local travelers in and
 24 around construction zones, including bicycle riders; provide signage warning of loose gravel, steel
 25 plates, etc. that could be hazardous to road cycling activity on roadways open to bicycle traffic;
 26 provide signage, barricades, and flag people as necessary to slow or detour traffic around
 27 construction sites; and notify the public, including cycling organizations and bike shops, of
 28 construction activities that could affect transportation. Additionally, another project commitment, as
 29 described in Appendix 3B, *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance
 30 recreational access to areas in the vicinity of the proposed intakes, including enhancement of bicycle
 31 and foot access to the Delta and the potential conversion of an abandoned rail line between
 32 Sacramento and Walnut Grove into a bicycle path. Because implementation of this mitigation
 33 measure and project commitment would avoid a substantial disruption to bicycle facilities as a
 34 result of increased roadway traffic and/or roadway closures, this impact would be less than
 35 significant.

36 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 37 **Plan**

38 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

39 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

40 **NEPA Effects:** The effect of maintaining and operating the facilities roadway operations under
 41 Alternative 1C would be the same as under Alternative 1A (see Tables 19-14, 19-15, and 19-16).
 42 Like Alternative 1A, O&M activities would occur along the entire alternative alignment. Even

1 assuming the higher employment range in Table 19-16, given the limited number of workers
 2 involved and the large number of work sites, it is not anticipated that routine operations and
 3 maintenance activities or major inspections would result in substantial increases of traffic volumes
 4 or roadway congestion. The effect of increased traffic volumes and delays during operations would
 5 not be adverse.

6 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
 7 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
 8 activities or major inspections would result in substantial increases of traffic volumes or roadway
 9 congestion. The impact of increased traffic volumes and delays during operations would therefore
 10 be less than significant. No mitigation is required.

11 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and** 12 **Maintenance**

13 **NEPA Effects:** Alternative 1C would require realignment of South River Road at the intakes, and
 14 multiple bridges across the alignment to maintain connectivity. Each intake/pumping plant site
 15 would require realignment of the adjacent levee road. The levee road adjacent to Intakes W1, W2,
 16 W3, W4, and W5 is County Highway E9 (South River Road). Alternative 1C would intersect several
 17 public roadways, state routes, and one railroad requiring bridges at most of these locations to
 18 maintain connectivity along the canal.

- 19 ● County Road 141: Connectivity of County Road 141 between County Highway E9 (S River Road)
 20 and County Road 144 would be maintained. County Road 141 would continue over buried
 21 pipelines from Intakes W1 and W2 and stay north and west of the beginning embankments for
 22 the canal.
- 23 ● N Courtland Road: N Courtland Road between Waukeena Road and Widgeon Road is close to or
 24 within the canal footprint.
- 25 ● Z Line Road (County Road 150): No bridge is proposed for this location and connectivity would
 26 not be maintained. The road adjacent to the ship canal does not appear to extend north of
 27 Courtland.
- 28 ● Teal Road: No bridge is proposed for this location, and therefore connectivity would not be
 29 maintained
- 30 ● Kellogg Creek Road: No bridge is proposed for this location. The project would realign this
 31 roadway to intersect with Bixler Road.
- 32 ● Western Farms Ranch Road: Connectivity would not be maintained.
- 33 ● Bruns Road: No bridge is proposed, and connectivity would not be maintained.

34 The design and construction of all project components (i.e., conveyances, intakes, and forebays) will
 35 provide for on-going continuity of all transportation operations following completion of
 36 construction. Structures would be constructed as necessary to provide connectivity across canals
 37 (either bridges or siphons) for active railroads to cross without disruption. Water operations would
 38 not modify the river stage above the water levels seen in the river today. Therefore, no change
 39 would be expected to affect boat traffic associated with changes in water levels. Operations and
 40 maintenance of the facilities would not have any substantive impact on barge traffic (or the roadway
 41 network) due to operation of moveable bridges. Impediments to boat traffic associated with the
 42 intakes would continue for the life of the project, but would not substantially impact boat passage or

1 usage (refer to Chapter 15, *Recreation*, for more discussion of effects on boating.) The effect of
 2 permanent alteration of transportation patterns during operations would not be adverse.

3 **CEQA Conclusion:** Alternative 1C would require realignment of South River Road at the intakes, and
 4 multiple bridges across the alignment to maintain connectivity. Each intake/pumping plant site
 5 would require realignment of the adjacent levee road. The design and construction of all project
 6 components (i.e., conveyances, intakes, and forebays) will provide for on-going continuity of all
 7 transportation operations following completion of construction. Water operations would not modify
 8 the river stage above the water levels seen in the river today. Therefore, no change would be
 9 expected to affect boat traffic associated with changes in water levels. Operations and maintenance
 10 of the facilities would not have any substantive impact on barge traffic (or the roadway network)
 11 due to operation of moveable bridges. Accordingly, the impact of permanent alteration of
 12 transportation patterns during operations would be less than significant. No mitigation is required.

13 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

14 **NEPA Effects:** At the program-level of analysis, the impact under Alternative 1C would be the same
 15 as Alternatives 1A and 1B because the acreage of conservation is identical. The effect of increased
 16 traffic volumes during construction and maintenance of CM2–CM22 would be adverse. Although
 17 TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not
 18 solely responsible for the timing, nature, or complete funding of required improvements. If an
 19 improvement identified in the mitigation agreement(s) is not fully funded and constructed before
 20 the project's contribution to the effect is made, an adverse effect would occur. Therefore, this effect
 21 would be adverse. If, however, all improvements required to avoid adverse effects prove to be
 22 feasible and any necessary agreements are completed before the project's contribution to the effect
 23 is made, effects would not be adverse.

24 **CEQA Conclusion:** The impact of increased traffic volumes during construction and operation of
 25 CM2–CM22 would be significant. Mitigation Measures TRANS-1a through TRANS-1c would reduce
 26 the severity of this impact, but not to less-than-significant levels. The BDCP proponents cannot
 27 ensure that the improvements will be fully funded or constructed prior to the project's contribution
 28 to the impact. If an improvement identified in the mitigation agreement(s) is not fully funded and
 29 constructed before the project's contribution to the impact is made, a significant impact would
 30 occur. Therefore, the project's impacts to roadway segment LOS would be conservatively significant
 31 and unavoidable. If, however, all improvements required to avoid significant impacts prove to be
 32 feasible and any necessary agreements are completed before the project's contribution to the effect
 33 is made, impacts would be less than significant.

34 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 35 **Plan**

36 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

37 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on** 38 **Congested Roadway Segments**

39 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

1 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 2 **Agreements to Enhance Capacity of Congested Roadway Segments**

3 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

4 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 5 **Conservation Measures with Plans and Policies**

6 **NEPA Effects:** The potential for inconsistencies with plans or polices would be similar to the
 7 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 1C
 8 would be compatible with applicable plans and policies related to transportation and circulation.

9 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
 10 and no additional CEQA conclusion is required related to the consistency of the alternative with
 11 relevant plans and polices. The relationship between plans, policies, and regulations and impacts on
 12 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

13 **19.3.3.5 Alternative 2A—Dual Conveyance with Pipeline/Tunnel and Five**
 14 **Intakes (15,000 cfs; Operational Scenario B)**

15 A total of five intakes would be constructed under Alternative 2A. For the purposes of this analysis,
 16 Alternative 2A was assumed to include Intakes 1–5 or Intakes 1–3 and Intakes 6 and 7. This
 17 alternative would also include an intermediate forebay, and the conveyance facility would be a
 18 buried pipeline (see Figures 3-2 and 3-3 in Chapter 3, *Description of Alternatives*).

19 **Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS**
 20 **Conditions**

21 **NEPA Effects:** The estimate of the number of vehicles generated by construction activities would
 22 slightly higher compared to Alternative 1A due to the addition of an operable barrier at the head of
 23 Old River. As shown in Table 19-8, under BPBG conditions, a total of 23 roadway segments would
 24 exceed LOS for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. As also shown in Table
 25 19-8, construction associated with Alternative 2A would cause LOS thresholds to be exceeded for at
 26 least 1 hour during the 6:00 AM to 7:00 PM analysis period on a total of 33 roadway segments under
 27 BPBGPP conditions (see entries in **bold** type). Alternative 2A would therefore exacerbate an already
 28 unacceptable LOS under BPBG conditions on **10** roadway segments (33 minus the 23 that would
 29 already be operating at an unacceptable LOS under BPBG conditions). Figure 19-3a shows the study
 30 roadway segments that could experience a substantial roadway operation effects.

31 The decrease in LOS below applicable thresholds during construction would be adverse at the
 32 locations identified in Table 19-8 because construction associated with Alternative 2A would cause
 33 LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM
 34 analysis period. Alternative 2A would also exacerbate an already unacceptable LOS under BPBG
 35 conditions at **10** roadway segments (33 minus the 23 that would already be operating at an
 36 unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur
 37 throughout the study area, the highest concentration of roadway segments below applicable LOS
 38 threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be
 39 exceeded on several local roadways, include all segments studied in West Sacramento.

40 Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively,
 41 these measures include requirements to avoid or reduce circulation effects, notify the public of

1 construction activities, provide alternate access routes, require direct haulers to pull over in the
 2 event of an emergency, limit/prohibit the amount of construction activity on congested roadways,
 3 and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity
 4 of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
 5 funding of required improvements. If an improvement that is identified in any mitigation
 6 agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed
 7 before the project's contribution to the effect is made, an adverse effect in the form of unacceptable
 8 LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to
 9 avoid adverse effects prove to be feasible and any necessary agreements are completed before the
 10 project's contribution to the effect is made, effects would not be adverse.

11 **CEQA Conclusion:** Construction under Alternative 2A would add hourly traffic volumes to study
 12 area roadways that would exceed acceptable LOS threshold (Table 19-8). As shown in Table 19-8,
 13 traffic volumes during construction of Alternative 2A would exacerbate already unacceptable LOS
 14 under BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-
 15 1a through TRANS-1c would reduce the severity of this impact, but not to less-than-significant
 16 levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 17 constructed prior to the project's contribution to the impact. If an improvement that is identified in
 18 any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 19 constructed before the project's contribution to the impact is made, a significant impact in the form
 20 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 21 however, all improvements required to avoid significant impacts prove to be feasible and any
 22 necessary agreements are completed before the project's contribution to the effect is made, impacts
 23 would be less than significant.

24 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 25 **Plan**

26 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

27 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 28 **Congested Roadway Segments**

29 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

30 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 31 **Agreements to Enhance Capacity of Congested Roadway Segments**

32 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

33 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
 34 **Conditions**

35 **NEPA Effects:** Construction truck traffic may damage roadway surfaces. During construction,
 36 various materials would be transported to and from the construction areas in load-bearing trucks.
 37 As shown in Table 19-10, construction of Alternative 2A would contribute to further deterioration of
 38 the existing pavement condition, to less than the acceptable PCI or similar applicable threshold (see
 39 Table 19-7), on a total of **43** roadway segments. Damage to roadway pavement is expected
 40 throughout the study area (Figure 19-4a) on various local and state roads, as well as on a few
 41 interstates. The effect of roadway damage to these segments during construction would be adverse.

1 Mitigation Measures TRANS-2a through TRANS-2c are available to reduce this effect, but not
 2 necessarily to a level that would not be adverse, as the BDCP proponents cannot ensure that the
 3 agreements or encroachment permits will be obtained from the relevant transportation agencies. If
 4 an agreement or encroachment permit is not obtained, an adverse effect in the form of deficient
 5 pavement conditions would occur. Accordingly, this effect could remain adverse. If, however,
 6 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 7 of pavement are obtained and any other necessary agreements are completed, adverse effects could
 8 be avoided.

9 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 10 below acceptable thresholds (Table 19-7) at the 43 locations shown in Table 19-10. The impact of
 11 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
 12 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
 13 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
 14 permits will be obtained from the relevant transportation agencies. If an agreement or
 15 encroachment permit is not obtained, a significant impact in the form of deficient pavement
 16 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 17 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 18 of pavement are obtained and any other necessary agreements are completed, impacts would be
 19 reduced to less than significant.

20 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 21 **Roadway Segments**

22 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

23 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 24 **Roadway Segments**

25 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

26 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
 27 **as Stipulated in Mitigation Agreements or Encroachment Permits**

28 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

29 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
 30 **during Construction**

31 **NEPA Effects:** Alternative 2A would require a heavy volume of materials to be hauled to the
 32 construction work zones, increasing the amount of trucks using the transportation system in the
 33 study area. The increase in heavy construction traffic on local roadways would increase the
 34 potential for safety hazards such as conflicts with recreational and commuter traffic and with
 35 farming operations. The increase in heavy construction traffic using emergency routes could result
 36 in interference with emergency service response times. Emergency routes in the study area are
 37 identified in Table 19-11.

38 As discussed above and in Chapter 22, *Air Quality and Greenhouse Gases*, construction of Alternative
 39 2A would increase the amount of trucks using the transportation system in the study area. The effect
 40 of increased safety hazards from increased heavy construction traffic on local roadways and

1 emergency routes identified in Table 19-11 would be adverse. Although TRANS-1c will reduce the
 2 severity of this effect, the BDCP proponents are not solely responsible for the timing, nature, or
 3 complete funding of required improvements. If an improvement identified in the mitigation
 4 agreement(s) is not fully funded and constructed before the project's contribution to the effect is
 5 made, an adverse effect in the form of increased safety hazards would occur. Accordingly, this effect
 6 would be adverse. If, however, all improvements required to avoid adverse effects prove to be
 7 feasible and any necessary agreements are completed before the project's contribution to the effect
 8 is made, effects would not be adverse.

9 **CEQA Conclusion:** Construction of Alternative 2A would increase the amount of trucks using the
 10 transportation system in the study area. This increase in heavy truck traffic could interfere with
 11 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
 12 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
 13 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 14 prior to the project's contribution to the impact. If an improvement identified in the mitigation
 15 agreement(s) is not fully funded and constructed before the project's contribution to the impact is
 16 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
 17 effect would be significant and unavoidable. If, however, all improvements required to avoid
 18 significant impacts prove to be feasible and any necessary agreements are completed before the
 19 project's contribution to the effect is made, impacts would be less than significant.

20 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 21 **Agreements to Enhance Capacity of Congested Roadway Segments**

22 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

23 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

24 **NEPA Effects:** Under Alternative 2A, commercial barges would be used to transport construction
 25 materials and equipment from the ports to temporary barge unloading facilities near construction
 26 sites and some in-water work would occur for construction of the intakes. Locations of temporary
 27 barge unloading facilities and estimates of trips and in-water work are the same as for Alternative
 28 1A. This potential effect is not considered adverse because construction of Alternative 2A would not
 29 require modification to existing deep water channels, interfere with Port of Stockton navigation, or
 30 substantially increase the volume of barge movement within the study area, such that existing
 31 marine traffic would be disrupted (on average, only 1 additional barge trip per day is expected
 32 through the 9-year construction period). Barge routes and landing sites will be selected to maximize
 33 continuous waterway access and a minimum waterway width greater than 100 feet. Moreover,
 34 Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes stipulations to
 35 notify the commercial and leisure boating community of proposed barge operations in the
 36 waterways.

37 **CEQA Conclusion:** Construction of Alternative 2A would not require modification to existing deep
 38 water channels, interfere with Port of Stockton navigation, or substantially increase the volume of
 39 barge movement within the study area such that existing marine traffic would be disrupted (on
 40 average, only 1 additional barge trip per day is expected through the 9-year construction period).
 41 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
 42 stipulations to notify the commercial and leisure boating community of proposed barge operations
 43 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would

1 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
2 mitigation is required.

3 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
4 **Plan**

5 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

6 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

7 **NEPA Effects:** The effects under Alternative 2A on the BNSF Railway and Amtrak San Joaquin Line
8 and the Union Pacific Railroad--Tracy Subdivision would be similar to that described for Alternative
9 1A. Construction would not be likely to disrupt rail service but if the UPRR Tracy Subdivision branch
10 line is reopened prior to construction, the continuity of rail traffic could be managed, if needed,
11 through implementation of Mitigation Measure TRANS-1a, which includes stipulations to coordinate
12 with rail providers to develop alternative interim transportation modes (e.g., trucks or buses) that
13 could be used to provide freight and/or passenger service during any longer term railroad closures
14 and daily construction time windows during which construction is restricted or rail operations
15 would need to be suspended for any activity within railroad rights of way.

16 **CEQA Conclusion:** Construction of Alternative 2A would not physically cross or require modification
17 to an existing or proposed railroad. Rather, the water conveyance will cross the BNSF Railway and
18 Amtrak San Joaquin Line well below grade in a deep bore tunnel. Accordingly, construction would
19 not be likely to disrupt rail service. However, if the UPRR Tracy Subdivision branch line is reopened
20 prior to construction, traffic associated with of the Byron Tract forebay may minimally impact rail
21 service through vehicle crossing. Implementation of Mitigation Measure TRANS-1a would ensure
22 this impact remains less than significant.

23 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
24 **Plan**

25 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

26 **Impact TRANS-6: Disruption of Transit Service during Construction**

27 **NEPA Effects:** The effect of Alternative 2A on operation of the SCT Link/Delta Route, traffic on SR 12,
28 and Intercity Greyhound bus lines would be similar to that described for Alternative 1A. Tunnel
29 construction could substantially affect operation of the SCT Link/Delta Route, and construction of
30 the shaft adjacent to SR 12 would affect traffic on that facility. The effect of disruption to transit
31 service during construction would be adverse. Although Mitigation Measures TRANS-1a through
32 TRANS-1c would reduce the severity of this effect, the BDCP proponents are not solely responsible
33 for the timing, nature, or complete funding of required improvements. If an improvement identified
34 in the mitigation agreement(s) is not fully funded and constructed before the project's contribution
35 to the effect is made, an adverse effect in the form of disruptions to transit service would occur.
36 Therefore, this effect would be adverse.

37 **CEQA Conclusion:** Construction activities associated with Alternative 2A would decrease LOS below
38 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 6 segments
39 on SR-12 (see Table 19-8). Accordingly, tunnel construction could significantly affect operation of
40 the SCT Link/Delta Route, and construction of the shaft adjacent to SR 12 would affect traffic on that

1 facility. To the extent that other roadways affected by Alternative 2A construction also carry
 2 Greyhound bus lines, those routes may be affected as well. Mitigation Measures TRANS-1a through
 3 TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels. Under
 4 Mitigation Measure TRANS-1a, the BDCP proponents would coordinate with transit providers to
 5 develop, to the extent feasible, daily construction time windows during which transit operations
 6 would not be either detoured or significantly slowed, avoiding a substantial disruption of transit
 7 service. Additionally, under Mitigation Measure TRANS-1b, construction traffic would be minimized
 8 around peak periods, to the extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP
 9 proponents would make good faith efforts to enter into mitigation agreements to enhance the
 10 capacity of congested roadway segments, likely reducing associated disruptions to transit service.
 11 However, the BDCP proponents cannot ensure that the improvements will be fully funded or
 12 constructed prior to the project's contribution to the impact. If an improvement identified in the
 13 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
 14 impact is made, a significant impact in the form disruptions to transit service would occur.
 15 Therefore, this impact would be significant and unavoidable. However, such impacts are likely to
 16 occur during the middle of the day because construction traffic would be minimized around peak
 17 periods.

18 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 19 **Plan**

20 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

21 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 22 **Congested Roadway Segments**

23 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

24 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 25 **Agreements to Enhance Capacity of Congested Roadway Segments**

26 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

27 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

28 **NEPA Effects:** The effect of Alternative 2A on bicycle routes along SR 160/River Road and
 29 potentially along SR 12 would be similar to that described for Alternative 1A (see Table 19-8). The
 30 effect of disruption to bicycle routes during construction would be adverse. Mitigation Measure
 31 TRANS-1a is available to reduce this effect. Under this measure, BDCP proponents would provide
 32 alternate access routes via detours or bridges to maintain continual circulation for local travelers in
 33 and around construction zones, including bicycle riders; provide signage warning of loose gravel,
 34 steel plates, etc. that could be hazardous to road cycling activity on roadways open to bicycle traffic;
 35 provide signage, barricades, and flag people as necessary to slow or detour traffic around
 36 construction sites; and notify the public, including cycling organizations and bike shops, of
 37 construction activities that could affect transportation. Additionally, another project commitment, as
 38 described in Appendix 3B, *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance
 39 recreational access to areas in the vicinity of the proposed intakes, including enhancement of bicycle
 40 and foot access to the Delta and the potential conversion of an abandoned rail line between
 41 Sacramento and Walnut Grove into a bicycle path.

1 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-8) could
 2 temporarily disrupt bicycle routes on SR 160/River Road and potentially on SR 12, resulting in a
 3 significant impact. However, Mitigation Measure TRANS-1a would reduce the severity of this impact
 4 to less-than-significant levels because BDCP proponents would provide alternate access routes via
 5 detours or bridges to maintain continual circulation for local travelers in and around construction
 6 zones, including bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could
 7 be hazardous to road cycling activity on roadways open to bicycle traffic; provide signage,
 8 barricades, and flag people as necessary to slow or detour traffic around construction sites; and
 9 notify the public, including cycling organizations and bike shops, of construction activities that could
 10 affect transportation. Additionally, another project commitment, as described in Appendix 3B,
 11 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
 12 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
 13 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
 14 bicycle path. Because implementation of this mitigation measure and project commitment would
 15 avoid a substantial disruption to bicycle facilities as a result of increased roadway traffic and/or
 16 roadway closures, this impact would be less than significant.

17 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 18 **Plan**

19 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

20 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

21 **NEPA Effects:** The effect of maintaining and operating the facilities roadway operations under
 22 Alternative 2A would be the same as under Alternative 1A (see Tables 19-14, 19-15, and 19-16).
 23 Like Alternative 1A, O&M activities would occur along the entire alternative alignment. Even
 24 assuming the higher employment range in Table 19-16, given the limited number of workers
 25 involved and the large number of work sites, it is not anticipated that routine operations and
 26 maintenance activities or major inspections would result in substantial increases of traffic volumes
 27 or roadway congestion. The effect of increased traffic volumes and delays during operations would
 28 not be adverse.

29 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
 30 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
 31 activities or major inspections would result in substantial increases of traffic volumes or roadway
 32 congestion. The impact of increased traffic volumes and delays during operations would therefore
 33 be less than significant. No mitigation is required.

34 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and**
 35 **Maintenance**

36 **NEPA Effects:** The effect of maintaining and operating the project under Alternative 2A would be
 37 similar to Alternative 1A. Impacts on public roadways would be limited to the intake areas and
 38 would not substantially alter traffic patterns. The design and construction of all project components
 39 (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all rail operations
 40 following completion of construction. Impediments to boat traffic associated with the intakes would
 41 continue for the life of the project, but would not substantially impact boat passage or usage. The
 42 effect of permanent alteration of transportation patterns during operations would not be adverse.

1 **CEQA Conclusion:** The impact of maintaining and operating the project under Alternative 2A would
 2 be similar to Alternative 1A. Impacts on public roadways would be limited to the intake areas and
 3 would not substantially alter traffic patterns. The design and construction of all project components
 4 (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all rail operations
 5 following completion of construction. Impediments to boat traffic associated with the intakes would
 6 continue for the life of the project, but would not substantially impact boat passage or usage.
 7 Accordingly, the impact of permanent alteration of transportation patterns during operations would
 8 be less than significant. No mitigation is required.

9 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

10 **NEPA Effects:** At the program-level of analysis, the impact under Alternative 2A would be the same
 11 as Alternative 1A because the acreage of conservation is identical. Impacts on roadways could result
 12 in circulation delays or the inability to maintain adequate vehicular access in or around restoration
 13 or enhancement work zones. Roads and highways in and around Suisun Marsh and the Yolo Bypass
 14 could experience increases in traffic volumes, resulting in localized congestion and conflicts with
 15 local traffic. These roadways could function as haul routes or to bring construction personnel to the
 16 work sites. Maintenance and monitoring of the restoration areas would also generate some vehicle
 17 trips. The effect of increased traffic volumes during implementation of CM2–CM22 would be adverse.
 18 Although TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP
 19 proponents are not solely responsible for the timing, nature, or complete funding of required
 20 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
 21 constructed before the project's contribution to the effect is made, an adverse effect would occur.
 22 Therefore, this effect would be adverse. If, however, all improvements required to avoid adverse
 23 effects prove to be feasible and any necessary agreements are completed before the project's
 24 contribution to the effect is made, effects would not be adverse.

25 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
 26 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
 27 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
 28 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
 29 function as haul routes or to bring construction personnel to the work sites. Maintenance and
 30 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
 31 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
 32 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
 33 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 34 constructed prior to the project's contribution to the impact. If an improvement identified in the
 35 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
 36 impact is made, a significant impact would occur. Therefore, the project's impacts to roadway
 37 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
 38 required to avoid significant impacts prove to be feasible and any necessary agreements are
 39 completed before the project's contribution to the effect is made, impacts would be less than
 40 significant.

41 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 42 **Plan**

43 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

1 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 2 **Congested Roadway Segments**

3 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

4 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 5 **Agreements to Enhance Capacity of Congested Roadway Segments**

6 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

7 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 8 **Conservation Measures with Plans and Policies**

9 **NEPA Effects:** The potential for inconsistencies with plans or polices would be similar to the
 10 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 2A
 11 would be compatible with applicable plans and policies related to transportation and circulation.

12 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
 13 and no additional CEQA conclusion is required related to the consistency of the alternative with
 14 relevant plans and polices. The relationship between plans, policies, and regulations and impacts on
 15 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

16 **19.3.3.6 Alternative 2B—Dual Conveyance with East Alignment and Five**
 17 **Intakes (15,000 cfs; Operational Scenario B)**

18 During construction, temporary impacts on roadways under Alternative 2B would be similar to
 19 those described for Alternative 1B. For the purposes of this analysis, Alternative 2B was assumed to
 20 include Intakes 1–5 or Intakes 1–3 and Intakes 6 and 7, the intermediate forebay, an east side canal
 21 conveyance, and an operable barrier at the head of Old River (see Figures 3-4 and 3-5 in Chapter 3,
 22 *Description of Alternatives*).

23 **Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS**
 24 **Conditions**

25 **NEPA Effects:** The estimate of the number of vehicles generated by construction activities for
 26 Alternative 2B would be similar to Alternative 1B but slightly higher due to the addition of an
 27 operable barrier at the head of Old River. As shown in Table 19-17, under BPBG conditions, a total of
 28 19 roadway segments would exceed LOS for at least 1 hour during the 6:00 AM to 7:00 PM analysis
 29 period. As also shown in Table 19-17, construction associated with Alternative 1B would cause LOS
 30 thresholds to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM analysis period on a
 31 total of 39 roadway segments under BPBGPP conditions (see entries in **bold type**). Alternative 2B
 32 would therefore exacerbate an already unacceptable LOS under BPBG conditions on **20** roadway
 33 segments (39 minus the 19 that would already be operating at an unacceptable LOS under BPBG
 34 conditions). Figure 19-3a shows the study roadway segments that could experience substantial
 35 roadway operation effects.

36 The decrease in LOS below applicable thresholds during construction would be adverse at the
 37 locations identified in Table 19-17 because construction associated with Alternative 2B would cause
 38 LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM
 39 analysis period. Alternative 2B would also exacerbate an already unacceptable LOS under BPBG
 40 conditions at **20** roadway segments (39 minus the 19 that would already be operating at an

1 unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur
 2 throughout the study area, the highest concentration of roadway segments below applicable LOS
 3 threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be
 4 exceeded on several local roadways.

5 Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively,
 6 these measures include requirements to avoid or reduce circulation effects, notify the public of
 7 construction activities, provide alternate access routes, require direct haulers to pull over in the
 8 event of an emergency, limit/prohibit the amount of construction activity on congested roadways,
 9 and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity
 10 of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
 11 funding of required improvements. If an improvement that is identified in any mitigation
 12 agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed
 13 before the project's contribution to the effect is made, an adverse effect in the form of unacceptable
 14 LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to
 15 avoid adverse effects prove to be feasible and any necessary agreements are completed before the
 16 project's contribution to the effect is made, effects would not be adverse.

17 **CEQA Conclusion:** Construction under Alternative 2B would add hourly traffic volumes to study
 18 area roadways that would exceed acceptable LOS threshold (Table 19-17). As shown in Table 19-17,
 19 traffic volumes during construction of Alternative 2B would exacerbate already unacceptable LOS
 20 under BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-
 21 1a through TRANS-1c would reduce the severity of this impact, but not to less-than-significant
 22 levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 23 constructed prior to the project's contribution to the impact. If an improvement that is identified in
 24 any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 25 constructed before the project's contribution to the impact is made, a significant impact in the form
 26 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 27 however, all improvements required to avoid significant impacts prove to be feasible and any
 28 necessary agreements are completed before the project's contribution to the effect is made, impacts
 29 would be less than significant.

30 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 31 **Plan**

32 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

33 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 34 **Congested Roadway Segments**

35 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

36 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 37 **Agreements to Enhance Capacity of Congested Roadway Segments**

38 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

1 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
 2 **Conditions**

3 **NEPA Effects:** The estimate of the number of vehicles generated by construction activities would be
 4 slightly higher for Alternative 2B compared to Alternative 1B due to the addition of an operable
 5 barrier at the head of Old River. As shown in Table 19-18, construction of Alternative 1B would
 6 contribute to further deterioration of the existing pavement condition, to less than the acceptable
 7 PCI or similar applicable threshold (see Table 19-7), on a total of **46** roadway segments (see table
 8 entries in bold type). Damage to roadway pavement is expected throughout the study area (Figure
 9 19-4a) on various local and state roads, as well as on a few interstates. The effect of roadway
 10 damage to these segments during construction would be adverse. Mitigation Measures TRANS-2a
 11 through TRANS-2c are available to reduce this effect, but not necessarily to a level that would not be
 12 adverse, as the BDCP proponents cannot ensure that the agreements or encroachment permits will
 13 be obtained from the relevant transportation agencies. If an agreement or encroachment permit is
 14 not obtained, an adverse effect in the form of deficient pavement conditions would occur.
 15 Accordingly, this effect could remain adverse. If, however, mitigation agreement(s) or encroachment
 16 permit(s) providing for the improvement or replacement of pavement are obtained and any other
 17 necessary agreements are completed, adverse effects could be avoided.

18 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 19 below acceptable thresholds (Table 19-7) at the 46 locations shown in Table 19-18. The impact of
 20 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
 21 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
 22 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
 23 permits will be obtained from the relevant transportation agencies. If an agreement or
 24 encroachment permit is not obtained, a significant impact in the form of deficient pavement
 25 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 26 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 27 of pavement are obtained and any other necessary agreements are completed, impacts would be
 28 reduced to less than significant.

29 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 30 **Roadway Segments**

31 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

32 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 33 **Roadway Segments**

34 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

35 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
 36 **as Stipulated in Mitigation Agreements or Encroachment Permits**

37 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

1 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
 2 **during Construction**

3 **NEPA Effects:** Alternative 2B would require a heavy volume of materials to be hauled to the
 4 construction work zones, increasing the amount of trucks using the transportation system in the
 5 study area. The increase in heavy construction traffic on local roadways would increase the
 6 potential for safety hazards such as conflicts with recreational and commuter traffic and with
 7 farming operations. The increase in heavy construction traffic using emergency routes could result
 8 in interference with emergency service response times. Emergency routes in the study area are
 9 identified in Table 19-11.

10 As discussed above and in Chapter 22, *Air Quality and Greenhouse Gases*, construction of Alternative
 11 2B would increase the amount of trucks using the transportation system in the study area. The effect
 12 under Alternative 2B would be the similar to the effect under Alternative 1B, but slightly higher due
 13 to the additional vehicle trips associated with an operable barrier at the head of Old River. The effect
 14 of increased safety hazards from increased heavy construction traffic on local roadways and
 15 emergency routes would be adverse. Although TRANS-1c will reduce the severity of this effect, the
 16 BDCP proponents are not solely responsible for the timing, nature, or complete funding of required
 17 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
 18 constructed before the project's contribution to the effect is made, an adverse effect in the form of
 19 increased safety hazards would occur. Accordingly, this effect would be adverse. If, however, all
 20 improvements required to avoid adverse effects prove to be feasible and any necessary agreements
 21 are completed before the project's contribution to the effect is made, effects would not be adverse.

22 **CEQA Conclusion:** Construction of Alternative 2B would increase the amount of trucks using the
 23 transportation system in the study area. This increase in heavy truck traffic could interfere with
 24 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
 25 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
 26 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 27 prior to the project's contribution to the impact. If an improvement identified in the mitigation
 28 agreement(s) is not fully funded and constructed before the project's contribution to the impact is
 29 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
 30 effect would be significant and unavoidable. If, however, all improvements required to avoid
 31 significant impacts prove to be feasible and any necessary agreements are completed before the
 32 project's contribution to the effect is made, impacts would be less than significant.

33 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 34 **Agreements to Enhance Capacity of Congested Roadway Segments**

35 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

36 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

37 **NEPA Effects:** Under Alternative 2B, commercial barges would be used to transport construction
 38 materials and equipment from the ports to a temporary barge unloading facility and some in-water
 39 work will occur for construction of the intakes. Locations of temporary barge unloading facilities
 40 and estimates of trips and in-water work are the same as for Alternative 1B. This potential effect is
 41 not considered adverse because construction of Alternative 2B would not substantially increase the
 42 volume of barge movement within the study area, such that existing marine traffic would be
 43 disrupted (on average, only 2 additional barge trips per day are expected through the 9-year

1 construction period). Barge routes and landing sites will be selected to maximize continuous
 2 waterway access and a minimum waterway width greater than 100 feet. Moreover, Mitigation
 3 Measure TRANS-1a would reduce any potential disruptions as it includes stipulations to notify the
 4 commercial and leisure boating community of proposed barge operations in the waterways.

5 **CEQA Conclusion:** Construction of Alternative 2B would not substantially increase the volume of
 6 barge movement within the study area such that existing marine traffic would be disrupted (on
 7 average, only 2 additional barge trips per day are expected through the 9-year construction period).
 8 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
 9 stipulations to notify the commercial and leisure boating community of proposed barge operations
 10 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would
 11 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
 12 mitigation is required.

13 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 14 **Plan**

15 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

16 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

17 **NEPA Effects:** The potential for Alternative 2B to disrupt rail service on the UPRR Tracy Subdivision
 18 branch line and BNSF/Amtrak railroad operations would be similar to the effect under Alternative
 19 1B. (See Table 19-19 for construction impacts on rail lines). The effect of disruption to rail traffic
 20 during construction would be adverse. Mitigation Measure TRANS-1a, which includes stipulations to
 21 coordinate with rail providers to develop alternative interim transportation modes (e.g., trucks or
 22 buses) that could be used to provide freight and/or passenger service during any longer term
 23 railroad closures and daily construction time windows during which construction is restricted or
 24 rail operations would need to be suspended for any activity within railroad rights of way, is
 25 available to reduce the effect.

26 **CEQA Conclusion:** Construction of east canal siphons may temporarily affect BNSF/Amtrak railroad
 27 operations through physical railroad crosses. If the UPRR Tracy Subdivision branch line is reopened
 28 prior to construction, traffic associated with of the Byron Tract forebay may minimally impact rail
 29 service through vehicle crossing. This is a potentially significant impact. Implementation of
 30 Mitigation Measure TRANS-1a would reduce this impact to a less than significant level.

31 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 32 **Plan**

33 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact REC-1.

34 **Impact TRANS-6: Disruption of Transit Service during Construction**

35 **NEPA Effects:** The effect of Alternative 2B on operation of the SCT Link/Delta Route, traffic on SR 12,
 36 and Intercity Greyhound bus lines would be similar to that described for Alternative 1B. The effect of
 37 disruption to transit service during construction would be adverse. Although Mitigation Measures
 38 TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not
 39 solely responsible for the timing, nature, or complete funding of required improvements. If an
 40 improvement identified in the mitigation agreement(s) is not fully funded and constructed before

1 the project's contribution to the effect is made, an adverse effect in the form of disruptions to transit
2 service would occur. Therefore, this effect would be adverse.

3 **CEQA Conclusion:** Construction activities associated with Alternative 2B would decrease LOS below
4 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 8 segments
5 on SR-12 (see Table 19-17). Accordingly, construction could significantly affect operation of the SCT
6 Link/Delta Route. To the extent that other roadways affected by Alternative 2B construction also
7 carry Greyhound bus lines, those routes may be affected as well. Mitigation Measures TRANS-1a
8 through TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels.
9 Under Mitigation Measure TRANS-1a, the BDCP proponents would coordinate with transit providers
10 to develop, to the extent feasible, daily construction time windows during which transit operations
11 would not be either detoured or significantly slowed, avoiding a substantial disruption of transit
12 service. Additionally, under Mitigation Measure TRANS-1b, construction traffic would be minimized
13 around peak periods, to the extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP
14 proponents would make good faith efforts to enter into mitigation agreements to enhance the
15 capacity of congested roadway segments, likely reducing associated disruptions to transit service.
16 However, the BDCP proponents cannot ensure that the improvements will be fully funded or
17 constructed prior to the project's contribution to the impact. If an improvement identified in the
18 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
19 impact is made, a significant impact in the form disruptions to transit service would occur.
20 Therefore, this impact would be significant and unavoidable. However, such impacts are likely to
21 occur during the middle of the day because construction traffic would be minimized around peak
22 periods.

23 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 24 **Plan**

25 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

26 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on** 27 **Congested Roadway Segments**

28 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

29 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation** 30 **Agreements to Enhance Capacity of Congested Roadway Segments**

31 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

32 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

33 **NEPA Effects:** The potential for Alternative 2B to interfere with bicycle routes along SR 12 would be
34 similar to the effect under Alternative 1B (see Table 19-17). The effect of disruption to bicycle
35 routes during construction would be adverse. Mitigation Measure TRANS-1a is available to reduce
36 this effect. Under this measure, BDCP proponents would provide alternate access routes via detours
37 or bridges to maintain continual circulation for local travelers in and around construction zones,
38 including bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could be
39 hazardous to road cycling activity on roadways open to bicycle traffic; provide signage, barricades,
40 and flag people as necessary to slow or detour traffic around construction sites; and notify the

1 public, including cycling organizations and bike shops, of construction activities that could affect
2 transportation.

3 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-17) could
4 interfere with bicycle routes along SR 12, resulting in a significant impact. However, Mitigation
5 Measure TRANS-1a would reduce the severity of this impact to less-than-significant levels because
6 BDCP proponents would provide alternate access routes via detours or bridges to maintain
7 continual circulation for local travelers in and around construction zones, including bicycle riders;
8 provide signage warning of loose gravel, steel plates, etc. that could be hazardous to road cycling
9 activity on roadways open to bicycle traffic; provide signage, barricades, and flag people as
10 necessary to slow or detour traffic around construction sites; and notify the public, including cycling
11 organizations and bike shops, of construction activities that could affect transportation. Additionally,
12 another project commitment, as described in Appendix 3B, *Environmental Commitments*, and
13 Chapter 15, *Recreation*, could enhance recreational access to areas in the vicinity of the proposed
14 intakes, including enhancement of bicycle and foot access to the Delta and the potential conversion
15 of an abandoned rail line between Sacramento and Walnut Grove into a bicycle path. Because
16 implementation of this mitigation measure and project commitment would avoid a substantial
17 disruption to bicycle facilities as a result of increased roadway traffic and/or roadway closures, this
18 impact would be less than significant.

19 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 20 **Plan**

21 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

22 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

23 **NEPA Effects:** The effect of maintaining and operating the facilities under Alternative 2B would be
24 the same as under Alternative 1A (see Tables 19-14, 19-15, and 19-16). Like Alternative 1A, O&M
25 activities would occur along the entire alternative alignment. Even assuming the higher employment
26 range in Table 19-16, given the limited number of workers involved and the large number of work
27 sites, it is not anticipated that routine operations and maintenance activities or major inspections
28 would result in substantial increases of traffic volumes or roadway congestion. The effect of
29 increased traffic volumes and delays during operations would not be adverse.

30 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
31 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
32 activities or major inspections would result in substantial increases of traffic volumes or roadway
33 congestion. The impact of increased traffic volumes and delays during operations would therefore
34 be less than significant. No mitigation is required.

35 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and** 36 **Maintenance**

37 **NEPA Effects:** The effect of maintaining and operating the facilities under Alternative 2B would be
38 similar to Alternative 1B. Roadway realignment would be necessary and multiple bridges would be
39 constructed across the alignment to maintain connectivity. Alternative 2B would intersect several
40 public roadways, state routes, and one railroad requiring bridges. The design and construction of all
41 project components (i.e., conveyances, intakes, and forebays) would provide for on-going continuity
42 of all transportation facilities following completion of construction. Impediments to boat traffic

1 associated with the intakes would continue for the life of the project, but would not substantially
2 impact boat passage or usage. The effect of permanent alteration of transportation patterns during
3 operations would not be adverse.

4 **CEQA Conclusion:** The impact of maintaining and operating the project under Alternative 2B would
5 be similar to Alternative 1B. Roadway realignment would be necessary and multiple bridges would
6 be constructed across the alignment to maintain connectivity. Alternative 2B would intersect several
7 public roadways, state routes, and one railroad requiring bridges. The design and construction of all
8 project components (i.e., conveyances, intakes, and forebays) would provide for on-going continuity
9 of all transportation facilities following completion of construction. Impediments to boat traffic
10 associated with the intakes would continue for the life of the project, but would not substantially
11 impact boat passage or usage. Accordingly, the impact of permanent alteration of transportation
12 patterns during operations would be less than significant. No mitigation is required.

13 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

14 **NEPA Effects:** At the program-level of analysis, the impact under Alternative 2B would be the same
15 as Alternative 1B because the acreage of conservation is identical. Impacts on roadways could result
16 in circulation delays or the inability to maintain adequate vehicular access in or around restoration
17 or enhancement work zones. Roads and highways in and around Suisun Marsh and the Yolo Bypass
18 could experience increases in traffic volumes, resulting in localized congestion and conflicts with
19 local traffic. These roadways could function as haul routes or to bring construction personnel to the
20 work sites. Maintenance and monitoring of the restoration areas would also generate some vehicle
21 trips. The effect of increased traffic volumes during implementation of CM2–CM22 would be
22 adverse. Although TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP
23 proponents are not solely responsible for the timing, nature, or complete funding of required
24 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
25 constructed before the project's contribution to the effect is made, an adverse effect would occur.
26 Therefore, this effect would be adverse. If, however, all improvements required to avoid adverse
27 effects prove to be feasible and any necessary agreements are completed before the project's
28 contribution to the effect is made, effects would not be adverse.

29 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
30 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
31 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
32 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
33 function as haul routes or to bring construction personnel to the work sites. Maintenance and
34 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
35 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
36 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
37 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
38 constructed prior to the project's contribution to the impact. If an improvement identified in the
39 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
40 impact is made, a significant impact would occur. Therefore, the project's impacts to roadway
41 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
42 required to avoid significant impacts prove to be feasible and any necessary agreements are
43 completed before the project's contribution to the effect is made, impacts would be less than
44 significant.

1 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 2 **Plan**

3 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

4 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 5 **Congested Roadway Segments**

6 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

7 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 8 **Agreements to Enhance Capacity of Congested Roadway Segments**

9 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

10 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 11 **Conservation Measures with Plans and Policies**

12 **NEPA Effects:** The potential for inconsistencies with plans or polices would be similar to the
 13 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 2B
 14 would be compatible with applicable plans and policies related to transportation and circulation.

15 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
 16 and no additional CEQA conclusion is required related to the consistency of the alternative with
 17 relevant plans and polices. The relationship between plans, policies, and regulations and impacts on
 18 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

19 **19.3.3.7 Alternative 2C—Dual Conveyance with West Alignment and Intakes**
 20 **W1–W5 (15,000 cfs; Operational Scenario B)**

21 A total of five intakes would be constructed under Alternative 2C. They would be sited on the west
 22 bank of the Sacramento River, directly opposite the locations identified for the tunnel and east canal
 23 alignments. This alternative would also include an intermediate forebay, and the conveyance facility
 24 would be a canal and buried pipeline (see Figures 3-6 and 3-7 in Chapter 3, *Description of*
 25 *Alternatives*).

26 **Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS**
 27 **Conditions**

28 **NEPA Effects:** The number of vehicles generated by construction activities would be slightly higher
 29 for Alternative 2C due to the addition of an operable barrier at the head of Old River. As shown in
 30 Table 19-21, under BPBG conditions, a total of 19 roadway segments would exceed LOS for at least 1
 31 hour during the 6:00 AM to 7:00 PM analysis period. As shown in Table 19-21, construction
 32 associated with Alternative 2C would cause LOS thresholds to be exceeded for at least 1 hour during
 33 the 6:00 AM to 7:00 PM analysis period on a total of 56 roadway segments under BPBGPP conditions
 34 (see entries in **bold** type). Alternative 2C would therefore exacerbate an already unacceptable LOS
 35 under BPBG conditions on **37** roadway segments (56 minus the 19 that would already be operating
 36 at an unacceptable LOS under BPBG conditions). Figure 19-3a shows the study roadway segments
 37 that could experience substantial roadway operation effects.

1 The decrease in LOS below applicable thresholds during construction would be adverse at the
 2 locations identified in Table 19-21 because construction associated with Alternative 2C would cause
 3 LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM
 4 analysis period. Alternative 2C would also exacerbate an already unacceptable LOS under BPBG
 5 conditions at **37** roadway segments (56 minus the 19 that would already be operating at an
 6 unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur
 7 throughout the study area, the highest concentration of roadway segments below applicable LOS
 8 threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be
 9 exceeded on several local roadways, including all segments studied in West Sacramento and Yolo
 10 County.

11 Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively,
 12 these measures include requirements to avoid or reduce circulation effects, notify the public of
 13 construction activities, provide alternate access routes, require direct haulers to pull over in the
 14 event of an emergency, limit/prohibit the amount of construction activity on congested roadways,
 15 and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity
 16 of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
 17 funding of required improvements. If an improvement that is identified in any mitigation
 18 agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed
 19 before the project's contribution to the effect is made, an adverse effect in the form of unacceptable
 20 LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to
 21 avoid adverse effects prove to be feasible and any necessary agreements are completed before the
 22 project's contribution to the effect is made, effects would not be adverse.

23 **CEQA Conclusion:** Construction under Alternative 2C would add hourly traffic volumes to study area
 24 roadways that would exceed acceptable LOS threshold (Table 19-21). As shown in Table 19-21,
 25 traffic volumes during construction of Alternative 2C would exacerbate already unacceptable LOS
 26 under BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-
 27 1a through TRANS-1c would reduce the severity of this impact, but not to less-than-significant
 28 levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 29 constructed prior to the project's contribution to the impact. If an improvement that is identified in
 30 any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 31 constructed before the project's contribution to the impact is made, a significant impact in the form
 32 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 33 however, all improvements required to avoid significant impacts prove to be feasible and any
 34 necessary agreements are completed before the project's contribution to the effect is made, impacts
 35 would be less than significant.

36 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 37 **Plan**

38 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

39 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 40 **Congested Roadway Segments**

41 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

1 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
2 **Agreements to Enhance Capacity of Congested Roadway Segments**

3 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

4 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
5 **Conditions**

6 **NEPA Effects:** The effect under Alternative 2C would be similar to the effects under Alternative 1C,
7 but greater in magnitude because of the higher amount of truck traffic due to addition of an operable
8 barrier at the head of Old River. As shown in Table 19-22, Alternative 1C would cause pavement
9 condition thresholds (see Table 19-7) to be exceeded on a total of **43** roadway segments (see entries
10 in bold text). Damage to roadway pavement is expected throughout the study area (Figure 19-4a) on
11 various local and state roads, as well as on a few interstates. The effect of roadway damage to these
12 segments during construction would be adverse. Mitigation Measures TRANS-2a through TRANS-2c
13 are available to reduce this effect, but not necessarily to a level that would not be adverse, as the
14 BDCP proponents cannot ensure that the agreements or encroachment permits will be obtained
15 from the relevant transportation agencies. If an agreement or encroachment permit is not obtained,
16 an adverse effect in the form of deficient pavement conditions would occur. Accordingly, this effect
17 could remain adverse. If, however, mitigation agreement(s) or encroachment permit(s) providing
18 for the improvement or replacement of pavement are obtained and any other necessary agreements
19 are completed, adverse effects could be avoided.

20 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
21 below acceptable thresholds (Table 19-7) at the 43 locations shown in Table 19-22. The impact of
22 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
23 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
24 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
25 permits will be obtained from the relevant transportation agencies. If an agreement or
26 encroachment permit is not obtained, a significant impact in the form of deficient pavement
27 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
28 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
29 of pavement are obtained and any other necessary agreements are completed, impacts would be
30 reduced to less than significant.

31 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
32 **Roadway Segments**

33 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

34 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
35 **Roadway Segments**

36 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

37 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
38 **as Stipulated in Mitigation Agreements or Encroachment Permits**

39 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

1 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
 2 **during Construction**

3 **NEPA Effects:** Alternative 2C would require a heavy volume of materials to be hauled to the
 4 construction work zones, increasing the amount of trucks using the transportation system in the
 5 study area. The increase in heavy construction traffic on local roadways would increase the
 6 potential for safety hazards such as conflicts with recreational and commuter traffic and with
 7 farming operations. The increase in heavy construction traffic using emergency routes could result
 8 in interference with emergency service response times. Emergency routes in the study area are
 9 identified in Table 19-11.

10 As discussed above and in Chapter 22, *Air Quality and Greenhouse Gases*, construction of Alternative
 11 2C would increase the amount of trucks using the transportation system in the study area. The effect
 12 under Alternative 2C would be the similar to the effect under Alternative 1C, but slightly higher due
 13 to the additional vehicle trips for construction of an operable barrier at the head of Old River. The
 14 effect of increased safety hazards from increased heavy construction traffic on local roadways and
 15 emergency routes would be adverse. Although TRANS-1c will reduce the severity of this effect, the
 16 BDCP proponents are not solely responsible for the timing, nature, or complete funding of required
 17 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
 18 constructed before the project's contribution to the effect is made, an adverse effect in the form of
 19 increased safety hazards would occur. Accordingly, this effect would be adverse. If, however, all
 20 improvements required to avoid adverse effects prove to be feasible and any necessary agreements
 21 are completed before the project's contribution to the effect is made, effects would not be adverse.

22 **CEQA Conclusion:** Construction of Alternative 2C would increase the amount of trucks using the
 23 transportation system in the study area. This increase in heavy truck traffic could interfere with
 24 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
 25 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
 26 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 27 prior to the project's contribution to the impact. If an improvement identified in the mitigation
 28 agreement(s) is not fully funded and constructed before the project's contribution to the impact is
 29 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
 30 effect would be significant and unavoidable. If, however, all improvements required to avoid
 31 significant impacts prove to be feasible and any necessary agreements are completed before the
 32 project's contribution to the effect is made, impacts would be less than significant.

33 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 34 **Agreements to Enhance Capacity of Congested Roadway Segments**

35 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

36 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

37 **NEPA Effects:** Under Alternative 2C, commercial barges would be used to transport construction
 38 materials and equipment from the ports to a temporary barge unloading facility and some in-water
 39 work would occur for construction of the intakes. Locations of temporary barge unloading facilities
 40 and estimates of trips and in-water work are the same as for Alternative 1C. This potential effect is
 41 not considered adverse because construction of Alternative 2C would not substantially increase the
 42 volume of barge movement within the study area, such that existing marine traffic would be
 43 disrupted (on average, only 2 additional barge trips per day are expected through the 9-year

1 construction period). Barge routes and landing sites will be selected to maximize continuous
 2 waterway access and a minimum waterway width greater than 100 feet. Moreover, Mitigation
 3 Measure TRANS-1a would reduce any potential disruptions as it includes stipulations to notify the
 4 commercial and leisure boating community of proposed barge operations in the waterways.

5 **CEQA Conclusion:** Construction of Alternative 2C would not substantially increase the volume of
 6 barge movement within the study area such that existing marine traffic would be disrupted (on
 7 average, only 2 additional barge trips per day are expected through the 9-year construction period).
 8 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
 9 stipulations to notify the commercial and leisure boating community of proposed barge operations
 10 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would
 11 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
 12 mitigation is required.

13 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 14 **Plan**

15 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

16 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

17 **NEPA Effects:** The potential for Alternative 2C to disrupt rail service on the UPRR Tracy Subdivision
 18 branch line and BNSF/Amtrak railroad operations would be similar to the effect under Alternative
 19 1C. The effect of disruption to rail traffic during construction would be adverse. Mitigation Measure
 20 TRANS-1a, which includes stipulations to coordinate with rail providers to develop alternative
 21 interim transportation modes (e.g., trucks or buses) that could be used to provide freight and/or
 22 passenger service during any longer term railroad closures and daily construction time windows
 23 during which construction is restricted or rail operations would need to be suspended for any
 24 activity within railroad rights of way, is available to reduce the effect.

25 **CEQA Conclusion:** The proposed conveyance (new canal and siphon) crosses the existing BNSF
 26 Railway/Amtrak San Joaquin Line approximately between Sunset Road and Orwood Road. Because
 27 this crossing is in a major work area, the train operations along the BNSF Railway/Amtrak San
 28 Joaquin Line could be affected. Likewise, if the UPRR Tracy Subdivision branch line is reopened prior
 29 to construction, traffic associated with of the Byron Tract forebay may minimally impact rail service
 30 through vehicle crossing. This is a potentially significant impact. Implementation of Mitigation
 31 Measure TRANS-1a would reduce this impact to a less-than-significant level.

32 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 33 **Plan**

34 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

35 **Impact TRANS-6: Disruption of Transit Service during Construction**

36 **NEPA Effects:** The effect of Alternative 2C on the Tri-Delta Transit Route 386 would be the same as
 37 that of Alternative 1C. The effect of disruption to transit service during construction would be
 38 adverse. Although Mitigation Measures TRANS-1a through TRANS-1c would reduce the severity of
 39 this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
 40 funding of required improvements. If an improvement identified in the mitigation agreement(s) is

1 not fully funded and constructed before the project's contribution to the effect is made, an adverse
 2 effect in the form of disruptions to transit service would occur. Therefore, this effect would be
 3 adverse.

4 **CEQA Conclusion:** Construction activities associated with Alternative 2C would decrease LOS below
 5 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 4 segments
 6 on SR-4 (see Table 19-21). Accordingly, construction could significantly affect operation of the Tri-
 7 Delta Transit Route 386. Mitigation Measures TRANS-1a through TRANS-1c would reduce the
 8 severity of this impact, but not to less-than-significant levels. Under Mitigation Measure TRANS-1a,
 9 the BDCP proponents would coordinate with transit providers to develop, to the extent feasible,
 10 daily construction time windows during which transit operations would not be either detoured or
 11 significantly slowed, avoiding a substantial disruption of transit service. Additionally, under
 12 Mitigation Measure TRANS-1b, construction traffic would be minimized around peak periods, to the
 13 extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP proponents would make
 14 good faith efforts to enter into mitigation agreements to enhance the capacity of congested roadway
 15 segments, likely reducing associated disruptions to transit service. However, the BDCP proponents
 16 cannot ensure that the improvements will be fully funded or constructed prior to the project's
 17 contribution to the impact. If an improvement identified in the mitigation agreement(s) is not fully
 18 funded and constructed before the project's contribution to the impact is made, a significant impact
 19 in the form disruptions to transit service would occur. Therefore, this impact would be significant
 20 and unavoidable. However, such impacts are likely to occur during the middle of the day because
 21 construction traffic would be minimized around peak periods.

22 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 23 **Plan**

24 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

25 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 26 **Congested Roadway Segments**

27 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

28 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 29 **Agreements to Enhance Capacity of Congested Roadway Segments**

30 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

31 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

32 **NEPA Effects:** The effect of Alternative 2C on bicycle routes along SR 160, River Road, and SR 12
 33 (and potentially SR 220) would be similar to that of Alternative 1C (see Table 19-21). The effect of
 34 disruption to bicycle routes during construction would be adverse. Mitigation Measure TRANS-1a is
 35 available to reduce this effect. Under this measure, BDCP proponents would provide alternate access
 36 routes via detours or bridges to maintain continual circulation for local travelers in and around
 37 construction zones, including bicycle riders; provide signage warning of loose gravel, steel plates,
 38 etc. that could be hazardous to road cycling activity on roadways open to bicycle traffic; provide
 39 signage, barricades, and flag people as necessary to slow or detour traffic around construction sites;
 40 and notify the public, including cycling organizations and bike shops, of construction activities that
 41 could affect transportation. Additionally, another project commitment, as described in Appendix 3B,

1 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
 2 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
 3 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
 4 bicycle path.

5 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-21) could
 6 temporarily disrupt bicycle routes on SR 160, River Road, and SR 12 (and potentially SR 220),
 7 resulting in a significant impact. However, Mitigation Measure TRANS-1a would reduce the severity
 8 of this impact to less-than-significant levels because BDCP proponents would provide alternate
 9 access routes via detours or bridges to maintain continual circulation for local travelers in and
 10 around construction zones, including bicycle riders; provide signage warning of loose gravel, steel
 11 plates, etc. that could be hazardous to road cycling activity on roadways open to bicycle traffic;
 12 provide signage, barricades, and flag people as necessary to slow or detour traffic around
 13 construction sites; and notify the public, including cycling organizations and bike shops, of
 14 construction activities that could affect transportation. Additionally, another project commitment, as
 15 described in Appendix 3B, *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance
 16 recreational access to areas in the vicinity of the proposed intakes, including enhancement of bicycle
 17 and foot access to the Delta and the potential conversion of an abandoned rail line between
 18 Sacramento and Walnut Grove into a bicycle path. Because implementation of this mitigation
 19 measure and project commitment would avoid a substantial disruption to bicycle facilities as a
 20 result of increased roadway traffic and/or roadway closures, this impact would be less than
 21 significant.

22 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 23 **Plan**

24 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

25 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

26 **NEPA Effects:** The effect of maintaining and operating the facilities roadway operations under
 27 Alternative 2C would be the same as under Alternative 1A (see Tables 19-14, 19-15, and 19-16).
 28 Like Alternative 1A, O&M activities would occur along the entire alternative alignment. Even
 29 assuming the higher employment range in Table 19-16, given the limited number of workers
 30 involved and the large number of work sites, it is not anticipated that routine operations and
 31 maintenance activities or major inspections would result in substantial increases of traffic volumes
 32 or roadway congestion. The effect of increased traffic volumes and delays during operations would
 33 not be adverse.

34 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
 35 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
 36 activities or major inspections would result in substantial increases of traffic volumes or roadway
 37 congestion. The impact of increased traffic volumes and delays during operations would therefore
 38 be less than significant. No mitigation is required.

39 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and**
 40 **Maintenance**

41 **NEPA Effects:** Alternative 2C would affect the same transportation facilities as Alternative 1C,
 42 including County Road 141, N Courtland Road, County Road 150, Teal Road, Kellogg Creek Road,

1 Western Farms Ranch Road, and Bruns Road. Connectivity would be maintained through bridging or
2 rerouting. The potential effect of permanent alteration of transportation patterns during operations
3 would be the same as for Alternative 1C and would not be adverse.

4 **CEQA Conclusion:** The impact of maintaining and operating the project under Alternative 2C would
5 be similar to Alternative 1C. Roadway realignment would be necessary to maintain connectivity. The
6 design and construction of all project components (i.e., conveyances, intakes, and forebays) would
7 provide for on-going continuity of all transportation facilities following completion of construction.
8 Impediments to boat traffic associated with the intakes would continue for the life of the project, but
9 would not substantially impact boat passage or usage. Accordingly, the impact of permanent
10 alteration of transportation patterns during operations would be less than significant. No mitigation
11 is required.

12 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

13 **NEPA Effects:** At the program-level of analysis, the impact under Alternative 2C would be the same
14 as Alternative 1C because the acreage of conservation is identical. Impacts on roadways could result
15 in circulation delays or the inability to maintain adequate vehicular access in or around restoration
16 or enhancement work zones. Roads and highways in and around Suisun Marsh and the Yolo Bypass
17 could experience increases in traffic volumes, resulting in localized congestion and conflicts with
18 local traffic. These roadways could function as haul routes or to bring construction personnel to the
19 work sites. Maintenance and monitoring of the restoration areas would also generate some vehicle
20 trips. The effect of increased traffic volumes during implementation of CM2–CM22 would be
21 adverse. Increased traffic volumes during implementation of CM2–CM22. Although TRANS-1a
22 through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not solely
23 responsible for the timing, nature, or complete funding of required improvements. If an
24 improvement identified in the mitigation agreement(s) is not fully funded and constructed before
25 the project's contribution to the effect is made, an adverse effect would occur. Therefore, this effect
26 would be adverse. If, however, all improvements required to avoid adverse effects prove to be
27 feasible and any necessary agreements are completed before the project's contribution to the effect
28 is made, effects would not be adverse.

29 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
30 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
31 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
32 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
33 function as haul routes or to bring construction personnel to the work sites. Maintenance and
34 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
35 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
36 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
37 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
38 constructed prior to the project's contribution to the impact. If an improvement identified in the
39 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
40 impact is made, a significant impact would occur. Therefore, the project's impacts to roadway
41 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
42 required to avoid significant impacts prove to be feasible and any necessary agreements are
43 completed before the project's contribution to the effect is made, impacts would be less than
44 significant.

1 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 2 **Plan**

3 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

4 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 5 **Congested Roadway Segments**

6 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

7 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 8 **Agreements to Enhance Capacity of Congested Roadway Segments**

9 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

10 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 11 **Conservation Measures with Plans and Policies**

12 **NEPA Effects:** The potential for inconsistencies with plans or polices would be similar to the
 13 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 2C
 14 would be compatible with applicable plans and policies related to transportation and circulation.

15 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
 16 and no additional CEQA conclusion is required related to the consistency of the alternative with
 17 relevant plans and polices. The relationship between plans, policies, and regulations and impacts on
 18 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

19 **19.3.3.8 Alternative 3—Dual Conveyance with Pipeline/Tunnel and Intakes 1**
 20 **and 2 (6,000 cfs; Operational Scenario A)**

21 A total of two intakes would be constructed under Alternative 3. For the purposes of this analysis,
 22 Alternative 3 was assumed to include Intakes 1 and 2. This alternative would also include an
 23 intermediate forebay, and the conveyance facility would be a buried pipeline (see Figures 3-2 and 3-
 24 8 in Chapter 3, *Description of Alternatives*).

25 **Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS**
 26 **Conditions**

27 **NEPA Effects:** The estimate of the number of vehicles generated by construction activities would be
 28 lower compared to Alternative 1A due to the reduction in the number of intakes (approximately
 29 60% reduction). Localized impacts in the vicinity of Intakes 3, 4, and 5 would not occur.

30 As shown in Table 19-8, under BPBG conditions, a total of 23 roadway segments would exceed LOS
 31 for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. As also shown in Table 19-8,
 32 construction associated with Alternative 3 would cause LOS thresholds to be exceeded for at least 1
 33 hour during the 6:00 AM to 7:00 PM analysis period on a total of 33 roadway segments under
 34 BPBGPP conditions (see entries in **bold** type). Alternative 3 would therefore exacerbate an already
 35 unacceptable LOS under BPBG conditions on **10** roadway segments (33 minus the 23 that would
 36 already be operating at an unacceptable LOS under BPBG conditions). Figure 19-3a shows the study
 37 roadway segments that could experience substantial roadway operation effects.

1 The decrease in LOS below applicable thresholds during construction would be adverse at the
 2 locations identified in Table 19-8 because construction associated with Alternative 3 would cause
 3 LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM
 4 analysis period. Alternative 3 would also exacerbate an already unacceptable LOS under BPBG
 5 conditions at **10** roadway segments (33 minus the 23 that would already be operating at an
 6 unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur
 7 throughout the study area, the highest concentration of roadway segments below applicable LOS
 8 threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be
 9 exceeded on several local roadways, include all segments studied in West Sacramento.

10 Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively,
 11 these measures include requirements to avoid or reduce circulation effects, notify the public of
 12 construction activities, provide alternate access routes, require direct haulers to pull over in the
 13 event of an emergency, limit/prohibit the amount of construction activity on congested roadways,
 14 and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity
 15 of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
 16 funding of required improvements. If an improvement that is identified in any mitigation
 17 agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed
 18 before the project's contribution to the effect is made, an adverse effect in the form of unacceptable
 19 LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to
 20 avoid adverse effects prove to be feasible and any necessary agreements are completed before the
 21 project's contribution to the effect is made, effects would not be adverse.

22 **CEQA Conclusion:** Construction under Alternative 3 would add hourly traffic volumes to study area
 23 roadways that would exceed acceptable LOS threshold (Table 19-8). As shown in Table 19-8, traffic
 24 volumes during construction of Alternative 3 would exacerbate already unacceptable LOS under
 25 BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-1a
 26 through TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels.
 27 The BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 28 prior to the project's contribution to the impact. If an improvement that is identified in any
 29 mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 30 constructed before the project's contribution to the impact is made, a significant impact in the form
 31 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 32 however, all improvements required to avoid significant impacts prove to be feasible and any
 33 necessary agreements are completed before the project's contribution to the effect is made, impacts
 34 would be less than significant.

35 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 36 **Plan**

37 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

38 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 39 **Congested Roadway Segments**

40 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

1 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 2 **Agreements to Enhance Capacity of Congested Roadway Segments**

3 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

4 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
 5 **Conditions**

6 **NEPA Effects:** Construction truck traffic may damage roadway surfaces. During construction,
 7 various materials would be transported to and from the construction areas in load-bearing trucks.
 8 As shown in Table 19-10, construction of Alternative 3 would contribute to further deterioration of
 9 the existing pavement condition, to less than the acceptable PCI or similar applicable threshold (see
 10 Table 19-7), on a total of **43** roadway segments. Damage to roadway pavement is expected
 11 throughout the study area (Figure 19-4a) on various local and state roads, as well as on a few
 12 interstates. The effect of roadway damage to these segments during construction would be adverse.
 13 Mitigation Measures TRANS-2a through TRANS-2c are available to reduce this effect, but not
 14 necessarily to a level that would not be adverse, as the BDCP proponents cannot ensure that the
 15 agreements or encroachment permits will be obtained from the relevant transportation agencies. If
 16 an agreement or encroachment permit is not obtained, an adverse effect in the form of deficient
 17 pavement conditions would occur. Accordingly, this effect could remain adverse. If, however,
 18 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 19 of pavement are obtained and any other necessary agreements are completed, adverse effects could
 20 be avoided.

21 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 22 below acceptable thresholds (Table 19-7) at the 43 locations shown in Table 19-10. The impact of
 23 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
 24 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
 25 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
 26 permits will be obtained from the relevant transportation agencies. If an agreement or
 27 encroachment permit is not obtained, a significant impact in the form of deficient pavement
 28 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 29 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 30 of pavement are obtained and any other necessary agreements are completed, impacts would be
 31 reduced to less than significant.

32 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 33 **Roadway Segments**

34 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

35 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 36 **Roadway Segments**

37 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

38 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
 39 **as Stipulated in Mitigation Agreements or Encroachment Permits**

40 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

1 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
 2 **during Construction**

3 **NEPA Effects:** Alternative 3 would require a heavy volume of materials to be hauled to the
 4 construction work zones, increasing the amount of trucks using the transportation system in the
 5 study area. The increase in heavy construction traffic on local roadways would increase the
 6 potential for safety hazards such as conflicts with recreational and commuter traffic and with
 7 farming operations. The increase in heavy construction traffic using emergency routes could result
 8 in interference with emergency service response times. Emergency routes in the study area are
 9 identified in Table 19-11.

10 As discussed above and in Chapter 22, *Air Quality and Greenhouse Gases*, construction of Alternative
 11 3 would increase the amount of trucks using the transportation system in the study area. The effects
 12 under Alternative 3 would be similar to those described for Alternative 1A although of lesser
 13 magnitude because Alternative 3 would construct two intake structures rather than five, with an
 14 approximately 60% reduction in vehicle generation. The effect of increased safety hazards from
 15 increased heavy construction traffic on local roadways and emergency routes would be adverse.
 16 Although TRANS-1c will reduce the severity of this effect, the BDCP proponents are not solely
 17 responsible for the timing, nature, or complete funding of required improvements. If an
 18 improvement identified in the mitigation agreement(s) is not fully funded and constructed before
 19 the project's contribution to the effect is made, an adverse effect in the form of increased safety
 20 hazards would occur. Accordingly, this effect would be adverse. If, however, all improvements
 21 required to avoid adverse effects prove to be feasible and any necessary agreements are completed
 22 before the project's contribution to the effect is made, effects would not be adverse.

23 **CEQA Conclusion:** Construction of Alternative 3 would increase the amount of trucks using the
 24 transportation system in the study area. This increase in heavy truck traffic could interfere with
 25 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
 26 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
 27 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 28 prior to the project's contribution to the impact. If an improvement identified in the mitigation
 29 agreement(s) is not fully funded and constructed before the project's contribution to the impact is
 30 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
 31 effect would be significant and unavoidable. If, however, all improvements required to avoid
 32 significant impacts prove to be feasible and any necessary agreements are completed before the
 33 project's contribution to the effect is made, impacts would be less than significant.

34 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 35 **Agreements to Enhance Capacity of Congested Roadway Segments**

36 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

37 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

38 **NEPA Effects:** Under Alternative 3, commercial barges would be used to transport construction
 39 materials and equipment from the ports to temporary barge unloading facilities near construction
 40 sites and some in-water work would occur for construction of the intakes. Locations of temporary
 41 barge unloading facilities are the same as for Alternative 1A but the estimate of trips and amount of
 42 in-water work would be less because of the reduction in the number of intakes to be constructed.
 43 This potential effect is not considered adverse because construction of Alternative 3 would not

1 require modification to existing deep water channels, interfere with Port of Stockton navigation, or
2 substantially increase the volume of barge movement within the study area, such that existing
3 marine traffic would be disrupted (on average, only 1 additional barge trip per day is expected
4 through the 9-year construction period). Barge routes and landing sites will be selected to maximize
5 continuous waterway access and a minimum waterway width greater than 100 feet. Moreover,
6 Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes stipulations to
7 notify the commercial and leisure boating community of proposed barge operations in the
8 waterways.

9 **CEQA Conclusion:** Construction of Alternative 3 would not require modification to existing deep
10 water channels, interfere with Port of Stockton navigation, or substantially increase the volume of
11 barge movement within the study area such that existing marine traffic would be disrupted (on
12 average, only 1 additional barge trip per day is expected through the 9-year construction period).
13 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
14 stipulations to notify the commercial and leisure boating community of proposed barge operations
15 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would
16 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
17 mitigation is required.

18 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 19 **Plan**

20 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

21 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

22 **NEPA Effects:** The effects under Alternative 3 on the BNSF Railway and Amtrak San Joaquin Line and
23 the Union Pacific Railroad--Tracy Subdivision would be similar to that described for Alternative 1A.
24 Construction would not be likely to disrupt rail service but if the UPRR Tracy Subdivision branch
25 line is reopened prior to construction, the continuity of rail traffic could be managed, if needed,
26 through implementation of Mitigation Measure TRANS-1a, which includes stipulations to coordinate
27 with rail providers to develop alternative interim transportation modes (e.g., trucks or buses) that
28 could be used to provide freight and/or passenger service during any longer term railroad closures
29 and daily construction time windows during which construction is restricted or rail operations
30 would need to be suspended for any activity within railroad rights of way.

31 **CEQA Conclusion:** Construction of Alternative 3 would not physically cross or require modification
32 to an existing or proposed railroad. Rather, the water conveyance will cross the BNSF Railway and
33 Amtrak San Joaquin Line well below grade in a deep bore tunnel. Accordingly, construction would
34 not be likely to disrupt rail service. However, if the UPRR Tracy Subdivision branch line is reopened
35 prior to construction, traffic associated with of the Byron Tract forebay may minimally impact rail
36 service through vehicle crossing. Implementation of Mitigation Measure TRANS-1a would ensure
37 this impact remains less than significant.

38 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 39 **Plan**

40 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

1 **Impact TRANS-6: Disruption of Transit Service during Construction**

2 **NEPA Effects:** The effect of Alternative 3 on operation of the SCT Link/Delta Route, traffic on SR 12,
 3 and Intercity Greyhound bus lines would be similar to that described for Alternative 1A. The effect
 4 of disruption to transit service during construction would be adverse. Although Mitigation Measures
 5 TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not
 6 solely responsible for the timing, nature, or complete funding of required improvements. If an
 7 improvement identified in the mitigation agreement(s) is not fully funded and constructed before
 8 the project's contribution to the effect is made, an adverse effect in the form of disruptions to transit
 9 service would occur. Therefore, this effect would be adverse.

10 **CEQA Conclusion:** Construction activities associated with Alternative 3 would decrease LOS below
 11 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 6 segments
 12 on SR-12 (see Table 19-8). Accordingly, tunnel construction could significantly affect operation of
 13 the SCT Link/Delta Route, and construction of the shaft adjacent to SR 12 would affect traffic on that
 14 facility. To the extent that other roadways affected by Alternative 3 construction also carry
 15 Greyhound bus lines, those routes may be affected as well. Mitigation Measures TRANS-1a through
 16 TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels. Under
 17 Mitigation Measure TRANS-1a, the BDCP proponents would coordinate with transit providers to
 18 develop, to the extent feasible, daily construction time windows during which transit operations
 19 would not be either detoured or significantly slowed, avoiding a substantial disruption of transit
 20 service. Additionally, under Mitigation Measure TRANS-1b, construction traffic would be minimized
 21 around peak periods, to the extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP
 22 proponents would make good faith efforts to enter into mitigation agreements to enhance the
 23 capacity of congested roadway segments, likely reducing associated disruptions to transit service.
 24 However, the BDCP proponents cannot ensure that the improvements will be fully funded or
 25 constructed prior to the project's contribution to the impact. If an improvement identified in the
 26 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
 27 impact is made, a significant impact in the form disruptions to transit service would occur.
 28 Therefore, this impact would be significant and unavoidable. However, such impacts are likely to
 29 occur during the middle of the day because construction traffic would be minimized around peak
 30 periods.

31 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 32 **Plan**

33 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

34 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on** 35 **Congested Roadway Segments**

36 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

37 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation** 38 **Agreements to Enhance Capacity of Congested Roadway Segments**

39 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

1 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

2 **NEPA Effects:** The effect of Alternative 3 on bicycle routes along SR 160/River Road would be less
 3 than that identified for Alternative 1A because of the reduction in the number of intakes. Potential
 4 effects along SR 12 would be the same as Alternative 1A (see Table 19-8). The effect of disruption to
 5 bicycle routes during construction would be adverse. Mitigation Measure TRANS-1a is available to
 6 reduce this effect. Under this measure, BDCP proponents would provide alternate access routes via
 7 detours or bridges to maintain continual circulation for local travelers in and around construction
 8 zones, including bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could
 9 be hazardous to road cycling activity on roadways open to bicycle traffic; provide signage,
 10 barricades, and flag people as necessary to slow or detour traffic around construction sites; and
 11 notify the public, including cycling organizations and bike shops, of construction activities that could
 12 affect transportation. Additionally, another project commitment, as described in Appendix 3B,
 13 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
 14 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
 15 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
 16 bicycle path.

17 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-8) could
 18 temporarily disrupt bicycle routes on SR 160/River Road and potentially on SR 12, resulting in a
 19 significant impact. However, Mitigation Measure TRANS-1a would reduce the severity of this impact
 20 to less-than-significant levels because BDCP proponents would provide alternate access routes via
 21 detours or bridges to maintain continual circulation for local travelers in and around construction
 22 zones, including bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could
 23 be hazardous to road cycling activity on roadways open to bicycle traffic; provide signage,
 24 barricades, and flag people as necessary to slow or detour traffic around construction sites; and
 25 notify the public, including cycling organizations and bike shops, of construction activities that could
 26 affect transportation. Additionally, another project commitment, as described in Appendix 3B,
 27 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
 28 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
 29 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
 30 bicycle path. Because implementation of this mitigation measure and project commitment would
 31 avoid a substantial disruption to bicycle facilities as a result of increased roadway traffic and/or
 32 roadway closures, this impact would be less than significant.

33 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 34 **Plan**

35 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

36 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

37 **NEPA Effects:** The effect of maintaining and operating the facilities on roadway operations under
 38 Alternative 3 would be the same as under Alternative 1A (see Tables 19-14, 19-15, and 19-16) but
 39 slightly less in magnitude because only two intakes would be operated and maintained and fewer
 40 employee trips would be anticipated. Like Alternative 1A, O&M activities would occur along the
 41 entire alternative alignment. Even assuming the higher employment range in Table 19-16, given the
 42 limited number of workers involved and the large number of work sites, it is not anticipated that
 43 routine operations and maintenance activities or major inspections would result in substantial

1 increases of traffic volumes or roadway congestion. The impact of increased traffic volumes and
 2 delays during operations would not be adverse.

3 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
 4 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
 5 activities or major inspections would result in substantial increases of traffic volumes or roadway
 6 congestion. The impact of increased traffic volumes and delays during operations would therefore
 7 be less than significant. No mitigation is required.

8 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and** 9 **Maintenance**

10 **NEPA Effects:** The effects under Alternative 3 would be similar to Alternative 1A but slightly less in
 11 magnitude because only two intakes would be operated and maintained and fewer employee trips
 12 would be anticipated. Impacts on public roadways would be limited to the intake areas and would
 13 not substantially alter traffic patterns. The design and construction of all project components (i.e.,
 14 conveyances, intakes, and forebays) would provide for on-going continuity of all rail operations
 15 following completion of construction. Impediments to boat traffic associated with the intakes would
 16 continue for the life of the project, but would not substantially impact boat passage or usage. The
 17 impact of permanent alteration of transportation patterns during operations would not be adverse.

18 **CEQA Conclusion:** The impact of maintaining and operating the project under Alternative 3 would
 19 be similar to Alternative 1A. Impacts on public roadways would be limited to the intake areas and
 20 would not substantially alter traffic patterns. The design and construction of all project components
 21 (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all rail operations
 22 following completion of construction. Impediments to boat traffic associated with the intakes would
 23 continue for the life of the project, but would not substantially impact boat passage or usage.
 24 Accordingly, the impact of permanent alteration of transportation patterns during operations would
 25 be less than significant. No mitigation is required.

26 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

27 **NEPA Effects:** At the program-level of analysis, the impact under Alternative 3 would be the same as
 28 Alternative 1A because the acreage of conservation is identical. Impacts on roadways could result in
 29 circulation delays or the inability to maintain adequate vehicular access in or around restoration or
 30 enhancement work zones. Roads and highways in and around Suisun Marsh and the Yolo Bypass
 31 could experience increases in traffic volumes, resulting in localized congestion and conflicts with
 32 local traffic. These roadways could function as haul routes or to bring construction personnel to the
 33 work sites. Maintenance and monitoring of the restoration areas would also generate some vehicle
 34 trips. The effect of increased traffic volumes during implementation of CM2–CM22 would be
 35 adverse. Although TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP
 36 proponents are not solely responsible for the timing, nature, or complete funding of required
 37 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
 38 constructed before the project's contribution to the effect is made, an adverse effect would occur.
 39 Therefore, this effect would be adverse. Increased traffic volumes during implementation of CM2–
 40 CM22 If, however, all improvements required to avoid adverse effects prove to be feasible and any
 41 necessary agreements are completed before the project's contribution to the effect is made, effects
 42 would not be adverse.

1 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
 2 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
 3 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
 4 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
 5 function as haul routes or to bring construction personnel to the work sites. Maintenance and
 6 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
 7 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
 8 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
 9 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 10 constructed prior to the project’s contribution to the impact. If an improvement identified in the
 11 mitigation agreement(s) is not fully funded and constructed before the project’s contribution to the
 12 impact is made, a significant impact would occur. Therefore, the project’s impacts to roadway
 13 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
 14 required to avoid significant impacts prove to be feasible and any necessary agreements are
 15 completed before the project’s contribution to the effect is made, impacts would be less than
 16 significant.

17 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 18 **Plan**

19 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

20 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 21 **Congested Roadway Segments**

22 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

23 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 24 **Agreements to Enhance Capacity of Congested Roadway Segments**

25 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

26 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 27 **Conservation Measures with Plans and Policies**

28 **NEPA Effects:** The potential for inconsistencies with plans or polices would be similar to the
 29 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 3
 30 would be compatible with applicable plans and policies related to transportation and circulation.

31 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
 32 and no additional CEQA conclusion is required related to the consistency of the alternative with
 33 relevant plans and polices. The relationship between plans, policies, and regulations and impacts on
 34 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

19.3.3.9 Alternative 4—Dual Conveyance with Modified Pipeline/Tunnel and Intakes 2, 3, and 5 (9,000 cfs; Operational Scenario H)

A total of three intakes would be constructed under Alternative 4. For the purposes of this analysis, Alternative 4 was assumed to include Intakes 2, 3, and 5. This alternative would also include an intermediate forebay, and the conveyance facility would be a buried pipeline (see Figures 3-9 and 3-10 in Chapter 3, *Description of Alternatives*).

Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS Conditions

NEPA Effects: As shown in Table 19-25, under BPBG conditions, a total of 23 roadway segments would exceed LOS for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. As also shown in Table 19-25, construction associated with Alternative 4 would cause LOS thresholds to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM analysis period on a total of 36 roadway segments under BPBGPP conditions (see entries in **bold** type). Alternative 4 would therefore exacerbate an already unacceptable LOS under BPBG conditions on **13** roadway segments (36 minus the 23 that would already be operating at an unacceptable LOS under BPBG conditions). Figure 19-3b shows the study roadway segments that could experience substantial roadway operation (LOS) impacts.

The decrease in LOS below applicable thresholds during construction would be adverse at the locations identified in Table 19-25 because construction associated with Alternative 4 would cause LOS thresholds to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. Alternative 4 would also exacerbate an already unacceptable LOS under BPBG conditions at 13 roadway segments (36 minus the 23 that would already be operating at an unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur throughout the study area, the highest concentration of roadway segments below applicable LOS threshold occurs on state roadways, including SR-12, I-80, SR-4, I-5, and I-205. Standards will also be exceeded on several local roadways, include all segments studied in West Sacramento. Minor delays and congestion may also be created during temporary realignment of Byron Highway/South Pacific Railroad, which is needed to construct the siphon connecting the new approach canal and Jones PP approach canal.

Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively, these measures include requirements to avoid or reduce circulation effects, notify the public of construction activities, provide alternate access routes, require direct haulers to pull over in the event of an emergency, limit/prohibit the amount of construction activity on congested roadways, and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete funding of required improvements. If an improvement that is identified in any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed before the project's contribution to the effect is made, an adverse effect in the form of unacceptable LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to avoid adverse effects prove to be feasible and any necessary agreements are completed before the project's contribution to the effect is made, effects would not be adverse.

1 Table 19-25. Level of Service for Modified Pipeline/Tunnel Alternative 4

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------|--|------------------------------------|------------------------------------|---------------|----------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| ALA 01 | Byron Hwy | Contra Costa Co./ Alameda Co. Line | Alameda Co./San Joaquin Co. Line | D | 1,600 | 385 to 656 | - | 477 to 813 | - | 1,057 to 1,393 | - |
| BRE 01 | Brentwood Blvd (old SR 4) ¹ | Delta Rd (Oakley City Limits) | Balfour Rd | C | 970 | 586 to 1,516 | 11 (7-9AM; 10AM-7PM) | - | - | - | - |
| | | | | D | 1,760 | - | - | 598 to 1,547 | - | 1,178 to 2,127 | 9 (8-9AM; 11-7PM) |
| BRE 02 | Brentwood Blvd (old SR 4) ¹ | Balfour Rd | Brentwood City Limits (South) | C | 1,920 | 369 to 1,013 | - | - | - | - | - |
| | | | | D | 3,540 | - | - | 301 to 825 | - | 881 to 1,405 | - |
| BRE 03 | Balfour Rd | Brentwood Blvd (Old SR 4) | Brentwood City Limits | D | 3,540 | 437 to 1,300 | - | 533 to 1,586 | - | 885 to 1,938 | - |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | D | 1,600 | 124 to 330 | - | 124 to 330 | - | 124 to 330 | - |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | D | 1,600 | 90 to 297 | - | 90 to 297 | - | 90 to 297 | - |
| CC 03 | Old SR 4 ¹ | Brentwood City Limits (South) | Marsh Creek Rd | C | 790 | 1,133 to 1,682 | 13 (6AM-7PM) | - | - | - | - |
| | | | | D | 1,600 | - | - | 1,320 to 1,959 | 4 (7-8AM; 3-6PM) | 1,900 to 2,539 | 13 (6AM-7PM) |
| CC 04 | Byron Hwy | Delta Rd | Old SR 4 | D | 1,410 | 108 to 240 | - | 108 to 240 | - | 108 to 240 | - |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./ Alameda Co. Line | D | 1,600 | 483 to 907 | - | 599 to 1,125 | - | 1,179 to 1,705 | 3 (8-9AM; 3-4PM; 5-6PM) |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | F | 6,060 | 2,589 to 5,820 | - | 2,987 to 6,714 | 1 (7-8AM) | 3,364 to 7,091 | 1 (7-8AM) |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | F | 6,060 | 1,647 to 5,705 | - | 1,870 to 6,479 | 2 (4-6PM) | 2,247 to 6,856 | 2 (4-6PM) |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | F | 6,060 | 2,359 to 5,156 | - | 2,359 to 5,156 | - | 2,359 to 5,156 | - |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | F | 6,060 | 1,543 to 5,243 | - | 1,543 to 5,243 | - | 1,543 to 5,243 | - |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | F | 4,010 | 1,820 to | - | 1,820 to | - | 1,820 to | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|-------|---------|------------------|------------------|---------------|----------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| | | | | | | 3,339 | | 3,339 | | 3,339 | |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | F | 4,010 | 1,254 to 3,332 | - | 1,254 to 3,332 | - | 1,254 to 3,332 | - |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | F | 4,010 | 1,504 to 2,162 | - | 1,751 to 2,517 | - | 2,210 to 2,976 | - |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | F | 4,010 | 1,217 to 2,236 | - | 1,425 to 2,619 | - | 1,884 to 3,078 | - |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | F | 4,010 | 1,414 to 1,851 | - | 1,644 to 2,152 | - | 2,021 to 2,529 | - |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | F | 4,010 | 1,207 to 1,964 | - | 1,405 to 2,285 | - | 1,782 to 2,662 | - |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | C | 2,880 | 1,312 to 1,720 | - | 1,561 to 2,047 | - | 2,020 to 2,506 | - |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | C | 2,880 | 1,111 to 1,813 | - | 1,322 to 2,158 | - | 1,781 to 2,617 | - |
| CT 13 | I-5 NB | Walnut Grove Rd | Peltier Rd | C | 2,880 | 1,374 to 1,803 | - | 1,704 to 2,236 | - | 1,812 to 2,344 | - |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | C | 2,880 | 1,128 to 1,894 | - | 1,399 to 2,349 | - | 1,507 to 2,457 | - |
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | C | 2,880 | 1,421 to 1,885 | - | 1,421 to 1,885 | - | 1,421 to 1,885 | - |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | C | 2,880 | 1,145 to 1,974 | - | 1,145 to 1,974 | - | 1,145 to 1,974 | - |
| CT 17 | I-5 NB | Turner Rd | SR 12 | C | 2,880 | 1,288 to 1,985 | - | 1,623 to 2,501 | - | 1,664 to 2,542 | - |
| CT 18 | I-5 SB | Turner Rd | SR 12 | C | 2,880 | 1,124 to 1,482 | - | 1,416 to 1,867 | - | 1,457 to 1,908 | - |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | C | 4,400 | 1,533 to 2,267 | - | 1,870 to 2,766 | - | 1,911 to 2,807 | - |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | C | 4,400 | 1,243 to 2,070 | - | 1,516 to 2,525 | - | 1,557 to 2,566 | - |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | D | 5,410 | 1,937 to 3,452 | - | 1,937 to 3,452 | - | 1,937 to 3,452 | - |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | D | 5,410 | 1,817 to 2,760 | - | 1,817 to 2,760 | - | 1,817 to 2,760 | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------------|----------------------------------|-----------------------------|--------------------------|---------------|----------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | E | 1,740 | 136 to 476 | - | 153 to 536 | - | 906 to 1,289 | - |
| CT 24 | SR 160 (Freeport Blvd/ River Rd) | Freeport Bridge | Scribner Rd | E | 1,740 | 94 to 180 | - | 94 to 180 | - | 847 to 933 | - |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | E | 1,740 | 41 to 125 | - | 41 to 125 | - | 794 to 878 | - |
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | E | 1,740 | 105 to 170 | - | 124 to 201 | - | 1,042 to 1,119 | - |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | E | 1,740 | 69 to 122 | - | 77 to 136 | - | 995 to 1,054 | - |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | E | 1,740 | 75 to 150 | - | 81 to 163 | - | 999 to 1,081 | - |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | E | 1,740 | 78 to 128 | - | 97 to 161 | - | 1,015 to 1,079 | - |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | E | 1,740 | 173 to 465 | - | 173 to 465 | - | 1,091 to 1,383 | - |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | E | 1,740 | 193 to 378 | - | 193 to 378 | - | 1,111 to 1,296 | - |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | F | 1,740 | 530 to 894 | - | 578 to 975 | - | 1,658 to 2,055 | 9 (6-10AM; 2-7PM) |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | B | 200 | 40 to 169 | - | 46 to 194 | - | 626 to 774 | 13 (6AM-7PM) |
| CT 34 | SR 84 (Courtland Rd/ Ryer Ave) | Courtland Rd | Cache Slough Ferry | C | 680 | 10 to 25 | - | 10 to 25 | - | 10 to 25 | - |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | C | 8,350 | 3,079 to 6,994 | - | 3,880 to 8,812 | 3 (3-6PM) | 4,421 to 9,353 | 3 (3-6PM) |

| ID | Segment | From | To | LOS | LOS Threshold | Baseline Plus Background | | | | | |
|-------|-----------------------------|-------------------------------------|-------------------------------------|-----|------------------|--|--|--|--|--|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| CT 36 | I-80 WB | Suisun Valley Rd | SR 12 | C | 8,350 | 5,751 to 8,892 | 2 (6-8AM) | 7,246 to 11,204 | 6 (6-9AM; 3- 6PM) | 7,787 to 11,745 | 9 (6-10AM; 1- 6PM) |
| CT 37 | SR 12 EB | I-80 | Beck Ave | C | 2,880 | 528 to 1,847 | - | 676 to 2,364 | - | 1,217 to 2,905 | 2 (5-7PM) |
| CT 38 | SR 12 WB | I-80 | Beck Ave | C | 2,880 | 829 to 1,625 | - | 1,061 to 2,080 | - | 1,602 to 2,621 | - |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/ Grizzly Island Rd | C | 5,060 | 2,408 to 3,573 | - | 3,046 to 4,519 | - | 4,086 to 5,559 | 3 (3-6PM) |
| CT 40 | SR 12 | Sunset Ave/ Grizzly Island Rd | Walters Rd/ Lawler Ranch Pkwy | C | 5,060 | 1,607 to 2,353 | - | 2,057 to 3,012 | - | 3,097 to 4,052 | - |
| CT 41 | SR 12 | Walters Rd/ Lawler Ranch Pkwy | SR 113 | C | 790 | 627 to 1,075 | 10 (6-8AM; 9- 1PM; 2- 6PM) | 803 to 1,376 | 13 (6AM-7PM) | 1,843 to 2,416 | 13 (6AM-7PM) |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | C | 790 | 1,073 to 1,544 | 13 (6AM- 7PM) | 1,373 to 1,976 | 13 (6AM-7PM) | 2,413 to 3,016 | 13 (6AM-7PM) |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | C | 970 | 1,135 to 1,685 | 13 (6AM- 7PM) | 1,453 to 2,157 | 13 (6AM-7PM) | 2,493 to 3,197 | 13 (6AM-7PM) |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./ SJ Co. Line | C | 790 | 704 to 1,030 | 12 (6AM- 6PM) | 845 to 1,236 | 13 (6AM-7PM) | 926 to 1,317 | 13 (6AM-7PM) |
| CT 45 | SR 12 | Sacramento Co./ SJ Co. Line | I-5 | C | 790 | 773 to 1,164 | 12 (6AM- 6PM) | 840 to 1,264 | 13 (6AM-7PM) | 921 to 1,345 | 13 (6AM-7PM) |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | C | 4,400 | 2,508 to 4,632 | 2 (3-5PM) | 3,108 to 5,741 | 6 (7-9AM; 2- 6PM) | 3,398 to 6,031 | 7 (7-9AM; 1- 6PM) |
| CT 47 | I-80 WB | SR 113 | Pedrick Rd | C | 4,400 | 3,068 to 4,191 | - | 3,563 to 4,867 | 4 (7-8AM; 3- 6PM) | 3,853 to 5,157 | 6 (6-9AM; 3- 6PM) |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|-------|------------------------------------|---------------------|----------------------|---------------|----------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| CT 48 | SR 113 | I-80 | Dixon City Limits | C | 1,920 | 569 to 1,341 | - | 569 to 1,341 | - | 1,149 to 1,921 | 1 (5-6PM) |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | C | 680 | 174 to 294 | - | 216 to 365 | - | 796 to 945 | 13 (6AM-7PM) |
| CT 50 | SR 4 (Marsh Creek Rd) ² | Vasco Rd | Byron Hwy (Old SR 4) | D | 1,600 | 442 to 733 | - | - | - | - | - |
| | | | | C | 790 | - | - | 548 to 909 | 2 (4-6PM) | 1,128 to 1,489 | 13 (6AM-7PM) |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | D | 1,600 | 554 to 1,224 | - | 654 to 1,445 | - | 1,234 to 2,025 | 11 (8AM-7PM) |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | C | 790 | 412 to 746 | - | 412 to 746 | - | 992 to 1,326 | 13 (6AM-7PM) |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | D | 1,410 | 867 to 1,492 | 1 (4-5PM) | 867 to 1,492 | 1 (4-5PM) | 1,447 to 2,072 | 13 (6AM-7PM) |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | D | 7,280 | 2,552 to 4,815 | - | 3,201 to 6,039 | - | 3,781 to 6,619 | - |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | D | 7,280 | 4,550 to 5,913 | - | 5,747 to 7,468 | 2 (7-8AM; 5-6PM) | 6,327 to 8,048 | 5 (7-8AM; 2-6PM) |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | D | 5,410 | 2,430 to 4,586 | - | 3,159 to 5,962 | 3 (3-6PM) | 3,739 to 6,542 | 4 (2-6PM) |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | D | 5,410 | 4,333 to 5,631 | 3 (7-8AM; 4-6PM) | 5,633 to 7,320 | 13 (6AM-7PM) | 6,213 to 7,900 | 13 (6AM-7PM) |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | C | 4,400 | 1,350 to 5,071 | 4 (3-7PM) | 1,629 to 6,118 | 5 (2-7PM) | 1,919 to 6,408 | 5 (2-7PM) |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | C | 4,400 | 1,873 to 4,867 | 2 (6-8AM) | 2,270 to 5,898 | 3 (6-9AM) | 2,560 to 6,188 | 3 (6-9AM) |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | C | 4,400 | 1,431 to 5,068 | 4 (3-7PM) | 1,803 to 6,386 | 5 (2-7PM) | 2,093 to 6,676 | 5 (2-7PM) |
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | C | 4,400 | 1,875 to 4,117 | - | 2,363 to 5,187 | 2 (6-8AM) | 2,653 to 5,477 | 3 (6-9AM) |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | D | 5,410 | 1,525 to 4,200 | - | 1,769 to 4,872 | - | 1,833 to 4,936 | - |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | D | 5,410 | 1,852 to | - | 2,148 to | - | 2,212 to | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------|-------------------------------------|------------------------|-------------------------------|---------------|----------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| | | | | | | 3,079 | | 3,572 | | 3,636 | |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | D | 5,410 | 1,511 to 4,182 | - | 1,753 to 4,851 | - | 1,817 to 4,915 | - |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | D | 5,410 | 2,083 to 3,446 | - | 2,416 to 3,997 | - | 2,480 to 4,061 | - |
| ISL 01 | A St/4th St/Jackson Blvd. | SR 160 | Isleton City Limits | D | 1,410 | 17 to 75 | - | 17 to 75 | - | 17 to 75 | - |
| OAK 01 | Main Street (Old SR 4) ¹ | SR 160 | Cypress Rd | C | 1,920 | 752 to 1,663 | - | - | - | - | - |
| | | | | D | 3,540 | - | - | 882 to 1,951 | - | 1,462 to 2,531 | - |
| OAK 02 | Main Street (Old SR 4) ¹ | Cypress Rd | Delta Rd (Oakley City Limits) | C | 970 | 722 to 1,335 | 10 (7-9AM; 11AM-7PM) | - | - | - | - |
| | | | | D | 1,760 | - | - | 939 to 1,736 | - | 1,519 to 2,316 | 11 (7-9AM; 10AM-7PM) |
| OAK 03 | Cypress Rd | Main Street (Old SR 4) | Bethel Island Rd | D | 1,600 | 304 to 764 | - | 304 to 764 | - | 304 to 764 | - |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | D | 1,410 | 140 to 367 | - | 140 to 367 | - | 140 to 367 | - |
| OAK 05 | Delta Rd | Main Street (Old SR 4) | Byron Hwy | D | 1,410 | 155 to 334 | - | 155 to 334 | - | 155 to 334 | - |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | D | 3,540 | 789 to 2,191 | - | 789 to 2,191 | - | 1,542 to 2,944 | - |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | D | 1,760 | 152 to 492 | - | 176 to 571 | - | 929 to 1,324 | - |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | D | 1,410 | 98 to 346 | - | 98 to 346 | - | 98 to 346 | - |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | D | 1,410 | 77 to 137 | - | 84 to 150 | - | 1,002 to 1,068 | - |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | D | 1,410 | 10 to 29 | - | 12 to 34 | - | 930 to 952 | - |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | D | 1,410 | 19 to 38 | - | 20 to 40 | - | 938 to 958 | - |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | D | 1,410 | 41 to 71 | - | 42 to 72 | - | 960 to 990 | - |
| SC 06 | Twin Cities Rd | River Rd | I-5 | D | 1,410 | 130 to 248 | - | 134 to 255 | - | 512 to 633 | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------------|--------------------------------|---|-------------------------------------|---------------|----------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | D | 1,410 | 141 to 318 | - | 141 to 318 | - | 141 to 318 | - |
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./ Yolo Co. Line | Paintersville Bridge | D | 1,410 | 51 to 113 | - | 63 to 140 | - | 643 to 720 | - |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | D | 1,410 | 85 to 134 | - | 85 to 134 | - | 85 to 134 | - |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | D | 1,600 | 223 to 365 | - | 230 to 377 | - | 608 to 755 | - |
| SC 11 | Walnut Grove Rd/ River Rd | Walnut Grove Bridge | Sacramento Co./ SJ Co. Line | D | 1,410 | 175 to 332 | - | 185 to 351 | - | 401 to 567 | - |
| SC 12 | Isleton Rd | River Rd (Walnut Grove)/Isleton Rd Bridge | 1.5 miles west of Isleton Rd Bridge | D | 1,410 | 61 to 283 | - | 61 to 283 | - | 61 to 283 | - |
| SC 13 | Race Track Rd/ Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | D | 1,410 | 17 to 34 | - | 17 to 34 | - | 17 to 34 | - |
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | D | 1,410 | 14 to 39 | - | 14 to 39 | - | 14 to 39 | - |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | D | 1,410 | 4 to 53 | - | 4 to 53 | - | 4 to 53 | - |
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | D | 1,410 | 16 to 52 | - | 16 to 52 | - | 16 to 52 | - |
| SJ 01 | Walnut Grove Rd | Sacramento Co./ SJ Co. Line | I-5 | C | 790 | 141 to 232 | - | 149 to 245 | - | 365 to 461 | - |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | C | 680 | 8 to 23 | - | 8 to 23 | - | 8 to 23 | - |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | C | 790 | 108 to 209 | - | 108 to 209 | - | 460 to 561 | - |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | C | 790 | 69 to 171 | - | 84 to 209 | - | 436 to 561 | - |
| SJ 05 | Byron Hwy | Alameda Co./San Joaquin Co. Line | Mountain House Pkwy | D | 1,600 | 521 to 824 | - | 646 to 1,022 | - | 1,226 to 1,602 | 1 (7-8AM) |
| SJ 06 | Mountain House Pkwy | Byron Hwy | Arnaudo Blvd | D | 1,410 | 190 to 298 | - | 236 to 370 | - | 816 to 950 | - |
| SJ 07 | Mountain House Pkwy | Arnaudo Blvd | I-205 | D | 3,540 | 418 to 769 | - | 543 to 1,000 | - | 1,123 to 1,580 | - |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | E | 1,870 | 309 to 769 | - | 309 to 769 | - | 309 to 769 | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------------|--|-----------------------------|------------------------------------|---------------|----------------------|----------------------------------|--|----------------------------------|--|----------------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold | Hourly Volume Range (6AM to 7PM) | Hours Operating Worse Than LOS Threshold |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | E | 1,870 | 309 to 759 | - | 377 to 926 | - | 729 to 1,278 | - |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | D | 3,540 | 1,140 to 2,317 | - | 1,374 to 2,793 | - | 1,954 to 3,373 | - |
| WS 02 | Industrial Blvd/ Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | C | 1,920 | 773 to 1,858 | - | 959 to 2,304 | 2 (7-8AM; 5-6PM) | 1,539 to 2,884 | 9 (7-9AM; 12-7PM) |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | C | 1,920 | 546 to 1,718 | - | 665 to 2,094 | 1 (5-6PM) | 1,245 to 2,674 | 6 (7-9AM; 3-7PM) |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | C | 680 | 42 to 146 | - | 50 to 174 | - | 630 to 754 | 6 (7-9AM; 2-6PM) |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | C | 680 | 74 to 249 | - | 74 to 249 | - | 74 to 249 | - |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./ Yolo Co. Line | C | 680 | 25 to 63 | - | 31 to 78 | - | 611 to 658 | - |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | C | 680 | 28 to 77 | - | 35 to 95 | - | 615 to 675 | - |

Source: Appendix 19A, Bay Delta Conservation Plan Construction Traffic Impact Analysis

* Segment IDs correspond to the segment IDs mapped on Figures 19-2a through 19-2c.

Notes:

- ¹ Facility is analyzed as a Caltrans facility under Baseline Conditions and a local facility under Baseline Plus Construction Conditions – roadway is relinquished to local jurisdiction after Baseline Year (2009). LOS Threshold is LOS C under Baseline Conditions and changes to LOS D under Baseline Plus Construction Conditions.
- ² Facility is analyzed as a local facility under Baseline Conditions and a Caltrans facility under Baseline Plus Construction Conditions – roadway is adopted as a State facility after Baseline Year (2009). LOS Threshold is LOS D under Baseline Conditions and changes to LOS C under Baseline Plus Construction Conditions.
- ³ Modified pipeline/tunnel (Alternative 4) construction traffic estimates for construction of the pipelines, intermediate Forebay, intermediate outlet are based on construction features shared with the pipeline/tunnel alternatives. This analysis does not reflect potential reductions in construction traffic associated with the modified pipeline/tunnel for these features due to differences in the scale of construction activity. Traffic volumes for all other construction features (e.g., intakes, pumping plants) are based on estimates specific to the modified pipeline/tunnel alignment.

1 **CEQA Conclusion:** Construction under Alternative 4 would add hourly traffic volumes to study area
 2 roadways that would exceed acceptable LOS threshold (Table 19-25). As shown in Table 19-25, traffic
 3 volumes during construction of Alternative 4 would exacerbate already unacceptable LOS under BPCG
 4 conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-1a through
 5 TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels. The BDCP
 6 proponents cannot ensure that the improvements will be fully funded or constructed prior to the project's
 7 contribution to the impact. If an improvement identified in the mitigation agreement(s) contemplated by
 8 Mitigation Measure TRANS-1c is not fully funded and constructed before the project's contribution to the
 9 impact is made, a significant impact in the form of unacceptable LOS would occur. Accordingly, this impact
 10 would be significant and unavoidable. If, however, all improvements required to avoid significant impacts
 11 prove to be feasible and any necessary agreements are completed before the project's contribution to the
 12 effect is made, impacts would be less than significant.

13 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management Plan**

14 Prior to construction, the BDCP proponents will be responsible for project management and may
 15 contract with one or more construction management firms to assist in ensuring that construction
 16 contractors' crews and schedules are coordinated and that the plans and specifications are being
 17 followed. The BDCP proponents will also ensure development of site-specific construction traffic
 18 management plans (TMPs) that address the specific steps to be taken before, during, and after
 19 construction to minimize traffic impacts, including the mitigation measures and environmental
 20 commitments identified in this EIR/EIS. This will include potential expansion of the study area
 21 identified in this EIR/EIS to capture all potentially significantly affected roadway segments.

22 The BDCP proponents will be responsible for developing the TMPs in coordination with the
 23 applicable jurisdictions, including Caltrans for state and federal facilities and local agencies for
 24 local roads, transit providers, rail operators, and commercial barge operators, the U.S. Coast
 25 Guard, boating organizations, marinas, city and county parks departments, and the California
 26 Department of Parks and Recreation (DPR), where applicable. The BDCP proponents will also
 27 ensure that the TMPs are implemented prior to beginning construction at a site, including in-
 28 water construction sites. If necessary to minimize unexpected operational impacts or delays
 29 experienced during real-time construction, the BDCP proponents will also be responsible for
 30 modifying the traffic management plan to reduce these effects.

31 Each TMP will address the following, as needed. Implementation of this measure will ensure
 32 operational traffic impacts and delays experienced during construction will be minimized to the
 33 greatest extent feasible.

- 34 ● Signage warning of roadway surface conditions such as loose gravel, steel plates or similar
 35 conditions that could be hazardous to road cycling activity on roadways open to bicycle traffic.
- 36 ● Signage and barricades to be used around the work sites.
- 37 ● In-water work areas will be indicated by buoys, signage, or other effective means to warn
 38 boaters of their presence and restrict access. Warning devices and signage (e.g., "boats keep
 39 out" or "no wake zone" labeled buoys) will be in compliance with the U.S. Coast Guard Private
 40 Aid to Navigation requirements (U.S. Coast Guard 2012) and effective during non-daylight
 41 hours and periods of dense fog.
- 42 ● Use of flag people or temporary traffic signals/signage as necessary to slow or detour traffic.

- 1 ● Notifications for the public, emergency providers, cycling organizations, bike shops, and
2 schools, the U.S. Coast Guard, boating organizations, marinas, city and county parks
3 departments, and DPR, where applicable, describing construction activities that could affect
4 transportation and water navigation.
- 5 ● Outreach (via public meetings and/or flyers and other advertisements)
- 6 ● Procedures for construction area evacuation in the case of an emergency declared by county
7 or other local authorities.
- 8 ● Alternate access routes via detours and bridges to maintain continual circulation for local
9 travelers in and around construction zones, including bicycle riders, pedestrians, and boaters,
10 where applicable.
- 11 ● Description of construction staging areas, material delivery routes, and specification of
12 construction vehicle travel hour limits.
- 13 ● Notifications to commercial and leisure boating community of proposed barge operations in
14 the waterways, including posting notices at Delta marinas and public launch ramps. This
15 information will provide details regarding construction site location(s), construction
16 schedules, and identification of no-wake zone, speed restricted zones, and/or detours, where
17 applicable.
- 18 ● No-wake zone and speed-restrictions will be established as part of development of the site-
19 specific plans and will be determined to protect the safety of construction workers and
20 recreationists.
- 21 ● Designation of areas where nighttime construction will occur.
- 22 ● Plans to relocate school bus drop-off and pick-up locations if they will be affected during
23 construction.
- 24 ● Scheduling for oversized material deliveries to the work site and haul routes.
- 25 ● Provisions that direct haulers are to pull over in the event of an emergency. If an emergency
26 vehicle is approaching on a narrow two-way roadway, specify measures to ensure that
27 appropriate maneuvers will be conducted by the construction vehicles to allow continual
28 access for the emergency vehicles at the time of an emergency.
- 29 ● Control for any temporary road closure, detour, or other disruption to traffic circulation,
30 including any temporary partial water channel closures.
- 31 ● Designated offsite vehicle staging and parking areas.
- 32 ● Posted information for contact in case of emergency or complaint.
- 33 ● Daily construction time windows during which construction is restricted or rail operations
34 would need to be suspended for any activity within railroad rights of way.
- 35 ● Coordination with rail providers (BNSF Railway, Amtrak, and UPRR) to develop alternative
36 interim transportation modes (e.g., trucks or buses) that could be used to provide freight
37 and/or passenger service during any longer term railroad closures.
- 38 ● Coordination with transit providers (SCT, Tri-Delta, Rio Vista, and Greyhound Bus Lines) to
39 develop daily construction time windows during which transit operations would not be either
40 detoured or significantly slowed.

- 1 • Routinely post information to the 511.org website regarding construction delays and detours.
- 2 • Other actions to be identified and developed as may be needed by the construction manager/
3 resident engineer to ensure that temporary impacts on transportation facilities are minimized.

4 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
5 **Congested Roadway Segments**

6 Where feasible, limit construction activity to fit within available reserve capacity or shift
7 construction activity to hours with more reserve capacity so as to achieve acceptable LOS
8 conditions (see Table 19-7). The BDCP proponents will include in the bid specifications a
9 requirement that the contractor submit a proposal for a process for determining when the hours
10 of construction can feasibly be limited to avoid operational deficiencies on identified roadway
11 segments as specified in Table 19-9.

12 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation Agreements**
13 **to Enhance Capacity of Congested Roadway Segments**

14 Prior to commencement of construction activities substantially affecting transportation facilities, the
15 BDCP proponents will make a good faith effort to enter into mitigation agreements with affected
16 state, regional, or local agencies (“affected agencies”) to verify the location, extent, timing, and fair
17 share cost to be paid for capacity enhancements to the identified roadway segments specified in
18 Table 19-9.

19 Implementation of this measure is intended to provide funding from BDCP proponents sufficient
20 to provide their fair share of the cost of capacity expansion so that traffic operating conditions (i.e.,
21 LOS) on study area roadways do not operate at a level of service or delay that is worse than the
22 pre-project conditions (to the extent feasible in light of costs, logistics, and other factors). The
23 BDCP proponents will include in the bid specifications requirements that the contractor(s) ensure
24 that all enhancements are conducted in compliance with applicable standards of affected agencies
25 and with any applicable mitigation agreements, as described below.

26 In attempting in good faith to enter into mitigation agreements with affected agencies, BDCP
27 proponents shall be guided by the following principles. The BDCP proponents shall be responsible
28 for their fair share costs of all feasible capacity-expanding physical improvements jointly
29 determined by BDCP proponents and the affected agencies to be necessary, feasible, and available
30 to reduce the severity of the BDCP’s significant construction-related transportation impacts. Fair
31 share calculations shall account not only for traffic levels as they existed at the time of the public
32 release of the BDCP Draft EIR/EIS, but also for “background growth” between that time frame and
33 the commencement of BDCP construction activities, as well as any probable future projects in the
34 affected agency or neighboring agencies that will likely contribute to the need for, and directly
35 benefit from, increased capacity.

36 The BDCP proponents’ contribution toward such improvements may take any, or some
37 combination, of the following forms:

- 38 1) Construction of improvements, which may be subject to fee credits and/or reimbursement,
39 coordinated by the affected agency, from other fee-paying development projects if available with
40 respect to improvements that would also benefit such fee-paying development projects;

- 1 2) The payment of impact fees to the affected agency in amounts that constitute the BDCP
2 proponents' fair share contributions to the construction of the required improvements,
3 consistent with the affected agency's Capital Improvement Program ("CIP") or other funding
4 program that meets the definition of a "reasonable plan for mitigation" under CEQA case law
5 (i.e., a plan that ensures that (i) the fees collected from the BDCP proponents will be used for
6 their intended purposes, and (ii) the improvements will actually be built within a reasonable
7 period of time);
- 8 3) The payment of adopted regional impact fees that would provide funding for transportation
9 facilities that are affected by multiple agencies, except where the BDCP proponents' payments of
10 other fees or construction of improvements within the affected agency will create credit against
11 the payment of regional impact fees;
- 12 4) The payment of impact fees to the affected agency in amounts that constitute the BDCP
13 proponents' fair share contributions to the construction of improvements within other agencies
14 and not the affected agency, which payments to the affected agency and transmittal of fees to
15 other agency would occur through one or more enforceable agreements, provided that for each
16 required improvement there is a reasonable plan for mitigation that ensures that (i) the fees
17 collected from the BDCP proponents will be used for their intended purposes, and (ii) the
18 improvements will actually be built within a reasonable period of time; and/or
- 19 5) The payment of impact fees to the California Department of Transportation ("Caltrans") in
20 amounts that constitute the BDCP proponents' fair share contributions to the construction of
21 improvements on federal or state highways or freeways needed in part because of the BDCP, to
22 be made available to Caltrans if and when Caltrans, DWR, and any other the affected agency
23 enter into an enforceable agreement consistent with state law, provided that, for each required
24 improvement, Caltrans has a reasonable mitigation plan that ensures that (i) the fees collected
25 from the BDCP proponents will be used for their intended purposes, and (ii) the improvements
26 will actually be built within a reasonable period of time.

27 In order to obtain the most fair, accurate, and up-to-date calculations of the BDCP proponents' fair
28 share of the costs of required improvements, the agreement(s) reached between BDCP
29 proponents and the affected agency or agencies shall also provide for the following: (i) that the
30 traffic models to be used be operated by transportation consultant mutually acceptable to both
31 BDCP proponents and the affected agency or agencies; and (ii) that the calculations account for (A)
32 newly approved projects cumulatively that contribute to transportation-related impacts and that
33 therefore should contribute to the funding of necessary improvements, and (B) up-to-date cost
34 calculations for the construction of needed improvements based on recent changes in the costs of
35 materials, labor, and other inputs.

36 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement** 37 **Conditions**

38 **NEPA Effects:** As shown in Table 19-26, construction of Alternative 4 would contribute to further
39 deterioration of the existing pavement condition, to less than the acceptable PCI or similar applicable
40 threshold (see Table 19-7), on a total of **42** roadway segments. Damage to roadway pavement is
41 expected throughout the study area (Figure 19-4b) on various local and state roads, as well as on a
42 few interstates.

1 **Table 19-26. Pavement Conditions for Modified Pipeline/Tunnel Alternative 4**

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPBGPP Conditions | |
|--------------|---------------------------|--------------------------------------|--|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| ALA 01 | Byron Hwy | Contra Costa Co./Alameda Co. Line | Alameda Co./San Joaquin Co. Line | Acceptable | Yes | No |
| BRE 01 | Brentwood Blvd (old SR 4) | Delta Rd (Oakley City Limits) | Balfour Rd | Acceptable | Yes | No |
| BRE 02 | Brentwood Blvd (old SR 4) | Balfour Rd | Brentwood City Limits (South) | Acceptable | Yes | No |
| BRE 03 | Balfour Rd | Brentwood Blvd (Old SR 4) | Brentwood City Limits | Acceptable | Yes | No |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | Deficient | No | No |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | Deficient | No | No |
| CC 03 | Old SR 4 | Brentwood City Limits (South) | Marsh Creek Rd | Deficient | Yes | Yes |
| CC 04 | Byron Hwy | Delta Rd | Old SR 4 | Acceptable | No | No |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./Alameda Co. Line | Deficient | Yes | Yes |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | Deficient | Yes | Yes |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | Deficient | Yes | Yes |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | Deficient | No | No |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | Deficient | No | No |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | Deficient | No | No |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | Deficient | No | No |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | Acceptable | Yes | No |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | Acceptable | Yes | No |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | Deficient | Yes | Yes |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | Deficient | Yes | Yes |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | Deficient | Yes | Yes |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | Acceptable | Yes | No |
| CT 13 | I-5 NB | Walnut Grove Rd | Peltier Rd | Acceptable | Yes | No |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | Acceptable | Yes | No |
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | Acceptable | No | No |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | Acceptable | No | No |
| CT 17 | I-5 NB | Turner Rd | SR 12 | Acceptable | Yes | No |
| CT 18 | I-5 SB | Turner Rd | SR 12 | Acceptable | Yes | No |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | Deficient | Yes | Yes |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPGPP Conditions | |
|--------------|--|--|-----------------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | Acceptable | Yes | No |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | Deficient | No | No |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | Acceptable | No | No |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | Deficient | Yes | Yes |
| CT 24 | SR 160 (Freeport Blvd/River Rd) | Freeport Bridge | Scribner Rd | Deficient | Yes | Yes |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | Deficient | Yes | Yes |
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | Deficient | Yes | Yes |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | Deficient | Yes | Yes |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | Not Applicable | Yes | No |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | Acceptable | Yes | No |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | Deficient | Yes | Yes |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | Deficient | Yes | Yes |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | Deficient | Yes | Yes |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | Deficient | Yes | Yes |
| CT 34 | SR 84 (Courtland Rd/Ryer Ave) | Courtland Rd | Cache Slough Ferry | Deficient | No | No |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | Acceptable | Yes | No |
| CT 36 | I-80 WB | SR 12 | Suisun Valley Rd | Acceptable | Yes | No |
| CT 37 | SR 12 EB | I-80 | Beck Ave | Acceptable | Yes | No |
| CT 38 | SR 12 WB | Beck Ave | I-80 | Acceptable | Yes | No |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/Grizzly Island Rd | Acceptable | Yes | No |
| CT 40 | SR 12 | Sunset Ave/Grizzly Island Rd | Walters Rd/Lawler Ranch Pkwy | Acceptable | Yes | No |
| CT 41 | SR 12 | Walters Rd/Lawler Ranch Pkwy | SR 113 | Deficient | Yes | Yes |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | Deficient | Yes | Yes |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | Not Applicable | Yes | No |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./SJ Co. Line | Deficient | Yes | Yes |
| CT 45 | SR 12 | Sacramento Co./San Joaquin Co. Line | I-5 | Deficient | Yes | Yes |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | Deficient | Yes | Yes |
| CT 47 | I-80 WB | Pedrick Rd | SR 113 | Acceptable | Yes | No |
| CT 48 | SR 113 | I-80 | Dixon City Limits | Acceptable | Yes | No |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | Deficient | Yes | Yes |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPGPP Conditions | |
|---------------|--------------------------------|--------------------------------------|--------------------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| CT 50 | SR 4 (Marsh Creek Rd) | Vasco Rd | Byron Hwy (Old SR 4) | Acceptable | Yes | No |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | Deficient | Yes | Yes |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | Deficient | Yes | Yes |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | Deficient | Yes | Yes |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | Deficient | Yes | Yes |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | Deficient | Yes | Yes |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | Acceptable | Yes | No |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | Acceptable | Yes | No |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | Acceptable | Yes | No |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | Acceptable | Yes | No |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | Acceptable | Yes | No |
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | Acceptable | Yes | No |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | Acceptable | Yes | No |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | Acceptable | Yes | No |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | Acceptable | Yes | No |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | Acceptable | Yes | No |
| ISL 01 | A St/4th St/Jackson Blvd. | SR 160 | Isleton City Limits | Deficient | No | No |
| OAK 01 | Main Street (Old SR 4) | SR 160 | Cypress Rd | Deficient | Yes | Yes |
| OAK 02 | Main Street (Old SR 4) | Cypress Rd | Delta Rd (Oakley City Limits) | Deficient | Yes | Yes |
| OAK 03 | Cypress Rd | Main Street (Old SR 4) | Bethel Island Rd | Acceptable | No | No |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | Deficient | No | No |
| OAK 05 | Delta Rd | Main Street (Old SR 4) | Byron Hwy | Deficient | No | No |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | Deficient | Yes | Yes |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | Acceptable | Yes | No |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | Not Applicable | No | No |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | Deficient | Yes | Yes |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | Acceptable | Yes | No |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | Deficient | Yes | Yes |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | Deficient | Yes | Yes |
| SC 06 | Twin Cities Rd | River Rd | I-5 | Acceptable | Yes | No |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | Deficient | No | No |
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./ Yolo Co. Line | Paintersville Bridge | Deficient | Yes | Yes |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | Deficient | No | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPGPP Conditions | |
|---------------|---|---|---|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | Deficient | Yes | Yes |
| SC 11 | Walnut Grove Rd/ River Rd | Walnut Grove Bridge | Sacramento Co./ San Joaquin Co. Line | Acceptable | Yes | No |
| SC 12 | Isleton Rd | River Rd (Walnut Grove)/Isleton Rd Bridge | 1.5 miles west of Isleton Rd Bridge | Acceptable | No | No |
| SC 13 | Race Track Rd/Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | Deficient | No | No |
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | Deficient | No | No |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | Acceptable | No | No |
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | Acceptable | No | No |
| SJ 01 | Walnut Grove Rd | Sacramento Co./ San Joaquin Co. Line | I-5 | Deficient | Yes | Yes |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | Deficient | No | No |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | Acceptable | Yes | No |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | Acceptable | Yes | No |
| SJ 05 | Byron Hwy | Alameda Co./ San Joaquin Co. Line | Mountain House Pkwy | Acceptable | Yes | No |
| SJ 06 | Mountain House Pkwy | Byron Hwy | Arnaudo Blvd | Acceptable | Yes | No |
| SJ 07 | Mountain House Pkwy | Arnaudo Blvd | I-205 | Acceptable | Yes | No |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | Deficient | No | No |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | Deficient | Yes | Yes |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | Acceptable | Yes | No |
| WS 02 | Industrial Blvd/Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | Acceptable | Yes | No |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | Deficient | Yes | Yes |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | Deficient | Yes | Yes |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | Deficient | No | No |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./Yolo Co. Line | Deficient | Yes | Yes |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | Deficient | Yes | Yes |

Source: Appendix 19A, Bay Delta Conservation Plan Construction Traffic Impact Analysis

* Segment IDs correspond to the roadway segment IDs shown on Figures 19-2a through 19-2c.

1 The effect of roadway damage to these segments during construction would be adverse. Mitigation
 2 Measures TRANS-2a through TRANS-2c are available to reduce this effect, but not necessarily to a
 3 level that would not be adverse, as the BDCP proponents cannot ensure that the agreements or
 4 encroachment permits will be obtained from the relevant transportation agencies. If an agreement
 5 or encroachment permit is not obtained, an adverse effect in the form of deficient pavement
 6 conditions would occur. Accordingly, this effect could remain adverse. If, however, mitigation
 7 agreement(s) or encroachment permit(s) providing for the improvement or replacement of
 8 pavement are obtained and any other necessary agreements are completed, adverse effects could be
 9 avoided.

10 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 11 below acceptable thresholds (Table 19-7) at the 42 locations shown in Table 19-26. The impact of
 12 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
 13 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
 14 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
 15 permits will be obtained from the relevant transportation agencies. If an agreement or
 16 encroachment permit is not obtained, a significant impact in the form of deficient pavement
 17 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 18 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 19 of pavement are obtained and any other necessary agreements are completed, impacts would be
 20 reduced to less than significant.

21 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 22 **Roadway Segments**

23 The BDCP proponents will, to the extent feasible, include in the bid specifications prohibitions
 24 against construction traffic from using roadway segments with pavement conditions below the
 25 thresholds identified in this study (i.e., an IRI rating greater than 170 or a PCI rating worse than
 26 55). Implementation of this measure would prohibit all construction traffic on the physically
 27 deficient roadway segments listed in Table 19-26, if feasible.

28 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 29 **Roadway Segments**

30 If complete avoidance of physically deficient roadway segments as described in Mitigation
 31 Measure TRANS-2a is not feasible, construction activity will be limited to the extent possible on
 32 the deficient roadways identified in Table 19-26. Implementation of this measure will reduce
 33 continuing deterioration of pavement conditions on the most damaged roadways in the study
 34 area. The BDCP proponents will include in the bid specifications requirements that limit the
 35 amount of construction traffic on roadway segments with pavement conditions below the
 36 thresholds identified in this study (i.e., an IRI rating greater than 170 or a PCI rating worse than
 37 55), if feasible. Trucks would be prohibited and construction traffic would be limited to
 38 passenger vehicles on travel routes with pavement conditions worse than the thresholds
 39 identified in this study (i.e., an IRI rating greater than 170 or a PCI rating worse than 55).

1 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
2 **as Stipulated in Mitigation Agreements or Encroachment Permits**

3 If use of physically deficient roadways cannot be avoided or limited as specified in Mitigation
4 Measures TRANS-2a and TRANS-2b, it may be necessary to improve the deficient roadways
5 identified in Table 19-26 or make other necessary infrastructure improvements, if any, before
6 construction to make them suitable for use during construction. Additionally, all affected
7 roadways would be returned to preconstruction condition or better following construction.
8 Implementation of this measure will ensure that construction activities will not worsen
9 pavement conditions, relative to Existing Conditions.

10 Prior to construction, the BDCP proponents will make a good faith effort to enter into mitigation
11 agreements with or to obtain encroachment permits from affected agencies to verify what the
12 location, extent, timing, and fair share cost to be paid by the BDCP proponents for any necessary
13 pre- and post-construction physical improvements. The fair share amount would be either the
14 cost to return the affected roadway segment to its preconstruction condition. Repairs may occur
15 before or after construction and may include overlays, other surface treatments, or roadway
16 reconstruction. The flood protection benefits of roadways will also be considered in developing
17 and implementing activities pursuant to this measure.

18 Pre-construction analyses of existing pavement conditions will be conducted just prior to
19 starting construction for any proposed construction traffic travel routes. The preconstruction
20 pavement analysis will establish the baseline for required improvements and will be based on
21 the PCI or IRI methodologies described in this EIR/EIS or an equivalent method as agreed to by
22 the BDCP proponents and the affected agencies. Relevant flood protection agencies will also be
23 consulted during the design of roadway improvements.

24 The BDCP proponents will include in the bid specifications stipulations that require the
25 contractor(s) to conduct the pre-construction pavement analysis and conduct all improvements
26 in compliance with applicable standards of affected agencies, as stipulated in the mitigation
27 agreements or encroachment permits.

28 It is not anticipated that project construction could cause the need for major transportation
29 infrastructure improvements, such as the need to upgrade or repair existing bridges or the need
30 to construct new highway interchanges. To the extent that construction activities could cause
31 the need for such major transportation infrastructure improvements, the BDCP proponents
32 retain the flexibility to seek alternative means of transporting people, equipment, and materials
33 to construction sites, such as via barges, to avoid the need for such major infrastructure
34 improvements, if any.

35 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
36 **during Construction**

37 **NEPA Effects:** Alternative 4 would require a heavy volume of materials to be hauled to the
38 construction work zones, increasing the amount of trucks using the transportation system in the
39 study area. The increase in heavy construction traffic on local roadways would increase the
40 potential for safety hazards such as conflicts with recreational and commuter traffic and with
41 farming operations. The increase in heavy construction traffic using emergency routes could result
42 in interference with emergency service response times. Emergency routes in the study area are
43 identified in Table 19-11.

1 As discussed above and in Chapter 22, *Air Quality and Greenhouse Gases*, construction of Alternative
 2 4 would increase the amount of trucks using the transportation system in the study area. The effects
 3 under Alternative 4 would be similar to those described for Alternative 1A. However, Alternative 4
 4 would require temporary realignment of Byron Highway/South Pacific Railroad during construction
 5 of the siphon connecting the new approach canal and Jones PP approach canal. Minor delays and
 6 congestion created by rerouted traffic could interfere with emergency service response times in the
 7 vicinity of Bryon Highway.

8 The effect of increased safety hazards from increased heavy construction traffic on local roadways
 9 and emergency routes would be adverse. Although TRANS-1c will reduce the severity of this effect,
 10 the BDCP proponents are not solely responsible for the timing, nature, or complete funding of
 11 required improvements. If an improvement identified in the mitigation agreement(s) is not fully
 12 funded and constructed before the project's contribution to the effect is made, an adverse effect in
 13 the form of increased safety hazards would occur. Accordingly, this effect would be adverse. If,
 14 however, all improvements required to avoid adverse effects prove to be feasible and any necessary
 15 agreements are completed before the project's contribution to the effect is made, effects would not
 16 be adverse.

17 **CEQA Conclusion:** Construction of Alternative 4 would increase the amount of trucks using the
 18 transportation system in the study area. The alternative would also require traffic on Byron
 19 Highway be rerouted during construction of the siphon connecting the new approach canal and
 20 Jones PP approach canal. The increase in heavy truck traffic and potential delays created by
 21 realignment of Byron Highway/South Pacific Railroad could interfere with emergency services on
 22 designated routes (Table 19-11), resulting in significant safety hazards. Mitigation Measure TRANS-
 23 1c will reduce the severity of this impact, but not to less-than-significant levels. BDCP proponents
 24 cannot ensure that the improvements will be fully funded or constructed prior to the project's
 25 contribution to the impact. If an improvement identified in the mitigation agreement(s) is not fully
 26 funded and constructed before the project's contribution to the impact is made, a significant impact
 27 in the form of increased safety hazards would occur. Accordingly, this effect would be significant and
 28 unavoidable. If, however, all improvements required to avoid significant impacts prove to be feasible
 29 and any necessary agreements are completed before the project's contribution to the effect is made,
 30 impacts would be less than significant.

31 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 32 **Agreements to Enhance Capacity of Congested Roadway Segments**

33 Please refer to Mitigation Measure TRANS-1c in Alternative 4, Impact TRANS-1.

34 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

35 **NEPA Effects:** Under Alternative 4, commercial barges would be used to transport construction
 36 materials and equipment from the ports to temporary barge unloading facilities near construction
 37 sites. The materials and equipment would then be unloaded and trucked to the construction sites.
 38 Temporary barge unloading facilities for construction materials are planned at the following
 39 locations.

- 40 ● SR 160 west of Walnut Grove
- 41 ● Venice Island
- 42 ● Bacon Island

- 1 • Woodward Island
- 2 • Victoria Island
- 3 • Tyler Island

4 Approximately 3,000 barge trips are projected to carry construction materials from ports to the
5 sites listed above via the Sacramento River under Alternative 1A, averaging approximately 1 trip per
6 day through a 9-year-long construction period. It is likely that under Alternative 4, the estimated
7 number of trips and amount of in-water work would be less because of the reduction in the number
8 of intakes to be constructed. Although barges are relatively slow and have less maneuverability than
9 smaller vessels, commercial barge operators on the Sacramento River are required to operate in
10 compliance with navigational guidelines. The majority of commercial barge activity in the Delta
11 travels from the San Francisco Bay to the Sacramento area via the SRDWSC (Delta Protection
12 Commission 2012).

13 Alternative 4 would avoid direct effects on this barge traffic because the alternative features would
14 be located along the Sacramento River (not the Deep Water Channel) and no modifications to the
15 Deep Water Channel would be required. The barge unloading facility by Venice Island would not be
16 expected to interfere with navigation to the Port of Stockton because it would be outside the main
17 channel and would be designed to facilitate barge operations. The barge unloading facilities would
18 be temporary and removed following construction. Increased barge traffic related to delivery of
19 materials to the alternative work site would average less than 1 barge trip per day over the 9-year-
20 long construction period and is not anticipated to cause impediments to the passage of other vessels.
21 There is 135 feet of open air clearance at the Antioch UPRR bridge and 144 feet at the Rio Vista
22 bridge, and additional raising of draw bridges in the study area would not be required.

23 Although some in-water work would be necessary for intake construction, the Sacramento River
24 would remain open to boat traffic at all times during construction. The intake cofferdams would
25 extend into the river channel up to 120 feet, depending on location. The width of the river near the
26 intakes (approximately 500–700 feet) would therefore allow for passage of the types of boats
27 typically observed on the Sacramento River (channel width during construction 380–580 feet).
28 (Refer to Chapter 15, *Recreation*, for additional discussion of the effects of intake construction on
29 boating.) This potential effect is not considered adverse because construction of Alternative 4
30 would not require modification to existing deep water channels, interfere with Port of Stockton
31 navigation, or substantially increase the volume of barge movement within the study area, such that
32 existing marine traffic would be disrupted (on average, less than 1 additional barge trip per day is
33 expected through the 9-year construction period). As noted in Chapter 15, *Recreation*, Impact REC-3,
34 temporary barge unloading facilities would occupy between 800 to 2,000 feet of riverbank,
35 depending on the location. Based on the river channel width, all barge facilities except the San
36 Joaquin River facility could occupy substantial portions of the waterway. However, all barge routes
37 and landing sites will be selected to maximize continuous waterway access and a minimum
38 waterway width greater than 100 feet. Moreover, Mitigation Measure TRANS-1a would reduce any
39 potential disruptions as it includes stipulations to notify the commercial and leisure boating
40 community of proposed barge operations in the waterways.

41 **CEQA Conclusion:** Construction of Alternative 4 would not require modification to existing deep
42 water channels, interfere with Port of Stockton navigation, or substantially increase the volume of
43 barge movement within the study area such that existing marine traffic would be disrupted (on
44 average, only 1 additional barge trip per day is expected through the 9-year construction period).

1 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
2 stipulations to notify the commercial and leisure boating community of proposed barge operations
3 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would
4 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
5 mitigation is required.

6 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
7 **Plan**

8 Please refer to Mitigation Measure TRANS-1a in Alternative 4, Impact TRANS-1.

9 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

10 **NEPA Effects:** The proposed Alternative 4 conveyance crosses under the existing BNSF/Amtrak San
11 Joaquin line between Bacon Island and Woodward Island. Maintaining freight and passenger service
12 on the BNSF line is included in the design, and the effect of this crossing would be minimal to non-
13 existent because the proposed conveyance would traverse the railroad in a deep bore tunnel.

14 As discussed in Impact TRANS-5 under Alternative 1A, the UPRR Tracy Subdivision (branch line)
15 runs parallel to Byron Highway, between the highway and the proposed new forebay (Byron Tract
16 forebay) adjacent to the existing Clifton Court Forebay. The construction impact of the new forebay
17 would be unlikely to disrupt rail service because much of this line has not been in service recently.
18 The UPRR may return it to freight service in the future.

19 Construction of Alternative 4 would not physically cross or require modification to an existing or
20 proposed railroad. Rather, the water conveyance will cross the BNSF Railway and Amtrak San
21 Joaquin Line well below grade in a deep bore tunnel. Accordingly, construction would not be likely
22 to disrupt rail service. However, if the UPRR Tracy Subdivision branch line is reopened prior to
23 construction, the continuity of rail traffic could be managed, if needed, through implementation of
24 Mitigation Measure TRANS-1a, which includes stipulations to coordinate with rail providers to
25 develop alternative interim transportation modes (e.g., trucks or buses) that could be used to
26 provide freight and/or passenger service during any longer term railroad closures and daily
27 construction time windows during which construction is restricted or rail operations would need to
28 be suspended for any activity within railroad rights of way.

29 **CEQA Conclusion:** Construction of Alternative 4 would not physically cross or require modification
30 to an existing or proposed railroad. Rather, the water conveyance will cross the BNSF Railway and
31 Amtrak San Joaquin Line well below grade in a deep bore tunnel. Accordingly, construction would
32 not be likely to disrupt rail service. However, if the UPRR Tracy Subdivision branch line is reopened
33 prior to construction, traffic associated with of the Byron Tract forebay may minimally impact rail
34 service through vehicle crossing. Implementation of Mitigation Measure TRANS-1a would ensure
35 this impact remains less than significant.

36 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
37 **Plan**

38 Please refer to Mitigation Measure TRANS-1a in Alternative 4, Impact TRANS-1.

1 **Impact TRANS-6: Disruption of Transit Service during Construction**

2 **NEPA Effects:** Construction of conveyances and other project elements may affect various roadways
 3 upon which transit service operates. To the extent that construction detours are necessary and/or
 4 significant congestion occurs during lane closures and other construction activities, transit routes
 5 and schedules would be affected. Transit service disruptions under Alternative 4 would be similar to
 6 the pipeline/tunnel alignment (refer to Impact TRANS-6 in Alternative 1A, Table 19-13).

7 Construction activities associated with Alternative 4 would decrease LOS below applicable
 8 thresholds, as well as exacerbate already unacceptable LOS conditions along on SR-12 (see Table 19-
 9 25). Accordingly, tunnel construction could substantially affect operation of the SCT Link/Delta
 10 Route, and construction of the shaft adjacent to SR 12 would affect traffic on that facility. Intercity
 11 Greyhound bus lines primarily operate on the interstate highway system in this vicinity. To the
 12 extent that other roadways affected by Alternative 4 construction also carry Greyhound bus lines,
 13 those routes may be affected as well. The effect of disruption to transit service during construction
 14 would be adverse. Although Mitigation Measures TRANS-1a through TRANS-1c would reduce the
 15 severity of this effect, the BDCP proponents are not solely responsible for the timing, nature, or
 16 complete funding of required improvements. If an improvement identified in the mitigation
 17 agreement(s) is not fully funded and constructed before the project's contribution to the effect is
 18 made, an adverse effect in the form of disruptions to transit service would occur. Therefore, this
 19 effect would be adverse.

20 **CEQA Conclusion:** Construction activities associated with Alternative 4 would decrease LOS below
 21 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along SR-12 (see
 22 Table 19-25). Accordingly, tunnel construction could significantly affect operation of the SCT
 23 Link/Delta Route, and construction of the shaft adjacent to SR 12 would affect traffic on that facility.
 24 To the extent that other roadways affected by Alternative 4 construction also carry Greyhound bus
 25 lines, those routes may be affected as well. Mitigation Measures TRANS-1a through TRANS-1c would
 26 reduce the severity of this impact, but not to less-than-significant levels. Under Mitigation Measure
 27 TRANS-1a, the BDCP proponents would coordinate with transit providers to develop, to the extent
 28 feasible, daily construction time windows during which transit operations would not be either
 29 detoured or significantly slowed, avoiding a substantial disruption of transit service. Additionally,
 30 under Mitigation Measure TRANS-1b, construction traffic would be minimized around peak periods,
 31 to the extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP proponents would
 32 make good faith efforts to enter into mitigation agreements to enhance the capacity of congested
 33 roadway segments, likely reducing associated disruptions to transit service. However, the BDCP
 34 proponents cannot ensure that the improvements will be fully funded or constructed prior to the
 35 project's contribution to the impact. If an improvement identified in the mitigation agreement(s) is
 36 not fully funded and constructed before the project's contribution to the impact is made, a
 37 significant impact in the form disruptions to transit service would occur. Therefore, this impact
 38 would be significant and unavoidable. However, such impacts are likely to occur during the middle
 39 of the day because construction traffic would be minimized around peak periods.

40 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 41 **Plan**

42 Please refer to Mitigation Measure TRANS-1a in Alternative 4, Impact TRANS-1.

1 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 2 **Congested Roadway Segments**

3 Please refer to Mitigation Measure TRANS-1b in Alternative 4, Impact TRANS-1.

4 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 5 **Agreements to Enhance Capacity of Congested Roadway Segments**

6 Please refer to Mitigation Measure TRANS-1c in Alternative 4, Impact TRANS-1.

7 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

8 **NEPA Effects:** Increased traffic and vehicle delays during construction (see Table 19-25) could
 9 temporarily disrupt bicycle routes on SR 160/River Road and potentially on SR 12. The effect of
 10 disruption to bicycle routes during construction would be adverse. Mitigation Measure TRANS-1a is
 11 available to reduce this effect. Under this measure, BDCP proponents would provide alternate access
 12 routes via detours or bridges to maintain continual circulation for local travelers in and around
 13 construction zones, including bicycle riders; provide signage warning of loose gravel, steel plates,
 14 etc. that could be hazardous to road cycling activity on roadways open to bicycle traffic; provide
 15 signage, barricades, and flag people as necessary to slow or detour traffic around construction sites;
 16 and notify the public, including cycling organizations and bike shops, of construction activities that
 17 could affect transportation. Additionally, another project commitment, as described in Appendix 3B,
 18 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
 19 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
 20 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
 21 bicycle path.

22 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-25) could
 23 temporarily disrupt bicycle routes on SR 160/River Road and potentially on SR 12, resulting in a
 24 significant impact. However, Mitigation Measure TRANS-1a would reduce the severity of this impact
 25 to less-than-significant levels because BDCP proponents would provide alternate access routes via
 26 detours or bridges to maintain continual circulation for local travelers in and around construction
 27 zones, including bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could
 28 be hazardous to road cycling activity on roadways open to bicycle traffic; provide signage,
 29 barricades, and flag people as necessary to slow or detour traffic around construction sites; and
 30 notify the public, including cycling organizations and bike shops, of construction activities that could
 31 affect transportation. Additionally, another project commitment, as described in Appendix 3B,
 32 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
 33 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
 34 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
 35 bicycle path. Because implementation of this mitigation measure and project commitment would
 36 avoid a substantial disruption to bicycle facilities as a result of increased roadway traffic and/or
 37 roadway closures, this impact would be less than significant.

38 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 39 **Plan**

40 Please refer to Mitigation Measure TRANS-1a in Alternative 4, Impact TRANS-1.

1 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

2 **NEPA Effects:** Maintaining and operating BDCP facilities could affect roadway operations in the
 3 vicinity by increasing vehicle trips. However, operations and maintenance activities would only
 4 require minimal labor. Consistent with the assumptions used for the air quality/GHG analyses in
 5 Chapter 22, *Air Quality and Greenhouse Gases*, of this EIR/EIS, it was estimated that routine
 6 operations and maintenance activities and yearly maintenance activities would require the crews
 7 and equipment identified in Tables 19-14 and 19-15 (refer to Impact TRANS-8 in Alternative 1A).
 8 For comparative purposes, Table 19-16 summarizes direct and indirect employment quantified
 9 using the IMPLAN model.

10 The effect of maintaining and operating the facilities on roadway operations under Alternative 4
 11 would be the same as under Alternative 1A (see Tables 19-14, 19-15, and 19-16), but slightly less in
 12 magnitude because only three intakes would be operated and maintained and correspondingly
 13 fewer employee trips would be anticipated. Like Alternative 1A, O&M activities would occur along
 14 the entire alternative alignment. Even assuming the higher employment range in Table 19-16, given
 15 the limited number of workers involved and the large number of work sites, it is not anticipated that
 16 routine operations and maintenance activities or major inspections would result in substantial
 17 increases of traffic volumes or roadway congestion. The impact of increased traffic volumes and
 18 delays during project operations would not be adverse.

19 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
 20 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
 21 activities or major inspections would result in substantial increases of traffic volumes or roadway
 22 congestion. The impact of increased traffic volumes and delays during operations would therefore
 23 be less than significant. No mitigation is required.

24 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and** 25 **Maintenance**

26 **NEPA Effects:** Due to the buried tunnel configuration, Alternative 4 does not intersect public
 27 roadways, state routes, railroads, and bridges except for the intake areas where the SR 160 and
 28 Randall Island Road would be permanently rerouted.

29 Each intake/pumping plant site would require realignment of the levee road (SR 160) adjacent to
 30 Intakes 2, 3, and 5. The levee road adjacent to Intake 5 is Randall Island Road. A project study report
 31 (PSR) prepared by the California Department of Transportation (Caltrans) describes the
 32 assumptions and requirements for the permanent realignment of SR 160 as follows.

- 33 ● Offsetting the realigned levee road 200 feet from the existing levee road.
- 34 ● Use of a two-lane, two-way road, with a total cross-sectional width of 24 feet.
- 35 ● Use of a maximum speed limit of 60 miles per hour.
- 36 ● Provide horizontal and vertical alignments per Caltrans Highway Design Manual.
- 37 ● The realigned levee road will be level, straight, and parallel to the intake for the length adjacent
 38 to the intake.
- 39 ● The realigned levee road will be set at the same elevation as the top of the intake and the
 40 pumping plant building pad for the length adjacent to the intake.

- A single cross intersection will be centered on the intake length to provide access to the intake and pumping plant.

Except for the intakes, Alternative 4 does not have surface intersections with public roadways, state routes, or railroads, and would not require bridges. Impacts on public roadways would be limited to the intake areas and would not substantially alter traffic patterns. The design and construction of all project components (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all rail operations following completion of construction. Structures would be constructed as necessary to provide connectivity across canals (either bridges or siphons) for active railroads to cross without disruption. Water operations would not modify the river stage above the water levels seen in the river today. Therefore, no change would be expected to affect boat traffic associated with changes in water levels. Operations and maintenance of the facilities would not have any substantive impact on barge traffic (or the roadway network) due to operation of moveable bridges.

Impediments to boat traffic associated with the intakes would continue for the life of the project, but would not substantially impact boat passage or usage (refer to Chapter 15, *Recreation*, for more discussion of effects on boating.) The effect of permanent alteration of transportation patterns during operations would not be adverse.

CEQA Conclusion: Each intake/pumping plant site constructed under Alternative 4 would require realignment of the levee road (SR 160) adjacent to Intakes 2, 3, and 5. Impacts on public roadways would be limited to the intake areas and would not substantially alter traffic patterns. The design and construction of all project components (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all rail operations following completion of construction. Impediments to boat traffic associated with the intakes would continue for the life of the project, but would not substantially impact boat passage or usage. Accordingly, the impact of permanent alteration of transportation patterns during operations would be less than significant. No mitigation is required.

Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22

NEPA Effects: Habitat restoration and enhancement conservation measures are anticipated to include a number of construction and maintenance activities, including the following.

- Grading, excavation, and placement of fill material.
- Breaching, modification, or removal of existing levees and construction of new levees.
- Modification, demolition, and removal of existing infrastructure (e.g., buildings, roads, fences, electric transmission and gas lines, irrigation infrastructure).
- Construction of new infrastructure (e.g., buildings, roads, fences, electric transmission and gas lines, irrigation infrastructure).
- Removal of existing vegetation and planting/seeding of vegetation.
- Levee maintenance.
- Mowing, burning, and trimming to manage vegetation.

In particular, implementation of CM2 and CM3–CM10 would generate traffic on area roadways during implementation due to transport of construction vehicles, equipment, and employees to and from the sites for the purposes of modifying or installing new facilities, or making changes in operation of existing facilities. Because the specific areas for implementing these conservation measures have not been determined, this effect is evaluated qualitatively.

- 1 ● Yolo Bypass Fishery Enhancement (CM2)
- 2 ○ Installing fish ladders and experimental ramps at Fremont Weir or widening the existing
- 3 fish ladder.
- 4 ○ Installing fish screens on small Yolo Bypass diversions.
- 5 ○ Constructing new or replacement operable check-structures at Tule Canal/Toe Drain.
- 6 ○ Replacing the Lisbon Weir with a fish-passable gate structure.
- 7 ○ Realigning Lower Putah Creek.
- 8 ○ Increasing operation of upstream unscreened pumps.
- 9 ○ Installing operable gates at Fremont Weir.
- 10 ○ Constructing physical barriers in the Sacramento River.
- 11 ○ Constructing associated support facilities (operations buildings, parking lots, access
- 12 facilities such as roads and bridges).
- 13 ○ Improving levees adjacent to the Fremont Weir Wildlife Area.
- 14 ○ Replacing agricultural crossings of the Tule Canal/Toe Drain with fish-passable structures
- 15 such as flat car bridges, earthen crossings with large, open culverts.
- 16 ○ Grading, removal of existing berms, levees, and water control structures, construction of
- 17 berms or levees, re-working of agricultural delivery channels, and earthwork or
- 18 construction of structures to reduce Tule Canal/Toe Drain channel capacities.
- 19 ● Tidal Habitat Restoration (CM4)
- 20 ○ Breaching and lowering levees, installing new or modified levees to protect adjacent areas
- 21 from flooding.
- 22 ○ Connecting remnant sloughs or channels to improve circulation.
- 23 ○ Modifying ground elevations to reduce impacts of subsidence to restore freshwater tidal
- 24 habitat in the Cache Slough, Cosumnes/Mokelumne, West Delta, South Delta, and Suisun
- 25 Marsh ROAs.
- 26 ● Seasonally Inundated Floodplain Restoration (CM5)
- 27 ○ Restoring seasonally inundated floodplain habitat within the north, east, and/or south Delta.
- 28 ● Channel Margin Habitat Enhancement (CM6)
- 29 ○ enhancing channel margin habitat on the Sacramento River between Freeport and Walnut
- 30 Grove, the San Joaquin River between Vernalis and Mossdale, Steamboat and Sutter Sloughs,
- 31 and the North and South Forks of the Mokelumne River
- 32 ● Riparian Habitat Restoration (CM7)
- 33 ○ Restoring riparian habitat in Cosumnes/Mokelumne, east, west, and south Delta
- 34 ● Grassland Communities Restoration (CM8)
- 35 ○ Sowing native species using a variety of techniques (e.g., seed drilling, native hay spreading,
- 36 plugs.

- 1 ○ Recontouring graded land.
- 2 ● Vernal Pool Complex Restoration (CM9)
- 3 ○ Recontouring historical vernal pools and swales to natural bathymetry.
- 4 ● Nontidal Marsh Restoration (CM10)
- 5 ○ Grading to establish an elevational gradient to support both open water perennial aquatic
- 6 ○ habitat intermixed with shallower marsh habitat.
- 7 ○ Planting and maintaining native marsh vegetation.

8 For the purposes of the EIR/EIS, it is assumed that during implementation, impacts on roadways
 9 could result in circulation delays or the inability to maintain adequate vehicular access in or around
 10 construction work zones. Roads and highways in and around Suisun Marsh and the Yolo Bypass
 11 could experience increases in traffic volumes, resulting in localized congestion and conflicts with
 12 local traffic. These roadways could function as haul routes or to bring construction personnel to the
 13 work sites. Maintenance and monitoring of the restoration areas would also generate some vehicle
 14 trips. As described in Impact TRANS-3 in Alternative 1A, the following roadways in the Delta
 15 subregion are anticipated to be affected.

- 16 ● Interstate 680
- 17 ● State Route 12
- 18 ● Chadbourne Road
- 19 ● Ramsey Road
- 20 ● Jacksnipe Road
- 21 ● Collinsville Road
- 22 ● Grizzly Island Road
- 23 ● Gum Tree Road
- 24 ● Van Sickle Road
- 25 ● Joyce Island Road
- 26 ● Branscombe Road
- 27 ● Potrero Hills Lane
- 28 ● Scally Road
- 29 ● Shiloh Road
- 30 ● Little Honker Bay Road

31 The effect would vary according to the amount of traffic generated by implementation of the specific
 32 conservation measure, the location and timing of the actions called for in the conservation measure,
 33 and the roadway and traffic conditions at the time of implementation. The effect of increased traffic
 34 volumes during construction and maintenance of CM2–CM22 would be adverse. Although TRANS-1a
 35 through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not solely
 36 responsible for the timing, nature, or complete funding of required improvements. If an
 37 improvement identified in the mitigation agreement(s) is not fully funded and constructed before

1 the project's contribution to the effect is made, an adverse effect would occur. Therefore, this effect
 2 would be adverse. If, however, all improvements required to avoid adverse effects prove to be
 3 feasible and any necessary agreements are completed before the project's contribution to the effect
 4 is made, effects would not be adverse.

5 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
 6 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
 7 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
 8 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
 9 function as haul routes or to bring construction personnel to the work sites. Maintenance and
 10 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
 11 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
 12 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
 13 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 14 constructed prior to the project's contribution to the impact. If an improvement identified in the
 15 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
 16 impact is made, a significant impact would occur. Therefore, the project's impacts to roadway
 17 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
 18 required to avoid significant impacts prove to be feasible and any necessary agreements are
 19 completed before the project's contribution to the effect is made, impacts would be less than
 20 significant.

21 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 22 **Plan**

23 Please refer to Mitigation Measure TRANS-1a in Alternative 4, Impact TRANS-1.

24 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 25 **Congested Roadway Segments**

26 Please refer to Mitigation Measure TRANS-1b in Alternative 4, Impact TRANS-1.

27 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 28 **Agreements to Enhance Capacity of Congested Roadway Segments**

29 Please refer to Mitigation Measure TRANS-1c in Alternative 4, Impact TRANS-1.

30 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 31 **Conservation Measures with Plans and Policies**

32 **NEPA Effects:** The potential for inconsistencies with plans or policies would be similar to the
 33 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 4
 34 would be compatible with applicable plans and policies related to transportation and circulation.

35 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
 36 and no additional CEQA conclusion is required related to the consistency of the alternative with
 37 relevant plans and policies. The relationship between plans, policies, and regulations and impacts on
 38 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

19.3.3.10 Alternative 5—Dual Conveyance with Pipeline/Tunnel and Intake 1 (3,000 cfs; Operational Scenario C)

One intake would be constructed under Alternative 5. For the purposes of this analysis, Alternative 5 was assumed to include Intake 1, an intermediate forebay, and a buried pipeline/tunnel conveyance (see Figures 3-2 and 3-12 in Chapter 3, *Description of Alternatives*).

Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS Conditions

NEPA Effects: The estimate of the number of vehicles generated by construction activities for Alternative 5 would be similar to Alternative 1A. The estimate of the number of vehicles generated by construction activities would be lower compared to Alternative 1A due to the reduction in the number of intakes (approximately 80% reduction). Localized impacts in the vicinity of Intakes 2–7 would not occur.

As shown in Table 19-8, under BPBG conditions, a total of 23 roadway segments would exceed LOS for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. As also shown in Table 19-8, construction associated with Alternative 5 would cause LOS thresholds to be exceeded for at least one hour during the 6 AM to 7 PM analysis period on a total of 33 roadway segments under BPBGPP conditions (see entries in **bold** type). Alternative 5 would therefore exacerbate an already unacceptable LOS under BPBG conditions on **10** roadway segments (33 minus the 23 that would already be operating at an unacceptable LOS under BPBG conditions). Figure 19-3a shows the study roadway segments that could experience substantial roadway operation impacts).

The decrease in LOS below applicable thresholds during construction would be adverse at the locations identified in Table 19-8 because construction associated with Alternative 5 would cause LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. Alternative 5 would also exacerbate an already unacceptable LOS under BPBG conditions at **10** roadway segments (33 minus the 23 that would already be operating at an unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur throughout the study area, the highest concentration of roadway segments below applicable LOS threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be exceeded on several local roadways, include all segments studied in West Sacramento.

Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively, these measures include requirements to avoid or reduce circulation effects, notify the public of construction activities, provide alternate access routes, require direct haulers to pull over in the event of an emergency, limit/prohibit the amount of construction activity on congested roadways, and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete funding of required improvements. If an improvement that is identified in any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed before the project's contribution to the effect is made, an adverse effect in the form of unacceptable LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to avoid adverse effects prove to be feasible and any necessary agreements are completed before the project's contribution to the effect is made, effects would not be adverse.

CEQA Conclusion: Construction under Alternative 5 would add hourly traffic volumes to study area roadways that would exceed acceptable LOS threshold (Table 19-8). As shown in Table 19-8, traffic

1 volumes during construction of Alternative 5 would exacerbate already unacceptable LOS under
 2 BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-1a
 3 through TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels.
 4 The BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 5 prior to the project's contribution to the impact. If an improvement that is identified in any
 6 mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 7 constructed before the project's contribution to the impact is made, a significant impact in the form
 8 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 9 however, all improvements required to avoid significant impacts prove to be feasible and any
 10 necessary agreements are completed before the project's contribution to the effect is made, impacts
 11 would be less than significant.

12 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 13 **Plan**

14 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

15 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 16 **Congested Roadway Segments**

17 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

18 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 19 **Agreements to Enhance Capacity of Congested Roadway Segments**

20 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

21 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
 22 **Conditions**

23 **NEPA Effects:** The effects under Alternative 5 would be similar to Alternative 1A but slightly less in
 24 magnitude because only one intake would be constructed, with less overall traffic impacts during
 25 construction (truck traffic and workers traffic generated by intake construction is reduced by
 26 approximately 80% compared to Alternative 1A). Localized impacts in the vicinity of Intakes 2-7
 27 would not occur.

28 As shown in Table 19-10, construction of Alternative 5 would contribute to further deterioration of
 29 the existing pavement condition, to less than the acceptable PCI or similar applicable threshold (see
 30 Table 19-7), on a total of **43** roadway segments. Damage to roadway pavement is expected
 31 throughout the study area (Figure 19-4a) on various local and state roads, as well as on a few
 32 interstates. The effect of roadway damage to these segments during construction would be adverse.
 33 Mitigation Measures TRANS-2a through TRANS-2c are available to reduce this effect, but not
 34 necessarily to a level that would not be adverse, as the BDCP proponents cannot ensure that the
 35 agreements or encroachment permits will be obtained from the relevant transportation agencies. If
 36 an agreement or encroachment permit is not obtained, an adverse effect in the form of deficient
 37 pavement conditions would occur. Accordingly, this effect could remain adverse. If, however,
 38 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 39 of pavement are obtained and any other necessary agreements are completed, adverse effects could
 40 be avoided.

1 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 2 below acceptable thresholds (Table 19-7) at the 43 locations shown in Table 19-10. The impact of
 3 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
 4 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
 5 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
 6 permits will be obtained from the relevant transportation agencies. If an agreement or
 7 encroachment permit is not obtained, a significant impact in the form of deficient pavement
 8 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 9 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 10 of pavement are obtained and any other necessary agreements are completed, impacts would be
 11 reduced to less than significant.

12 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 13 **Roadway Segments**

14 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

15 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 16 **Roadway Segments**

17 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

18 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
 19 **as Stipulated in Mitigation Agreements or Encroachment Permits**

20 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

21 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
 22 **during Construction**

23 **NEPA Effects:** Alternative 5 would require a heavy volume of materials to be hauled to the
 24 construction work zones, increasing the amount of trucks using the transportation system in the
 25 study area. The increase in heavy construction traffic on local roadways would increase the
 26 potential for safety hazards such as conflicts with recreational and commuter traffic and with
 27 farming operations. The increase in heavy construction traffic using emergency routes could result
 28 in interference with emergency service response times. Emergency routes in the study area are
 29 identified in Table 19-11.

30 As discussed above and in Chapter 22, *Air Quality and Greenhouse Gases*, construction of Alternative
 31 5 would increase the amount of trucks using the transportation system in the study area. The effects
 32 under Alternative 5 would be similar to those described for Alternative 1A although of lesser
 33 magnitude because Alternative 5 would construct one intake structure rather than five, with an
 34 approximately 80% reduction in trip generation. The effect of increased safety hazards from
 35 increased heavy construction traffic on local roadways and emergency routes identified in Table 19-
 36 11 would be adverse. Although TRANS-1c will reduce the severity of this effect, the BDCP
 37 proponents are not solely responsible for the timing, nature, or complete funding of required
 38 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
 39 constructed before the project's contribution to the effect is made, an adverse effect in the form of
 40 increased safety hazards would occur. Accordingly, this effect would be adverse. If, however, all

1 improvements required to avoid adverse effects prove to be feasible and any necessary agreements
2 are completed before the project's contribution to the effect is made, effects would not be adverse.

3 **CEQA Conclusion:** Construction of Alternative 5 would increase the amount of trucks using the
4 transportation system in the study area. This increase in heavy truck traffic could interfere with
5 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
6 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
7 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
8 prior to the project's contribution to the impact. If an improvement identified in the mitigation
9 agreement(s) is not fully funded and constructed before the project's contribution to the impact is
10 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
11 effect would be significant and unavoidable. If, however, all improvements required to avoid
12 significant impacts prove to be feasible and any necessary agreements are completed before the
13 project's contribution to the effect is made, impacts would be less than significant.

14 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
15 **Agreements to Enhance Capacity of Congested Roadway Segments**

16 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

17 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

18 **NEPA Effects:** Under Alternative 5, commercial barges would be used to transport construction
19 materials and equipment from the ports to temporary barge unloading facilities near construction
20 sites and some in-water work would occur for construction of the intakes. Locations of temporary
21 barge unloading facilities are the same as for Alternative 1A but the estimate of trips and amount of
22 in-water work would be substantially less because of the reduction in the number of intakes to be
23 constructed. This potential effect is not considered adverse because construction of Alternative 5
24 would not require modification to existing deep water channels, interfere with Port of Stockton
25 navigation, or substantially increase the volume of barge movement within the study area, such that
26 existing marine traffic would be disrupted (on average, only 1 additional barge trip per day is
27 expected through the 9-year construction period). Barge routes and landing sites will be selected to
28 maximize continuous waterway access and a minimum waterway width greater than 100 feet.
29 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
30 stipulations to notify the commercial and leisure boating community of proposed barge operations
31 in the waterways.

32 **CEQA Conclusion:** Construction of Alternative 5 would not require modification to existing deep
33 water channels, interfere with Port of Stockton navigation, or substantially increase the volume of
34 barge movement within the study area such that existing marine traffic would be disrupted (on
35 average, only 1 additional barge trip per day is expected through the 9-year construction period).
36 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
37 stipulations to notify the commercial and leisure boating community of proposed barge operations
38 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would
39 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
40 mitigation is required.

1 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 2 **Plan**

3 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

4 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

5 **NEPA Effects:** The effects under Alternative 5 on the BNSF Railway and Amtrak San Joaquin Line and
 6 the Union Pacific Railroad--Tracy Subdivision would be similar to that described for Alternative 1A.
 7 Construction would not be likely to disrupt rail service but if the UPRR Tracy Subdivision branch
 8 line is reopened prior to construction, the continuity of rail traffic could be managed, if needed,
 9 through implementation of Mitigation Measure TRANS-1a, which includes stipulations to coordinate
 10 with rail providers to develop alternative interim transportation modes (e.g., trucks or buses) that
 11 could be used to provide freight and/or passenger service during any longer term railroad closures
 12 and daily construction time windows during which construction is restricted or rail operations
 13 would need to be suspended for any activity within railroad rights of way.

14 **CEQA Conclusion:** Construction of Alternative 5 would not physically cross or require modification
 15 to an existing or proposed railroad. Rather, the water conveyance will cross the BNSF Railway and
 16 Amtrak San Joaquin Line well below grade in a deep bore tunnel. Accordingly, construction would
 17 not be likely to disrupt rail service. However, if the UPRR Tracy Subdivision branch line is reopened
 18 prior to construction, traffic associated with of the Byron Tract forebay may minimally impact rail
 19 service through vehicle crossing. Implementation of Mitigation Measure TRANS-1a would ensure
 20 this impact remains less than significant.

21 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 22 **Plan**

23 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

24 **Impact TRANS-6: Disruption of Transit Service during Construction**

25 **NEPA Effects:** The effect of Alternative 5 on operation of the SCT Link/Delta Route, traffic on SR 12,
 26 and Intercity Greyhound bus lines would be similar to that described for Alternative 1A. The effect
 27 of disruption to transit service during construction would be adverse. Although Mitigation Measures
 28 TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not
 29 solely responsible for the timing, nature, or complete funding of required improvements. If an
 30 improvement identified in the mitigation agreement(s) is not fully funded and constructed before
 31 the project's contribution to the effect is made, an adverse effect in the form of disruptions to transit
 32 service would occur. Therefore, this effect would be adverse.

33 **CEQA Conclusion:** Construction activities associated with Alternative 5 would decrease LOS below
 34 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 6 segments
 35 on SR-12 (see Table 19-8). Accordingly, tunnel construction could significantly affect operation of
 36 the SCT Link/Delta Route, and construction of the shaft adjacent to SR 12 would affect traffic on that
 37 facility. To the extent that other roadways affected by Alternative 5 construction also carry
 38 Greyhound bus lines, those routes may be affected as well. Mitigation Measures TRANS-1a through
 39 TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels. Under
 40 Mitigation Measure TRANS-1a, the BDCP proponents would coordinate with transit providers to
 41 develop, to the extent feasible, daily construction time windows during which transit operations

1 would not be either detoured or significantly slowed, avoiding a substantial disruption of transit
 2 service. Additionally, under Mitigation Measure TRANS-1b, construction traffic would be minimized
 3 around peak periods, to the extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP
 4 proponents would make good faith efforts to enter into mitigation agreements to enhance the
 5 capacity of congested roadway segments, likely reducing associated disruptions to transit service.
 6 However, the BDCP proponents cannot ensure that the improvements will be fully funded or
 7 constructed prior to the project's contribution to the impact. If an improvement identified in the
 8 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
 9 impact is made, a significant impact in the form disruptions to transit service would occur.
 10 Therefore, this impact would be significant and unavoidable. However, such impacts are likely to
 11 occur during the middle of the day because construction traffic would be minimized around peak
 12 periods.

13 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 14 **Plan**

15 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

16 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 17 **Congested Roadway Segments**

18 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

19 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 20 **Agreements to Enhance Capacity of Congested Roadway Segments**

21 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

22 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

23 **NEPA Effects:** The effect of Alternative 5 on bicycle routes along SR 160/River Road would be
 24 substantially less than that identified for Alternative 1A because of the reduction in the number of
 25 intakes. Potential effects along SR 12 would be the same as Alternative 1A (see Table 19-8). The
 26 effect of disruption to bicycle routes during construction would be adverse. Mitigation Measure
 27 TRANS-1a is available to reduce this effect. Under this measure, BDCP proponents would provide
 28 alternate access routes via detours or bridges to maintain continual circulation for local travelers in
 29 and around construction zones, including bicycle riders; provide signage warning of loose gravel,
 30 steel plates, etc. that could be hazardous to road cycling activity on roadways open to bicycle traffic;
 31 provide signage, barricades, and flag people as necessary to slow or detour traffic around
 32 construction sites; and notify the public, including cycling organizations and bike shops, of
 33 construction activities that could affect transportation. Additionally, another project commitment, as
 34 described in Appendix 3B, *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance
 35 recreational access to areas in the vicinity of the proposed intakes, including enhancement of bicycle
 36 and foot access to the Delta and the potential conversion of an abandoned rail line between
 37 Sacramento and Walnut Grove into a bicycle path.

38 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-8) could
 39 temporarily disrupt bicycle routes on SR 160/River Road and potentially on SR 12, resulting in a
 40 significant impact. However, Mitigation Measure TRANS-1a would reduce the severity of this impact
 41 to less-than-significant levels because BDCP proponents would provide alternate access routes via

1 detours or bridges to maintain continual circulation for local travelers in and around construction
 2 zones, including bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could
 3 be hazardous to road cycling activity on roadways open to bicycle traffic; provide signage,
 4 barricades, and flag people as necessary to slow or detour traffic around construction sites; and
 5 notify the public, including cycling organizations and bike shops, of construction activities that could
 6 affect transportation. Additionally, another project commitment, as described in Appendix 3B,
 7 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
 8 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
 9 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
 10 bicycle path. Because implementation of this mitigation measure and project commitment would
 11 avoid a substantial disruption to bicycle facilities as a result of increased roadway traffic and/or
 12 roadway closures, this impact would be less than significant.

13 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 14 **Plan**

15 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

16 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

17 **NEPA Effects:** The effect of maintaining and operating the facilities on roadway operations under
 18 Alternative 5 would be the same as under Alternative 1A (see Tables 19-14, 19-15, and 19-16) but
 19 slightly less in magnitude because only one intake would be operated and maintained and
 20 substantially fewer employee trips would be anticipated. Like Alternative 1A, O&M activities would
 21 occur along the entire alternative alignment. Even assuming the higher employment range in Table
 22 19-16, given the limited number of workers involved and the large number of work sites, it is not
 23 anticipated that routine operations and maintenance activities or major inspections would result in
 24 substantial increases of traffic volumes or roadway congestion. The impact of increased traffic
 25 volumes and delays during operations would not be adverse.

26 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
 27 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
 28 activities or major inspections would result in substantial increases of traffic volumes or roadway
 29 congestion. The impact of increased traffic volumes and delays during operations would therefore
 30 be less than significant. No mitigation is required.

31 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and** 32 **Maintenance**

33 **NEPA Effects:** The effects under Alternative 5 would be similar to Alternative 1A but slightly less in
 34 magnitude because only one intake would be operated and maintained and fewer employee trips
 35 would be anticipated. Impacts on public roadways would be limited to the intake areas and would
 36 not substantially alter traffic patterns. The design and construction of all project components (i.e.,
 37 conveyances, intakes, and forebays) would provide for on-going continuity of all rail operations
 38 following completion of construction. Impediments to boat traffic associated with the intakes would
 39 continue for the life of the project, but would not substantially impact boat passage or usage. The
 40 impact of permanent alteration of transportation patterns during operations would not be adverse.

41 **CEQA Conclusion:** The impact of maintaining and operating the project under Alternative 5 would
 42 be similar to Alternative 1A. Impacts on public roadways would be limited to the intake areas and

1 would not substantially alter traffic patterns. The design and construction of all project components
 2 (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all rail operations
 3 following completion of construction. Impediments to boat traffic associated with the intakes would
 4 continue for the life of the project, but would not substantially impact boat passage or usage.
 5 Accordingly, the impact of permanent alteration of transportation patterns during operations would
 6 be less than significant. No mitigation is required.

7 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

8 **NEPA Effects:** At the program-level of analysis, the impact under Alternative 5 would be similar to
 9 Alternative 1A; however, tidal habitat restoration under CM4 would be limited to 25,000 acres.
 10 Impacts on roadways could result in circulation delays or the inability to maintain adequate
 11 vehicular access in or around restoration or enhancement work zones. Roads and highways in and
 12 around Suisun Marsh and the Yolo Bypass could experience increases in traffic volumes, resulting in
 13 localized congestion and conflicts with local traffic. These roadways could function as haul routes or
 14 to bring construction personnel to the work sites. Maintenance and monitoring of the restoration
 15 areas would also generate some vehicle trips. The effect of increased traffic volumes during
 16 implementation of CM2–CM22 would be adverse. Although TRANS-1a through TRANS-1c would
 17 reduce the severity of this effect, the BDCP proponents are not solely responsible for the timing,
 18 nature, or complete funding of required improvements. If an improvement identified in the
 19 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
 20 effect is made, an adverse effect would occur. Therefore, this effect would be adverse. If, however, all
 21 improvements required to avoid adverse effects prove to be feasible and any necessary agreements
 22 are completed before the project's contribution to the effect is made, effects would not be adverse.

23 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
 24 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
 25 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
 26 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
 27 function as haul routes or to bring construction personnel to the work sites. Maintenance and
 28 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
 29 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
 30 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
 31 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 32 constructed prior to the project's contribution to the impact. If an improvement identified in the
 33 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
 34 impact is made, a significant impact would occur. Therefore, the project's impacts to roadway
 35 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
 36 required to avoid significant impacts prove to be feasible and any necessary agreements are
 37 completed before the project's contribution to the effect is made, impacts would be less than
 38 significant.

39 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 40 **Plan**

41 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

1 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 2 **Congested Roadway Segments**

3 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

4 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 5 **Agreements to Enhance Capacity of Congested Roadway Segments**

6 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

7 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 8 **Conservation Measures with Plans and Policies**

9 **NEPA Effects:** The potential for inconsistencies with plans or polices would be similar to the
 10 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 5
 11 would be compatible with applicable plans and policies related to transportation and circulation.

12 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
 13 and no additional CEQA conclusion is required related to the consistency of the alternative with
 14 relevant plans and polices. The relationship between plans, policies, and regulations and impacts on
 15 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

16 **19.3.3.11 Alternative 6A—Isolated Conveyance with Pipeline/Tunnel and**
 17 **Intakes 1–5 (15,000 cfs; Operational Scenario D)**

18 A total of five intakes would be constructed under Alternative 6A. For the purposes of this analysis,
 19 Alternative 6A was assumed to include Intakes 1–5. This alternative would also include an
 20 intermediate forebay, and the conveyance facility would be a buried pipeline (see Figures 3-2 and 3-
 21 13 in Chapter 3, *Description of Alternatives*).

22 **Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS**
 23 **Conditions**

24 **NEPA Effects:** The estimate of the number of vehicles generated by construction activities for
 25 Alternative 6A would be the same as Alternatives 1A, assuming that discontinuing the use of the
 26 SWP and CVP south Delta export facilities would not generate any significant traffic or close off
 27 existing roadways.

28 As shown in Table 19-8, under BPBG conditions, a total of 23 roadway segments would exceed LOS
 29 for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. As also shown in Table 19-8,
 30 construction associated with Alternative 6A would cause LOS thresholds to be exceeded for at least
 31 1 hour during the 6:00 AM to 7:00 PM analysis period on a total of 33 roadway segments under
 32 BPBGPP conditions (see entries in **bold** type). Alternative 6A would therefore exacerbate an already
 33 unacceptable LOS under BPBG conditions on **10** roadway segments (33 minus the 23 that would
 34 already be operating at an unacceptable LOS under BPBG conditions). Figure 19-3a shows the study
 35 roadway segments that could experience substantial roadway operation impacts.

36 The decrease in LOS below applicable thresholds during construction would be adverse at the
 37 locations identified in Table 19-8 because construction associated with Alternative 6A would cause
 38 LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM
 39 analysis period. Alternative 6A would also exacerbate an already unacceptable LOS under BPBG

1 conditions at 10 roadway segments (33 minus the 23 that would already be operating at an
 2 unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur
 3 throughout the study area, the highest concentration of roadway segments below applicable LOS
 4 threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be
 5 exceeded on several local roadways, include all segments studied in West Sacramento.

6 Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively,
 7 these measures include requirements to avoid or reduce circulation effects, notify the public of
 8 construction activities, provide alternate access routes, require direct haulers to pull over in the
 9 event of an emergency, limit/prohibit the amount of construction activity on congested roadways,
 10 and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity
 11 of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
 12 funding of required improvements. If an improvement that is identified in any mitigation
 13 agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed
 14 before the project's contribution to the effect is made, an adverse effect in the form of unacceptable
 15 LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to
 16 avoid adverse effects prove to be feasible and any necessary agreements are completed before the
 17 project's contribution to the effect is made, effects would not be adverse.

18 **CEQA Conclusion:** Construction under Alternative 6A would add hourly traffic volumes to study
 19 area roadways that would exceed acceptable LOS threshold (Table 19-8). As shown in Table 19-8,
 20 traffic volumes during construction of Alternative 6A would exacerbate already unacceptable LOS
 21 under BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-
 22 1a through TRANS-1c would reduce the severity of this impact, but not to less-than-significant
 23 levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 24 constructed prior to the project's contribution to the impact. If an improvement that is identified in
 25 any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 26 constructed before the project's contribution to the impact is made, a significant impact in the form
 27 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 28 however, all improvements required to avoid significant impacts prove to be feasible and any
 29 necessary agreements are completed before the project's contribution to the effect is made, impacts
 30 would be less than significant.

31 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 32 **Plan**

33 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

34 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 35 **Congested Roadway Segments**

36 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

37 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 38 **Agreements to Enhance Capacity of Congested Roadway Segments**

39 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

1 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
 2 **Conditions**

3 **NEPA Effects:** Construction truck traffic may damage roadway surfaces. During construction,
 4 various materials would be transported to and from the construction areas in load-bearing trucks.
 5 As shown in Table 19-10, construction of Alternative 6A would contribute to further deterioration of
 6 the existing pavement condition, to less than the acceptable PCI or similar applicable threshold (see
 7 Table 19-7), on a total of **43** roadway segments. Damage to roadway pavement is expected
 8 throughout the study area (Figure 19-4a) on various local and state roads, as well as on a few
 9 interstates. The effect of roadway damage to these segments during construction would be adverse.
 10 Mitigation Measures TRANS-2a through TRANS-2c are available to reduce this effect, but not
 11 necessarily to a level that would not be adverse, as the BDCP proponents cannot ensure that the
 12 agreements or encroachment permits will be obtained from the relevant transportation agencies. If
 13 an agreement or encroachment permit is not obtained, an adverse effect in the form of deficient
 14 pavement conditions would occur. Accordingly, this effect could remain adverse. If, however,
 15 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 16 of pavement are obtained and any other necessary agreements are completed, adverse effects could
 17 be avoided.

18 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 19 below acceptable thresholds (Table 19-7) at the 43 locations shown in Table 19-10. The impact of
 20 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
 21 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
 22 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
 23 permits will be obtained from the relevant transportation agencies. If an agreement or
 24 encroachment permit is not obtained, a significant impact in the form of deficient pavement
 25 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 26 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 27 of pavement are obtained and any other necessary agreements are completed, impacts would be
 28 reduced to less than significant.

29 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 30 **Roadway Segments**

31 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

32 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 33 **Roadway Segments**

34 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

35 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
 36 **as Stipulated in Mitigation Agreements or Encroachment Permits**

37 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

1 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
 2 **during Construction**

3 **NEPA Effects:** Alternative 6A would require a heavy volume of materials to be hauled to the
 4 construction work zones, increasing the amount of trucks using the transportation system in the
 5 study area. The increase in heavy construction traffic on local roadways would increase the
 6 potential for safety hazards such as conflicts with recreational and commuter traffic and with
 7 farming operations. The increase in heavy construction traffic using emergency routes could result
 8 in interference with emergency service response times. Emergency routes in the study area are
 9 identified in Table 19-11.

10 The potential for increased safety hazards during construction would be the same under Alternative
 11 6A as Alternative 1A. The effect of increased safety hazards from increased heavy construction
 12 traffic on local roadways and emergency routes identified in Table 19-11 would be adverse.
 13 Although TRANS-1c will reduce the severity of this effect, the BDCP proponents are not solely
 14 responsible for the timing, nature, or complete funding of required improvements. If an
 15 improvement identified in the mitigation agreement(s) is not fully funded and constructed before
 16 the project's contribution to the effect is made, an adverse effect in the form of increased safety
 17 hazards would occur. Accordingly, this effect would be adverse. If, however, all improvements
 18 required to avoid adverse effects prove to be feasible and any necessary agreements are completed
 19 before the project's contribution to the effect is made, effects would not be adverse.

20 **CEQA Conclusion:** Construction of Alternative 6A would increase the amount of trucks using the
 21 transportation system in the study area. This increase in heavy truck traffic could interfere with
 22 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
 23 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
 24 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 25 prior to the project's contribution to the impact. If an improvement identified in the mitigation
 26 agreement(s) is not fully funded and constructed before the project's contribution to the impact is
 27 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
 28 effect would be significant and unavoidable. If, however, all improvements required to avoid
 29 significant impacts prove to be feasible and any necessary agreements are completed before the
 30 project's contribution to the effect is made, impacts would be less than significant.

31 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 32 **Agreements to Enhance Capacity of Congested Roadway Segments**

33 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

34 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

35 **NEPA Effects:** Under Alternative 6A, commercial barges would be used to transport construction
 36 materials and equipment from the ports to temporary barge unloading facilities near construction
 37 sites and some in-water work would occur for construction of the intakes. Locations of temporary
 38 barge unloading facilities and estimates of trips and in-water work are the same as for Alternative
 39 1A. This potential effect is not considered adverse because construction of Alternative 6A would not
 40 require modification to existing deep water channels, interfere with Port of Stockton navigation, or
 41 substantially increase the volume of barge movement within the study area, such that existing
 42 marine traffic would be disrupted (on average, only 1 additional barge trip per day is expected
 43 through the 9-year construction period). Barge routes and landing sites will be selected to maximize

1 continuous waterway access and a minimum waterway width greater than 100 feet. Moreover,
2 Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes stipulations to
3 notify the commercial and leisure boating community of proposed barge operations in the
4 waterways.

5 **CEQA Conclusion:** Construction of Alternative 6A would not require modification to existing deep
6 water channels, interfere with Port of Stockton navigation, or substantially increase the volume of
7 barge movement within the study area such that existing marine traffic would be disrupted (on
8 average, only 1 additional barge trip per day is expected through the 9-year construction period).
9 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
10 stipulations to notify the commercial and leisure boating community of proposed barge operations
11 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would
12 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
13 mitigation is required.

14 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
15 **Plan**

16 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

17 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

18 **NEPA Effects:** The effects under Alternative 6A on the BNSF Railway and Amtrak San Joaquin Line
19 and the Union Pacific Railroad--Tracy Subdivision would be similar to that described for Alternative
20 1A. Construction would not be likely to disrupt rail service but if the UPRR Tracy Subdivision branch
21 line is reopened prior to construction, the continuity of rail traffic could be managed, if needed,
22 through implementation of Mitigation Measure TRANS-1a, which includes stipulations to coordinate
23 with rail providers to develop alternative interim transportation modes (e.g., trucks or buses) that
24 could be used to provide freight and/or passenger service during any longer term railroad closures
25 and daily construction time windows during which construction is restricted or rail operations
26 would need to be suspended for any activity within railroad rights of way.

27 **CEQA Conclusion:** Construction of Alternative 6A would not physically cross or require modification
28 to an existing or proposed railroad. Rather, the water conveyance will cross the BNSF Railway and
29 Amtrak San Joaquin Line well below grade in a deep bore tunnel. Accordingly, construction would
30 not be likely to disrupt rail service. However, if the UPRR Tracy Subdivision branch line is reopened
31 prior to construction, traffic associated with of the Byron Tract forebay may minimally impact rail
32 service through vehicle crossing. Implementation of Mitigation Measure TRANS-1a would ensure
33 this impact remains less than significant.

34 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
35 **Plan**

36 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

37 **Impact TRANS-6: Disruption of Transit Service during Construction**

38 **NEPA Effects:** The effect of Alternative 6A on operation of the SCT Link/Delta Route, traffic on SR 12,
39 and Intercity Greyhound bus lines would be similar to that described for Alternative 1A. The effect
40 of disruption to transit service during construction would be adverse. Although Mitigation Measures

1 TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not
 2 solely responsible for the timing, nature, or complete funding of required improvements. If an
 3 improvement identified in the mitigation agreement(s) is not fully funded and constructed before
 4 the project's contribution to the effect is made, an adverse effect in the form of disruptions to transit
 5 service would occur. Therefore, this effect would be adverse.

6 **CEQA Conclusion:** Construction activities associated with Alternative 6A would decrease LOS below
 7 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 6 segments
 8 on SR-12 (see Table 19-8). Accordingly, tunnel construction could significantly affect operation of
 9 the SCT Link/Delta Route, and construction of the shaft adjacent to SR 12 would affect traffic on that
 10 facility. To the extent that other roadways affected by Alternative 6A construction also carry
 11 Greyhound bus lines, those routes may be affected as well. Mitigation Measures TRANS-1a through
 12 TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels. Under
 13 Mitigation Measure TRANS-1a, the BDCP proponents would coordinate with transit providers to
 14 develop, to the extent feasible, daily construction time windows during which transit operations
 15 would not be either detoured or significantly slowed, avoiding a substantial disruption of transit
 16 service. Additionally, under Mitigation Measure TRANS-1b, construction traffic would be minimized
 17 around peak periods, to the extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP
 18 proponents would make good faith efforts to enter into mitigation agreements to enhance the
 19 capacity of congested roadway segments, likely reducing associated disruptions to transit service.
 20 However, the BDCP proponents cannot ensure that the improvements will be fully funded or
 21 constructed prior to the project's contribution to the impact. If an improvement identified in the
 22 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
 23 impact is made, a significant impact in the form disruptions to transit service would occur.
 24 Therefore, this impact would be significant and unavoidable. However, such impacts are likely to
 25 occur during the middle of the day because construction traffic would be minimized around peak
 26 periods.

27 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 28 **Plan**

29 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

30 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 31 **Congested Roadway Segments**

32 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

33 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 34 **Agreements to Enhance Capacity of Congested Roadway Segments**

35 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

36 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

37 **NEPA Effects:** The effect of Alternative 6A on bicycle routes along SR 160/River Road and
 38 potentially along SR 12 would be similar to that described for Alternative 1A (see Table 19-8). The
 39 effect of disruption to bicycle routes during construction would be adverse. Mitigation Measure
 40 TRANS-1a is available to reduce this effect. Under this measure, BDCP proponents would provide
 41 alternate access routes via detours or bridges to maintain continual circulation for local travelers in

1 and around construction zones, including bicycle riders; provide signage warning of loose gravel,
 2 steel plates, etc. that could be hazardous to road cycling activity on roadways open to bicycle traffic;
 3 provide signage, barricades, and flag people as necessary to slow or detour traffic around
 4 construction sites; and notify the public, including cycling organizations and bike shops, of
 5 construction activities that could affect transportation. Additionally, another project commitment, as
 6 described in Appendix 3B, *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance
 7 recreational access to areas in the vicinity of the proposed intakes, including enhancement of bicycle
 8 and foot access to the Delta and the potential conversion of an abandoned rail line between
 9 Sacramento and Walnut Grove into a bicycle path.

10 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-8) could
 11 temporarily disrupt bicycle routes on SR 160/River Road and potentially on SR 12, resulting in a
 12 significant impact. However, Mitigation Measure TRANS-1a would reduce the severity of this impact
 13 to less-than-significant levels because BDCP proponents would provide alternate access routes via
 14 detours or bridges to maintain continual circulation for local travelers in and around construction
 15 zones, including bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could
 16 be hazardous to road cycling activity on roadways open to bicycle traffic; provide signage,
 17 barricades, and flag people as necessary to slow or detour traffic around construction sites; and
 18 notify the public, including cycling organizations and bike shops, of construction activities that could
 19 affect transportation. Additionally, another project commitment, as described in Appendix 3B,
 20 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
 21 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
 22 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
 23 bicycle path. Because implementation of this mitigation measure and project commitment would
 24 avoid a substantial disruption to bicycle facilities as a result of increased roadway traffic and/or
 25 roadway closures, this impact would be less than significant.

26 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 27 **Plan**

28 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

29 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

30 **NEPA Effects:** The effect of maintaining and operating the facilities roadway operations under
 31 Alternative 6A would be the same as under Alternative 1A (see Tables 19-14, 19-15, and 19-16).
 32 Like Alternative 1A, O&M activities would occur along the entire alternative alignment. Even
 33 assuming the higher employment range in Table 19-16, given the limited number of workers
 34 involved and the large number of work sites, it is not anticipated that routine operations and
 35 maintenance activities or major inspections would result in substantial increases of traffic volumes
 36 or roadway congestion. The effect of increased traffic volumes and delays during operations would
 37 not be adverse.

38 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
 39 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
 40 activities or major inspections would result in substantial increases of traffic volumes or roadway
 41 congestion. The impact of increased traffic volumes and delays during operations would therefore
 42 be less than significant. No mitigation is required.

1 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and**
2 **Maintenance**

3 **NEPA Effects:** The effect of maintaining and operating the project under Alternative 6A would be
4 similar to Alternative 1A. Impacts on public roadways would be limited to the intake areas and
5 would not substantially alter traffic patterns. The design and construction of all project components
6 (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all rail operations
7 following completion of construction. Impediments to boat traffic associated with the intakes would
8 continue for the life of the project, but would not substantially impact boat passage or usage. The
9 effect of permanent alteration of transportation patterns during operations would not be adverse.

10 **CEQA Conclusion:** The impact of maintaining and operating the project under Alternative 6A would
11 be similar to Alternative 1A. Impacts on public roadways would be limited to the intake areas and
12 would not substantially alter traffic patterns. The design and construction of all project components
13 (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all rail operations
14 following completion of construction. Impediments to boat traffic associated with the intakes would
15 continue for the life of the project, but would not substantially impact boat passage or usage.
16 Accordingly, the impact of permanent alteration of transportation patterns during operations would
17 be less than significant. No mitigation is required.

18 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

19 **NEPA Effects:** At the program-level of analysis, the impact under Alternative 6A would be the same
20 as Alternative 1A because the acreage of conservation is identical. Impacts on roadways could result
21 in circulation delays or the inability to maintain adequate vehicular access in or around restoration
22 or enhancement work zones. Roads and highways in and around Suisun Marsh and the Yolo Bypass
23 could experience increases in traffic volumes, resulting in localized congestion and conflicts with
24 local traffic. These roadways could function as haul routes or to bring construction personnel to the
25 work sites. Maintenance and monitoring of the restoration areas would also generate some vehicle
26 trips. The effect of increased traffic volumes during implementation of CM2–CM22 would be
27 adverse. Although TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP
28 proponents are not solely responsible for the timing, nature, or complete funding of required
29 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
30 constructed before the project's contribution to the effect is made, an adverse effect would occur.
31 Therefore, this effect would be adverse. If, however, all improvements required to avoid adverse
32 effects prove to be feasible and any necessary agreements are completed before the project's
33 contribution to the effect is made, effects would not be adverse.

34 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
35 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
36 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
37 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
38 function as haul routes or to bring construction personnel to the work sites. Maintenance and
39 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
40 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
41 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
42 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
43 constructed prior to the project's contribution to the impact. If an improvement identified in the
44 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the

1 impact is made, a significant impact would occur. Therefore, the project's impacts to roadway
 2 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
 3 required to avoid significant impacts prove to be feasible and any necessary agreements are
 4 completed before the project's contribution to the effect is made, impacts would be less than
 5 significant.

6 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 7 **Plan**

8 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

9 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 10 **Congested Roadway Segments**

11 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

12 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 13 **Agreements to Enhance Capacity of Congested Roadway Segments**

14 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

15 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 16 **Conservation Measures with Plans and Policies**

17 **NEPA Effects:** The potential for inconsistencies with plans or policies would be similar to the
 18 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 6A
 19 would be compatible with applicable plans and policies related to transportation and circulation.

20 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
 21 and no additional CEQA conclusion is required related to the consistency of the alternative with
 22 relevant plans and policies. The relationship between plans, policies, and regulations and impacts on
 23 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

24 **19.3.3.12 Alternative 6B—Isolated Conveyance with East Alignment and**
 25 **Intakes 1–5 (15,000 cfs; Operational Scenario D)**

26 During construction, temporary impacts on roadways under Alternative 6B would be similar to
 27 those described for Alternative 1B. A total of five intakes on the east bank of the Sacramento River
 28 would be constructed under Alternative 6B. For the purposes of this analysis, Alternative 6B was
 29 assumed to include Intakes 1–5. This alternative would also include an intermediate forebay, and
 30 the conveyance facility would be a canal on the east side of the Sacramento River (see Figures 3-4
 31 and 3-14 in Chapter 3, *Description of Alternatives*).

32 **Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS**
 33 **Conditions**

34 **NEPA Effects:** The estimate of the number of vehicles generated by construction activities for
 35 Alternative 6B would be similar to Alternative 1B (assuming that discontinuing the use of the SWP
 36 and CVP south Delta export facilities would not generate any significant traffic or close off existing
 37 roadways).

1 As shown in Table 19-17, under BPBG conditions, a total of 19 roadway segments would exceed LOS
2 for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. As also shown in Table 19-17,
3 construction associated with Alternative 6B would cause LOS thresholds to be exceeded for at least
4 1 hour during the 6:00 AM to 7:00 PM analysis period on a total of 39 roadway segments under
5 BPBGPP conditions (see entries in **bold type**). Alternative 6B would therefore exacerbate an already
6 unacceptable LOS under BPBG conditions on **20** roadway segments (39 minus the 19 that would
7 already be operating at an unacceptable LOS under BPBG conditions). Figure 19-3a shows the study
8 roadway segments that could experience substantial roadway operation effects.

9 The decrease in LOS below applicable thresholds during construction would be adverse at the
10 locations identified in Table 19-17 because construction associated with Alternative 2B would cause
11 LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM
12 analysis period. Alternative 6B would also exacerbate an already unacceptable LOS under BPBG
13 conditions at 20 roadway segments (39 minus the 19 that would already be operating at an
14 unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur
15 throughout the study area, the highest concentration of roadway segments below applicable LOS
16 threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be
17 exceeded on several local roadways.

18 Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively,
19 these measures include requirements to avoid or reduce circulation effects, notify the public of
20 construction activities, provide alternate access routes, require direct haulers to pull over in the
21 event of an emergency, limit/prohibit the amount of construction activity on congested roadways,
22 and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity
23 of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
24 funding of required improvements. If an improvement that is identified in any mitigation
25 agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed
26 before the project's contribution to the effect is made, an adverse effect in the form of unacceptable
27 LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to
28 avoid adverse effects prove to be feasible and any necessary agreements are completed before the
29 project's contribution to the effect is made, effects would not be adverse.

30 **CEQA Conclusion:** Construction under Alternative 6B would add hourly traffic volumes to study
31 area roadways that would exceed acceptable LOS threshold (Table 19-17). As shown in Table 19-17,
32 traffic volumes during construction of Alternative 2B would exacerbate already unacceptable LOS
33 under BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-
34 1a through TRANS-1c would reduce the severity of this impact, but not to less-than-significant
35 levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
36 constructed prior to the project's contribution to the impact. If an improvement that is identified in
37 any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
38 constructed before the project's contribution to the impact is made, a significant impact in the form
39 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
40 however, all improvements required to avoid significant impacts prove to be feasible and any
41 necessary agreements are completed before the project's contribution to the effect is made, impacts
42 would be less than significant.

1 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 2 **Plan**

3 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

4 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 5 **Congested Roadway Segments**

6 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

7 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 8 **Agreements to Enhance Capacity of Congested Roadway Segments**

9 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

10 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
 11 **Conditions**

12 **NEPA Effects:** The potential for damage to the roadway surface would be the same under Alternative
 13 6B as Alternative 1B (assuming that discontinuing the use of the SWP and CVP south Delta export
 14 facilities would not generate any significant traffic). As shown in Table 19-18, construction of
 15 Alternative 6B would contribute to further deterioration of the existing pavement condition, to less
 16 than the acceptable PCI or similar applicable threshold (see Table 19-7), on a total of **46** roadway
 17 segments. Damage to roadway pavement is expected throughout the study area (Figure 19-4a) on
 18 various local and state roads, as well as on a few interstates. The effect of roadway damage to these
 19 segments during construction would be adverse. Mitigation Measures TRANS-2a through TRANS-2c
 20 are available to reduce this effect, but not necessarily to a level that would not be adverse, as the
 21 BDCP proponents cannot ensure that the agreements or encroachment permits will be obtained
 22 from the relevant transportation agencies. If an agreement or encroachment permit is not obtained,
 23 an adverse effect in the form of deficient pavement conditions would occur. Accordingly, this effect
 24 could remain adverse. If, however, mitigation agreement(s) or encroachment permit(s) providing
 25 for the improvement or replacement of pavement are obtained and any other necessary agreements
 26 are completed, adverse effects could be avoided.

27 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 28 below acceptable thresholds (Table 19-7) at the 46 locations shown in Table 19-18. The impact of
 29 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
 30 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
 31 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
 32 permits will be obtained from the relevant transportation agencies. If an agreement or
 33 encroachment permit is not obtained, a significant impact in the form of deficient pavement
 34 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 35 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 36 of pavement are obtained and any other necessary agreements are completed, impacts would be
 37 reduced to less than significant.

38 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 39 **Roadway Segments**

40 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

1 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 2 **Roadway Segments**

3 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

4 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
 5 **as Stipulated in Mitigation Agreements or Encroachment Permits**

6 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

7 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
 8 **during Construction**

9 **NEPA Effects:** Alternative 6B would require a heavy volume of materials to be hauled to the
 10 construction work zones, increasing the amount of trucks using the transportation system in the
 11 study area. The increase in heavy construction traffic on local roadways would increase the
 12 potential for safety hazards such as conflicts with recreational and commuter traffic and with
 13 farming operations. The increase in heavy construction traffic using emergency routes could result
 14 in interference with emergency service response times. Emergency routes in the study area are
 15 identified in Table 19-11.

16 The potential for increased safety hazards during construction would be the same under Alternative
 17 6B as Alternative 1B (assuming that discontinuing the use of the SWP and CVP south Delta export
 18 facilities would not generate any significant traffic or close off existing roadways). The effect of
 19 increased safety hazards from increased heavy construction traffic on local roadways and
 20 emergency routes would be adverse. Although TRANS-1c will reduce the severity of this effect, the
 21 BDCP proponents are not solely responsible for the timing, nature, or complete funding of required
 22 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
 23 constructed before the project's contribution to the effect is made, an adverse effect in the form of
 24 increased safety hazards would occur. Accordingly, this effect would be adverse. If, however, all
 25 improvements required to avoid adverse effects prove to be feasible and any necessary agreements
 26 are completed before the project's contribution to the effect is made, effects would not be adverse.

27 **CEQA Conclusion:** Construction of Alternative 6B would increase the amount of trucks using the
 28 transportation system in the study area. This increase in heavy truck traffic could interfere with
 29 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
 30 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
 31 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 32 prior to the project's contribution to the impact. If an improvement identified in the mitigation
 33 agreement(s) is not fully funded and constructed before the project's contribution to the impact is
 34 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
 35 effect would be significant and unavoidable. If, however, all improvements required to avoid
 36 significant impacts prove to be feasible and any necessary agreements are completed before the
 37 project's contribution to the effect is made, impacts would be less than significant.

38 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 39 **Agreements to Enhance Capacity of Congested Roadway Segments**

40 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

1 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

2 **NEPA Effects:** Under Alternative 6B, commercial barges would be used to transport construction
 3 materials and equipment from the ports to a temporary barge unloading facility and some in-water
 4 work will occur for construction of the intakes. Locations of temporary barge unloading facilities
 5 and estimates of trips and in-water work are the same as for Alternative 1B. This potential effect is
 6 not considered adverse because construction of Alternative 6B would not substantially increase the
 7 volume of barge movement within the study area, such that existing marine traffic would be
 8 disrupted (on average, only 2 additional barge trips per day are expected through the 9-year
 9 construction period). Barge routes and landing sites will be selected to maximize continuous
 10 waterway access and a minimum waterway width greater than 100 feet. Moreover, Mitigation
 11 Measure TRANS-1a would reduce any potential disruptions as it includes stipulations to notify the
 12 commercial and leisure boating community of proposed barge operations in the waterways.

13 **CEQA Conclusion:** Construction of Alternative 6B would not substantially increase the volume of
 14 barge movement within the study area such that existing marine traffic would be disrupted (on
 15 average, only 2 additional barge trips per day are expected through the 9-year construction period).
 16 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
 17 stipulations to notify the commercial and leisure boating community of proposed barge operations
 18 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would
 19 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
 20 mitigation is required.

21 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 22 **Plan**

23 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

24 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

25 **NEPA Effects:** The potential for Alternative 6B to disrupt rail service on the UPRR Tracy Subdivision
 26 branch line and BNSF/Amtrak railroad operations would be similar to the effect under Alternative
 27 1B. (See Table 19-19 for construction impacts on rail lines). The effect of disruption to rail traffic
 28 during construction would be adverse. Mitigation Measure TRANS-1a, which includes stipulations to
 29 coordinate with rail providers to develop alternative interim transportation modes (e.g., trucks or
 30 buses) that could be used to provide freight and/or passenger service during any longer term
 31 railroad closures and daily construction time windows during which construction is restricted or
 32 rail operations would need to be suspended for any activity within railroad rights of way is available
 33 to reduce the effect.

34 **CEQA Conclusion:** Construction of east canal siphons may temporarily affect BNSF/Amtrak railroad
 35 operations through physical railroad crosses. If the UPRR Tracy Subdivision branch line is reopened
 36 prior to construction, traffic associated with of the Byron Tract forebay may minimally impact rail
 37 service through vehicle crossing. This is a potentially significant impact. Implementation of
 38 Mitigation Measure TRANS-1a would reduce this impact to a less-than-significant level.

39 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 40 **Plan**

41 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

1 **Impact TRANS-6: Disruption of Transit Service during Construction**

2 **NEPA Effects:** The effect of Alternative 6B on operation of the SCT Link/Delta Route, traffic on SR 12,
3 and Intercity Greyhound bus lines would be similar to that described for Alternative 1B. The effect of
4 disruption to transit service during construction would be adverse. Although Mitigation Measures
5 TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not
6 solely responsible for the timing, nature, or complete funding of required improvements. If an
7 improvement identified in the mitigation agreement(s) is not fully funded and constructed before
8 the project's contribution to the effect is made, an adverse effect in the form of disruptions to transit
9 service would occur. Therefore, this effect would be adverse.

10 **CEQA Conclusion:** Construction activities associated with Alternative 6B would decrease LOS below
11 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 8 segments
12 on SR-12 (see Table 19-17). Accordingly, construction could significantly affect operation of the SCT
13 Link/Delta Route. To the extent that other roadways affected by Alternative 6B construction also
14 carry Greyhound bus lines, those routes may be affected as well. Mitigation Measures TRANS-1a
15 through TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels.
16 Under Mitigation Measure TRANS-1a, the BDCP proponents would coordinate with transit providers
17 to develop, to the extent feasible, daily construction time windows during which transit operations
18 would not be either detoured or significantly slowed, avoiding a substantial disruption of transit
19 service. Additionally, under Mitigation Measure TRANS-1b, construction traffic would be minimized
20 around peak periods, to the extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP
21 proponents would make good faith efforts to enter into mitigation agreements to enhance the
22 capacity of congested roadway segments, likely reducing associated disruptions to transit service.
23 However, the BDCP proponents cannot ensure that the improvements will be fully funded or
24 constructed prior to the project's contribution to the impact. If an improvement identified in the
25 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
26 impact is made, a significant impact in the form disruptions to transit service would occur.
27 Therefore, this impact would be significant and unavoidable. However, such impacts are likely to
28 occur during the middle of the day because construction traffic would be minimized around peak
29 periods.

30 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 31 **Plan**

32 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

33 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on** 34 **Congested Roadway Segments**

35 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

36 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation** 37 **Agreements to Enhance Capacity of Congested Roadway Segments**

38 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

1 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

2 **NEPA Effects:** The potential for Alternative 6B to interfere with bicycle routes along SR 12 would be
 3 similar to the effect under Alternative 1B, assuming that discontinuing the use of the SWP and CVP
 4 south Delta export facilities would not generate any significant traffic or close off existing roadways
 5 (see Table 19-17). The effect of disruption to bicycle routes during construction would be adverse.
 6 Mitigation Measure TRANS-1a is available to reduce this effect. Under this measure, BDCP
 7 proponents would provide alternate access routes via detours or bridges to maintain continual
 8 circulation for local travelers in and around construction zones, including bicycle riders; provide
 9 signage warning of loose gravel, steel plates, etc. that could be hazardous to road cycling activity on
 10 roadways open to bicycle traffic; provide signage, barricades, and flag people as necessary to slow or
 11 detour traffic around construction sites; and notify the public, including cycling organizations and
 12 bike shops, of construction activities that could affect transportation. Additionally, another project
 13 commitment, as described in Appendix 3B, *Environmental Commitments*, and Chapter 15, *Recreation*,
 14 could enhance recreational access to areas in the vicinity of the proposed intakes, including
 15 enhancement of bicycle and foot access to the Delta and the potential conversion of an abandoned
 16 rail line between Sacramento and Walnut Grove into a bicycle path.

17 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-17) could
 18 interfere with bicycle routes along SR 12, resulting in a significant impact. However, Mitigation
 19 Measure TRANS-1a would reduce the severity of this impact to less-than-significant levels because
 20 BDCP proponents would provide alternate access routes via detours or bridges to maintain
 21 continual circulation for local travelers in and around construction zones, including bicycle riders;
 22 provide signage warning of loose gravel, steel plates, etc. that could be hazardous to road cycling
 23 activity on roadways open to bicycle traffic; provide signage, barricades, and flag people as
 24 necessary to slow or detour traffic around construction sites; and notify the public, including cycling
 25 organizations and bike shops, of construction activities that could affect transportation. Additionally,
 26 another project commitment, as described in Appendix 3B, *Environmental Commitments*, and
 27 Chapter 15, *Recreation*, could enhance recreational access to areas in the vicinity of the proposed
 28 intakes, including enhancement of bicycle and foot access to the Delta and the potential conversion
 29 of an abandoned rail line between Sacramento and Walnut Grove into a bicycle path. Because
 30 implementation of this mitigation measure and project commitment would avoid a substantial
 31 disruption to bicycle facilities as a result of increased roadway traffic and/or roadway closures, this
 32 impact would be less than significant.

33 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 34 **Plan**

35 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

36 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

37 **NEPA Effects:** The effect of maintaining and operating the facilities roadway operations under
 38 Alternative 6B would be similar to Alternative 1B. Like Alternative 1B, O&M activities would occur
 39 along the entire alternative alignment. Even assuming the higher employment range in Table 19-16,
 40 given the limited number of workers involved and the large number of work sites, it is not
 41 anticipated that routine operations and maintenance activities or major inspections would result in
 42 substantial increases of traffic volumes or roadway congestion. The effect of increased traffic
 43 volumes and delays during operations would not be adverse.

1 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
2 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
3 activities or major inspections would result in substantial increases of traffic volumes or roadway
4 congestion. The impact of increased traffic volumes and delays during operations would therefore
5 be less than significant. No mitigation is required.

6 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and** 7 **Maintenance**

8 **NEPA Effects:** The effect of maintaining and operating the facilities under Alternative 6B would be
9 similar to Alternative 1B. Roadway realignment would be necessary and multiple bridges would be
10 constructed across the alignment to maintain connectivity. Alternative 6B would intersect several
11 public roadways, state routes, and one railroad requiring bridges. The design and construction of all
12 project components (i.e., conveyances, intakes, and forebays) would provide for on-going continuity
13 of all transportation facilities following completion of construction. Impediments to boat traffic
14 associated with the intakes would continue for the life of the project, but would not substantially
15 impact boat passage or usage. The effect of permanent alteration of transportation patterns during
16 operations would not be adverse.

17 **CEQA Conclusion:** The impact of maintaining and operating the project under Alternative 6B would
18 be similar to Alternative 1B. Roadway realignment would be necessary and multiple bridges would
19 be constructed across the alignment to maintain connectivity. Alternative 6B would intersect several
20 public roadways, state routes, and one railroad requiring bridges. The design and construction of all
21 project components (i.e., conveyances, intakes, and forebays) would provide for on-going continuity
22 of all transportation facilities following completion of construction. Impediments to boat traffic
23 associated with the intakes would continue for the life of the project, but would not substantially
24 impact boat passage or usage. Accordingly, the impact of permanent alteration of transportation
25 patterns during operations would be less than significant. No mitigation is required.

26 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

27 **NEPA Effects:** At the program-level of analysis, assuming that discontinuing the use of the SWP and
28 CVP south Delta export facilities would not generate any significant traffic or close off existing
29 roadways, the impact under Alternative 6B would be the same as Alternative 1B because the acreage
30 of conservation is identical. Impacts on roadways could result in circulation delays or the inability to
31 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
32 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
33 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
34 function as haul routes or to bring construction personnel to the work sites. Maintenance and
35 monitoring of the restoration areas would also generate some vehicle trips. The effect of increased
36 traffic volumes during implementation of CM2–CM22 would be adverse. Although TRANS-1a
37 through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not solely
38 responsible for the timing, nature, or complete funding of required improvements. If an
39 improvement identified in the mitigation agreement(s) is not fully funded and constructed before
40 the project's contribution to the effect is made, an adverse effect would occur. Therefore, this effect
41 would be adverse. If, however, all improvements required to avoid adverse effects prove to be
42 feasible and any necessary agreements are completed before the project's contribution to the effect
43 is made, effects would not be adverse.

1 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
 2 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
 3 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
 4 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
 5 function as haul routes or to bring construction personnel to the work sites. Maintenance and
 6 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
 7 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
 8 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
 9 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 10 constructed prior to the project’s contribution to the impact. If an improvement identified in the
 11 mitigation agreement(s) is not fully funded and constructed before the project’s contribution to the
 12 impact is made, a significant impact would occur. Therefore, the project’s impacts to roadway
 13 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
 14 required to avoid significant impacts prove to be feasible and any necessary agreements are
 15 completed before the project’s contribution to the effect is made, impacts would be less than
 16 significant.

17 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 18 **Plan**

19 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

20 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 21 **Congested Roadway Segments**

22 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

23 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 24 **Agreements to Enhance Capacity of Congested Roadway Segments**

25 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

26 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 27 **Conservation Measures with Plans and Policies**

28 **NEPA Effects:** The potential for inconsistencies with plans or polices would be similar to the
 29 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 6B
 30 would be compatible with applicable plans and policies related to transportation and circulation.

31 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
 32 and no additional CEQA conclusion is required related to the consistency of the alternative with
 33 relevant plans and polices. The relationship between plans, policies, and regulations and impacts on
 34 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

35 **19.3.3.13 Alternative 6C—Isolated Conveyance with West Alignment and**
 36 **Intakes W1–W5 (15,000 cfs; Operational Scenario D)**

37 A total of five intakes would be constructed under Alternative 6C. They would be sited on the west
 38 bank of the Sacramento River, directly opposite the locations identified for the tunnel and east canal
 39 alignments. This alternative would also include an intermediate forebay, and the conveyance facility

1 would be a canal and buried pipeline (see Figures 3-6 and 3-15 in Chapter 3, *Description of*
2 *Alternatives*).

3 **Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS** 4 **Conditions**

5 **NEPA Effects:** The estimate of the number of vehicles generated by construction activities for
6 Alternative 6C would be similar to Alternative 1C. As shown in Table 19-21, under BPBG conditions,
7 a total of 19 roadway segments would exceed LOS for at least 1 hour during the 6:00 AM to 7:00 PM
8 analysis period. As also shown in Table 19-8, construction associated with Alternative 6C would
9 cause LOS thresholds to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM analysis
10 period on a total of 55 roadway segments under BPBGPP conditions (see entries in **bold** type).
11 Alternative 6C would therefore exacerbate an already unacceptable LOS under BPBG conditions on
12 **37** roadway segments (56 minus the 19 that would already be operating at an unacceptable LOS
13 under BPBG conditions). Figure 19-3a above shows the study roadway segments that could
14 experience substantial roadway operation effects.

15 The decrease in LOS below applicable thresholds during construction would be adverse at the
16 locations identified in Table 19-21 because construction associated with Alternative 6C would cause
17 LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM
18 analysis period. Alternative 6C would also exacerbate an already unacceptable LOS under BPBG
19 conditions at **37** roadway segments (56 minus the 19 that would already be operating at an
20 unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur
21 throughout the study area, the highest concentration of roadway segments below applicable LOS
22 threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be
23 exceeded on several local roadways, including all segments studied in West Sacramento and Yolo
24 County.

25 Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively,
26 these measures include requirements to avoid or reduce circulation effects, notify the public of
27 construction activities, provide alternate access routes, require direct haulers to pull over in the
28 event of an emergency, limit/prohibit the amount of construction activity on congested roadways,
29 and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity
30 of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
31 funding of required improvements. If an improvement that is identified in any mitigation
32 agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed
33 before the project's contribution to the effect is made, an adverse effect in the form of unacceptable
34 LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to
35 avoid adverse effects prove to be feasible and any necessary agreements are completed before the
36 project's contribution to the effect is made, effects would not be adverse.

37 **CEQA Conclusion:** Construction under Alternative 6C would add hourly traffic volumes to study area
38 roadways that would exceed acceptable LOS threshold (Table 19-21). As shown in Table 19-21,
39 traffic volumes during construction of Alternative 6C would exacerbate already unacceptable LOS
40 under BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-
41 1a through TRANS-1c would reduce the severity of this impact, but not to less-than-significant
42 levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
43 constructed prior to the project's contribution to the impact. If an improvement that is identified in
44 any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and

1 constructed before the project's contribution to the impact is made, a significant impact in the form
 2 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 3 however, all improvements required to avoid significant impacts prove to be feasible and any
 4 necessary agreements are completed before the project's contribution to the effect is made, impacts
 5 would be less than significant.

6 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 7 **Plan**

8 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

9 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 10 **Congested Roadway Segments**

11 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

12 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 13 **Agreements to Enhance Capacity of Congested Roadway Segments**

14 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

15 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
 16 **Conditions**

17 **NEPA Effects:** The potential for damage to road surfaces during construction would be the same
 18 under Alternative 6C as Alternative 1C (assuming that discontinuing the use of the SWP and CVP
 19 south Delta export facilities would not generate any significant traffic or close off existing
 20 roadways). As shown in Table 19-22, Alternative 1C would cause pavement condition thresholds
 21 (see Table 19-7), on a total of 43 roadway segments. Damage to roadway pavement is expected
 22 throughout the study area (Figure 19-4a) on various local and state roads, as well as on a few
 23 interstates. The effect of roadway damage to these segments during construction would be adverse.
 24 Mitigation Measures TRANS-2a through TRANS-2c are available to reduce this effect, but not
 25 necessarily to a level that would not be adverse, as the BDCP proponents cannot ensure that the
 26 agreements or encroachment permits will be obtained from the relevant transportation agencies. If
 27 an agreement or encroachment permit is not obtained, an adverse effect in the form of deficient
 28 pavement conditions would occur. Accordingly, this effect could remain adverse. If, however,
 29 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 30 of pavement are obtained and any other necessary agreements are completed, adverse effects could
 31 be avoided.

32 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 33 below acceptable thresholds (Table 19-7) at the 43 locations shown in Table 19-22. The impact of
 34 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
 35 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
 36 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
 37 permits will be obtained from the relevant transportation agencies. If an agreement or
 38 encroachment permit is not obtained, a significant impact in the form of deficient pavement
 39 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 40 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement

1 of pavement are obtained and any other necessary agreements are completed, impacts would be
2 reduced to less than significant.

3 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
4 **Roadway Segments**

5 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

6 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
7 **Roadway Segments**

8 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

9 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
10 **as Stipulated in Mitigation Agreements or Encroachment Permits**

11 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

12 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
13 **during Construction**

14 **NEPA Effects:** Alternative 6C would require a heavy volume of materials to be hauled to the
15 construction work zones, increasing the amount of trucks using the transportation system in the
16 study area. The increase in heavy construction traffic on local roadways would increase the
17 potential for safety hazards such as conflicts with recreational and commuter traffic and with
18 farming operations. The increase in heavy construction traffic using emergency routes could result
19 in interference with emergency service response times. Emergency routes in the study area are
20 identified in Table 19-11.

21 The potential to increase safety hazards during construction would be the same under Alternative
22 6C as Alternative 1C (assuming that discontinuing the use of the SWP and CVP south Delta export
23 facilities would not generate any significant traffic or close off existing roadways). The effect of
24 increased safety hazards from increased heavy construction traffic on local roadways and
25 emergency routes would be adverse. Although TRANS-1c will reduce the severity of this effect, the
26 BDCP proponents are not solely responsible for the timing, nature, or complete funding of required
27 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
28 constructed before the project's contribution to the effect is made, an adverse effect in the form of
29 increased safety hazards would occur. Accordingly, this effect would be adverse. If, however, all
30 improvements required to avoid adverse effects prove to be feasible and any necessary agreements
31 are completed before the project's contribution to the effect is made, effects would not be adverse.

32 **CEQA Conclusion:** Construction of Alternative 6C would increase the amount of trucks using the
33 transportation system in the study area. This increase in heavy truck traffic could interfere with
34 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
35 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
36 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
37 prior to the project's contribution to the impact. If an improvement identified in the mitigation
38 agreement(s) is not fully funded and constructed before the project's contribution to the impact is
39 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
40 effect would be significant and unavoidable. If, however, all improvements required to avoid

1 significant impacts prove to be feasible and any necessary agreements are completed before the
2 project's contribution to the effect is made, impacts would be less than significant.

3 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
4 **Agreements to Enhance Capacity of Congested Roadway Segments**

5 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

6 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

7 **NEPA Effects:** Under Alternative 6C, commercial barges would be used to transport construction
8 materials and equipment from the ports to a temporary barge unloading facility and some in-water
9 work would occur for construction of the intakes. Locations of temporary barge unloading facilities
10 and estimates of trips and in-water work are the same as for Alternative 1C. This potential effect is
11 not considered adverse because construction of Alternative 6C would not substantially increase the
12 volume of barge movement within the study area, such that existing marine traffic would be
13 disrupted (on average, only 2 additional barge trips per day are expected through the 9-year
14 construction period). Barge routes and landing sites will be selected to maximize continuous
15 waterway access and a minimum waterway width greater than 100 feet. Moreover, Mitigation
16 Measure TRANS-1a would reduce any potential disruptions as it includes stipulations to notify the
17 commercial and leisure boating community of proposed barge operations in the waterways.

18 **CEQA Conclusion:** Construction of Alternative 6C would not substantially increase the volume of
19 barge movement within the study area such that existing marine traffic would be disrupted (on
20 average, only 2 additional barge trips per day is expected through the 9-year construction period).
21 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
22 stipulations to notify the commercial and leisure boating community of proposed barge operations
23 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would
24 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
25 mitigation is required.

26 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
27 **Plan**

28 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

29 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

30 **NEPA Effects:** The potential for Alternative 6C to disrupt rail service on the UPRR Tracy Subdivision
31 branch line and BNSF/Amtrak railroad operations would be similar to the effect under Alternative
32 1C. The effect of disruption to rail traffic during construction would be adverse. Mitigation Measure
33 TRANS-1a, which includes stipulations to coordinate with rail providers to develop alternative
34 interim transportation modes (e.g., trucks or buses) that could be used to provide freight and/or
35 passenger service during any longer term railroad closures and daily construction time windows
36 during which construction is restricted or rail operations would need to be suspended for any
37 activity within railroad rights of way, is available to reduce the effect.

38 **CEQA Conclusion:** The proposed conveyance (new canal and siphon) crosses the existing BNSF
39 Railway/Amtrak San Joaquin Line approximately between Sunset Road and Orwood Road. Because
40 this crossing is in a major work area, the train operations along the BNSF Railway/Amtrak San

1 Joaquin Line could be affected. Likewise, if the UPRR Tracy Subdivision branch line is reopened prior
 2 to construction, traffic associated with of the Byron Tract forebay may minimally impact rail service
 3 through vehicle crossing. This is a potentially significant impact. Implementation of Mitigation
 4 Measure TRANS-1a would reduce this impact to a less than significant level.

5 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 6 **Plan**

7 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

8 **Impact TRANS-6: Disruption of Transit Service during Construction**

9 **NEPA Effects:** The effect of Alternative 6C on the Tri-Delta Transit Route 386 would be the same as
 10 that of Alternative 1C. The effect of disruption to transit service during construction would be
 11 adverse. Although Mitigation Measures TRANS-1a through TRANS-1c would reduce the severity of
 12 this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
 13 funding of required improvements. If an improvement identified in the mitigation agreement(s) is
 14 not fully funded and constructed before the project's contribution to the effect is made, an adverse
 15 effect in the form of disruptions to transit service would occur. Therefore, this effect would be
 16 adverse.

17 **CEQA Conclusion:** Construction activities associated with Alternative 6C would decrease LOS below
 18 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 4 segments
 19 on SR-4 (see Table 19-21). Accordingly, construction could significantly affect operation of the Tri-
 20 Delta Transit Route 386. Mitigation Measures TRANS-1a through TRANS-1c would reduce the
 21 severity of this impact, but not to less-than-significant levels. Under Mitigation Measure TRANS-1a,
 22 the BDCP proponents would coordinate with transit providers to develop, to the extent feasible,
 23 daily construction time windows during which transit operations would not be either detoured or
 24 significantly slowed, avoiding a substantial disruption of transit service. Additionally, under
 25 Mitigation Measure TRANS-1b, construction traffic would be minimized around peak periods, to the
 26 extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP proponents would make
 27 good faith efforts to enter into mitigation agreements to enhance the capacity of congested roadway
 28 segments, likely reducing associated disruptions to transit service. However, the BDCP proponents
 29 cannot ensure that the improvements will be fully funded or constructed prior to the project's
 30 contribution to the impact. If an improvement identified in the mitigation agreement(s) is not fully
 31 funded and constructed before the project's contribution to the impact is made, a significant impact
 32 in the form disruptions to transit service would occur. Therefore, this impact would be significant
 33 and unavoidable. However, such impacts are likely to occur during the middle of the day because
 34 construction traffic would be minimized around peak periods.

35 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 36 **Plan**

37 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

38 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 39 **Congested Roadway Segments**

40 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

1 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
2 **Agreements to Enhance Capacity of Congested Roadway Segments**

3 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

4 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

5 **NEPA Effects:** The effect of Alternative 6C on bicycle routes along SR 160, River Road, and SR 12
6 (and potentially SR 220) would be similar to that of Alternative 1C (see Table 19-21). The effect of
7 disruption to bicycle routes during construction would be adverse. Mitigation Measure TRANS-1a is
8 available to reduce this effect. Under this measure, BDCP proponents would provide alternate access
9 routes via detours or bridges to maintain continual circulation for local travelers in and around
10 construction zones, including bicycle riders; provide signage warning of loose gravel, steel plates,
11 etc. that could be hazardous to road cycling activity on roadways open to bicycle traffic; provide
12 signage, barricades, and flag people as necessary to slow or detour traffic around construction sites;
13 and notify the public, including cycling organizations and bike shops, of construction activities that
14 could affect transportation. Additionally, another project commitment, as described in Appendix 3B,
15 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
16 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
17 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
18 bicycle path.

19 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-21) could
20 temporarily disrupt bicycle routes on SR 160, River Road, and SR 12 (and potentially SR 220),
21 resulting in a significant impact. However, Mitigation Measure TRANS-1a would reduce the severity
22 of this impact to less-than-significant levels because BDCP proponents would provide alternate
23 access routes via detours or bridges to maintain continual circulation for local travelers in and
24 around construction zones, including bicycle riders; provide signage warning of loose gravel, steel
25 plates, etc. that could be hazardous to road cycling activity on roadways open to bicycle traffic;
26 provide signage, barricades, and flag people as necessary to slow or detour traffic around
27 construction sites; and notify the public, including cycling organizations and bike shops, of
28 construction activities that could affect transportation. Additionally, another project commitment, as
29 described in Appendix 3B, *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance
30 recreational access to areas in the vicinity of the proposed intakes, including enhancement of bicycle
31 and foot access to the Delta and the potential conversion of an abandoned rail line between
32 Sacramento and Walnut Grove into a bicycle path. Because implementation of this mitigation
33 measure and project commitment would avoid a substantial disruption to bicycle facilities as a
34 result of increased roadway traffic and/or roadway closures, this impact would be less than
35 significant.

36 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
37 **Plan**

38 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

39 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

40 **NEPA Effects:** The effect of maintaining and operating the facilities roadway operations under
41 Alternative 6C would be the same as under Alternative 1A (see Tables 19-14, 19-15, and 19-16).
42 Like Alternative 1A, O&M activities would occur along the entire alternative alignment. Even

1 assuming the higher employment range in Table 19-16, given the limited number of workers
2 involved and the large number of work sites, it is not anticipated that routine operations and
3 maintenance activities or major inspections would result in substantial increases of traffic volumes
4 or roadway congestion. The effect of increased traffic volumes and delays during operations would
5 not be adverse.

6 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
7 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
8 activities or major inspections would result in substantial increases of traffic volumes or roadway
9 congestion. The impact of increased traffic volumes and delays during operations would therefore
10 be less than significant. No mitigation is required.

11 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and** 12 **Maintenance**

13 **NEPA Effects:** Alternative 6C would affect the same transportation facilities as Alternative 1C,
14 including County Road 141, N Courtland Road, County Road 150, Teal Road, Kellogg Creek Road,
15 Western Farms Ranch Road, and Bruns Road. Connectivity would be maintained through bridging or
16 rerouting. The potential effect of permanent alteration of transportation patterns during operations
17 would be the same as for Alternative 1C and would not be adverse.

18 **CEQA Conclusion:** The impact of maintaining and operating the project under Alternative 6C would
19 be similar to Alternative 1C. Roadway realignment would be necessary to maintain connectivity. The
20 design and construction of all project components (i.e., conveyances, intakes, and forebays) would
21 provide for on-going continuity of all transportation facilities following completion of construction.
22 Impediments to boat traffic associated with the intakes would continue for the life of the project, but
23 would not substantially impact boat passage or usage. Accordingly, the impact of permanent
24 alteration of transportation patterns during operations would be less than significant. No mitigation
25 is required.

26 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

27 **NEPA Effects:** At the program-level of analysis, the impact under Alternative 6C would be the same
28 as Alternative 1C because the acreage of conservation is identical. Impacts on roadways could result
29 in circulation delays or the inability to maintain adequate vehicular access in or around restoration
30 or enhancement work zones. Roads and highways in and around Suisun Marsh and the Yolo Bypass
31 could experience increases in traffic volumes, resulting in localized congestion and conflicts with
32 local traffic. These roadways could function as haul routes or to bring construction personnel to the
33 work sites. Maintenance and monitoring of the restoration areas would also generate some vehicle
34 trips. The effect of increased traffic volumes during implementation of CM2–CM22 would be
35 adverse. Although TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP
36 proponents are not solely responsible for the timing, nature, or complete funding of required
37 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
38 constructed before the project's contribution to the effect is made, an adverse effect would occur.
39 Therefore, this effect would be adverse. If, however, all improvements required to avoid adverse
40 effects prove to be feasible and any necessary agreements are completed before the project's
41 contribution to the effect is made, effects would not be adverse.

42 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
43 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads

1 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
 2 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
 3 function as haul routes or to bring construction personnel to the work sites. Maintenance and
 4 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
 5 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
 6 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
 7 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 8 constructed prior to the project's contribution to the impact. If an improvement identified in the
 9 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
 10 impact is made, a significant impact would occur. Therefore, the project's impacts to roadway
 11 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
 12 required to avoid significant impacts prove to be feasible and any necessary agreements are
 13 completed before the project's contribution to the effect is made, impacts would be less than
 14 significant.

15 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 16 **Plan**

17 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

18 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 19 **Congested Roadway Segments**

20 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

21 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 22 **Agreements to Enhance Capacity of Congested Roadway Segments**

23 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

24 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 25 **Conservation Measures with Plans and Policies**

26 **NEPA Effects:** The potential for inconsistencies with plans or polices would be similar to the
 27 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 6C
 28 would be compatible with applicable plans and policies related to transportation and circulation.

29 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
 30 and no additional CEQA conclusion is required related to the consistency of the alternative with
 31 relevant plans and polices. The relationship between plans, policies, and regulations and impacts on
 32 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

33 **19.3.3.14 Alternative 7—Dual Conveyance with Pipeline/Tunnel, Intakes 2, 3,**
 34 **and 5, and Enhanced Aquatic Conservation (9,000 cfs; Operational**
 35 **Scenario E)**

36 For the purposes of this analysis, Alternative 7 was assumed to include Intakes 2, 3, and 5. This
 37 alternative would also include an intermediate forebay, and the conveyance facility would be a
 38 buried pipeline (see Figures 3-2 and 3-11 in Chapter 3, *Description of Alternatives*).

1 **Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS**
 2 **Conditions**

3 **NEPA Effects:** The estimate of the number of vehicles generated by construction activities for
 4 Alternative 7 would be the similar to Alternative 1A except only three intakes would be constructed,
 5 resulting in a 40% reduction in overall traffic impacts during construction. Localized impacts in the
 6 vicinity of Intakes 1, 4, 6, and 7 would not occur.

7 As shown in Table 19-8, under BPBG conditions, a total of 23 roadway segments would exceed LOS
 8 for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. As also shown in Table 19-8,
 9 construction associated with Alternative 7 would cause LOS thresholds to be exceeded for at least 1
 10 hour during the 6:00 AM to 7:00 PM analysis period on a total of 33 roadway segments under
 11 BPBGPP conditions (see entries in **bold** type). Alternative 7 would therefore exacerbate an already
 12 unacceptable LOS under BPBG conditions on **10** roadway segments (33 minus the 23 that would
 13 already be operating at an unacceptable LOS under BPBG conditions). Figure 19-3a shows the study
 14 roadway segments that could experience substantial roadway operation impacts.

15 The decrease in LOS below applicable thresholds during construction would be adverse at the
 16 locations identified in Table 19-8 because construction associated with Alternative 7 would cause
 17 LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM
 18 analysis period. Alternative 7 would also exacerbate an already unacceptable LOS under BPBG
 19 conditions at 10 roadway segments (33 minus the 23 that would already be operating at an
 20 unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur
 21 throughout the study area, the highest concentration of roadway segments below applicable LOS
 22 threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be
 23 exceeded on several local roadways, include all segments studied in West Sacramento.

24 Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively,
 25 these measures include requirements to avoid or reduce circulation effects, notify the public of
 26 construction activities, provide alternate access routes, require direct haulers to pull over in the
 27 event of an emergency, limit/prohibit the amount of construction activity on congested roadways,
 28 and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity
 29 of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
 30 funding of required improvements. If an improvement that is identified in any mitigation
 31 agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed
 32 before the project's contribution to the effect is made, an adverse effect in the form of unacceptable
 33 LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to
 34 avoid adverse effects prove to be feasible and any necessary agreements are completed before the
 35 project's contribution to the effect is made, effects would not be adverse.

36 **CEQA Conclusion:** Construction under Alternative 7 would add hourly traffic volumes to study area
 37 roadways that would exceed acceptable LOS threshold (Table 19-8). As shown in Table 19-8, traffic
 38 volumes during construction of Alternative 7 would exacerbate already unacceptable LOS under
 39 BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-1a
 40 through TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels.
 41 The BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 42 prior to the project's contribution to the impact. If an improvement that is identified in any
 43 mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 44 constructed before the project's contribution to the impact is made, a significant impact in the form

1 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 2 however, all improvements required to avoid significant impacts prove to be feasible and any
 3 necessary agreements are completed before the project's contribution to the effect is made, impacts
 4 would be less than significant.

5 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 6 **Plan**

7 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

8 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 9 **Congested Roadway Segments**

10 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

11 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 12 **Agreements to Enhance Capacity of Congested Roadway Segments**

13 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

14 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
 15 **Conditions**

16 **NEPA Effects:** The potential to damage road surfaces during construction under Alternative 7 would
 17 be similar to Alternative 1A, except only three intakes would be constructed, resulting in less overall
 18 traffic impacts during construction (truck traffic and workers traffic generated by intake
 19 construction is reduced by 40% compared to 1A). Localized impacts in the vicinity of Intakes 4 and
 20 5-7 would not occur.

21 As shown in Table 19-10, construction of Alternative 7 would contribute to further deterioration of
 22 the existing pavement condition, to less than the acceptable PCI or similar applicable threshold (see
 23 Table 19-7), on a total of **43** roadway segments. Damage to roadway pavement is expected
 24 throughout the study area (Figure 19-4a) on various local and state roads, as well as on a few
 25 interstates. The effect of roadway damage to these segments during construction would be adverse.
 26 Mitigation Measures TRANS-2a through TRANS-2c are available to reduce this effect, but not
 27 necessarily to a level that would not be adverse, as the BDCP proponents cannot ensure that the
 28 agreements or encroachment permits will be obtained from the relevant transportation agencies. If
 29 an agreement or encroachment permit is not obtained, an adverse effect in the form of deficient
 30 pavement conditions would occur. Accordingly, this effect could remain adverse. If, however,
 31 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 32 of pavement are obtained and any other necessary agreements are completed, adverse effects could
 33 be avoided.

34 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 35 below acceptable thresholds (Table 19-7) at the 43 locations shown in Table 19-10. The impact of
 36 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
 37 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
 38 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
 39 permits will be obtained from the relevant transportation agencies. If an agreement or
 40 encroachment permit is not obtained, a significant impact in the form of deficient pavement

1 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 2 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 3 of pavement are obtained and any other necessary agreements are completed, impacts would be
 4 reduced to less than significant.

5 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 6 **Roadway Segments**

7 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

8 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 9 **Roadway Segments**

10 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

11 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
 12 **as Stipulated in Mitigation Agreements or Encroachment Permits**

13 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

14 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
 15 **during Construction**

16 **NEPA Effects:** Alternative 7 would require a heavy volume of materials to be hauled to the
 17 construction work zones, increasing the amount of trucks using the transportation system in the
 18 study area. The increase in heavy construction traffic on local roadways would increase the
 19 potential for safety hazards such as conflicts with recreational and commuter traffic and with
 20 farming operations. The increase in heavy construction traffic using emergency routes could result
 21 in interference with emergency service response times. Emergency routes in the study area are
 22 identified in Table 19-11.

23 The potential for increased safety hazards during construction would be similar to those described
 24 for Alternative 1A, although of lesser magnitude because Alternative 7 would construct fewer
 25 intakes. The effect of increased safety hazards from increased heavy construction traffic on local
 26 roadways and emergency routes would be would be adverse. Although TRANS-1c will reduce the
 27 severity of this effect, the BDCP proponents are not solely responsible for the timing, nature, or
 28 complete funding of required improvements. If an improvement identified in the mitigation
 29 agreement(s) is not fully funded and constructed before the project's contribution to the effect is
 30 made, an adverse effect in the form of increased safety hazards would occur. Accordingly, this effect
 31 would be adverse. If, however, all improvements required to avoid adverse effects prove to be
 32 feasible and any necessary agreements are completed before the project's contribution to the effect
 33 is made, effects would not be adverse.

34 **CEQA Conclusion:** Construction of Alternative 7 would increase the amount of trucks using the
 35 transportation system in the study area. This increase in heavy truck traffic could interfere with
 36 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
 37 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
 38 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 39 prior to the project's contribution to the impact. If an improvement identified in the mitigation
 40 agreement(s) is not fully funded and constructed before the project's contribution to the impact is

1 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
2 effect would be significant and unavoidable. If, however, all improvements required to avoid
3 significant impacts prove to be feasible and any necessary agreements are completed before the
4 project's contribution to the effect is made, impacts would be less than significant.

5 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
6 **Agreements to Enhance Capacity of Congested Roadway Segments**

7 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

8 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

9 **NEPA Effects:** Under Alternative 7, commercial barges would be used to transport construction
10 materials and equipment from the ports to temporary barge unloading facilities near construction
11 sites and some in-water work would occur for construction of the intakes. Locations of temporary
12 barge unloading facilities are the same as for Alternative 1A but the estimate of trips and amount of
13 in-water work would be less because of the reduction in the number of intakes to be constructed.
14 This potential effect is not considered adverse because construction of Alternative 7 would not
15 require modification to existing deep water channels, interfere with Port of Stockton navigation, or
16 substantially increase the volume of barge movement within the study area, such that existing
17 marine traffic would be disrupted (on average, only 1 additional barge trip per day is expected
18 through the 9-year construction period). Barge routes and landing sites will be selected to maximize
19 continuous waterway access and a minimum waterway width greater than 100 feet. Moreover,
20 Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes stipulations to
21 notify the commercial and leisure boating community of proposed barge operations in the
22 waterways.

23 **CEQA Conclusion:** Construction of Alternative 7 would not require modification to existing deep
24 water channels, interfere with Port of Stockton navigation, or substantially increase the volume of
25 barge movement within the study area such that existing marine traffic would be disrupted (on
26 average, only 1 additional barge trip per day is expected through the 9-year construction period).
27 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
28 stipulations to notify the commercial and leisure boating community of proposed barge operations
29 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would
30 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
31 mitigation is required.

32 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
33 **Plan**

34 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

35 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

36 **NEPA Effects:** The effects under Alternative 7 on the BNSF Railway and Amtrak San Joaquin Line and
37 the UPRR Tracy Subdivision would be similar to that described for Alternative 1A. Construction
38 would not be likely to disrupt rail service but if the UPRR Tracy Subdivision branch line is reopened
39 prior to construction, the continuity of rail traffic could be managed, if needed, through
40 implementation of Mitigation Measure TRANS-1a, which includes stipulations to coordinate with
41 rail providers to develop alternative interim transportation modes (e.g., trucks or buses) that could

1 be used to provide freight and/or passenger service during any longer term railroad closures and
 2 daily construction time windows during which construction is restricted or rail operations would
 3 need to be suspended for any activity within railroad rights of way.

4 **CEQA Conclusion:** Construction of Alternative 7 would not physically cross or require modification
 5 to an existing or proposed railroad. Rather, the water conveyance will cross the BNSF Railway and
 6 Amtrak San Joaquin Line well below grade in a deep bore tunnel. Accordingly, construction would
 7 not be likely to disrupt rail service. However, if the UPRR Tracy Subdivision branch line is reopened
 8 prior to construction, traffic associated with of the Byron Tract forebay may minimally impact rail
 9 service through vehicle crossing. Implementation of Mitigation Measure TRANS-1a would ensure
 10 this impact remains less than significant.

11 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 12 **Plan**

13 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

14 **Impact TRANS-6: Disruption of Transit Service during Construction**

15 **NEPA Effects:** The effect of Alternative 7 on operation of the SCT Link/Delta Route, traffic on SR 12,
 16 and Intercity Greyhound bus lines would be similar to that described for Alternative 1A. The effect
 17 of disruption to transit service during construction would be adverse. Although Mitigation Measures
 18 TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not
 19 solely responsible for the timing, nature, or complete funding of required improvements. If an
 20 improvement identified in the mitigation agreement(s) is not fully funded and constructed before
 21 the project's contribution to the effect is made, an adverse effect in the form of disruptions to transit
 22 service would occur. Therefore, this effect would be adverse.

23 **CEQA Conclusion:** Construction activities associated with Alternative 7 would decrease LOS below
 24 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 6 segments
 25 on SR-12 (see Table 19-8). Accordingly, tunnel construction could significantly affect operation of
 26 the SCT Link/Delta Route, and construction of the shaft adjacent to SR 12 would affect traffic on that
 27 facility. To the extent that other roadways affected by Alternative 7 construction also carry
 28 Greyhound bus lines, those routes may be affected as well. Mitigation Measures TRANS-1a through
 29 TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels. Under
 30 Mitigation Measure TRANS-1a, the BDCP proponents would coordinate with transit providers to
 31 develop, to the extent feasible, daily construction time windows during which transit operations
 32 would not be either detoured or significantly slowed, avoiding a substantial disruption of transit
 33 service. Additionally, under Mitigation Measure TRANS-1b, construction traffic would be minimized
 34 around peak periods, to the extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP
 35 proponents would make good faith efforts to enter into mitigation agreements to enhance the
 36 capacity of congested roadway segments, likely reducing associated disruptions to transit service.
 37 However, the BDCP proponents cannot ensure that the improvements will be fully funded or
 38 constructed prior to the project's contribution to the impact. If an improvement identified in the
 39 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
 40 impact is made, a significant impact in the form disruptions to transit service would occur.
 41 Therefore, this impact would be significant and unavoidable. However, such impacts are likely to
 42 occur during the middle of the day because construction traffic would be minimized around peak
 43 periods.

1 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 2 **Plan**

3 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

4 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 5 **Congested Roadway Segments**

6 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

7 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 8 **Agreements to Enhance Capacity of Congested Roadway Segments**

9 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

10 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

11 **NEPA Effects:** The effect of Alternative 7 on bicycle routes along SR 160/River Road would be less
 12 than that identified for Alternative 1A because of the reduction in the number of intakes. Potential
 13 effects along SR 12 would be the same as Alternative 1A (see Table 19-8). The effect of disruption to
 14 bicycle routes during construction would be adverse. Mitigation Measure TRANS-1a is available to
 15 reduce this effect. Under this measure, BDCP proponents would provide alternate access routes via
 16 detours or bridges to maintain continual circulation for local travelers in and around construction
 17 zones, including bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could
 18 be hazardous to road cycling activity on roadways open to bicycle traffic; provide signage,
 19 barricades, and flag people as necessary to slow or detour traffic around construction sites; and
 20 notify the public, including cycling organizations and bike shops, of construction activities that could
 21 affect transportation. Additionally, another project commitment, as described in Appendix 3B,
 22 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
 23 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
 24 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
 25 bicycle path.

26 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-8) could
 27 temporarily disrupt bicycle routes on SR 160/River Road and potentially on SR 12, resulting in a
 28 significant impact. However, Mitigation Measure TRANS-1a would reduce the severity of this impact
 29 to less-than-significant levels because BDCP proponents would provide alternate access routes via
 30 detours or bridges to maintain continual circulation for local travelers in and around construction
 31 zones, including bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could
 32 be hazardous to road cycling activity on roadways open to bicycle traffic; provide signage,
 33 barricades, and flag people as necessary to slow or detour traffic around construction sites; and
 34 notify the public, including cycling organizations and bike shops, of construction activities that could
 35 affect transportation. Additionally, another project commitment, as described in Appendix 3B,
 36 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
 37 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
 38 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
 39 bicycle path. Because implementation of this mitigation measure and project commitment would
 40 avoid a substantial disruption to bicycle facilities as a result of increased roadway traffic and/or
 41 roadway closures, this impact would be less than significant.

1 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
2 **Plan**

3 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

4 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

5 **NEPA Effects:** The effect of maintaining and operating the facilities on roadway operations under
6 Alternative 7 would be the same as under Alternative 1A (see Tables 19-14, 19-15, and 19-16) but
7 slightly less in magnitude because fewer intakes would be operated and maintained and
8 correspondingly fewer employee trips would be anticipated. Like Alternative 1A, O&M activities
9 would occur along the entire alternative alignment. Even assuming the higher employment range in
10 Table 19-16, given the limited number of workers involved and the large number of work sites, it is
11 not anticipated that routine operations and maintenance activities or major inspections would
12 result in substantial increases of traffic volumes or roadway congestion. The impact of increased
13 traffic volumes and delays during operations would not be adverse.

14 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
15 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
16 activities or major inspections would result in substantial increases of traffic volumes or roadway
17 congestion. The impact of increased traffic volumes and delays during operations would therefore
18 be less than significant. No mitigation is required.

19 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and**
20 **Maintenance**

21 **NEPA Effects:** The effects under Alternative 7 would be similar to Alternative 1A but slightly less in
22 magnitude because fewer intakes would be operated and maintained and correspondingly fewer
23 employee trips would be anticipated. Impacts on public roadways would be limited to the intake
24 areas and would not substantially alter traffic patterns. The design and construction of all project
25 components (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all
26 rail operations following completion of construction. Impediments to boat traffic associated with the
27 intakes would continue for the life of the project, but would not substantially impact boat passage or
28 usage. The effect of permanent alteration of transportation patterns during operations would not be
29 adverse.

30 **CEQA Conclusion:** The impact of maintaining and operating the project under Alternative 7 would
31 be similar to Alternative 1A. Impacts on public roadways would be limited to the intake areas and
32 would not substantially alter traffic patterns. The design and construction of all project components
33 (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all rail operations
34 following completion of construction. Impediments to boat traffic associated with the intakes would
35 continue for the life of the project, but would not substantially impact boat passage or usage.
36 Accordingly, the impact of permanent alteration of transportation patterns during operations would
37 be less than significant. No mitigation is required.

38 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

39 **NEPA Effects:** At the program-level of analysis, the impact under Alternative 7 would be similar to
40 Alternative 1A; however, additional 20 linear miles of channel margin habitat would be enhanced
41 and approximately 10,000 acres of seasonally-inundated floodplain would be restored.

1 Impacts on roadways could result in circulation delays or the inability to maintain adequate
 2 vehicular access in or around restoration or enhancement work zones. Roads and highways in and
 3 around Suisun Marsh and the Yolo Bypass could experience increases in traffic volumes, resulting in
 4 localized congestion and conflicts with local traffic. These roadways could function as haul routes or
 5 to bring construction personnel to the work sites. Maintenance and monitoring of the restoration
 6 areas would also generate some vehicle trips. The effect of increased traffic volumes during
 7 implementation of CM2–CM22 would be adverse. Although TRANS-1a through TRANS-1c would
 8 reduce the severity of this effect, the BDCP proponents are not solely responsible for the timing,
 9 nature, or complete funding of required improvements. If an improvement identified in the
 10 mitigation agreement(s) is not fully funded and constructed before the project’s contribution to the
 11 effect is made, an adverse effect would occur. Therefore, this effect would be adverse. If, however, all
 12 improvements required to avoid adverse effects prove to be feasible and any necessary agreements
 13 are completed before the project’s contribution to the effect is made, effects would not be adverse.

14 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
 15 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
 16 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
 17 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
 18 function as haul routes or to bring construction personnel to the work sites. Maintenance and
 19 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
 20 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
 21 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
 22 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 23 constructed prior to the project’s contribution to the impact. If an improvement identified in the
 24 mitigation agreement(s) is not fully funded and constructed before the project’s contribution to the
 25 impact is made, a significant impact would occur. Therefore, the project’s impacts to roadway
 26 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
 27 required to avoid significant impacts prove to be feasible and any necessary agreements are
 28 completed before the project’s contribution to the effect is made, impacts would be less than
 29 significant.

30 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 31 **Plan**

32 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

33 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 34 **Congested Roadway Segments**

35 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

36 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 37 **Agreements to Enhance Capacity of Congested Roadway Segments**

38 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

1 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 2 **Conservation Measures with Plans and Policies**

3 **NEPA Effects:** The potential for inconsistencies with plans or polices would be similar to the
 4 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 7
 5 would be compatible with applicable plans and policies related to transportation and circulation.

6 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
 7 and no additional CEQA conclusion is required related to the consistency of the alternative with
 8 relevant plans and polices. The relationship between plans, policies, and regulations and impacts on
 9 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

10 **19.3.3.15 Alternative 8—Dual Conveyance with Pipeline/Tunnel, Intakes 2, 3,**
 11 **and 5, and Increased Delta Outflow (9,000 cfs; Operational Scenario**
 12 **F)**

13 The impacts of Alternative 8 would be similar to Alternative 7. Both are assumed to construct
 14 Intakes 2–4 and an intermediate forebay, and the conveyance facility would be a buried pipeline
 15 (see Figures 3-2 and 3-11 in Chapter 3, *Description of Alternatives*).

16 **Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS**
 17 **Conditions**

18 **NEPA Effects:** As with Alternative 7, the estimate of the number of vehicles generated by
 19 construction activities for Alternative 8 would result in a 40% reduction in overall traffic impacts
 20 during construction, compared to Alternative 1A, and localized impacts in the vicinity of Intakes 1
 21 and 4 would not occur.

22 As shown in Table 19-8, under BPBG conditions, a total of 23 roadway segments would exceed LOS
 23 for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. As also shown in Table 19-8,
 24 construction associated with Alternative 8 would cause LOS thresholds to be exceeded for at least
 25 one hour during the 6 AM to 7 PM analysis period on a total of 33 roadway segments under BPBGPP
 26 conditions (see entries in **bold** type). Alternative 8 would therefore exacerbate an already
 27 unacceptable LOS under BPBG conditions on **10** roadway segments (33 minus the 23 that would
 28 already be operating at an unacceptable LOS under BPBG conditions). Figure 19-3a shows the study
 29 roadway segments that could experience substantial roadway operation impacts.

30 The decrease in LOS below applicable thresholds during construction would be adverse at the
 31 locations identified in Table 19-8 because construction associated with Alternative 8 would cause
 32 LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM
 33 analysis period. Alternative 8 would also exacerbate an already unacceptable LOS under BPBG
 34 conditions at **10** roadway segments (33 minus the 23 that would already be operating at an
 35 unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur
 36 throughout the study area, the highest concentration of roadway segments below applicable LOS
 37 threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be
 38 exceeded on several local roadways, include all segments studied in West Sacramento.

39 Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively,
 40 these measures include requirements to avoid or reduce circulation effects, notify the public of
 41 construction activities, provide alternate access routes, require direct haulers to pull over in the

1 event of an emergency, limit/prohibit the amount of construction activity on congested roadways,
 2 and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity
 3 of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
 4 funding of required improvements. If an improvement that is identified in any mitigation
 5 agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed
 6 before the project's contribution to the effect is made, an adverse effect in the form of unacceptable
 7 LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to
 8 avoid adverse effects prove to be feasible and any necessary agreements are completed before the
 9 project's contribution to the effect is made, effects would not be adverse.

10 **CEQA Conclusion:** Construction under Alternative 8 would add hourly traffic volumes to study area
 11 roadways that would exceed acceptable LOS threshold (Table 19-8). As shown in Table 19-8, traffic
 12 volumes during construction of Alternative 8 would exacerbate already unacceptable LOS under
 13 BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-1a
 14 through TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels.
 15 The BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 16 prior to the project's contribution to the impact. If an improvement that is identified in any
 17 mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 18 constructed before the project's contribution to the impact is made, a significant impact in the form
 19 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 20 however, all improvements required to avoid significant impacts prove to be feasible and any
 21 necessary agreements are completed before the project's contribution to the effect is made, impacts
 22 would be less than significant.

23 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 24 **Plan**

25 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

26 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 27 **Congested Roadway Segments**

28 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

29 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 30 **Agreements to Enhance Capacity of Congested Roadway Segments**

31 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

32 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
 33 **Conditions**

34 **NEPA Effects:** The impact under Alternative 8 would be less than under Alternative 1A due to the
 35 reduction in intakes constructed (estimated 40% reduction in vehicle trips).

36 As shown in Table 19-10, construction of Alternative 8 would contribute to further deterioration of
 37 the existing pavement condition, to less than the acceptable PCI or similar applicable threshold (see
 38 Table 19-7), on a total of 43 roadway segments. Damage to roadway pavement is expected
 39 throughout the study area (Figure 19-4a) on various local and state roads, as well as on a few
 40 interstates. The effect of roadway damage to these segments during construction would be adverse.

1 Mitigation Measures TRANS-2a through TRANS-2c are available to reduce this effect, but not
 2 necessarily to a level that would not be adverse, as the BDCP proponents cannot ensure that the
 3 agreements or encroachment permits will be obtained from the relevant transportation agencies. If
 4 an agreement or encroachment permit is not obtained, an adverse effect in the form of deficient
 5 pavement conditions would occur. Accordingly, this effect could remain adverse. If, however,
 6 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 7 of pavement are obtained and any other necessary agreements are completed, adverse effects could
 8 be avoided.

9 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 10 below acceptable thresholds (Table 19-7) at the 43 locations shown in Table 19-10. The impact of
 11 roadway damage during construction would be potentially significant. Mitigation Measures TRANS-
 12 2a through TRANS-2c would reduce the severity of this impact, but not necessarily to less-than-
 13 significant levels, as the BDCP proponents cannot ensure that the agreements or encroachment
 14 permits will be obtained from the relevant transportation agencies. If an agreement or
 15 encroachment permit is not obtained, a significant impact in the form of deficient pavement
 16 conditions would occur. Accordingly, this impact could be significant and unavoidable. If, however,
 17 mitigation agreement(s) or encroachment permit(s) providing for the improvement or replacement
 18 of pavement are obtained and any other necessary agreements are completed, impacts would be
 19 reduced to less than significant.

20 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 21 **Roadway Segments**

22 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

23 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 24 **Roadway Segments**

25 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

26 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
 27 **as Stipulated in Mitigation Agreements or Encroachment Permits**

28 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

29 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
 30 **during Construction**

31 **NEPA Effects:** Alternative 8 would require a heavy volume of materials to be hauled to the
 32 construction work zones, increasing the amount of trucks using the transportation system in the
 33 study area. The increase in heavy construction traffic on local roadways would increase the
 34 potential for safety hazards such as conflicts with recreational and commuter traffic and with
 35 farming operations. The increase in heavy construction traffic using emergency routes could result
 36 in interference with emergency service response times. Emergency routes in the study area are
 37 identified in Table 19-11.

38 The potential for increased safety hazards during construction would be less than under Alternative
 39 1A due to the reduction in intakes constructed and the correspondingly fewer vehicle trips. The
 40 effect of increased safety hazards from increased heavy construction traffic on local roadways and

1 emergency routes would be adverse. Although TRANS-1c will reduce the severity of this effect, the
 2 BDCP proponents are not solely responsible for the timing, nature, or complete funding of required
 3 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
 4 constructed before the project's contribution to the effect is made, an adverse effect in the form of
 5 increased safety hazards would occur. Accordingly, this effect would be adverse. If, however, all
 6 improvements required to avoid adverse effects prove to be feasible and any necessary agreements
 7 are completed before the project's contribution to the effect is made, effects would not be adverse.

8 **CEQA Conclusion:** Construction of Alternative 8 would increase the amount of trucks using the
 9 transportation system in the study area. This increase in heavy truck traffic could interfere with
 10 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
 11 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
 12 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 13 prior to the project's contribution to the impact. If an improvement identified in the mitigation
 14 agreement(s) is not fully funded and constructed before the project's contribution to the impact is
 15 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
 16 effect would be significant and unavoidable. If, however, all improvements required to avoid
 17 significant impacts prove to be feasible and any necessary agreements are completed before the
 18 project's contribution to the effect is made, impacts would be less than significant.

19 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 20 **Agreements to Enhance Capacity of Congested Roadway Segments**

21 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

22 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

23 **NEPA Effects:** Under Alternative 8, commercial barges would be used to transport construction
 24 materials and equipment from the ports to temporary barge unloading facilities near construction
 25 sites and some in-water work would occur for construction of the intakes. Locations of temporary
 26 barge unloading facilities are the same as for Alternative 1A but the estimate of trips and amount of
 27 in-water work would be less because of the reduction in the number of intakes to be constructed.
 28 This potential effect is not considered adverse because construction of Alternative 8 would not
 29 require modification to existing deep water channels, interfere with Port of Stockton navigation, or
 30 substantially increase the volume of barge movement within the study area, such that existing
 31 marine traffic would be disrupted (on average, only 1 additional barge trip per day is expected
 32 through the 9-year construction period). Barge routes and landing sites will be selected to maximize
 33 continuous waterway access and a minimum waterway width greater than 100 feet. Moreover,
 34 Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes stipulations to
 35 notify the commercial and leisure boating community of proposed barge operations in the
 36 waterways.

37 **CEQA Conclusion:** Construction of Alternative 8 would not require modification to existing deep
 38 water channels, interfere with Port of Stockton navigation, or substantially increase the volume of
 39 barge movement within the study area such that existing marine traffic would be disrupted (on
 40 average, only 1 additional barge trip per day is expected through the 9-year construction period).
 41 Moreover, Mitigation Measure TRANS-1a would reduce any potential disruptions as it includes
 42 stipulations to notify the commercial and leisure boating community of proposed barge operations
 43 in the waterways. Accordingly, the impact of disruption to marine traffic during construction would

1 be less than significant with implementation of Mitigation Measure TRANS-1a. No additional
2 mitigation is required.

3 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
4 **Plan**

5 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

6 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

7 **NEPA Effects:** The effects under Alternative 8 on the BNSF Railway and Amtrak San Joaquin Line and
8 the Union Pacific Railroad--Tracy Subdivision would be similar to that described for Alternative 1A.
9 Construction is not likely to disrupt rail service but if the UPRR Tracy Subdivision branch line is
10 reopened prior to construction, the continuity of rail traffic can be managed, if needed, through
11 implementation of Mitigation Measure TRANS-1a, which includes stipulations to coordinate with
12 rail providers to develop alternative interim transportation modes (e.g., trucks or buses) that could
13 be used to provide freight and/or passenger service during any longer term railroad closures and
14 daily construction time windows during which construction is restricted or rail operations would
15 need to be suspended for any activity within railroad rights of way.

16 **CEQA Conclusion:** Construction of Alternative 8 would not physically cross or require modification
17 to an existing or proposed railroad. Rather, the water conveyance will cross the BNSF Railway and
18 Amtrak San Joaquin Line well below grade in a deep bore tunnel. Accordingly, construction would
19 not be likely to disrupt rail service. However, if the UPRR Tracy Subdivision branch line is reopened
20 prior to construction, traffic associated with of the Byron Tract forebay may minimally impact rail
21 service through vehicle crossing. Implementation of Mitigation Measure TRANS-1a would ensure
22 this impact remains less than significant.

23 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
24 **Plan**

25 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

26 **Impact TRANS-6: Disruption of Transit Service during Construction**

27 **NEPA Effects:** The effect of Alternative 8 on operation of the SCT Link/Delta Route, traffic on SR 12,
28 and Intercity Greyhound bus lines would be similar to that described for Alternative 1A. The effect
29 of disruption to transit service during construction would be adverse. Although Mitigation Measures
30 TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP proponents are not
31 solely responsible for the timing, nature, or complete funding of required improvements. If an
32 improvement identified in the mitigation agreement(s) is not fully funded and constructed before
33 the project's contribution to the effect is made, an adverse effect in the form of disruptions to transit
34 service would occur. Therefore, this effect would be adverse.

35 **CEQA Conclusion:** Construction activities associated with Alternative 8 would decrease LOS below
36 applicable thresholds, as well as exacerbate already unacceptable LOS conditions along 6 segments
37 on SR-12 (see Table 19-8). Accordingly, tunnel construction could significantly affect operation of
38 the SCT Link/Delta Route, and construction of the shaft adjacent to SR 12 would affect traffic on that
39 facility. To the extent that other roadways affected by Alternative 8 construction also carry
40 Greyhound bus lines, those routes may be affected as well. Mitigation Measures TRANS-1a through

1 TRANS-1c would reduce the severity of this impact, but not to less-than-significant levels. Under
 2 Mitigation Measure TRANS-1a, the BDCP proponents would coordinate with transit providers to
 3 develop, to the extent feasible, daily construction time windows during which transit operations
 4 would not be either detoured or significantly slowed, avoiding a substantial disruption of transit
 5 service. Additionally, under Mitigation Measure TRANS-1b, construction traffic would be minimized
 6 around peak periods, to the extent feasible. Finally, under Mitigation Measure TRANS-1c, the BDCP
 7 proponents would make good faith efforts to enter into mitigation agreements to enhance the
 8 capacity of congested roadway segments, likely reducing associated disruptions to transit service.
 9 However, the BDCP proponents cannot ensure that the improvements will be fully funded or
 10 constructed prior to the project's contribution to the impact. If an improvement identified in the
 11 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
 12 impact is made, a significant impact in the form disruptions to transit service would occur.
 13 Therefore, this impact would be significant and unavoidable. However, such impacts are likely to
 14 occur during the middle of the day because construction traffic would be minimized around peak
 15 periods.

16 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 17 **Plan**

18 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

19 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 20 **Congested Roadway Segments**

21 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

22 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 23 **Agreements to Enhance Capacity of Congested Roadway Segments**

24 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

25 **Impact TRANS-7: Interference with Bicycle Routes during Construction**

26 **NEPA Effects:** The effect of Alternative 8 on bicycle routes along SR 160/River Road would be less
 27 than that identified for Alternative 1A because of the reduction in the number of intakes. Potential
 28 effects along SR 12 would be the same as Alternative 1A (see Table 19-8). The effect of disruption to
 29 bicycle routes during construction would be adverse. Mitigation Measure TRANS-1a is available to
 30 reduce this effect. Under this measure, BDCP proponents would provide alternate access routes via
 31 detours or bridges to maintain continual circulation for local travelers in and around construction
 32 zones, including bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could
 33 be hazardous to road cycling activity on roadways open to bicycle traffic; provide signage,
 34 barricades, and flag people as necessary to slow or detour traffic around construction sites; and
 35 notify the public, including cycling organizations and bike shops, of construction activities that could
 36 affect transportation. Additionally, another project commitment, as described in Appendix 3B,
 37 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
 38 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
 39 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
 40 bicycle path.

1 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-8) could
2 temporarily disrupt bicycle routes on SR 160/River Road and potentially on SR 12, resulting in a
3 significant impact. However, Mitigation Measure TRANS-1a would reduce the severity of this impact
4 to less-than-significant levels because BDCP proponents would provide alternate access routes via
5 detours or bridges to maintain continual circulation for local travelers in and around construction
6 zones, including bicycle riders; provide signage warning of loose gravel, steel plates, etc. that could
7 be hazardous to road cycling activity on roadways open to bicycle traffic; provide signage,
8 barricades, and flag people as necessary to slow or detour traffic around construction sites; and
9 notify the public, including cycling organizations and bike shops, of construction activities that could
10 affect transportation. Additionally, another project commitment, as described in Appendix 3B,
11 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
12 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
13 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
14 bicycle path. Because implementation of this mitigation measure and project commitment would
15 avoid a substantial disruption to bicycle facilities as a result of increased roadway traffic and/or
16 roadway closures, this impact would be less than significant.

17 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 18 **Plan**

19 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

20 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

21 **NEPA Effects:** The effect of maintaining and operating the facilities on roadway operations under
22 Alternative 8 would be the same as under Alternative 1A (see Tables 19-14, 19-15, and 19-16) but
23 slightly less in magnitude because fewer intakes would be operated and maintained and
24 correspondingly fewer employee trips would be anticipated. Like Alternative 1A, O&M activities
25 would occur along the entire alternative alignment. Even assuming the higher employment range in
26 Table 19-16, given the limited number of workers involved and the large number of work sites, it is
27 not anticipated that routine operations and maintenance activities or major inspections would
28 result in substantial increases of traffic volumes or roadway congestion. The impact of increased
29 traffic volumes and delays during operations would not be adverse.

30 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
31 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
32 activities or major inspections would result in substantial increases of traffic volumes or roadway
33 congestion. The impact of increased traffic volumes and delays during operations would therefore
34 be less than significant. No mitigation is required.

35 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and** 36 **Maintenance**

37 **NEPA Effects:** The effects under Alternative 8 would be similar to Alternative 1A but slightly less in
38 magnitude because fewer intakes would be operated and maintained and correspondingly fewer
39 employee trips would be anticipated. Impacts on public roadways would be limited to the intake
40 areas and would not substantially alter traffic patterns. The design and construction of all project
41 components (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all
42 rail operations following completion of construction. Impediments to boat traffic associated with the

1 intakes would continue for the life of the project, but would not substantially impact boat passage or
2 usage. The effect of permanent alteration of transportation patterns during operations would not be
3 adverse.

4 **CEQA Conclusion:** The impact of maintaining and operating the project under Alternative 8 would
5 be similar to Alternative 1A. Impacts on public roadways would be limited to the intake areas and
6 would not substantially alter traffic patterns. The design and construction of all project components
7 (i.e., conveyances, intakes, and forebays) would provide for on-going continuity of all rail operations
8 following completion of construction. Impediments to boat traffic associated with the intakes would
9 continue for the life of the project, but would not substantially impact boat passage or usage.
10 Accordingly, the impact of permanent alteration of transportation patterns during operations would
11 be less than significant. No mitigation is required.

12 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

13 **NEPA Effects:** At the program-level of analysis, the impact under Alternative 8 would be the same as
14 Alternative 1A because the acreage of conservation is identical. Impacts on roadways could result in
15 circulation delays or the inability to maintain adequate vehicular access in or around restoration or
16 enhancement work zones. Roads and highways in and around Suisun Marsh and the Yolo Bypass
17 could experience increases in traffic volumes, resulting in localized congestion and conflicts with
18 local traffic. These roadways could function as haul routes or to bring construction personnel to the
19 work sites. Maintenance and monitoring of the restoration areas would also generate some vehicle
20 trips. The effect of increased traffic volumes during implementation of CM2–CM22 would be
21 adverse. Although TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP
22 proponents are not solely responsible for the timing, nature, or complete funding of required
23 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
24 constructed before the project's contribution to the effect is made, an adverse effect would occur.
25 Therefore, this effect would be adverse. If, however, all improvements required to avoid adverse
26 effects prove to be feasible and any necessary agreements are completed before the project's
27 contribution to the effect is made, effects would not be adverse.

28 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
29 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
30 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
31 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could
32 function as haul routes or to bring construction personnel to the work sites. Maintenance and
33 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
34 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
35 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
36 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
37 constructed prior to the project's contribution to the impact. If an improvement identified in the
38 mitigation agreement(s) is not fully funded and constructed before the project's contribution to the
39 impact is made, a significant impact would occur. Therefore, the project's impacts to roadway
40 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
41 required to avoid significant impacts prove to be feasible and any necessary agreements are
42 completed before the project's contribution to the effect is made, impacts would be less than
43 significant.

1 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
2 **Plan**

3 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

4 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
5 **Congested Roadway Segments**

6 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

7 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
8 **Agreements to Enhance Capacity of Congested Roadway Segments**

9 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

10 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
11 **Conservation Measures with Plans and Policies**

12 **NEPA Effects:** The potential for inconsistencies with plans or polices would be similar to the
13 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 8
14 would be compatible with applicable plans and policies related to transportation and circulation.

15 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
16 and no additional CEQA conclusion is required related to the consistency of the alternative with
17 relevant plans and polices. The relationship between plans, policies, and regulations and impacts on
18 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

19 **19.3.3.16 Alternative 9—Through Delta/Separate Corridors (15,000 cfs;**
20 **Operational Scenario G)**

21 Alternative 9 would construct two intakes, at the entrances to the Delta Cross Channel and
22 Georgiana Slough. These intakes would be smaller sized than for the other alternatives. Two
23 pumping plants would be constructed on the San Joaquin River at the Head of Old River and on
24 Middle River upstream of Victoria Canal. There would be no new forebay. The conveyance would be
25 through existing canals and Delta channels, with modifications to the levees and channels, operable
26 barriers, a fish movement corridor around Clifton Court Forebay, and a water supply corridor (see
27 Figures 3-16, 3-17, and 3-18 in Chapter 3, *Description of Alternatives*).

28 **Impact TRANS-1: Increased Construction Vehicle Trips Resulting in Unacceptable LOS**
29 **Conditions**

30 **NEPA Effects:** As shown in Table 19-27, under BPBG conditions, a total of 17 roadway segments
31 would exceed LOS for at least 1 hour during the 6:00 AM to 7:00 PM analysis period. As also shown
32 in Table 19-8, construction associated with Alternative 9 would cause LOS thresholds to be
33 exceeded for at least 1 hour during the 6:00 AM to 7:00 PM analysis period on a total of 51 roadway
34 segments under BPBGPP conditions (see entries in **bold type**). Alternative 9 would therefore
35 exacerbate an already unacceptable LOS under BPBG conditions on **34** roadway segments (51 minus
36 the 17 that would already be operating at an unacceptable LOS under BPBG conditions). Figure 19-
37 3b shows the study roadway segments that could experience substantial roadway operation effects.

1 **Table 19-27. Level of Service for Through Delta/Separate Corridors – Alternative 9**

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume Threshold | Baseline Conditions | | Baseline Plus Background Growth Conditions | | BPBGPP Conditions | |
|---------------|--|---|---|---------------|-----------------------------|---------------------|----------------------------------|--|----------------------------------|-----------------------|----------------------------------|
| | | | | | | Hourly Volume | Hours Operating Range Worse Than | Hourly Volume | Hours Operating Range Worse Than | Hourly Volume | Hours Operating Range Worse Than |
| | | | | | | (6AM to 7PM) | LOS Threshold | (6AM to 7PM) | LOS Threshold | (6AM to 7PM) | LOS Threshold |
| ALA 01 | Byron Hwy | Contra Costa Co./ Alameda Co. Line | Alameda Co./San Joaquin Co. Line | D | 1,600 | 385 to 656 | - | 416 to 708 | - | 2,184 to 2,476 | 13 (6AM-7PM) |
| BRE 01 | Brentwood Blvd (old SR 4)¹ | Delta Rd (Oakley City Limits) | Balfour Rd | C | 970 | 586 to 1,516 | 11 (7-9AM; 10AM-7PM) | - | - | - | - |
| | | | | D | 1,760 | - | - | 590 to 1,526 | - | 3,417 to 4,353 | 13 (6AM-7PM) |
| BRE 02 | Brentwood Blvd (old SR 4)¹ | Balfour Rd | Brentwood City Limits (South) | C | 1,920 | 369 to 1,013 | - | - | - | - | - |
| | | | | D | 3,540 | - | - | 346 to 950 | - | 3,173 to 3,777 | 8 (6-7AM; 9AM-4PM) |
| BRE 03 | Balfour Rd | Brentwood Blvd (Old SR 4) | Brentwood City Limits | D | 3,540 | 437 to 1,300 | - | 437 to 1,300 | - | 437 to 1,300 | - |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | D | 1,600 | 124 to 330 | - | 124 to 330 | - | 124 to 330 | - |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | D | 1,600 | 90 to 297 | - | 90 to 297 | - | 90 to 297 | - |
| CC 03 | Old SR 4¹ | Brentwood City Limits (South) | Marsh Creek Rd | C | 790 | 1,133 to 1,682 | 13 (6AM-7PM) | - | - | - | - |
| | | | | D | 1,600 | - | - | 1,220 to 1,811 | 3 (3-6PM) | 4,047 to 4,638 | 13 (6AM-7PM) |
| CC 04 | Byron Hwy | Delta Rd | Old SR 4 | D | 1,410 | 108 to 240 | - | 108 to 240 | - | 108 to 240 | - |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./ Alameda Co. Line | D | 1,600 | 483 to 907 | - | 522 to 980 | - | 2,290 to 2,748 | 13 (6AM-7PM) |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | F | 6,060 | 2,589 to 5,820 | - | 2,589 to 5,820 | - | 2,589 to 5,820 | - |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | F | 6,060 | 1,647 to 5,705 | - | 1,647 to 5,705 | - | 1,647 to 5,705 | - |

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume Threshold | Baseline Plus Background | | | | | |
|-------|------------------------|------------------------|------------------|---------------|-----------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|-------------------------------|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating LOS Threshold |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | F | 6,060 | 2,359 to 5,156 | - | 2,359 to 5,156 | - | 2,359 to 5,156 | - |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | F | 6,060 | 1,543 to 5,243 | - | 1,543 to 5,243 | - | 1,543 to 5,243 | - |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | F | 4,010 | 1,820 to 3,339 | - | 1,820 to 3,339 | - | 1,820 to 3,339 | - |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | F | 4,010 | 1,254 to 3,332 | - | 1,254 to 3,332 | - | 1,254 to 3,332 | - |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | F | 4,010 | 1,504 to 2,162 | - | 1,504 to 2,162 | - | 1,504 to 2,162 | - |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | F | 4,010 | 1,217 to 2,236 | - | 1,217 to 2,236 | - | 1,217 to 2,236 | - |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | F | 4,010 | 1,414 to 1,851 | - | 1,560 to 2,043 | - | 1,980 to 2,463 | - |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | F | 4,010 | 1,207 to 1,964 | - | 1,333 to 2,169 | - | 1,753 to 2,589 | - |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | C | 2,880 | 1,312 to 1,720 | - | 1,312 to 1,720 | - | 1,312 to 1,720 | - |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | C | 2,880 | 1,111 to 1,813 | - | 1,111 to 1,813 | - | 1,111 to 1,813 | - |
| CT 13 | I-5 NB | Walnut Grove Rd | Peltier Rd | C | 2,880 | 1,374 to 1,803 | - | 1,594 to 2,091 | - | 1,967 to 2,464 | - |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | C | 2,880 | 1,128 to 1,894 | - | 1,308 to 2,197 | - | 1,681 to 2,570 | - |
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | C | 2,880 | 1,421 to 1,885 | - | 1,421 to 1,885 | - | 1,421 to 1,885 | - |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | C | 2,880 | 1,145 to 1,974 | - | 1,145 to 1,974 | - | 1,145 to 1,974 | - |
| CT 17 | I-5 NB | Turner Rd | SR 12 | C | 2,880 | 1,288 to 1,985 | - | 1,443 to 2,223 | - | 1,554 to 2,334 | - |
| CT 18 | I-5 SB | Turner Rd | SR 12 | C | 2,880 | 1,124 to 1,482 | - | 1,259 to 1,660 | - | 1,370 to 1,771 | - |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | C | 4,400 | 1,533 to 2,267 | - | 1,656 to 2,448 | - | 1,767 to 2,559 | - |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | C | 4,400 | 1,243 to 2,070 | - | 1,342 to 2,236 | - | 1,453 to 2,347 | - |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | D | 5,410 | 1,937 to 3,452 | - | 1,937 to 3,452 | - | 1,937 to 3,452 | - |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | D | 5,410 | 1,817 to 2,760 | - | 1,817 to 2,760 | - | 1,817 to 2,760 | - |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | E | 1,740 | 136 to 476 | - | 136 to 476 | - | 136 to 476 | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|--------------|----------------------------------|------------------------------------|----------------------------|---------------|----------------------|----------------------------|--|----------------------------|--|----------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold |
| CT 24 | SR 160 (Freeport Blvd/ River Rd) | Freeport Bridge | Scribner Rd | E | 1,740 | 94 to 180 | - | 94 to 180 | - | 94 to 180 | - |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | E | 1,740 | 41 to 125 | - | 41 to 125 | - | 41 to 125 | - |
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | E | 1,740 | 105 to 170 | - | 105 to 170 | - | 105 to 170 | - |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | E | 1,740 | 69 to 122 | - | 69 to 122 | - | 69 to 122 | - |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | E | 1,740 | 75 to 150 | - | 78 to 156 | - | 823 to 901 | - |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | E | 1,740 | 78 to 128 | - | 89 to 147 | - | 2,593 to 2,651 | 13 (6AM-7PM) |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | E | 1,740 | 173 to 465 | - | 173 to 465 | - | 2,677 to 2,969 | 13 (6AM-7PM) |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | E | 1,740 | 193 to 378 | - | 193 to 378 | - | 2,697 to 2,882 | 13 (6AM-7PM) |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | F | 1,740 | 530 to 894 | - | 549 to 926 | - | 4,112 to 4,489 | 13 (6AM-7PM) |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | B | 200 | 40 to 169 | - | 42 to 177 | - | 2,546 to 2,681 | 13 (6AM-7PM) |
| CT 34 | SR 84 (Courtland Rd/ Ryer Ave) | Courtland Rd | Cache Slough Ferry | C | 680 | 10 to 25 | - | 10 to 25 | - | 10 to 25 | - |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | C | 8,350 | 3,079 to 6,994 | - | 3,510 to 7,973 | - | 5,292 to 9,755 | 5 (2-7PM) |
| CT 36 | I-80 WB | Suisun Valley Rd | SR 12 | C | 8,350 | 5,751 to 8,892 | 2 (6-8AM) | 6,556 to 10,137 | 2 (6-8AM) | 8,338 to 11,919 | 12 (6AM-6PM) |

| ID | Segment | From | To | LOS Threshold | LOS Volume Threshold | Baseline Plus Background | | | | | |
|-------|--------------------------|-------------------------------|-------------------------------|---------------|----------------------|----------------------------|--|----------------------------|--|----------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold |
| CT 37 | SR 12 EB | I-80 | Beck Ave | C | 2,880 | 528 to 1,847 | - | 612 to 2,143 | - | 2,394 to 3,925 | 11 (7-9AM; 10AM-7PM) |
| CT 38 | SR 12 WB | I-80 | Beck Ave | C | 2,880 | 829 to 1,625 | - | 962 to 1,885 | - | 2,744 to 3,667 | 12 (6AM-6PM) |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/ Grizzly Island Rd | C | 5,060 | 2,408 to 3,573 | - | 2,772 to 4,114 | - | 6,335 to 7,677 | 13 (6AM-7PM) |
| CT 40 | SR 12 | Sunset Ave/ Grizzly Island Rd | Walters Rd/ Lawler Ranch Pkwy | C | 5,060 | 1,607 to 2,353 | - | 1,864 to 2,729 | - | 5,427 to 6,292 | 13 (6AM-7PM) |
| CT 41 | SR 12 | Walters Rd/ Lawler Ranch Pkwy | SR 113 | C | 790 | 627 to 1,075 | 10 (6-8AM; 9-1PM; 2-6PM) | 727 to 1,247 | 12 (6AM-6PM) | 4,290 to 4,810 | 13 (6AM-7PM) |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | C | 790 | 1,073 to 1,544 | 13 (6AM-7PM) | 1,245 to 1,791 | 13 (6AM-7PM) | 4,808 to 5,354 | 13 (6AM-7PM) |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | C | 970 | 1,135 to 1,685 | 13 (6AM-7PM) | 1,317 to 1,955 | 13 (6AM-7PM) | 4,880 to 5,518 | 13 (6AM-7PM) |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./ SJ Co. Line | C | 790 | 704 to 1,030 | 12 (6AM-6PM) | 746 to 1,092 | 12 (6AM-6PM) | 967 to 1,313 | 13 (6AM-7PM) |
| CT 45 | SR 12 | Sacramento Co./ SJ Co. Line | I-5 | C | 790 | 773 to 1,164 | 12 (6AM-6PM) | 793 to 1,194 | 13 (6AM-7PM) | 1,014 to 1,415 | 13 (6AM-7PM) |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | C | 4,400 | 2,508 to 4,632 | 2 (3-5PM) | 2,808 to 5,186 | 3 (3-6PM) | 4,590 to 6,968 | 13 (6AM-7PM) |
| CT 47 | I-80 WB | SR 113 | Pedrick Rd | C | 4,400 | 3,068 to 4,191 | - | 3,316 to 4,529 | 2 (3-5PM) | 5,098 to 6,311 | 13 (6AM-7PM) |
| CT 48 | SR 113 | I-80 | Dixon City Limits | C | 1,920 | 569 to 1,341 | - | 569 to 1,341 | - | 4,132 to 4,904 | 13 (6AM-7PM) |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | C | 680 | 174 to 294 | - | 188 to 318 | - | 3,751 to 3,881 | 13 (6AM-7PM) |
| CT 50 | SR 4 (Marsh) | Vasco Rd | Byron Hwy | D | 1,600 | 442 to 733 | - | - | - | - | - |

| ID | Segment | From | To | LOS Threshold | Baseline Conditions | | Baseline Plus Background Growth Conditions | | BPBGPP Conditions | | | |
|-------|------------------------|---------------------|---------------------|---------------|---------------------|----------------|--|--|---------------------|--|---------------------|--|
| | | | | | LOS Threshold | Hourly Volume | Hourly Volume Range | Hours Operating Worse Than LOS Threshold | Hourly Volume Range | Hours Operating Worse Than LOS Threshold | Hourly Volume Range | Hours Operating Worse Than LOS Threshold |
| | | | | | | | (6AM to 7PM) | | (6AM to 7PM) | | (6AM to 7PM) | |
| | Creek Rd) ² | | (Old SR 4) | C | 790 | - | - | 477 to 792 | 1 (4-5PM) | 3,304 to 3,619 | 13 (6AM-7PM) | |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | D | 1,600 | 554 to 1,224 | - | 601 to 1,327 | - | 3,428 to 4,154 | 13 (6AM-7PM) | |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | C | 790 | 412 to 746 | - | 412 to 746 | - | 3,239 to 3,573 | 13 (6AM-7PM) | |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | D | 1,410 | 867 to 1,492 | 1 (4-5PM) | 867 to 1,492 | 1 (4-5PM) | 3,694 to 4,319 | 13 (6AM-7PM) | |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | D | 7,280 | 2,552 to 4,815 | - | 2,855 to 5,386 | - | 4,269 to 6,800 | - | |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | D | 7,280 | 4,550 to 5,913 | - | 5,108 to 6,639 | - | 6,522 to 8,053 | 7 (6-8AM; 1-6PM) | |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | D | 5,410 | 2,430 to 4,586 | - | 2,770 to 5,228 | - | 4,184 to 6,642 | 5 (1-6PM) | |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | D | 5,410 | 4,333 to 5,631 | 3 (7-8AM; 4-6PM) | 4,940 to 6,419 | 8 (6-9AM; 1-6PM) | 6,354 to 7,833 | 13 (6AM-7PM) | |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | C | 4,400 | 1,350 to 5,071 | 4 (3-7PM) | 1,480 to 5,560 | 4 (3-7PM) | 2,364 to 6,444 | 5 (2-7PM) | |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | C | 4,400 | 1,873 to 4,867 | 2 (6-8AM) | 2,058 to 5,348 | 3 (6-9AM) | 2,942 to 6,232 | 4 (6-10AM) | |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | C | 4,400 | 1,431 to 5,068 | 4 (3-7PM) | 1,574 to 5,575 | 5 (2-7PM) | 2,458 to 6,459 | 5 (2-7PM) | |
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | C | 4,400 | 1,875 to 4,117 | - | 2,063 to 4,529 | 1 (6-7AM) | 2,947 to 5,413 | 3 (6-9AM) | |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | D | 5,410 | 1,525 to 4,200 | - | 1,617 to 4,452 | - | 2,300 to 5,135 | - | |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | D | 5,410 | 1,852 to 3,079 | - | 1,963 to 3,264 | - | 2,646 to 3,947 | - | |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | D | 5,410 | 1,511 to 4,182 | - | 1,602 to 4,433 | - | 2,285 to 5,116 | - | |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | D | 5,410 | 2,083 to 3,446 | - | 2,208 to 3,653 | - | 2,891 to 4,336 | - | |

| ID | Segment | From | To | LOS Threshold | LOS Hourly Volume Threshold | Baseline Plus Background | | | | | |
|--------|-------------------------------------|------------------------------|-------------------------------|---------------|-----------------------------|----------------------------|--|----------------------------|--|----------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold |
| ISL 01 | A St/4th St/Jackson Blvd. | SR 160 | Isleton City Limits | D | 1,410 | 17 to 75 | - | 17 to 75 | - | 17 to 75 | - |
| OAK 01 | Main Street (Old SR 4) ¹ | SR 160 | Cypress Rd | C | 1,920 | 752 to 1,663 | - | - | - | - | - |
| | | | | D | 3,540 | - | - | 795 to 1,759 | - | 3,622 to 4,586 | 13 (6AM-7PM) |
| OAK 02 | Main Street (Old SR 4) ¹ | Cypress Rd | Delta Rd (Oakley City Limits) | C | 970 | 722 to 1,335 | 10 (7-9AM; 11AM-7PM) | - | - | - | - |
| | | | | D | 1,760 | - | - | 823 to 1,522 | - | 3,650 to 4,349 | 13 (6AM-7PM) |
| OAK 03 | Cypress Rd | Main Street (Old SR 4) | Bethel Island Rd | D | 1,600 | 304 to 764 | - | 304 to 764 | - | 304 to 764 | - |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | D | 1,410 | 140 to 367 | - | 140 to 367 | - | 140 to 367 | - |
| OAK 05 | Delta Rd | Main Street (Old SR 4) | Byron Hwy | D | 1,410 | 155 to 334 | - | 155 to 334 | - | 155 to 334 | - |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | D | 3,540 | 789 to 2,191 | - | 789 to 2,191 | - | 789 to 2,191 | - |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | D | 1,760 | 152 to 492 | - | 152 to 492 | - | 152 to 492 | - |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | D | 1,410 | 98 to 346 | - | 98 to 346 | - | 98 to 346 | - |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | D | 1,410 | 77 to 137 | - | 77 to 137 | - | 77 to 137 | - |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | D | 1,410 | 10 to 29 | - | 10 to 29 | - | 10 to 29 | - |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | D | 1,410 | 19 to 38 | - | 19 to 38 | - | 19 to 38 | - |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | D | 1,410 | 41 to 71 | - | 41 to 71 | - | 41 to 71 | - |
| SC 06 | Twin Cities Rd | River Rd | I-5 | D | 1,410 | 130 to 248 | - | 133 to 254 | - | 878 to 999 | - |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | D | 1,410 | 141 to 318 | - | 149 to 335 | - | 252 to 438 | - |
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./Yolo Co. Line | Paintersville Bridge | D | 1,410 | 51 to 113 | - | 55 to 122 | - | 2,559 to 2,626 | 13 (6AM-7PM) |

| ID | Segment | From | To | LOS Threshold | LOS Volume | Baseline Plus Background | | | | | |
|--------------|-------------------------------|---|-------------------------------------|---------------|--------------|----------------------------|--|----------------------------|--|----------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | D | 1,410 | 85 to 134 | - | 86 to 135 | - | 831 to 880 | - |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | D | 1,600 | 223 to 365 | - | 229 to 375 | - | 974 to 1,120 | - |
| SC 11 | Walnut Grove Rd/River Rd | Walnut Grove Bridge | Sacramento Co./SJ Co. Line | D | 1,410 | 175 to 332 | - | 181 to 343 | - | 926 to 1,088 | - |
| SC 12 | Isleton Rd | River Rd (Walnut Grove)/Isleton Rd Bridge | 1.5 miles west of Isleton Rd Bridge | D | 1,410 | 61 to 283 | - | 61 to 283 | - | 429 to 651 | - |
| SC 13 | Race Track Rd/Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | D | 1,410 | 17 to 34 | - | 17 to 34 | - | 17 to 34 | - |
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | D | 1,410 | 14 to 39 | - | 14 to 39 | - | 14 to 39 | - |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | D | 1,410 | 4 to 53 | - | 4 to 53 | - | 4 to 53 | - |
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | D | 1,410 | 16 to 52 | - | 16 to 52 | - | 16 to 52 | - |
| SJ 01 | Walnut Grove Rd | Sacramento Co./SJ Co. Line | I-5 | C | 790 | 141 to 232 | - | 145 to 239 | - | 890 to 984 | 13 (6AM-7PM) |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | C | 680 | 8 to 23 | - | 8 to 23 | - | 8 to 23 | - |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | C | 790 | 108 to 209 | - | 108 to 209 | - | 1,472 to 1,573 | 13 (6AM-7PM) |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | C | 790 | 69 to 171 | - | 72 to 178 | - | 1,436 to 1,542 | 13 (6AM-7PM) |
| SJ 05 | Byron Hwy | Alameda Co./San Joaquin Co. Line | Mountain House Pkwy | D | 1,600 | 521 to 824 | - | 563 to 890 | - | 2,331 to 2,658 | 13 (6AM-7PM) |
| SJ 06 | Mountain House Pkwy | Byron Hwy | Arnaudo Blvd | D | 1,410 | 190 to 298 | - | 205 to 322 | - | 1,973 to 2,090 | 13 (6AM-7PM) |
| SJ 07 | Mountain House Pkwy | Arnaudo Blvd | I-205 | D | 3,540 | 418 to 769 | - | 477 to 877 | - | 2,245 to 2,645 | - |

| ID | Segment | From | To | LOS Threshold | LOS Volume | Baseline Plus Background | | | | | |
|--------|---------------------------------------|------------------------|-------------------------------|---------------|------------|----------------------------|--|----------------------------|--|----------------------------|--|
| | | | | | | Baseline Conditions | | Growth Conditions | | BPBGPP Conditions | |
| | | | | | | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold | Hourly Volume (6AM to 7PM) | Hours Operating Range Worse Than LOS Threshold |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | E | 1,870 | 309 to 769 | - | 309 to 769 | - | 309 to 769 | - |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | E | 1,870 | 309 to 759 | - | 321 to 789 | - | 1,685 to 2,153 | 10 (8AM-6PM) |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | D | 3,540 | 1,140 to 2,317 | - | 1,218 to 2,476 | - | 3,722 to 4,980 | 13 (6AM-7PM) |
| WS 02 | Industrial Blvd/ Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | C | 1,920 | 773 to 1,858 | - | 835 to 2,007 | 1 (5-6PM) | 3,339 to 4,511 | 13 (6AM-7PM) |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | C | 1,920 | 546 to 1,718 | - | 586 to 1,843 | - | 3,090 to 4,347 | 13 (6AM-7PM) |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | C | 680 | 42 to 146 | - | 45 to 155 | - | 2,549 to 2,659 | 13 (6AM-7PM) |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | C | 680 | 74 to 249 | - | 74 to 249 | - | 74 to 249 | - |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./ Yolo Co. Line | C | 680 | 25 to 63 | - | 27 to 68 | - | 2,531 to 2,572 | 13 (6AM-7PM) |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | C | 680 | 28 to 77 | - | 30 to 83 | - | 2,534 to 2,587 | 13 (6AM-7PM) |

Source: Appendix 19A, Bay Delta Conservation Plan Construction Traffic Impact Analysis.

* Segment IDs correspond to the roadway segment IDs shown on Figures 19-2a through 19-2c.

- ¹ Facility is analyzed as a Caltrans facility under Baseline Conditions and a local facility under Baseline Plus Construction Conditions – roadway is relinquished to local jurisdiction after Baseline Year (2009). LOS Threshold is LOS C under Baseline Conditions and changes to LOS D under Baseline Plus Construction Conditions.
- ² Facility is analyzed as a local facility under Baseline Conditions and a Caltrans facility under Baseline Plus Construction Conditions – roadway is adopted as a State facility after Baseline Year (2009). LOS Threshold is LOS D under Baseline Conditions and changes to LOS C under Baseline Plus Construction Conditions.

1 The decrease in LOS below applicable thresholds during construction would be adverse at the
 2 locations identified in Table 19-27 because construction associated with Alternative 9 would cause
 3 LOS thresholds (see Table 19-7) to be exceeded for at least 1 hour during the 6:00 AM to 7:00 PM
 4 analysis period. Alternative 9 would also exacerbate an already unacceptable LOS under BPBG
 5 conditions at **34** roadway segments (51 minus the 17 that would already be operating at an
 6 unacceptable LOS under BPBG conditions). While decreases in traffic conditions will occur
 7 throughout the study area, the highest concentration of roadway segments below applicable LOS
 8 threshold occurs on state roadways, including SR-12, I-80, SR-4, and I-205. Standards will also be
 9 exceeded on several local roadways, include all segments studied in West Sacramento and the
 10 majority of segments in San Joaquin County.

11 Mitigation Measures TRANS-1a through TRANS-1c are available to reduce this effect. Collectively,
 12 these measures include requirements to avoid or reduce circulation effects, notify the public of
 13 construction activities, provide alternate access routes, require direct haulers to pull over in the
 14 event of an emergency, limit/prohibit the amount of construction activity on congested roadways,
 15 and enhance roadway conditions. Although TRANS-1a through TRANS-1c would reduce the severity
 16 of this effect, the BDCP proponents are not solely responsible for the timing, nature, or complete
 17 funding of required improvements. If an improvement that is identified in any mitigation
 18 agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and constructed
 19 before the project's contribution to the effect is made, an adverse effect in the form of unacceptable
 20 LOS would occur. Therefore, this effect would be adverse. If, however, all improvements required to
 21 avoid adverse effects prove to be feasible and any necessary agreements are completed before the
 22 project's contribution to the effect is made, effects would not be adverse.

23 **CEQA Conclusion:** Construction under Alternative 9 would add hourly traffic volumes to study area
 24 roadways that would exceed acceptable LOS threshold (Table 19-25). As shown in Table 19-27,
 25 traffic volumes during construction of Alternative 9 would exacerbate already unacceptable LOS
 26 under BPBG conditions during the 6:00 AM to 7:00 PM analysis period. Mitigation Measures TRANS-
 27 1a through TRANS-1c would reduce the severity of this impact, but not to less-than-significant
 28 levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 29 constructed prior to the project's contribution to the impact. If an improvement that is identified in
 30 any mitigation agreement(s) contemplated by Mitigation Measure TRANS-1c is not fully funded and
 31 constructed before the project's contribution to the impact is made, a significant impact in the form
 32 of unacceptable LOS would occur. Accordingly, this impact would be significant and unavoidable. If,
 33 however, all improvements required to avoid significant impacts prove to be feasible and any
 34 necessary agreements are completed before the project's contribution to the effect is made, impacts
 35 would be less than significant.

36 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 37 **Plan**

38 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

39 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 40 **Congested Roadway Segments**

41 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

1 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 2 **Agreements to Enhance Capacity of Congested Roadway Segments**

3 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

4 **Impact TRANS-2: Increased Construction Vehicle Trips Exacerbating Unacceptable Pavement**
 5 **Conditions**

6 **NEPA Effects:** Construction truck traffic may damage roadway surfaces. During construction,
 7 various materials would be transported to and from the construction areas in load-bearing trucks.
 8 As shown in Table 19-28, construction of Alternative 9 would contribute to further deterioration of
 9 the existing pavement condition, to less than the acceptable PCI or similar applicable threshold (see
 10 Table 19-7), on a total of **32** roadway segments (see table entries in **bold** type). Figure 19-4b shows
 11 the study roadway segments that could experience substantial pavement condition effects.

12 The effect of roadway damage during construction would be adverse. Mitigation Measures TRANS-
 13 2a through TRANS-2c are available to reduce this effect, but not necessarily to a level that would not
 14 be adverse, as the BDCP proponents cannot ensure that the agreements or encroachment permits
 15 will be obtained from the relevant transportation agencies. If an agreement or encroachment permit
 16 is not obtained, an adverse effect in the form of deficient pavement conditions would occur.
 17 Accordingly, this effect could remain adverse. If, however, mitigation agreement(s) or encroachment
 18 permit(s) providing for the improvement or replacement of pavement are obtained and any other
 19 necessary agreements are completed, adverse effects could be avoided.

20 **CEQA Conclusion:** Construction would add trips, exacerbating unacceptable pavement conditions to
 21 below acceptable thresholds (Table 19-7) at the 36 intersections shown in Table 19-28. The impact
 22 of roadway damage during construction would be potentially significant. Mitigation Measures
 23 TRANS-2a through TRANS-2c would reduce this impact, but not necessarily to a level that would be
 24 less than significant, as the BDCP proponents cannot ensure that the agreements or encroachment
 25 permits will be obtained from the relevant transportation agencies. If an agreement or
 26 encroachment permit is not obtained, a significant impact in the form of deficient pavement
 27 conditions would occur. Accordingly, this effect could remain adverse. If, however, mitigation
 28 agreement(s) or encroachment permit(s) providing for the improvement or replacement of
 29 pavement are obtained and any other necessary agreements are completed, impacts would be
 30 reduced to less than significant.

31 **Mitigation Measure TRANS-2a: Prohibit Construction Activity on Physically Deficient**
 32 **Roadway Segments**

33 Please refer to Mitigation Measure TRANS-2a in Alternative 1A, Impact TRANS-2.

34 **Mitigation Measure TRANS-2b: Limit Construction Activity on Physically Deficient**
 35 **Roadway Segments**

36 Please refer to Mitigation Measure TRANS-2b in Alternative 1A, Impact TRANS-2.

37 **Mitigation Measure TRANS-2c: Improve Physical Condition of Affected Roadway Segments**
 38 **as Stipulated in Mitigation Agreements or Encroachment Permits**

39 Please refer to Mitigation Measure TRANS-2c in Alternative 1A, Impact TRANS-2.

1 **Table 19-28. Pavement Conditions for Through Delta/Separate Corridors – Alternative 9**

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPGPP Conditions | |
|--------------|---------------------------|--------------------------------------|--|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| ALA 01 | Byron Hwy | Contra Costa Co./Alameda Co. Line | Alameda Co./San Joaquin Co. Line | Acceptable | Yes | No |
| BRE 01 | Brentwood Blvd (old SR 4) | Delta Rd (Oakley City Limits) | Balfour Rd | Acceptable | Yes | No |
| BRE 02 | Brentwood Blvd (old SR 4) | Balfour Rd | Brentwood City Limits (South) | Acceptable | Yes | No |
| BRE 03 | Balfour Rd | Brentwood Blvd (Old SR 4) | Brentwood City Limits | Acceptable | No | No |
| CC 01 | Bethel Island Rd | Oakley City Limits | End | Deficient | No | No |
| CC 02 | Balfour Rd | Brentwood City Limits | Byron Hwy | Deficient | No | No |
| CC 03 | Old SR 4 | Brentwood City Limits (South) | Marsh Creek Rd | Deficient | Yes | Yes |
| CC 04 | Byron Hwy | Delta Rd | Old SR 4 | Acceptable | No | No |
| CC 05 | Byron Hwy | SR 4 | Contra Costa Co./Alameda Co. Line | Deficient | Yes | Yes |
| CT 01 | I-5 NB | Florin Rd | Pocket Rd | Deficient | No | No |
| CT 02 | I-5 SB | Florin Rd | Pocket Rd | Deficient | No | No |
| CT 03 | I-5 NB | Pocket Rd | Laguna Blvd | Deficient | No | No |
| CT 04 | I-5 SB | Pocket Rd | Laguna Blvd | Deficient | No | No |
| CT 05 | I-5 NB | Laguna Blvd | Elk Grove Blvd | Deficient | No | No |
| CT 06 | I-5 SB | Laguna Blvd | Elk Grove Blvd | Deficient | No | No |
| CT 07 | I-5 NB | Elk Grove Blvd | Hood Franklin Rd | Acceptable | No | No |
| CT 08 | I-5 SB | Elk Grove Blvd | Hood Franklin Rd | Acceptable | No | No |
| CT 09 | I-5 NB | Hood Franklin Rd | Twin Cities Rd | Deficient | Yes | Yes |
| CT 10 | I-5 SB | Hood Franklin Rd | Twin Cities Rd | Deficient | Yes | Yes |
| CT 11 | I-5 NB | Twin Cities Rd | Walnut Grove Rd | Deficient | No | No |
| CT 12 | I-5 SB | Twin Cities Rd | Walnut Grove Rd | Acceptable | No | No |
| CT 13 | I-5 NB | Walnut Grove Rd | Peltier Rd | Acceptable | Yes | No |
| CT 14 | I-5 SB | Walnut Grove Rd | Peltier Rd | Acceptable | Yes | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPBGPP Conditions | |
|--------------|---------------------------------|------------------------------------|------------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| CT 15 | I-5 NB | Peltier Rd | Turner Rd | Acceptable | No | No |
| CT 16 | I-5 SB | Peltier Rd | Turner Rd | Acceptable | No | No |
| CT 17 | I-5 NB | Turner Rd | SR 12 | Acceptable | Yes | No |
| CT 18 | I-5 SB | Turner Rd | SR 12 | Acceptable | Yes | No |
| CT 19 | I-5 NB | SR 12 | Eight Mile Rd | Deficient | Yes | Yes |
| CT 20 | I-5 SB | SR 12 | Eight Mile Rd | Acceptable | Yes | No |
| CT 21 | I-5 NB | Eight Mile Rd | Hammer Ln | Deficient | No | No |
| CT 22 | I-5 SB | Eight Mile Rd | Hammer Ln | Acceptable | No | No |
| CT 23 | SR 160 (Freeport Blvd) | Sacramento City Limits | Freeport Bridge | Deficient | No | No |
| CT 24 | SR 160 (Freeport Blvd/River Rd) | Freeport Bridge | Scribner Rd | Deficient | No | No |
| CT 25 | SR 160 (River Rd) | Scribner Rd | Hood Franklin Rd | Deficient | No | No |
| CT 26 | SR 160 (River Rd) | Hood Franklin Rd | Lambert Rd | Deficient | No | No |
| CT 27 | SR 160 (River Rd) | Lambert Rd | Paintersville Bridge | Deficient | No | No |
| CT 28 | SR 160 (Paintersville Bridge) | Sutter Slough Bridge Rd | SR 160 (River Rd) | Not Applicable | Yes | No |
| CT 29 | SR 160 | Paintersville Bridge | Walnut Grove Bridge | Acceptable | Yes | No |
| CT 30 | SR 160 (River Rd) | Walnut Grove Bridge | A St (Isleton) | Deficient | Yes | Yes |
| CT 31 | SR 160 | A St (Isleton) | SR 12 | Deficient | Yes | Yes |
| CT 32 | SR 160 | SR 12 | Brannan Island Rd | Deficient | Yes | Yes |
| CT 33 | SR 84 (Jefferson Blvd) | West Sacramento City Limits | Courtland Rd | Deficient | Yes | Yes |
| CT 34 | SR 84 (Courtland Rd/Ryer Ave) | Courtland Rd | Cache Slough Ferry | Deficient | No | No |
| CT 35 | I-80 EB | Suisun Valley Rd | SR 12 | Acceptable | Yes | No |
| CT 36 | I-80 WB | SR 12 | Suisun Valley Rd | Acceptable | Yes | No |
| CT 37 | SR 12 EB | I-80 | Beck Ave | Acceptable | Yes | No |
| CT 38 | SR 12 WB | Beck Ave | I-80 | Acceptable | Yes | No |
| CT 39 | SR 12 | Beck Ave | Sunset Ave/Grizzly Island Rd | Acceptable | Yes | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPBGPP Conditions | |
|--------------|---------------------------|-------------------------------------|-----------------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| CT 40 | SR 12 | Sunset Ave/Grizzly Island Rd | Walters Rd/Lawler Ranch Pkwy | Acceptable | Yes | No |
| CT 41 | SR 12 | Walters Rd/Lawler Ranch Pkwy | SR 113 | Deficient | Yes | Yes |
| CT 42 | SR 12 | SR 113 | SR 84 (River Rd) | Deficient | Yes | Yes |
| CT 43 | SR 12 (Rio Vista Bridge) | SR 84 (River Rd) | SR 160 (River Rd) | Not Applicable | Yes | No |
| CT 44 | SR 12 | SR 160 (River Rd) | Sacramento Co./SJ Co. Line | Deficient | Yes | Yes |
| CT 45 | SR 12 | Sacramento Co./SJ Co. Line | I-5 | Deficient | Yes | Yes |
| CT 46 | I-80 EB | SR 113 | Pedrick Rd | Deficient | Yes | Yes |
| CT 47 | I-80 WB | Pedrick Rd | SR 113 | Acceptable | Yes | No |
| CT 48 | SR 113 | I-80 | Dixon City Limits | Acceptable | Yes | No |
| CT 49 | SR 113 | Dixon City Limits | SR 12 | Deficient | Yes | Yes |
| CT 50 | SR 4 (Marsh Creek Rd) | Vasco Rd | Byron Hwy (Old SR 4) | Acceptable | Yes | No |
| CT 51 | SR 4 | Marsh Creek Rd | Discovery Bay Blvd | Deficient | Yes | Yes |
| CT 52 | SR 4 | Discovery Bay Blvd | Tracy Blvd | Deficient | Yes | Yes |
| CT 53 | SR 4 (Charter Way) | Tracy Blvd | I-5 | Deficient | Yes | Yes |
| CT 54 | I-5 NB | SR 4 (Freeway) | SR 4 (Charter Way) | Deficient | Yes | Yes |
| CT 55 | I-5 SB | SR 4 (Freeway) | SR 4 (Charter Way) | Deficient | Yes | Yes |
| CT 56 | I-5 NB | SR 4 (Charter Way) | Eighth Street | Acceptable | Yes | No |
| CT 57 | I-5 SB | SR 4 (Charter Way) | Eighth Street | Acceptable | Yes | No |
| CT 58 | I-205 EB | I-580 | Mountain House Pkwy | Acceptable | Yes | No |
| CT 59 | I-205 WB | I-580 | Mountain House Pkwy | Acceptable | Yes | No |
| CT 60 | I-205 EB | Mountain House Pkwy | Eleventh St | Acceptable | Yes | No |
| CT 61 | I-205 WB | Mountain House Pkwy | Eleventh St | Acceptable | Yes | No |
| CT 62 | I-205 EB | Grant Line Rd | Tracy Blvd | Acceptable | Yes | No |
| CT 63 | I-205 WB | Grant Line Rd | Tracy Blvd | Acceptable | Yes | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPBGPP Conditions | |
|---------------|--------------------------------|---|--------------------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| CT 64 | I-205 EB | Tracy Blvd | MacArthur Dr | Acceptable | Yes | No |
| CT 65 | I-205 WB | Tracy Blvd | MacArthur Dr | Acceptable | Yes | No |
| ISL 01 | A St/4th St/Jackson Blvd. | SR 160 | Isleton City Limits | Deficient | No | No |
| OAK 01 | Main Street (Old SR 4) | SR 160 | Cypress Rd | Deficient | Yes | Yes |
| OAK 02 | Main Street (Old SR 4) | Cypress Rd | Delta Rd (Oakley City Limits) | Deficient | Yes | Yes |
| OAK 03 | Cypress Rd | Main Street (Old SR 4) | Bethel Island Rd | Acceptable | No | No |
| OAK 04 | Bethel Island Rd | Cypress Rd | Oakley City Limits | Deficient | No | No |
| OAK 05 | Delta Rd | Main Street (Old SR 4) | Byron Hwy | Deficient | No | No |
| SAC 01 | Pocket Rd | I-5 | Freeport Blvd (Old SR 160) | Deficient | No | No |
| SAC 02 | Freeport Blvd (Old SR 160) | Pocket Rd | Sacramento City Limits | Acceptable | No | No |
| SC 01 | Freeport Bridge | River Rd | SR 160 (Freeport Blvd) | Not Applicable | No | No |
| SC 02 | Hood Franklin Rd | SR 160 (River Rd) | I-5 | Deficient | No | No |
| SC 03 | Lambert Rd | SR 160 (River Rd) | Herzog Rd | Acceptable | No | No |
| SC 04 | Lambert Rd | Herzog Rd | Franklin Blvd | Deficient | No | No |
| SC 05 | Franklin Blvd | Lambert Rd | Twin Cities Rd | Deficient | No | No |
| SC 06 | Twin Cities Rd | River Rd | I-5 | Acceptable | Yes | No |
| SC 07 | Twin Cities Rd | I-5 | Franklin Blvd | Deficient | Yes | Yes |
| SC 08 | Sutter Slough Bridge Rd | Sacramento Co./Yolo Co. Line | Paintersville Bridge | Deficient | Yes | Yes |
| SC 09 | River Rd (Sac Co.) | Paintersville Bridge | Twin Cities Rd | Deficient | Yes | Yes |
| SC 10 | River Rd (Sac Co.) | Twin Cities Rd | Walnut Grove Bridge | Deficient | Yes | Yes |
| SC 11 | Walnut Grove Rd/River Rd | Walnut Grove Bridge | Sacramento Co./SJ Co. Line | Acceptable | Yes | No |
| SC 12 | Isleton Rd | River Rd (Walnut Grove)/Isleton Rd Bridge | 1.5 miles west of Isleton Rd Bridge | Acceptable | Yes | No |

| Segment ID* | Roadway | From | To | Baseline Year 2009 Conditions | BPBGPP Conditions | |
|---------------|--------------------------------------|-----------------------------------|-------------------------------------|-------------------------------|--|--|
| | | | | | Alternative Results in Construction Trips Added to Roadway | Alternative Results in Impact on Deficient Roadway |
| SC 13 | Race Track Rd/Tyler Island Rd | Walnut Grove Rd | Southern End of Tyler Island | Deficient | No | No |
| SC 14 | Tyler Island Rd | Southern End of Tyler Island | SR 160 (River Rd) | Deficient | No | No |
| SC 15 | Jackson Slough Rd | Isleton City Limits | SR 12 | Acceptable | No | No |
| SC 16 | Jackson Slough Rd | Brannan Island Rd | SR 12 | Acceptable | No | No |
| SJ 01 | Walnut Grove Rd | Sacramento Co./SJ Co. Line | I-5 | Deficient | Yes | Yes |
| SJ 02 | Peltier Rd | Blossom Rd | I-5 | Deficient | No | No |
| SJ 03 | Tracy Blvd | SR 4 | Clifton Court Rd | Acceptable | Yes | No |
| SJ 04 | Tracy Blvd | Clifton Court Rd | Tracy City Limits | Acceptable | Yes | No |
| SJ 05 | Byron Hwy | Alameda Co./San Joaquin Co. Line | Mountain House Pkwy | Acceptable | Yes | No |
| SJ 06 | Mountain House Pkwy | Byron Hwy | Arnaudo Blvd | Acceptable | Yes | No |
| SJ 07 | Mountain House Pkwy | Arnaudo Blvd | I-205 | Acceptable | Yes | No |
| STK 01 | Eight Mile Rd | Stockton City Limits | I-5 | Deficient | No | No |
| TRA 01 | Tracy Blvd | Tracy City Limits | I-205 | Deficient | Yes | Yes |
| WS 01 | Harbor Blvd | Industrial Blvd | US 50 | Acceptable | Yes | No |
| WS 02 | Industrial Blvd/Lake Washington Blvd | Harbor Blvd | Jefferson Blvd (Old SR 84) | Acceptable | Yes | No |
| WS 03 | Jefferson Blvd (Old SR 84) | Lake Washington Blvd | Southport Pkwy | Deficient | Yes | Yes |
| WS 04 | Jefferson Blvd (Old SR 84) | Southport Pkwy | West Sacramento City Limits | Deficient | Yes | Yes |
| YOL 01 | River Rd (Yolo Co.) | Freeport Bridge | Courtland Rd | Deficient | No | No |
| YOL 02 | River Rd (Yolo Co.) | Courtland Rd | Sacramento Co./Yolo Co. Line | Deficient | Yes | Yes |
| YOL 03 | Courtland Rd | SR 84 (Jefferson Blvd) | River Rd | Deficient | Yes | Yes |

Source: Appendix 19A, *Bay Delta Conservation Plan Construction Traffic Impact Analysis*

* Segment IDs correspond to the roadway segment IDs shown on Figures 19-2a through 19-2c.

1 **Impact TRANS-3: Increase in Safety Hazards, Including Interference with Emergency Routes**
 2 **during Construction**

3 **NEPA Effects:** Alternative 9 would require a heavy volume of materials to be hauled to the
 4 construction work zones, increasing the amount of trucks using the transportation system in the
 5 study area. The increase in heavy construction traffic on local roadways would increase the
 6 potential for safety hazards such as conflicts with recreational and commuter traffic and with
 7 farming operations. The increase in heavy construction traffic using emergency routes could result
 8 in interference with emergency service response times. Emergency routes in the study area are
 9 identified in Table 19-11.

10 As discussed above and in Chapter 22, *Air Quality and Greenhouse Gases*, construction of Alternative
 11 9 would increase the amount of trucks using the transportation system in the study area. The effect
 12 of increased safety hazards from increased heavy construction traffic on local roadways and
 13 emergency routes identified in Table 19-11 would be adverse. Although TRANS-1c will reduce the
 14 severity of this effect, the BDCP proponents are not solely responsible for the timing, nature, or
 15 complete funding of required improvements. If an improvement identified in the mitigation
 16 agreement(s) is not fully funded and constructed before the project's contribution to the effect is
 17 made, an adverse effect in the form of increased safety hazards would occur. Accordingly, this effect
 18 would be adverse. If, however, all improvements required to avoid adverse effects prove to be
 19 feasible and any necessary agreements are completed before the project's contribution to the effect
 20 is made, effects would not be adverse.

21 **CEQA Conclusion:** Construction of Alternative 9 would increase the amount of trucks using the
 22 transportation system in the study area. This increase in heavy truck traffic could interfere with
 23 emergency services on designated routes (Table 19-11), resulting in significant safety hazards.
 24 Mitigation Measure TRANS-1c will reduce the severity of this impact, but not to less-than-significant
 25 levels. BDCP proponents cannot ensure that the improvements will be fully funded or constructed
 26 prior to the project's contribution to the impact. If an improvement identified in the mitigation
 27 agreement(s) is not fully funded and constructed before the project's contribution to the impact is
 28 made, a significant impact in the form of increased safety hazards would occur. Accordingly, this
 29 effect would be significant and unavoidable. If, however, all improvements required to avoid
 30 significant impacts prove to be feasible and any necessary agreements are completed before the
 31 project's contribution to the effect is made, impacts would be less than significant.

32 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 33 **Agreements to Enhance Capacity of Congested Roadway Segments**

34 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

35 **Impact TRANS-4: Disruption of Marine Traffic during Construction**

36 **NEPA Effects:** In-water construction of operable barriers and barge unloading facilities could result
 37 in impediments to marine traffic on the San Joaquin River at the confluence with (1) the Old River
 38 and (2) Fisherman's Cut. The construction of an operable barrier at the confluence of Threemile
 39 Slough and the Sacramento River may have some adverse impact on marine traffic. The effect of
 40 disruption to marine traffic during construction would be adverse. As noted in Chapter 15,
 41 Recreation, Impact REC-3, the barge unloading facilities built on Middle River would occupy
 42 between 900 and 1,100 feet of riverbank. The Middle River in both locations is about 600–650 feet

1 wide and is characterized by a split channel, with a vegetated island in the middle of the river. The
 2 barge unloading facilities and barge operations at these two locations could therefore occupy a
 3 substantial portion of the west channel of the river depending on the location. However, all barge
 4 routes and landing sites will be selected to maximize continuous waterway access and a minimum
 5 waterway width greater than 100 feet. Moreover, Mitigation Measure TRANS-1a is available to
 6 reduce this effect.

7 **CEQA Conclusion:** Construction of Alternative 9 could result in impediments to marine traffic on the
 8 San Joaquin River at the confluence with (1) the Old River and (2) Fisherman’s Cut. The construction
 9 of an operable barrier at the confluence of Threemile Slough and the Sacramento River may have
 10 some adverse impact on marine traffic. The impact of disruption to marine traffic during
 11 construction would be significant. Mitigation Measure TRANS-1a would reduce this impact to a less-
 12 than-significant level.

13 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 14 **Plan**

15 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

16 **Impact TRANS-5: Disruption of Rail Traffic during Construction**

17 **NEPA Effects:** The effect of Alternative 9 on rail operations is shown in Table 19-29. Train
 18 operations along the BNSF Railway/Amtrak San Joaquin Line could be affected during construction
 19 of the proposed operable barrier at the Middle River entrance of the Railroad Cut (between the
 20 Middle River and the Old River).

21 **Table 19-29. Construction Impacts on Rail Traffic for Through Delta/Separate Corridors –**
 22 **Alternative 9**

| Affected Railroad | Crosses and/or Immediately Adjacent to Construction Zone | Level of Train Volume | Construction Impacts on Rail Traffic |
|---|--|-----------------------|--|
| BNSF Railway and Amtrak San Joaquin Line | Yes | High | Substantial—rail line operates down the center of the Railroad Cut and crosses construction of proposed operable barrier at the Middle River (on the eastern end of the Railroad Cut) in a proposed major work area. |
| Union Pacific Railroad--Tracy Subdivision | No | Low (Out of Service) | Minimal to Non-Existent |

23
 24 Construction of Alternative 9, which physically crosses the BNSF Railway and Amtrak San Joaquin
 25 Line, could disrupt BNSF rail operations. The effect of disruption to rail traffic during construction
 26 would be adverse. Mitigation Measure TRANS-1a, which includes stipulations to coordinate with rail
 27 providers to develop alternative interim transportation modes (e.g., trucks or buses) that could be
 28 used to provide freight and/or passenger service during any longer term railroad closures and daily
 29 construction time windows during which construction is restricted or rail operations would need to
 30 be suspended for any activity within railroad rights of way, is available to reduce this effect.

CEQA Conclusion: Construction of Alternative 9 may temporarily affect BNSF/Amtrak railroad operations through physical railroad crosses. This is a potentially significant impact. Implementation of Mitigation Measure TRANS-1a would reduce this impact to a less than significant level.

Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management Plan

Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

Impact TRANS-6: Disruption of Transit Service during Construction

NEPA Effects: Construction of Alternative 9 would not affect area roadways upon which transit service operates. Table 19-30 summarizes the transit service that intersects with Alternative 9.

Table 19-30. Construction Impacts on Bus Routes for Through Delta/Separate Corridors – Alternative 9

| Affected Transit Service | Roadway Operated On and Location | Estimated Trips per Day | Construction Impacts on Bus Routes |
|--------------------------|---|---|---|
| SCT/Link Delta Route | SR 12 across the North Mokelumne River and Little Potato Slough (on existing bridges) | 4 trips per weekday (2 in each direction) | None. SR 12 currently crosses both waterway corridors. No additional construction is identified at either bridge crossing location. |

Although the SCT/Link Delta Route crosses Alternative 9 waterways on existing bridges, no construction-related impacts on transit operations are anticipated. However, transit routes and services may change over time and consultation with affected transit agencies would be advisable prior to construction. Mitigation Measure TRANS-1a, which includes stipulations to maintain continual circulation in and around construction zones and coordinate with transit providers to develop daily construction time windows during which transit operations would not be either detoured or significantly slowed is available to reduce this effect.

CEQA Conclusion: Construction of Alternative 9 would not affect area roadways upon which transit service operates. Accordingly, the impact of disruption to transit service during construction would not be significant; however, Mitigation Measure TRANS-1a, which includes stipulations to maintain continual circulation in and around construction zones and coordinate with transit providers to develop daily construction time windows during which transit operations would not be either detoured or significantly slowed would further reduce the potential for this effect.

Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management Plan

Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

Impact TRANS-7: Interference with Bicycle Routes during Construction

NEPA Effects: Several bicycle routes traverse or are adjacent to the proposed water conveyance features and their construction zones. Bicycle routes may be separated non-motorized paths (Class

1 I); bike lanes on a street or highway (Class II); or designated signed routes without a marked lane
 2 operating in mixed flow with motorized traffic (Class III). Bicycles may also operate legally on any
 3 roadway, regardless of whether or not a bike route class designation exists. The effect of disruption
 4 to bicycle routes during construction would be adverse. Mitigation Measure TRANS-1a is available
 5 to reduce this effect. Under this measure, BDCP proponents would provide alternate access routes
 6 via detours or bridges to maintain continual circulation for local travelers in and around
 7 construction zones, including bicycle riders; provide signage warning of loose gravel, steel plates,
 8 etc. that could be hazardous to road cycling activity on roadways open to bicycle traffic; provide
 9 signage, barricades, and flag people as necessary to slow or detour traffic around construction sites;
 10 and notify the public, including cycling organizations and bike shops, of construction activities that
 11 could affect transportation. Additionally, another project commitment, as described in Appendix 3B,
 12 *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance recreational access to areas
 13 in the vicinity of the proposed intakes, including enhancement of bicycle and foot access to the Delta
 14 and the potential conversion of an abandoned rail line between Sacramento and Walnut Grove into a
 15 bicycle path.

16 **CEQA Conclusion:** Increased traffic and vehicle delays during construction (see Table 19-27) could
 17 temporarily disrupt bicycle routes within and adjacent to the proposed project and its construction
 18 zones, resulting in a significant impact. However, Mitigation Measure TRANS-1a would reduce the
 19 severity of this impact to less-than-significant levels because BDCP proponents would provide
 20 alternate access routes via detours or bridges to maintain continual circulation for local travelers in
 21 and around construction zones, including bicycle riders; provide signage warning of loose gravel,
 22 steel plates, etc. that could be hazardous to road cycling activity on roadways open to bicycle traffic;
 23 provide signage, barricades, and flag people as necessary to slow or detour traffic around
 24 construction sites; and notify the public, including cycling organizations and bike shops, of
 25 construction activities that could affect transportation. Additionally, another project commitment, as
 26 described in Appendix 3B, *Environmental Commitments*, and Chapter 15, *Recreation*, could enhance
 27 recreational access to areas in the vicinity of the proposed intakes, including enhancement of bicycle
 28 and foot access to the Delta and the potential conversion of an abandoned rail line between
 29 Sacramento and Walnut Grove into a bicycle path. Because implementation of this mitigation
 30 measure and project commitment would avoid a substantial disruption to bicycle facilities as a
 31 result of increased roadway traffic and/or roadway closures, this impact would be less than
 32 significant.

33 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 34 **Plan**

35 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

36 **Impact TRANS-8: Increased Traffic Volumes and Delays during Operations and Maintenance**

37 **NEPA Effects:** The effect of maintaining and operating the facilities on roadway operations under
 38 Alternative 9 have not been estimated, but are assumed to be similar the effect under Alternative 1A
 39 (see Tables 19-14, 19-15, and 19-16), but substantially less in magnitude. Like Alternative 1A, O&M
 40 activities would occur along the entire alternative alignment. Even assuming the higher employment
 41 range in Table 19-16, given the limited number of workers involved and the large number of work
 42 sites, it is not anticipated that routine operations and maintenance activities or major inspections
 43 would result in substantial increases of traffic volumes or roadway congestion. The effect of
 44 increased traffic volumes and delays during operations would not be adverse.

1 **CEQA Conclusion:** Given the limited number of workers involved and the large number of work sites
2 (see Tables 19-14, 19-15, and 19-16), it is not anticipated that routine operations and maintenance
3 activities or major inspections would result in substantial increases of traffic volumes or roadway
4 congestion. The impact of increased traffic volumes and delays during operations would therefore
5 be less than significant. No mitigation is required.

6 **Impact TRANS-9: Permanent Alteration of Transportation Patterns during Operations and**
7 **Maintenance**

8 **NEPA Effects:** The effect of maintaining and operating the facilities on transportation patterns under
9 Alternative 9 would be similar to Alternative 1A, but substantially less in magnitude. Impacts on
10 public roadways would be limited to the intake areas and would not substantially alter traffic
11 patterns. The design and construction of all project components (i.e., intakes, gates) would provide
12 for on-going continuity of all rail operations following completion of construction. Impediments to
13 boat traffic associated with the intakes would continue for the life of the project, but would not
14 substantially impact boat passage or usage. The effect of permanent alteration of transportation
15 patterns during operations would not be adverse.

16 **CEQA Conclusion:** The impact of maintaining and operating the project under Alternative 9 would
17 be similar to Alternative 1A. Impacts on public roadways would be limited to the intake areas and
18 would not substantially alter traffic patterns. The design and construction of all project components
19 (i.e., intakes, gates) would provide for on-going continuity of all rail operations following completion
20 of construction. Impediments to boat traffic associated with the intakes would continue for the life
21 of the project, but would not substantially impact boat passage or usage. Accordingly, the impact of
22 permanent alteration of transportation patterns during operations would be less than significant. No
23 mitigation is required.

24 **Impact TRANS-10: Increased Traffic Volumes during Implementation of CM2–CM22**

25 **NEPA Effects:** At the program-level of analysis, the impact under Alternative 9 would be the same as
26 Alternative 1A because the acreage of conservation is identical. Impacts on roadways could result in
27 circulation delays or the inability to maintain adequate vehicular access in or around restoration or
28 enhancement work zones. Roads and highways in and around Suisun Marsh and the Yolo Bypass
29 could experience increases in traffic volumes, resulting in localized congestion and conflicts with
30 local traffic. These roadways could function as haul routes or to bring construction personnel to the
31 work sites. Maintenance and monitoring of the restoration areas would also generate some vehicle
32 trips. The effect of increased traffic volumes during implementation of CM2–CM22 would be
33 adverse. Although TRANS-1a through TRANS-1c would reduce the severity of this effect, the BDCP
34 proponents are not solely responsible for the timing, nature, or complete funding of required
35 improvements. If an improvement identified in the mitigation agreement(s) is not fully funded and
36 constructed before the project's contribution to the effect is made, an adverse effect would occur.
37 Therefore, this effect would be adverse. If, however, all improvements required to avoid adverse
38 effects prove to be feasible and any necessary agreements are completed before the project's
39 contribution to the effect is made, effects would not be adverse.

40 **CEQA Conclusion:** Impacts on roadways could result in circulation delays or the inability to
41 maintain adequate vehicular access in or around restoration or enhancement work zones. Roads
42 and highways in and around Suisun Marsh and the Yolo Bypass could experience increases in traffic
43 volumes, resulting in localized congestion and conflicts with local traffic. These roadways could

1 function as haul routes or to bring construction personnel to the work sites. Maintenance and
 2 monitoring of the restoration areas would also generate some vehicle trips. The impact of increased
 3 traffic volumes during implementation of CM2–CM22 would be significant. Mitigation Measures
 4 TRANS-1a through TRANS-1c would reduce the severity of this impact, but not to less-than-
 5 significant levels. The BDCP proponents cannot ensure that the improvements will be fully funded or
 6 constructed prior to the project’s contribution to the impact. If an improvement identified in the
 7 mitigation agreement(s) is not fully funded and constructed before the project’s contribution to the
 8 impact is made, a significant impact would occur. Therefore, the project’s impacts to roadway
 9 segment LOS would be conservatively significant and unavoidable. If, however, all improvements
 10 required to avoid significant impacts prove to be feasible and any necessary agreements are
 11 completed before the project’s contribution to the effect is made, impacts would be less than
 12 significant.

13 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**
 14 **Plan**

15 Please refer to Mitigation Measure TRANS-1a in Alternative 1A, Impact TRANS-1.

16 **Mitigation Measure TRANS-1b: Limit Hours or Amount of Construction Activity on**
 17 **Congested Roadway Segments**

18 Please refer to Mitigation Measure TRANS-1b in Alternative 1A, Impact TRANS-1.

19 **Mitigation Measure TRANS-1c: Make Good Faith Efforts to Enter into Mitigation**
 20 **Agreements to Enhance Capacity of Congested Roadway Segments**

21 Please refer to Mitigation Measure TRANS-1c in Alternative 1A, Impact TRANS-1.

22 **Impact TRANS-11: Compatibility of the Proposed Water Conveyance Facilities and Other**
 23 **Conservation Measures with Plans and Policies**

24 **NEPA Effects:** The potential for inconsistencies with plans or polices would be similar to the
 25 discussion in Alternative 1A, Impact TRANS-11. Construction and implementation of Alternative 9
 26 would be compatible with applicable plans and policies related to transportation and circulation.

27 **CEQA Conclusion:** The physical effects are discussed in impacts TRANS-1 through TRANS-10, above
 28 and no additional CEQA conclusion is required related to the consistency of the alternative with
 29 relevant plans and polices. The relationship between plans, policies, and regulations and impacts on
 30 the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

31 **19.3.3.17 Cumulative Analysis**

32 **Assessment Methodology**

33 Transportation systems in the Delta region are expected to change as a result of past, present, and
 34 reasonably foreseeable future projects, related to population growth and changes in economic
 35 activity (Chapter 30, *Growth Inducement and Other Indirect Effects*). The effects of the alternatives on
 36 transportation were considered in connection with the potential effects of projects listed in
 37 Attachment 3D-A to Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project*
 38 *Alternative, and Cumulative Impact Conditions*. Projects with the greatest potential to affect the
 39 transportation network are identified in Table 19-31. Please note that infrastructure projects

1 included in the Sacramento County General Plan Update and the metropolitan and regional
 2 transportation plans prepared by SACOG, SJCOG, and MTC may also affect traffic operations
 3 throughout the Plan Area. Projects on the interstate and highway system that add additional vehicle
 4 trips or significantly change the location of existing trips are likely to have the largest potential
 5 effect.

6 **Table 19-31. Effects on Transportation from a Selection of Plans, Policies, and Programs Considered**
 7 **for Cumulative Analysis**

| Agency | Program/ Project | Description of Program/Project | Effects on Transportation |
|--|--|---|--|
| California High Speed Rail Authority and Federal Railroad Administration | Altamont Corridor Rail Project | The project would incrementally upgrade the Altamont Corridor Express System as part of the statewide High Speed Rail Initiative on a separate, dedicated passenger track and may ultimately be fully grade-separated, electrified, and compatible with the high speed train equipment | Project could result in temporary transportation effects during construction, including increased vehicle delays and road closures. Project may have a long-term beneficial effect on regional transportation by reducing vehicle trips. |
| California High Speed Rail Authority and Federal Railroad Administration | California High-Speed Rail System Sacramento to Merced Section | The project would construct a new rail corridor between Merced and Sacramento, with various alignments under study including alignments adjacent to the existing Union Pacific Railroad and Burlington Northern Santa Fe (BNSF) railroad routes. The new corridor would be fully grade-separated and electrified. | Project could result in temporary transportation effects during construction, including increased vehicle delays and road closures. Project may have a long-term beneficial effect on regional transportation by reducing vehicle trips. |

8
 9 The above list of related projects evaluated for cumulative impacts includes projects that would
 10 affect transportation conditions, including land use and network changes. The proposed BDCP, in
 11 conjunction with other projects identified in Table 19-31 and regional transportation plans, would
 12 cumulatively effect transportation operations during project construction, as discussed further
 13 below.

14 **No Action Alternative**

15 The No Action Alternative is not anticipated to cumulatively contribute to changes in the
 16 characteristics of the transportation systems in the transportation study area. Roadways currently
 17 experiencing congestion and delays, as identified in Table 19-3, would continue to experience level
 18 of service impacts. Ongoing and reasonably foreseeable future projects are expected to provide
 19 capacity enhancements, although traffic congestion is still likely to increase in future years as
 20 growth occurs in the Bay Area and Valley. However, none of the projects or programs assumed
 21 under the No Action Alternative would create new growth that would cumulatively effect traffic
 22 volumes, increase vehicle delays, or deteriorate pavement conditions. Effects on other

1 transportation modes such as bicycle, marine, rail, bus, and air traffic are also not expected as a
2 result of the No Action Alternative.

3 The Delta and vicinity are within a highly active seismic area, with a generally high potential for
4 major future earthquake events along nearby and/or regional faults, and with the probability for
5 such events increasing over time. Based on the location, extent and minimally engineered nature of
6 many existing levee structures in the Delta area, the potential for significant damage to, or failure of,
7 these structures during a major local seismic event is generally moderate to high. For major
8 earthquakes along larger faults, ground rupture can extend for considerable distances (hundreds or
9 thousands of feet), with associated risks for surface structures such as roadways. (See Appendix 3E,
10 *Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies* for more detailed discussion)
11 In instances of a catastrophic event due to climate change or a seismic event, there would also be a
12 potential for adverse effect on transportation (such as decreased level of service) or closure of
13 roadways and other transportation systems in the affected portion of the study area. While similar
14 risks would occur under implementation of the action alternatives, these risks may be reduced by
15 BDCP-related levee improvements along with those projects identified for the purposes of flood
16 protection in Table 19-31.

17 **Impact TRANS-13: Cumulative impacts on transportation systems from construction**

18 **NEPA Effects:** Construction of planned projects throughout the study area would have temporary,
19 discrete effects such as traffic disruption resulting in delays to travelers and users of the
20 transportation system, although these effects would not be necessarily be substantial from a
21 regional perspective.

22 Construction of these projects could result in temporary impacts on levels of service because of
23 increases in vehicle trips associated with movement of personnel, goods, and materials. Heavy
24 construction equipment on local roadways could contribute to existing pavement deterioration.
25 Conflicts with other users of the transportation roadway network, such as cyclists, transit services,
26 or emergency service providers could occur. Marine highway corridors along between the ports of
27 Oakland, Stockton, and Sacramento could be affected if commercial barges are used to transport
28 materials to construction sites during work on the ship channel.

29 Although it is difficult to determine when major infrastructure projects would be constructed, the
30 cumulative impact may be substantial if these projects occur during the same time frame and
31 location as the proposed project because the magnitude of effects would be greater. If these projects
32 occurred sequentially, the construction-related effects could be drawn out for an extended period,
33 again. If one local area experiences several large construction projects simultaneously, there could
34 be substantial localized impacts.

35 The effects are relatively similar between the alternatives and vary in location according to the type
36 of conveyance. Decreases in level of service from construction of water conveyance facilities
37 associated with BDCP alternatives using the pipeline/tunnel conveyance (Alternatives 1A, 2A, 3, 5,
38 6A, 7, and 8) affect fewer roadway segments (33), compared to alternatives using the modified
39 pipeline/tunnel (Alternative 4) (36), east canal conveyance (Alternatives 1B, 2B, and 6B) (39), west
40 canal conveyance (Alternatives 1C, 2C, and 6C) (56), or Alternative 9 (51). Pavement deterioration
41 under Alternative 9 affects the fewest road segments (32), compared to all the other alternatives
42 (42-46). Effects would also be lessened with alternatives constructing fewer intakes.

1 The effect related to implementation of restored habitats associated with CM2–CM22 could also
 2 result in similar construction-related effects depending on the location and duration of the
 3 construction activities, but these effects are not distinguishable between the alternatives at the
 4 current program level of design.

5 Construction of cumulative projects within the Delta could result in cumulative impacts on
 6 transportation systems because of substantial increases in construction traffic volumes affecting
 7 level of service and contributing to pavement deterioration. This cumulative impact is considered
 8 adverse and the contribution from Alternatives 1A-9 would be cumulatively considerable.

9 Mitigation Measures TRANS-1 through TRANS-7 are available to reduce this effect, but would not
 10 reduce the severity to a level that would not be considered adverse. The BDCP proponents are not
 11 solely responsible for the timing, nature, or complete funding of required improvements. Moreover,
 12 coordinating with the construction schedules of other large projects in the region is heavily
 13 dependent on availability. If an improvement identified in the mitigation agreement(s) is not fully
 14 funded and constructed before the project's contribution to the effect is made, construction of BDCP
 15 water conveyance facilities combined with other projects in the study area would make a
 16 cumulatively considerable contribution to the effects on transportation systems in the Delta.
 17 Accordingly, this effect would be adverse.

18 **CEQA Conclusion.** Construction of cumulative projects within the Delta would result in cumulative
 19 impacts on transportation systems because of substantial increases in construction traffic volumes
 20 affecting level of service and contributing to pavement deterioration. This cumulative impact would
 21 be significant and the contribution from Alternatives 1A-9 would be cumulatively considerable.
 22 Although TRANS-1 through TRANS-7 would reduce the severity of this impact, the BDCP proponents
 23 cannot ensure that the improvements will be fully funded or constructed prior to the project's
 24 contribution to the impact. If an improvement identified in the mitigation agreement(s) is not fully
 25 funded and constructed before the project's contribution to the effect is made, construction of BDCP
 26 facilities combined with other projects in the study area would make a cumulatively considerable
 27 contribution to the effects on transportation systems in the Delta. Accordingly, this effect would be
 28 significant and unavoidable.

29 **Impact TRANS-14: Cumulative impacts on transportation systems from operation and**
 30 **maintenance (post-construction)**

31 **NEPA Effects:** Traffic and transportation impacts include increased congestion and exceedances of
 32 roadway levels of service, which most jurisdictions consider significant and unavoidable. Other
 33 impacts identified by some jurisdictions include impacts on parking capacity, emergency access,
 34 conflicts with or increased demand for alternative transportation, and altered air traffic patterns:
 35 these are considered by some jurisdictions to be significant but mitigable and by at least one
 36 jurisdiction to be significant and unavoidable (refer to Chapter 30, *Growth Inducement and Other*
 37 *Indirect Effects*). Identified mitigation measures include implementation of general plan traffic and
 38 circulation policies; provision of alternative means of transportation; implementation of traffic
 39 signal improvements; and coordination with Caltrans and local councils of government to apportion
 40 traffic impact mitigation.

41 None of the alternatives would construct new public transportation facilities, demolish existing
 42 public transportation facilities, or add substantial traffic to transportation facilities during routine
 43 operation and maintenance (refer to Tables 19-14, 19-15, 19-16). Operation and maintenance of the
 44 project would not result in the construction of new transportation systems or increases in capacity

1 in existing transportation systems and therefore would not make a cumulatively considerable
 2 contribution to effects on transportation systems. This cumulative impact is not distinguishable
 3 between the alternatives.

4 The effect related to operation and maintenance of restored habitats associated with CM2–CM22
 5 could also result in similar minor contributions to traffic on transportation facilities, depending on
 6 the location and duration of the O&M activities, but these effects are not distinguishable between the
 7 alternatives at the current program level of design.

8 **CEQA Conclusion:** Operation and maintenance of cumulative projects within the Delta could result
 9 in cumulative impacts on transportation systems because of increases in traffic volumes affecting
 10 level of service and contributing to pavement deterioration. Development within the Delta region is
 11 limited. Any development that would occur in the future would occur as part of planned growth, and
 12 would include any necessary supporting infrastructure improvements. The minor contribution of
 13 traffic from the project for routine operation and maintenance during the post construction period
 14 would not be considered cumulatively considerable.

15 19.4 References

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