2 SUMMARY

2.1 INTRODUCTION

As required by the State CEQA Guidelines, California Code of Regulations (CCR) Section 15123(a), this chapter includes: 1) a summary description of the proposed project; 2) a synopsis of environmental impacts and recommended mitigation measures; 3) identification of the alternatives evaluated and of the environmentally superior alternative; and 4) a discussion of potential areas of controversy associated with the project.

2.2 SUMMARY DESCRIPTION OF THE PROPOSED PROJECT

2.2.1 Background

The Dry Creek Greenway East Trail (a multi-use trail along Dry, Cirby, and Linda Creeks from Riverside Avenue to Old Auburn Road) (proposed project) is a proposed 4.25-mile paved multi-use trail in the City of Roseville (City). The proposed project would be a shared-use trail for pedestrians, bicyclists, and other non-motorized vehicle users that would connect neighborhoods, parks, schools, businesses, natural areas, and the on-street bikeway system across the south side of the City.

The City's 2008 Bicycle Master Plan (BMP) includes a plan for development of over 28 miles of Class I trails in Roseville, including the Dry Creek Greenway East Trail. The proposed project is identified as a priority project in the BMP because of its potential to provide a safe, comfortable, and convenient bicycle route in an area of the City with limited existing options for bicyclists.

The City prepared the Dry Creek Greenway Planning and Feasibility Study in 2009. The study outlined the existing conditions, opportunities and constraints, alignment options, evaluation criteria, and a recommended alignment for a paved path from Riverside Avenue and Darling Way to the City limits just south of Old Auburn Road. The study also included design treatment options, cost estimates, and a phasing plan. The City Council accepted the study in 2010. The study was updated in 2013 to provide further information regarding alternative trail alignments.

During preparation of the original and updated feasibility study, the City used a community-based planning approach with an emphasis on public outreach. The public outreach efforts included establishment of a Stakeholder Representative Group (SRG) that represented a broad array of community interests. The SRG met 10 times between 2008 and 2013. The public outreach efforts also included three community meetings, an online survey and numerous neighborhood meetings. The community input received during this process informed the proposed project's design and alignment, and the community input was also considered during the formulation of the optional alignments and project alternatives presented in this EIR.

2.2.2 Summary Description of the Proposed Project

The proposed 4.25-mile multi-use trail would extend from the existing Saugstad/Royer Park trail near the intersection of Riverside Avenue and Darling Way eastward to the City limits, just past the Old Auburn Road/South Cirby Way intersection. The trail would follow creek corridors along portions of Dry, Cirby, and Linda Creeks. These corridors currently contain segments of existing unimproved natural surface paths and paved multi-use paths, some of which do not meet current City design standards.

Much of the corridor has been used historically for recreation and for access and transportation of infrastructure maintenance vehicles and equipment. The corridor continues to be used for these purposes along both improved and unimproved segments.

The proposed project would be a paved, multi-use trail would that would conform to the City of Roseville Design Standards (Section 13 Bikeways) and other provisions of the City of Roseville Construction Standards. A typical cross-section for the proposed trail would consist of a 10-foot wide paved trail with two-foot shoulders on each side (one composed of decomposed granite and one of aggregate base), for a total width of 14 feet. The trail may also include drainage swales on one or both shoulders, as needed. The proposed trail may be narrowed to an eight-foot wide paved section with one- or two-foot wide shoulders for access spurs and in "pinch-point" locations that have severe physical or environmental constraints. The narrower cross section would still support safe, two-way travel but would limit physical disturbance where design constraints prevent construction of the standard cross-section. The proposed trail may also be widened in areas where additional shoulder or trail width is desired to enhance user comfort and safety. In these instances, the shoulder width may be increased to between 5 and 10 feet on one side of the trail. As a result of existing topography, retaining walls would be required at several locations along the proposed alignment. The proposed walls would include gravity walls (reinforced concrete) and anchored walls. The proposed project would include undercrossings to pass beneath existing roadways, including Darling Way, Interstate 80, Sunrise Avenue, Rocky Ridge Drive, and Old Auburn Road. The project would also include the construction or modification of up to eight bridges to provide creek crossings throughout the alignment. Finally, the project could include elements such as benches, lighting on lengthy portions of the undercrossings, utility relocations, and regulatory and wayfinding signs (see Chapter 3, "Project Description.")

The proposed trail would, to the extent feasible, be designed to provide maintenance and emergency access for the City Environmental Utilities Department, open space and storm water maintenance crews, and the Roseville Fire Department. It would provide a safe route for walkers, joggers, cyclists, wheelchair users, and others traveling on non-motorized vehicles to access parks and other trails.

2.2.3 Project Objectives

The proposed project objectives for the Dry Creek Greenway East Trail are developed in consideration of the California Environmental Quality Act (CEQA), the City of Roseville General Plan, 2008 Bicycle Master Plan, and the 2009 Dry Creek Greenway Planning and Feasibility Study. The project objectives are as follows:

- Develop a safe and continuous trail alignment that maximizes opportunities for bicycle and pedestrian travel separate from roadway vehicle traffic by connecting neighborhoods, shopping and employment, schools, parks, transit, and other existing and planned trails, bikeways and walkways.
- Enhance access to the Dry Creek, Cirby Creek, and Linda Creek open space areas for public recreational and educational opportunities, utility maintenance, open space maintenance, and emergency response.
- Protect the natural habitat and special-status wildlife species of the Dry Creek, Cirby Creek, and Linda Creek open space areas, minimize the potential for loss of life and property due to flooding, enhance compatibility with private properties, and reduce the need for right-of-way acquisition.
- Seek the most effective and efficient balance of capital cost, operational and maintenance costs, environmental and community impacts, and public benefits.
- Direct consideration of cost is not required under CEQA. However, efforts to attain this objective are part of the design process employed by the City in meeting its health, welfare and economic obligations to the citizens of Roseville.

2.3 ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

The Draft EIR addresses the following technical issue areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions and Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services
- Recreation
- Transportation and Circulation
- Utilities

The specific topics evaluated are described in each of the technical sections presented in Chapter 4. Table 2-1 at the end of this chapter, provides a summary of the environmental impacts of the proposed project, the level of significance of the impact before mitigation, recommended mitigation measures, and the level of significance of the impact after the implementation of the mitigation measures.

2.3.1 Effects Eliminated from Detailed Evaluation

Under CEQA and the State CEQA Guidelines, a lead agency may limit an EIR's discussion of environmental effects when they are not significant (Public Resources Code [PRC] Section 21002.1(e); State CEQA Guidelines CCR Sections 15128 and 15143). Based on a review of the potential effects of the proposed project, the City determined that agricultural and forestry resources, mineral resources, and population and housing would not require detailed evaluation in the Draft EIR.

AGRICULTURAL AND FORESTRY RESOURCES

No agricultural uses exist on or near the proposed project site, and the site is designated by the Farmland Mapping and Monitoring Program (FMMP) as "Urban and Built-up" (California Department of Conservation 2016). The designation for much of the adjacent lands surrounding the project site is Urban and Built Up; the eastern end of the proposed trail (at Old Auburn and South Cirby Way is designated "Other Land"). The proposed project site is not on, or near, any land with the FMMP designation of Prime or Unique Farmland or Farmland of Statewide Importance, nor is it on or near any land with a Williamson Act contract. Thus, development of the proposed project would not convert any prime farmland, unique farmland, or farmland of statewide importance; would not conflict with existing zoning for agricultural use of a Williamson Act contract; and would not involve any changes in the existing environment that could result in conversion of farmland to nonagricultural use. While the project alignment contains some area of riparian woodland, it is not zoned as forest land or Timberland Production, and development of the site would not result in conversion of forest land to non-forest use. Recognizing the absence of adverse impacts related to agriculture or forest resources, these issues are not discussed further in this EIR.

MINERAL RESOURCES

Under the State Mining and Reclamation Act, areas containing economically significant mineral deposits are classified and mapped. These mineral resource zones (MRZs) are used in land use planning to show the likelihood of the occurrence of mineral resources in a particular area. Areas classified as MRZ-2 are considered to have the likelihood of significant mineral deposits that could be economically beneficial to society. Areas classified as MRZ-1 or MRZ-3 are not considered to contain significant mineral deposits.

The project area is classified as MRZ-4, areas of unknown mineral resource significance (California Department of Conservation 1995). As stated in the *City of Roseville General Plan* (City of Roseville 2010), mineral resources, consisting of sand and gravel, are limited and no mineral extraction operations currently occur or are anticipated to occur in the City within the timeframe of the General Plan's analysis. The City of Roseville has not designated the site as a locally important mineral resource area. The project area is not located within or near an area of significant mineral deposits; therefore, no loss of availability of a known mineral resource would occur, and this issue is not discussed further in this EIR.

POPULATION AND HOUSING

The proposed project would not result in new housing or additional population in the City of Roseville. The project would involve the construction of a paved trail alignment along portions of Dry, Cirby, and Linda Creek corridors. The proposed project would be aligned within the creek corridors of developed neighborhoods and business districts in the City of Roseville. With the exception of a few scattered parcels, the properties surrounding the creek corridors are fully developed. While most of the project corridor is on public property, use of some privately-owned parcels is necessary, and this issue is discussed in Chapter 4.9, "Land Use and Planning."

The Proposed Project would not directly induce population growth, because it would not include employment-generating uses. Project development would not indirectly induce population growth, because it would not extend roads or infrastructure into previously undeveloped areas (see the growth-inducing discussion in Chapter 5, "Other CEQA Considerations"). The proposed project does not include residential development, would not displace any existing homes or people, and would not necessitate the construction of replacement housing elsewhere. Recognizing the absence of adverse impacts related to population and housing, these issues are not discussed further in this EIR.

2.3.2 Effects Found to be Less Than Significant

A number of project impacts identified in the Draft EIR were evaluated in detail and found to be less than significant, requiring no mitigation. These impacts can be found in sections 4.1, "Aesthetics"; 4.2, "Air Quality"; 4.5, "Geology and Soils"; 4.6, "Greenhouse Gas Emissions and Climate Change"; 4.8, "Hydrology and Water Quality"; 4.9, "Land Use and Planning"; 4.11, "Public Services"; 4.12, "Recreation"; 4.13, "Transportation and Circulation," and 4.14, "Utilities."

2.3.3 Environmental Impacts and Mitigation

Under CEQA, a significant effect on the environment is defined as a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project, including air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance (CCR Section 15382). Implementation of the proposed project would result in significant impacts to some of these resources, which are analyzed in Sections 4.1 through 4.14 of this document and summarized in Table 2-1 at the end of this chapter.

CCR Section 15126.4 requires that an EIR describe feasible mitigation measures that could minimize significant adverse impacts. Implementation of mitigation measures would either reduce the impact to a less-than-significant level or leave the impact as significant and unavoidable. In the course of drafting the EIR for this project, impacts were identified that could be reduced to a less-than-significant level with implementation of proposed mitigation measures (see also Chapter 5, "Other CEQA Considerations"). These impacts can be found in sections 4.2, "Air Quality"; 4.3, "Biological Resources"; 4.4, "Cultural Resources"; and 4.7, "Hazards and Hazardous Materials"; 4.10, "Noise"; and 4.13, "Transportation and Circulation."

An impact that remains significant after mitigation is considered an unavoidable adverse impact of the proposed project. One significant and unavoidable impact has been identified in Section 4.10, “Noise,” related to short-term construction noise.

2.4 SUMMARY OF ALTERNATIVES

The following summary describes the alternatives to the proposed project that are evaluated in this EIR. For a complete discussion of project alternatives, see Chapter 6, “Alternatives.”

2.4.1 Alternatives Considered but Eliminated from Further Consideration

This Draft EIR includes a discussion of four alternatives to the project that attempt to reduce the environmental impacts of the proposed project. In addition to the alternatives listed below, several alternatives were considered, but dismissed. These include the following:

- Alternative 1D: This alignment option would begin just before the existing terminus of the Saugstad/Royer trail, travel under the bridge on the east side of Dry Creek and continue south for approximately 700 feet. The trail alignment would continue along the east side of Dry Creek and Cirby Creek for approximately 500 feet before crossing Cirby Creek via Bridge #4 to the southern bank of Cirby Creek, and continue within the floodplain along the south side of Cirby Creek toward the I-80 underpass. Access to the proposed trailhead parking would be via Riverside Avenue. Ultimately, access to the trailhead parking and future trail extension to lower Vernon Street would be provided via Bridge #2.
- Alternative 5C: This alignment option would begin just south of the confluence of Cirby Creek and Linda Creek and cross Linda Creek via Bridge #13 and follow the northern bank of Linda Creek within City owned property. The trail would tie into the existing maintenance path in front of the floodwalls on the north side of Linda Creek and travel eastward under Sunrise Boulevard overcrossing. No direct access would be provided to Sunrise Boulevard.
- Additional On-street Portions of the Path: This alternative would include more on-street bikeways. This alternative would create areas within paved streets identified by striping and signs for preferential (semi-exclusive) bicycle use (Class II bike lanes).

2.4.2 Alternatives Evaluated

This Draft EIR analyzes the following alternatives to the proposed project:

- No Project Alternative: The proposed trail and associated structures, including bridges and retaining walls, would not be constructed.
- Option 1A Alternative Alignment: This Alternative Alignment (shown in Exhibit 3-13) would begin at the existing terminus of the Saugstad/Royer trail, travel across Darling Way bridge (potentially requiring widening of the bridge) and loop under the bridge on the west side of Dry Creek. The alternative would continue south, crossing Dry Creek via Bridge #3 to the southern bank of Cirby Creek, from where it would traverse the existing steep slope down to the existing bench, and continue within the floodplain along the south side of Cirby Creek toward the I-80 undercrossing. Access would be provided to the proposed trail-head parking area at Riverside Avenue and to the future trail extension to Vernon Street. Option 1A Alternative Alignment would require Bridge #3, but would eliminate the need for Bridge #2 and Bridge #4. The remainder of the trail would be the same as the proposed project.

- Option 1C Alternative Alignment: This Alternative (shown in Exhibit 3-14) would begin just before the existing terminus of the Saugstad/Royer trail, travel under the bridge on the east side of Dry Creek and continue south for approximately 700 feet. A spur to the west would provide access to the proposed trail head parking and future trail extension toward Vernon Street, via Bridge # 2 over Dry Creek. This alternative would continue along the east side of Dry Creek and Cirby Creek before crossing Cirby Creek via Bridge #4 to the southern bank of Cirby Creek, from where it would continue along the south side of Cirby Creek toward the I-80 undercrossing. The remainder of the trail would be the same as the proposed project.
- Option 5A Alternative Alignment: This Alternative (shown in Exhibit 3-15) would begin just south of the confluence of Cirby Creek and Linda Creek and remain on the south side, following the southern bank of Linda Creek within City-owned property. The trail would travel eastward and pass beneath Sunrise Avenue. Connecting ramps would provide access to both sides of Sunrise Avenue. This alternative would continue to just east of the existing drainage outfall structure at which point it would cross to the north side of Linda Creek via Bridge #14. It would eliminate the need for Bridge #13. The remainder of the trial would be same as the proposed project.

These alignment Options are evaluated at a project level in Chapter 4 and, therefore, may be selected by the City Council for implementation in association with the proposed project. The relative effects of the alternatives are identified by impact area in Chapter 6, “Alternatives.”

2.5 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

The City issued a Notice of Preparation (NOP) on November 18, 2013 to inform agencies and the general public that an EIR was being prepared and to invite comments on the scope and content of the document. The NOP was circulated for 30 days, through December 19, 2013, and a noticed scoping meeting for the EIR occurred on December 3, 2013. A summary of the comments received on the NOP during the public scoping period is included in each technical chapter and in Chapter 1, “Introduction.” Appendix A contains a copy of the NOP, while scoping comments and comment letters received on the NOP are included in Appendix B.

A total of 15 NOP comment letters were received that addressed the following issues of concern: potential hydrology impacts associated with the accumulation and establishment of woody vegetation that is not managed and including mitigation measures for channel and levee improvements and maintenance to prevent and/or reduce hydraulic impacts; potential impacts to native trees including allowing the destruction of one area by planting young trees miles away; habitat protection for river otters, western pond turtle, red-winged hawks, pheasants, and salmon; design crossings such that Oak Ridge and Rocky Ridge are underpasses; water quality concerns including rainwater run-off; design concerns that the uphill grade from the creek up to Meadow Lark Drive will discourage many who would otherwise continue walking further; include an assessment of the degree to which the proposed alignment supports the goal of a highly connected trail; and diminishing property values and limiting future development. Please see Table 1-1 in Chapter 1, “Introduction,” for a table summarizing the NOP comments and the location of the appropriate Draft EIR chapter in which each comment is addressed. The City has considered the relevant NOP comments in preparation of this Draft EIR. Issues to be resolved related to hydraulics, the loss of trees and natural habitats, water quality, and trail connectivity are addressed in the appropriate technical sections of this EIR.

Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
4.1 Aesthetics			
Impact 4.1-1: Substantially degrade the visual character or quality of the site and its surroundings.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.1-2: Create a new source of substantial light or glare that would adversely affect day or nighttime views of the area.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
4.2 Air Quality			
Impact 4.2-1: Short-term construction-generated emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$.	Proposed Project = PS Alignment Option 1A = PS Alignment Option 1C = PS Alignment Option 5A = PS	**Mitigation Measure 4.2-1: Reduce construction-related NO_X emissions.** Before approval of grading permits, the construction contractor shall submit for PCAPCD approval, a written calculation demonstrating that the fleet of heavy-duty (> 50 horsepower) off-road equipment used during the project's construction, including owned, leased, and subcontractor vehicles, will achieve the necessary percent reduction in NOX emissions during all construction phases, and for any periods during which multiple phases would overlap, as to not exceed 82 lb/day. Acceptable options for reducing emissions may include reduction in the number of segments constructed in a single day, use of late model-year engines, low-emission renewable diesel fuel, engine retrofit technologies, and/or other effective options as recommended by PCAPCD at the time (see Appendix C of the PCAPCD 2017 CEQA Handbook [PCAPCD 2017:75] for additional options). The calculation shall be provided using PCAPCD's Construction Mitigation Calculator.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

NI = No impact, LTS = Less than significant, PS = Potentially significant, S = Significant

Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
Impact 4.2-2: Long-term use-related emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.2-3: Generation of local mobile-source CO emissions.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.2-4: Exposure of sensitive receptors to toxic air contaminant (TAC) emissions.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
4.3 Biological Resources			
Impact 4.3-1: Disturbance and loss of waters of the United States, waters of the state and riparian habitat.	Proposed Project = S Alignment Option 1A = S Alignment Option 1C = S Alignment Option 5A = S	**Mitigation Measure 4.3-1: Wetlands, Waters of the United States, and Water of the State.** This mitigation would apply for the Proposed Trail Alignment, Alignments Options 1A, 1C, and 5A. The City shall implement the following measures to compensate for the loss of wetlands, waters of the United States, waters of the State, and riparian habitat: a. The City shall submit a wetland delineation report to USACE and request a preliminary jurisdictional determination. Based on the jurisdictional determination, the City shall determine the exact acreage of waters of the United States and waters of the state that would be filled as a result of project implementation. b. The City shall replace on a "no net loss" basis (minimum 1:1 ratio) (in accordance with USACE, CDFW, and/or RWQCB) the acreage and function of all wetlands and other waters that would be removed, lost, or degraded as a result of project implementation. Wetland habitat shall be replaced at an acreage and location agreeable	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

NI = No impact, LTS = Less than significant, PS = Potentially significant, S = Significant

Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		to USACE, CDFW, and the Central Valley RWQCB and as determined during the Section 401, Section 404 and Section 1602 permitting processes. The ratio of stream habitat restoration/replacement shall consider value for Central Valley steelhead and Chinook salmon (as discussed under Mitigation Measure 4.3-2). Habitat shall either be restored on the affected stream and within City property, or at an approved mitigation bank. In either instance, compensatory mitigation will be approved by USACE, CDFW, and RWQCB. c. The City shall obtain a USACE Section 404 Individual Permit, RWQCB Section 401 certification, and a Section 1602 streambed alteration agreement from CDFW before any groundbreaking activity within 50 feet of any wetland or water of the United States. The City shall implement all permit conditions, which may include contributions to an approved wetland mitigation bank or through the development and implementation of a Compensatory Wetland, Stream and Riparian Mitigation and Monitoring Plan for creating or restoring in-kind habitat in the surrounding area. If mitigation credits are not available, stream and riparian habitat compensation shall include establishment of riparian vegetation on currently unvegetated bank portions of streams affected by the project and enhancement of existing riparian habitat through removal of nonnative species, where appropriate, and planting additional native riparian plants to increase cover, continuity, and width of the existing riparian corridor along streams in the project site and surrounding areas. The ratio of riparian restoration/replacement shall consider value for Central Valley steelhead and Chinook salmon (as discussed under Mitigation Measure 4.3-2) as well as City Protected trees and Oak Woodland Habitat (as discussed under Mitigation Measure 4.3-8).	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		Construction activities and compensatory mitigation shall be conducted in accordance with the terms of a streambed alteration agreement as required under Section 1602 of the Fish and Game Code. d. The Compensatory Wetland, Stream and Riparian Restoration and Mitigation and Monitoring Plan shall include the following: 1. identification of compensatory mitigation sites and criteria for selecting these mitigation sites; 2. in kind reference habitats for comparison with compensatory wetland, stream, and riparian habitats (using performance and success criteria) to document success; 3. monitoring protocol, including schedule and annual report requirements (Compensatory habitat shall be monitored for a minimum of three (3) years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer.); 4. ecological performance standards, based on the best available science and including specifications for native riparian plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship (based on characteristics of the existing impacted habitat); at a minimum, compensatory mitigation planting sites must achieve 80 percent survival of planted riparian trees and shrubs by the end of the three-year maintenance and monitoring period or dead and dying trees shall be replaced and monitoring continued until 80 percent survivorship is achieved; 5. corrective measures if performance standards are not met;	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		6. responsible parties for monitoring and preparing reports; and 7. responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.	
Impact 4.3-2: Interfere substantially with the movement of Central Valley steelhead and Central Valley fall-run Chinook salmon.	Proposed Project = S Alignment Option 1A = S Alignment Option 1C = S Alignment Option 5A = S	**Mitigation Measure 4.3-2: Central Valley Steelhead and Central Valley fall-run Chinook Salmon** This mitigation would apply for the Proposed Trail Alignment, Alignment Options 1A, 1C, and 5A. The City shall implement the following measures, developed based on past consultations with NMFS, to avoid, minimize and/or mitigate potential effects on Central Valley steelhead and Central Valley fall-run Chinook salmon. a. Prior to the onset of work, the qualified biologist shall conduct a mandatory worker environmental awareness training. The training shall educate workers about the importance of avoiding impacts to Central Valley steelhead and Central Valley fall-run Chinook salmon and their habitat. The training shall also cover the relevant permit conditions and avoidance and minimization measures that protect sensitive species and habitats, as well as the penalties for non-compliance with state and federal laws, regulations, and permit requirements. The training shall include information about the life history and habitat requirements of Central Valley steelhead and Central Valley fall-run Chinook salmon and their potential to occur in the project site, as well as the terms and conditions of the Project's Biological Opinions or other authorizing documents (i.e. letter of concurrence). b. Construction activities occurring within creek banks and channel beds shall be limited to the low-flow period	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

NI = No impact, LTS = Less than significant, PS = Potentially significant, S = Significant

Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		(typically June 15 - October 15), unless earlier or later dates are approved by CDFW and NMFS during consultation. By limiting in-water construction activities to this time period, the Project shall limit construction activities to periods when low flow depths and velocities within the project streams are less likely to support Central Valley steelhead or Central Valley fall-run Chinook salmon life stages including adult migration, spawning, and egg incubation periods. c. Fish screens or temporary stream diversion structures shall be installed to exclude Central Valley steelhead and Central Valley fall-run Chinook salmon from areas where in-water and near-water construction activities would be conducted. Installation of fish screens or temporary diversion structures shall prevent access to affected areas in the unlikely event that Central Valley steelhead or Central Valley fall-run Chinook salmon are present in the project streams during the low-flow period (June 15 - October 15). d. The City shall retain a qualified biologist to monitor the installation of fish screens or temporary stream diversion structures, as well as any other near or in-water construction activities (e.g., installation of RSP along creek banks or below the OHWM, installation and removal of low water crossings, placement of new abutments, rock walls, gabions, and water diversions). Prior to the installation of fish screens or temporary stream diversion structures the biologist shall visually survey the in-water work area for Central Valley steelhead and Central Valley fall-run Chinook salmon. e. Once the biologist confirms that no Central Valley steelhead or Central Valley fall-run Chinook salmon are present in the in-water work area, fish screens or temporary diversion devices shall be installed in a downstream direction, installing the upstream fish	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		screen or temporary diversion device. The biologist shall conduct a second visual survey before the downstream portion of the fish screen or temporary stream diversion is installed. If fish are present within the diversion area, the fish shall be guided out of the in-water work area with nets by the qualified biologist. The need for fish salvage is not anticipated because Central Valley steelhead or Central Valley fall-run Chinook salmon are not likely to be present in the project streams during the low-flow period (June 15 - October 15) – primarily because of excessive summer water temperatures that occur during this period in the Project area. However, fish salvage (or relocation outside of the in-water work areas) shall be conducted as needed should fish be present. f. Before the onset of construction activities, high visibility orange construction fencing shall be installed along the perimeter of Environmentally Sensitive Areas under the supervision of the qualified biologist. Fencing shall be installed along the limits of construction in riparian habitat, minimizing the disturbance of or encroachment on sensitive aquatic and riparian habitats. The contractor shall maintain the project's Environmentally Sensitive Area fencing for the duration of the project and remove it when the project is complete. g. Erosion control BMPs shall be implemented during construction to minimize the potential for erosion, and the mobilization of sediments to project waterways and be consistent with the Open Space Preserve Overarching Management Plan (and related USFWS Biological Opinion (81420-2008-F-1958-3). The following erosion and sediment control measures shall be implemented to prevent sedimentation and turbidity, as well as any identified in the SWPPP, 401, 404, or 1602 permits.	

NI = No impact, LTS = Less than significant, PS = Potentially significant, S = Significant

Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		1. Soil exposure shall be minimized by limiting the area of construction and disturbance and through the use of temporary BMPs, groundcover, and stabilization measures. These measures may include mulches, soil binders and erosion control blankets, silt fencing, fiber rolls, temporary berms, sediment de-silting basins, sediment traps, and check dams. 2. Pursuant to Section 13-4.03C(3) of the Caltrans Standard Specifications, water pollution control practices shall be implemented within 72 hours of stockpiling material or before a forecasted storm event, whichever occurs first. If stockpiles are being used, soil, sediment, or other debris shall not be allowed to enter storm drains, open drainages, and watercourses. Active and inactive soil stockpiles must be covered with soil stabilization. 3. Plastic mono-filament netting (erosion control matting) or similar material that could trap wildlife shall not be used. Acceptable substitutes include, but are not limited to, jute, coconut coir matting, or tackified hydroseeding compounds. 4. Energy dissipaters and erosion control pads shall be provided at the bottom of slope drains as needed. Other flow conveyance control mechanisms may include earth dikes, swales, or ditches. Stream bank stabilization measures shall also be implemented. 5. Existing vegetation shall be protected, to the extent feasible, to reduce erosion and sedimentation. Vegetation shall be preserved by installing temporary fencing, or other protection devices, around areas to be protected. Where complete removal is not necessary, vegetation shall be cut to ground level with the root systems left intact to	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		prevent erosion and facilitate the recovery of riparian vegetation after project activities are complete. 6. Exposed soils shall be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events. 7. Exposed soils shall be stabilized, through watering or other measures, to prevent the movement of dust at the project site caused by wind and construction activities such as traffic and grading activities. 8. All construction roadway areas shall be properly protected to prevent excess erosion, sedimentation, and water pollution. 9. The contractor shall conduct periodic maintenance of erosion and sediment control measures. All erosion and storm water control measures shall be properly maintained for the duration of the project. h. A Spill Prevention and Control Plan shall be developed and implemented by the City, or its contractor, for the duration of the project. Pollution prevention and control BMPs shall be implemented during construction to minimize the risk of hazardous materials being released into waters in the project site. The following pollution and contamination prevention measures shall be implemented to prevent the release of hazardous materials during construction: 1. All equipment and materials shall be stored at least 50 feet from wetlands or waters in the project site unless the equipment is on established paved areas. If storage of equipment or materials within 50 feet of wetlands or waters in the project site is necessary, secondary containment shall be utilized to contain the equipment and materials and prevent discharge of any harmful substances into the soil or aquatic resources. Staging and storage areas for equipment,	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		materials, fuels, lubricants, and solvents shall be located outside of the channel and banks of Dry Creek, Cirby Creek, Linda Creek, and Strap Ravine. 2. Secondary containment shall be provided for stationary equipment such as motors, pumps, generators, and compressors located within or adjacent to the Dry Creek, Cirby Creek, Linda Creek, and Strap Ravine. Any equipment or vehicles driven or operated within or adjacent to these creeks shall be checked and maintained daily to ensure proper working conditions to avoid potential impacts such as leaks. 3. No fueling, cleaning or maintenance of vehicles or equipment, or placement of construction debris, spoils or trash should occur within 50 feet of wetlands or waters in the project site unless it occurs in designated refueling/staging areas on existing paved surfaces with secondary containment in place. Refueling of equipment should occur at approved fuel locations. Contractor shall inspect all equipment/vehicles for leaks prior to use and should inspected regularly during Project inspection. 4. For work that is to occur on existing structures over open flowing portions of Dry Creek, Cirby Creek, Linda Creek, or Strap Ravine, a method of containment such as netting, tarps or similar catchments shall be utilized to catch debris or other potential construction materials and prevent such material from falling into the waters. i. Lighting design shall include measures to limit the amount of light "spill" on water surfaces at night that could lead to predation of juvenile salmonids. To minimize the effects of lighting on salmonids, the City shall prevent lighting that directly shines on the water	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		surfaces of Dry Creek, Cirby Creek, and Linda Creek by minimizing the amount of lighting necessary to safely and effectively illuminate pedestrian areas on bridges and trails, and by shielding and focusing lights on the bridge and trail surfaces and away from water surfaces. j. The project shall avoid impacts to riparian vegetation where feasible, and shall incorporate restoration and enhancement of the riparian corridor into the final design plans and construction specifications and shall develop a riparian and restoration plan (RRP), as part of the Compensatory Wetland, Stream and Riparian Mitigation and Monitoring Plan discussed in Impact 4.3-1, Disturbance and loss of waters of the United States, and Mitigation Measure 4.3-1 that involves onsite enhancements and purchase of mitigation bank credits to compensate for permanent and temporal loss of riparian and SRA cover. The RRP shall include on-site measures such as enhancing riparian vegetation by the planting of native shrub, tree, and understory species to create a more diverse vegetation structure and thus a higher quality habitat for wildlife. The onsite measures in the RRP may also include the planting of willows and other fast-growing native riparian species, which can quickly compensate for the loss of riparian and SRA cover, and will be planted where erosion control (RSP, slope pavement etc.) is installed along stream banks. Permanent impacts to riparian vegetation can also be mitigated with the purchase of credits (1:1 for riparian and 1.7:1 for SRA cover), and 0.5:1 for temporal loss of riparian vegetation and SRA cover. Restoration and enhancement of the riparian vegetation in the project site (combined with mitigation bank credits) shall result in no net loss of riparian habitat acreage or function and shall increase the quality of habitat for Central Valley steelhead (including Critical Habitat), Central Valley fall-	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		run Chinook salmon (including EFH), and shall be accomplished through development and implementation of the RRP. Permanent impacts to riparian, including SRA, and waters of the United States shall be further analyzed and determined based on final design for each construction phase during Section 7 consultation as part of USACE Section 404 and CDFW Section 1602 permitting. k. Construction techniques shall be implemented to isolate near shore work from waterbodies in the project site. It is anticipated that clear water diversion using a cofferdam or gravel bag berm with impermeable layer would be used. Isolating in-water construction areas behind cofferdams would minimize the potential for turbidity and suspended sediments from reaching levels that could harm Central Valley steelhead, degrade existing Critical Habitat, harm Central Valley fall-run Chinook salmon, or degrade existing EFH. The extent of cofferdam footprints and dewatering shall be kept to the minimum necessary to support construction activities, and creek flow shall not be interrupted or reduced as a result of construction activities. Any fill material used in association with the cofferdams, such as sandbag fill, shall be composed of washed, rounded, spawning-sized gravel between 0.4 and 4 inches in diameter. If authorized by applicable state and federal permits, any of this gravel in contact with flowing water shall be left in place, and distributed manually with hand tools to allow passage for all life stages of fish. Installation and removal of cofferdams and/or gravel bag berms would be restricted to the summer low-flow period.	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
Impact 4.3-3: Disturbance or loss of valley elderberry longhorn beetle or its habitat.	Proposed Project = S Alignment Option 1A = S Alignment Option 1C = S Alignment Option 5A = S	**Mitigation Measure 4.3-3a: Avoidance and Minimization Measures** The following measures shall be implemented to avoid or minimize effects to VELB and/or its habitat during construction of the proposed project. a. A worker awareness training program for construction personnel shall be conducted by a qualified biologist prior to beginning construction activities. The program shall inform all construction personnel about the life history and status of the beetle, requirements to avoid damaging the elderberry plants, and the possible penalties for not complying with these requirements. Written documentation of the training shall be submitted to the USFWS within 30 days of its completion. b. If elderberry shrubs can be retained within the project footprint, the City shall avoid indirect impacts by implementing the following measures, to the extent feasible, or equivalent measures agreed to in consultation with USFWS. Minimization measures include: 1. Avoidance Area. An avoidance area shall be established at least 20 feet from the drip-line of an elderberry shrub for any activities that may damage or kill the elderberry shrub (e.g., trenching, paving, etc.). 2. Fencing. All areas to be avoided during construction activities shall be fenced and/or flagged as close to construction limits as feasible. 3. Signage. Signage shall be posted every 50 feet along the buffer area with the following information, "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		Violators are subject to prosecution, fines, and imprisonment." The signs shall be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction. 4. Timing. To the extent feasible, all activities that could occur within 165 feet of an elderberry shrub, shall be conducted outside of the VELB flight season (March - July). 5. Erosion Control and Revegetation. Erosion control measures will be implemented to restore areas disturbed within 165 feet of elderberry shrubs and the affected area will be re-vegetated with appropriate native plants. 6. Chemical Usage. Herbicides will not be used within the drip-line of the shrub. Insecticides will not be used within 100 feet of an elderberry shrub. All chemicals will be applied using a backpack sprayer or similar direct application method. 7. Mowing. Mechanical weed removal within the drip-line of the shrub shall be limited to the season when adults are not active (August - February) and shall avoid damaging the elderberry. 8. Pre-construction and post-construction surveys. Pre-construction surveys shall document compliance with mitigation measures. The post-construction survey shall confirm that there was no additional damage to any of the elderberry shrubs than as described in this document. 9. Construction monitoring. A qualified biologist shall monitor the work area at project-appropriate intervals to assure that all avoidance and minimization measures are implemented. The amount and duration of monitoring will depend on the project	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		specifics and shall be discussed with a USFWS biologist. 10. Elderberry Shrub Protection and Management Plan. The City will develop as part of the Section 7 consultation process with USFWS for the Dry Creek Greenway Multi-Use Trail project an elderberry shrub protection and management plan that will include how the buffer areas are to be protected, restored, and maintained after construction is completed and the City will ensure that ground-disturbing activities on the project site do not alter the hydrology for shrubs to be protected or otherwise affect the likelihood of vigor or survival of elderberry shrubs. The Elderberry Shrub Protection and Management Plan shall be consistent with the City's Open Space Preserve Overarching Management Plan. **Mitigation Measure 4.3-3b: Removing/Transplanting Individual Elderberry Shrubs** a. Elderberry shrubs that are in the path of construction activities and cannot be avoided shall be removed and if feasible, transplanted, according to Table 4.3-5. A Biological Opinion from USFWS will be obtained prior to removal or transplanting of elderberry shrubs. Removal of a shrub may either include the roots or just the removal of the above-ground portion of the plant. If feasible, the entire root ball shall be removed, and the shrub transplanted. b. Elderberry shrubs requiring removal shall be transplanted as close as feasible to its original location within City-owned property or as approved by USFWS. Elderberry shrubs may be relocated adjacent to the project footprint if: 1) the planting location is suitable for elderberry growth and reproduction; and 2) the City is	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		able to provide long-term protection to the shrub and ensure that the shrub becomes reestablished. c. If these criteria cannot be met, the shrub may be transplanted to an appropriate USFWS-approved mitigation site. d. Any elderberry shrub that is unlikely to survive transplanting because of poor condition or location, or a shrub that would be extremely difficult to move because of access problems, may not be appropriate for transplanting. The following transplanting guidelines shall be used to guide removal and transplanting of elderberry shrubs on the project site: 1. A qualified biologist shall be on-site for the duration of transplanting activities to assure compliance with avoidance and minimization measures and other conservation measures. 2. Exit-hole surveys shall be completed immediately before transplanting. The number of exit holes found, GPS location of the plant to be relocated, and the GPS location of where the plant is transplanted shall be reported to the USFWS and to the California Natural Diversity Database (CNDDB). 3. Elderberry shrubs shall be transplanted when the shrubs are dormant (November through the first two weeks in February) and after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the shrub and increase transplantation success. 4. Transplanting shall follow the most current version of the ANSI A300 (Part 6) guidelines for transplanting (http://www.tcia.org/).	

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Table 4.3-5 Mitigation for Loss of Individual Shrubs According to Preliminary Project Design

Shrub ID	Proposed Trail Alignment	Alignment Option 1A	Alignment Option 1C	Alignment Option 5A
ES24	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES25	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES26	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES31	Transplant if feasible	No Impact	Transplant if feasible	Transplant if feasible
ES32	Transplant if feasible	No Impact	No Impact	Transplant if feasible
ES33	Transplant if feasible	No Impact	Transplant if feasible	Transplant if feasible
ES34	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES35	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES36	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES37	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES38	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES39	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES40	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES41	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES42	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible

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Table 2-1 Summary of Impacts and Mitigation Measures

<table>
<tr><th>Impacts</th><th>Significance before Mitigation (by Alignment Option)</th><th>Mitigation Measures</th><th>Significance after Mitigation (by Alignment Option)</th></tr>
<tr><td></td><td></td><td>
Mitigation Measure 4.3-3c: Compensatory Mitigation for Loss of Riparian Habitat
a. The following compensatory mitigation addresses impacts to VELB habitat through compensating for the permanent loss of riparian habitat within 165 feet of elderberry shrubs. Table 4.3-6 lists the total riparian habitat that is anticipated to be lost, according to the preliminary project design, and the corresponding credits that shall be purchased to replace habitat lost at a 3:1 ratio, as outlined in the VELB framework (USFWS 2017b). The exact amount of compensation shall be as agreed to by USFWS, per Section 7 consultation under the Federal Endangered Species Act.
Table 4.3-6 Potential Valley Elderberry Longhorn Beetle Habitat-Level Compensation
<table>
<tr><th>Project Alternative Options</th><th>Compensation Ratio</th><th>Loss of Riparian Habitat (acres)</th><th>Acres of Credit[1]</th><th>Total Credit Purchase[2]</th></tr>
<tr><td>Proposed Trail Alignment</td><td>3:1</td><td>1.22</td><td>3.66</td><td>89</td></tr>
<tr><td>Alignment Option 1A</td><td>3:1</td><td>0.89</td><td>2.67</td><td>65</td></tr>
<tr><td>Alignment Option 1C</td><td>3:1</td><td>1.41</td><td>4.23</td><td>103</td></tr>
<tr><td>Alignment Option 5A</td><td>3:1</td><td>1.22</td><td>3.66</td><td>89</td></tr>
</table>
[1] Acre(s) of credit = Compensation Ratio X Total Acres of Riparian Habitat Permanently Lost within 165 Feet of Elderberry Shrubs
[2] Formula for Credit Purchase: 1 credit = 0.041 acres
</td><td></td></tr>
</table>

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		b. If the City chooses not to purchase credits at a USFWS-approved bank, they shall follow USFWS requirements for providing a permanent conservation area that meets USFWS criteria and approval, as described in the VELB Framework (USFWS 2017b). **Mitigation Measure 4.3-3d: Consultation with USFWS** Caltrans, as the federal designated agency, will consult with USFWS under Section 7 of ESA for approval of transplanting and compensatory measures outlined in Mitigation Measures 4.3-3b and 4.3-3c prior to project construction.	
Impact 4.3-4: Disturbance or loss of Swainson's hawk, white-tailed kite, and other nesting raptors.	Proposed Project = PS Alignment Option 1A = PS Alignment Option 1C = PS Alignment Option 5A = PS	**Mitigation Measure 4.3-4: Nesting Raptors** This mitigation would apply for the Proposed Trail Alignment, Alternative Alignments 1A, 1C, and 5A. The following measures shall be implemented to avoid, minimize and fully mitigate impacts to Swainson's hawk, white-tailed kite, as well as other raptors. a. For project activities, including tree removal, that begin between February 15 and September 15, a qualified biologist shall conduct preconstruction surveys for nesting raptors and to identify active nests on and within 0.25 mile of the project site with direct line of sight from public access areas with the use of binoculars and spotting scopes to the proposed work areas. The surveys shall be conducted before the beginning of any construction activities between February 15 and September 15. b. The City shall attempt to initiate upland construction activities before the nest initiation phase (i.e., before February 15). If breeding raptors establish an active nest site, as evidenced by nest building, egg laying, incubation, or other nesting behavior, near the	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		construction area, they shall not be harassed or deterred from continuing with their normal breeding activities. c. Impacts to nesting raptors shall be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. No project activity shall commence within the buffer areas until a qualified biologist has determined the young have fledged, the nest is no longer active, or reducing the buffer, in coordination with CDFW, would not likely result in nest abandonment. CDFW guidelines recommend implementation of 500 feet for raptors, but the size of the buffer may be adjusted if a qualified biologist and the City, in consultation with CDFW, determine that such an adjustment would not likely adversely affect the nest. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has potential to adversely affect the nest. d. Trees shall not be removed during the breeding season for nesting raptors unless a survey by a qualified biologist verifies that there are not active nests within the trees or within 500 feet of the trees proposed to be removed. Loss of trees that provide potential nesting habitat shall be compensated by planting replacement trees according to Mitigation Measure 4.3-1 (wetlands/riparian trees) and Mitigation Measure 4.3-8 (protected oak trees).	
Impact 4.3-5: Disturbances to special-status song birds.	Proposed Project = S Alignment Option 1A = S Alignment Option 1C = S Alignment Option 5A = S	**Mitigation Measure 4.3-5: Special-status birds** This mitigation would apply for the Proposed Trail Alignment, Alignment Option 1A, 1C, and 5A. The following measures shall be implemented and are intended to avoid, minimize, and fully mitigate impacts to nesting special-status birds.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		a. The City shall ensure that before any ground-disturbing project activities begin for a given proposed trail segment, a qualified biologist shall identify potential habitat for nesting special-status bird species in areas that could be affected during the breeding season by construction. b. If vegetation removal or other disturbance related to construction of the trail segment is required during the nesting season, focused surveys for active nests of special-status birds shall be conducted before and within 5 days of initiating construction by a qualified biologist. The appropriate area to be surveyed and timing of the survey may vary depending on the activity and species that could be affected. If no active nests are found during focused surveys, no further action under this measure shall be required. c. If an active special-status bird nest is located during the preconstruction surveys, the biologist shall notify the City and the City shall notify CDFW. Construction shall be prohibited within a minimum of 25 feet of the nest to avoid disturbance until the nest is no longer active. d. If construction stops for more than 5 days during the nesting season, a follow up survey shall be conducted to make sure that no birds moved into the area and started nesting.	
Impact 4.3-6: Disturbance or loss of Western pond turtle.	Proposed Project = S Alignment Option 1A = S Alignment Option 1C = S Alignment Option 5A = S	**Mitigation Measure 4.3-6: Western Pond Turtle.** This mitigation would apply for the Proposed Trail Alignment, Alignment Options 1A, 1C, and 5A. a. Implement Mitigation Measure 4.3-1. b. Before ground disturbance, all onsite construction personnel shall be instructed by a qualified biologist regarding the potential presence of western pond turtle, the importance of avoiding impacts on this species and	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		its habitat, and recognition of western pond turtle and its habitat(s). c. Within 24 hours before beginning construction activities within 200 feet of suitable aquatic habitat for western pond turtle, a qualified biologist shall inspect areas of anticipated disturbance for the presence of western pond turtle nests and individuals. If nests are found, a 100-foot no disturbance buffer shall be erected and maintained until the turtles have hatched and no obstructions between the nest and aquatic habitat shall be created. No vegetation clearing will be allowed within the buffer to shelter the turtles from the elements and potential predators. d. If adult and juvenile turtles are found during preconstruction, dewatering, or fish rescue operations, the biologist shall relocate the western pond turtle to the nearest suitable habitat outside of the area of disturbance. The construction area shall be re-inspected whenever a lapse in construction activity of two weeks or more has occurred. The biologist shall be available thereafter; if a turtle is encountered during construction activities, the biologist shall relocate the western pond turtle to the nearest suitable aquatic habitat outside the area of disturbance. As suitable habitat is located throughout the area, it is not anticipated that turtles would be relocated far from construction areas and that they would recolonize following construction. e. After completion of project-related construction activities, any temporary fill and construction debris shall be removed, and temporarily disturbed areas shall be restored to pre-project conditions. Restoration of grassland and riparian habitat shall be conducted as applicable under Mitigation Measure 4.3-1 (for riparian vegetation) and Mitigation Measure 4.3-4 (for grassland habitat) in proximity to the stream corridors.	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
Impact 4.3-7: Disturbance or loss of special-status bats – pallid bat and silver-haired bat.	Proposed Project = S Alignment Option 1A = S Alignment Option 1C = S Alignment Option 5A = S	**Mitigation Measure 4.3-7: Special-status bats** This mitigation would apply for the Proposed Trail Alignment, Alternative Alignments 1A, 1C, and 5A. a. Bat surveys shall be conducted by a qualified wildlife biologist within 5 days before removal of trees that have suitable roosting habitat for bats. Specific survey methodologies shall be determined in coordination with CDFW, and may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Petterson, Anabat, Wildlife Acoustics). Removal of any significant roost sites located shall be avoided to the extent feasible with a non-disturbance buffer of 250-feet. If it is determined that an active roost site cannot be avoided and will be affected, bats shall be excluded from the roost site before the site is removed. The City shall first notify and consult with CDFW on appropriate bat exclusion methods and roost removal procedures. Exclusion methods may include use of one-way doors at roost entrances (bats may leave, but not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Once it is confirmed that all bats have left the roost, crews shall be allowed to continue work in the area. The City may have to provide temporary suitable bat roosting habitat (i.e. bat boxes), prior, during, and after exclusion to provide bat roosting habitat. b. Exclusion efforts shall be restricted during periods of sensitive activity (e.g., during winter hibernation or while females in maternity colonies are nursing young [generally, April 15 through August 15]). If a hibernation or maternity roosting site is discovered, the project biologist and the City shall consult with CDFW to	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		establish appropriate exclusionary buffers until all young are determined to be able to fly by the project biologist. Once it is determined that all young are able to fly, passive exclusion devices shall be installed and all bats will be allowed to leave voluntarily. Once it is determined by a qualified biologist that all bats have left the roost, crews shall be allowed to work within the buffer zone.	
Impact 4.3-8: Disturbance or loss of City protected trees, Valley Oak Woodland, and other Sensitive Vegetation Alliances and Associations.	Proposed Project = S Alignment Option 1A = S Alignment Option 1C = S Alignment Option 5A = S	**Mitigation Measure 4.3-8: Avoid impacts or mitigate for impacts to Valley Oak Woodland, and other Sensitive Vegetation Alliances and Associations (previously known as Sensitive Natural Communities)** This mitigation would apply for the Proposed Trail Alignment, Alignment Option 1A, 1C, and 5A. a. To the maximum extent feasible, oak and riparian trees shall be avoided where possible and protection measures shall be implemented to protect oak woodlands, riparian areas and associated native trees from project-related impacts. The following measures shall be implemented for oak and riparian trees that would be impacted by project activities to avoid and minimize potential impacts to individual oak and riparian trees: 1. Temporary protective fencing shall be installed at least one foot outside the dripline of the native oak tree before initiating construction to avoid damage to the tree canopy and root system. A circle with a radius measurement from the trunk of the tree to the tip of its longest limb will constitute the dripline protection area for each tree. Limbs must not be cut back to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each tree. Removing limbs that make up the dripline does not change the protected area.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		2. No vehicles, construction equipment, mobile home/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the dripline of the native oak trees. 3. No grading shall be allowed within the dripline of the native oak tree. 4. No trenching shall be allowed within the dripline of the native oak tree. If it is necessary to install underground utilities within the dripline of the native oak tree, the utility line shall be jacked and bored under the supervision of a certified arborist. 5. Drainage patterns onsite shall not be modified so that water collects or stands within, or is diverted across, the dripline of any native oak tree. 6. If ground disturbance must occur within the protected zone of a native oak tree, all work shall occur consistent with the City's Tree Preservation Ordinance requirements. b. For those trees that cannot be avoided, the City shall comply with any riparian habitat conditions to comply with the Compensatory Wetland, Stream and Riparian Mitigation and Monitoring Plan that will be developed during the Section 404, Section 401, and Section 1602 permitting process as described in Mitigation Measure 4.3-1. Additionally, the City shall implement the following: 1. An arborist report shall be conducted to identify the species and quantities of trees that will be removed to implement the project. 2. If native oak trees are removed, they shall be replaced as outlined in the City's Tree Preservation Ordinance 19.66.070. A Tree Planting and Maintenance Plan showing species, size, spacing	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		and location of plantings, and the location and species of established vegetation shall be prepared. A monitoring program shall also be established to ensure compliance with any prescribed mitigation measures established by the project and to monitor the oak woodland restoration area. 3. Fully implement Mitigation Measure 4.3-1, which requires the City to secure and comply with a CDFW Streambed Alteration Agreement that would include a riparian restoration component.	
Impact 4.3-9: Disturbance or loss of special-status plants – Sanford's arrowhead.	Proposed Project = S Alignment Option 1A = S Alignment Option 1C = S Alignment Option 5A = S	**Mitigation Measure 4.3-9: Special-status plants – Sanford's arrowhead.** This mitigation would apply for the Proposed Trail Alignment, Alternative Alignments 1A, 1C, and 5A. The City shall implement the following measures to reduce potential impacts on Sanford's arrowhead: a. Prior to project construction and during the blooming period for Sanford's arrowhead (May – November), a qualified botanist shall conduct floristic-level surveys for Sanford's arrowhead in areas where potentially suitable habitat would be removed or disturbed by project activities. The normal blooming period for Sanford's arrowhead generally indicates the optimal survey period when the species is most identifiable. b. If no Sanford's arrowhead plants are found, the botanist shall document the findings in a letter report to the City of Roseville and CDFW and no further mitigation shall be required. c. If Sanford's arrowhead plants are found that cannot be avoided during construction, the City shall consult with CDFW to determine the appropriate mitigation measures for direct and indirect impacts that could occur as a result of project construction and shall implement	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		the agreed-upon mitigation measures to achieve no net loss of occupied habitat or individuals. Mitigation measures may include preserving and enhancing existing populations, creation of offsite (but within the stream reach) populations on project mitigation sites through seed collection or transplantation, and/or restoring or creating suitable habitat in sufficient quantities to achieve no net loss of occupied habitat and/or individuals. Potential mitigation sites could include suitable locations along the stream but outside of the construction areas. A mitigation and monitoring plan shall be developed describing how unavoidable losses of special-status plants will be compensated. d. If relocation efforts are part of the mitigation plan, the plan shall include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, success criteria, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements. e. Success criteria for preserved and compensatory populations shall include: 1. The extent of occupied area and plant density (number of plants per unit area) in compensatory populations shall be equal to or greater than the affected occupied habitat. 2. Compensatory and preserved populations shall be self-producing. Populations shall be considered self-producing when: I. plants reestablish annually for a minimum of five years with no human intervention such as supplemental seeding;	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		II. reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity. 3. If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria such as those listed above and other details, as appropriate to target the preservation of long term viable populations.	
Impact 4.3-10: Impacts on movement of native resident or migratory fish or wildlife species or migratory wildlife corridors or impede the use of native wildlife nursery sites.	Proposed Project = S Alignment Option 1A = S Alignment Option 1C = S Alignment Option 5A = S	**Mitigation Measure 4.3-10: Movement of native resident or migratory fish or wildlife species or migratory wildlife corridors or impede the use of native wildlife nursery sites.** This mitigation would apply for the Proposed Trail Alignment, Alternative Alignments 1A, 1C, and 5A. Implementation of Mitigation Measure 4.3-1 and Mitigation Measure 4.3-2 would ensure that impacted habitats are mitigated for or restored, and work windows would prevent impact to migratory fish species. The work windows would allow the fish to freely use the stream corridors during migration to and from the streams. Impacted habitats (i.e., aquatic, riparian and SRA) would be restored or mitigated for and although affected their long-term function as breeding or nursery site would not be impacted. a. Implement Mitigation Measure 4.3-1 Wetlands, Waters of the United States, waters of the state and riparian habitat. b. Implement Mitigation Measure 4.3-2 Central Valley Steelhead and Central Valley Fall-run Chinook Salmon.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
4.4 Cultural Resources			
Impact 4.4-1: Disturb archaeological resources, including tribal cultural resources.	Proposed Project = PS Alignment Option 1A = PS Alignment Option 1C = PS Alignment Option 5A = PS	**Mitigation Measure 4.4-1: Proper Handling of Archaeological Resources.** This mitigation would apply for the Proposed Trail Alignment, Alignment Options 1A, 1C, and 5A. A minimum of seven days prior to beginning earthwork or other soil disturbance activities, the City shall notify UAIC of the proposed earthwork start-date. As part of this notification, a UAIC tribal representative shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days of groundbreaking activity. During this inspection, a site meeting of construction personnel shall also be held to afford the tribal representative the opportunity to provide cultural resources awareness information. If any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during this initial inspection or during any subsequent construction activities, work shall be suspended within 100 feet of the find, and the City's Project Manager shall immediately notify the City of Roseville Development Services Director. The City's Project Manager, in consultation with the City's Environmental Coordinator, shall coordinate any necessary investigation of the site with a qualified archaeologist approved by the City, and as part of the site investigation and resource assessment the archeologist shall consult with the UAIC and provide proper management recommendations should potential impacts to the resources be found by the City to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the City by the qualified archaeologist. Possible management recommendations for unique archaeological resources	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		could include resource avoidance or, where avoidance is infeasible in light of project design or layout or is unnecessary to avoid significant effects, preservation in place or other measures. The contractor shall implement any measures deemed by City staff to be necessary and feasible to avoid or minimize significant effects to the cultural resources.	
Impact 4.4-2: Accidental discovery of human remains.	Proposed Project = PS Alignment Option 1A = PS Alignment Option 1C = PS Alignment Option 5A = PS	**Mitigation Measure 4.4-2: Stop work if human remains are discovered.** This mitigation would apply for the Proposed Trail Alignment, Alignment Options 1A, 1C, and 5A. If human remains are discovered during any construction activities, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and the project applicant shall notify the Placer County coroner and the NAHC immediately, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the NAHC to be Native American, the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The City shall also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the MLD, if any, identified by the NAHC. Following the coroner's and NAHC's findings, the archaeologist, and the NAHC-designated MLD shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section 5097.94.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
4.5 Geology and Soils			
Impact 4.5-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.5-2: Result in substantial soil erosion or the loss of topsoil.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.5-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.5-4: Be located on expansive soil, creating a substantial risk to life or property.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.5-5: Destroy a unique paleontological resource.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
4.6 Greenhouse Gas Emissions and Climate Change			
Impact 4.6-1: Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
4.7 Hazards and Hazardous Materials			
Impact 4.7-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.7-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release or hazardous materials into the environment.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.7-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within 0.25 mile if an existing or proposed school.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.7-4: Impair implementation of, or physically interfere with, an adopted emergency evacuation plan or emergency response plan.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.7-5: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are located adjacent to urbanized areas or where residences are intermixed with wildlands during project construction.	Proposed Project = PS Alignment Option 1A = PS Alignment Option 1C = PS Alignment Option 5A = PS	**Mitigation Measure 4.7-5: Clear flammable materials within the project site prior to construction.** This mitigation would apply for the Proposed Trail Alignment, Alignment Options 1A, 1C, and 5A. If dry vegetation or other fire fuels exist on or near staging areas, welding areas, or any other area on which equipment will be operated, contractors shall clear the immediate area of fire fuel prior to construction. To the extent feasible, areas subject to construction activities will be maintained free of fire fuel and debris during the course of construction. To avoid impacts to natural resources, areas to be cleared and appropriate clearing methods shall be identified with the assistance of a qualified biologist.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
Impact 4.7-6: Use-related exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are located adjacent to urbanized areas or where residences are intermixed with wildlands.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
4.8 Hydrology and Water Quality			
Impact 4.8-1: Potential to violate any water quality standards or waste discharge requirements, or to otherwise degrade water quality.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.8-2: Potential to substantially alter existing drainage patterns or to create runoff volume that would exceed the capacity of drainage systems or result in erosion, siltation, or flooding.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.8-3: Alter or redirect 100-year flood flows, or expose people or structures to risk of injury or damage by flood waters.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
4.9 Land Use and Planning			
Impact 4.9-1: Consistency with applicable land use plans.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.9-2: Physically divide an established community.	Proposed Project = Beneficial Alignment Option 1A = Beneficial Alignment Option 1C = Beneficial Alignment Option 5A = Beneficial	None required	Proposed Project = Beneficial Alignment Option 1A = Beneficial Alignment Option 1C = Beneficial Alignment Option 5A = Beneficial

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
4.10 Noise			
Impact 4.10-1: Short-term construction-related noise.	Proposed Project = PS Alignment Option 1A = PS Alignment Option 1C = PS Alignment Option 5A = PS	**Mitigation Measure 4.10-1: Employ Noise-Reducing Construction Practices** This mitigation will apply to the Proposed Trail Alignment and Alignment Options 1A, 1C, and 5A. Feasible measures that can be used to limit construction noise include the following: ◢ Locate stationary noise generating construction equipment as far as feasible from noise-sensitive uses. ◢ Do not idle inactive construction equipment for prolonged periods (i.e., more than 5 minutes). ◢ Prohibit unmuffled engine exhaust systems. All construction equipment powered by gasoline or diesel engines shall have factory-installed sound control devices, or sound control devices that are at least as effective as those originally provided by the manufacturer, and all equipment shall be operated and maintained in good working order to minimize noise generation pursuant to Section 9.24.030 of the Noise Ordinance. ◢ The contractor shall provide advance written notification to owners and renters of buildings located within 50 feet of construction activities. The notice shall explain when construction is expected. The notice shall include contact information for the project manager. ◢ When construction occurs outside of the typical daytime and early evening hours (7:00 a.m. – 7:00 p.m. Monday-Friday and 8:00 a.m. – 8:00 p.m. Saturday and Sunday) or within 50 feet of noise	Proposed Project = SU Alignment Option 1A = SU Alignment Option 1C = SU Alignment Option 5A = SU

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		sensitive commercial or office buildings, the use of noise-generating construction equipment will be avoided to the extent feasible. When not feasible, construction contractors will specify proposed noise-reducing construction practices or alternative schedules that will be employed to reduce construction noise. Measures specified by the contractors will be reviewed and approved by the City prior to construction activities. In these situations, feasible noise reduction measures include the following: ◤ Alternative construction schedule to minimize disturbance to normal office operations; and/or ◤ Use temporary noise-reducing barriers positioned between noise-generating equipment (including hand operated jack hammers) and the sensitive receptor building. Such barriers may include commercially manufactured noise-insulating blankets/quilts or as equal materials with similar noise reduction performance as approved by the resident engineer. When temporary barrier units are joined together, the mating surfaces shall be flush with each other with no gaps.	
Impact 4.10-2: Long-term increases in use-related noise.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.10-3: Exposure to construction-related groundborne vibrations.	Proposed Project = PS Alignment Option 1A = PS Alignment Option 1C = PS Alignment Option 5A = PS	**Mitigation Measure 4.10-3: Reduce exposure to construction-generated ground vibration.** This mitigation will apply to the Proposed Trail Alignment and Alignment Options 1A, 1C, and 5A.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = SU

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		Construction documents shall specify construction practices that reduce the adverse effects of ground vibration associated with project construction activities. Measures specified by the design engineer will be reviewed and approved by the City prior to approval of the plans and specifications and may include, but are not limited to, the measures listed below. ◢ Implement Mitigation Measure 4.10-1. ◢ All construction equipment on construction sites shall be operated as far away from vibration- and noise-sensitive sites as reasonably feasible. ◢ Earthmoving, dozing, and ground-impacting operations shall be phased so as not to occur simultaneously in areas close to offsite sensitive receptors, to the extent feasible. The total vibration level produced could be significantly less when each vibration source is operated at separate times. ◢ As part of final design, project engineers shall identify areas on the project plans where work may be constrained due to proximity of structures. The designs shall specify requirements that during project construction on the trail alignment, no heavy vibratory equipment (i.e., the types of equipment listed in Table 4.10-5), shall be operated within 13 feet of off-site building structures unless otherwise approved in writing by the City Engineer. Non-vibratory equipment, such as hand tools, and handheld vibratory compactors and rollers may be used. Use of different material types including slurry cement and concrete paving approved by the Engineer, may be used to reduce or eliminate the need for vibratory equipment. Those portions of the	

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		project site located within 13 feet of an off-site building structure shall be identified on construction documents and demarcated with stakes, flags, rope and/or markings on the ground. ◢ For Option 5A, locate caisson drilling for Bridge 14 forty-three (43) feet or greater from existing occupied structures, if feasible. ◢ Staging areas shall be adjusted and temporary fencing shall be installed to ensure that loaded trucks shall not operate within 13 feet of existing structures.	
4.11 Public Services			
Impact 4.11-1: Effects on fire protection and emergency services.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.11-2: Effects on police protection services.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
4.12 Recreation			
Impact 4.12-1: Increased use of existing neighborhood and regional parks.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
4.13 Transportation and Circulation			
4.13-1: Safety-related traffic impacts.	Proposed Project = PS Alignment Option 1A = PS Alignment Option 1C = PS Alignment Option 5A = PS	**Mitigation Measure 4.13-1: Prepare Traffic Management Plan.** This mitigation would apply for the Proposed Trail Alignment, Alignment Options 1A, 1C, and 5A.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
		The City shall require the construction contractor to prepare for city approval and implement a traffic management plan before construction activities begin. Before the beginning of construction on the project site, the contractor shall prepare a detailed traffic management plan that will be subject to review and approval by the City Department of Public Works. The plan shall ensure maintenance of safe and acceptable operating conditions for local roadways, bicycle and pedestrian facilities, and transit routes. The Traffic Management Plan shall regulate maintenance of traffic during each construction season and comply with agency standards to promote safe and efficient travel for the public and construction workers through the work zones. The plan shall include provisions for regular inspections to assess contractor compliance, signage to direct traffic, and public noticing, as appropriate. Methods in the plan may include (but are not limited to): ◢ appropriately sequencing activities (e.g., segment phasing, timing of grading, hours of construction) to minimize conflicts with traffic on affected roadways, ◢ maintaining traffic flow in the project area to the extent feasible, ◢ maintaining bicycle and pedestrian access along Riverside Avenue, and ◢ using flaggers to direct traffic, as needed, for ingress or egress of large trucks and other vehicles.	
4.13-2: Conflict with an applicable plan, ordinance or policy which establishes measures of effectiveness for the performance of the circulation system or with an alternative transportation plan.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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Table 2-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation (by Alignment Option)	Mitigation Measures	Significance after Mitigation (by Alignment Option)
4.14 Utilities			
Impact 4.14-1: Insufficient water supplies available to serve the project from existing entitlements and resources, or result in the construction of new water treatment facilities.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.14-2: Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.14-3: Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs or fail to comply with federal, state, and local statutes and regulations related to solid waste.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.14-4: Result in a substantial increase in electrical demand.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS
Impact 4.14-5: Disrupt existing utility service.	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS	None required	Proposed Project = LTS Alignment Option 1A = LTS Alignment Option 1C = LTS Alignment Option 5A = LTS

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