

Spruce, Hanby, Yaney Sidewalks Project

Draft Initial Study & Environmental Evaluation

March 2017

Prepared for:
City of Bishop
Public Works Department
377 West Line Street
Bishop, CA 93514

Prepared by:
HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
Folsom, CA 95630

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**SPRUCE, HANBY, YANEY SIDEWALKS PROJECT
DRAFT INITIAL STUDY AND ENVIRONMENTAL EVALUATION**

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**INITIAL STUDY AND
ENVIRONMENTAL EVALUATION**

Project Title:	Spruce, Hanby, Yaney Sidewalks Project
Entitlements Requested:	Section 404 Permit Section 401 Water Quality Certification 1602 Lake and Streambed Alteration Agreement
Lead Agency Name and Address:	City of Bishop Department of Public Works 377 West Line Street, Bishop, CA 93514
Contact Person and Phone Number	David Grah Director of Public Works (760) 873-8458
General Plan Designation: Parks/Open Space	Existing Zoning: Open Space (O-S) Un-zoned (streets)

1. INTRODUCTION

This Initial Study addresses the proposed Spruce, Hanby, Yaney Sidewalks Project (proposed project) and whether it would result in significant impacts on the environment. The Initial Study also assesses whether any environmental impacts of the project are susceptible to substantial reduction or avoidance by project revision, imposition of conditions, or any other means [§15152(b)(2)] of the California Environmental Quality Act (CEQA) Guidelines. If such revisions, conditions, or other means are identified, they will be included as mitigation measures.

This Initial Study relies on CEQA Guidelines Sections §§15064 and 15064.4 in its determination of the significance of the environmental impacts. Per §15064, the finding as to whether a project may have one or more significant impacts shall be based on substantial evidence in the record, and that controversy alone, without substantial evidence of a significant impact, does not trigger the need for an environmental impact report (EIR).

2. PROJECT BACKGROUND

The Inyo County Local Transportation Commission's (ICTC) Regional Transportation Plan (adopted April 22, 2009 and amended May, 20, 2015) identified the Spruce, Yaney, Hanby, Sidewalks Project as a Tier 2 Priority for the City of Bishop (City) that is compatible with the goals and objectives set forth in the Inyo County Collaborative Bikeways Plan, and the administrative draft Inyo County Transportation Program Plan. With support from the ICLTC, the City received state funding in 2016 for the proposed project through the Active Transportation Program (ATP).

The following project specific technical reports or surveys were used in preparation of this Initial Study and are incorporated by reference:

- Jurisdictional Delineation of Waters of the U.S. and State of the project site on June 7, 2016 by HELIX senior biologist, Stephen Stringer.
- Biological Resource Inventory of project site for biological resources and trees conducted on June 7, 2016 by HELIX senior biologist, Stephen Stringer.
- Cultural Resources records search and pedestrian survey, performed by HELIX senior archaeologist, Carrie Wills, on January 17, 2017.

3. DESCRIPTION OF PROJECT

Project Location

The project area is located in the City of Bishop, Inyo County, California (**Figure 1**). The project area would mostly comprise of a 20-foot wide corridor along the following streets: the east and west sides of Spruce street from E. Yaney St to the South Fork of Bishop Creek; the south side of Spruce Street from the South Fork of Bishop Creek to Hanby Avenue; the south side of E. Yaney Street between Spruce Street and Hanby Avenue; the west side of Hanby Avenue from E. Yaney Street to E. Pine Street, and; a corridor connecting Hanby Avenue to the northern terminus of N. 2nd Street and the Sterling Heights Assisted Living facility at 369 E. Pine Street (**Figure 2**). The project area extends outward an additional 20-feet where Spruce Street and Hanby Avenue across the South Fork Bishop Creek. The approximate center of the project area is at Latitude 37.367701 and Longitude - 118.388610 (NAD 83).

Environmental Setting

The City of Bishop is located in Inyo County at the northern end of Owens Valley. The City covers an area of approximately 1.8 square miles and has a population of approximately 3,879 (United States Census 2010). The population is expected to remain relatively steady because it is largely prevented from growth because the City is surrounded by a combination of City of Los Angeles Department of Water and Power (LADWP), other public, and Native American lands. The City of Bishop was incorporated in 1903.

The Owens River, which is located east of the City of Bishop, flows to the south down the valley. The valley is bounded by the Sierra Nevada mountain range to the west and the White Mountains range to the east. Numerous creeks and ditches carry water from the Sierra Nevada Mountains toward the Owens River.

Bishop is in the rain shadow of the Sierra Nevada. The warmest month of the year is July with an average maximum temperature of about 98 degrees Fahrenheit. The coldest month of the year is December with an average minimum temperature of 22 degrees Fahrenheit. Temperature variations between night and day are over 40 degrees during the summer and over 30 degrees during winter. The annual average precipitation at Bishop is 5 inches. The wettest month of the year is February with an average rainfall of 1 inch.

The proposed project is located on the eastern most boundary of the City, approximately 0.25-mile east of US Highway 395 (US 395) and approximately 1.10-mile west of the Bishop Airport. The site is relatively flat and sits at an elevation of approximately 4,135-feet above mean sea level (amsl). The South Fork of Bishop Creeks flows west to east and intersects the project at Spruce Street and at Hanby Avenue. The proposed project is in and near the Bishop City Park (park) and is primarily surrounded by recreational facilities which include: four baseball fields; two children's play structures; four tennis courts; a public pool; an outdoor fitness center and bocce court; a community garden; arboretum; pond; and, dog park. Additional land uses include open space to the north and

northwest, a small residential community to the east, open-space to the southeast, residential to the south, and the City Park to the west and southwest. The Bishop Senior Center is located in the southwest portion of the site off Spruce Street. Walking distance between the park and southeast Bishop neighborhoods range from 0.25- to 0.5-miles.

Approximately 0.25-miles north of the park between Spruce Street and US 395 is the 50,000 square-foot Vons supermarket and 108,000 square-foot Kmart, which serves as the main commercial center and a large employer for the City. The shopping center is a major Eastern Sierra Authority (ESTA) bus stop and is a checkpoint stop for local Bishop dial-a-ride trips as well as the primary Bishop stop along the intercity routes to Lone Pine, Lancaster, Mammoth Lakes, and Reno.

Project Characteristics

The City proposes a complete and safe pedestrian facility and bike corridor between the neighborhoods in southeast Bishop by constructing 4,400 lineal feet of curb, gutter, and sidewalk; about 3,000-feet of on-street 5-foot, Class II bike lane; about 400-feet of new paved path; and street widening at two creek crossings and near live irrigation ditches. The project would make improvements to an existing dirt parking lot along Spruce Street, north of the ball field. Additional parking would be developed south of Spruce Street and north of the soccer field (**Figure 3**). Improvements are likely to occur in several phases over multiple construction seasons and would primarily take place within the City's right-of-way or land leased to the City by LADWP.

The project would include approximately 630-feet of sidewalk, curb, and gutter on each side of Spruce Street from South Fork of Bishop Creek to E. Yaney Street; approximately 500-feet of sidewalk, curb, and gutter along the south side of Spruce Street from South Fork of Bishop Creek to Hanby Avenue; approximately 620-feet of sidewalk, curb, and gutter along the south side of E. Yaney Street from Spruce Street to Hanby Avenue; and approximately 1,900-feet of sidewalk, curb, and gutter along the west side of Hanby Avenue from the west leg of E. Yaney Street to East Pine Street. The sidewalk would be roughly 10-feet wide on Spruce Street from the South Fork of Bishop Creek to E. Yaney Street and 5-feet wide with a 5-foot landscaping strip elsewhere (this dimension includes the 6-inch curb and 4.5-foot dirt planting strip). An 8-foot wide path would be extended west off Hanby toward the southern portion of the project, connecting to the existing foot path.

The project would replace the existing culvert at the intersection of the Spruce Street and the South Fork of Bishop Creek, and would construct new concrete headwalls and install hand and guard rails. The project may include a 10-foot wide by 30-foot long pedestrian bridge over Bishop Creek, connecting the existing sidewalk on the west side of Spruce Street to the existing parking lot. Construction of the bridge would be consistent with existing bridges in the park. Alternatively, the sidewalk would be extended along Spruce Street and connect to the existing sidewalk south of Bishop Creek. The project may also replace the existing culvert and expand the headwall downstream at the Hanby intersection. Additional culvert improvements would occur at the Spruce and Yaney Street intersection. Up to 42 trees would be removed and replaced at approximately a 2:1 ratio in the landscaping strip and along the road to accommodate sidewalk improvements. Trees

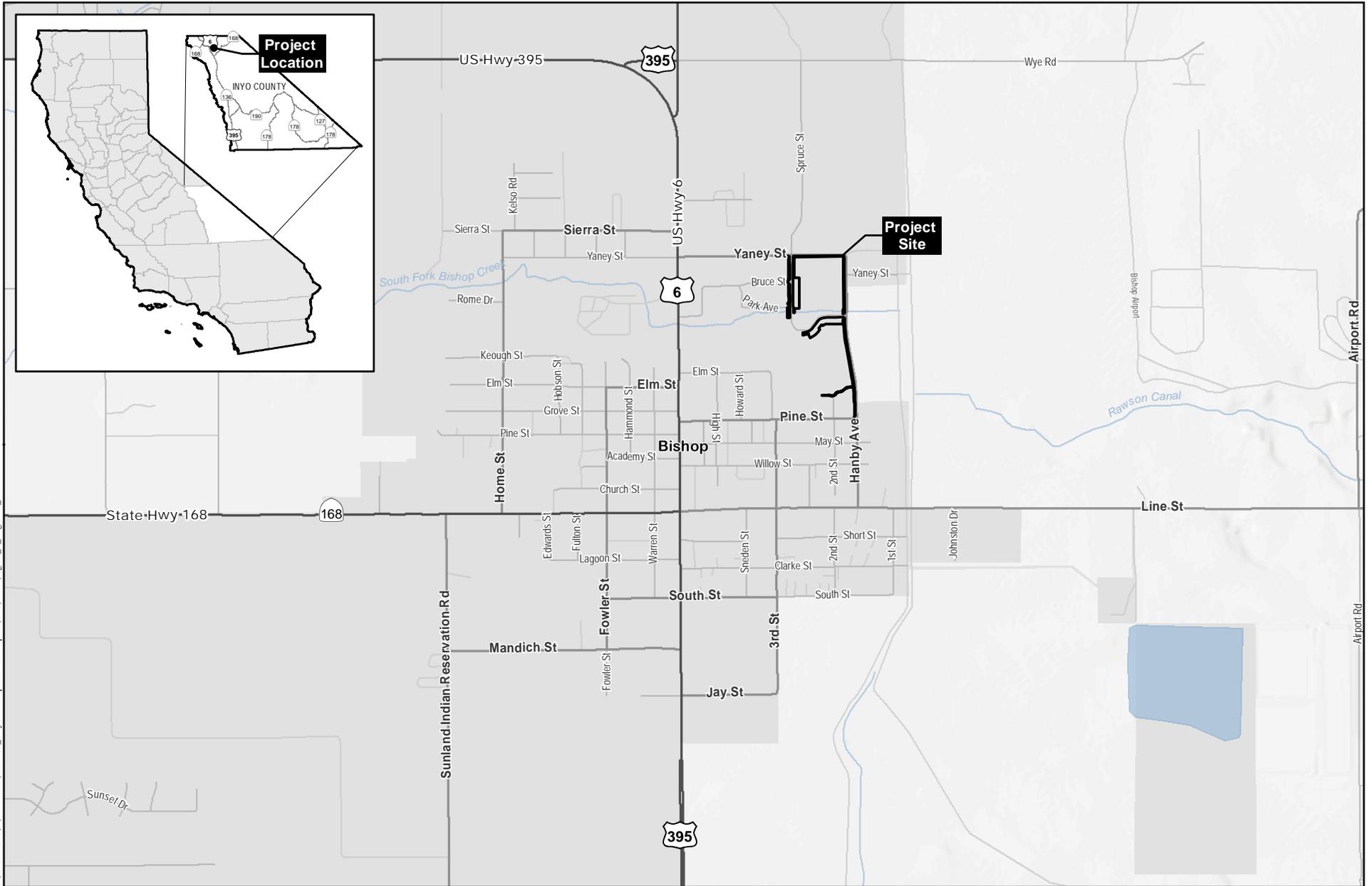
planted along north Hanby would generally not exceed heights of 12-15-feet to avoid obstructing the view of nearby residents.

Bike improvements will occur along Spruce Street and Hanby Avenue, where Class 2 bike lanes including striping will take place on both the east and west side of Spruce St from E. Yaney St to the South Fork of Bishop Creek and continue along the west and southern portion of Spruce St to the intersection of Hanby Ave, and continue along the western portion of Hanby Ave to Pine St. Improvements include repaving existing asphalt surfaces and adding a Class 2 Bike Lane with striped lanes approximately 5-feet from the edge of pavement to allow bicyclist to safely ride along Spruce St and Hanby Ave.

General Plan Designation

Most of the proposed work is within the city street right-of-way that is not zoned. The land use surrounding the project area is primarily Parks/ Open Space and zoned Open Space (O-S). The north side of Yaney Street is zoned Single-Family Residential (R-1); and on the northeast portion of Hanby Avenue is zoned Low Density Multiple Residential (R-2); and on Pine Street along the southern portion of the project is Medium-High Density Residential (R-2000).

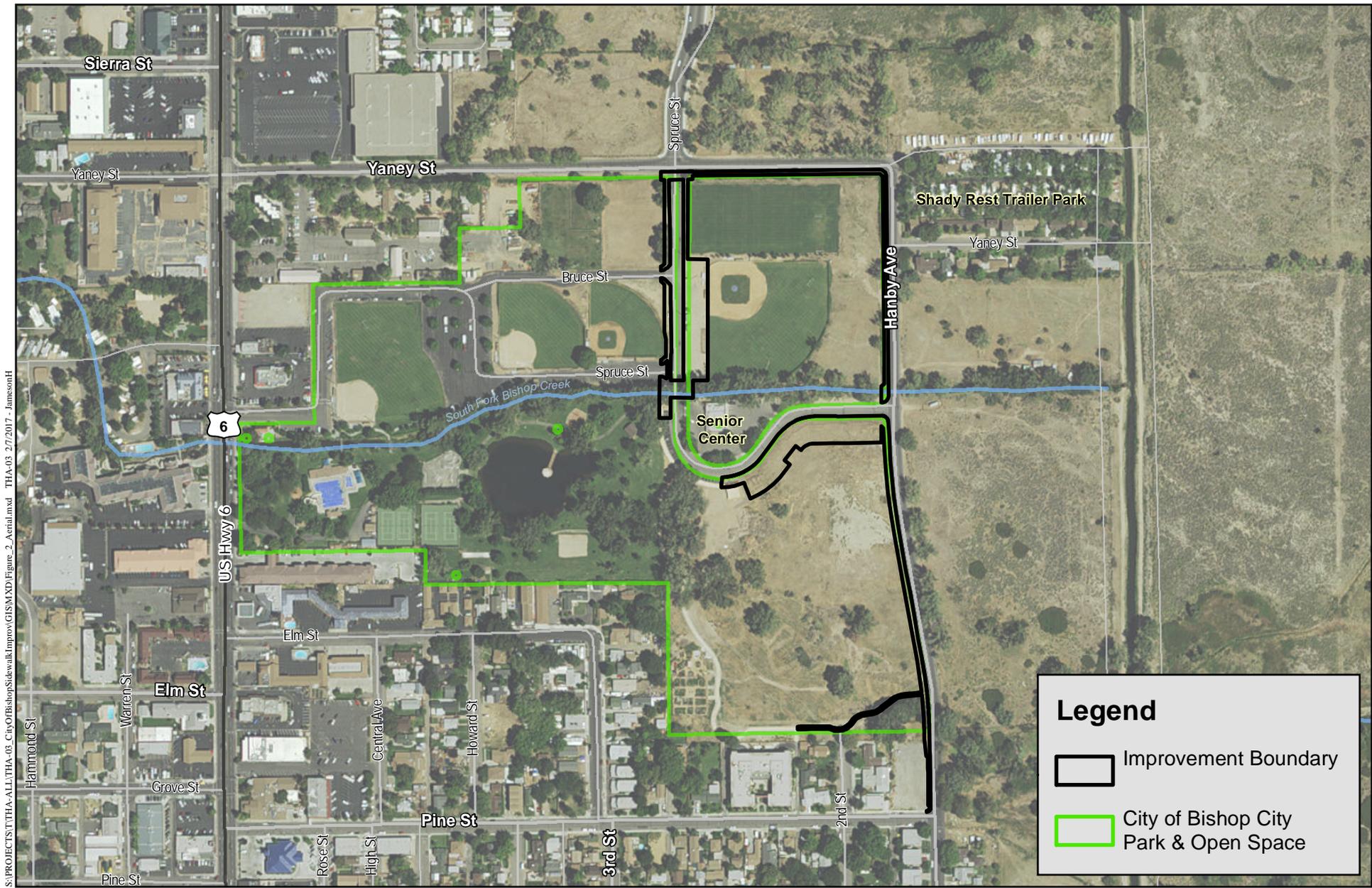
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Regional Location Map

CITY OF BISHOP:
SPRUCE, HANBY, YANEY SIDEWALKS PROJECT

Figure 1



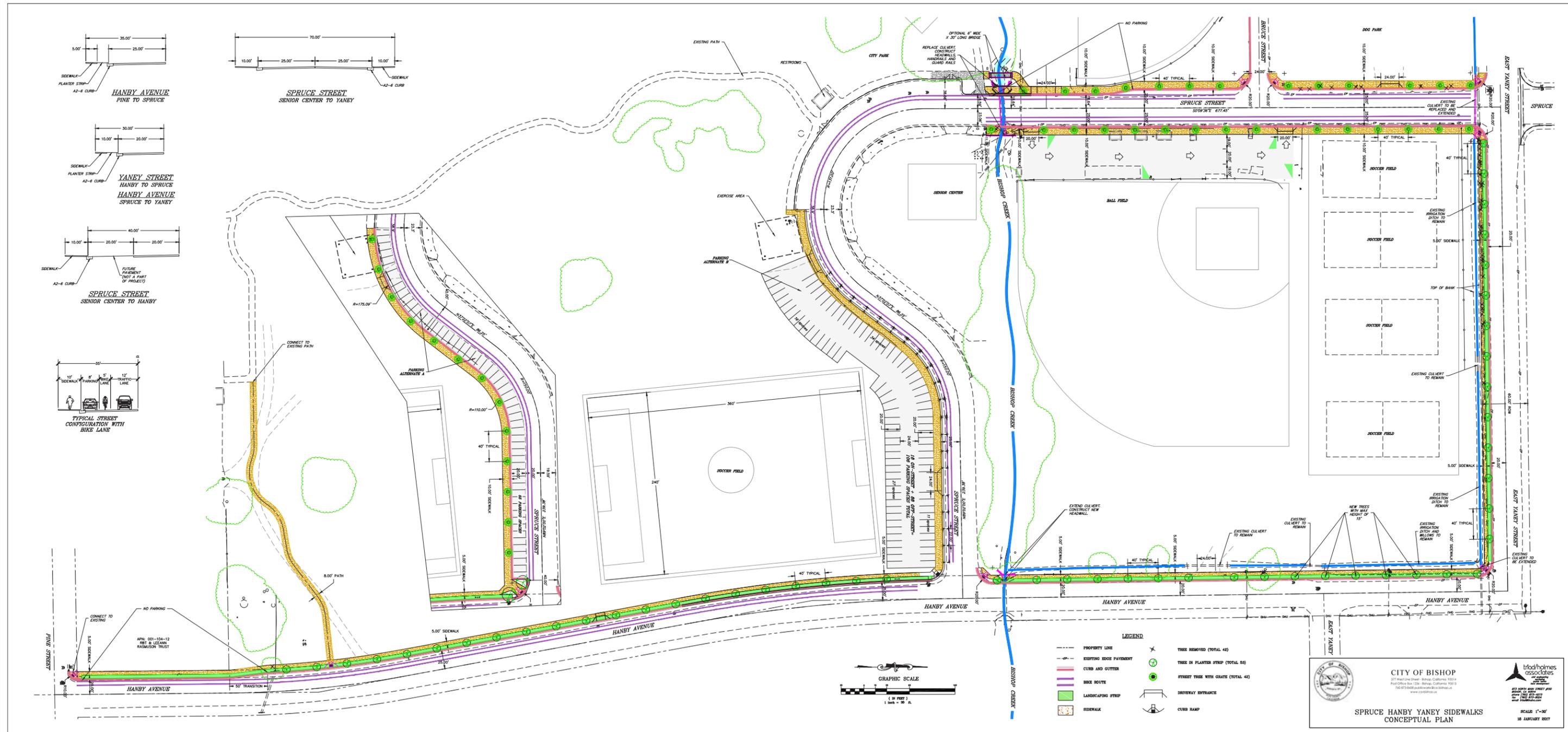
Aerial Map

CITY OF BISHOP:
 SPRUCE, HANBY, YANEY SIDEWALKS PROJECT

Figure 2

S:\PROJECTS\THA-ALL\THA-03_CityOfBishopSidewalkImprovements\GIS\MXD\Figure_2_Aerial.mxd THA-03 2/7/2017 - JamesonH

Source: triad/holmes associates 2016



4. PROJECT OBJECTIVES

The objective of the proposed project is to provide a complete and safe pedestrian facility and enhance bike facilities between the neighborhoods in southeast Bishop, the City Park, and services in north Bishop. The proposed project would improve non-motorized mobility between the City Park and neighborhoods by constructing sidewalks and bike lanes along city streets.

5. REQUIRED APPROVALS

The project as proposed would require approval for authorization of work by the City's Department of Public Works. The proposed project will be replacing culverts at the intersection of Bishop Creek with Hanby Avenue and Spruce Street, requiring the following aquatic resource permits:

- Clean Water Act Section 404 permit from the US Army Corps of Engineers;
- Clean Water Act Section 401 Water Quality Certification from the Lahontan Regional Water Quality Control Board; and,
- California Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement from the California Department of Fish and Wildlife.

City of Bishop

The City has the following discretionary powers related to the proposed project:

- **Certification of the environmental document:** The Bishop City Council will act as the lead agency as defined by the California Environmental Quality Act (CEQA) and will have authority to determine if the environmental document is adequate under CEQA.
- **Project Approval:** The Bishop City Council will consider approval of the project and all entitlements as described above.

6. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input checked="" type="checkbox"/> Tribal Cultural Resources | <input type="checkbox"/> Utilities/Service Systems |
| <input checked="" type="checkbox"/> Mandatory Findings of Significance | | |

7. DETERMINATION

On the basis of the initial evaluation that follows:

- I find that the proposed project WOULD NOT have a significant effect on the environment. A NEGATIVE DECLARATION will be prepared.

- I find that although the proposed project could have a significant effect on the environment, the project impacts were adequately addressed in an earlier document or there will not be a significant effect in this case because revisions in the project have been made that will avoid or reduce any potential significant effects to a less than significant level. A MITIGATED NEGATIVE DECLARATION will be prepared.

- I find that the proposed project MAY have a significant effect on the environment. An ENVIRONMENTAL IMPACT REPORT will be prepared.

- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed Name

Date

8. EVALUATION OF ENVIRONMENTAL IMPACTS

Responses to the following questions and related discussion indicate if the proposed project will have, or will potentially have a significant adverse impact on the environment, either individually or cumulatively with other projects. All phases of project planning, implementation, and operation are considered. Mandatory Findings of Significance are located in Section 8.19 below.

8.1 AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The project proposes sidewalk improvements to three local streets that connect the commercial center with the City's southeast neighborhoods. Spruce Street runs north to south from Wye Road behind the Vons shopping center to Hanby Avenue. East Yaney Street runs from east to west from US-395 and the east end of West Yaney Street to a small residential area which includes the Shady Rest Trailer Park. Hanby Avenue runs north to south along the City's eastern border from E. Yaney Street through a residential neighborhood to E. Line Street. The overall streetscape lacks sidewalks or notable landscaping features aside from several established trees.

The proposed project improvements would be in and adjacent to the City Park, where there are no residents immediately next to the site except for the northern and southernmost portion of the project off Hanby Avenue. The Senior Center is the only commercial building located within the direct vicinity of the project. The surrounding area is relatively unobstructed and largely characterized as rural open space with little development. Cottonwoods and other deciduous trees line portions of all

the streets as well as the South Fork of Bishop Creek. Dominant vistas from the site include the White Mountains to the east and the Sierra Nevada to west.

Evaluation of Aesthetics

Question a: Less than significant with mitigation

The project proposes the installation and improvement of sidewalks and bike lanes as well as tree planting, which would not result in direct impacts to the background scenic vistas and would likely improve the overall scenic value and quality of the immediate area. The project would remove several trees along the streets and replace them with species from City's list of acceptable street trees. Trees planted close to nearby residents would be specifically chosen to not exceed heights of 12-15-feet to avoid obstructing views. The project would not have a substantial adverse effect on the area's scenic vista and impacts would be less than significant with mitigation.

Mitigation Measure AES-1: Tree Replacement and Replanting

Tree replacements for sidewalk improvements will be selected based on their beneficial qualities and their limited impacts on improvements, and shall be an acceptable species per the City's list of acceptable street trees. Tree replacement shall occur at a rate of approximately 2:1 using 5 to 15-gallon pots and would be installed per the *Bishop Tree Care Information* guidelines. All planted trees shall be maintained by the City. Trees that fail to survive for a 5-year establishment period will be replaced with a similar tree species.

Question b: No impact

There are no state or locally designated scenic highways in direct the vicinity of the proposed project (Caltrans 2016). Implementation of the proposed project would not adversely affect scenic resources within a designated scenic highway, and no impact would occur.

Question c: No impact

As discussed in Question a, the project proposes to install new sidewalks, curbs, and gutters, and would tree planting, improving the existing visual character and quality of the site and its surroundings. Improvements would be consistent with the existing aesthetic of the park facilities and would complete portions of the park that are currently unimproved. As a result, there would be no impact and the project would not degrade the existing visual character of the surrounding area.

Question d: Less than significant impact

The proposed project does not include installation of new lighting that could produce glare. Tree removal would potentially result in increased sunlight and reduced shade in some areas in the short term. In the longer term, shade should be increased by the larger number of trees planted than removed.

8.2 AGRICULTURE AND FORESTRY RESOURCES

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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In determining whether impacts to agriculture resources are significant environmental effects, lead agencies may refer to the California Agriculture Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526 (g)), or timberland zoned Timberland Production (as defined by Government Code Section 51104 (g))?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

No agricultural activities or timber management occur on the project site and the site is not designated for agricultural or timberland uses. Inyo County does not support a large agricultural industry and is not included in California's Farmland Mapping and Monitoring Program (FMMP). However, irrigated field crops and livestock grazing are common around Bishop and throughout Inyo County.

Evaluation of Agriculture and Forestry Services

Questions a, b, e: No impact

The project site is almost entirely within the developed city street right-of-ways and does not contain farmland of any significance nor is it under a Williamson Act Contract to be preserved as farmland. Therefore, no impact would occur, and no mitigation would be necessary.

Questions c, d, e: No impact

The project site is not zoned for forest land or timberland. Therefore, no impact would occur, and no mitigation would be necessary.

8.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe, to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The U.S. Environmental Protection Agency (EPA) has established national ambient air quality standards (NAAQS) for seven air pollution constituents. As permitted by the Clean Air Act, California has adopted more stringent air emissions standards (CAAQS), and expanded the number of regulated air constituents.

The California Air Resources Board (CARB) is required to designate areas of the state as attainment, nonattainment, or unclassified for any state standard. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once.

The EPA designates areas for ozone (O₃), carbon monoxide (CO), and nitrogen dioxide (NO₂) as either “Does not meet the primary standards”, “Cannot be classified”, or “Better than national standards”. For sulfur dioxide (SO₂), areas are designated as “Does not meet the primary standards”, “Does not meet the secondary standards”, “Cannot be classified”, or “Better than national standards”.

Air Quality within the City and surrounding Inyo County is monitored and regulated by the Great Basin Unified Air Pollution Control District (GBUAPCD). Inyo County has been designated as unclassified for ozone and PM_{2.5}; attainment for carbon monoxide, hydrogen sulfide, lead, sulfates, sulfur dioxide, and nitrogen dioxide; and is listed as non-attainment for the state standard for PM-10 (particulate matter less than 10 microns in diameter) air emissions, which include chemical emissions and other inhalable particulate matter with an aerodynamic diameter of less than 10 microns. Federal and California ambient air quality standards for criteria pollutants are summarized in **Table 1**.

Pollutant	Average Time	Federal Standards	Federal Attainment Status	California Standards	State Attainment Status
Ozone	1-Hr. 8-Hr.	-- 0.07 ppm	Unclassified/ Attainment	0.09 ppm 0.07 ppm	Unclassified
Carbon Monoxide	1-Hr. 8-Hr.	35.0 ppm 9.0 ppm	Unclassified/ Attainment	20.0 ppm 9.0 ppm	Attainment
Nitrogen Dioxide	Annual 1-Hr.	0.053 ppm 0.100 ppm	Unclassified/ Attainment	0.030 ppm 0.18 ppm	Attainment
Sulfur Dioxide	Annual 24-Hr. 1-Hr.	0.03 ppm 0.14 ppm –	Unclassified/ Attainment	– 0.04 ppm 0.25 ppm	Attainment
PM ₁₀	Annual 24-Hr.	50 µg/m ³ 150 µg/m ³	Attainment for areas north of Big Pine (including project site)	20 µg/m ³ 50 µg/m ³	Non-Attainment
PM _{2.5}	Annual 24-Hr.	15 µg/m ³ 65 µg/m ³		12 µg/m ³ –	Unclassified
Lead	30-Day Monthly	– 1.5 µg/m ³	NA	1.5 µg /m ³ –	Attainment
ppm = parts per million µg/m ³ = micrograms per cubic meter N/A = not available					

Question a: No impact

The project would not contribute to the generation of significant levels of any air contaminants and would thus not conflict with or obstruct the implementation of any of the plans of the GBUAPCD. None of the air quality plans apply to the Bishop area (GBUAPCD 2016).

Question b: Less than significant

The project is expected to decrease traffic-related emissions. Adverse air quality impacts would be limited to the emissions from construction equipment involved in the construction of the proposed improvements. The short duration of the proposed work combined with existing regulations regarding motor vehicle fuels and emissions would result in potential air quality impacts being well below any state or federal significance criteria. The project is expected to have long-term benefits by promoting non-motorized travel and shifting some trips away from motorized travel.

Construction-related dust is the GBUAPCD's greatest concern, which is addressed in District Rules 400 and 401. Rule 400 prohibits discharge into the atmosphere of any air contaminant for a period of more than three minutes in any one hour that is (a) dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, or (2) of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke.

Rule 401 requires that a person take reasonable precaution to prevent visible particulate matter from being airborne, under normal wind conditions, beyond the property from which the emissions originate. With implementation of best management practices including watering to ensure compliance with District Rule 400 and 401, the project would have a less than significant impact on air quality.

Question c: Less than significant

The project could generate some dust (including PM10 - a criteria pollutant) from excavation and other activities involving equipment. The District's Rule 401 requires that a person take reasonable precaution to prevent visible particulate matter from being airborne beyond the property from which the emissions originates under normal wind conditions to minimize potential cumulative effects from pollutants. Soils would be watered in accordance with District Rule 400 and 401, which would minimize PM10 emissions and therefore reduce any potential significant or cumulative impacts to less than significant levels.

Questions d: Less than significant

The Senior Center and Shady Rest Trailer Park are within the direct vicinity of the project site; however, the project is not expected to expose sensitive receptors to substantial pollutant concentrations. The project would result in temporary and relatively small amounts of air emissions during project construction associated with concrete demolition, tree removal, and placement of fill and aggregate, asphalt, slurry, and pouring of concrete. These pollutant concentrations would not be emitted at substantial levels and impact would be less than significant.

Questions e: Less than significant

Construction could generate odors from heavy diesel machinery and materials used for paving (i.e., asphalt and slurry). The generation of odors during the construction period would be temporary and would tend to be dispersed within a short distance from the active work area, and therefore, would be less than significant.

No odors would be generated after construction.

8.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any applicable policies protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Existing land uses surrounding the project site are urban, and include transportation, residential, and recreational. The predominant land uses immediately surrounding the project site are paved streets, and Bishop City Park, which consists of turfed athletic fields, lawns and picnic areas, unpaved parking lots, and vacant urban land.

Regulatory Framework Related to Biological Resources

The City regulates urban development through standard construction conditions and through mitigation, building, and construction requirements set forth in the City of Bishop Municipal Code. Required of all projects constructed throughout the City, compliance with the requirements of the City's standard conditions and the provisions of the Municipal Code avoids or reduces many potential environmental effects. No Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan has been approved for the City.

State and Federal Endangered Species Acts

Special status species are protected by state and federal laws. The California Endangered Species Act (CESA; California Fish and Game Code Sections 2050 to 2097) protects species listed as threatened and endangered under CESA from harm or harassment. This law is similar to the Federal Endangered Species Act of 1973 (FESA; 16 USC 1531 et seq.) which protects federally threatened or endangered species (50 CFR 17.11, and 17.12; listed species) from take. For both laws, take of the protected species may be allowed through consultation with and issuance of a permit by the agency with jurisdiction over the protected species.

California Code of Regulations and California Fish and Game Code

The official listing of endangered and threatened animals and plants is contained in the California Code of Regulations Title 14 § 670.5. A state candidate species is one that the California Fish and Game Code has formally noticed as being under review by the California Department of Fish and Wildlife (CDFW) for inclusion on the state list pursuant to Sections 2074.2 and 2075.5 of the California Fish and Game Code. CDFW also designates Species of Special Concern that are not currently listed or candidate species.

Legal protection is also provided for wildlife species in California that are identified as "fully protected animals." These species are protected under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fishes) of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species at any time. The CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by these species. The CDFW has informed non-federal agencies and private parties that they must avoid take of any fully protected species. However, Senate Bill (SB) 618 (2011) allows the CDFW to issue permits authorizing the incidental take of fully protected species under the CESA, so long as any such take authorization is issued in conjunction with the approval of a Natural Community

Conservation Plan that covers the fully protected species (California Fish and Game Code Section 2835).

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code Sections 1900 to 1913) requires all state agencies to use their authority to implement programs to conserve endangered and otherwise rare species of native plants. Provisions of the act prohibit the taking of listed plants from the wild and require notification of CDFW at least 10 days in advance of any change in land use other than changing from one agricultural use to another, which allows CDFW to salvage listed plants that would otherwise be destroyed.

Nesting and Migratory Birds

Nesting birds are protected by state and federal laws. California Fish and Game Code (§3503, 3503.5, and 3800) prohibits the possession, incidental take, or needless destruction of any bird nests or eggs; Fish and Game Code §3511 designates certain bird species “fully protected” (including all raptors), making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. Under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USF §703-711), migratory bird species and their nests and eggs that are on the federal list (50 CFR §10.13) are protected from injury or death, and project-related disturbance must be reduced or eliminated during the nesting cycle.

Jurisdictional Waters

Any person, firm, or agency planning to alter or work in “waters of the U.S.,” including the discharge of dredged or fill material, must first obtain authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). Section 401 requires an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of the CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California. The RWQCB also regulates discharges of pollutants or dredged or fill material to waters of the State which is a broader definition than waters of the U.S.

California Fish and Game Code Section 1602 – Lake and Streambed Alteration Program

Diversions or obstructions of the natural flow of, or substantial changes or use of material from the bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW, pursuant to Section 1602 of the California Fish and Game Code. The CDFW requires notification prior to commencement of any such activities, and a Lake and Streambed Alteration Agreement (SAA) pursuant to Fish and Game Code Sections 1601 1603, if the activity may substantially adversely affect an existing fish and wildlife resource.

Methods

The information provided in Chapter 9.4 *Biological Resources* of this Initial Study is based on the *Spruce, Hanby, Yaney Sidewalks Project Biological Resources Evaluation* prepared by HELIX

(2016a), which is included as **Appendix A**. Biological studies conducted in preparation of this Initial Study included a desktop evaluation and background research to identify sensitive biological communities and/or special-status species with the potential to occur in or near the project site, biological field surveys to document baseline conditions and special-status species and/or their habitats in the project site, and an arborist survey of the project site. A full discussion of methods is included in Appendix A.

Species and habitats were considered to be special-status if they fall into one or more of the following categories:

- Listed as endangered or threatened under the FESA (including candidate species and species proposed for listing),
- Listed as endangered or threatened under the CESA (including candidate species and species proposed for listing),
- Designated as a Species of Special Concern or sensitive natural community by the CDFW; and/or
- Designated by the California Native Plant Society (CNPS) as California Rare Plant Rank 1 or 2.

To determine the potential for special-status species or their habitats to occur in the project site and vicinity, current lists of regionally-occurring special-status species and sensitive natural communities known to occur or having the potential to occur on the “Bishop, CA” U.S. Geological Survey 7.5-minute topographic quadrangle were obtained from the following databases: the CNDDDB database maintained by CDFW (CDFW 2016), the CNPS database (CNPS 2016), and the Information for Planning and Conservation online system maintained by the USFWS (USFWS 2016).

These lists were then reviewed to determine which of the regionally-occurring special-status species have the potential to occur in the project site and vicinity and/or be affected by the proposed project. The potential for each regionally-occurring special-status species to occur in the project site and vicinity and/or be affected by the proposed project was determined based on a comparison of the life history requirements, known ranges (geographic and/or elevational), and reported occurrences of the special-status species to the habitats on the project site noted during the biological surveys as well as other factors such as local knowledge of such species distribution(s) and professional judgement by HELIX biologists.

Biological field surveys of the project site were conducted on June 7-8, 2016 by HELIX Senior Biologist, Stephen Stringer, M.S. and HELIX Senior Biologist, George Aldridge, Ph.D. Both Mr. Stringer and Dr. Aldridge are certified arborists per the International Society of Arboriculture. Biological field surveys consisted of baseline biological surveys, a tree inventory and assessment, a focused rare plant survey, and a delineation of potentially jurisdictional wetlands and other waters.

The baseline biological survey included a pedestrian reconnaissance of the entire project site, mapping of biological habitats and land covers, and a comprehensive list of all plant and animal species observed or detected. The tree inventory and assessment included an inventory of all trees in the project site of at least 4-inches in diameter at 4-feet above grade (dbh), as well as a general rapid assessment of tree condition.

The rare plant survey, which was conducted within the flowering period of the special-status plant species having potential to occur in the project site, consisted of identifying plant species on the project site to the taxonomic level to determine whether they were a special-status species. Because there are reported occurrences of Owens Valley checkerbloom (*Sidalcea covillei*) in CNDDDB near the project site, a reference population of this species just north of Bishop was visited prior to conducting the rare plant survey to confirm that the species was flowering and could be detected if present in the project site as well as develop a search image. The reference population was flowering, and the species was conspicuous and readily identifiable.

During the delineation of potentially jurisdictional wetlands and other waters in the project site, the presence/absence of wetlands and other waters was determined based on the presence/absence of hydrophytic vegetation, evidence of wetland hydrology, and hydric soils for wetlands and the presence of topography, and/or the presence of bed and banks for ditches/drainages. The National Wetland Inventory Online Mapper (NWI; USFWS 2016b) was consulted for wetlands and other waters that may have been previously identified in the project site prior to conducting the delineation fieldwork. The results of the jurisdictional delineation are summarized in this Initial Study and provided in detail in the *Spruce, Hanby, Yaney Sidewalks Project Delineation of Aquatic Resources* (HELIX 2016b) (**Appendix B**).

Biological Resources Present in the Project Site

Biological Habitat Types/Land Cover

Upland Habitats

Upland areas within the project site are adjacent to existing roads and subjected to high levels of disturbance. Within the upland areas of the project site, habitats consist primarily of disturbed and developed land cover, with a small patch of riparian habitat outside of the banks of South Fork Bishop Creek where it crosses under Spruce Street (see the discussion of riparian habitat, below, for additional information regarding this habitat type).

Disturbed Habitat

Disturbed habitat comprises approximately 1.66 acres within the project site. Disturbed habitat describes land that is subject to recent or ongoing disturbance by human activity but retains a soil substrate. Disturbed habitat is often barren or only sparsely vegetated, and soils may be compacted by vehicles, pedestrians, or grazing animals. If vegetated, there is no recognizable native or naturalized community, and the species composition depends on local colonization potential. Vegetation is dominated by ruderal native and non-native species that are adapted to colonize

disturbed soils and open areas. Most of the project site is disturbed habitat along the shoulders of streets.

Developed

Developed land comprises approximately 0.99 acres within the project site. Developed land has been altered by structures, paving, hardscape, landscaping, or relatively permanent placement of materials such that it no longer naturally supports vegetation. Developed land in the project site includes paved streets, unpaved parking lots, irrigated turf, and urban park along South Fork Bishop Creek and Spruce Street in Bishop City Park.

Riparian

A narrow riparian corridor comprised of Fremont cottonwood (*Populus fremontii*) and red willow (*Salix laevigata*) trees is growing adjacent to South Fork Bishop Creek. The riparian habitat is a total of approximately 0.087 acres. The riparian habitat is classified as upland habitat because it is growing outside of the banks of the channelized creek and does not experience inundation or saturation at or near the soil surface for a sufficient duration during the growing season to result in anaerobic conditions that would result in hydric soil formation or a preponderance of hydrophytic vegetation.

Aquatic Habitats

Aquatic habitats in the project site include South Fork Bishop Creek and a constructed earthen ditch.

South Fork Bishop Creek

South Fork Bishop Creek flows through the project site in a constructed earthen channel crossing under Spruce Street and Hanby Avenue. South Fork Bishop Creek comprises approximately 0.011 acre within the project site as depicted on Attachment A in the appended Jurisdictional Delineation (HELIX 2017). Establishment of vegetation within the channel is largely excluded by periodic scouring flows and compacted soil. A fringe of herbaceous vegetation is present above the high-water line. South Fork Bishop Creek is considered a potential waters of the U.S. and waters of the State.

The segment of South Fork Bishop Creek where the creek crosses under Spruce Street is a total of 0.008 acre. The creek is earthen and largely unvegetated in this segment except for a fringe of common velvet grass (*Holcus lanatus*) and mountain bog bulrush (*Scirpus microcarpus*) along the water line. Due to the lack of wetland vegetation within the channel, the creek is classified as a non-wetland water (unvegetated streambed) in this location.

The segment of South Fork Bishop Creek upstream of a 72-inch corrugated metal culvert and headwall at Hanby Avenue is a total of 0.003 acre. The creek supports a wetland feature in this location. The wetland is fed by the constructed earthen ditch as well as South Fork Bishop Creek. The wetland is characterized by a dense patch of tule (*Schoenoplectus acutus var. occidentalis*) growing over most of the channel where the flow is slowed by the culvert inlet.

Constructed Earthen Ditch

A constructed earthen ditch flows through the project site under Spruce Street at E. Yaney Street, and runs parallel to the project site along the south side of E. Yaney Street and the west side of Hanby Avenue between E. Yaney Street and the South Fork of Bishop Creek. The constructed earthen ditch comprises 0.004 acre within the project site. The ditch is heavily vegetated with sedges and grasses for much of its length in and adjacent to the project site, with patches of willows (*Salix* spp.) and other trees outside the banks. Although the constructed earthen ditch functions as a drainage to carry urban runoff into South Fork Bishop Creek, it is best classified as a wetland within the project site because it is heavily vegetated with perennial emergent macrophytes such as cattail (*Typha latifolia*) and other species such as Italian ryegrass (*Festuca perennis*).

Wildlife

Wildlife observed in the study area include common species tolerant of urban habitats, such as American crow (*Corvus brachyrhynchos*), Brewer's blackbird (*Euphagus cyanocephalus*), and European starling (*Sturnus vulgaris*).

Special-Status Species with the Potential to Occur in the Project Site

The CDFW, USFWS, and CNPS lists included a total of 27 regionally-occurring special-status species that were reviewed for the potential to occur on the project site or otherwise be impacted by the proposed project. These regionally-occurring special-status species are typically associated with aquatic habitats including perennial waterbodies and wetlands or are associated with native upland communities such as alkaline meadows or desert scrub communities. Due to the projects urbanized environment, the species expected to use the site would be highly adaptable common species tolerant of disturbance and urban areas.

Of the 27 regionally-occurring special-status species that were evaluated, two regionally-occurring special-status species have the potential to occur in the project site or vicinity: Owens sucker (*Catostomus fumeiventris*) and Owens speckled dace (*Rhinichthys osculus* ssp. 2). Both of these fish species are considered species of special concern by CDFW but are not listed under FESA or CESA. No other special-status species were identified as having the potential to occur in the project site or be impacted by the proposed project.

Migratory Birds and Nesting Birds

While no special-status bird species are expected to nest on the project site, marginal habitat is present on the site for a variety of migratory birds and common bird species that nest in trees, on buildings, or on the ground in urban and suburban areas. No bird nests were observed on the project site; however, birds could occupy the project site prior to construction.

Jurisdictional Waters

Potentially jurisdictional waters of the U.S./State in the project site consist of South Fork Bishop Creek and a constructed earthen ditch. South Fork Bishop Creek and its adjacent riparian corridor is also subject to regulation by CDFW under the Lake and Streambed Alteration Program. A detailed

description and map of potentially jurisdictional waters of the U.S./State in the project site is provided in the *Spruce, Hanby, Yaney Sidewalks Project Delineation of Aquatic Resources* (Appendix B).

Evaluation of Biological Resources

Question a: Less than significant impact with mitigation

The proposed project is not anticipated to impact special-status species due to a lack of suitable habitat in the project site. However, Owens sucker and Owens speckled dace are two fish species of special concern that are known to occur in drainages in the project vicinity and could be present in waterways in or near the project during construction. If these species are present in or adjacent to the project site during construction, direct or indirect impacts could occur because of contact with construction equipment/personnel, stranding during dewatering, or reduced water quality in the project site or downstream. Direct or indirect impacts to these species would be considered a significant impact. Best Management Practices (BMP) would be implemented to reduce impacts to water quality during project construction and general avoidance measures for special-status fishes would also be implemented as a precautionary measure.

The following mitigation measures would be implemented to avoid and minimize impacts to special-status fish species in South Fork Bishop Creek and the constructed earthen ditch:

Mitigation Measure BIO-1: Avoid and minimize impacts to water quality in South Fork Bishop Creek and the Constructed Earthen Ditch.

- Activities conducted in or near South Fork Bishop Creek and the constructed earthen ditch shall be limited to the winter months (generally November – March) when flows are lowest.
- All disturbed soils shall undergo erosion control treatment using erosion control blankets, as deemed necessary by the contractor to avoid the unnecessary introduction of sediment into the creek, prior to October 15 and/ or immediately after construction is terminated. Erosion control blankets shall be installed on any disturbed soils on a 2:1 slope or steeper.
- Standard construction BMPs shall be implemented throughout construction to avoid and minimize adverse effects to water quality within South Fork Bishop Creek and the constructed earthen ditch in and adjacent to the project site. Appropriate erosion control measures shall be used (e.g., hay bales, filter fences, vegetative buffer strips or other accepted equivalents) to reduce siltation and contaminated runoff from the project site. The integrity and effectiveness of the BMPs shall be inspected daily by the contractor. Corrective actions and repairs shall be carried out immediately.
- No construction other than culvert, headwall, and bridge work shall occur within the wetted portion of waterways, including access by construction equipment or personnel, if avoidable. If work in the wetted portion of waterways is unavoidable, the work area shall be dewatered and the flow diverted around the work area.

- Construction activities and ground disturbance within the project site shall be confined to the minimal area necessary to facilitate construction activities. To ensure that construction equipment and personnel do not affect sensitive aquatic habitat in South Fork Bishop Creek and the constructed earthen ditch up and downstream of the project site, orange barrier fencing shall be erected to clearly define the habitat to be avoided. This fencing shall delineate the Environmentally Sensitive Area (ESA) on the project. The integrity and effectiveness of ESA fencing shall be inspected daily by the contractor. Corrective actions and repairs shall be carried out immediately for fence breaches.
- Construction by-products and pollutants such as petroleum products, chemicals, or other deleterious materials shall not be allowed to enter streams or other waters. A plan for the emergency clean-up of any spills of fuel or other materials shall be prepared by the contractor, approved by the City, and made available when construction equipment is in use.
- Construction vehicles and equipment shall be maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease. Leaking vehicles and equipment shall be removed from the site by the contractor.
- Equipment shall be re-fueled, washed, and serviced at the designated construction staging area or off-site. All construction and fill materials shall be stored and contained in a designated area that is located away from South Fork Bishop Creek and the constructed earthen ditch to prevent transport of materials into these waterways. Equipment/materials maintenance activities and storage shall be 100 feet or more away from waterways. In addition, a silt fence shall be installed by the contractor around the staging and materials storage areas to collect any discharge, and adequate materials shall be available for spill clean-up and during storm events.
- No litter, debris, or sidecast shall be dumped or permitted to enter South Fork Bishop Creek and the constructed earthen ditch. Trash and debris shall be removed from the site regularly by the contractor. Following construction, all trash and construction debris shall be removed from work areas by the contractor.
- Building materials storage areas containing hazardous or potentially toxic materials such as herbicides and petroleum products shall be located outside of the 100-year flood zone, have an impermeable membrane between the ground and the hazardous material, and shall be bermed to prevent the discharge of pollutants to ground water and runoff water.
- Worker education and awareness training regarding sensitive habitats (e.g., aquatic and riparian habitats) and special-status species shall be conducted for all construction personnel by a qualified biologist. The contractor shall ensure that all new personnel receive the mandatory training before starting work.

Mitigation Measure BIO-2: Fish salvage during dewatering in South Fork Bishop Creek and the Constructed Earthen Ditch.

- If dewatering is required, the contractor shall prepare a dewatering plan that complies with applicable permit conditions. Water diversion activities shall be conducted under the supervision

of a qualified biologist. The biologist shall survey the area to be dewatered immediately after installation of the dewatering device and prior to the continuation of dewatering activities. The approved biologist shall use a net to capture trapped fish present in the area to be dewatered. Captured native organisms shall be released into the creek/ditch up or downstream of the construction zone.

- If dewatering the work area in the creek is necessary, and it would be dewatered by pumping, intakes shall be completely screened with wire mesh not larger than five millimeters to prevent fish from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed by the contractor in a manner that would allow flow to resume with the least disturbance to the soil substrate.

With implementation of the above mitigation measures, impacts to special-status fish would be less than significant and no additional mitigation measures would be required.

In addition, common bird species protected by the MBTA and/or Fish and Game Code may nest on trees present on the project site. If active nests are present tree removal or construction activities, this may result in injury or death of birds (e.g., if trees or limbs containing active nests are removed), or harassment which may cause nesting birds to abandon active nests resulting in the loss of eggs or young. The loss of foraging habitat near an active nest may result in the reduced health and vigor of eggs and/or nestlings, resulting in reduced survival rates. Any harassment, injury, or death of nesting birds, their nestlings, or eggs would be considered a significant impact.

The following mitigation measure would be implemented to avoid and minimize impacts to nesting birds:

Mitigation Measure BIO-3: Avoid and minimize impacts to nesting birds.

If project construction occurs between February 15 and September 15, a qualified biologist(s) shall conduct preconstruction surveys for nesting birds. The biologist(s) conducting the surveys shall be experienced bird surveyors and familiar with standard nest-locating techniques. Surveys shall be conducted in accordance with the following guidelines:

- Surveys shall cover all potential nesting habitat in the project site and within 500-feet of the project site and linear facilities boundaries – inaccessible areas outside of the project boundary may be surveyed from within the project site or publicly accessible land with the aid of binoculars.
- Vegetation removal or other ground disturbing activities should be avoided between February 1 and August 31; however, if it cannot be avoided, the avian biologist shall survey breeding/nesting habitat within the survey radius described within one week prior to the start of project activities.
- Site preparation and construction activities may begin if no breeding/nesting birds are observed. Additional follow-up surveys shall be conducted if periods of construction inactivity exceed one

week in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation.

If active nests are detected during the survey, a no-disturbance buffer zone (protected area surrounding the nest, the size of which is to be determined by the project biologist) shall be established and no construction within the buffer shall be allowed until a qualified biologist has determined that the nest is no longer active (i.e. the nestlings have fledged and are no longer reliant on the nest, or the nest has failed). Encroachment into the buffer may occur at the discretion of a qualified biologist. Any encroachment into the buffer shall be monitored by a qualified biologist to determine whether nesting birds are being impacted.

With implementation of the above mitigation measure, impacts to nesting birds would be less than significant and no additional mitigation measures would be required.

Question b: Less than significant impact with mitigation

The riparian habitat along Bishop Creek in the project area is regulated by CDFW under the Lake and Streambed Alteration Program. Permanent impacts to 0.087 acre (3,786 square feet) of riparian habitat would occur where South Fork Bishop Creek crosses under Spruce Street. This would be considered a significant impact. The following mitigation measures would be implemented to avoid and minimize impacts to riparian habitat and offset loss of riparian habitat:

Mitigation Measure BIO-4: Avoid and minimize impacts to riparian habitat.

The following avoidance and minimization efforts and protection measures shall be incorporated into the project construction methods:

- Temporary staging areas shall be located in the upland habitat, or in existing developed areas, away from the riparian trees and riparian habitat.
- Construction activities shall be confined to the minimal area necessary to safely conduct proposed project activities to the extent possible.
- Riparian habitat shall be avoided or preserved to the maximum extent practicable. Emergent (rising out of water) and submergent (covered by water) vegetation shall be retained where feasible.

Mitigation Measure BIO-5: Obtain a Streambed Alteration Agreement from CDFW.

The City shall obtain a Lake and Streambed Alteration Agreement from CDFW pursuant to Section 1600 et. Seq. of the California Fish and Game Code to authorize impacts to the streams and associated riparian habitat on the project site. The City shall adhere to all conditions and requirements of the Streambed Alteration Agreement.

With implementation of the above mitigation measures, impacts to riparian habitat would be less than significant and no additional mitigation measures would be required.

Question c: Less than significant impact with mitigation

Potentially jurisdictional waters of the U.S./State in the project site consist of South Fork Bishop Creek and a constructed earthen ditch. Construction activities would involve light disturbance to the streambed which may result in increased erosion and sediment transfer to water channels. Construction activities could also result in the potential for materials (including hazardous materials, construction materials, and litter generated by construction personnel) to spill into the waterway, which could degrade water quality. Impacts to water quality would be a potentially significant impact. Construction activities would be required to follow standard engineering practices that reduce impacts to water quality, especially where watercourses may be affected. As outlined in Mitigation Measure BIO-1, these practices include reduction of sediment loading and sediment disturbance, debris containment methods, and litter removal, as well as other BMPs for maintaining water quality in the project area. With BMPs incorporated into construction activities, no impacts to water quality are anticipated during or post-construction.

Implementation of the proposed project would result in permanent impacts to an estimated 0.009 acre (406 square feet) and temporary impacts to an estimated 0.006 acre (252 square feet) of waters of the U.S./State in South Fork Bishop Creek and the constructed earthen ditch.

Mitigation is proposed to reduce potential impacts to potential waters of the U.S./State to a less than significant level:

Mitigation Measure BIO-6: Obtain Clean Water Act Permits

The City shall obtain the appropriate permits from the U.S. Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB) to authorize fill of onsite waters of the U.S. These impacts would require a Section 404 Clean Water Act Nationwide Permit from the USACE and a 401 Water Quality Certification from the RWQCB.

- The City shall apply for any necessary permits from the USACE, CDFW, and the RWQCB. Permanent impacts, if noted, shall be mitigated in accordance with agency requirements to ensure no net loss of acreage or functions and values of waters of the U.S./State a challenge].
- Temporary impacts to waters of the U.S./State shall be restored to pre-project conditions, and may not require compensatory mitigation. If permanent impacts to waters of the U.S./State occur, the City shall obtain and comply with the necessary permits from the USACE.
- Waterways temporarily impacted from dewatering shall be allowed to return to native habitat. Temporary dewatering would be expected to have a minimal effect on the aquatic habitat. No compensatory mitigation is required for temporary impacts to waterways.

With implementation of the above mitigation measure, impacts to waters of the U.S./State would be less than significant and no additional mitigation measures would be required.

Question d: Less than significant impact with mitigation

The project site is in an urbanized area and would not directly interfere with the movement of any native resident wildlife species nor would it impact any wildlife movement corridors. The project would make improvements within South Fork Bishop Creek, where Owens sucker and Owens speckled dace are two species of special concern that are known to occur in the project vicinity and could be present in waterway. The project would be required to salvage and relocate any fish species within the creek as discussed Mitigation Measure BIO-2 under Question a, reducing potential impacts to less than significant with mitigation.

Question e: No Impact

The City of Bishop does not have a tree ordinance. Therefore, no impact would occur, and no mitigation is necessary.

Question f: No impact

No Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan has been approved for the City of Bishop. Therefore, no impacts to an existing adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan would occur, and no mitigation is necessary.

8.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Regulatory Setting

State and federal legislation requires the protection of historical and cultural resources. In 1971, President's Executive Order No. 11593 required that all federal agencies initiate procedures to preserve and maintain cultural resources by nomination and inclusion on the National Register of Historic Places. In 1980, the Governor's Executive Order No. B-64-80 required that state agencies inventory all "significant historic and cultural sites, structures, and objects under their jurisdiction which are over 50 years of age and which may qualify for listing on the National Register of Historic Places." Section 15064.5(b)(1) of the CEQA Guidelines specifies that projects that cause "...physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired" shall be found to have a significant impact on the environment. For the purposes of CEQA, an historical resource is a resource listed in, or determined eligible for listing in the California Register of Historical Resources. When a project could impact a resource, it must be determined whether the resource is an historical resource, which is defined as a resource that:

(A) is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California; and,

(B) Meets any of the following criteria: 1) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; 2) is associated with the lives of persons important in our past; 3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or 4) has yielded, or may be likely to yield, information important in prehistory or history.

Cultural Background

Prehistoric Era

Previous archaeological research indicates that prehistoric people inhabited eastern California for most of the Holocene era. The first occupation began somewhere around 11,000 before present (B.P.). Owens Valley is considered to have been the exclusive territory of Paiute groups until about 1800 (Davis-King 2003). Other groups of Native Americans ventured into and inhabited parts of the valley during the 19th and 20th centuries; however, all people in the valley spoke some form of Numic language (a subgroup of the Uto-Aztecan language family (Liljeblad and Fowler 1986)). Owens Valley groups resided at lowland village sites for much of the year (Bettinger 1978). The Bishop area was once one of the principal Paiute settlements.

Historic Era

The City of Bishop was incorporated in 1903 and became the commercial center of an agricultural economy which became more diversified as the area's water resource were developed and applied to the land. With the City of Los Angeles' purchase of Owens Valley ranches for water rights local agriculture declined and so did the population. The agricultural products and productivity of the fertile Owens Valley declined sharply once the water rights were transferred to the Los Angeles Basin and crop mix changed to dry land farming. Today, Bishop is one of the largest eastern Sierra's urban communities with an economy based on tourism, recreation, and government. Bishop motto is "small town big backyard" and it is at the heart of the Eastern Sierra region of California, and several National Parks including, Yosemite, Sequoia, Kings Canyon, and Death Valley.

Record Searches and Pedestrian Survey Results

This section describes the existing cultural resource setting and potential impacts from project implementation on the project site and its surroundings. This section assesses potential impacts related to historic resources, archaeological resources, and human remains.

Eastern Information Center Record Search

On January 6, 2017, a record search was conducted by staff at the Eastern Information Center (EIC) located in Riverside, California. The record search included the project Area of Potential Effect (APE) and a 0.50-mile radius outside the project APE boundaries. The record search included current inventories of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Inventory of Historical Resources, California State Historic Landmarks, and the California Points of Historical Interest.

No pre-contact or historic resources or sites have been recorded within the project APE. Six resources (two historic, 3 pre-contact, and 1 pre-contact/historic) have been recorded within the 0.50-mile search radius. In addition, 11 studies have been conducted within the 0.50-mile search radius. One of the studies, IN-0466, included a portion of the southern APE in a large Caltrans project spanning over 130 miles. A search of the Historic Property Data File was negative for historic properties within the APE.

Native American Heritage Commission (NAHC) Sacred Lands File Search

A Sacred Lands File (SLF) search request was submitted to the NAHC on January 23, 2017, and a response letter was received from the NAHC on January 26, 2017. The response letter indicated that “a record search of the SLF was completed for the APE with negative results”. The response included a list of 10 Native American representatives who might be able to provide additional information concerning the project APE.

On January 27, 2017, HELIX sent information request letters to each of the tribal members regarding the project. On February 22, 2017, HELIX received written communication from Mr. Raymond Andrews of the Bishop Paiute tribe. Mr Andrews stated that there is the potential of cultural resources being unearthed during ground disturbing activities and that he recommended certified tribal cultural monitors be present during any ground disturbing activities. No evidence or information was provided by Mr. Andrews to support the claim of unintended discoveries; however, appropriate mitigation has been prescribed to address this potentially significant impact.

No additional project information has been received from any of the tribal representatives.

Pedestrian Survey

HELIX Senior Archaeologist Carrie D. Wills surveyed the project APE on January 17, 2016. The APE is flat with weedy vegetation along the perimeter of the roadways and along the watercourses. The portion of the APE along Yaney Street was flat and adjacent to a small drainage ditch. Approximately 70 feet east of the intersection of E. Yaney Street and Spruce Street is where the small historic-age bottle was found half buried in the soil. No other resources were found associated with the bottle.

No historic age or pre-contact resources have been previously recorded within the project APE or within a 0.50-mile radius. No pre-contact resources were found during the survey, however, a single, circa 1965 bottle (isolate) was found but there was no way to determine its provenience. An isolate is not considered a historical resource under CEQA or a historic property under Section 106 of the NHPA and therefore does not warrant further consideration or study. Therefore, the APE is considered to have a very low sensitivity for historic age or pre-contact resources. Since no historic properties were identified within the APE, there would be no historic properties affected by project development.

Evaluation of Cultural Resources

Question A: Less than significant impact with mitigation

A records search and pedestrian survey of the project site determined that there would be no effect on historic properties from project development. Additionally, no pre-contact resources were identified during the survey. Since no pre-contact or historic resources have been previously recorded within the APE or a 0.50-mile radius and none were discovered during the field survey, project development would not be considered to have an effect on historic resources. However, although no historic-age resources were found during the field survey, there is always the possibility that previously unknown historic resources exist below the ground surface. Therefore, implementation of standard cultural resource construction mitigation (Mitigation Measure CUL-1) would ensure that this impact is less than significant.

Mitigation Measure CUL-1: Avoid and minimize impacts to previously unknown historic resources.

It is always possible that ground-disturbing activities during construction may uncover previously unknown, buried historic resources. If buried historic resources are discovered during construction, construction operations shall stop within a 100-foot radius of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resources, including but not limited to excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Historic resources could consist of, but are not limited to, stone, wood, or shell artifacts, structural remains, privies, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and evaluated for significance in terms of CEQA criteria.

Question B: Less than significant impact with mitigation

As discussed under Question A, no pre-contact resources have been recorded within a 0.5-mile radius of the project and no archaeological resources were discovered during the pedestrian survey. However, it is possible that subsurface excavation activities may encounter previously undiscovered

archaeological resources. The implementation of standard cultural resource construction mitigation (Mitigation Measure CUL-2) would ensure that this impact is less than significant.

Mitigation Measure CUL-2: Avoid and minimize impacts to previously unknown archaeological resources.

It is always possible that ground-disturbing activities during demolition and construction may uncover previously unknown archaeological resources. If archaeological resources are discovered during demolition or construction, construction operations shall stop within a 100-foot radius of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resources, including but not limited to, excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Archaeological resources could consist of, but are not limited to, stone, bone, wood, or shell artifacts or features, including hearths. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and evaluated for significance in terms of CEQA criteria.

Questions C and D: Less than significant impact with mitigation

No paleontological resources or human remains are known to exist within the project area nor were there any indications of such resources/remains found during the field survey. However, there is always the possibility that subsurface construction activities associated with the proposed project, such as trenching and grading, could potentially damage or destroy previously undiscovered paleontological resources and/or human remains. Accordingly, this is a potentially significant impact. However, if such resources/remains are discovered, implementation of Mitigation Measure CUL-3 would reduce this potential impact to a less than significant level.

Mitigation Measure CUL-3: Avoid and minimize impacts related to accidental discovery of paleontological resources and/or human remains.

In the event of the accidental discovery or recognition of any paleontological resources or human remains, CEQA Guidelines § 15064.5; Health and Safety Code § 7050.5; Public Resources Code § 5097.94 and § 5097.98 must be followed. If during project development there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance within a 100-foot radius of the potentially human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the

excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.

2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance:
 - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.
 - The descendant identified fails to make a recommendation.
 - The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

For discovery of paleontological resources, ground-disturbing construction work shall cease until the resource has been recovered and/or evaluated by a professional paleontologist. Construction activities shall commence following the recommendations of the professional paleontologist with approval by the City.

8.6 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Topography

The project area is in the Basin and Range geomorphic province. The province is characterized by elongated north-trending mountain ranges separated by relatively straight-sided sediment filled valleys. The site lies in the Owens Valley at the base of an alluvial fan historically formed by Bishop Creek.

Geology

Owens Valley is underlain by valley fill, consisting of unconsolidated to moderately consolidated alluvial fan, transition-zone, glacial and talus, fluvial, and lacustrine deposits. Valley fill consists mostly of detritus eroded from the surrounding mountain bedrock, and includes inter-layered recent volcanic flows and pyroclastic rocks (Hollett et al 1991).

Faulting and Seismicity

The proposed project site is situated in the northern half of Owens Valley in the Owens Lake Basin. The basin is a seismically active region of eastern California. The Bishop Area is located in seismic Zone 4. Several important faults exist in relative proximity to the project. The faults zones present are: Owens Valley, Fish Slough, Independence, White Mountain, and Lone Pine Fault Zones. These are part of a major fault system collectively known as the Eastern California Shear Zone. Portions of these fault zones are classified as fault rupture hazard zones under guidelines of the Alquist-Priolo (A-P) Earthquake Fault Zoning Program (Hart and Bryant 1999). Proposed project components do not cross these designated fault hazard zones and does not overlie any designated Alquist-Priolo (A-P) fault hazard zones (CGS 2017).

Soils

The study area includes three soil mapping units in two series (NRCS 2017): Lucerne loamy fine sand, 0 to 2 percent slopes (246), Dehy-Dehy calcareous complex, 0 to 2 percent slopes (189), and Dehy loam, 0 to 2 percent slopes (184). Lucerne loamy fine sand 0 to 2 percent slopes, has soils that are well drained with permeability moderately rapid over very rapid. The water table lies between 39 to greater than 60 inches. The potential for water erosion is slight, and severe for wind erosion if the soils are disturbed and not secured. Dehy-Dehy calcareous complex 0 to 2 percent slopes, has soils that are somewhat poorly drained, exhibit moderate to moderately rapid permeability, with a seasonally high water table of 24 to 60 inches. The potential for water erosion is slight to severe when dry, and moderate to severe for wind erosion when the soils are disturbed and not secure. NRCS soil survey for soils within the project area indicates that no expansive soils are present in the project area.

Evaluation of Geology and Soils

Questions a: Less than significant

The Bishop Area is located in seismic Zone 4. The project area is not an Alquist-Priolo Special Studies Zone (Hollett et al. 1991). The projects primary consideration with regard to geology, seismicity and soils is the probability of ground shaking as the result of an earthquake. Since no buildings are involved, this potential is considered insignificant.

Groundwater is relatively high and granular soils may be present in the upper 50 feet, therefore, liquefaction may occur. However, the potential resulting differential settlement is not expected to significantly impact the project. There is no potential for landslides within the project area. The topography of the project area is almost flat and is approximately 4,100 feet above mean sea level (amsl). No special measures are required to address potential seismic activity in the area during construction or during use of the constructed project.

Questions b: Less than significant impact

Construction activities including culvert replacements and headwall improvements could result in a minor risk of erosion. Erosion control measures and other Best Management Practices including the use of straw wattles, erosion control netting, and revegetation will be implemented, resulting in less than significant impacts.

Questions c: No impact

The project is not located on an unstable geologic unit. The underlying geology is alluvial sediments. The project would occur in a built area that likely is comprised of fill material. The project would not cause geologic instability and topography is level. On- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse would not occur because of the project.

Questions d: No impact

Natural Resources Conservation Service (NRCS) soil survey for soils within the project area indicate the soils consist Lucerne loamy fine sand, 0 to 2 percent slopes (246), Dehy-Dehy calcareous complex, 0 to 2 percent slopes (189), and Dehy loam, 0 to 2 percent slopes (184). These soils are not considered to be expansive and are suitable for the subgrade of roadways, sidewalks, and pipelines/ infrastructure (NRCS 2002).

Question e: No impact

The proposed project does not include the construction of permanent structures, thus septic tanks and alternative waste disposal systems are not applicable. Construction personnel will use portable sanitation units or nearby public restrooms.

8.7 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Climate change refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, which is an average increase in the temperature of the atmosphere near the Earth's surface; this is attributed to an accumulation of greenhouse gas (GHG) emissions in the atmosphere. GHGs trap heat in the atmosphere which, in turn, increases the Earth's surface temperature. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through fossil fuel combustion in conjunction with other human activities appears to be closely associated with global warming.

GHGs, as defined under California's Assembly Bill 32 (AB 32), include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). General discussions on climate change often include water vapor, ozone, and aerosols in the GHG category. Water vapor and atmospheric ozone are not gases that are formed directly in the construction or operation of development Projects, nor can they be controlled in these Projects. Aerosols are not gases. While these elements have a role in climate change, they are not considered by either regulatory bodies, such as CARB, or climate change groups, such as the Climate Registry, as gases to be reported or analyzed for control. Therefore, no further discussion of water vapor, ozone, or aerosols is provided.

GHGs vary widely in the power of their climatic effects; therefore, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO₂. For example, since CH₄ and N₂O are approximately

25 and 298 times more powerful than CO₂, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO₂ has a GWP of 1). Carbon dioxide equivalent (CO₂e) is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO₂e. The atmospheric lifetime and GWP of selected GHGs are summarized in **Table 2**.

Table 2 GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES		
Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO ₂)	50.0–200.0	1
Methane (CH ₄)	12.0	25
Nitrous Oxide (N ₂ O)	114.0	298
HFC-134a	14	1,430
PFC: Tetrafluoromethane (CF ₄)	50,000.0	7,390
PFC: Hexafluoroethane (C ₂ F ₆)	10,000.0	12,200
Sulfur Hexafluoride (SF ₆)	3,200.0	22,800
Carbon Dioxide (CO ₂)	50.0–200.0	1
Methane (CH ₄)	12.0	25
Nitrous Oxide (N ₂ O)	114.0	298
HFC-134a	14	1,430

HFC: hydrofluorocarbons; PFC: perfluorocarbons
Source: IPCC 2007.

Regulatory Framework Relating to Greenhouse Gas Emissions

Assembly Bill 32, the California Global Warming Solutions Act of 2006, recognizes that California is a source of substantial amounts of GHG emissions. The statute states that:

Global warming poses a serious threat to the economic wellbeing, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

In order to help avert these potential consequences, AB 32 established a State goal of reducing GHG emissions to 1990 levels by the year 2020, which is a reduction of approximately 16 percent from forecasted emission levels, with further reductions to follow (CARB 2011).

Evaluation of Greenhouse Gas Emissions

Question a: Less than significant impact

Construction activities will produce greenhouse gasses due to emissions from diesel operated machinery as well as the daily commute of construction workers. There are no operational emissions associated with the project.

Once construction is complete, the project should reduce emissions as more people choose non-motorized modes of transportation for trips in the area. The generation of emissions related to construction will be limited to the short construction period and, therefore, will have negligible impacts to State greenhouse gas reduction goals.

Question b: No impact

There are no locally adopted greenhouse gas reduction targets, nor are they required for County's that are not party to a Metro Planning Organization or MPO. Once construction is complete, the project should reduce emissions as more people choose non-motorized modes of transportation for trips in the area. The only additional generation of greenhouse emission because of this project will be limited to the short construction duration and, therefore, will have negligible impacts to the State greenhouse gas reduction goals.

8.8 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
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h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

	□	□	■	□
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Environmental Setting

The project site primarily consists of existing roads within the city’s right-of way, and would further improve access to the area by developing sidewalks and bike lanes. A records search of the project site was completed, and no known hazardous materials are present (DTSC 2017). Use of potentially hazardous material would be limited to the construction of the project.

Evaluation of Hazards and Hazardous Materials

Questions a, b: Less than significant impact

Based on records searches of the project area, the project site is not currently listed as having hazardous materials. During project construction, road paving materials, epoxies, oil, gasoline, diesel fuel, paints, solvents, and other hazardous materials may be used. If spilled, these substances could pose a risk to the environment and to human health. No long-term use of hazardous materials is foreseeable because of the project. The routine transport, use, and disposal of hazardous materials are subject to local, state, and federal regulations to minimize risk and exposure. Consequently, use of these materials for their intended purpose would not pose a significant risk to the public or environment, and impacts would be less than significant.

Question c: No impact

The proposed project will not entail emission or handling of hazardous materials, substances or waste within 0.25-miles of a school. Bishop Union High School is the nearest school to the proposed project area, which is more than 0.5-miles away. Therefore, no impact would occur, and no mitigation is necessary.

Question d: No impact

The project site is not included on the lists of hazardous materials sites available through the Department of Toxic Substance Control’s EnviroStor website (DTSC 2017), and no significant hazard to the public or environment would result with project implementation. Therefore, no impact would occur, and no mitigation is necessary.

Questions e, f: No impact

The proposed project site is located less than two miles west of the Bishop Airport, a full-service regional airport owned by the LADWP and operated in accordance with FAA and Inyo County regulations. The proposed project would include no new buildings and would not present a safety hazard for people residing or working in the project area because of proximity to the airport. Further, there are no private airstrips located within the vicinity of the proposed project. No impact would occur, and no mitigation is necessary.

Question g: Less than significant impact

Project related activities would not interfere with any emergency response plan or emergency evacuation plan. Should the construction require a segment of Yaney Street or Hanby Avenue to be blocked, a reasonably convenient alternative route would be identified. There are no hospitals, fire, police, or sheriff stations located along the project area. Unless an emergency would occur on or along Yaney Street or Hanby Avenue, these streets would not be used as a main route to respond to emergencies. Emergency response personnel may use alternative routes around Yaney Street or Hanby Avenue, such as Main Street, Bruce Street or Pine Street, during construction to avoid encountering any traffic delays. The proposed project would not result in an increased concentration of large numbers of persons in any at-risk location, and the proposed project would not have a significant impact on any emergency plans. Thus, no significant impact would occur, and no mitigation would be necessary.

Question h: Less than significant impact

The project site is located in a developed area of the City, and fire protection from urban fires is provided by the City. The area is predominantly concrete or asphalt and open space with natural and landscape vegetation. The risk of starting a wildfire is minimal. Therefore, the proposed project would not increase the risk of wildland fires. No significant impact would occur, and no mitigation is necessary.

8.9 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Sources of surface water in the study area are direct runoff from inside the study area and flow from outside the study area. Flow from both inside and outside of the study area flow in the South Fork of Bishop Creek as well as the earthen drainage channel along East Yaney Street and along Hanby Avenue. Much of the flow from outside of the area is regulated as irrigation water and it originates from the mountains west of Bishop including South Lake, Lake Sabrina, and North Lake. Irrigation water is jointly managed by LADWP and the Bishop Creek Water Association. The study area is in the North Fork Bishop Creek – Owens River Hydrologic Unit (HUC 12: 180901020705). Bishop Creek is a tributary of the Owens River, which historically terminated in Owens Lake. The Owens River is now captured by the Los Angeles Aqueduct and no longer supplies surface water to Owens Lake.

Federal Emergency Management Agency (FEMA) flood insurance rate maps were reviewed for the project’s proximity to a flood hazard zone. The proposed project is on FEMA panel 06027C0332D effective 8/16/2011 (FEMA 2016). Portions of the project site are located within the 100-year and 500-year flood hazard zone. Domestic groundwater in Bishop is provided by the City of Bishop Public Works Department. The City’s water system produces and delivers water for consumption, irrigation, and fire suppression from three wells through almost 22 miles of water mains. Implementation of the proposed project would not involve groundwater use for domestic purposes or discharges to groundwater.

Evaluation of Hydrology and Water Quality

Questions a, e, f: Less than significant impact

Improvements from the proposed project include replacing old culverts and headwalls as well as the option of installing a pedestrian bridge. These improvements would require construction activities in

or near Bishop Creek, introducing a minor risk to water quality. The City will implement erosion control measures and Best Management Practices during construction to avoid environmental impacts. The project would not create or contribute to runoff that would exceed existing storm water systems. Installation of the curb and gutters would improve local water quality by reducing the potential for erosion during storm events. Thus, impacts from the project would be less than significant and no mitigation is required.

Question b: No impact

Except for temporary irrigation for street trees, the project would not use groundwater resources and the water for irrigating trees would be minor. Water for construction activities would be provided by the City of Bishop's water system; however, no new entitlements would be required to serve the proposed project. The project would develop new sidewalks and gutters, but would not result in any significant increases in impervious surfaces. New surface area resulting from sidewalk improvements would be too small to impact groundwater supplies or recharge. No impacts to the aquifer or groundwater table will occur because of the proposed project.

Question c and d: Less than significant

No natural drainages would be altered because of the proposed project. New curb and gutters would be installed as part of project improvements and would drain to natural low areas to infiltrate or slowly migrate to more major drainage courses. During construction, the City will implement erosion control measures and other Best Management Practices to further avoid environmental impacts. The project would also install new culverts at the Bishop Creek crossing at Spruce Street and Hanby Avenue; however, the project would not alter the course of the stream and would not result in erosion, siltation, or flooding on or off-site. Impacts from the project would be less than significant.

Questions g and h: No impact

The project would be located with a 100-year and 500-year flood hazard zone; however, the project does not include the construction of housing or structures. Further, sidewalk and street improvements would not impede or redirect flows within the flood hazard area, resulting in no impact.

Question i: No impact

The project area is located in an inundation area of the Sabrina and South Lake Dams (City of Bishop 2002). The proposed project would not newly expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding because of the failure of a levee or dam. The proposed project would also not influence or cause any flooding events.

Question j: No impact

The project does not lie in an area at risk of seiche, tsunami, or mudflow because it is not located in an area where these threats and hazards exist. There would be no impacts.

8.10 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Land use in the project area is regulated by the City of Bishop through the City's General Plan, Municipal Code, and Zoning Code. The proposed project is primarily within the city street right-of-way and is not zoned or defined by General Plan. However, the land use surrounding the project area is primarily Parks/ Open Space and zoned Open Space (O-S). Additional land use and zoning near the project include Medium Density Residential, zoned Low Density (R-1); and Density Residential, zoned Medium Density Residential (R-2).

Evaluation of Land Use and Planning

Question a: No impact

The project is located near the eastern boundary of the City and is primarily surrounded by open space. The proposed changes include improvements to existing roadways as well as constructing sidewalks and bike lanes. The project would enhance the connection between the City's southeast neighborhood, a commercial center, and recreational activities and would not result in physically dividing an established community.

Question b: No impact

The proposed work is in the city street right-of-way that is not zoned and is used for public uses and travel. All proposed improvements are consistent with existing and proposed land use in the area.

Landscaping in the public right-of-way would be implemented per the City of Bishop Standards for Landscaping Within the Public Rights of Way. The proposed project would not conflict with any additional land use plans or policies, resulting in no impact.

Question c: No impact

The City's General Plan Area does not include habitat, natural community, or other conservation plans that apply to the proposed project area. No conflicts are expected to occur.

8.11 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The occurrence of mineral resources was an important factor in much of the early settlement within the Owens Valley region, and mining operations remain a substantial, albeit declining, local industry. Currently, aggregate resources (e.g., sand, gravel, clay and stone) represent the predominant mining activity in the area, although development of other mineral resources such as base and precious metals, borates, volcanic materials (e.g., pumice, perlite and cinders) and geothermal resources are occurring in various locations.

Evaluation of Mineral Resources

Questions a, b: No impact

No important mineral resources are known to exist on the project site. The proposed project will have no negative impact on mineral resources. The City may need to obtain fill material for some construction. Any borrow or disposal sites must comply with the Surface and Mining Reclamation Act of 1975. No impacts are expected.

8.12 NOISE

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (including construction)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

There are a variety of noise sources in the City and immediate vicinity which can be divided into two categories: mobile sources and stationary sources. Mobile sources include automobiles, trucks, trains, airplanes, buses, motorcycles, and other vehicles. Fixed sources include power equipment, industrial plants, construction equipment and other activities such as rock concerts, auto racing, group recreational activities and general park activities. There are three noise sources of concern in the City of Bishop (City of Bishop 1993):

- Streets and Highways;
- The Eastern Sierra Regional Airport; and,
- Noise emitted from non-residential use areas.

The predominant existing noise sources near the proposed project site are typically low and are generally from vehicles using the roads that would be improved or nearby activities associated with the City Park.

Noise standards for the project area include a maximum 45 dB interior and 60 dB exterior in the residential areas and 65 dB in the commercial areas. The standard for noise generation related to construction for a single event is 86 dB (City of Bishop 1993). Noise sources are mainly produced from passing cars and typical recreational and residential noises.

Evaluation of Noise

Question a: Less than significant impact with mitigation

Noise generation from the proposed project would be related to construction activities. Construction noise would be variable, temporary, and short-term in nature. During construction, noise could be significant. Heavy trucks and machinery for demolition, concrete pouring, waste disposal, etc., could generate a significant amount of noise. Equipment used for soil, asphalt, and concrete compaction would likely be the loudest machinery used. The maximum outdoor noise level acceptable in residential neighborhoods is 55 decibels (dB) in the City of Bishop. The limit on noise related to construction for a single event is 86 dB (City of Bishop 1993). The following mitigation measures would be implemented reduce potentially significant noise impacts to less than significant levels.

Mitigation Measure NOI-1: Construction hours.

Construction shall be limited to the hours of 7am to 7 pm. A primary contact for the contractor shall be designated to be responsible for responding to any complaints about construction noise. The contact shall determine the cause of the noise complaint (e.g., starting too early, bad mufflers, etc.) and institute reasonable measures warranted to correct the problem immediately and in no case longer than two hours.

Question b: Less than significant impact

Generally, construction activities within 200 feet of a vibration sensitive use would be potentially disruptive to vibration-sensitive operations (Caltrans 2013). Land uses in which groundborne vibration could potentially interfere with operations or equipment, such as research, manufacturing, hospitals, and university research operations are considered “vibration-sensitive” (Caltrans 2013). There are no vibration sensitive land uses within 200 feet of the proposed project. Therefore, impacts related to excessive groundborne vibration would be less than significant.

Question c: Less than significant impact

See Question a: Improvements would not generate a source of permanent noise after construction.

Question d: Less than significant impact

See Question a: Substantial temporary and variable increases of ambient noise level would be caused by construction activities. The major source of noise would be from the use of construction equipment such as jackhammers, loaders, vibratory rollers, and other equipment. Mitigation measure Noise-1 and Noise-2 would reduce impacts of increases to ambient noise levels to local residences to less than significant levels.

Question e, f: No impact

The project is located less than one mile to the east of Bishop Airport, a county facility. Workers would not be exposed to air traffic noise that is any greater than current conditions or to which residents are already exposed.

8.13 POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The City of Bishop is the largest and only incorporated city the County of Inyo, with a population of 3,879 based on the 2010 Census. The total population of the Bishop area is about 10,000 people. About half the population in the city is between the ages of 20 and 60 years with a median age of 39. The population of Bishop changes little over time due to extremely limited private land available for development and population growth. Most vacant buildable parcels within the city limits are owned by the City of Los Angeles, whose policies limit the ability for new growth and development.

Evaluation of Population and Housing

Question a: Less than significant impact

The project would not induce growth either directly or indirectly. The proposed project would not require or encourage an increase in population or the construction of housing. The proposed project would be an asset to the City and the community by improving access and safety through road and sidewalk improvements however, no expanded infrastructure that could encourage growth is proposed. Therefore, impacts would be less than significant.

Questions b, c: No impact

The project is located mostly within the City's right-of-way and would not demolish existing housing nor displace people. There would be no impact, and no mitigation would be necessary.

8.14 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
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Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The proposed project is in an area currently served by urban levels of all public services. Public services in the project area include fire, police, school, library, and park services. The Bishop Fire Department is a volunteer fire department with 39 volunteers and is a cooperation between the Bishop Rural Fire Protection and the City of Bishop that provides fire protection and other emergency services in the Bishop Area. The Bishop Police Department employs 14 sworn officers, 5 dispatchers, 5 crossing guards, 5 reserve officers and a support staff of 4. Schools in the City are serviced by the Bishop Unified School District and include Bishop Elementary, Bishop Union High School, Homes Street Middle School, and Palisade Glacier High School. Bishop City Park is the City's main park.

Evaluation of Public Services

Questions a-e: No impact

Existing fire, police, and other governmental services are sufficient to accommodate the service needs of this project. The project would not necessitate the expansion of the equipment, facilities, or manpower of responsible fire, police, health, and school services to maintain current service ratios and response times. The project also would not result in substantial adverse physical impacts associated with the provision of new or altered fire, police, health, or school facilities. There would be no need for new or physically altered governmental facilities. The proposed project would have no

negative impact on public services, but would have a positive impact to some public services such as sidewalk and bike lanes.

8.15 RECREATION

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Parks and Recreation is part of the Community Services Department with the City of Bishop. The central feature of the City is the Bishop City Park located in the center of downtown on 44 acres. The park is a combination of passive and active areas including a community garden, a pond, gazebos and a dog park. There are also baseball fields play structures, tennis courts, a pool, outdoor fitness center and a bocce court.

Evaluation of Recreation

Question a: Less than significant impact

The proposed project is located in the City Park and would improve access and safety to the project by road and sidewalk improvements as well as new bike lanes. Project improvements would result in better access which may increase park use slightly; however, the slight increase in use or demand is not expected to result in substantial deterioration of recreational facilities and the project would in fact improve the overall park facility, resulting in a less than significant impact

Question b: No impact

As described in *Question b*, the proposed project would construct new sidewalks and bike lanes in the City Park, enhancing safety and access to the Park's facilities. Potential impacts resulting from the project is the subject of this environmental evaluation and discussed accordingly. The project does not require the construction or expansion of existing facilities; therefore, there is no impact.

8.16 TRANSPORTATION/TRAFFIC

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The City of Bishop is served by three State maintained roadways, including Highways 395, 168, and 6. These major roadways also serve as the City's primary arterials. Thus, these routes can at times

receive heavy traffic, especially during peak tourist times. The remaining surface streets provide additional local traffic movement within the City in varying capacities, including collector and local streets. The Yaney Street and Hanby Avenue are considered to be both important for local circulation and bike travel.

Pavement conditions throughout the City are generally considered to be poor and fair. Pavement improvements and rehabilitation efforts are primarily met through the State Transportation Improvement Program funding provided through the California Transportation Commission (CTC) and the Inyo Local Transportation Commission (ICLTC). Most funds provided by the CTC are administered by Caltrans.

The ICLTC is a State mandated Regional Transportation Planning Agency for Inyo County and is the primary entity tasked with preparing a Regional Transportation Plan as well as proposing projects for programming into transportation improvement plans. Funding for the proposed project is provided through the Active Transportation Program (ATP).

Parking

Parking in the general area is limited at times, especially during seasonal ball games. The proposed project may increase parking south of Spruce Street to help accommodate periodic parking demands. Additional improvements may occur to the existing, unpaved parking lot located east of Spruce Street and west of the ball field.

Airports

The Bishop Airport is located less than a mile of the proposed project site and is maintained by Inyo County and provides several facilities for a variety of aviation users.

Evaluation of Transportation/Traffic

Questions a, b, and f: No impacts

The proposed project closes the largest gap in the City of Bishop sidewalk network and adds another non-motorized-friendly north-south through corridor, the project connects residents to recreation, commercial services and employment. The proposed project is consistent with the goals and objectives of the Inyo County Regional Transportation Plan (adopted April 22, 2009 and amended May 20, 2015), the Inyo County Collaborative Bikeways Plan, and is listed as the top priority in the Inyo County Draft Active Transportation Plan. The project is consistent with the Mobility Element of the General Plan of the City of Bishop. The proposed does not conflict with any other transportation or traffic management plans and would result in improved access and safety. Therefore, the project would have no impact

Question c: No impact

The proposed project is located directly west of the Bishop Airport. However, as a transportation improvement project focused on sidewalks and bike lanes, the project would not result in modification to any air travel route. There would be no impact and no mitigation would be required.

Question d: Less than significant impact

The proposed project's main objectives include increased access and improved public safety. The project would construct new sidewalks and bike lanes to improve public safety and would not result in an increase in hazards due to design features or present an incompatible use. Temporary hazards may exist during construction; however, access to the project site will be controlled during that time. Impacts would be less than significant and no mitigation would be required.

Question e: No impact

The proposed project would not interfere or obstruct emergency access or evacuation routes. Temporary road closures may occur during construction; however, no impacts to evacuation routes are expected to occur.

8.17 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	□	■	□	□
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	□	■	□	□

Environmental Setting

Effective July 1, 2015, AB 52 amended CEQA to mandate consultation with California Native American tribes during the CEQA process to determine whether the proposed project may have a significant impact on a Tribal Cultural Resource, and that this consideration be made separately from cultural and paleontological resources.

Recognizing that California tribes are experts in their tribal cultural resources and heritage, AB 52 requires that CEQA lead agencies carry out consultation with tribes at the commencement of the CEQA process to identify Tribal Cultural Resources. Furthermore, because a significant effect on a Tribal Cultural Resource is considered a significant impact on the environment under CEQA, consultation is required to develop appropriate avoidance, impact minimization, and mitigation measures.

Evaluation of Tribal Cultural Resources

Question a and b: Less than significant impact with mitigation

There are no known tribal cultural resources located on or near the project site. The City is required to conduct government-to-government consultation with tribal governments that have asked for formal consultation under Assembly Bill 52 (AB 52). If during the course of consultation with tribal governments it is determined that Tribal Cultural Resource(s) are present within the project area, a potentially significant impact would be noted. The consultation efforts between the City and the appointed Native American representative(s) would provide feasible and attainable mitigation measure(s), including monitoring of the site during construction by qualified archaeologists and/or Native Americans, that would result in a less than significant impact. Mitigation measure TCR-01 outlines the requirements of the government-to-government consultation, should it be requested by a tribal government.

Mitigation Measure TCR-1: Consultation with Tribes under Assembly Bill 52.

In accordance with AB-52, the City of Bishop submitted requests for government-to-government consultation on February 23, 2017, to the Cabazon Band of Mission Indians, the Bishop Paiute Tribe, and the Big Pine Paiute Tribe. State law requires tribes to respond within 30 days of the request; as of March 13, 2017, the City has not received input or a request for involvement by the abovementioned tribes.

8.18 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The City of Bishop Public Works Department provides water and wastewater services to the residents of the City. The City's water system produces and delivers water for consumption,

irrigation, and fire suppression from three wells through almost 22 miles of water mains to about 1,100 service accounts. Average consumption varies from about 740,000 gallons per day during the winter to about 2.6 million gallons per day during the summer. All the water is pumped out of the ground, most by one of the 2 production wells. The third well is a standby water source kept in that status due to high fluoride levels. The City's sewer system collects, treats, and disposes of wastewater for most of the city. The collection system consists of 16 miles of pipe and one lift station. The Los Angeles Department of Water and Power and Southern California Edison provide electrical service to the City of Bishop and surrounding area. Landline telephone service is provided by Frontier Communications. Television and internet service is provided by Suddenlink Communications. Internet is also provided by California Broadband Cooperative.

Evaluation of Utilities and Service Systems

Questions a, b, e: No impact

The City of Bishop operates and maintains its own sewage collection and treatment facilities and provides sewer service to the incorporated areas of the City. The City of Bishop falls within the jurisdiction of the Lahontan Regional Water Quality Control Board (LRWQCB), the Water Quality Control Board that is responsible for regulating and protection water quality. The proposed project is a street and sidewalk improvement project and does not propose an expansion or modification to the existing wastewater treatment facility nor would it require the construction of a new a wastewater facility. Improvements would not result in an increased use or demand resulting in no effect on the facilities existing capacity. Further, the project would comply with LRWQCB wastewater treatment requirements.

Question c: No impact

Bishop's Public Works Department handles all stormwater management issues for the City, from design and construction of the storm drain system to operation and maintenance, and urban runoff pollution prevention. Proposed curb and gutter drains and other features for stormwater runoff would collect stormwater flows and prevent flooding or ponding. Existing stormwater facilities would not need to be expanded to accommodate the proposed project. Therefore, the project would have no impact on stormwater facilities.

Question d: No impact

The proposed project would not require long-term water supplies except for irrigation of street trees. During construction, water would be provided by the City as needed for dust suppression. Existing city water supplies would be adequate during this time. The project would have sufficient water supplies and not require the expansion of existing entitlements; therefore, impacts would be less than significant and no mitigation would be required.

Questions f and g: Less than significant

Significant solid waste disposal needs are not envisioned for the proposed project. Organic debris may be generated during site preparation and is anticipated to be used elsewhere rather than being disposed of. Extracted asphalt and/or concrete will be disposed of at the the Granite plant north of Bishop. Further, the proposed project will comply with federal, state, and local statutes and regulations related to solid waste disposal. Therefore, impacts from the project are less than significant with no mitigation required.

8.19 MANDATORY FINDINGS OF SIGNIFICANCE

The lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur. Where prior to commencement of the environmental analysis a project proponent agrees to mitigation measures or project modifications that would avoid any significant effect on the environment or would mitigate the significant environmental effect, a lead agency need not prepare an EIR solely because without mitigation the environmental effects would have been significant (per Section 15065 of the State CEQA Guidelines):

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Question a: Less than significant impact with mitigation

As discussed in the Biological Resources, Cultural Resources, and Tribal Resources sections of this Initial Study, the proposed project would result in potentially significant impacts with the potential to degrade the quality of the environment. However, adoption and implementation of the mitigation measures described in this Initial Study, and compliance with City programs and requirements identified in this report, impacts would be reduced to a less than significant level. No significant or potentially significant impacts would remain.

Biological Resources

Owens sucker and Owens speckled dace are two species of special concern that are known to occur in the project vicinity and could be present in waterways in or near the project during construction. If these species are present in or adjacent to the project site during construction, direct or indirect impacts could occur due to contact with construction equipment/personnel or stranding during dewatering, or reduced water quality in the project site or downstream. Direct or indirect impacts to these species would be considered a significant impact. Best Management Practices will be implemented to reduce impacts to water quality during project construction and general avoidance measures for special-status fishes will also be implemented as a precautionary measure. Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce the impact to a less than significant level.

Various species of birds protected under the MBTA and/or Fish and Game Code may use the project site and/or project area for nesting. If active nests are present in trees that would be removed during the raptor breeding season (February 15 – August 31), mortality of eggs and chicks could result. In addition, project demolition and construction could disturb active nests by increased activity and higher than ambient noise levels near the site or in trees not yet removed from the site, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. This would be a significant impact. Implementation of Mitigation Measures BIO-3 would reduce the impact to a less than significant level. Mitigation Measures BIO-4 through BIO-6 outline the parameters the City must follow to obtain regulatory permits from applicable federal/state agencies prior to conducting in-creek construction work.

With implementation of the mitigation measure described above, the project would not reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of an endangered, rare, or threatened species.

Cultural and Tribal Resources

Although no documented cultural or paleontological resources are located at the project site, the potential exists to encounter previously undiscovered cultural material or paleontological resources during construction-related ground disturbing activities. However, adoption and implementation of

Mitigation Measure CUL-1 and CUL-2 would reduce these potential impacts to less than significant levels.

No evidence suggests that any prehistoric or historic-era marked or unmarked interments are present within or in the immediate vicinity of the project site. However, there is a possibility that unmarked previously unknown graves could be present within the project site. Potential disturbance of previously undiscovered human remains during project construction would be a potentially significant impact. Implementation of Mitigation Measure CUL-3 would reduce the project's potential for disturbance of human remains to a less than significant level. Mitigation Measure TCR-1 outlines the government-to-government consultation the City shall undertake with tribal governments, if requested, under AB 52.

Question b: No impact

Cumulative environmental impacts are multiple individual impacts that, when considered together, would be considerable or compound or increase other environmental impacts. Individual impacts may result from a single project or several separate projects and may occur at the same place and point in time or at different locations and over extended periods of time.

The project would have no impacts that would be considered cumulatively considerable because the project would be short term and have minimal impacts to the environment. Further, the project would encourage alternative means of transportation (namely biking and walking), having a net benefit to the local environment by improving circulation by reducing traffic and creating a safer route through the City. Mitigation measures would minimize or eliminate all potentially significant impacts.

Question c: Less than significant impact with mitigation

It is anticipated that the proposed project would have beneficial impacts to the health and safety by providing safer walking and biking routes that link the north and south neighborhoods of Bishop. Still, implementation of the proposed project may result in temporary impacts to local residents as outlined in the Aesthetics and Noise sections of the Initial Study. However, adoption and implementation of the mitigation measures described in this Initial Study, and compliance with City programs and requirements identified in this report, impacts would be reduced to a less than significant level. No significant or potentially significant impacts would remain.

Aesthetics

The project proposes the installation and improvement of sidewalks and bike lanes as well as landscaping and tree planting, which would not result in direct impacts to the background scenic vistas and would likely improve the overall scenic value and quality of the immediate area. Additional native plants and trees may be planted in the open naturalized areas to further enhance the biological integrity and habitat of the immediate locale. The project would remove several trees along the streets and replace them with species from City's list of acceptable street trees. Trees planted close to nearby residents would be specifically chosen to not exceed heights of 12-15-feet to avoid

obstructing views. The project would not have a substantial adverse effect on the area's scenic vista and impacts would be less than significant with incorporation of Mitigation Measure AES-01 which requires tree replacement and replanting at a ratio of approximately 2:1 (mitigation:impact).

Noise

Construction of the proposed project may result in elevated levels of ambient noise due to the operation of construction equipment in the project area. This impact is temporary both in project sequencing and duration. Mitigation measures NOI-1 and NOI-2 require the contractor to maintain construction equipment in good working order with standard noise mufflers as well as adhere to the City's standard construction hours.

9. MITIGATION MONITORING AND REPORTING PLAN

A Mitigation Monitoring and Reporting Program (MMRP) has been prepared by the City per Section 15097 of the CEQA Guidelines and is available in **Appendix C**.

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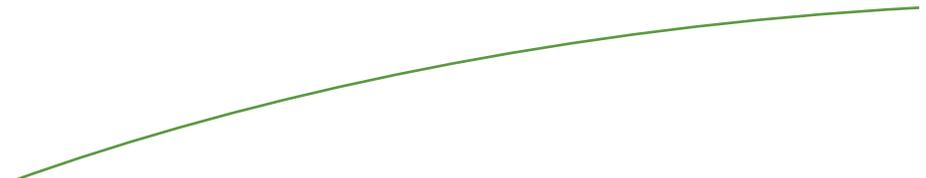
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Appendix A

Biological Resources Evaluation



Spruce, Hanby, Yaney Sidewalks Project, Bishop, CA

Biological Resources Evaluation

March 2017



Prepared for:

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1.0 Introduction

HELIX Environmental Planning, Inc. (HELIX) has prepared this Biological Resources Evaluation (BRE) to evaluate potential impacts to biological resources that could occur from implementation of the proposed Spruce, Hanby, Yaney Sidewalks Project located in Bishop, California (hereafter referred to as “proposed project”). This report documents queries of special-status species databases maintained by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and California Native Plant Society (CNPS), as well as field surveys of the project and surrounding areas performed by HELIX biologists. Biological resources assessed include special-status plant and animal species, sensitive natural communities, and tree resources. Aquatic resources potentially under the jurisdiction of the U.S. Army Corps of Engineers (USACE), CDFW, and the Lahontan Regional Water Quality Control Board (LRWQCB) are summarized in this BRE and described in detail in the separately bound *Spruce, Hanby, Yaney Sidewalks Project Delineation of Aquatic Resources* (HELIX 2017).

The purpose of this BRE is to provide baseline information on the biological resources in the project site, evaluate potential impacts to sensitive biological resources that could occur because of implementation of the proposed project, and propose measures to reduce impacts to less than significant. This BRE will be used to support planning efforts and processing of the project under the California Environmental Quality Act (CEQA).

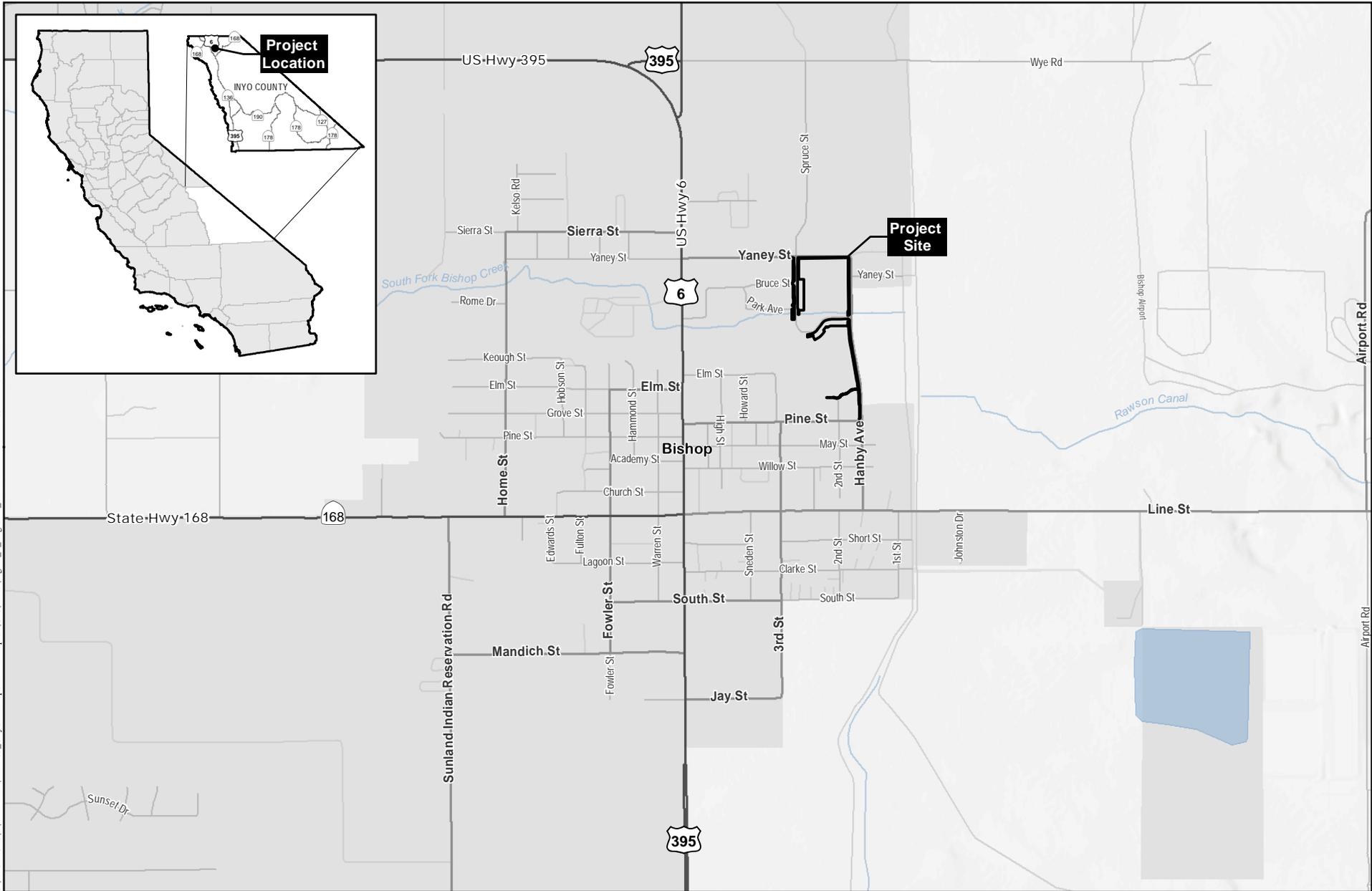
1.1 Location

The approximately 2.76-acre linear project site is located in the City of Bishop, Inyo County, California (Error! Reference source not found.). The project site is in Section 6, Township 7 South, Range 33 East, Mount Diablo Meridian, and is depicted on the U.S. Geological Survey (USGS) “Bishop, CA” 7.5-minute quadrangle map (quad; Error! Reference source not found.). The project site generally comprises a 20-foot wide corridor along the following streets:

- east and west sides of Spruce Street E. Yaney St to the South Fork of Bishop Creek;
- south side of E. Yaney Street between Spruce Street and Hanby Avenue;
- west side of Hanby Avenue from E. Yaney Street to E. Pine Street;
- the south side of Spruce Street from the South Fork of Bishop Creek to Hanby Avenue;
- the corridor connecting Hanby Avenue to the northern terminus of N. 2nd Street and the Sterling Heights Assisted Living facility at 369 E. Pine Street.

The project site limits extend outward an additional 20 feet where Spruce Street and Hanby Avenue across South Fork Bishop Creek and include improvements to existing dirt parking lots. The approximate center of the project site is at Latitude 37.367701 and Longitude -118.388610 (NAD 83).

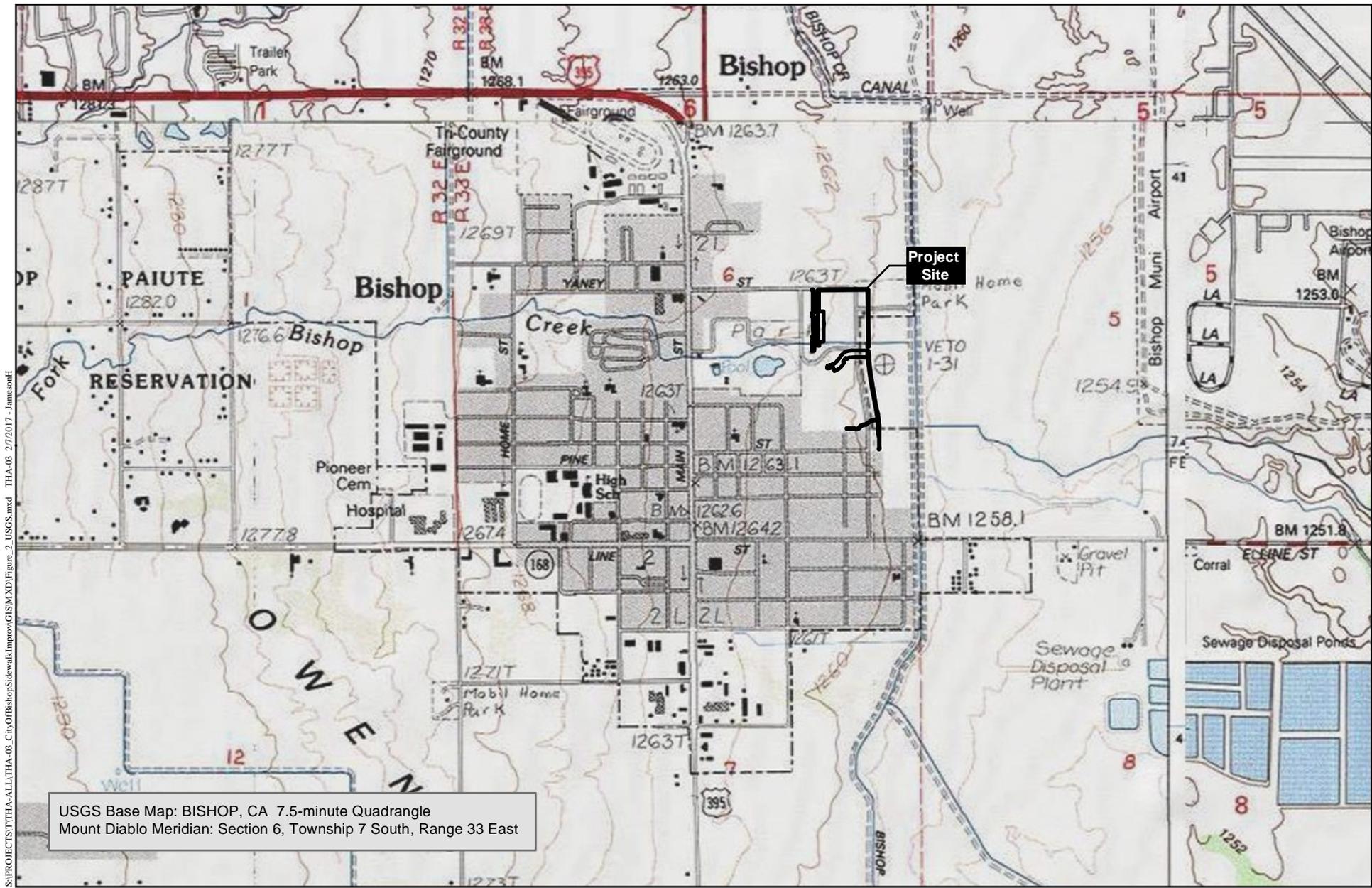
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Regional Location Map

CITY OF BISHOP:
SPRUCE, HANBY, YANEY SIDEWALKS PROJECT

Figure 1



USGS Base Map: BISHOP, CA 7.5-minute Quadrangle
 Mount Diablo Meridian: Section 6, Township 7 South, Range 33 East

USGS Quadrangle Map

CITY OF BISHOP:
 SPRUCE, HANBY, YANEY SIDEWALKS PROJECT

Figure 2

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1.2 Project Description

The City of Bishop proposes a complete and safe pedestrian facility between the neighborhoods in southeast Bishop by constructing approximately 4,400 lineal feet of curb, gutter, and sidewalk; approximately 3,000-feet of on-street 5-foot, Class II bike lane; approximately 400-feet of new paved path; and street widening at two creek crossings and near live irrigation ditches. The project would make improvements to an existing dirt parking lot along Spruce Street, north of the ball field. Additional parking would be developed south of Spruce Street and north of the soccer field. Improvements would primarily take place within the City of Bishop's right-of-way or land leased to the City of Bishop by the Los Angeles Department of Water and Power (LADWP). **Figure 3** is a site plan.

The project would include the following approximate elements:

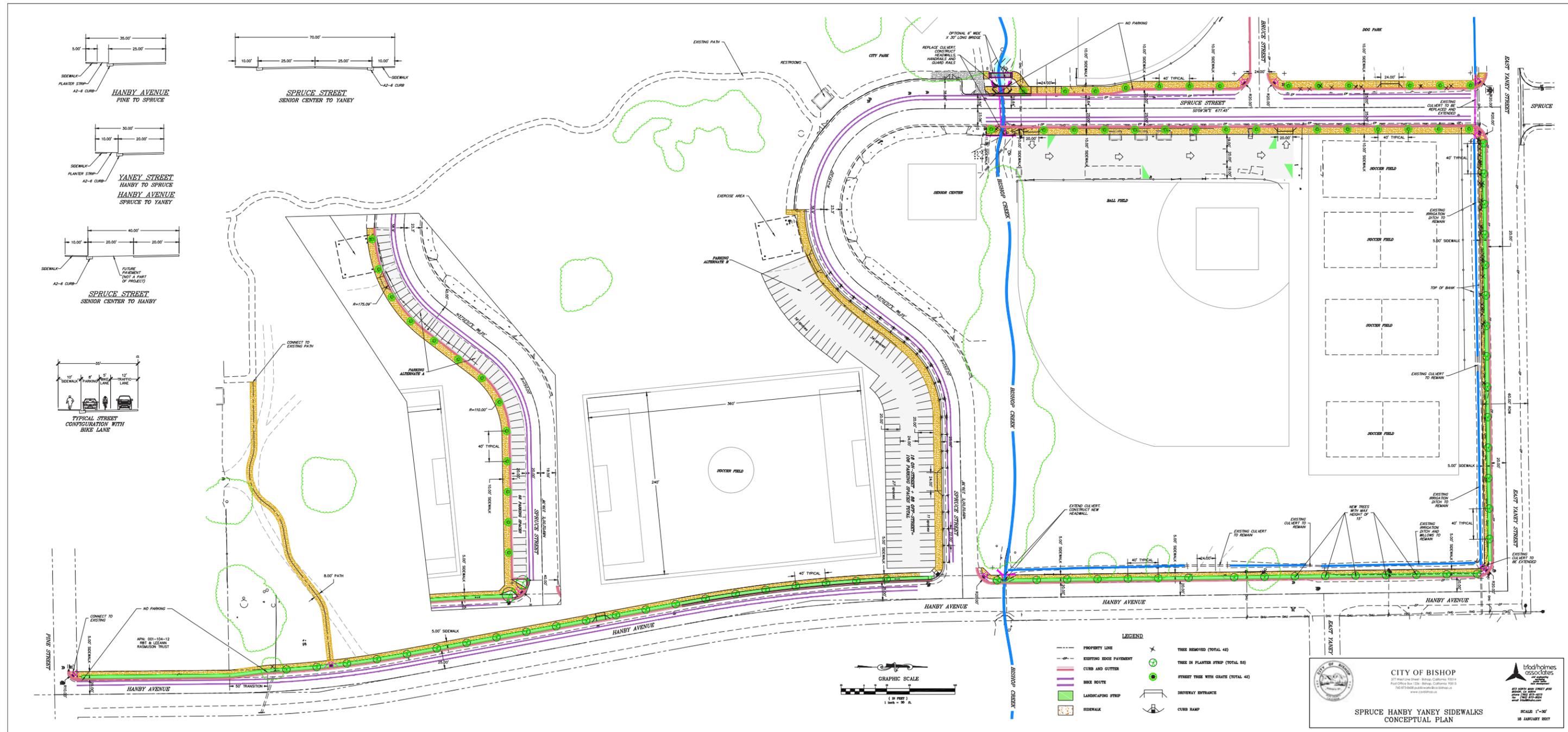
- 630-feet of sidewalk, curb, and gutter on each side of Spruce Street from South Fork of Bishop Creek to E. Yaney Street;
- 500-feet of sidewalk, curb, and gutter along the south side of Spruce Street from South Fork of Bishop Creek to Hanby Avenue;
- 620-feet of sidewalk, curb, and gutter along the south side of E. Yaney Street from Spruce Street to Hanby Avenue; and,
- 1,900-feet of sidewalk, curb, and gutter along the west side of Hanby Avenue from the west leg of E. Yaney Street to East Pine Street.

The sidewalk would be approximately 10-feet wide on Spruce Street from South Fork of Bishop Creek to E. Yaney Street and 5-feet wide with a 5-foot landscaping strip elsewhere (this dimension includes the 6-inch curb and 4.5-foot dirt planting strip). An 8-foot wide path would be extended west off Hanby Avenue toward the southern portion of the project, connecting to the existing foot path.

The project would replace and extend the existing culvert at the intersection of Spruce Street and South Fork Bishop Creek, and would construct new concrete headwalls and install hand and guard rails. The project may include a 10-foot wide by 30-foot long pedestrian bridge over South Fork Bishop Creek, connecting the existing sidewalk on the west side of Spruce Street to the existing parking lot. Construction of the bridge would be consistent with existing bridges in the park. Alternatively, the sidewalk would be extended along Spruce Street and connect to the existing sidewalk south of South Fork Bishop Creek. The project would also improve the existing culvert and expand the headwall downstream where South Fork Bishop Creek crosses under Hanby Avenue. Additional culvert improvements would occur at the intersection of Spruce and Yaney streets to accommodate the new sidewalk. Up to 42 trees would be removed and replaced at approximately a 2:1 ratio in the landscaping strip and along the road to accommodate sidewalk improvements. Trees planted along the north-most

portion of Hanby Avenue would generally not exceed heights of 12-15-feet to avoid obstructing the view of nearby residents.

Source: triad/holmes associates 2016



2.0 Methods

Studies conducted in preparation of this BRE included a desktop evaluation and background research to identify sensitive biological communities and/or special-status species with the potential to occur near the project site, biological field surveys to document baseline conditions and special-status species and/or their habitats on the project site, an arborist survey of the project site and a delineation of aquatic resources. These methods are presented in the following sections.

2.1 Special-Status Species Evaluation

The most current available lists of special-status species known to occur and/or having the potential to occur in the project region were reviewed to determine their potential to occur in the project site or otherwise be affected by project activities. The following lists were reviewed and are included in **Appendix A**:

- The Sacramento Fish and Wildlife Office list of threatened and endangered species that may occur in the project site and/or may be affected by the project (USFWS 2016a).
- The California Native Plant Society list of special-status plants documented in the “Bishop, CA” quad below 1,300 meters (4,300 ft.) elevation (CNPS 2016).
- The California Natural Diversity Database (CNDDDB) list of special-status species documented within 1 mile of the center of the project site (CDFW 2017).

Appendix B presents the general habitat requirements, status, the potential for the species to occur; and rationale for each of the regionally-occurring special-status species identified in the desktop review. Species determined to have no potential to occur in the project site or be otherwise affected by activities on the site were excluded from further evaluation. Species having the potential to occur in the project site and/or be affected by project activities are evaluated in detail in **Section 5.0-Evaluation of Biological Resources** of this BRE.

2.2 Biological Surveys

Biological surveys conducted in the project site include a biological reconnaissance survey, habitat mapping, botanical and wildlife inventories, and a focused survey for rare plants. These surveys are described briefly below. Boundaries of biological habitats were primarily determined based on the composition of vegetation. A list of plant and animal species observed during the site visit is included in **Appendix C**.

Biological field surveys were conducted on June 7 and 8, 2016 by HELIX Senior Biologists, Stephen Stringer, M.S. and George Aldridge, Ph.D. The survey included a pedestrian reconnaissance of the entire

project site, mapping of habitats and land cover types, and compiling a comprehensive list of all plant and animal species observed or detected.

A focused rare plant survey was conducted concurrently with the biological reconnaissance. These dates are within the flowering period of the special-status plant species having potential to occur in the project site. Site photographs are compiled in **Appendix D**.

2.3 Arborist Survey

An arborist survey of the project site was conducted concurrently with the biological reconnaissance, by International Society of Arboriculture Certified Arborist Mr. Stephen Stringer, M.S. (WE-7129A). The survey included an inventory of all trees in the project site of at least 4-inches diameter at 4-feet above grade, as well as a general rapid assessment of tree condition.

2.4 Jurisdictional Delineation of Wetlands and Other Waters

A delineation of potentially jurisdictional wetlands and other waters in the project site was conducted on June 7 and 8, 2016 concurrently with the biological reconnaissance. The presence of wetlands and other waters was determined based on the presence of hydrophytic vegetation, hydric soil, evidence of wetland hydrology, topography, and/or the presence of bed and banks for ditches/drainages. The results of the jurisdictional delineation are summarized in this report and provided in detail in a separately bound delineation of aquatic resources (HELIX 2017). As part of the delineation effort, the National Wetland Inventory Online Mapper (NWI; USFWS 2016b) was consulted for wetlands and other waters that may have been previously mapped in the project site.

3.0 Environmental Setting

3.1 Existing Land Use

Bishop is a city of approximately 4,000 people that is the regional hub of business and services for the Eastern Sierra Nevada. The urban core of Bishop is centered on U.S. Highway 395, and transitions within a few blocks to rural residential and agriculture. The City of Bishop is largely surrounded by tribal land to the west and land owned by the City of Los Angeles to the north, east, and south.

Existing land uses surrounding the project site are primarily pasture and urban, and include transportation, residential, and recreational. The predominant land uses immediately surrounding the project site are paved streets, and Bishop City Park, which consists of turfed athletic fields, lawns and picnic areas, unpaved parking lots, and vacant urban land.

3.2 Climate

The City of Bishop is located at the northern end of the Owens Valley, in the rain shadow of the Sierra Nevada, at an elevation of 4,150-feet above mean sea level. The warmest month of the year is July with

an average maximum temperature of 98 degrees Fahrenheit. The coldest month of the year is December with an average minimum temperature of 22 degrees Fahrenheit. Temperature variations between night and day are over 40 degrees Fahrenheit during summer and over 30 degrees Fahrenheit during winter. The average annual precipitation at Bishop Airport is 5.2 inches. The wettest month of the year is February with an average rainfall of 1 inch.

3.3 Topography

The project site is flat and slopes gently to the southeast. Regional topography surrounding the project site is flat and formed by the lower slopes of the large alluvial fans associated with the Sierra Nevada and White Mountains. The City of Bishop sits in an alluvial fan formed by Bishop Creek and the Owens River, which are meandering, low-gradient streams at that point.

3.4 Hydrology

Hydrology in the northern Owens Valley is managed, primarily by the LADWP and secondarily by Southern California Edison (on Bishop Creek) as well as the Bishop Creek Water Association. All three source branches of Bishop Creek are dammed near the headwaters in the Sierra Nevada and the main stem of the creek is controlled by hydroelectric power houses for most of its length. The Owens River is dammed upstream of the City of Bishop at Pleasant Valley Reservoir and Crowley Lake. Both rivers have substantial diversions into canals that supply irrigation water to Bishop and Big Pine. South Fork Bishop Creek separates from the North Fork of the creek west of Bishop and flows through the project area in a constructed channel before entering the Bishop Creek Canal.

Despite the arid climate, surface water is seasonally abundant in Bishop due to snowmelt from the surrounding mountains, and the City has an extensive network of ditches and drains that convey water throughout the year. South Fork Bishop Creek flows through the project site at two points: under Spruce Street at the Bishop City Park parking lot [this never seems like a good landmark to me], and under Hanby Avenue at the intersection of Spruce Street. A constructed earthen ditch flows through the project site under Spruce Street at E. Yaney Street, and runs parallel to the project site along the south side of E. Yaney Street and the west side of Hanby Avenue, between E. Yaney Street and Spruce Street. Historic aerial imagery (NETR 2016) indicates that, prior to 1951, South Fork Bishop Creek flowed in a natural course southeast from the center of Bishop City Park toward the intersection of Hanby Avenue and E. Pine Street.

3.5 Soils

The project site includes three soil mapping units in two series (NRCS 2016): Lucerne loamy fine sand, 0 to 2 percent slopes (246), Dehy-Dehy calcareous complex, 0 to 2 percent slopes (189), and Dehy loam, 0 to 2 percent slopes (184). Dehy series soils are derived from mixed alluvium and somewhat poorly-drained. Lucerne soils are derived from granitic alluvium and well-drained. All three soils occur on alluvial fans and floodplain terraces.

Surface soils in the project site are disturbed by development and urbanization. Most of the project site is road shoulders that are subject to frequent pedestrian traffic near the streets and show signs of past disturbance associated with general urban development farther from the street. Soils along Spruce Street are highly compacted by vehicles and pedestrians for the entire width of the project site.

3.6 Vegetation Communities and Land Cover

Vegetation communities/habitats are depicted on **Figure 4**, along with the locations of trees inventoried in the project site, and discussed in the following paragraphs.

3.6.1 Upland Habitats

Upland areas within the project site are adjacent to existing roads and subjected to high levels of disturbance. Within the upland areas of the project site, habitats consist primarily of disturbed and developed land cover, with a small patch of riparian habitat outside of the banks of South Fork Bishop Creek where it crosses under Spruce Street.

3.6.1.1 Disturbed Habitat

Disturbed habitat comprises approximately 1.66 acres within the project site. Disturbed habitat describes land that is subject to recent or ongoing disturbance by human activity but retains a soil substrate. Disturbed habitat is often barren or only sparsely vegetated, and soils may be compacted by vehicles, pedestrians, or grazing animals. If vegetated, there is no recognizable native or naturalized community, and the species composition depends on local colonization potential. Vegetation is dominated by ruderal native and non-native species that are adapted to colonize disturbed soils and open areas. Most of the project site is disturbed habitat along the shoulders of streets.

3.6.1.2 Developed

Developed land comprises approximately 0.99 acres within the project site. Developed land has been altered by structures, paving, hardscape, landscaping, or relatively permanent placement of materials such that it no longer naturally supports vegetation. Developed land in the project site includes paved streets, unpaved parking lots, irrigated turf, and urban park along South Fork Bishop Creek and Spruce Street in Bishop City Park.

3.6.1.3 Riparian

A narrow riparian corridor composed of Fremont cottonwood (*Populus fremontii*) and red willow (*Salix laevigata*) trees is growing adjacent to South Fork Bishop Creek. The riparian habitat is a total of approximately 0.087 acres. The riparian habitat is classified as upland habitat because it is growing outside of the banks of the channelized creek and does not experience inundation or saturation at or

Figure 4. Habitats and Tree Survey

near the soil surface for a sufficient duration during the growing season to result in anaerobic conditions that would result in hydric soil formation or a preponderance of hydrophytic vegetation.

3.6.2 Aquatic Habitats

Aquatic habitats in the project site include South Fork Bishop Creek and a constructed earthen ditch.

3.6.2.1 South Fork Bishop Creek

South Fork Bishop Creek flows through the project site in a constructed earthen channel crossing under Spruce Street and Hanby Avenue. South Fork Bishop Creek comprises approximately 0.011 acre within the project site. Establishment of vegetation within the channel is largely excluded. A fringe of herbaceous vegetation is present above the high-water line. South Fork Bishop Creek is considered potential waters of the U.S. and waters of the State.

The segment of South Fork Bishop Creek where the creek crosses under Spruce Street is a total of 0.008 acre. The creek is earthen and largely unvegetated in this segment except for a fringe of common velvet grass (*Holcus lanatus*) and mountain bog bulrush (*Scirpus microcarpus*) along the water line. Due to the lack of wetland vegetation within the channel, the creek is classified as a non-wetland water (unvegetated streambed) in this location.

The segment of South Fork Bishop Creek upstream of a 72-inch concrete culvert and headwall at Hanby Avenue is a total of 0.003 acre. The creek supports a wetland feature in this location. The wetland is fed by the constructed earthen ditch as well as South Fork Bishop Creek. The wetland is characterized by a dense patch of tule (*Schoenoplectus acutus* var. *occidentalis*) growing over most of the channel where the flow is slowed by the culvert inlet.

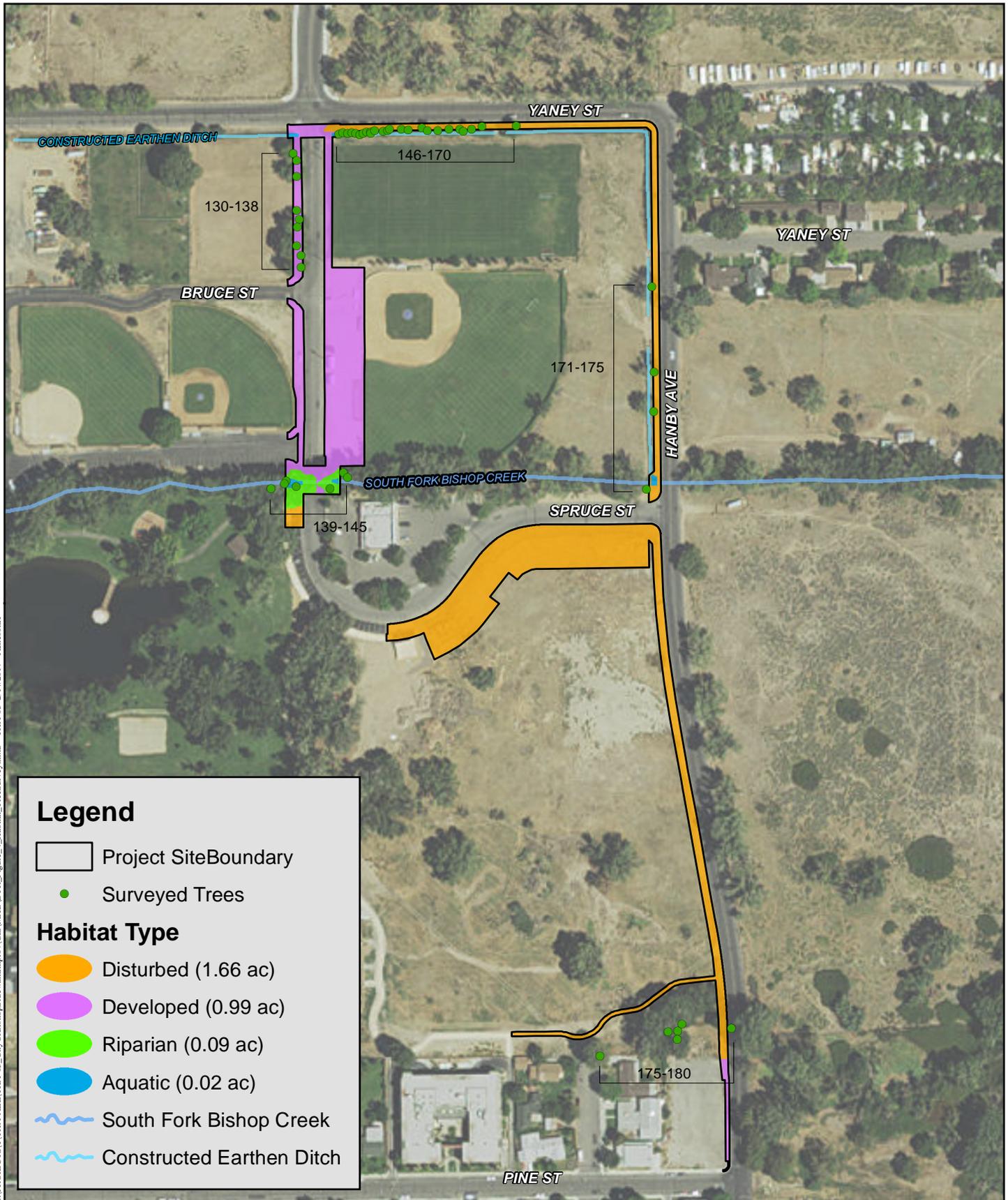
3.6.2.2 Constructed Earthen Ditch

A constructed earthen ditch flows through the project site under Spruce Street at E. Yaney Street, and runs parallel to the project site along the south side of E. Yaney Street and the west side of Hanby Avenue between E. Yaney Street and Spruce Street. The constructed earthen ditch comprises 0.004 acre within the project site. The ditch is heavily vegetated with sedges and grasses for much of its length in and adjacent to the project site, with patches of willows (*Salix* spp.) and other trees outside the banks. Although the constructed earthen ditch functions in part as a drainage to carry urban runoff into South Fork Bishop Creek, it is best classified as a wetland within the project site because it is heavily vegetated with perennial emergent macrophytes such as cattail (*Typha latifolia*) and other species such as Italian ryegrass (*Festuca perennis*).

3.7 Trees

A total of 51 trees greater than 4-inches dbh were identified, marked and assessed during the arborist survey (**Appendix E; Figure 4**). Most trees in the project site are cottonwoods (*Populus fremontii*) along

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Habitats and Tree Survey

CITY OF BISHOP:
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Spruce Street, E. Yaney Street, and Hanby Avenue, and in the corridor between Hanby Avenue and 2nd Street. There are some ornamental elms (*Ulmus* sp.) in a parking lot at the intersection of Spruce Street and E. Yaney Street, and two red willows (*Salix laevigata*) along South Fork Bishop Creek in Bishop City Park. Most of the trees in the project site are in Poor or Poor-Fair condition, with dieback, decayed pruning cuts, and topping. Three trees are failure hazards, and four others are dead.

3.8 Invasive Plant Species

Species rated as “high” or “moderate” for invasiveness by Cal-IPC (2015) are present in the project site, including cheatgrass (*Bromus tectorum*), Bermuda grass (*Cynodon dactylon*), common velvet grass (*Holcus lanatus*), and hare barley (*Hordeum murinum*). Cheatgrass, Bermuda grass, and hare barley are present in disturbed areas along Spruce Street north of the parking lot in Bishop City Park. Common velvet grass is present in the channel of South Fork Bishop Creek at Spruce Street, and in the earthen ditch on the south side of E. Yaney Street.

3.9 Wildlife

Wildlife observed in the project site include common species tolerant of urban habitats, such as American crow (*Corvus brachyrhynchos*), Brewer’s blackbird (*Euphagus cyanocephalus*), and European starling (*Sturnus vulgaris*).

4.0 Regulatory Setting

Policies, regulations, and plans pertaining to the protection of biological resources on the airport property are summarized in the following sections.

4.1 Federal Requirements

4.1.1 Federal Endangered Species Act

The USFWS enforces the provisions stipulated within the Federal Endangered Species Act of 1973 (FESA; 16 USC 1531 *et seq.*). Species identified as federally threatened or endangered (50 CFR 17.11, and 17.12) are protected from take, defined as direct or indirect harm, unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed species may be present in the project site and determine whether the proposed project will jeopardize the continued existence of or result in the destruction or adverse modification of critical habitat of such species (16 USC 1536 (a)[3], [4]). Other federal agencies designate species of concern (species that have the potential to become listed), which are evaluated during environmental review under the National Environmental Policy Act (NEPA) or California Environmental Quality Act (CEQA) although they are not otherwise protected under FESA.

4.1.2 Executive Order 13186: Migratory Bird Treaty Act

Under the Migratory Bird Treaty Act of 1918 (16 USC 703-712), migratory bird species and their nests and eggs are protected from injury or death; these species are listed at 50 CFR 10.13. Project related nest disturbances must be reduced or eliminated during the nesting cycle for these species.

4.2 State Requirements

4.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code Sections 2050 to 2097) is similar to the FESA. The California Fish and Wildlife Commission is responsible for maintaining lists of threatened and endangered species under CESA. CESA prohibits the take of listed and candidate (petitioned to be listed) species. “Take” under California law means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch capture, or kill (California Fish and Game Code, Section 86). The CDFW can authorize take of a state-listed species under Section 2081 of the California Fish and Game Code if the take is incidental to an otherwise lawful activity, the impacts are minimized and fully mitigated, funding is ensured to implement and monitor mitigation measures, and CDFW determines that issuance would not jeopardize the continued existence of the species. A CESA permit must be obtained if a project will result in the “take” of listed species, either during construction or over the life of the project. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

4.2.2 California Code of Regulations Title 14 and California Fish and Game Code

The official listing of endangered and threatened animals and plants is contained in the California Code of Regulations Title 14 §670.5. A state candidate species is one that the California Fish and Game Code has formally noticed as being under review by CDFW to include in the state list pursuant to Sections 2074.2 and 2075.5 of the California Fish and Game Code.

Legal protection is also provided for wildlife species in California that are identified as “fully protected animals.” These species are protected under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species at any time. CDFW is unable to authorize incidental take of fully protected species unless any such take authorization is issued in conjunction with the approval of a Natural Community Conservation Plan that covers the fully protected species (California Fish and Game Code Section 2835).

4.2.3 California Environmental Quality Act

Under the California Environmental Quality Act of 1970 (CEQA; Public Resources Code Section 21000 *et seq.*), lead agencies analyze whether projects would have a substantial adverse effect on a candidate,

sensitive, or special-status species (Public Resources Code Section 21001(c)). These “special-status” species generally include those listed under FESA and CESA, and species that are not currently protected by statute or regulation, but would be considered rare, threatened, or endangered under the criteria included CEQA Guidelines Section 15380. Therefore, species that are considered rare are addressed under CEQA regardless of whether they are afforded protection through any other statute or regulation. The CNPS inventories the native flora of California and ranks species per rarity; plants ranked as 1A, 1B, 2A, and 2B are generally considered special-status species under CEQA.¹

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare if it can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (i.e., candidate species) would occur.

4.2.4 California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code Sections 1900-1913) requires all state agencies to use their authority to carry out programs to conserve endangered and otherwise rare species of native plants. Provisions of the act prohibit the taking of listed plants from the wild and require notification of CDFW at least 10 days in advance of any change in land use (other than changing from one agricultural use to another), which allows CDFW to salvage listed plants that would otherwise be destroyed.

4.2.5 Nesting Birds

California Fish and Game Code Subsections 3503 and 3800 prohibit the possession, incidental take, or needless destruction of birds, their nests, and eggs. California Fish and Game Code Subsection 3503.5 protects all birds in the orders of Falconiformes and Strigiformes (birds of prey)².

4.2.6 California Food and Agriculture Code Section 403

This section directs the CDFA to prevent the introduction and spread of injurious pests including noxious weeds. CDFA Code Section 7271 designates the CDFA as the lead department in noxious weed management responsible for implementing state laws concerning noxious weeds. Representing a statewide program, noxious weed management laws and regulations are enforced locally in cooperation with the County Agricultural Commissioner. Under state law, noxious weeds include any species of plant

¹ The CNPS rare plant ranking system can be found online at < <http://www.cnps.org/cnps/rareplants/ranking.php>>

² Recent taxonomic revision accepted by the American Ornithologists Union and the International Ornithological Congress has placed diurnal birds of prey that were formerly classified in the Falconiformes into the Order Accipitriformes. This revision has not been incorporated into the text of the CFG Code; however, species in the Accipitriformes are protected under that law.

that is, or is liable to be, troublesome, aggressive, intrusive, detrimental, or destructive to agriculture, silviculture, or important native species, and difficult to control or eradicate, which the director, by regulation, designates to be a noxious weed (CDFA Code Section 5004).

4.3 Local Plans And Policies

4.3.1 City of Bishop Municipal Code

The City of Bishop Municipal Code does not include a tree preservation ordinance or other special codes related to trees.

4.3.2 City of Bishop Tree Forum/Committee

The Tree Forum/Committee was formed as an *ad-hoc* committee to allow citizens to communicate with staff on projects, programs, and ordinances involving trees. The committee meets monthly.

4.4 Jurisdictional Waters

4.4.1 Federal

Any person, firm, or agency planning to alter or work in “waters of the U.S.,” including the discharge of dredged or fill material, must first obtain authorization from the USACE under Section 404 of the Clean Water Act (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403).

Waters of the U.S. are defined as: all waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams, mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters (33 CFR Part 328). With non-tidal waters, in the absence of adjacent wetlands, the extent of USACE jurisdiction extends to the ordinary high water mark (OHWM) – the line on the shore established by fluctuations of water and indicated by a clear, natural line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, or the presence of litter and debris. Wetlands are defined in 33 CFR Part 328 as:

“those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

Federal and state regulations pertaining to waters of the U.S., including wetlands, are discussed below.

Clean Water Act (33 USC 1251-1376). The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation’s waters.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of CWA. The RWQCB administers the certification program in California, and may require State Water Quality Certification before other permits are issued.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S.

Section 404 establishes a permit program administered by USACE regulating the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if there is no practicable alternative that would have less adverse impacts.

4.4.2 State Requirements

4.4.2.1 Porter-Cologne Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 *et seq.*) is California's statutory authority for the protection of water quality in conjunction with the federal CWA. The Porter-Cologne Act requires the State Water Resources Control Board (SWRCB) and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, National Pollution Discharge Elimination System (NPDES) permits, Section 401 water quality certifications, or other approvals.

4.4.2.2 California Fish and Game Code Section 1602 – Lake and Streambed Alteration Program

Diversions or obstructions of the natural flow of, or substantial changes or use of material from the bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW, pursuant to Section 1602 of the California Fish and Game Code. The CDFW requires notification prior to commencement of any such activities, and a Streambed Alteration Agreement (SAA) pursuant to Fish and Game Code Sections 1601-1603, if the activity may substantially adversely affect an existing fish and wildlife resource.

5.0 Evaluation of Biological Resources

This chapter evaluates potential impacts to biological resources that could occur as a result of the project, as proposed. Impacts to biological resources in the project site would primarily be limited to

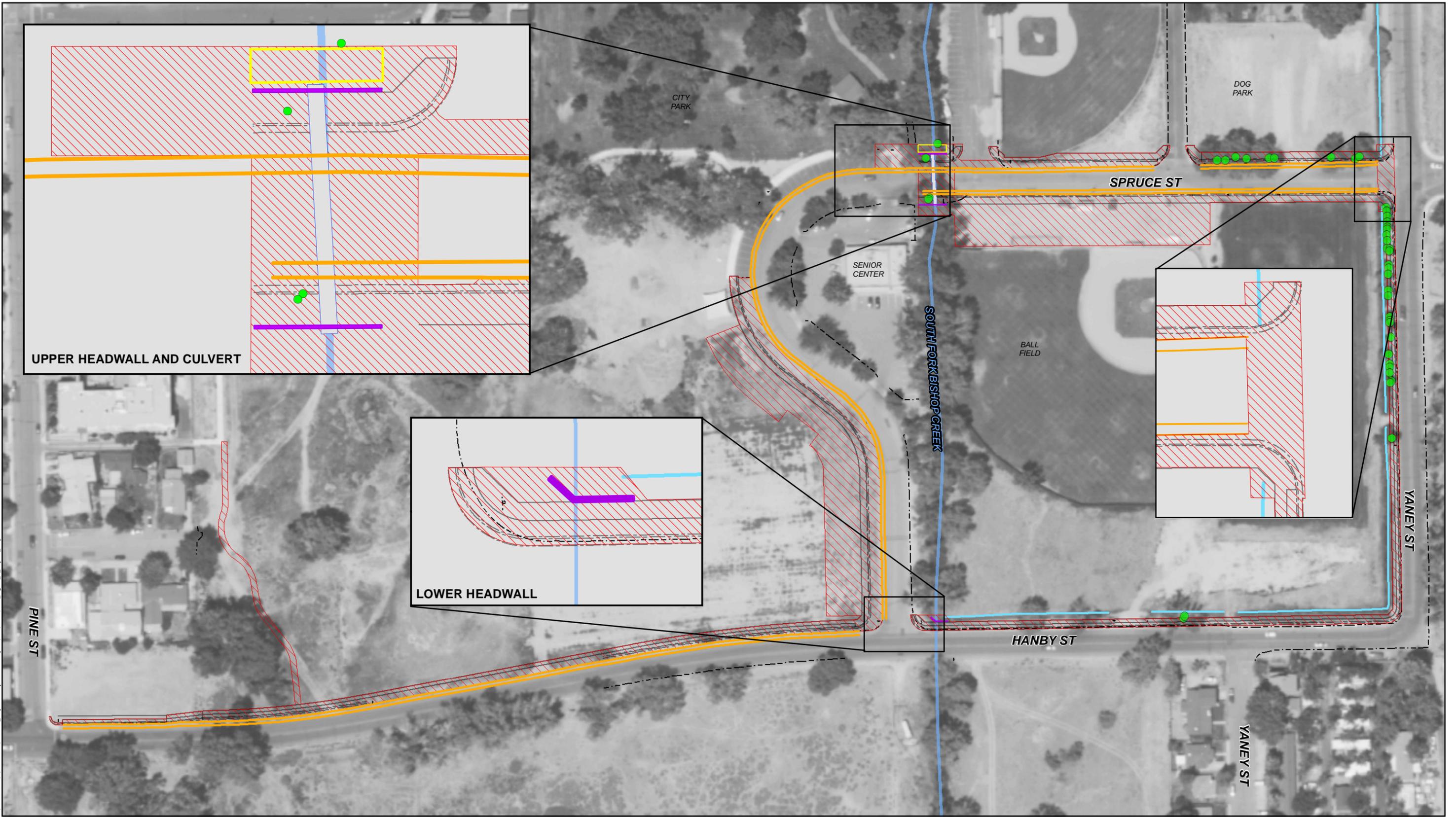
construction activities in and near the project site's waterways; these areas are shown in detail on **Figure 5**.

5.1 Sensitive Habitats

Sensitive habitats in the project site include South Fork Bishop Creek along with its associated riparian corridor and the constructed earthen ditch. The constructed earthen ditch is tributary to South Fork Bishop Creek, which is a perennial stream with downstream connection to the Owens River through an extensive network of canals. South Fork Bishop Creek and its associated riparian corridor is considered a sensitive habitat because the creek is a potential waters of the U.S. and waters of the State and the riparian corridor is regulated by CDFW under the Lake and Streambed Alteration Program. The constructed earthen ditch is also a potential waters of the U.S. and waters of the State because it is a tributary to South Fork Bishop Creek. In addition to be a regulated waterway, South Fork Bishop Creek may support special-status fish species in reaches upstream of the project site. Potential impacts to waterways are discussed in Chapter 5.3 *Potential Jurisdictional Waters*.

Habitats and land cover types in the project site outside of the waterways and riparian habitats are not sensitive and have no potential to support special-status species. The urban setting and proximity to streets and other high-traffic areas make the project site unsuitable for occupancy by species intolerant of human presence or highly disturbed soils and vegetation. There is no designated critical habitat in the project site (USFWS 2016c).

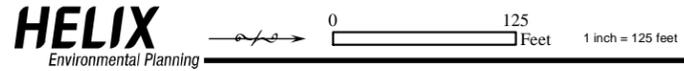
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- | | | | |
|-----------------|---------------------------|-------------------------|---------------|
| PROJECT SITE | PROPOSED CULVERT | BIKE LANE | SIDEWALK |
| PROPOSED BRIDGE | PROPOSED HEADWALL | SOUTH FORK BISHOP CREEK | CURB & GUTTER |
| SURVEYED TREES | CONSTRUCTED EARTHEN DITCH | EDGE OF PAVEMENT | |

Potential Areas of Impact

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5.2 Special-Status Wildlife

No special-status animal species were observed in the project site. Based on species ranges and habitat affinities, two regionally-occurring special-status fish species have the potential to occur in the project site or vicinity (**Table 1**). These species are discussed in the following sections. No other special-status species were identified as having the potential to occur in the project site or be impacted by the proposed project.

Table 1. Special-Status Wildlife with the Potential to Occur in the Project site

Scientific Name (Common Name)	Status*	Suitable Habitat in the Project site
Fishes		
<i>Catostomus fumeiventris</i> Owens sucker	--/SSC/--	The project site does not provide suitable habitat for this species. However, because this species is known to occur in upstream reaches of South Fork Bishop Creek and in other hydrologically connected waterways this species could be present occasionally in the project site.
<i>Rhinichthys osculus</i> ssp. 2 Owens speckled dace	--/SSC/--	The project site does not provide suitable habitat for this species. However, because suitable habitat is present in upstream reaches of South Fork Bishop Creek and in other hydrologically connected waterways this species could be present occasionally in the project site.

5.2.1 Special-status Fishes

5.2.1.1 Owens Sucker (*Catostomus fumeiventris*)

FESA status – none

CESA status – none

Other status – CDFW Species of Special Concern

Owens sucker is widespread and common throughout the Owens River system, including Bishop Creek, Rock Creek, Convict Lake, and Crowley Lake. It is considered secure with low concern, but is retained on the list of species of special concern because of its limited geographic range (Moyle et al. 2015).

Owens sucker inhabits streams and lakes throughout the Owens River watershed and is the dominant species in many pools and ponds (Moyle et al. 2015). This species is primarily found in cool-water streams where it is found in long reaches with few riffles or rapids and a fine substrate, and often in off-channel pools. In lakes, Owens sucker is abundant near the bottom. It appears to tolerate the presence of non-native species such as brown trout and bass. Owens suckers feed at night on a diet of aquatic insects, algae, detritus, and organic matter (Calfish 2017). Adults occur in cool permanent streams with deep (1+ meters) pools (Moyle 2015). Larvae of this species are abundant in weedy edges and

backwaters of streams. This species spawns in gravelly riffles in tributary streams; lacustrine populations spawn in springs and gravel patches along lake shores, as well as in tributary streams (Moyle 2015).

Habitat includes silty to rocky pools and runs of creeks (Page and Burr 2011). In the lower Owens River and tributaries, this sucker is most abundant in sections with long runs and few riffles, over substrates of mostly fine material (some gravel and rubble) (Deinstadt *et al.* 1986).

Survey History

There are CNDDDB reported occurrences of Owens sucker in South Fork Bishop Creek upstream of the project site, in North Fork Bishop Creek, and in ditches in Bishop south and southeast of the project site.

Habitat Suitability

The segments of South Fork Bishop Creek and the constructed ditch in the project site are not suitable habitat for Owens sucker. This species could be present upstream of the project site or in upstream waterways hydrologically connected to the project site. However, this species is not expected to occur in the segment of South Fork Bishop Creek in the project site or from the project site downstream to the Bishop Creek Canal.

Potential for Project Impacts

No impacts to Owens sucker are expected to occur as a result of the proposed project. This species is not expected to occur in the project site or in the segments of South Fork Bishop Creek downstream of the project site. However, Best Management Practices will be implemented to reduce impacts to water quality during project construction and general avoidance measures for special-status fishes will also be implemented as a precautionary measure.

5.2.1.2 Owens Speckled Dace (*Rhinichthys osculus ssp. 2*)

FESA status – none

CESA status – none

Other status – CDFW Species of Special Concern

Owens speckled dace has been extirpated from most of its natural range in the Owens River watershed, and now occurs in three disjunct populations in Fish Slough, Round Valley, and in irrigation ditches in Bishop. It has a high concern rating due to a declining and fragmented population (Moyle *et al.* 2015).

Owens speckled dace inhabits a wide range of streams, including ditches, hot spring systems, and cold water streams. Spawning occurs in gravel and the fry congregate in warm shallow areas, often in channels with rocks and emergent vegetation (CDFW 2017). Owens speckled dace appears to be excluded from most of its wide ecological range by non-native predatory fishes, and habitat modifications that reduce vegetative cover (Moyle *et al.* 2015).

Survey History

Within the northern Owens Valley, this species is known to occur in North McNally Ditch, North Fork Bishop Creek, an irrigation ditch in north Bishop, Lower Horton Creek, and Lower Pine and Rock creeks. Speckled dace now occur primarily in streams and irrigation ditches around Bishop, but the populations are scattered, mostly small and fluctuate widely in size (CDFW 2017). There are CNDDDB reported occurrences of Owens speckled dace in ditches in Bishop south and southeast of the project site.

Habitat Suitability

The segments of South Fork Bishop Creek and the constructed ditch in the project site are not suitable habitat for Owens speckled dace. This species could be present upstream of the project site or in upstream waterways hydrologically connected to the project site. However, this species is not expected to occur in the segment of South Fork Bishop Creek in the project site or from the project site downstream to the Bishop Creek Canal.

Potential for Project Impacts

No impacts to Owens speckled dace are expected to occur because of the proposed project. This species is not expected to occur in the project site or in the segments of South Fork Bishop Creek downstream of the project site. However, Best Management Practices (BMP) will be implemented to reduce impacts to water quality during project construction and general avoidance measures for special-status fishes will also be implemented as a precautionary measure.

5.2.2 Migratory Birds and Raptors

The project site provides habitat for a variety of migratory birds that use trees in developed areas. Birds observed during the field surveys represent species commonly found in proximity to human environments such as American crow (*Corvus brachyrhynchos*), Brewer's blackbird (*Euphagus cyanocephalus*), and European starling (*Sturnus vulgaris*). Large trees within 300-feet of the project site provide potential nesting habitat for raptors such as red-shouldered hawk (*Buteo linearis*).

Construction related activities could result in impacts to migratory birds and/or raptors if these species begin nesting in the project site prior to commencement of construction, such as nest disturbance or forced fledging.

5.2.3 Special-Status Plants

No special-status plant species were observed in the project site during the biological survey. Only one regionally-occurring special-status plant species has reported occurrences in CNDDDB near the project site: Owens Valley checkerbloom (*Sidalcea covillei*). Prior to the biological survey of the project site, a reference location was inspected to confirm that the species was flowering and could be detected if present in the project site. The reference population was flowering, and the species is conspicuous and readily identifiable. No Owens Valley checkerbloom was observed in or near the project site.

The project site provides no suitable habitat for regionally-occurring special-status plant species, which generally occur in alkaline meadows or desert scrubs.

5.3 Potential Jurisdictional Waters

Potentially jurisdictional waters of the U.S./State in the project site consist of South Fork Bishop Creek and the constructed earthen ditch (**Figure 4**). In addition, the riparian corridor along South Fork Bishop Creek is regulated by the CDFW Lake and Streambed Alteration Program. A detailed description and map of potentially jurisdictional waters of the U.S./State and CDFW jurisdictional areas in the project site is provided under separate cover in the aquatic resources delineation report prepared by HELIX (January 2017).

Impacts to potentially jurisdictional waterways (wetland and non-wetland waters) would occur at the intersection of Spruce and Yaney streets in the constructed earthen ditch and in South Fork Bishop Creek where it crosses under Spruce Street and again at Hanby Avenue. Impacts to riparian canopy would occur at South Fork Bishop Creek where it crosses under Spruce Street because of tree removal. Permanent impacts would occur because of activities such as expanding culverts, constructing new wingwalls, and armoring of the bed or bank of the channel. Temporary impacts would occur as a result of activities such as dewatering, installing cofferdams, and temporary access into the waterways by construction equipment or personnel. **Table 2** summarizes acreages of impacts to potentially jurisdictional waterways that would occur because of the proposed project.

Table 2. Summary of Impacts to Potentially Jurisdictional Waters and Riparian Habitats

Project Area	Potentially Jurisdictional Feature/ Cowardin Classification ¹	Permanent Impacts (acres/Sq Ft)	Temporary Impacts (acres/ Sq Ft)
Wetlands and Other Waters of the U.S. and State (USACE and LRWQCB Jurisdiction)			
Spruce and Yaney Street Intersection	Constructed Earthen Ditch/ [Palustrine, Emergent (persistent) semi-permanently flooded, excavated]	0.004/168	N/A
South Fork Bishop Creek at Spruce Street	South Fork Bishop Creek/ [Riverine, Lower Perennial, unconsolidated bottom, permanently flooded, excavated]	0.004/166	0.005/202
South Fork Bishop Creek at Hanby Avenue	South Fork Bishop Creek/ [Palustrine, Emergent (persistent) permanently flooded, excavated]	0.002/72	0.001/50
Wetlands and Other Waters Sub-total		0.009/406	0.006/252
Riparian Habitat (CDFW Jurisdiction only)			
South Fork Bishop Creek at Spruce Street	Riparian Canopy along South Fork Bishop Creek/ [non-wetland]	0.087/3,786	N/A
Total		0.096/4,192	0.006/252

¹Cowardin classification codes from USFWS (2011)

Totals may not add due to rounding

5.4 Trees

An estimated 42 trees would be removed to facilitate construction of the proposed project. Some additional trees may require pruning for equipment access.

5.5 Invasive Species

Invasive species present in the project site are abundant in the region and eradication of these species within the project site is not feasible. No mitigation is necessary for invasive species.

6.0 Avoidance and Mitigation Measures

6.1 Avoidance Measures Implemented for Special-Status Fishes

Avoidance measures for special-status fishes consist of measures to reduce impacts to water quality and fish salvage to avoid direct impacts to any special-status fish entrained in the work area during or after dewatering

6.1.1 Measures to Reduce Impacts to Water Quality

The following avoidance and minimization efforts shall be implemented to reduce impacts to water quality in South Fork Bishop Creek and the constructed earthen ditch:

- Activities conducted in or near South Fork Bishop Creek and the constructed earthen ditch shall be limited to the winter months (generally November – March) when flows are lowest.
- All disturbed soils will undergo erosion control treatment prior to October 15 and/ or immediately after construction is terminated. Erosion control blankets will be installed on any disturbed soils on a 2:1 slope or steeper.
- Standard construction BMPs will be implemented throughout construction to avoid and minimize adverse effects to water quality within South Fork Bishop Creek and the constructed earthen ditch in and adjacent to the project site. Appropriate erosion control measures will be used (e.g., hay bales, filter fences, vegetative buffer strips or other accepted equivalents) to reduce siltation and contaminated runoff from the project site. The integrity and effectiveness of the BMPs will be inspected daily. Corrective actions and repairs shall be carried out immediately.
- No construction will occur within the wetted portion of waterways, including access by construction equipment or personnel. If work in the wetted portion of waterways is unavoidable, the work area will be dewatered and the flow diverted around the work area. The flow will be diverted only once the construction of the diversion is completed.
- Construction activities and ground disturbance within the waterways in the project site will be confined to the minimal area necessary to facilitate construction activities. To ensure that

construction equipment and personnel do not affect sensitive aquatic habitat in South Fork Bishop Creek and the constructed earthen ditch up and downstream of the project site, orange barrier fencing will be erected to clearly define the habitat to be avoided. This will delineate the Environmentally Sensitive Area (ESA) on the project. The integrity and effectiveness of ESA fencing will be inspected daily. Corrective actions and repairs shall be carried out immediately for fence breaches.

- Construction by-products and pollutants such as petroleum products, chemicals, or other deleterious materials shall not be allowed to enter streams or other waters. A plan for the emergency clean-up of any spills of fuel or other materials shall be available when construction equipment is in use.
- Construction vehicles and equipment will be maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease. Leaking vehicles and equipment shall be removed from the site.
- Equipment shall be re-fueled, washed, and serviced at the designated construction staging area or off-site. All construction and fill materials will be stored and contained in a designated area that is located away from South Fork Bishop Creek and the constructed earthen ditch to prevent transport of materials into these waterways. Equipment maintenance and storage, and materials storage will be 100 feet or more away from waterways. In addition, a silt fence will be installed around the staging and materials storage areas to collect any discharge, and adequate materials should be available for spill clean-up and during storm events
- No litter, debris, or sidecast shall be dumped or permitted to enter South Fork Bishop Creek and the constructed earthen ditch. Trash and debris shall be removed from the site regularly. Following construction, all trash and construction debris shall be removed from work areas.
- Building materials storage areas containing hazardous or potentially toxic materials such as herbicides and petroleum products will be located outside of the 100-year flood zone, have an impermeable membrane between the ground and the hazardous material, and will be bermed to prevent the discharge of pollutants to ground water and runoff water.
- Worker education and awareness training regarding sensitive habitats (e.g., aquatic and riparian habitats) and special-status species will be conducted for all construction personnel. The contractor will ensure that all new personnel will receive the mandatory training before starting work.

6.1.2 Fish Salvage Measures

- If dewatering is required, the contractor will prepare a creek dewatering plan that complies with all applicable permit conditions. Water diversion activities will be conducted under the supervision of a qualified biologist. The biologist will survey the area to be dewatered

immediately after installation of the dewatering device and prior to the continuation of dewatering activities. The approved biologist will use a net to capture trapped fish present in the area to be dewatered. Captured native organisms will be released into the creek/ditch up or downstream of the construction zone.

- If dewatering the work area in the creek is necessary, and it will be dewatered by pumping, intakes shall be completely screened with wire mesh not larger than five millimeters to prevent fish from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the soil substrate.

6.2 Mitigation for Impacts to Migratory Birds and Raptors

Pre-Construction Bird Surveys and Avoidance Measures

If project construction occurs between roughly February 1 and August 31, a qualified biologist(s) shall conduct preconstruction surveys for nesting birds. The biologist(s) conducting the surveys shall be experienced bird surveyors and familiar with standard nest-locating techniques. Surveys shall be conducted in accordance with the following guidelines:

- Surveys shall cover all potential nesting habitat in the project site and within 500 feet of the project site and linear facilities boundaries – inaccessible areas outside of the project boundary may be surveyed from within the project site or publicly accessible land with the aid of binoculars.
- Vegetation removal or other ground disturbing activities should be avoided between February 1 and August 31; however, if it cannot be avoided, the avian biologist shall survey breeding/nesting habitat within the survey radius described within one week prior to the start of project activities.
- Site preparation and construction activities may begin if no breeding/nesting birds are observed. Additional follow-up surveys shall be conducted if periods of construction inactivity exceed one week in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation.

If active nests are detected during the survey, a no-disturbance buffer zone (protected area surrounding the nest, the size of which is to be determined by the project biologist) shall be established and no construction within the buffer shall be allowed until a qualified biologist has determined that the nest is no longer active (i.e. the nestlings have fledged and are no longer reliant on the nest, or the nest has failed). Encroachment into the buffer may occur at the discretion of a qualified biologist. Any encroachment into the buffer shall be monitored by a qualified biologist to determine whether nesting birds are being impacted.

6.3 Mitigation for Impacts to Jurisdictional Waters

Aquatic Resource Permits

The project proponent shall apply for any necessary permits from the USACE, CDFW, and the RWQCB. Permanent impacts shall be mitigated in accordance with agency requirements to ensure no net loss of acreage or functions and values of waters of the U.S./State.

Temporary impacts to waters of the U.S./State shall be restored to pre-project conditions, and may not require compensatory mitigation. If permanent impacts to waters of the U.S./State occur, the City shall obtain and comply with the necessary permits from the USACE

Waterways temporarily impacted from dewatering would be allowed to return to native habitat. Temporary dewatering would be expected to have a minimal effect on the aquatic habitat. No compensatory mitigation is required for temporary impacts to waterways.

6.4 Mitigation for Impacts to Trees

The City of Bishop Municipal Code does not include a tree preservation ordinance or other special codes related to trees and no mitigation for loss of trees is required. However, the project plans include planting of an estimated 95 trees along the project alignment to offset the loss of approximately 42 trees that would result from construction of the proposed project. The City of Bishop will be responsible for maintenance and upkeep of the replanted trees.

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Appendix A
USFWS, CNDDDB, and CNPS Lists of Regionally Occurring
Special-Status Species



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Reno Fish and Wildlife Office
1340 FINANCIAL BOULEVARD, SUITE 234
RENO, NV 89502
PHONE: (775)861-6300 FAX: (775)861-6301
URL: www.fws.gov/nevada/

Consultation Code: 08ENV00-2016-SLI-0359

June 09, 2016

Event Code: 08ENV00-2016-E-00414

Project Name: Bishop Sidewalk Improvements

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list indicates threatened, endangered, proposed, and candidate species and designated or proposed critical habitat that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (ESA, 16 U.S.C. 1531 *et seq.*), for projects that are authorized, funded, or carried out by a Federal agency. Candidate species have no protection under the ESA but are included for consideration because they could be listed prior to the completion of your project. Consideration of these species during project planning may assist species conservation efforts and may prevent the need for future listing actions. For additional information regarding species that may be found in the proposed project area, visit <http://www.fws.gov/nevada/es/ipac.html>.

The purpose of the ESA is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment

be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Guidelines for preparing a Biological Assessment can be found at: http://www.fws.gov/midwest/endangered/section7/ba_guide.html.

If a Federal action agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: <http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this species list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally listed, proposed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally, as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation, for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the attached list.

The Nevada Fish and Wildlife Office (NFWO) no longer provides species of concern lists. Most of these species for which we have concern are also on the Animal and Plant At-Risk Tracking List for Nevada (At-Risk list) maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we adopted Heritage's At-Risk list and are partnering with them to provide distribution data and information on the conservation needs for at-risk species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. In addition, in order to avoid future conflicts, we ask that you consider these at-risk species early in your project planning and explore management alternatives that provide for their long-term conservation.

For a list of at-risk species by county, visit Heritage's website (<http://heritage.nv.gov>). For a specific list of at-risk species that may occur in the project area, you can obtain a data request form from the website (http://heritage.nv.gov/get_data) or by contacting the Administrator of Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the ESA. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address.

Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (<http://www.leg.state.nv.us/NAC/NAC-503.html>). You must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (NDOW) to

take, or possess any parts of protected fish and wildlife species. Please visit <http://www.ndow.org> or contact NDOW in northern Nevada (775) 688-1500, in southern Nevada (702) 486-5127, or in eastern Nevada (775) 777-2300.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Service's wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

The Service's Pacific Southwest Region developed the *Interim Guidelines for the Development of a Project Specific Avian and Bat Protection Plan for Wind Energy Facilities* (Interim Guidelines). This document provides energy facility developers with a tool for assessing the risk of potential impacts to wildlife resources and delineates how best to design and operate a bird- and bat-friendly wind facility. These Interim Guidelines are available upon request from the NFWO. The intent of a Bird and Bat Conservation Strategy is to conserve wildlife resources while supporting project developers through: (1) establishing project development in an adaptive management framework; (2) identifying proper siting and project design strategies; (3) designing and implementing pre-construction surveys; (4) implementing appropriate conservation measures for each development phase; (5) designing and implementing appropriate post-construction monitoring strategies; (6) using post-construction studies to better understand the dynamics of mortality reduction (*e.g.*, changes in blade cut-in speed, assessments of blade “feathering” success, and studies on the effects of visual and acoustic deterrents) including efforts tied into Before-After/Control-Impact analysis; and (7) conducting a thorough risk assessment and validation leading to adjustments in management and mitigation actions.

The template and recommendations set forth in the Interim Guidelines were based upon the Avian Powerline Interaction Committee's Avian Protection Plan template (<http://www.aplic.org/>) developed for electric utilities and modified accordingly to address the unique concerns of wind energy facilities. These recommendations are also consistent with the Service's wind energy guidelines. We recommend contacting us as early as possible in the planning process to discuss the need and process for developing a site-specific Bird and Bat Conservation Strategy.

The Service has also developed guidance regarding wind power development in relation to prairie grouse leks (sage-grouse are included in this). This document can be found at: http://www.fws.gov/southwest/es/Oklahoma/documents/te_species/wind%20power/prairie%20gr

Migratory Birds are a Service Trust Resource. Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. 703 *et seq.*), we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to avoid potential destruction of bird nests or young, or birds that breed in the area. Such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located,

or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Guidance for minimizing impacts to migratory birds for projects involving communications towers (*e.g.*, cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

If wetlands, springs, or streams are known to occur in the project area or are present in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (ACOE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the ACOE's Regulatory Section regarding the possible need for a permit. For projects located in northern Nevada (Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, and Washoe Counties) contact the Reno Regulatory Office at 300 Booth Street, Room 3060, Reno, Nevada 89509, (775) 784-5304; in southern Nevada (Clark, Lincoln, Nye, and White Pine Counties) contact the St. George Regulatory Office at 321 North Mall Drive, Suite L-101, St. George, Utah 84790-7314, (435) 986-3979; or in California along the eastern Sierra contact the Sacramento Regulatory Office at 650 Capitol Mall, Suite 5-200, Sacramento, California 95814, (916) 557-5250.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

The table below outlines lead FWS field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project, and send any documentation regarding your project to that corresponding office. Therefore, the lead FWS field office may not be the office listed above in the letterhead.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*
Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Alameda	All ownerships but tidal/estuarine	All	SFWO



United States Department of Interior
Fish and Wildlife Service

Project name: Bishop Sidewalk Improvements

Official Species List

Provided by:

Reno Fish and Wildlife Office
1340 FINANCIAL BOULEVARD, SUITE 234
RENO, NV 89502
(775) 861-6300
<http://www.fws.gov/nevada/>

Consultation Code: 08ENVD00-2016-SLI-0359

Event Code: 08ENVD00-2016-E-00414

Project Type: RECREATION CONSTRUCTION / MAINTENANCE

Project Name: Bishop Sidewalk Improvements

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: Bishop Sidewalk Improvements

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-118.39086055755615 37.36952621765197, -118.39083909988402 37.36734337401783, -118.39025974273682 37.367019352752656, -118.38935852050781 37.36759917929134, -118.38871479034424 37.36756507197194, -118.38828563690186 37.365399225437045, -118.38828563690186 37.36517752108328, -118.38920831680298 37.36519457528758, -118.38910102844237 37.364989924579966, -118.38804960250854 37.36500697882694, -118.38847875595093 37.36753096463701, -118.38850021362303 37.36956032407983, -118.39086055755615 37.36952621765197)))

Project Counties: Inyo, CA



United States Department of Interior
Fish and Wildlife Service

Project name: Bishop Sidewalk Improvements

Endangered Species Act Species List

There are a total of 7 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	Status	Has Critical Habitat	Condition(s)
Mountain Yellow-Legged frog (<i>Rana muscosa</i>) Population: Northern California DPS	Endangered	Proposed	
Sierra Nevada Yellow-legged Frog (<i>Rana sierrae</i>)	Endangered	Proposed	
Yosemite toad (<i>Anaxyrus canorus</i>)	Threatened	Proposed	
Fishes			
Lahontan cutthroat trout (<i>Oncorhynchus clarkii henshawi</i>) Population: Entire	Threatened		
Owens Tui Chub (<i>Gila bicolor ssp. snyderi</i>) Population: Entire	Endangered	Final designated	
Owens pupfish (<i>Cyprinodon radiosus</i>) Population: Entire	Endangered		
Mammals			
Sierra Nevada Bighorn sheep (<i>Ovis canadensis sierrae</i>)	Endangered	Final designated	



United States Department of Interior
Fish and Wildlife Service

Project name: Bishop Sidewalk Improvements

Population: Sierra Nevada			
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United States Department of Interior
Fish and Wildlife Service

Project name: Bishop Sidewalk Improvements

Critical habitats that lie within your project area

There are no critical habitats within your project area.



United States Department of Interior
Fish and Wildlife Service

Project name: Bishop Sidewalk Improvements

Appendix A: FWS National Wildlife Refuges and Fish Hatcheries

There are no refuges or fish hatcheries within your project area.



United States Department of Interior
Fish and Wildlife Service

Project name: Bishop Sidewalk Improvements

Appendix B: FWS Migratory Birds

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no otherwise lawful activities. For more information regarding these Acts see: <http://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php> <http://www.fws.gov/birds/policies-and-regulations/laws-legislations/bald-and-golden-eagle-protection-act.php>

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to:

<http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>

For information about conservation measures that help avoid or minimize impacts to birds, please visit:

<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>

To search and view summaries of year-round bird occurrence data within your project area, go to the Avian Knowledge Network Histogram Tools at:

<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php>

Migratory birds of concern that may be affected by your project:

There are 26 birds on your Migratory birds of concern list.

Species Name	Bird of Conservation Concern (BCC)	Seasonal Occurrence in Project Area
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Yes	Wintering



United States Department of Interior
Fish and Wildlife Service

Project name: Bishop Sidewalk Improvements

Black Rosy-Finch (<i>Leucosticte atrata</i>)	Yes	Year-round
Black-chinned Sparrow (<i>Spizella atrogularis</i>)	Yes	Breeding
Brewer's Sparrow (<i>Spizella breweri</i>)	Yes	Breeding
Burrowing Owl (<i>Athene cunicularia</i>)	Yes	Breeding
Calliope Hummingbird (<i>Stellula calliope</i>)	Yes	Breeding
Costa's Hummingbird (<i>Calypte costae</i>)	Yes	Breeding
Eared Grebe (<i>Podiceps nigricollis</i>)	Yes	Breeding
Flammulated owl (<i>Otus flammeolus</i>)	Yes	Breeding
Fox Sparrow (<i>Passerella liaca</i>)	Yes	Year-round
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	Yes	Year-round
Green-tailed Towhee (<i>Pipilo chlorurus</i>)	Yes	Breeding
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	Yes	Wintering
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	Yes	Year-round
Long-Billed curlew	Yes	Breeding



United States Department of Interior
Fish and Wildlife Service

Project name: Bishop Sidewalk Improvements

<i>(Numenius americanus)</i>		
Nuttall's Woodpecker <i>(Picoides nuttallii)</i>	Yes	Year-round
Olive-Sided flycatcher <i>(Contopus cooperi)</i>	Yes	Breeding
Peregrine Falcon (<i>Falco peregrinus</i>)	Yes	Wintering
Pinyon Jay (<i>Gymnorhinus cyanocephalus</i>)	Yes	Year-round
Sage Thrasher (<i>Oreoscoptes montanus</i>)	Yes	Breeding
Short-eared Owl (<i>Asio flammeus</i>)	Yes	Wintering
Snowy Plover (<i>Charadrius alexandrinus</i>)	Yes	Breeding
Swainson's hawk (<i>Buteo swainsoni</i>)	Yes	Breeding
Western grebe <i>(aechmophorus occidentalis)</i>	Yes	Breeding
White-headed Woodpecker <i>(Picoides albolarvatus)</i>	Yes	Year-round
Willow Flycatcher <i>(Empidonax traillii)</i>	Yes	Breeding



United States Department of Interior
Fish and Wildlife Service

Project name: Bishop Sidewalk Improvements

Appendix C: NWI Wetlands

There are no wetlands within your project area.



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: BIOS selection

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Boechera dispar</i> pinyon rockcress	PDBRA060F0	None	None	G3	S3	2B.3
<i>Bombus morrisoni</i> Morrison bumble bee	IIHYM24460	None	None	G4G5	S1S2	
<i>Calochortus excavatus</i> Inyo County star-tulip	PMLIL0D0F0	None	None	G2	S2	1B.1
<i>Catostomus fumeiventris</i> Owens sucker	AFCJC02090	None	None	G3G4	S3	SSC
<i>Crepis runcinata</i> fiddleleaf hawksbeard	PDAST2R0K0	None	None	G5	S3	2B.2
<i>Euderma maculatum</i> spotted bat	AMACC07010	None	None	G4	S3	SSC
<i>Falco mexicanus</i> prairie falcon	ABNKD06090	None	None	G5	S4	WL
<i>Lasionycteris noctivagans</i> silver-haired bat	AMACC02010	None	None	G5	S3S4	
<i>Lepus townsendii townsendii</i> western white-tailed jackrabbit	AMAEB03041	None	None	G5T5	S3?	SSC
<i>Plagiobothrys parishii</i> Parish's popcornflower	PDBOR0V0U0	None	None	G1	S1	1B.1
<i>Ranunculus hydrocharoides</i> frog's-bit buttercup	PDRAN0L190	None	None	G4	S1	2B.1
<i>Rhinichthys osculus ssp. 2</i> Owens speckled dace	AFCJB3705F	None	None	G5T1T2Q	S1S2	SSC
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<i>Sidalcea covillei</i> Owens Valley checkerbloom	PDMAL11040	None	Endangered	G2	S2	1B.1
<i>Siphateles bicolor snyderi</i> Owens tui chub	AFCJB1303J	Endangered	Endangered	G4T1	S1	
<i>Vulpes vulpes necator</i> Sierra Nevada red fox	AMAJA03012	Candidate	Threatened	G5T1T2	S1	

Record Count: 16

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Search Criteria

Found in Quad **37118C4**, Elevation is below **1300** meters

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Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Astragalus lentiginosus var. piscinensis	Fish Slough milk-vetch	Fabaceae	perennial herb	1B.1	S1	G5T1
Boechera dispar	pinyon rockcress	Brassicaceae	perennial herb	2B.3	S3	G3
Calochortus excavatus	Inyo County star-tulip	Liliaceae	perennial bulbiferous herb	1B.1	S2	G2
Crepis runcinata	fiddleleaf hawksbeard	Asteraceae	perennial herb	2B.2	S3	G5
Dedeckera eurekaensis	July gold	Polygonaceae	perennial deciduous shrub	1B.3	S3	G3
Eriastrum sparsiflorum	few-flowered eriastrum	Polemoniaceae	annual herb	4.3	S4	G5
Fimbristylis thermalis	hot springs fimbristylis	Cyperaceae	perennial rhizomatous herb	2B.2	S1S2	G4
Lupinus magnificus var. hesperius	McGee Meadows lupine	Fabaceae	perennial herb	1B.3	S2	G3T2Q
Oryctes nevadensis	Nevada oryctes	Solanaceae	annual herb	2B.1	S2	G3
Phacelia inyoensis	Inyo phacelia	Hydrophyllaceae	annual herb	1B.2	S3	G3
Ranunculus hydrocharoides	frog's-bit buttercup	Ranunculaceae	perennial herb	2B.1	S1	G4
Sidalcea covillei	Owens Valley checkerbloom	Malvaceae	perennial herb	1B.1	S2	G2

Suggested Citation

CNPS, Rare Plant Program. 2016. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 29 December 2016].

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Appendix B
Potential for Special-Status Species and Critical Habitats in
the Region to Occur in the Airport property

Appendix B. Evaluation of Regionally-Occurring Special-Status Species

Scientific Name/ Common Name	Federal/ State/ CNPS Status; Other*	General Habitat Description	Potential to Occur	Rationale
Invertebrates				
<i>Bombus morrisoni</i> Morrison bumble bee	--/--/--; G5, S1	Ranges throughout the intermountain west, east to Texas and North Dakota. Inhabits dry, open scrub where it nests underground (Hatfield <i>et al.</i> 2014).	Will not occur	There is no suitable habitat in the project site.
Fishes				
<i>Catostomus fumeiventris</i> Owens sucker	--/SSC/--	Large (15 cm) fish common throughout the Owens River and Bishop Creek systems. Found in streams with long reaches, few riffles, and fine substrates with few cobbles, and found in lakes near the bottom, regardless of depth (Moyle <i>et al.</i> 2015).	May occur	The project site does not provide suitable habitat for this species. However, because this species is known to occur in upstream reaches of South Fork Bishop Creek and in other hydrologically connected waterways this species could be present occasionally in the project site.
<i>Rhinichthys osculus ssp. 2</i> Owens speckled dace	--/SSC/--	Small (5-8 cm) fish that inhabit a variety of streams including small coldwater streams, hot spring systems, and irrigation ditches. Currently known from 3 locations: Fish Slough, Round Valley, and ditches in and around Bishop. Persist where non-native predatory fishes are excluded (Moyle <i>et al.</i> 2015).	May occur	The project site does not provide suitable habitat for this species. However, because suitable habitat is present in upstream reaches of South Fork Bishop Creek and in other hydrologically connected waterways this species could be present occasionally in the project site.
<i>Siphateles bicolor snyderi</i> Owens tui chub	FE/SE/--	Federally-listed as endangered on August 5, 1985. Naturally inhabits clear, clean water with aquatic vegetation and cover. Presumed extirpated in the wild or genetically swamped by hybridization with exotic Lahontan tui chub. Currently exists only in managed refuges (USFWS 1998).	Will not occur	There is no suitable habitat in the project site. CNDDDB record is presumed extirpated.

Scientific Name/ Common Name	Federal/ State/ CNPS Status; Other*	General Habitat Description	Potential to Occur	Rationale
Amphibians				
<i>Anaxyrus canorus</i> Yosemite toad	FT/--/--	Federally-listed as threatened on April 29, 2014. Habitat includes moist mountain meadows and borders of forests. Individuals shelter in rodent burrows as well as in dense vegetation. Breeding occurs in shallow edges of snow melt pools and ponds or in shallows or along edges of lakes and slow-moving streams (USFWS 2014).	Will not occur	The project site is below the elevation range of the species and lacks suitable habitat.
<i>Rana muscosa</i> mountain yellow-legged frog	FE/SE/--	Federally-listed as endangered on April 29, 2014. Inhabits riverbanks, meadow streams, isolated pools, and lake borders in the Sierra Nevada above 4,500 feet elevation (USFWS 2014).	Will not occur	The project site is below the elevation range of the species and lacks suitable habitat.
<i>Rana sierrae</i> Sierra Nevada yellow-legged frog	FE/ST/--	Federally-listed as endangered on April 29, 2014. Inhabits sunny river margins, meadow streams, isolated pools, and lakes. More common in high elevation lakes and slow-moving portions of streams (USFWS 2014).	Will not occur	The project site is below the elevation range of the species and lacks suitable habitat.
Birds				
<i>Falco mexicanus</i> prairie falcon	--/WL/--	Inhabits dry, open terrain; nests on cliffs. Forages throughout the Owens Valley (Polite and Pratt 2005).	Will not occur	There is no suitable nesting habitat in or near the project site. May forage in open land near the project site but the project site itself does not provide foraging habitat.
<i>Riparia riparia</i> bank swallow	--/ST/--	State-listed as threatened in 1989. Forms nesting colonies in vertical banks and bluffs along streams, lake shores, and in gravel pits. Forages for insects over open water, grasslands, and agricultural fields (CDFW 1995).	Will not occur	There is no suitable habitat in the project site.
Mammals				
<i>Euderma maculatum</i> spotted bat	--/SSC/--	Insectivorous bat. Inhabits a wide variety of habitats including deserts, grasslands, and mixed conifer forest, foraging over water and along	Will not occur	There is no suitable habitat in the project site.

Scientific Name/ Common Name	Federal/ State/ CNPS Status; Other*	General Habitat Description	Potential to Occur	Rationale
		washes; roosts in crevices in cliffs or caves (Bolster, ed. 1998).		
<i>Lasionycteris noctivagans</i> hoary bat	--/--/--; G5, S4	Insectivorous bat. Inhabits coastal areas and montane forests, foraging over streams, ponds, and open brushy areas; roosts in hollow trees (Arroyo-Cabrales <i>et al.</i> 2008).	Will not occur	There is no suitable habitat in the project site. The species has no special conservation status.
<i>Lepus townsendii townsendii</i> western white-tailed hare	--/WL/--	Inhabits sagebrush, subalpine, juniper woodland, alpine dwarf shrub, and perennial grassland habitats; prefers open areas with scattered shrubs and exposed hills (Bolster, ed. 1998).	Will not occur	There is no suitable habitat in the project site.
<i>Ovis canadensis sierrae</i> Sierra Nevada bighorn sheep	FE/--/--	Federally-listed as endangered on April 20, 1999. Known to occur in 5 populations in Mono and Inyo counties. Inhabit steep, rocky slopes at high elevations (10,000-14,000 ft.) during summer and sagebrush steppe as low as 4,800 feet elevation in winter (USFWS 1999).	Will not occur	The project site is below the elevation range of the species and lacks suitable habitat.
<i>Vulpes vulpes necator</i> Sierra Nevada red fox	--/ST/--	State-listed as threatened in 1980. Occur at high elevations in the Sierra Nevada and southern Cascades, inhabiting open conifer forests and meadows near tree line. Thought to be extinct in the Sierra Nevada until sighted near Sonora Pass in 2010 and Yosemite recently (USFS 2010).	Will not occur	The study area is below the elevation range of this species. The sole CNDDDB record is from the 1940's and doubtful as to exact location.
Plants				
<i>Astragalus lentiginosus</i> var. <i>piscinensis</i> Fish Slough milk vetch	--/--/1B.1	Perennial herb found on mounds in alkali meadows and playas from 1,130 to 1,300 meters in elevation. Currently known to occur in Inyo and Mono counties. Blooms June to July (CNPS 2016)	Will not occur	There is no suitable habitat in the project site.
<i>Boechera dispar</i> pinyon rockcross	--/--/2B.3	Annual herb found on granitic, gravelly slopes and mesas in Joshua Tree woodland, pinyon-juniper woodland, and Mojave Desert scrub from 1,200 to 2,540 meters in elevation. Currently known to occur in Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and Tulare counties. Blooms March to June (CNPS 2016).	Will not occur	There is no suitable habitat in the project site.

Scientific Name/ Common Name	Federal/ State/ CNPS Status; Other*	General Habitat Description	Potential to Occur	Rationale
<i>Calochortus excavatus</i> Inyo County star-tulip	--/--/1B.1	Perennial herb found on fine sandy or clay soils in alkaline seeps, grassy meadows, and shadscale scrub from 1,150 to 32,000 meters in elevation (CNPS 2016). Currently known to occur in Inyo and Mono counties. Blooms April to July.	Will not occur	There is no suitable habitat in the project site.
<i>Crepis runcinata</i> fiddleleaf hawksbeard	--/--/2B.2	Perennial herb found in Mojavean desert scrub, and pinyon and juniper woodland from 1,250 to 1,975 meters in elevation. Currently known to occur in Alpine, Inyo, Lassen, Modoc, Mono, and Sierra counties. Blooms May to August (CNPS 2016).	Will not occur	There is no suitable habitat in the project site.
<i>Dedeckera eurekaensis</i> July gold	--/--/1B.3	Perennial deciduous shrub found on carbonate soils in Mojavean desert scrub from 1,215 to 2,200 meters in elevation. Currently known to occur in Inyo and Mono counties. Blooms May to August (CNPS 2016).	Will not occur	There is no suitable habitat in the project site.
<i>Eriastrum sparsiflorum</i> few-flowered eriastrum	--/--/4.3	Annual herb found on granitic and sandy soils in chaparral, cismontane woodland, Great Basin scrub, Joshua Tree woodland, Mojavean desert scrub, and pinyon-juniper woodland from 1,075 to 1,710 meters in elevation. Currently known to occur in Alpine, Fresno, Inyo, Kern, Lassen, Mono, Plumas, and Tulare counties. Blooms May to September (CNPS 2016).	Will not occur	There is no suitable habitat in the project site.
<i>Fimbristylis thermalis</i> hot springs fimbristylis	--/--/2B.2	Perennial rhizomatous herb found in alkaline meadows near hot springs from 110 to 1,340 meters in elevation. Currently known to occur in Inyo, Los Angeles, Mono, and San Bernardino counties. Blooms July to September (CNPS 2016).	Will not occur	There is no suitable habitat in the project site.
<i>Lupinus magnificus</i> var. <i>hesperius</i> McGee Meadows lupine	--/--/1B.3	Perennial herb found on sandy substrates in upper montane coniferous forest and Great Basin scrub from 1,260 to 1,830 meters in elevation. Currently known to occur in Inyo County. Blooms from April to June (CNPS 2016).	Will not occur	There is no suitable habitat in the project site.

Scientific Name/ Common Name	Federal/ State/ CNPS Status; Other*	General Habitat Description	Potential to Occur	Rationale
<i>Oryctes nevadensis</i> Nevada oryctes	--/--/2B.1	Annual herb found on loose sandy soils in washes and desert foothills in chenopod scrub from 1,100 to 2,535 meters in elevation. Currently known to occur in Inyo County. Blooms from April to June (CNPS 2016).	Will not occur	There is no suitable habitat in the project site.
<i>Phacelia inyoensis</i> Inyo phacelia	--/--/1B.2	Annual herb found in alkaline meadows and seeps from 915 to 3,200 meters in elevation. Currently known to occur in Inyo and Mono counties. Blooms April to August (CNPS 2016).	Will not occur	There is no suitable habitat in the project site.
<i>Plagiobothrys parishii</i> Parish's popcornflower	--/--/1B.1	Annual herb found in alkaline, mesic sites in Great Basin scrub and Joshua Tree woodland from 750 to 1,400 meters in elevation. Currently known to occur in Inyo, Mono, and San Bernardino counties. Blooms March to November (CNPS 2016).	Will not occur	There is no suitable habitat in the project site.
<i>Ranunculus hydrocharoides</i> frog's-bit buttercup	--/--/2B.1	Annual herb found in meadows and swamps from 1,100 to 2,700 meters in elevation. Currently known to occur in Inyo and Mono counties. Blooms May to September (CNPS 2016).	Will not occur	There is no suitable habitat in the project site.
<i>Sidalcea covillei</i> Owens Valley checkerbloom	--/--/1B.1	A perennial herb found on fine sandy loam soils in moist alkaline meadows and seeps from 1,095 to 1,415 meters in elevation. Currently known to occur in Inyo County. Blooms April to June (CNPS 2016).	Will not occur	There is no suitable habitat in the project site.

*FE – federally endangered; FT – federally threatened; SE – state endangered; ST – state threatened; SSC – state species of special concern; WL – Watch List; CNPS – California Native Plant Society (see definitions of CNPS rankings below)

CNPS ratings:

1B = Rare, threatened, or endangered in California and elsewhere

2B = Rare, threatened, or endangered in California but more common elsewhere.

4 = Species of limited distribution

.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 = Fairly endangered in California (20-80% occurrences threatened)

.3 = Not very endangered in California (fewer than 20% of occurrences threatened)

Global and State rankings in descending order of sensitivity (1=critically imperiled; 5=demonstrably secure)

Appendix C
Plant and Wildlife Species Observed

Appendix C. Species Observed in the Spruce, Hanby, Yaney Sidewalks Project Site

Plants

Family	Species Name	Common Name	Status ¹
Native			
Apocynaceae	<i>Asclepias fascicularis</i>	narrow-leaf milkweed	--
Asteraceae	<i>Ericameria nauseosa</i>	rubber rabbitbrush	--
Boraginaceae	<i>Amsinckia intermedia</i>	rancher's fiddleneck	--
Brassicaceae	<i>Lepidium nitidum</i>	shining peppergrass	--
Chenopodiaceae	<i>Atriplex serenana</i> var. <i>serenana</i>	bractscale	--
Cyperaceae	<i>Eleocharis macrostachya</i>	pale spike-rush	--
	<i>Schoenoplectus acutus</i> var. <i>occidentalis</i>	tule	--
	<i>Scirpus microcarpus</i>	mountain bog bulrush	--
Equisetaceae	<i>Equisetum arvense</i>	common horsetail	--
Fabaceae	<i>Glycyrrhiza lepidota</i>	American licorice	--
Juncaceae	<i>Juncus balticus</i> ssp. <i>ater</i>	Baltic rush	--
	<i>Juncus mexicanus</i>	Mexican rush	--
Poaceae	<i>Distichlis spicata</i>	saltgrass	--
	<i>Elymus glaucus</i>	blue wildrye	--
	<i>Sporobolus airoides</i>	alkali sacaton	--
Rosaceae	<i>Rosa woodsii</i> ssp. <i>ultramontana</i>	interior rose	--
Salicaceae	<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont cottonwood	--
	<i>Salix exigua</i>	narrow-leaved willow	--
	<i>Salix laevigata</i>	red willow	--
Typhaceae	<i>Typha latifolia</i>	broad-leaved cattail	--
Non-native			
Asteraceae	<i>Taraxacum officinale</i>	common dandelion	--
	<i>Tragopogon dubius</i>	yellow salsify	--
Chenopodiaceae	<i>Atriplex prostrata</i>	triangle orache	--
	<i>Bassia hyssopifolia</i>	five-hook bassia	Limited
	<i>Salsola tragus</i>	Russian thistle	Limited
Fabaceae	<i>Medicago sativa</i>	alfalfa	--
	<i>Melilotus albus</i>	white sweet clover	--
Geraniaceae	<i>Erodium cicutarium</i>	redstem filaree	Limited
Malvaceae	<i>Malvella leprosa</i>	alkali-mallow	--
Poaceae	<i>Bromus tectorum</i>	cheatgrass	High
	<i>Cynodon dactylon</i>	Bermuda grass	Moderate
	<i>Festuca perennis</i>	Italian ryegrass	--
	<i>Holcus lanatus</i>	common velvet grass	Moderate
	<i>Hordeum murinum</i>	hare barley	Moderate

Polygonaceae	<i>Rumex crispus</i>	curly dock	Limited
Portulacaceae	<i>Portulaca oleracea</i>	common purslane	--

¹Status for native species is federal/state listing status or California Rare Plant Rank;
 Status for non-native species is California Invasive Plant Council Invasiveness Ranking.

Animals

Order/Family	Species Name	Common Name	Status ¹
Birds			
Accipitriformes			
Accipitridae	<i>Buteo lineatus</i>	red-shouldered hawk	--
Passeriformes			
Corvidae	<i>Corvus brachyrhynchos</i>	American crow	--
Icteridae	<i>Euphagus cyanocephalus</i>	Brewer's blackbird	--
	<i>Sturnus vulgaris</i>	European starling	--
Piciformes			
Picidae	<i>Colaptes aurata</i>	northern flicker	--
Mammals			
Rodentia			
Geomyidae	<i>Thomomys bottae</i>	Botta's pocket gopher	--

¹Status for animal species is federal/state listing status.

Appendix D
Site Photographs

Appendix D. Representative Site Photos



Photo 1. Looking south on Spruce Street from E. Yaney Street.



Photo 2. South Fork Bishop Creek at Spruce Street.



Photo 3. Looking east on E. Yaney Street from Spruce Street.



Photo 4. Looking north on Hanby Avenue from Spruce Street.



Photo 5. Looking west on Spruce Street from Hanby Avenue.



Photo 6. Looking west toward 2nd Street from Hanby Avenue.



Photo 7. Looking north on Hanby Avenue toward Spruce Street.



Photo 8. Looking south on Hanby Avenue toward E. Pine Street.

Appendix E
Tree Inventory and Assessment

Appendix E. Tree Inventory and Assessment

Tree ID	Species	DBH (in.)	Height (ft.)	Dripline (ft.)	Vigor	Hazard Tree	Notes
130	<i>Ulmus sp.</i>	22	45	30	F	--	Old pruning cuts w/ decay
131	<i>Ulmus sp.</i>	17, 13, 13	45	30	F	--	Trunk wounds, decay
132	<i>Ulmus sp.</i>	25, 16, 14	45	30	F-P	--	Large pruning cuts with decay, canker, trunk wound infection, topped only epicormics sprouts
133	<i>Ulmus sp.</i>	20	20	13	P	--	Nearly dead
134	<i>Populus fremontii</i>	22, 16, 15	45	27	F-P	Y	Decay at base, weak crotch, failure possible, ant infestation
135	<i>Ulmus sp.</i>	18	30	26	F	--	Many pruning cuts, some decay
136	<i>Populus fremontii</i>	28	50	31	F	Y	
137	<i>Ulmus sp.</i>	15, 14	40	16	F-P	--	Many pruning cuts, cavities, decay, dieback
138	<i>Ulmus sp.</i>	40	50	32	F-P	--	Large pruning cuts w/decay, trunk wounds, dieback
139	<i>Populus fremontii</i>	42, 16	60	30	F	--	Pruning cuts (many), epicormic sprouts, also healthy limbs
140	<i>Populus fremontii</i>	38	60	38	F-G	--	Many cuts, some dead branches
141	<i>Salix laevigata</i>	13	15	12	F	--	Shaded, leans
142	<i>Populus fremontii</i>	50+	80	50	F-G	--	Next to creek could not measure dbh
143	<i>Populus fremontii</i>	24, 16	55	25	F	--	Many large pruning cuts, some decay, epicormics sprouts
144	<i>Populus fremontii</i>	44, 20	55	26	F	Y	Trunk wounds with decay, dieback, failure hazard w/large limb
145	<i>Salix laevigata</i>	24	15	31	F-P	--	Major pruning cuts, decay
146	<i>Populus fremontii</i>	23, 16	15	18	P	--	Topped, major decay
147	<i>Populus fremontii</i>	20	15	14	P	--	Topped, major dieback, decay
148	<i>Populus fremontii</i>	14	15	7	P	--	Topped, major dieback, decay
149	<i>Populus fremontii</i>	16	15	12	P	--	Topped, major dieback, decay
150	<i>Populus fremontii</i>	13	15	14	P	--	Topped, major dieback, decay

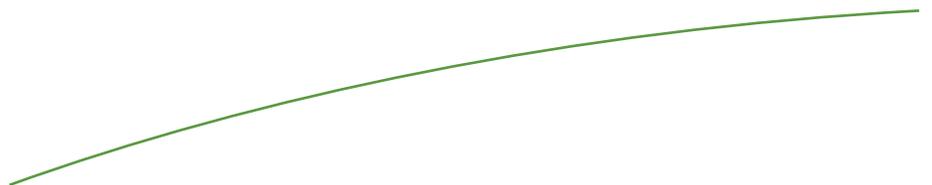
Tree ID	Species	DBH (in.)	Height (ft.)	Dripline (ft.)	Vigor	Hazard Tree	Notes
151	<i>Populus fremontii</i>	12	15	5	P	--	Topped, decay, dieback
152	<i>Populus fremontii</i>	17	15	8	P	--	Topped, decay, dieback
153	<i>Populus fremontii</i>	16, 10	15	14	P	--	Topped, decay, dieback
154	<i>Populus fremontii</i>	7	10	5	P	--	Topped, decay, dieback
155	<i>Populus fremontii</i>	13	15	10	P	--	Topped, decay, dieback
156	<i>Populus fremontii</i>	10, 7	15	5	P	--	Topped, decay, dieback
157	<i>Populus fremontii</i>	18	15	8	P	--	Topped, decay, dieback
158	<i>Populus fremontii</i>	10	12	2	Dead	--	
159	<i>Populus fremontii</i>	12, 10	15	10	P	--	Topped, decay, dieback
160	<i>Populus fremontii</i>	18, 14	15	10	P	--	Topped, decay, dieback
161	<i>Populus fremontii</i>	17	15	10	P	--	Topped, decay, dieback
162	<i>Populus fremontii</i>	16	15	5	P	--	Topped, decay, dieback
163	<i>Populus fremontii</i>	17, 16	15	10	P	--	Topped, decay, dieback
164	<i>Populus fremontii</i>	16	12	2	Dead	--	
165	<i>Populus fremontii</i>	25	15	10	P	--	Topped, decay, dieback
166	<i>Populus fremontii</i>	18	12	2	Dead	--	
167	<i>Populus fremontii</i>	14	15	5	P	--	Topped, decay, dieback
168	<i>Populus fremontii</i>	13	12	2	Dead	--	
169	<i>Populus fremontii</i>	18, 12, 6, 4	12	8	P	--	Topped, decay, dieback
170	<i>Populus fremontii</i>	24	18	15	P	--	Topped, decay, dieback
171	<i>Populus fremontii</i>	28, 26, 24, 10	45	38	F-P	--	Significant branch tip dieback, decay
172	<i>Populus fremontii</i>	26, 14, 12, 10	35	25	F-P	--	Significant branch tip dieback, decay, epicormic sprouts
173	<i>Populus fremontii</i>	35	40	30	F	--	Some decay, dieback

Tree ID	Species	DBH (in.)	Height (ft.)	Dripline (ft.)	Vigor	Hazard Tree	Notes
174	<i>Populus fremontii</i>	18	40	25	F	--	Branch dieback
175	<i>Ulmus</i> sp.	12, 8, 6	30	16	F	--	
176	<i>Populus fremontii</i>	60	80+	49	F	--	Some dieback (branch), aphids
177	<i>Populus fremontii</i>	18, 10	40	28	F	--	Some dieback (branch), aphids
178	<i>Populus fremontii</i>	50, 33	80+	40	F	--	Some dieback (branch), aphids
179	<i>Populus fremontii</i>	115, 47.5	60	39	P	--	Top broken off, but several large live stems, aphids
180	<i>Ulmus</i> sp.	43	70	27	F-P	--	Large trunk wound/canker, decay, dieback



Appendix B

Delineation of Aquatic Resources



Spruce, Hanby, Yaney Sidewalks Project, Bishop, California

Delineation of Aquatic Resources

March 2017



Prepared for:
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1.0 Introduction

On behalf of Triad/Holmes Associates and the City of Bishop, HELIX Environmental Planning, Inc. (HELIX) has prepared this preliminary jurisdictional delineation report to document potential jurisdictional wetlands and other waters of the U.S. and State within the Spruce, Yaney, Hanby Sidewalks Project site. This delineation also documents areas subject to California Department of Fish and Wildlife (CDFW) jurisdiction under the California Fish and Game Code. The results presented in this document are preliminary until concurrence is received from the U.S. Army Corps of Engineers (USACE), the Lahontan Regional Water Quality Control Board (LRWQCB), and CDFW.

1.1 Project Location

The project site is located in the City of Bishop, Inyo County, California (**Figure 1**). The project site is in Section 6, Township 7 South, Range 33 East, Mount Diablo Meridian, and is depicted on the U.S. Geological Survey (USGS) "Bishop, CA" 7.5-minute quadrangle map (quad; **Figure 2**). The project site is comprised of a 20-foot wide corridor plus adjacent buffer areas along the following streets:

- east and west sides of Spruce street between the South Fork of Bishop Creek and E. Yaney Street;
- south side of E. Yaney Street between Spruce Street and Hanby Avenue;
- west side of Hanby Avenue from E. Yaney Street to E. Pine Street;
- south side of Spruce Street from Hanby Avenue to the parking lot near the Bishop Senior Center in the Bishop City Park;
- a corridor connecting Hanby Avenue to the northern terminus of N. 2nd Street and the Sterling Heights Assisted Living facility at 369 E. Pine Street.

The project limits extend outward an additional 20-feet where Spruce Street and Hanby Avenue across South Fork Bishop Creek and include improvements to existing dirt parking lots. The approximate center of the project site is at Latitude 37.367701 and Longitude -118.388610 (NAD 83). **Figure 3** is an aerial map depicting the project limits.

1.2 Project Description

The City of Bishop proposes a complete and safe pedestrian facility between the neighborhoods in southeast Bishop by constructing approximately 4,400 lineal feet of curb, gutter, and sidewalk; approximately 3,000-feet of on-street 5-foot, Class II bike lane; approximately 400-feet of new paved path; and street widening at a creek crossing and near live irrigation ditches. The project would also make improvements to an existing dirt parking lot along Spruce Street. Additional parking would be developed south of Spruce Street and north of the soccer field. Improvements would primarily occur within the City of Bishop's right-of-way and/or land leased to the City of Bishop by the Los Angeles Department of Water and Power.

The project would also include the following improvements:

- Construction of approximately 630-feet of sidewalk, curb, and gutter on each side of Spruce Street from South Fork of Bishop Creek to E. Yaney Street;
- Construction of approximately 500-feet of sidewalk, curb, and gutter along the south side of Spruce Street from South Fork of Bishop Creek to Hanby Avenue.

- Construction of approximately 620 feet of sidewalk, curb, and gutter along the south side of E. Yaney Street from Spruce Street to Hanby Avenue.
- Construction of approximately 1,900 feet of sidewalk, curb, and gutter along the west side of Hanby Avenue from the west leg of E. Yaney Street to E. Pine Street. The sidewalk would be roughly 10-foot wide on Spruce Street from South Fork of Bishop Creek to E. Yaney Street and 5-foot wide with a 5-foot landscaping strip elsewhere. An 8-foot wide path would be extended west off Hanby connecting to the existing foot path.

The project would replace the existing culvert at the intersection of Spruce Street and South Fork Bishop Creek, and would construct new concrete headwalls and install hand and guard rails. The project may include a 10-foot wide by 30-foot long pedestrian bridge over Bishop Creek, connecting the existing sidewalk on the west side of Spruce Street to the existing parking lot and new sidewalk proposed north of the creek. Alternatively, the sidewalk would be extended along Spruce Street and connect to the existing sidewalk south of Bishop Creek. The project would also replace the existing culvert and expand the upstream headwall at the Hanby intersection. Additional culvert improvements would occur at the Spruce and Yaney Street intersection. Up to 42 trees would be removed and replaced at approximately a 2:1 ratio in the landscaping strip and along the road to accommodate sidewalk improvements. Trees planted along the north-most portion of Hanby will generally not exceed heights of 12-15-feet to avoid obstructing the view of nearby residents.

1.3 Driving Directions

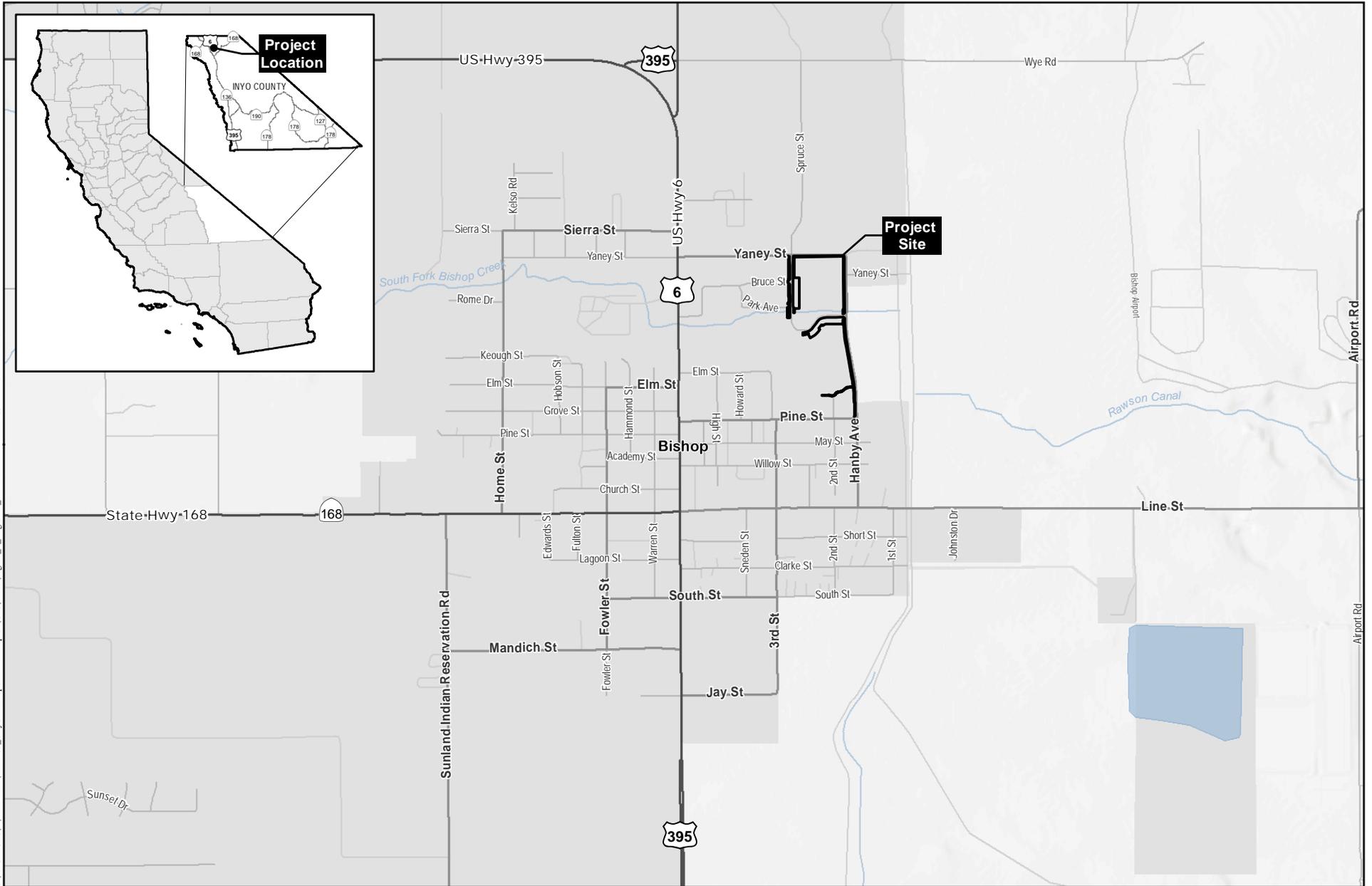
To access the project site, travel north from downtown Los Angeles on State Route (SR) 110 to Interstate 5, then north on Interstate 5 to SR-14. Travel north on SR-14 to US-395 and north on US-395 to Bishop. Turn onto E. Yaney Street and travel 1 block east to Spruce Street. Turn south on Spruce Street and travel 1 block south to the parking lot at Bishop City Park.

1.4 Contact Information

Agent:

HELIX Environmental Planning, Inc.
Robert Edgerton, AICP CEP
11 Natoma Street, Suite 155
Folsom, CA 95630
(916) 365-8713

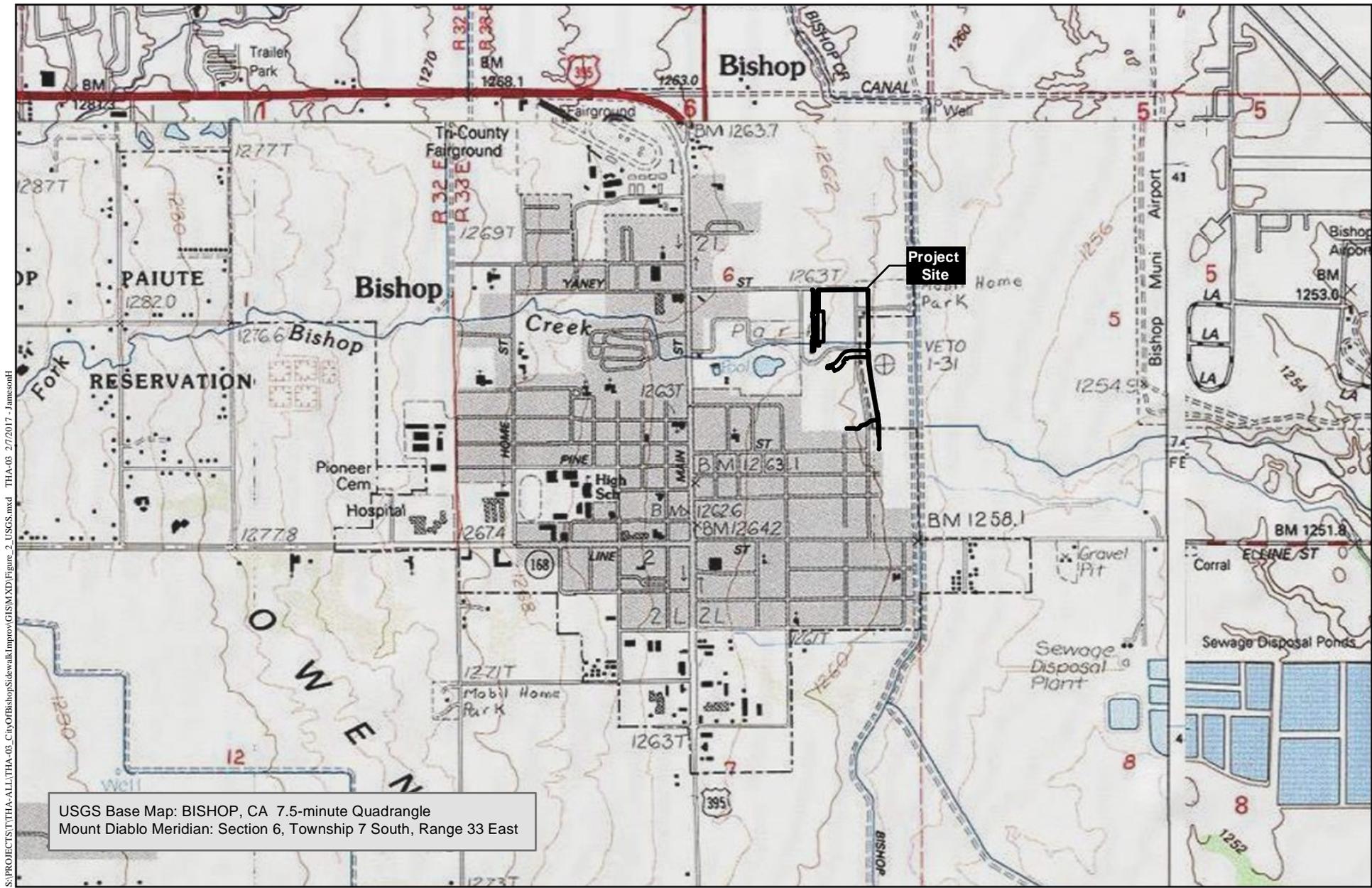
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Regional Location Map

CITY OF BISHOP:
SPRUCE, HANBY, YANEY SIDEWALKS PROJECT

Figure 1



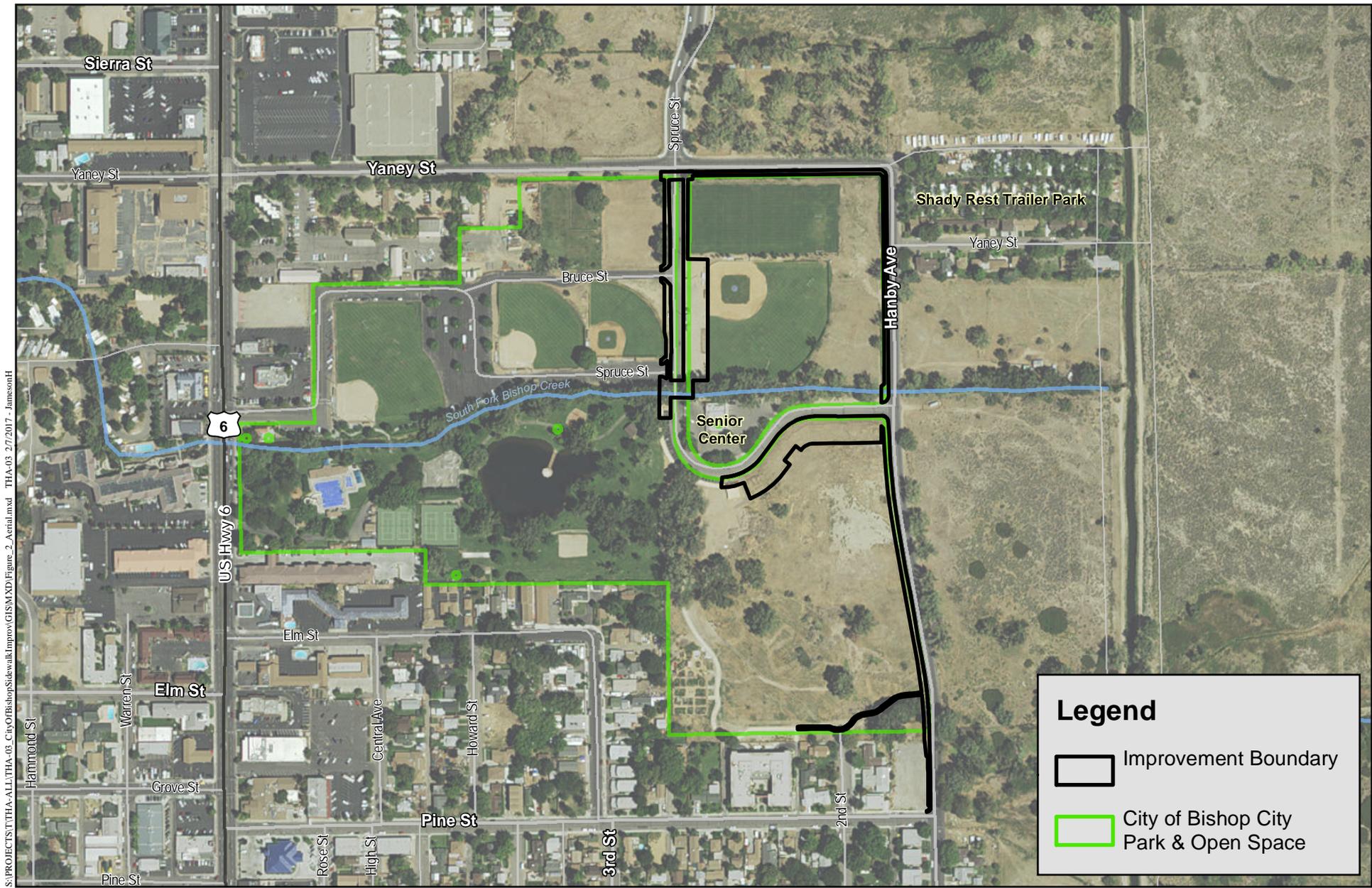
USGS Base Map: BISHOP, CA 7.5-minute Quadrangle
 Mount Diablo Meridian: Section 6, Township 7 South, Range 33 East

USGS Quadrangle Map

CITY OF BISHOP:
 SPRUCE, HANBY, YANEY SIDEWALKS PROJECT

Figure 2

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Aerial Map

CITY OF BISHOP:
 SPRUCE, HANBY, YANEY SIDEWALKS PROJECT

Figure 3

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2.0 Regulatory Setting

2.1 Federal Requirements

Any person, firm, or agency planning to alter or work in waters of the U.S., including the discharge of dredged or fill material, must first obtain authorization from the USACE under Section 404 of the Clean Water Act (CWA; 33 U.S. Code [USC] 1344). Waters of the U.S. are defined as: (a) all waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; (b) all interstate waters including interstate wetlands; (c) all other waters such as intrastate lakes, rivers, streams, mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, the use, degradation, or destruction of which could affect interstate commerce; (d) impoundments of these waters; (e) tributaries of these waters; or (f) wetlands adjacent to these waters (33 Code of Federal Regulations [CFR] Part 328). Within non-tidal waters that meet the definition given above, and in the absence of adjacent wetlands, the indicator used by the USACE to determine the lateral extent of its jurisdiction is the ordinary high water mark (OHWM), which is defined as the line on the shore established by fluctuations of water and indicated by a clear, natural line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, and/or the presence of litter and debris.

Wetlands are defined under the CFR Part 328.3 as:

those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

The USACE has determined that not all features which meet the waters of the U.S. definition are, in fact, considered waters of the U.S. Normally, features not considered waters of the U.S. include: (a) non-tidal drainage and irrigation ditches excavated on dry land; (b) artificially irrigated areas which would revert to upland if the irrigation ceased; (c) artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing, (d) artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons, and (e) water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel, unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the U.S. (see 33 CFR 328.3(a)). Other features may be excluded based on Federal court rulings (e.g. SWANCC and Rapanos) or by regulation.

Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act of 1899 prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from the USACE (33 USC 403). The CDFW requires notification prior to commencement, and possibly a Lake or Streambed Alteration Agreement (LSAA) pursuant to California Fish and Game Code Subsection 1600 et seq., if a proposed activity would result in the alteration of a stream, river, or lake in California.

2.2 State Requirements

2.2.1 Regional Water Quality Control Board

Any action requiring a Clean Water Act (CWA) Section 404 permit or a Rivers and Harbors Act Section 10 permit must also obtain a CWA Section 401 Water Quality Certification. The Regional Water Quality Control Board (RWQCB) administers the 401 Certification program. If a water body does not meet the criteria to be considered waters of the U.S. but is considered waters of the State, a Report of Waste Discharge (ROWD) is required to be submitted to the appropriate regional water quality control board pursuant to California Water Code Section 13260. The term “waters of the state” is defined by California Water Code as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code Section 13050(e)). The State Water Resources Control Board has defined a wetland as the following:

An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area either lacks vegetation or the vegetation is dominated by hydrophytes.

2.2.2 California Fish and Game Code (Streambed Alteration Agreement Program)

Diversions or obstructions of the natural flow of, or substantial changes or use of material from the bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW, pursuant to Section 1600 et seq. of the California Fish and Game Code. The CDFW requires notification prior to commencement of any such activities, and a Streambed Alteration Agreement (SAA) pursuant to Fish and Game Code Sections 1601 to 1603, if the activity may substantially adversely affect an existing fish and wildlife resource.

3.0 Environmental Setting

3.1 Location Description

The project site is in the City of Bishop, in and surrounding the eastern half of Bishop City Park. Surrounding lands are developed as residences, athletic fields, landscaped park, and vacant urban lots. The project site is located at the northern end of Owens Valley, between the Sierra Nevada, the White Mountains, and the Volcanic Tablelands that form the southwestern escarpment of Long Valley. The study area is relatively flat and slopes slightly to the southeast. Elevations in the study area range from 4,135 to 4,144 feet above mean sea level (amsl).

3.2 Existing Conditions

The project site is associated with public streets and City park property. The portions of Bishop City Park along E. Yaney Street and Spruce Street are developed and landscaped, while the portions along Hanby Avenue are mostly undeveloped. Historic USGS topographic maps and aerial imagery show Bishop City Park as largely undeveloped until the 1970s (NETR 2016). Historic USGS topographic maps depict South Fork Bishop Creek flowing southeast in a natural channel from the center of the park toward the intersection of Hanby and E. Pine prior to 1951, and in its current alignment due east from the center of the park in an artificial channel after 1951 (NETR 2016).

Refer to ground photographs in **Appendix A** that show conditions in the project site.

3.3 Field Conditions

The delineation was conducted on June 7 and 8, 2016. The weather during the site visit was clear and hot. The average annual precipitation for the City of Bishop is 5.2 inches.¹ The average monthly precipitation for May is 0.2 inches. The area received 0 inches of precipitation over the 7 days leading up to the June 7 survey². Refer to **Section 5.0 - Results** for a description of the existing plant communities, habitat types, and soils identified at the site.

3.4 Interstate or Foreign Commerce Connection

The project site includes no waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce. The nearest traditional navigable water is the Owens River, 2.5 miles to the east. South Fork Bishop Creek flows through the project site in a constructed channel and is captured by the Bishop Creek Canal one block east of the project site. Drainage from the project site flows into South Fork Bishop Creek either directly or via constructed earthen ditches that parallel E. Yaney Street and Hanby Avenue. Flows into South Fork Bishop Creek enter the Bishop Creek Canal and are conveyed south into a system of irrigation and diversion canals managed by the Los Angeles Department of Water and Power (LADWP) generally to the Owens River. The Owens River is impounded at Tinemaha Reservoir and are subsequently diverted into the Los Angeles Aqueduct, either at the aqueduct intake or at the terminus of the Owens River at the north end of Owens Lake.

4.0 Methods

4.1 Data Gathering

The following sources were used in preparation of this jurisdictional delineation:

- Aerial photography taken May 10, 2016 downloaded from Esri®
- Topographic contours from the USGS 7.5-minute “Bishop, CA” quadrangle map
- Natural Resources Conservation Service (NRCS) web soil survey (NRCS 2016)
- U.S. Army Corps of Engineers Wetlands Delineation Manual (USACE 1987)
- Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Arid West (Version 2.0) (USACE 2008)
- USACE 2016 Arid West Regional Wetland Plant List (Lichvar *et al.* 2016)
- USFWS’s National Wetland Inventory online wetland mapper (USFWS 2016)

4.2 Delineation Area

All areas within the project limits were included in the delineation. The delineation boundary is depicted on the aquatic resources delineation map in **Attachment B**.

¹ Average annual precipitation for Bishop Airport from < <http://www.ncdc.noaa.gov/cdo-web/quickdata> > accessed July 6, 2016

²Rainfall data from:

https://www.wunderground.com/history/airport/KBIH/2016/5/31/DailyHistory.html?req_city=Bishop&req_state=CA&req_stationname=&reqdb.zip=93514&reqdb.magic=1&reqdb.wmo=99999 Accessed July 6, 2016.

4.3 Determination Procedures

4.3.1 Delineation Methods

Fieldwork for the delineation was conducted on June 7-8, 2016 by HELIX biologists Stephen Stringer, M.S. and George Aldridge, Ph.D. The delineation was conducted in accordance with the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0; USACE 2008)*.

Vegetation, soils, and hydrologic characteristics were visually assessed during the field delineation by walking the study area to obtain 100 percent visual coverage. The plant species identifiable at the time of the survey were recorded (refer to **Appendix C** for the list of plants observed with the wetland indicator status for each species). Ground photographs of each recorded feature were taken (**Appendix A**).

The three-parameter method was used to determine the presence/absence of wetlands, which involves identifying indicators of hydrophytic vegetation, hydric soils, and wetland hydrology according to the *Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010) and the *Western Mountains, Valleys, and Coast 2016 Regional Wetland Plant List* (USACE 2016). A total of 3 data points were taken in the project site (**Appendix D**).

The extent of wetlands and other waters within the project limits was mapped in the field using a Trimble GeoXT® global positioning system (GPS) receiver with sub-meter accuracy. The widths of drainage features were also measured with a tape measure to provide back-up data. These data were exported into ArcMap 10.3.1® and used to produce the map of aquatic features in the delineation area and calculate the acreage of each aquatic feature.

4.3.2 Determination of Potential Jurisdiction

Waters of the U.S.

Typically, the USACE and the U.S. Environmental Protection Agency (EPA) will assert jurisdiction over the following types of wetlands and tributaries:

- Traditional navigable waters (TNW),
- Wetlands adjacent to TNWs,
- Non-navigable tributaries of TNWs that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months), and
- Wetlands directly abutting such tributaries.

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW:

- Non-navigable tributaries that are not relatively permanent,
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent, and
- Wetlands adjacent to but not directly abutting a relatively permanent non-navigable tributary.

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow), and
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The agencies apply the significant nexus standard as follows:

“A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters.”

Waters of the State

The RWQCB will assert jurisdiction over any waters of the state, including wetlands. Waters of the State include but are not limited to ponds, rivers and streams, ditches and canals, wetlands, and vernal pools.

4.3.3 Habitat Nomenclature

Habitat nomenclature is generally derived from *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986).

5.0 Results

5.1 Vegetation Communities/Land Cover Types in the Study Area

5.1.1 Upland Habitats

Upland areas within the project site are adjacent to existing roads and subjected to high levels of disturbance. Within the upland areas of the project site, habitats are restricted to disturbed and developed land cover. There are no native or naturalized habitats within upland areas of the project site.

5.1.1.1 Disturbed Habitat

Disturbed habitat describes land that is subject to recent or ongoing disturbance by human activity but retains a soil substrate. Disturbed habitat is often barren or only sparsely vegetated, and soils may be compacted by vehicles, pedestrians, or grazing animals. If vegetated, there is no recognizable native or naturalized community, and the species composition depends on local colonization potential. Vegetation is dominated by ruderal native and non-native species that are adapted to colonize disturbed soils and open areas. Most of the project site is disturbed habitat along the shoulders of streets.

5.1.1.2 Developed Land

Developed land has been altered by structures, paving, hardscape, landscaping, or relatively permanent placement of materials such that it no longer naturally supports vegetation. Developed land in the project

site includes paved streets, unpaved parking lots, irrigated turf, and urban park along South Fork Bishop Creek and Spruce Street in Bishop City Park.

5.1.2 Aquatic Habitats

Aquatic habitats in the project site include South Fork Bishop Creek and a constructed earthen ditch.

5.1.2.1 South Fork Bishop Creek

South Fork Bishop Creek flows through the project site in a constructed earthen channel crossing under Spruce Street and Hanby Avenue. Establishment of vegetation within the channel is largely excluded by compacted soil and disturbance. A fringe of herbaceous vegetation is present above the high-water line. The channel of South Fork Bishop Creek where it flows under Spruce Street is mostly unvegetated, with only a narrow strip of herbaceous vegetation along the banks above the OHWM. A small patch of tule (*Schoenoplectus* sp.) and sedges (*Cyperus* spp.) occurs in the channel of the creek upstream of the culvert at Hanby Avenue. Occasional large cottonwoods occur in a narrow corridor along the creek as well.

5.1.2.2 Constructed Earthen Ditch

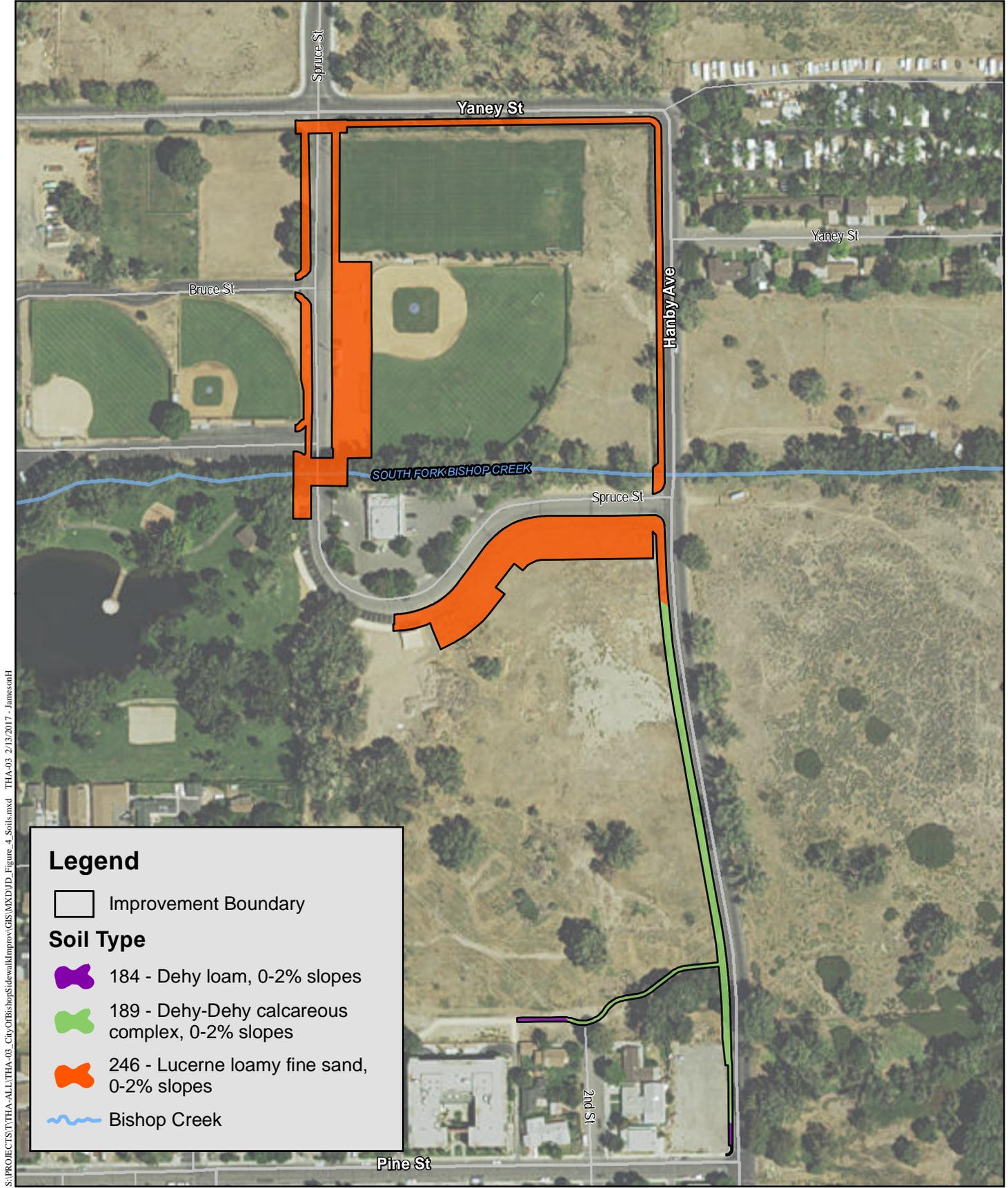
A constructed earthen ditch flows through the project site under Spruce Street at E. Yaney Street, and runs parallel to the project site along the south side of E. Yaney Street and the west side of Hanby Avenue, between E. Yaney Street and Spruce Street. The ditch is heavily vegetated with sedges and grasses for much of its length in the project site, with patches of willows (*Salix* spp.) and other trees outside the banks.

5.2 Study Area Soils

The project site includes three soil mapping units in two series (NRCS 2016): Lucerne loamy fine sand, 0 to 2 percent slopes (246), Dehy-Dehy calcareous complex, 0 to 2 percent slopes (189), and Dehy loam, 0 to 2 percent slopes (184). Dehy loam and Dehy-Dehy calcareous complex soils are included on the 2015 national list of hydric soils (NRCS 2015) for the Owens Valley area when mapped in channels and alluvial fans. The mapped soil types in the project site are described in detail below as modified from the online NRCS soil unit descriptions (NRCS 2016). A soil map is included as Error! Reference source not found..

184 – Dehy Loam

Dehy loam is a somewhat poorly-drained soil derived from mixed alluvium that occurs on alluvial fans and floodplain terraces. A typical profile is loam and sandy clay loam to a depth of 19 inches, a depth to restrictive feature of more than 80 inches, and a depth to water table of 24 to 36 inches. The frequency of flooding is “rare” and the frequency of ponding is “none”. Dehy loam soil is classified as prime farmland if drained and irrigated. Dehy loam, 0 to 2 percent slopes soil is listed on the national list of hydric soils in Inyo County when occurring in channels and alluvial fans.



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Soils Map

CITY OF BISHOP:
 SPRUCE, HANBY, YANEY SIDEWALKS PROJECT

Figure 3

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189 – Dehy-Dehy Calcareous Complex

Dehy-Dehy calcareous complex is a somewhat poorly-drained soil derived from mixed alluvium that occurs on alluvial fans and floodplain terraces. A typical profile is loamy sand, sandy clay loam, and sandy loam to a depth of 36 inches, a depth to restrictive feature of more than 80 inches, and a depth to water table of 24 to 36 inches. The frequency of flooding is “rare” and the frequency of ponding is “none”. Dehy-Dehy calcareous complex soil is classified as prime farmland if drained and irrigated. Dehy-Dehy calcareous complex, 0 to 2 percent slopes soil is listed on the national list of hydric soils in Inyo County when occurring in channels and alluvial fans.

246 – Lucerne loamy fine sand

Lucerne loamy fine sand is a well-drained soil derived from granitic alluvium that occurs on fan terraces. A typical profile is a progression from loamy fine sand, through gravelly sandy loam, to very cobbly sand to a depth of 36 inches, a depth to restrictive feature of more than 80 inches, and a depth to water table of more than 80 inches. The frequency of flooding is “rare” and the frequency of ponding is “none”. Lucerne loamy fine sand soil is classified as prime farmland if irrigated, and is not on the national list of hydric soils.

5.3 Study Area Hydrology

Sources of surface water in the project site are (1) direct runoff from the project site and surrounding land, (2) flows in South Fork Bishop Creek, which drains South Lake, Lake Sabrina, and North Lake in the Sierra Nevada, and (3) flows in the constructed earthen ditch along E. Yaney Street and Hanby Avenue, which collects urban runoff from Bishop in addition to carrying water diverted out of the South Fork of Bishop Creek for irrigation and aesthetics by the City of Los Angeles Department of Water and Power and the Bishop Creek Water Association. The project site is in the North Fork Bishop Creek – Owens River Hydrologic Unit (HUC 12: 180901020705). Bishop Creek is a tributary of the Owens River, which historically terminated in Owens Lake. The Owens River is now captured by the Los Angeles Aqueduct and no longer supplies surface water to Owens Lake.

5.4 USFWS National Wetlands Inventory Mapping of the Study Area

The USFWS National Wetlands Inventory online database³ was reviewed to determine if there are any wetlands or other waters of the U.S. mapped by the USFWS in the project site or vicinity. The only aquatic feature depicted on NWI mapping within the project site is South Fork Bishop Creek. NWI-mapped aquatic features near the project site include an artificial freshwater pond in the developed portion of Bishop City Park west of Spruce Street, a freshwater forested shrub wetland north of E. Pine Street and 2nd Street and a freshwater emergent wetland along Spruce Street a half-block north of E. Yaney Street (See Error! Not a valid bookmark self-reference.).

5.5 Wetlands and Other Waters in the Project Site

The project site contains 0.15 acres of wetlands and other waters including a segment of a constructed earthen ditch at the intersection of Spruce Street and E. Yaney Street and two segments of South Fork Bishop Creek where it crosses under Spruce Street and Hanby Avenue (

³ National Wetlands Inventory online database at < <https://www.fws.gov/wetlands/data/mapper.html> > accessed June 6, 2016

Table 1). These features are depicted on the Aquatic Resources Delineation Map (**Appendix B**).

Table 1. Potentially Jurisdictional Wetlands and Other Waters of the U.S./State in the Project Site

Feature	Cowardin Classification ¹	Area		Length (ft.)	Avg. Width (ft.)
		Acres ²	Sq. Ft.		
Wetland					
Constructed Earthen Ditch	Palustrine, Emergent (persistent) semi-permanently flooded, excavated	0.004	168	28	6
South Fork Bishop Creek (upstream of Hanby Ave.)	Palustrine, Emergent (persistent) permanently flooded, excavated	0.003	122.1	11	11.1
Wetlands Total		0.007	290.1	--	--
Non-Wetland					
South Fork Bishop Creek (at Spruce St.)	Riverine, Lower Perennial, unconsolidated bottom, permanently flooded, excavated	0.008	368	40	9.2
Non-wetlands Total		0.008	368	--	--
Total potentially jurisdictional waters of the U.S./State		0.015	658.1		

¹Cowardin classification codes from USFWS (2011)

²Acreege is rounded to 0.001

5.5.1 Waters Potentially Meeting the Definition of Waters of the U.S.

5.5.1.1 Wetlands

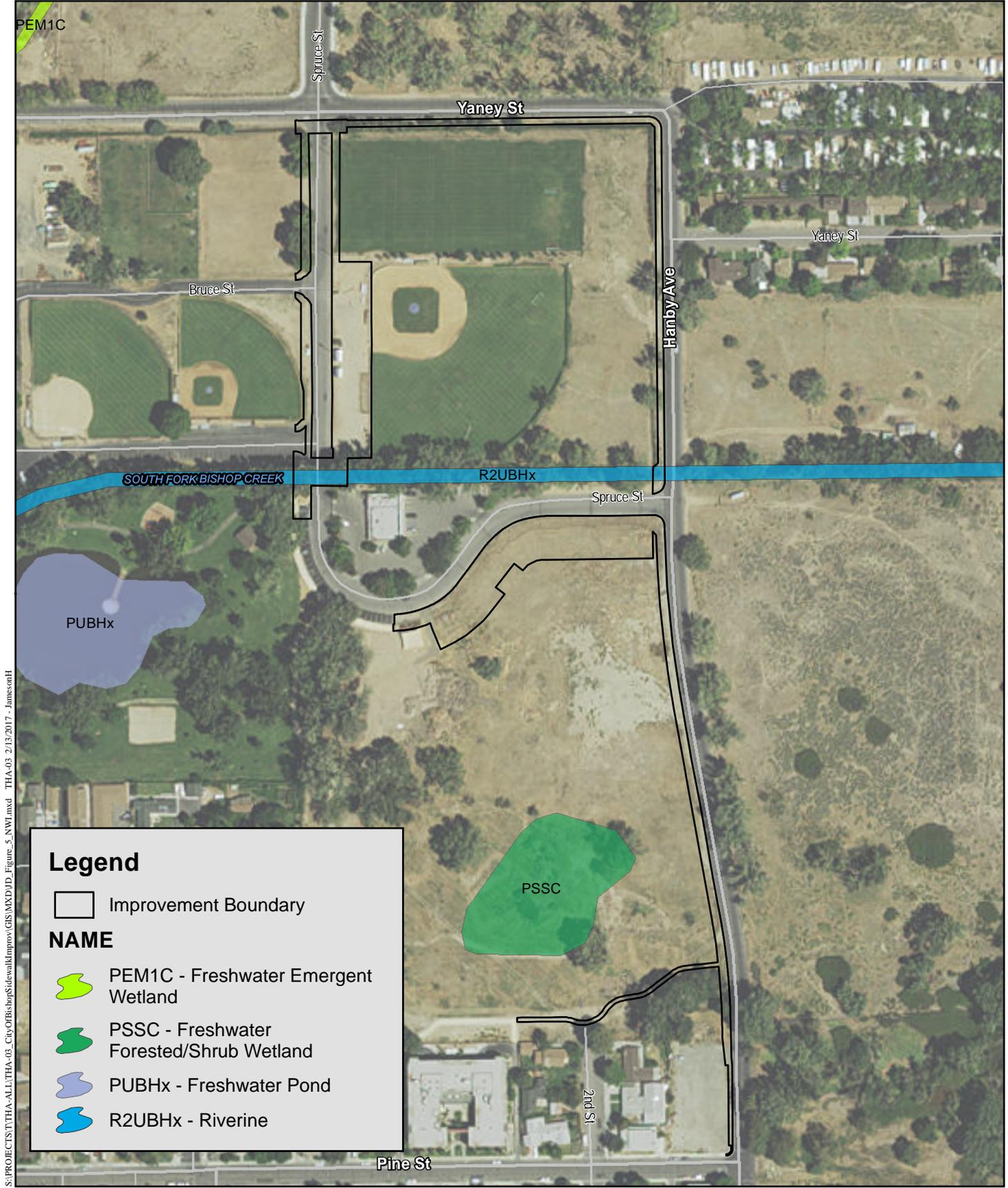
Wetlands in the project site occur in excavated channels, including South Fork Bishop Creek and a constructed earthen ditch that is tributary to South Fork Bishop Creek. Flow in these channels enters the Bishop Creek Canal east of the study area and is conveyed south into a system of irrigation and diversion canals managed by the LADWP. All unused surface flow in the valley north of Fish Springs has entered the Owens River by the time it reaches Tinemaha Reservoir and is ultimately diverted into the Los Angeles Aqueduct.

No potential wetlands were observed outside of South Fork Bishop Creek and the constructed earthen ditch. An upland data point was taken in a low-lying portion of the project site that appeared to lie in the former floodplain of South Fork Bishop Creek southeast of Bishop City Park and west of Hanby Avenue. This was the “wettest” area within the project site outside of the drainages. This area was dominated by saltgrass (*Distichlis spicata*) and blue wild rye (*Elymus glaucus*). The area did not qualify as a wetland because it lacked indicators of wetland vegetation, wetland hydrology and hydric soil. No other portion of the project site outside of excavated channels showed any evidence of wetland vegetation or hydrology.

Constructed Earthen Ditch

The constructed earthen ditch in the project site supports a 0.004-acre wetland feature at the intersection of Spruce St. and E. Yaney Street. Downstream the constructed earthen ditch flows east along the south side of E. Yaney Street, turns south at Hanby Avenue and enters South Fork Bishop Creek near Hanby Avenue and Spruce Street. There is a diversion out of the constructed earthen ditch at the intersection of Yaney Street and Hanby Avenue that diverts water along both sides of the eastern-most portion of East Yaney Street to the Bishop Creek Canal. Although the constructed earthen ditch functions in part as a drainage to carry urban runoff into South Fork Bishop Creek, it is best classified as a wetland within the project site because it is heavily vegetated with perennial emergent macrophytes such as cattail (*Typha latifolia*) and other species such as Italian ryegrass (*Festuca perennis*). The data point taken within the

wetland met the three-parameter test for wetlands (see **Attachment D**). No upland data point was taken because the borders of the ditch are well defined and surrounded by developed uplands.



S:\PROJECTS\THA-ALL\THA-03_CityOfBishopSidewalkImprovements\GIS\MXD\JD_Figure_5_NWI.mxd THA-03_2/13/2017 - JamesonH

National Wetland Inventory

CITY OF BISHOP:
 SPRUCE, HANBY, YANEY SIDEWALKS PROJECT

Figure 5

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South Fork Bishop Creek

South Fork Bishop Creek supports a 0.003-acre wetland feature upstream of a 72-inch concrete culvert and headwall where South Fork Bishop Creek flows under Hanby Avenue. The wetland is fed by the constructed earthen ditch as well as South Fork Bishop Creek. The wetland is characterized by a dense patch of tule (*Schoenoplectus acutus* var. *occidentalis*) growing over most of the channel where the flow is slowed by the culvert inlet. The data point taken within the wetland met the three-parameter test for wetlands (see **Attachment D**). No upland data point was taken because the borders of the channel are well defined and surrounded by developed uplands.

5.5.1.2 Non-Wetland Waters

Non-wetland waters in the project site occur in the channel of South Fork Bishop Creek.

South Fork Bishop Creek – Unvegetated Streambed

The 0.008-acre segment of South Fork Bishop Creek in Bishop City Park where the creek crosses under Spruce Street is classified as a non-wetland water. In this segment of the creek the channel is earthen and largely unvegetated except for a fringe of common velvet grass (*Holcus lanatus*) and mountain bog bulrush (*Scirpus microcarpus*) along the water line. Due to the lack of wetland vegetation within the channel, the creek is classified as a non-wetland water (unvegetated streambed) in this location.

5.5.2 Waters Potentially Meeting the Definition of Waters of the State

All wetlands and other waters delineated in this report and depicted on the Aquatic Resource Delineation Map in **Appendix B** are considered potentially jurisdictional waters of the State. Therefore, the project site contains 0.015 acre of potential waters of the State.

5.5.3 Waters Potentially Subject to CDFW Jurisdiction under the Lake and Streambed Alteration Program

Both segments of South Fork Bishop Creek within the project site, including the wetland area upstream of the culvert at Hanby Avenue and the segment that flows under Spruce Street, are potentially subject to CDFW jurisdiction under the Streambed Alteration Program of the California Fish and Game Code. CDFW jurisdiction extends to the limits of the canopy of the riparian vegetation, which includes several large Fremont cottonwood (*Populus fremontii*) and red willow (*Salix laevigata*) trees growing adjacent to the creek. The total acreage potentially under CDFW jurisdiction is 0.098 acre (see **Table 2 and Appendix B**).

Table 2. CDFW Jurisdictional Areas in the Project Site (Subject to Streambed Alteration Agreement)

Feature	Cowardin Classification ¹	Area		Length (ft.)	Avg. Width (ft.)
		Acres ¹	Sq. Ft.		
South Fork Bishop Creek (at Spruce St.)	Non-wetland waters consisting of the channel of South Fork Bishop Creek	0.008	368	40	9.2
	Riparian canopy along South Fork Bishop Creek outside of the channel	0.087	3,786	--	--
South Fork Bishop Creek (upstream of Hanby Ave.)	Wetlands within the channel of South Fork Bishop Creek (includes overlapping riparian canopy)	0.003	122.1	11	11.1
Total CDFW jurisdictional areas		0.098	4,276.1	--	--

¹Acreeage is rounded to 0.001

6.0 Summary

HELIX conducted a delineation of aquatic resources in the Spruce, Yaney, Hanby Sidewalks Project site. A total of 0.015 acre of wetland and non-wetland waters were identified, consisting of wetlands within South Fork Bishop Creek and a constructed earthen ditch and non-wetland waters (unvegetated streambed) within South Fork Bishop Creek. All wetland and non-wetland waters identified in the study area are potential waters of the U.S. subject to USACE jurisdiction under Section 404 of the CWA and waters of the State subject to LRWQCB jurisdiction under Section 401 of the CWA. A total of 0.098 acre, including two segments of South Fork Bishop Creek and adjacent riparian canopy, is potentially subject to CDFW jurisdiction under the Streambed Alteration Program.

7.0 References

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Appendix A
Ground Photographs

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View of the location where the upland data point was taken



View of the wetland in South Fork Bishop Creek upstream of the culvert at Hanby Avenue



View of the wetland in the Constructed Earthen Ditch looking upstream from Spruce Street



View of South Fork Bishop Creek downstream of Spruce Street



View of South Fork Bishop Creek upstream of Spruce Street



View of the corridor to 2nd Street from Hanby Ave. looking west from Hanby Ave.

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APPENDIX B
Aquatic Resources Delineation Map

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Potentially Jurisdictional Wetlands and Other Waters of the U.S/State in the Project Site					
Feature	Cowardin Classification	Area		Length (ft.)	Width (ft.)
		Acres	SqFt		
Wetland					
Constructed Earthen Ditch	Palustrine, Emergent (persistent) semi-permanently flooded, excavated	0.004	168	28	6
South Fork Bishop Crk (Upstream at Hanby Ave)	Palustrine, Emergent (persistent) permanently flooded, excavated	0.003	122.1	11	11.1
Wetland Total		0.007	290.1	--	--
Non-Wetland					
South Fork Bishop Crk (at Spruce St)	Riverine, Lower Perennial, unconsolidated bottom, permanently flooded, excavated	0.008	368	40	9.2
Non-Wetland Total		0.008	368	--	--
Total potentially jurisdictional waters of the U.S./State		0.015	658.1	--	--

CDFW Jurisdictional Areas in the Project Site (Subject to Streambed Alteration Agreement)					
Feature	Cowardin Classification	Area		Length (ft.)	Width (ft.)
		Acres	SqFt		
South Fork Bishop Crk (at Spruce St)	Riverine, Lower Perennial, unconsolidated bottom, permanently flooded, excavated	0.008	368	40	9.2
	Riparian canopy along South Fork Bishop Creek outside of the channel	0.087	3,786	--	--
South Fork Bishop Crk (Upstream at Hanby Ave)	Palustrine, Emergent (persistent) permanently flooded, excavated	0.003	122.1	11	11.1
Total CDFW jurisdictional areas		0.098	4,276.10	--	--



REVISIONS		
DATE	DESCRIPTION	BY

PROJECT LIMITS/ DELINEATION BOUNDARY (2.75 AC)
 AQUATIC FEATURES WITHIN PROJECT LIMITS
 RIPARIAN CANOPY
 SOUTH FORK BISHOP CREEK
 CONSTRUCTED EARTHEN DITCH
● UPLAND DATA POINT
● WETLAND DATA POINT
→ FLOW DIRECTION
 CULVERT

0 62.5 125 Feet
 1 inch = 125 feet
 Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet
 Projection: Lambert Conformal Conic
 Datum: North American 1983
 DRAWN BY: J. Honeycutt
 DELINEATORS: G. Aldridge, S. Stringer
 DATE OF FIELDWORK: June 8, 2016
 DATE OF AERIAL PHOTOGRAPH: 2016 (NAIP)
 CREATED ON: February 9, 2017

NOTE: The boundaries and jurisdictional status of all waters shown on this map are preliminary and subject to verification by the U.S. Army Corps of Engineers

AQUATIC RESOURCES DELINEATION MAP
Made in accordance with the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016.

SPRUCE, HANBY, YANEY SIDEWALK PROJECT

City of Bishop, California
 February 9, 2017

Appendix B Map 1 of 1

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APPENDIX C
Plant Species Observed and Wetland Indicator Status

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Plants

Family	Species Name	Common Name	Status
Native			
Apocynaceae	<i>Asclepias fascicularis</i>	narrow-leaf milkweed	FAC
Asteraceae	<i>Ericameria nauseosa</i>	rubber rabbitbrush	UPL
Boraginaceae	<i>Amsinckia intermedia</i>	rancher's fiddleneck	UPL
Brassicaceae	<i>Lepidium nitidum</i>	shining peppergrass	FAC
Chenopodiaceae	<i>Atriplex serenana</i> var. <i>serenana</i>	bractscale	FAC
Cyperaceae	<i>Eleocharis macrostachya</i>	pale spike-rush	OBL
	<i>Schoenoplectus acutus</i> var. <i>occidentalis</i>	tule	OBL
	<i>Scirpus microcarpus</i>	mountain bog bulrush	OBL
Equisetaceae	<i>Equisetum arvense</i>	common horsetail	FAC
Fabaceae	<i>Glycyrrhiza lepidota</i>	American licorice	FAC
Juncaceae	<i>Juncus balticus</i> ssp. <i>ater</i>	Baltic rush	FACW
	<i>Juncus mexicanus</i>	Mexican rush	FACW
Poaceae	<i>Distichlis spicata</i>	saltgrass	FAC
	<i>Elymus glaucus</i>	blue wildrye	FACU
	<i>Sporobolus airoides</i>	alkali sacaton	FAC
Rosaceae	<i>Rosa woodsii</i> ssp. <i>ultramontana</i>	interior rose	FACU
Salicaceae	<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont cottonwood	FAC
	<i>Salix exigua</i>	narrow-leaved willow	FACW
	<i>Salix laevigata</i>	red willow	FACW
Typhaceae	<i>Typha latifolia</i>	broad-leaved cattail	OBL
Non-native			
Asteraceae	<i>Taraxacum officinale</i>	common dandelion	FACU
	<i>Tragopogon dubius</i>	yellow salsify	UPL
Chenopodiaceae	<i>Atriplex prostrata</i>	triangle orache	FACW
	<i>Bassia hyssopifolia</i>	five-hook bassia	FACU
	<i>Salsola tragus</i>	Russian thistle	FACU
Fabaceae	<i>Medicago sativa</i>	alfalfa	UPL
	<i>Melilotus albus</i>	white sweet clover	UPL
Geraniaceae	<i>Erodium cicutarium</i>	redstem filaree	UPL
Malvaceae	<i>Malvella leprosa</i>	alkali-mallow	FACU
Poaceae	<i>Bromus tectorum</i>	cheatgrass	UPL
	<i>Cynodon dactylon</i>	Bermuda grass	FACU
	<i>Festuca perennis</i>	Italian ryegrass	FAC
	<i>Holcus lanatus</i>	common velvet grass	FAC
	<i>Hordeum murinum</i>	hare barley	FACU
Polygonaceae	<i>Rumex crispus</i>	curly dock	FAC
Portulacaceae	<i>Portulaca oleracea</i>	common purslane	FAC

APPENDIX D
Data Sheets

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Bishop Sidewalk Improvements City/County: Bishop / Inyo Sampling Date: 6/8/2016
 Applicant/Owner: City of Bishop State: CA Sampling Point: 1
 Investigator(s): S. Stringer, G. Aldridge Section, Township, Range: S 06, T 7S, R 33E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <1
 Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD-83
 Soil Map Unit Name: Dehy-Dehy calcareous complex 0-2 percent slopes NWI classification: hydric in channels

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Sample point is in a grassy depression near Hanby Avenue, in the former course of Bishop Creek	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.5</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>60</u> x 3 = <u>180</u> FACU species <u>40</u> x 4 = <u>160</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>340</u> (B) Prevalence Index = B/A = <u>3.4</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Herb Stratum (Plot size: <u>1m</u>)				
1. <u>Distichlis spicata</u>	<u>60</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Elymus glaucus</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust _____				
Remarks:				

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	10YR 3/2	100					L	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

No hydric indicators

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes _____ No Depth (inches): _____
 Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): _____

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Bishop Sidewalks City/County: Bishop / Inyo Sampling Date: 6/8/2016
 Applicant/Owner: City of Bishop State: CA Sampling Point: 2
 Investigator(s): S. Stringer, G. Aldridge Section, Township, Range: S 6, T 7S, R 33E
 Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): concave Slope (%): <5
 Subregion (LRR): C Lat: 37.367812 Long: -118.388669 Datum: NAD-84
 Soil Map Unit Name: Lucerne loamy fine sand NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Sample point is in the channel of South Fork Bishop Creek at the culvert under Hanby Avenue	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10m radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Populus fremontii</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>15</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>5m radius</u>)				
1. <u>Schoenoplectus acutus</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>50</u> = Total Cover				
Herb Stratum (Plot size: <u>2m radius</u>)				
1. <u>Holcus lanatus</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Festuca perennis</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>30</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>20</u> % Cover of Biotic Crust <u>0</u>				

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

Remarks:
 20 percent of the sample point area is covered by flowing water.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Bishop Sidewalks City/County: Bishop / Inyo Sampling Date: 6/8/2016
 Applicant/Owner: City of Bishop State: CA Sampling Point: 3
 Investigator(s): S. Stringer, G. Aldridge Section, Township, Range: S 6, T 7S, R 33E
 Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): concave Slope (%): <5
 Subregion (LRR): C Lat: 37.369517 Long: -118.390892 Datum: NAD-84
 Soil Map Unit Name: Lucerne loamy fine sand NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Sample point is in an earthen ditch at the intersection of Spruce St and E. Yaney St.	

VEGETATION – Use scientific names of plants.

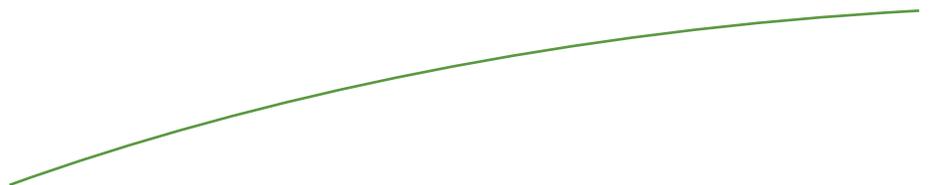
Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)		
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)		
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)		
4. _____	_____	_____	_____	Prevalence Index worksheet:		
= Total Cover					Total % Cover of: _____ Multiply by: _____	
Sapling/Shrub Stratum (Plot size: <u>2m radius</u>)				OBL species _____ x 1 = _____		
1. <u>Typha latifolia</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	FACW species _____ x 2 = _____		
2. _____	_____	_____	_____	FAC species _____ x 3 = _____		
3. _____	_____	_____	_____	FACU species _____ x 4 = _____		
4. _____	_____	_____	_____	UPL species _____ x 5 = _____		
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)		
<u>25</u> = Total Cover				Prevalence Index = B/A = _____		
Herb Stratum (Plot size: <u>1m radius</u>)				Hydrophytic Vegetation Indicators:		
1. <u>Scirpus microcarpus</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>		<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Festuca perennis</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>		<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3. <u>Rumex crispus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. _____	_____	_____	_____		<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. _____	_____	_____	_____		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
6. _____	_____	_____	_____			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
7. _____	_____	_____	_____			
8. _____	_____	_____	_____			
<u>75</u> = Total Cover						
Woody Vine Stratum (Plot size: _____)						
1. _____	_____	_____	_____			
2. _____	_____	_____	_____			
= Total Cover						
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>				

Remarks:
 Ditch is overgrown with emergent vegetation



Appendix C

Mitigation Monitoring and Reporting Program



MITIGATION MONITORING AND REPORTING PROGRAM

SPRUCE, HANBY, YANEY, SIDEWALKS PROJECT

Purpose of Mitigation Monitoring and Reporting Program: The California Environmental Quality Act (CEQA), Public Resources Code Section 21081.6, requires that a Mitigation Monitoring and Reporting Program (MMRP) be established upon completing findings. CEQA stipulates that “the public agency shall adopt a reporting or monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.”

This MMRP has been prepared in compliance with Section 21081.6 of CEQA to ensure that all required mitigation measures are implemented and completed according to schedule and maintained in a satisfactory manner during the construction and operation of the project, as required. A table (attached) has been prepared to assist the responsible parties in implementing the MMRP. The table identifies individual mitigation measures, monitoring/mitigation timing, the responsible person/agency for implementing the measure, and space to confirm implementation of the mitigation measures. The numbering of mitigation measures follows the numbering sequence found in the Initial Study and Mitigated Negative Declaration.

The City of Folsom (City) is the lead agency for the project under CEQA and shall administer and implement the MMRP. The City is responsible for review of all monitoring reports, enforcement actions, and document disposition. The City shall rely on information provided by the project site observers/monitors (e.g., construction manager, project manager, biologist, archaeologist, etc.) as accurate and up-to-date and shall provide personnel to field check mitigation measure status, as required.

Project Description: The Spruce, Hanby, Yaney, Sidewalks Project is a proposed pedestrian facility and bike corridor between the neighborhoods in southeast Bishop. The project would construct 4,400 lineal feet of curb, gutter, and sidewalk; about 3,000-feet of on-street 5-foot, Class II bike lane; about 400-feet of new paved path; and include street widening at two creek crossings and near live irrigation ditches. The project would make improvements to an existing dirt parking lot along Spruce Street, north of the ball field. The project would replace the existing culvert at the intersection of the Spruce Street and the South Fork of Bishop Creek, and would construct new concrete headwalls and install hand and guard rails. The project may include a 10-foot wide by 30-foot long pedestrian bridge over Bishop Creek, connecting the existing sidewalk on the west side of Spruce Street to the existing parking lot. The project may also replace the

existing culvert and expand the headwall downstream at the Hanby intersection. Bike improvements will occur along Spruce Street and Hanby Avenue, where Class II bike lanes including striping will take place on both the east and west side of Spruce St from E. Yaney St to the South Fork of Bishop Creek and continue along the west and southern portion of Spruce St to the intersection of Hanby Ave, and continue along the western portion of Hanby Ave to Pine St.

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
AESTHETICS				
<p>Mitigation Measure AES-1: Tree Replacement and Replanting</p> <p>Tree replacements for sidewalk improvements will be selected based on their beneficial qualities and their limited impacts on improvements, and shall be an acceptable species per the City's list of acceptable street trees. Tree replacement shall occur at a rate of approximately 2:1 using 5 to 15-gallon pots and would be installed per the Bishop Tree Care Information guidelines. All planted trees shall be maintained by the City. Trees that fail to survive for a 5-year establishment period will be replaced with a similar tree species.</p>	<p>This mitigation measure will be implemented during project construction.</p>	<p>City of Bishop</p>		

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
BIOLOGICAL RESOURCES				
<p>Mitigation Measures BIO-01: Avoid and minimize impacts to water quality in South Fork Bishop Creek and the Constructed Earthen Ditch</p> <ul style="list-style-type: none"> • Activities conducted in or near South Fork Bishop Creek and the constructed earthen ditch shall be limited to the winter months (generally November - March) when flows are lowest. • All disturbed soils shall undergo erosion control treatment using erosion control blankets, as deemed necessary by the contractor to avoid the unnecessary introduction of sediment into the creek, prior to October 15 and/ or immediately after construction is terminated. Erosion control blankets shall be installed on any disturbed soils on a 2:1 slope or steeper. • Standard construction BMPs shall be implemented throughout construction to avoid and minimize adverse effects to water quality within South Fork Bishop Creek and the constructed earthen ditch in and adjacent to the project site. Appropriate erosion control measures shall be used (e.g., hay bales, filter fences, vegetative buffer strips or other accepted equivalents) to reduce siltation and contaminated runoff from the project site. The integrity and effectiveness of the BMPs shall be inspected daily by the contractor. Corrective actions and repairs shall be carried out immediately. • No construction other than culvert, headwall, and bridge work shall occur within the wetted portion of waterways, including access by construction equipment or personnel, if avoidable. If work in the wetted portion of waterways is unavoidable, the work area shall be dewatered and the flow diverted around the work area. 	Prior to and during construction.	City of Bishop		

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
<ul style="list-style-type: none"> • Construction activities and ground disturbance within the project site shall be confined to the minimal area necessary to facilitate construction activities. To ensure that construction equipment and personnel do not affect sensitive aquatic habitat in South Fork Bishop Creek and the constructed earthen ditch up and downstream of the project site, orange barrier fencing shall be erected to clearly define the habitat to be avoided. This fencing shall delineate the Environmentally Sensitive Area (ESA) on the project. The integrity and effectiveness of ESA fencing shall be inspected daily by the contractor. Corrective actions and repairs shall be carried out immediately for fence breaches. • Construction by-products and pollutants such as petroleum products, chemicals, or other deleterious materials shall not be allowed to enter streams or other waters. A plan for the emergency clean-up of any spills of fuel or other materials shall be prepared by the contractor, approved by the City, and made available when construction equipment is in use. • Construction vehicles and equipment shall be maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease. Leaking vehicles and equipment shall be removed from the site by the contractor. • Equipment shall be re-fueled, washed, and serviced at the designated construction staging area or off-site. All construction and fill materials shall be stored and contained in a designated area that is located away from South Fork Bishop Creek and the constructed earthen ditch to prevent transport of materials into these waterways. Equipment/materials maintenance activities and storage shall be 100 feet or more away from waterways. In addition, a silt fence shall be installed by the contractor around the staging and materials storage 				

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
<p>areas to collect any discharge, and adequate materials shall be available for spill clean-up and during storm events.</p> <ul style="list-style-type: none"> • No litter, debris, or sidecast shall be dumped or permitted to enter South Fork Bishop Creek and the constructed earthen ditch. Trash and debris shall be removed from the site regularly by the contractor. Following construction, all trash and construction debris shall be removed from work areas by the contractor. • Building materials storage areas containing hazardous or potentially toxic materials such as herbicides and petroleum products shall be located outside of the 100-year flood zone, have an impermeable membrane between the ground and the hazardous material, and shall be bermed to prevent the discharge of pollutants to ground water and runoff water. <p>Worker education and awareness training regarding sensitive habitats (e.g., aquatic and riparian habitats) and special-status species shall be conducted for all construction personnel by a qualified biologist. The contractor shall ensure that all new personnel receive the mandatory training before starting work.</p>				

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
<p>Mitigation Measures BIO-02: Fish Salvage during dewatering in South Fork Bishop Creek and the Constructed Earthen Ditch</p> <ul style="list-style-type: none"> • If dewatering is required, the contractor shall prepare a dewatering plan that complies with applicable permit conditions. Water diversion activities shall be conducted under the supervision of a qualified biologist. The biologist shall survey the area to be dewatered immediately after installation of the dewatering device and prior to the continuation of dewatering activities. The approved biologist shall use a net to capture trapped fish present in the area to be dewatered. Captured native organisms shall be released into the creek/ditch up or downstream of the construction zone . • If dewatering the work area in the creek is necessary, and it would be dewatered by pumping, intakes shall be completely screened with wire mesh not larger than five millimeters to prevent fish from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed by the contractor in a manner that would allow flow to resume with the least disturbance to the soil substrate. • With implementation of the above mitigation measures, impacts to special-status fish would be less than significant and no additional mitigation measures would be required. • In addition, common bird species protected by the MBTA and/or Fish and Game Code may nest on trees present on the project site. If active nests are present tree removal or construction activities, this may result in injury or death of birds (e.g., if trees or limbs containing active nests 	<p>Prior to and during construction in the creek.</p>	<p>City of Bishop</p> <p>and</p> <p>Qualified Biologist</p> <p>and</p> <p>Construction Contractor</p>		

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
<p>are removed), or harassment which may cause nesting birds to abandon active nests resulting in the loss of eggs or young. The loss of foraging habitat near an active nest may result in the reduced health and vigor of eggs and/or nestlings, resulting in reduced survival rates. Any harassment, injury, or death of nesting birds, their nestlings, or eggs would be considered a significant impact.</p>				

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
<p>Mitigation Measures BIO-03: Avoid and minimize impacts to nesting birds</p> <ul style="list-style-type: none"> • If project construction occurs between February 15 and September 15, a qualified biologist(s) shall conduct preconstruction surveys for nesting birds. The biologist(s) conducting the surveys shall be experienced bird surveyors and familiar with standard nest-locating techniques. Surveys shall be conducted in accordance with the following guidelines: • Surveys shall cover all potential nesting habitat in the project site and within 500-feet of the project site and linear facilities boundaries – inaccessible areas outside of the project boundary may be surveyed from within the project site or publicly accessible land with the aid of binoculars. • Vegetation removal or other ground disturbing activities should be avoided between February 1 and August 31; however, if it cannot be avoided, the avian biologist shall survey breeding/nesting habitat within the survey radius described within one week prior to the start of project activities. • Site preparation and construction activities may begin if no breeding/nesting birds are observed. Additional follow-up surveys shall be conducted if periods of construction inactivity exceed one week in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation. 	<p>This mitigation measure shall be included in all construction documents for implementation during construction that occurs between February 15 and September 15.</p> <p>Pre-construction surveys for the presence avian species protected by the Migratory Bird Treaty Act (MBTA) shall be conducted by a qualified biologist 14 days prior to the start of construction, with an additional</p>	<p>City of Bishop and Qualified Biologist and CDFW</p>		

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
	survey 48 hours prior to the start of construction.			

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
<p>Mitigation Measures BIO-04: Avoid and minimize impacts to riparian habitat</p> <ul style="list-style-type: none"> • The following avoidance and minimization efforts and protection measures shall be incorporated into the project construction methods: • Temporary staging areas shall be located in the upland habitat, or in existing developed areas, away from the riparian trees and riparian habitat. • Construction activities shall be confined to the minimal area necessary to safely conduct proposed project activities to the extent possible. • Riparian habitat shall be avoided or preserved to the maximum extent practicable. Emergent (rising out of water) and submergent (covered by water) vegetation shall be retained where feasible. 	Prior to and during Construction	City of Bishop		

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
<p>Mitigation Measures BIO-05: Obtain a Streambed Alteration Agreement from CDFW</p> <p>The City shall obtain a Lake and Streambed Alteration Agreement from CDFW pursuant to Section 1600 et. Seq. of the California Fish and Game Code to authorize impacts to the streams and associated riparian habitat on the project site. The City shall adhere to all conditions and requirements of the Streambed Alteration Agreement.</p>	Prior to Construction.	City of Bishop		

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
<p>Mitigation Measures BIO-06: Obtain Clean Water Act Permits</p> <p>The City shall obtain the appropriate permits from the U.S. Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB) to authorize fill of onsite waters of the U.S. These impacts would require a Section 404 Clean Water Act Nationwide Permit from the USACE and a 401 Water Quality Certification from the RWQCB.</p> <ul style="list-style-type: none"> • The City shall apply for any necessary permits from the USACE, CDFW, and the RWQCB. Permanent impacts, if noted, shall be mitigated in accordance with agency requirements to ensure no net loss of acreage or functions and values of waters of the U.S./State a challenge]. • Temporary impacts to waters of the U.S./State shall be restored to pre-project conditions, and may not require compensatory mitigation. If permanent impacts to waters of the U.S./State occur, the City shall obtain and comply with the necessary permits from the USACE. • Waterways temporarily impacted from dewatering shall be allowed to return to native habitat. Temporary dewatering would be expected to have a minimal effect on the aquatic habitat. No compensatory mitigation is required for temporary impacts to waterways. 	Prior to Construction.	City of Bishop		

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
CULTURAL RESOURCES				
<p>Mitigation Measure CUL-1: Avoid and minimize impacts to previously unknown historic resources</p> <p>It is always possible that ground-disturbing activities during construction may uncover previously unknown, buried historic resources. If buried historic resources are discovered during construction, construction operations shall stop within a 100-foot radius of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resources, including but not limited to excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Historic resources could consist of, but are not limited to, stone, wood, or shell artifacts, structural remains, privies, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and evaluated for significance in terms of CEQA criteria.</p>	<p>Prior to and during construction – this mitigation measure shall be included in all construction documents for implementation during construction.</p>	<p>City of Bishop and Archeologist or Qualified Cultural Resource Monitor and Construction Contractor</p>		

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
<p>Mitigation Measure CUL-2: Avoid and minimize impacts to previously unknown archaeological resources</p> <p>It is always possible that ground-disturbing activities during demolition and construction may uncover previously unknown archaeological resources. If archaeological resources are discovered during demolition or construction, construction operations shall stop within a 100-foot radius of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resources, including but not limited to, excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Archaeological resources could consist of, but are not limited to, stone, bone, wood, or shell artifacts or features, including hearths. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and evaluated for significance in terms of CEQA criteria.</p>	<p>Prior to and during construction – this mitigation measure shall be included in all construction documents for implementation during construction.</p>	<p>City of Bishop and Archeologist or Qualified Cultural Resource Monitor and Construction Contractor</p>		

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
<p>Mitigation Measure CUL-3: Avoid and minimize impacts related to accidental discovery of paleontological resources and/or human remains</p> <p>In the event of the accidental discovery or recognition of any paleontological resources or human remains, CEQA Guidelines § 15064.5; Health and Safety Code § 7050.5; Public Resources Code § 5097.94 and § 5097.98 must be followed. If during project development there is accidental discovery or recognition of any human remains, the following steps shall be taken:</p> <ol style="list-style-type: none"> 1. There shall be no further excavation or disturbance within a 100-foot radius of the potentially human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98. 2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance: 	<p>Prior to and during construction – this mitigation measure shall be included in all construction documents for implementation during construction.</p>	<p>City of Bishop and Archeologist or Qualified Cultural Resource Monitor and Construction Contractor</p>		

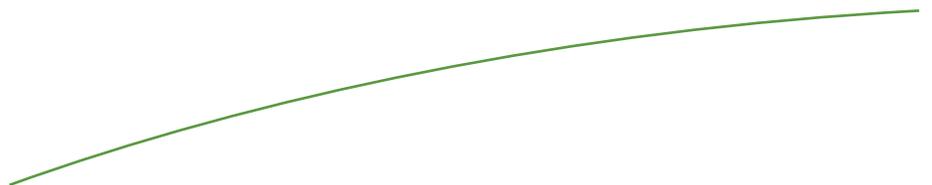
Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
<ul style="list-style-type: none"> • The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission. • The descendant identified fails to make a recommendation. • The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner. <p>For discovery of paleontological resources, ground-disturbing construction work shall cease until the resource has been recovered and/or evaluated by a professional paleontologist. Construction activities shall commence following the recommendations of the professional paleontologist with approval by the City.</p>				

Mitigation Measure	Monitoring/ Mitigation Timing	Reporting/ Responsible Party	Verification of Compliance	
			Initials	Date
TRIBAL CULTURAL RESOURCES				
<p>Mitigation Measure TCR-1: Consultation with Tribes under Assembly Bill 52</p> <p>In accordance with AB-52, the City of Bishop submitted requests for government-to-government consultation on February 23, 2017, to the Cabazon Band of Mission Indians, the Bishop Paiute Tribe, and the Big Pine Paiute Tribe. State law requires tribes to respond within 30 days of the request; as of March 13, 2017, the City has not received input or a request for involvement by the abovementioned tribes.</p>	30 days after initial request from the City (February 23 to March 25)	City of Bishop		



Appendix D

Cultural Resource Assessment



**SECTION 106 CULTURAL RESOURCES ASSESSMENT
SPRUCE, YANEY, HANBY SIDEWALKS PROJECT, BISHOP, CA**

Prepared for:

Triad/Holmes Associates
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Bishop, CA 93514

Prepared by:

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Senior Archaeologist

January 2017

HELIX Project No.: THA-03

Bishop Sidewalks Project
Section 106 Cultural Resources Assessment

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MANAGEMENT SUMMARY

At the request of Triad/Holmes Associates, HELIX Environmental (HELIX) conducted a Cultural Resource Assessment (Assessment) for the Spruce, Yaney, Hanby Sidewalks Project (project) that included record search reviews and a field survey of the proposed Area of Potential Effects (APE) located within Inyo County, California. The components of the Assessment included a record search at the Eastern Information Center (NWIC), a search of the Native American Heritage Commission's (NAHC) Sacred Lands file, and a field survey.

The project is located in a rural setting on the eastern most boundary of the City of Bishop, approximately 0.40-mile east of US Highway 395 (US 395) and approximately 1.10-mile west of the Bishop Airport. The project area is relatively flat and sits at an elevation of approximately 4,135 feet above mean sea level (amsl).

The APE includes an area approximately 116,000 square feet extending north/south from Yaney Street to Pine Street in the eastern portion of the City of Bishop. The project area is comprised of 20-foot wide corridors along E. Yaney Street, Spruce Street, Hanby Avenue, and E. Pine Street. The project area extends outward an additional 20 feet where Spruce Street and Hanby Avenue cross South Fork Bishop Creek. The project will construct 4,400 linear feet of curb, gutter, and sidewalk; about 3,000 feet of on-street 5-foot, Class II bike lane; about 400 feet of new paved path; and street widening at a creek crossing and near live irrigation ditches. The vertical extent of the potential construction impacts consists of grading depths for construction that would extend 6-12 inches below the existing ground surface. The APE includes all areas expected to be disturbed by construction activities and areas where only staging will.

Since the proposed project would affect the waters of the United States, the project proponent must meet the requirements of Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act, and therefore, is seeking a permit from the U.S. Army Corps of Engineers (USACE), Sacramento District. The purpose of this report is to document the presence or absence of any potentially significant historic properties located within the project's APE, and, if historic properties would be affected by the proposed project, to propose recommendations to mitigate the effects, which might include a Memorandum of Agreement (MOA) or other protective measures. Completion of this investigation fulfills the protocols associated with Section 106 of the National Historic Preservation Act (NHPA).

A records search including the APE and a 0.50-mile radius was conducted by staff at the Eastern Information Center, Riverside, on January 6, 2016. Results from the search indicate that no sites or resources have been recorded within the APE. Six resources have been recorded within 0.50-mile of the APE; the closest of which is approximately 500 feet northwest and would not be affected by project activities due to distance. In addition, 11 studies have been conducted within

the 0.50-mile search radius. One of the reports included the project APE in a 1994 Caltrans project extending approximately 130 miles. No resources were identified during the 1994 survey. A search of the Historic Property Data File for Inyo County was negative for historic properties within or immediately adjacent to the APE.

On January 23, 2017, HELIX sent a letter to the NAHC to determine if any sacred sites are listed on its Sacred Lands File (SLF) for the APE. A response was received on January 26, 2017 indicating that the SLF search was negative for the APE. Attached to the response was a list of 10 Native American representatives who might have additional information about the project. Information request letters were sent on January 26, 2017; as of this date, no responses have been received.

HELIX Senior Archaeologist, Carrie D. Wills, surveyed the APE on January 17, 2017. The APE is predominantly flat with poor to fair visibility due to grassy vegetation, large trees, and areas covered with gravel fill material. The majority of the APE consists of road shoulders that have been highly disturbed by pedestrians, traffic, and road maintenance over the years. In some instances, the survey was along watercourses including an unnamed ditch along the south side of E. Yaney and a portion of the S. Fork of Bishop Creek. These areas were closely examined for pre-contact resources, as watercourses are often sensitive for Native American resources and sites. A single, ca 1965 bottle was found partially buried along E. Yaney Street but there was no way to determine if this was its original location or if it had washed in during an episodic flood. No additional historic age materials were found associated with the bottle.

No pre-contact resources were discovered during the field survey. Although an isolated bottle was found, its provenience is unknown and as an isolated find, it has limited data potential. The isolate is not considered a "historical resource" under CEQA or a historic property under Section 106 of the NHPA and therefore does not warrant further consideration or study.

Since no pre-contact or historic resources have been previously recorded within the APE or a 0.50-mile radius and none were discovered during the course of the field survey, project development is not considered to have an effect on historic properties.

As there would be no effect on historic properties from project development, no additional studies or archaeological work is recommended.

1.0 INTRODUCTION

Since implementation of the project will include permitting (Section 404 Permit) required by the USACE, it is necessary to comply with Section 106 of the NHPA. As the lead federal agency for compliance with the NHPA, it is USACE's responsibility to consult with the State Historic Preservation Officer (SHPO) before granting permits, funding, or other authorization of the undertaking. The Section 106 review process normally involves a four-step procedure described in detail in the regulations implementing Section 106 of the NHPA (36 CFR Part 800). Following is a brief summary of the basic tenets of the process:

- Identify and evaluate historic properties in consultation with the SHPO and interested parties.
- Assess the effects of the undertaking on properties that are eligible for inclusion in the NRHP.
- Consult with the SHPO, other agencies, and interested parties to develop an agreement that addresses the treatment of historic properties and notify the Advisory Council on Historic Preservation.
- Proceed with the project according to the conditions of the agreement.

1.1 PROJECT DESCRIPTION

The project will construct 4,400 linear feet of curb, gutter, and sidewalk; about 3,000 feet of on-street 5-foot, Class II bike lane; about 400 feet of new paved path; and street widening at a creek crossing and near live irrigation ditches. The project may also make improvements to an existing dirt parking lot along Spruce Street, north of the ball field. Additional parking may also be developed south of Spruce Street and north of the soccer field.

1.2 AREA OF POTENTIAL EFFECT (APE)

The Bishop Sidewalks Project is located in Inyo County, within the City of Bishop (Figure 1). The APE is depicted on the U.S. Geological Survey (USGS) "Bishop, CA" 7.5-minute quadrangle map (Figure 2). The APE for the proposed project consists of the areas and resources that could potentially be directly or indirectly affected by the proposed project (Figure 3).

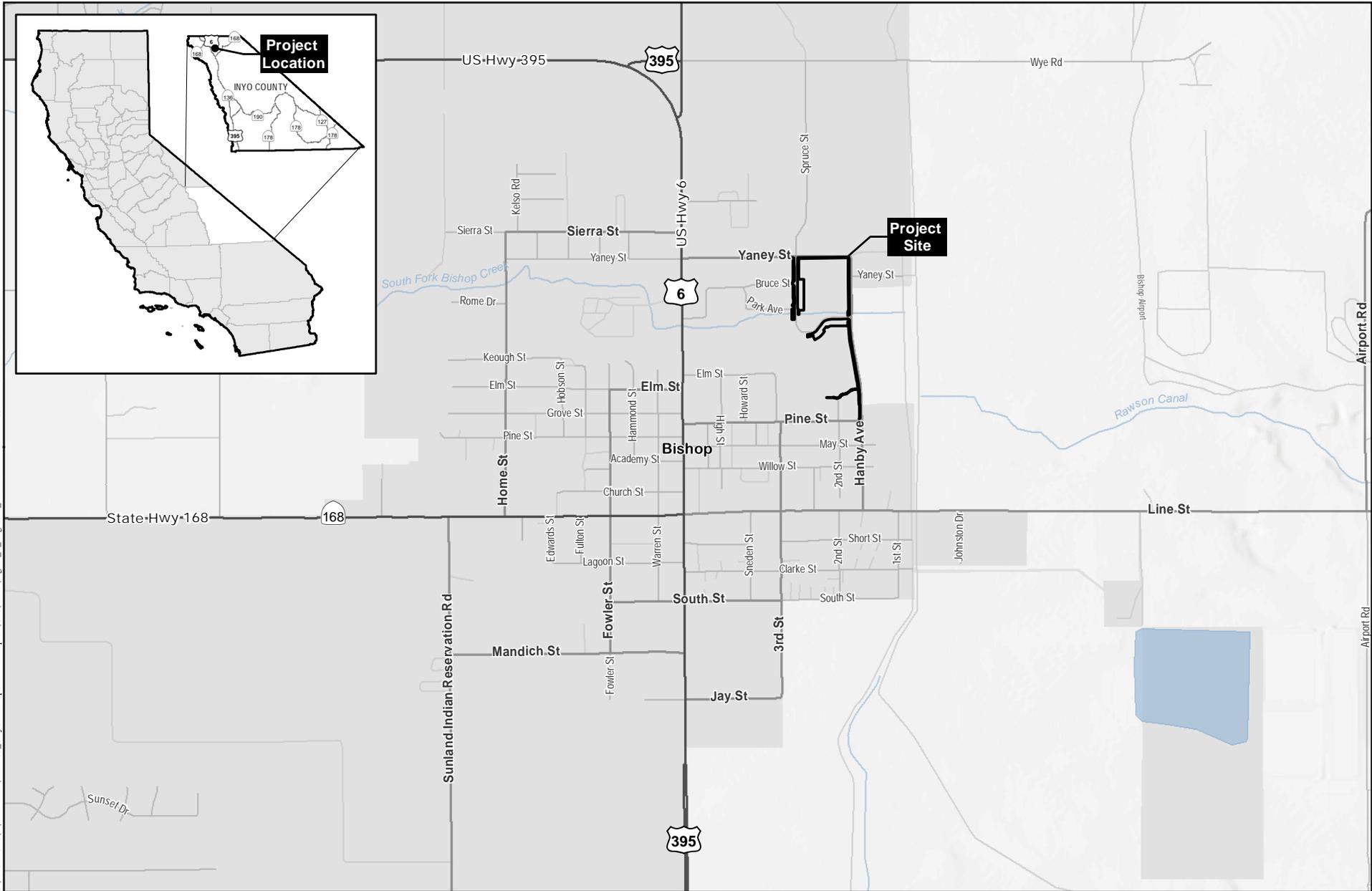
The APE includes an area approximately 116,000 square feet extending north/south from Yaney Street to Pine Street in the eastern portion of the City. The project area comprises a 20-foot wide corridor along the following streets: the east and west sides of Spruce street between the parking lot and E. Yaney Street; the south side of E. Yaney Street between Spruce Street and Hanby

Avenue; the west side of Hanby Avenue from E. Yaney Street to E. Pine Street; the south side of Spruce Street from Hanby Avenue to the parking lot, and; a corridor connecting Hanby Avenue to the northern terminus of N. 2nd Street and the Sterling Heights Assisted Living facility at 369 E. Pine Street. The project area extends outward an additional 20 feet where Spruce Street and Hanby Avenue cross South Fork Bishop Creek. The project will construct 4,400 linear feet of curb, gutter, and sidewalk; about 3,000 feet of on-street 5-foot, Class II bike lane; about 400 feet of new paved path; and street widening at a creek crossing and near flowing irrigation ditches. The project may also make improvements to an existing dirt parking lot along Spruce Street, west of the ball field. Additional parking may also be developed south of Spruce Street and north of the soccer field. The APE was established with reference to planned-for project construction methods, the existing topography, and the current level of local disturbance and included adjacent areas. The vertical extent of the potential construction impacts consists of grading depths for construction that would extend up to 6-12 inches below the existing ground surface. The APE includes all areas expected to be disturbed by construction activities and areas where only staging will occur.

1.3 ASSESSMENT TEAM

HELIX Senior Archaeologist Carrie D. Wills, M.A., RPA, conducted the pedestrian survey and authored this report. Professional qualifications for Ms. Wills can be found in Appendix C.

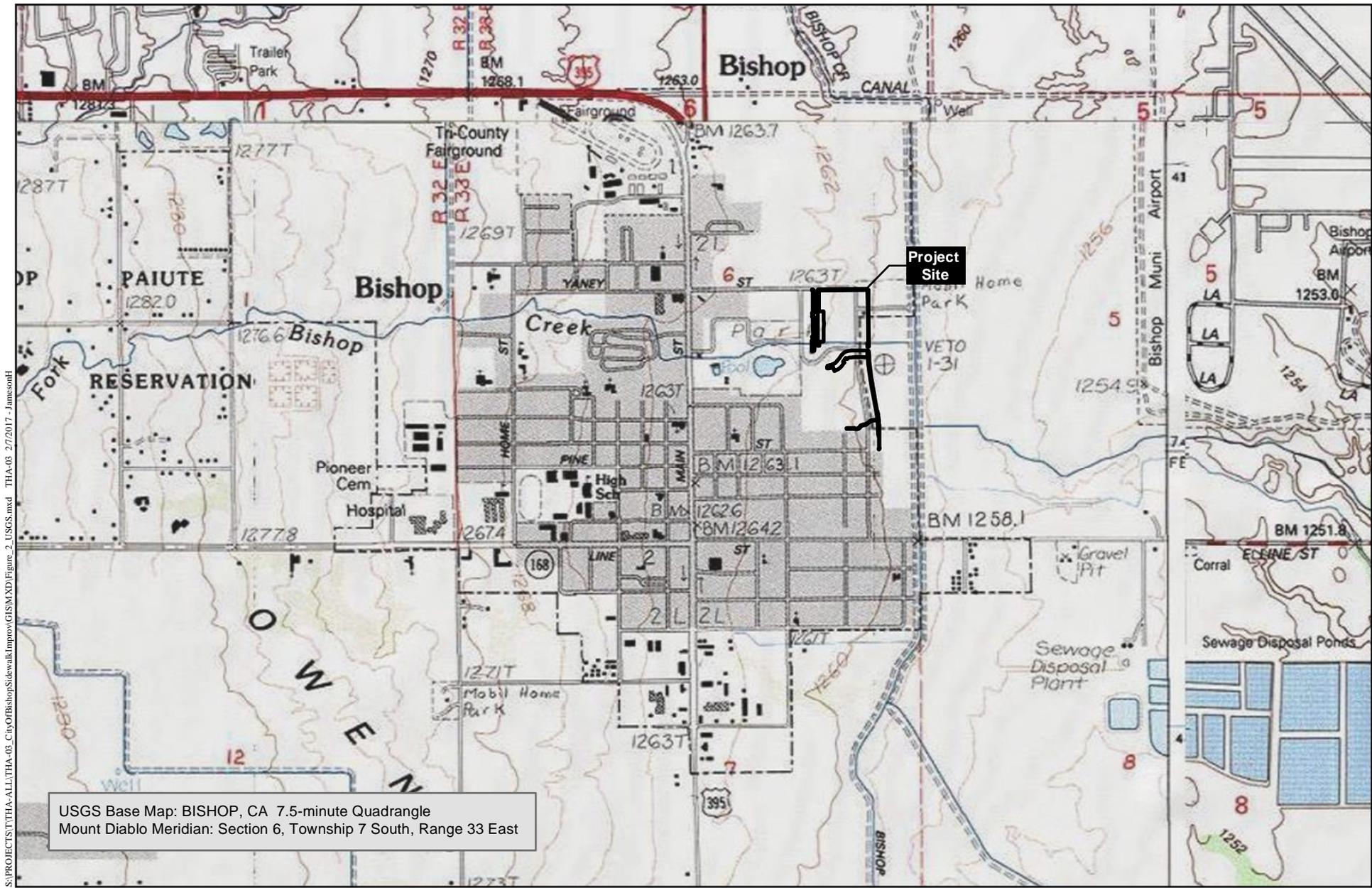
S:\PROJECTS\THA-ALL\THA-03_CityOfBishopSidewalkImprov\GIS\MXD\Figure_1_Regional_Location.mxd THA-03_2/7/2017 - JamesonTH



Regional Location Map

CITY OF BISHOP:
SPRUCE, HANBY, YANEY SIDEWALKS PROJECT

Figure 1



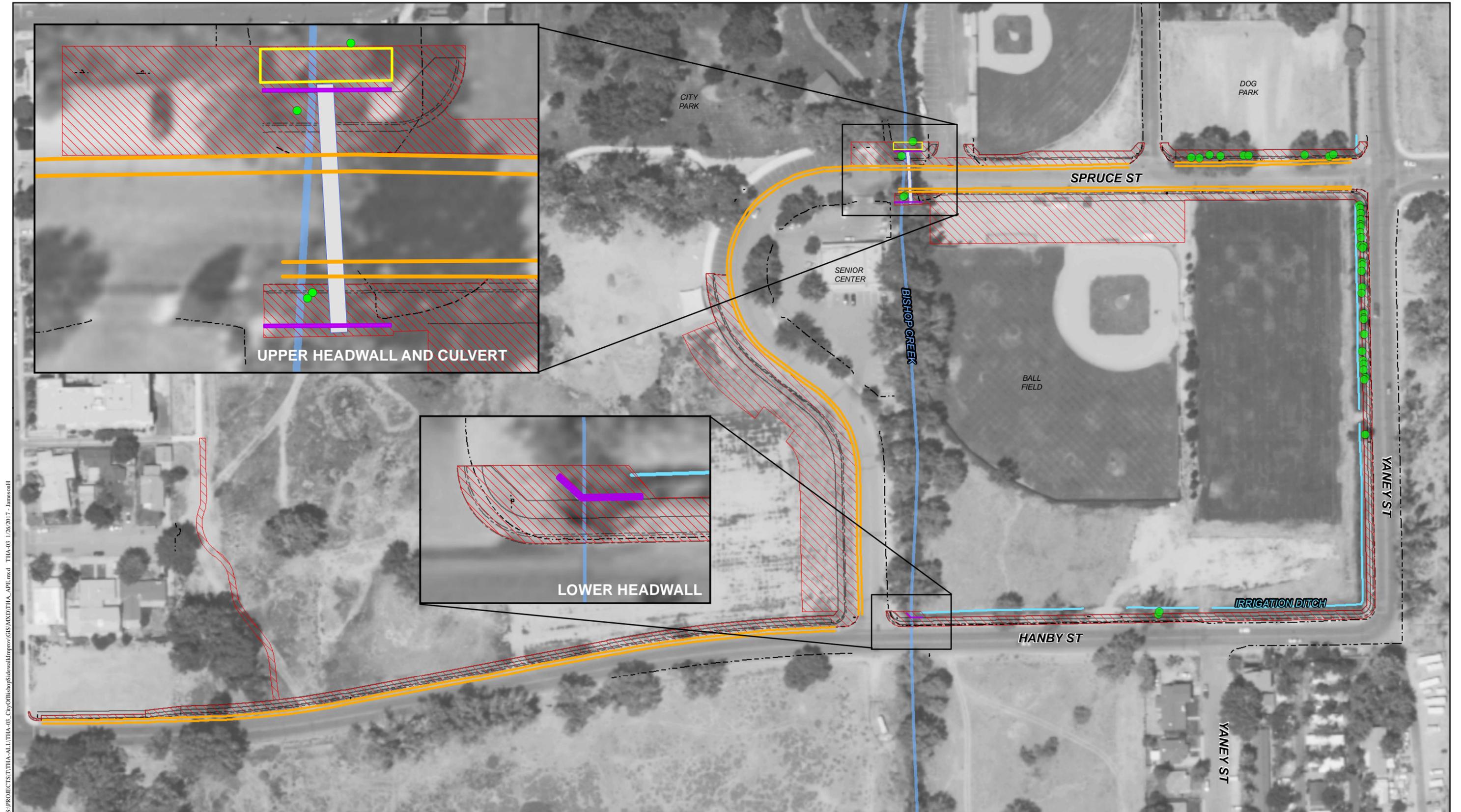
USGS Base Map: BISHOP, CA 7.5-minute Quadrangle
 Mount Diablo Meridian: Section 6, Township 7 South, Range 33 East

USGS Quadrangle Map

CITY OF BISHOP:
 SPRUCE, HANBY, YANNEY SIDEWALKS PROJECT

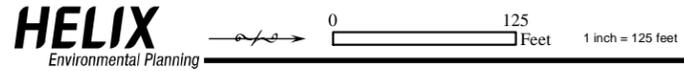
Figure 2

S:\PROJECTS\THA-ALL\THA-03_CityOfBishop\SideWalk\Improv\GIS\MXD\Figure_2_USGS.mxd THA-03_27/2017_JamesonH



S:\PROJECTS\TTHA-ALL\TTHA-08_CityOfBishopSidewalkImprovements\GIS\MXD\TTHA_APE.mxd TTHA-08 1/26/2017 - JameonH

AREA OF POTENTIAL EFFECT	CULVERT	BIKE LANE	SIDEWALK	TREES
BRIDGE	HEADWALL	CREEK	CURB & GUTTER	
	DITCH	EDGE OF PAVEMENT		



HELIX
Environmental Planning

Area of Potential Effect
CITY OF BISHOP:
SPRUCE, HANBY, YANEY SIDEWALKS PROJECT
Figure 1

2.0 CULTURAL SETTING

Following is a brief overview of the prehistory and history of the Bishop area that provides a context in which to understand the background and relevance of sites found in the general APE. This section is not intended to be a comprehensive review of the current resources available; rather, it serves as a general overview.

2.1 PRE-CONTACT BACKGROUND

Although the history of archaeological investigation in California spans more than a century, certain areas of the state were largely excluded by researchers until fairly recently. The Sierra Nevada was one of the last regions in California to have been archaeologically researched. Much remains to be learned about the pre-contact use of the area, and the nature of the archaeological record continues to pose interpretational challenges due to the area being viewed as inhospitable compared to other regions of California. However, despite the fact that the mountains encompass more rugged terrain, the archaeological record of the Sierra Nevada documents human use of the area for thousands of years, with connections to the cultural history of both the east and the west.

The Sierra Nevada Range in eastern California is approximately 640 kilometers (400 miles) long and 80 kilometers (50 miles) wide. It abuts the southern end of the Cascade Range on the north and adjoins the central Transverse Ranges of southern California in the south. The crest of the Sierra attains a maximum elevation of approximately 2,740 meters (9,000 feet) in the north, but gradually increases in elevation to the south, with the highest peaks rising to more than 4,418 meters (14,496 feet). The slope of the Sierra Nevada also varies from west to east, as the western slope rises gradually over the width of the range. Several major river watersheds occur along the western slope, with smaller streams that drain the steep eastern slope, and contribute to the Owens River watershed. The intervening ridges between these watersheds facilitated travel between the steeper eastern slope and the western slope (Hull 2007).

The biotic community along slope of the Sierra Nevada comprises yellow pine forest, lodge pole-fir forest, subalpine forest, and the alpine zone. The east side of the Sierras also supports pinyon-juniper woodlands in the mid-elevations (Sawyer and Keeler-Wolf 1995). In addition to the biotic variation, significant climate patterns have occurred over time. Paleoenvironmental data suggests that severe droughts affected the Sierra Nevada, with evidence of these droughts or drier conditions shown by tree stumps that are currently submerged in high-country lakes and rivers of the eastern Sierra, including Mono Lake and Tenaya Lake (Lindstrom 2000).

Given the geographic position of the Sierra Nevada within California, the culture and history of the native peoples of the region are connected to both California and the Great Basin. Ethnographic data indicate that the native peoples living in the Sierra Nevada were traditionally organized in small village tribelets. While maps of ethnolinguistic territories tend to depict the Sierra Crest as a boundary between the Paiute and their western neighbors, people who wintered in lower elevations of either the eastern or western slopes both likely used the high country, so there was no boundary in a fixed sense. The Owens Valley Paiute and Western Shoshone were located along the eastern slope in the southern Sierra and areas around Bishop. The high Sierra was likely an area of joint use by the Paiute and other occupants living east of the mountains, utilizing areas west of the Sierra Crest, including the Kern Plateau (Thomas et al. 1986).

Based upon broad characterizations for the regional settlement in the Sierra Nevada, it appears that initial sustained occupation as a whole began after ca. 3000 B.C. This time period represents relatively large residential sites occupied (or reoccupied) for substantial periods of time. This pattern may represent a primary hunting focus in many mid- to high-elevation areas. After ca. A.D. 500, the settlement pattern clearly shifts, with residential sites both smaller in size and more ephemeral in terms of quantity of cultural debris. Rather than sustained occupation, this evidence suggests more short-term residential bases and possible limited resource acquisition of foragers rather than collectors (Hull 2007).

People living on the eastern slope used the mountainous environment on a seasonal basis, although the steeper slope of the eastern Sierra provided access to diverse biotic zones without requiring relocation of residential sites for extended periods. High Sierra environments and resources such as pinyon pine nuts were within a day's walk of the base of the mountains. Dwellings at seasonal camps in the high country were likely ephemeral brush shelters, while more substantial structures of bark slabs were constructed for use in the fall and winter. Deer and acorns were particularly important dietary resources for the people of the Sierra Nevada, although the mountains would have provided a great diversity of game and plant foods (Hull 2007).

Sierra people traded with neighboring groups to the east and west for resources not locally available, including food and stone for manufacturing tools. One of the most important items acquired through trade was obsidian. The Owens Valley Paiute and Western Shoshone had access to obsidian quarries located in the areas of Casa Diablo, Mono Craters, and Fish Springs that would have provided a valuable trade resource. Recent intersource geochemical variability studies at the Casa Diablo and Coso volcanic fields has provided for finer distinctions in defining regional obsidian use. Initial results from Sierra archaeological studies suggest acquisition of material was from the nearest available flow (Hughes 1989).

In conclusion, significant occupation of mid- to upper-elevation areas of the central and southern Sierra did not become prevalent until after ca. 3000 cal B.C. There may have been a hunting focus at this time in the upper-elevation areas. Between ca. cal A.D. 500 and 1250, a significant shift in human use of the Sierra Nevada becomes evident, with substantial changes in technology, trade, subsistence, settlement, and population. The record of the latest use of the Sierra after ca. A.D. 1250 to 1500 reflects a return to a more densely settled region, with more intensive use of vegetal foods, such as pinyon nuts in the eastern portion of the Sierra.

2.2 NATIVE AMERICAN BACKGROUND

2.2.1 Paiute

Various tribes of the Paiute Indians lived in and around the Bishop region for generations. Today, the Bishop Paiute (part of Owens Valley Paiute) tribe is a sovereign nation with approximately 2,000 members. The Owens Valley Paiute occupied land in California, primarily along the eastern slope of the Sierra Nevada.

The population of the Paiutes in the early nineteenth century was estimated at approximately 8,000 people, prior to contact with Europeans and other Native groups. However, estimates for the pre-contact populations in California vary substantially. The Bishop Paiute tribe, formerly known as the Paiute-Shoshone Indians, speak both the Timbisha language and Mono language, which are part of the Numic subfamily language group (Sturtevant 1986).

Paiute communities were organized in family bands, and were closely affiliated with the Great Basin cultures and ecologies. In general, the Paiute were nomadic tribes that harvested pine nuts, berries, seeds, and grasses in the spring, summer, and fall, and consumed stored foods with game, fish, and fowl throughout the year. Each tribe or band occupied specific territory, generally centered on a lake or wetland that provided fish and waterfowl. They built dome shelters from willow, grass, and sagebrush and manufactured clay pottery and pipes. Paiute women were highly skilled in the art of basket weaving and created beautiful woven willow baskets that were used as dishes and containers, but were also used for food gathering (Sturtevant 1986).

Relations among the Paiute bands and Shoshone neighbors were generally peaceful, and there was no sharp distinction between the tribes. Obsidian trafficking was important, as major sources were not equally distributed. In addition, some trade of pinenuts for acorns occurred across the Sierra Nevada. Rights to hunt, fish, and gather were exercised within some tribal areas, especially within the Owens Valley and the Central Northern Paiute areas. These rights extended to harvesting wild seed tracts, especially those that were purposefully irrigated.

Contact with Europeans in the early nineteenth century forced smaller groups to migrate to neighboring Native American communities for survival. As Euro-American settlement of the area progressed, several violent incidents occurred, including the Owens Valley Indian War which lasted from 1861-1864. These incidents generally began with a disagreement between the settlers and the Paiute regarding property, retaliation, or counter-retaliation. Many Paiutes also died from introduced infectious diseases such as smallpox.

2.3 HISTORIC BACKGROUND

2.3.1 City of Bishop

It is widely believed that the first European to travel through the Eastern Sierra region was Jedidiah Smith in 1826. Following Smith sometime between 1832 and 1843 was Joseph Walker who traveled the Sierras and passed through the Bishop area on his way to present day Walker Lake. Extending his journey through the Bishop area, in 1845 Walker joined John Fremont and in early 1846 traveled south through Owens Valley in route to Walker Pass. The Eastern Sierra and Owens Valley were surveyed in 1855 by John Hays and Alexey Von Schmidt and subsequently became part of the new state of California.

Prospectors and miners were drawn to the area in hopes of striking it rich from the gold and silver deposits in the Eastern Sierra and western Nevada. The local miners needed food and supplies and owing to the abundance of water, small farms were established and soon thrived in the Bishop area. In 1861, Samuel Bishop decided to try his hand at cattle ranching and moved 500 head of cattle from Fort Tejon to the Owens Valley. Arriving at Bishop Creek on August 22, he established the Saint Francis Ranch approximately three mile west of present day downtown Bishop. Although Samuel Bishop did not remain in the area, by 1862 a small town was established near the ranch and was named Bishop Creek.

Although growth in the Bishop area was not particularly rapid, conflicts between settlers and the local Native Americans escalated until it resulted in the Owens Valley War fought between 1861 and 1864. Local settlers and California Volunteers fought against the Owens Valley Paiutes and their Shoshone and Kawaiisu allies in Owens Valley and an area near the southwest Nevada border. A large number of Owens River Native Americans were removed from the area and taken to Fort Tejon in 1863-1864 marking the end of the war. However, minor skirmishes between local settlers and Native Americans continued sporadically until about 1867.

The town of Bishop continued to grow and in April 1903 was incorporated as the City of Bishop. By 1905, there was a water crisis in the City of Los Angeles as well as the majority of Southern California. Rapid growth was depleting the existing water supplies and agents for the City of Los Angeles were scouting nearby areas to find water sources. Rather quickly, the agents turned to the Owens Valley and recognized it as source of water that could fuel that city's rapid growth. In 1913, in cooperation with the federal government, the City of Los Angeles acquired enough water rights and property to construct an aqueduct

to export water from the Owens Valley to Los Angeles. The acquisition of these rights and export of vast amounts of water led to a battle between the residents of Owens Valley and the City of Los Angeles for control of the valley and its water. The battle raged on for years and was the subject of numerous news articles, books, and movies. Today, the City of Los Angeles Department of Water and Power (DWP) owns the majority of the Owens Valley floor, including areas around and within the City of Bishop. However, some of the local ranchers outside the Bishop City limits were able to resist DWP's efforts to acquire their property and subdivided and developed the area as residential properties and minor commercial developments that surround the city and house most of the people in the Bishop area.

Present day Bishop is within a setting that is world famous for its scenery, hiking, fishing, and rock climbing. Although Bishop is a relatively small city, it is the primary commercial hub within the region and is the only incorporated city in Inyo County. Bishop's primary industries include tourism and recreation, as well as government and related support services. In addition, there are small mining operations at various locations around the city, local agricultural enterprises, and a famous bakery, Schat's that has been in operation since 1907.

3.0 RECORD SEARCHES

3.1.1 Eastern Information Center (EIC) Record Search

On January 6, 2017, a record search was conducted by staff at the EIC, located in Riverside, California. The record search included the project APE and a 0.50-mile radius outside the project APE boundaries. The record search included current inventories of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Inventory of Historical Resources, California State Historic Landmarks, and the California Points of Historical Interest.

No pre-contact or historic resources or sites have been recorded within the project APE. Six resources (two historic, 3 pre-contact, and 1 pre-contact/historic) have been recorded within the 0.50-mile search radius (Table 1). In addition, 11 studies have been conducted within the 0.50-mile search radius (Table 2). One of the studies, IN-0466, included a portion of the southern APE in a large Caltrans project spanning over 130 miles. A search of the Historic Property Data File was negative for historic properties within the APE.

Table 1: Resources within 0.50-mile radius of the APE

Resource P-14-	Pre-Contact/Historic: Description	Author/Year Recorded	Within APE?
005200	Historic: Object	None given	No
006506	Pre-Contact: Site	Epsilon Systems/ 2014	No

Resource P-14-	Pre-Contact/Historic: Description	Author/Year Recorded	Within APE?
008527	Pre-Contact/Historic: Site	Far Western/ 2006	No
008854	Pre-Contact: Other	Hudlow Cultural Resource Associates/2006	No
008855	Pre-Contact: Other	Hudlow Cultural Resource Associates/2006	No
012232	Historic: No description provided	ASM Affiliates/ 2014	No

Table 2: Surveys Conducted within 0.50-mile radius of the APE

Report #IN-	Author, Year	Within APE?
00070	Busby, et al., 1979	No
00210	Adams, 1984	No
00211	Oman, 1984	No
00212	Proctor, 1984	No
00276	Haney, 1992	No
00282	Jenkins, 1986	No
00283	Forrest, 1996	No
00369	Self, 1990	No
00466	Caltrans, 1994	Portion of APE included
00566	Burton, 1999	No
00802	Hudlow, 2006	No
00845	Reno, 2006	No
00948	Switalski, 2009	No
01024	Diamond, et al., 1988	No

Source: EIC-INY-ST-3962; January 6, 2017

3.1.2 NAHC Sacred Lands File Search

A Sacred Lands File (SLF) search request was submitted to the NAHC on January 23, 2017, and a response letter was received from the NAHC on January 26, 2017. The response letter indicated that “a record search of the SLF was completed for the APE with negative results”. The response included a list of 10 Native American representatives who might be able to provide additional information concerning the project APE. On January 27, 2017, HELIX sent

information request letters to each of the tribal members regarding the project. As of this date, no additional project information has been received from any of the tribal representatives.

3.2 PEDESTRIAN SURVEY

HELIX Senior Archaeologist Carrie D. Wills surveyed the project APE on January 17, 2016. The APE is flat with weedy vegetation along the perimeter of the roadways and along the watercourses. The portion of the APE along Yaney Street was flat and adjacent to a small drainage ditch (Photograph 1). Approximately 70 feet east of the intersection of E. Yaney Street and Spruce Street is where the small historic-age bottle was found half buried in the soil. No other resources were found associated with the bottle (Photograph 2). Photograph 3 depicts an overview looking south along Hanby Avenue and Photograph 4 shows an area of fill material typical to the roadside. Photograph 5 is an overview showing the western trajectory of the APE from Hanby Avenue to the existing bike path. The APE would extend east/west (left-right) in front of the large cottonwood trees in the background. A portion of the APE follows the curve along Spruce Street (Photograph 6). Photograph 7 depicts the area west of Spruce Street where the APE crosses Bishop Creek. Photographs 8 and 9 depict the APE along Spruce Street with typical vegetation and road alignment trees and vegetation. Photograph 10 show Bishop Creek at the intersection with Spruce Street.

No historic age or pre-contact resources have been previously recorded within the project APE or within a 0.50-mile radius. No pre-contact resources were found during the survey, however, a single, ca 1965 bottle (isolate) was found but there was no way to determine its provenience. An isolate is not considered a historical resource under CEQA or a historic property under Section 106 of the NHPA and therefore does not warrant further consideration or study. Therefore, the APE is considered to have a very low sensitivity for historic age or pre-contact resources. Since no historic properties were identified within the APE, there would be no historic properties affected by project development.

4.0 SUMMARY AND RECOMMENDATIONS

4.1 SUMMARY

In accordance with Section 106 regulations, HELIX assessed the effects of development for the project APE. A records search was conducted by HELIX at the EIC on January 6, 2017. Results from the search indicate that six resources have been recorded within 0.5 mile of the APE; none are within the APE. In addition, 11 studies have been conducted within the 0.50-mile search radius. One of the reports included the project APE within a large survey report.

On January 23, 2017, HELIX sent a Sacred Lands File search request to the NAHC. On January 26, 2017 a response was received that indicted the findings were negative. Included in the response was a list of 10 Native American representatives who were sent information request letters on January 27, 2017. As of this date, no responses have been received.

HELIX Professional Archaeologist Carrie D. Wills surveyed the APE on January 17, 2017. The APE is a flat with fair to poor visibility. No pre-contact resources were identified during the course of the survey. An isolate (ca 1965 bottle) was found but is not considered a historical resource under CEQA or a historic property under Section 106 of the NHPA and therefore does not warrant further consideration or study.

Since no pre-contact or historic resources have been previously recorded within the APE or a 0.50-mile radius and none were discovered during the course of the field survey, project development would not be considered to have an effect on historic properties.

4.2 RECOMMENDATIONS

As there would be no effect on historic properties from project development, no additional studies or archaeological work is recommended.

Procedures for inadvertent discoveries of human remains and historic resources are provided below.

5.0 INADVERTENT DISCOVERY PROCEDURES

5.1.1 Accidental Discovery of Human Remains

There is always the possibility that ground-disturbing activities during construction may uncover previously unknown buried human remains. Should this occur, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed.

In the event of an accidental discovery or recognition of any human remains, Public Resource Code (PRC) Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American,

the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or

2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:
 - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
 - The descendent identified fails to make a recommendation; or
 - The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

5.1.2 Accidental Discovery of Cultural Resources

As mandated by Section 106 of the NHPA, federal agencies must take into account the effects of their undertakings on historic properties and seek ways to avoid, minimize, or mitigate adverse effects on such properties [36 CFR 800.1(a)]. Likewise, CEQA regulations state, “a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment” (PRC Section 21084.1). “Substantial adverse change” means “demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired” [PRC Section 5020.1(q)].

If an archaeological site qualifies for listing on the NRHP or CR, the provisions in Section 106 and CEQA mandate that the lead agencies further determine whether the proposed undertaking will have an “effect” and “adverse effect” upon the site [36 CFR 800.4(d)(1)]. According to federal regulations, “Effect means alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register” [36 CFR 800.16(i)]. The criteria of adverse effect are:

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative [36 CFR 800.5(a)(1)].

In accordance with PRC Section 21082 and Section 15064.5 of the CEQA Guidelines and [36 CFR 800] of Section 106 of the NHPA , if buried cultural resources are discovered during construction, operations shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The archaeologist shall make recommendations to the lead agency concerning appropriate measures that will be implemented to protect the resources, including but not limited to excavation and evaluation of the finds, consistent with Section 15064.5 of the CEQA Guidelines and 36 CFR 800. Cultural resources could consist of but are not limited to stone, bone, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. In accordance with PRC Section 21082 and Section 15064.5 of the CEQA Guidelines, no further grading or construction activity shall occur within 50 feet of the discovery until the lead agency approves the measures to protect these resources.

In addition, reasonable efforts to avoid, minimize, or mitigate adverse effects to the property will be taken and the State Historic Preservation Officer (SHPO) and Indian tribes with concerns about the property, and the Advisory Council on Historic Preservation (Council) will be notified within 48 hours in compliance with 36 CFR 800.13 (b) (3).

6.0 PERSONNEL

The following persons participated in the preparation of this report:

Carrie D. Wills, M.A. (RPA)

Senior Archaeologist

7.0 REFERENCES

- Hull, Kathleen A. 2007. The Sierra Nevada: Archaeology in the Range of Light. In *California Prehistory: Colonization, Culture, and Complexity*, edited by T. L. Jons and K. A. Klar, pp. 71-82. AltaMira Press, Lanham, MD.
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- Lindstrom, L. 2000. A Contextual Overview of Human Land Use and Environmental Conditions. In *Lake Tahoe Watershed Assessment*, vol. 1, edited by D. D. Murphy and C. M. Knopp, USDA Forest Service, Pacific Southwest Research Station General Technical Report PSW-GTR-175.
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- Thomas, D. H., L. S. A. Pendleton, and S. C. Cappannari. 1986. Western Shoshone. In *Great Basin*, edited by W. L. d'Azevedo, pp. 262-283, *Handbook of North American Indians*, Volume 11. W. C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

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APPENDIX A
PHOTOGRAPHS



Photograph 1: View of APE that is between the trees on the right and the Yaney Street road edge; facing east



Photograph 2: Area where small ca. 1965 bottle was found; facing west



Photograph 3: View of APE along Hanby Avenue; facing south



Photograph 4: View of typical roadside fill material; facing north



Photograph 5: Overview from Hanby Avenue to APE in front of trees; facing south



Photograph 6: View APE along Spruce Street; facing northeast



Photograph 7: Area where APE crosses Bishop Creek; facing south



Photograph 8: View along Spruce Street; facing south



Photograph 9: View of APE along Spruce Street; facing southeast



Photograph 10: View of Bishop Creek at Spruce Street; facing west

APPENDIX B

NATIVE AMERICAN HERITAGE COMMISSION CORRESPONDENCE

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 Fax



January 26, 2017

Carrie Wills
Helix EPI

Sent by: CarrieW@helixepi.com

RE: Bishop Sidewalk Project, Inyo County

Dear Ms. Wills,

Attached is a list of tribes that have cultural and traditional affiliation to the area of potential project effect (APE) referenced above. I suggest you contact all of those listed, if they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult, as may be required under particular state statutes. If a response has not been received within two weeks of notification, the Native American Heritage Commission (NAHC) requests that you follow-up with a telephone call to ensure that the project information has been received.

The NAHC also recommends that project proponents conduct a record search of the NAHC Sacred Lands File (SLF) at the appropriate regional archaeological Information Center of the California Historic Resources Information System (CHRIS) (http://ohp.parks.ca.gov/?page_id=1068) to determine if any tribal cultural resources are located within the area(s) affected by the proposed action. The SFL, established under Public Resources Code section 5094, are sites submitted for listing to the NAHC by California Native American tribes. The SFL, established under Public Resources Code section 5094, are sites submitted for listing to the NAHC by California Native American tribes. A record search of the SLF was completed for the APE referenced above with negative results. Please note records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of tribal cultural resources. A tribe may be the only source of information regarding the existence of tribal cultural resources.

If you receive notification of change of addresses and phone numbers from any of these tribes, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: frank.lienert@nahc.ca.gov

Sincerely,

A handwritten signature in blue ink, appearing to read "Frank Lienert".

Frank Lienert
Associate Governmental Program Analyst

Native American Contacts

January 26, 2017

Big Pine Paiute Tribe of the Owens Valley
Shannon Romero, Chairperson
P. O. Box 700 Owens Valley Paiute
Big Pine , CA 93513
shann_romero@hotmail.com
(760) 938-2003

(976) 938-2942 Fax

Bishop Paiute Tribe
Deston Rogers, Chairperson
50 Tu Su Lane Paiute - Shoshone
Bishop , CA 93514
deston.rogers@bishoppaiute.
(760) 873-3584

(760) 873-4143 Fax

Fort Independence Indian Community of Paiutes
Norman Wilder, Chairman
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This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources assessments for Bishop Sidewalk Project, Inyo County

APPENDIX C

RESUME

Carrie D. Wills, RPA

Senior Archaeologist

Summary of Qualifications

Ms. Wills provides guidance to clients on pre-contact and historical resource issues for small, mid-size and large, multi-component projects. She has extensive experience managing projects that include background research utilizing state, federal and local databases; pre-construction field surveys and assessments; and the formulation of mitigation measures designed to avoid or reduce impacts to cultural resources from project development. She has conducted site evaluations that include testing procedures, data recovery and analysis of resources at both pre-contact and historic sites. Her experience includes evaluating sites, buildings and resources for historical significance, and preparing reports that comply with the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). She has extensive experience coordinating with various agencies including city and county governments, U.S. Army Corps of Engineers (USACE), and the Bureau of Reclamation. In addition, Ms. Wills has provided oversight for SB 18 and AB 52 consultations with Native American tribal representatives and has good working relationships built on mutual trust and respect.

Selected Project Experience

Iron Point Retirement Community (2015 - 2016).

Senior Archaeologist for archaeological studies for a 4.68-acre parcel located in south/central City of Folsom in northeastern Sacramento County. Conducted a record search at the North Central Information Center (NCIC), requested a Sacred Lands File search at the Native American Heritage Commission (NAHC), conducted a field survey and provided the results for the Initial Study Report. Work was conducted for the City of Folsom who was the lead agency.

Cresleigh Ravine (2015 - 2016).

Senior Archaeologist for archaeological studies for the Cresleigh Ravine and Campus at Iron Point Mixed Residential Development project on two parcels (Cresleigh Ravine and Campus at Iron Point) totaling 17.3 acres within the City of Folsom in northeastern Sacramento County. Studies included a record search at the North Central Information Center (NCIC), and a Sacred Lands File search request from the Native American Heritage Commission (NAHC). A field survey was conducted and the findings and mitigation measures were provided in the Initial Study Report. A second field survey was conducted with a representative from the United Auburn Indian Community (UAIC) with negative results. The work was conducted for the City of Folsom Community Development Department and the City of Folsom was the lead agency.

Pique at Iron Point Apartments (2015 - 2016).

Senior Archaeologist for an Initial Study for a 34-acre project in the east/central area of the City of Folsom in northeastern Sacramento County. Studies included a record search at the North Central Information Center (NCIC), historic map review, a Sacred

Education

Master of Arts,
Anthropology,
emphasis
archaeology,
California State
University, Hayward,
1994

Bachelor of Arts,
Anthropology,
California State
University, Hayward,
1989

Registrations/ Certifications

Register of
Professional
Archaeologists
#11138, 1999

Professional Affiliations

Society for Historical
Archaeology
Society for California
Archaeology

Lands File search request from the Native American Heritage Commission (NAHC), a field survey and preparation of the findings for inclusion in the Initial Study Report. Although the field survey was negative, mitigation for inadvertent discoveries were provided. The work was conducted for the City of Folsom who was the lead agency.

Old Library Building (2016 - 2016).

Senior Archaeologist for a 0.91-acre parcel located within the central boundary of the City of Folsom's historic district in northeastern Sacramento County. Archaeological work for the project included a record search at the North Central Information Center (NCIC) in addition to a historic map review. Subject to AB 52, the project required consultation with the United Auburn Indian Community (UAIC) who reported a Traditional Cultural Resource (TRC) near the project. Auger testing was conducted with negative results. The findings of the research and the testing were provided in an Archaeological Assessment Report. The work was conducted for the City of Folsom who was also the lead agency.

Colusa County Airport (2016 - 2016).

Senior Archaeologist for a Section 106 of the National Historic Preservation Act (NHPA) project located within Colusa County. The components of the assessment included a record search at the Northwest Information Center (NWIC), a search of the Native American Heritage Commission's (NAHC) Sacred Lands file, a field survey and preparation of a report following Section 106 guidelines. Work performed for C&S Engineers, potentially under the jurisdiction of the U.S. Army Corps of Engineers (USACE) as the lead agency.

Environmental Assessment Specialists - 2016 (2016 - 2016).

Senior Archaeologist and team leader for telecommunications projects across California that require record searches, map reviews, field surveys, historic building and ground disturbance evaluations, and compliance reports for State Historic Preservation Officer (SHPO) submittal. Coordinated team efforts with archaeologists and architectural historians, primarily for T-Mobile projects. Work conducted as a consultant for EAS, Inc. with the Federal Communications Commission (FCC) as the lead agency.

NID Raw Water PEIR (2016 - 2016).

Senior Archaeologist for a Program Environmental Impact Report (PEIR) to assess the potentially significant environmental effects associated with the implementation of the Nevada Irrigation District's (NID's) Capital Improvement Program (CIP). Tasks included review of previous archaeological reports, sensitivity maps and record searches which served to provide baseline information and recommendations for future projects. Work was conducted for NID which is also the lead agency.

RE Mustang Two - Environmental Consulting (2016 Present).

Senior Archaeologist for Mustang Two Solar Energy Project which would generate alternating current electricity on approximately 1800 acres of land in unincorporated western Kings County. The project included a record search and historic map review at the Southern San Joaquin Valley Information Center (SSJVIC), a Sacred Lands File search request to the Native American Heritage Commission (NAHC) and a field survey of the 1800 acre project area. In addition, the Tachi Yokut tribe was consulted

about specific tasks including construction monitoring and curation. The work was conducted for RE Mustang Two, LLC and Kings County is lead agency.

Fresno VA Parking (2015 - 2015).

Senior Archaeologist for a Section 106 of the National Historic Preservation Act (NHPA) 9-acre project located within the City of Clovis, Fresno County. Tasks included a record search at the Southern San Joaquin Valley Information Center (SSJVIC), a search of the Native American Heritage Commission's (NAHC's) Sacred Lands File, a paleontological record search and a field survey conducted within the project Area of Potential Effects (APE). The findings (negative) were included in a Cultural Resource Impact Prediction Report. The work was conducted for Terracon with the U.S. Department of Veterans Affairs as the lead agency.

Baywood Drive Apartments in Petaluma California (2015 - 2015).

Senior Archaeologist for a 5.5-acre multi-family apartment project located within the City of Petaluma in Sonoma County. Under Section 106 of the National Historic Preservation Act (NHPA) the project included a record search at the Northwest Information Center (NWIC), a search of the Native American Heritage Commission's (NAHC) Sacred Lands file, a paleontological assessment, a field survey of the Area of Potential Effects (APE) and preparation of a report following Section 106 guidelines. Work performed for The Reliant Group, Inc., and the U.S. Army Corps of Engineers (USACE) was the lead agency.

APPENDIX D
REGULATORY FRAMEWORK

REGULATORY FRAMEWORK

Government agencies, including federal, state, and local agencies, have developed laws and regulations designed to protect significant cultural resources that may be affected by projects regulated, funded, or undertaken by the agency. Federal and state laws that govern the preservation of historic and archaeological resources of national, state, regional, and local significance include the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), and the California Environmental Quality Act (CEQA). In addition, laws specific to work conducted on federal lands includes the Archaeological Resources Protection Act (ARPA), the American Antiquities Act, and the Native American Graves Protection and Repatriation Act (NAGPRA).

The following Federal or CEQA criteria were used to evaluate the significance of potential impacts on cultural resources for the proposed project. An impact would be considered significant if it would affect a resource eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CR), or if it is identified as a unique archaeological resource.

FEDERAL-LEVEL EVALUATIONS

Federal agencies are required to consider the effects of their actions on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings under NEPA § 106. Federal agencies are responsible for initiating NEPA § 106 review and completing the steps in the process that are outlined in the regulations. They must determine if NHPA § 106 applies to a given project and, if so, initiate review in consultation with the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO). Federal agencies are also responsible for involving the public and other interested parties. Furthermore, NHPA § 106 requires that any federal or federally assisted undertaking, or any undertaking requiring federal licensing or permitting, consider the effect of the action on historic properties listed in or eligible for the NRHP. Under the Code of Federal Regulations (CFR), 36 CFR Part 800.8, federal agencies are specifically encouraged to coordinate compliance with NEPA § 106 and the NEPA process. The implementing regulations “Protection of Historic Properties” are found in 36 CFR Part 800. Resource eligibility for listing on the NRHP is detailed in 36 CFR Part 63 and the criteria for resource evaluation are found in 36 CFR Part 60.4 [a-d].

The NHPA established the NRHP as the official federal list for cultural resources that are considered important for their historical significance at the local, state, or national level. To be determined eligible for listing in the NRHP, properties must meet specific criteria for historic significance and possess certain levels of integrity of form, location, and setting. The criteria for

listing on the NRHP are significance in American history, architecture, archaeology, engineering, and culture as present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. In addition, a resource must meet one or all of these eligibility criteria:

- a.) Is associated with events that have made a significant contribution to the broad patterns of our history.
- b.) Is associated with the lives of persons significant in our past.
- c.) Embodies the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values, represent a significant and distinguishable entity whose components may lack individual distinction.
- d.) That have yielded, or may be likely to yield, information important in prehistory or history.

Criterion D is usually reserved for archaeological resources. Eligible properties must meet at least one of the criteria and exhibit integrity, measured by the degree to which the resource retains its historical properties and conveys its historical character.

Criteria Considerations

Ordinarily cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions or used for religious purposes, buildings that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the NRHP. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

- a.) A religious property deriving primary significance from architectural or artistic distinction or historical importance.
- b.) A building or structure removed from its original location but which is primarily significant for architectural value, or which is the surviving structure most importantly associated with a historic person or event.
- c.) A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building associated with his or her productive life.

- d.) A cemetery that derives its primary importance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events.
- e.) A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived.
- f.) A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance.
- g.) A property achieving significance within the past 50 years if it is of exceptional importance.

THRESHOLDS OF SIGNIFICANCE

In consultation with the SHPO/THPO and other entities that attach religious and cultural significance to identified historic properties, the Agency shall apply the criteria of adverse effect to historic properties within the Area of Potential Effect (APE). The Agency official shall consider the views of consulting parties and the public when considering adverse effects.

Federal Criteria of Adverse Effects

Under federal regulations, 36 CFR Part 800.5, an adverse effect is found when an undertaking alters, directly or indirectly, any of the characteristics of a historic property that qualifies the property for inclusion in the NRHP in a manner that diminishes the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration will be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for listing in the NRHP. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative.

According to 36 CFR Part 800.5, adverse effects on historic properties include, but are not limited to, those listed below:

- Physical destruction of or damage to all or part of the property.
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that

is not consistent with the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties per 36 CFR Part 68 and applicable guidelines.

- Removal of the property from its historic location.
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance.
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.
- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization.
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long term preservation of the property's historic significance.

If Adverse Effects Are Found

If adverse effects are found, the agency official shall continue consultation as stipulated at 36 CFR Part 800.6. The agency official shall consult with the SHPO/THPO and other consulting parties to develop alternatives to the undertaking that could avoid, minimize, or mitigate adverse effects to historic resources. According to 36 CFR Part 800.14(d), if adverse effects cannot be avoided then standard treatments established by the ACHP may be used as a basis for Memorandum of Agreement (MOA).

According to 36 CFR Part 800.11(e), the filing of an approved MOA, and appropriate documentation, concludes the § 106 process. The MOA must be signed by all consulting parties and approved by the ACHP prior to construction activities. If no adverse effects are found and the SHPO/THPO or the ACHP do not object within 30 days of receipt, the agencies' responsibilities under § 106 will be satisfied upon completion of report and documentation as stipulated in 36 CFR Part 800.11. The information must be made available for public review upon request, excluding information covered by confidentiality provisions.

STATE-LEVEL EVALUATION PROCESSES

An archaeological site may be considered an historical resource if it is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California per PRC § 5020.1(j) or if it meets the criteria for listing on the CR per California Code of Regulations (CCR) at Title 14 CCR § 4850.

The most recent amendments to the CEQA guidelines direct lead agencies to first evaluate an archeological site to determine if it meets the criteria for listing in the CR. If an archeological site is an historical resource, in that it is listed or eligible for listing in the CR, potential adverse impacts to it must be considered as stated in PRC §§ 21084.1 and 21083.2(l). If an archeological site is considered not to be an historical resource, but meets the definition of a “unique archeological resource” as defined in PRC § 21083.2, then it would be treated in accordance with the provisions of that section.

With reference to PRC § 21083.2, each site found within a project area will be evaluated to determine if it is a unique archaeological resource. A unique archaeological resource is described as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

As used in this report, “non-unique archaeological resource” means an archaeological artifact, object, or site that does not meet the criteria for eligibility for listing on the CR, as noted in subdivision (g) of PRC § 21083.2. A non-unique archaeological resource requires no further consideration, other than simple recording of its components and features. Isolated artifacts are typically considered non-unique archaeological resources. Historic structures that have had their superstructures demolished or removed can be considered historic archaeological sites and are evaluated following the processes used for prehistoric sites. Finally, OHP recognizes an age threshold of 45 years. Cultural resources built less than 45 years ago may qualify for consideration, but only under the most extraordinary circumstances.

Title 14, CCR, Chapter 3 § 15064.5 is associated with determining the significance of impacts to archeological and historical resources. Here, the term historical resource includes the following:

1. A resource listed in, or determined eligible by the State Historical Resources Commission, for listing in the CR (PRC § 5024.1; Title 14 CCR, § 4850 et seq.).
2. A resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in an historical resource survey meeting the PRC § 5024.1(g) requirements, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript, which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be historically significant if the resource meets the criteria for listing on the California Register of Historical Resources (PRC § 5024.1; Title 14 CCR § 4852) including the following:
 - A. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
 - B. Is associated with the lives of persons important in our past.
 - C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
 - D. Has yielded, or may be likely to yield, information important in prehistory or history.

Typically, archaeological sites exhibiting significant features qualify for the CR under Criterion D because such features have information important to the prehistory of California. A lead agency may determine that a resource may be a historical resource as defined in PRC §§ 5020.1(j) or 5024.1 even if it is:

- Not listed in or determined to be eligible for listing in the CR.

- Not included in a local register of historical resources pursuant to PRC § 5020.1(k).
- Identified in an historical resources survey per PRC § 5024.1(g).

Threshold of Significance

If a project will have a significant impact on a cultural resource, several steps must be taken to determine if the cultural resource is a “unique archaeological resource” under CEQA. If analysis and/or testing determine that the resource is a unique archaeological resource and therefore subject to mitigation prior to development, a threshold of significance should be developed. The threshold of significance is a point where the qualities of significance are defined and the resource is determined to be unique under CEQA. A significant impact is regarded as the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource will be reduced to a point that it no longer meets the significance criteria. Should analysis indicate that project development will destroy the unique elements of a resource; the resource must be mitigated for under CEQA regulations. The preferred form of mitigation is to preserve the resource in-place, in an undisturbed state. However, as that is not always possible or feasible, appropriate mitigation measures may include, but are not limited to:

1. Planning construction to avoid the resource.
2. Deeding conservation easements.
3. Capping the site prior to construction.

If a resource is determined to be a “non-unique archaeological resource,” no further consideration of the resource by the lead agency is necessary.

TRIBAL CONSULTATION

The following serves as an overview of the procedures and timeframes for the Tribal Consultation process, for the complete Tribal Consultation Guidelines, please refer to the State of California Office of Planning and Research web site.

Prior to the amendment or adoption of general or specific plans, local governments must notify the appropriate tribes of the opportunity to conduct consultation for the purpose of preserving or mitigating impacts to cultural places located on land within the local government’s jurisdiction that is affected by the plan adoption or amendment. The tribal contacts for this list maintained by the NAHC and is distinct from the Most Likely Descendent (MLD) list. It is suggested that local governments send written notice by certified mail with return receipt requested. The tribes have 90 days from the date they receive notification to request consultation. In addition, prior to adoption or amendment of a general or specific plan, local

government must refer the proposed action to tribes on the NAHC list that have traditional lands located within the city or county's jurisdiction. Notice must be sent regardless of prior consultation. The referral must allow a 45-day comment period.

In brief, notices from government to the tribes should include:

- A clear statement of purpose.
- A description of the proposed general or specific plan, the reason for the proposal, and the specific geographic areas affected.
- Detailed maps to accompany the description.
- Deadline date for the tribes to respond.
- Government representative(s) contact information.
- Contact information for project proponent/applicant, if applicable.

The basic schedule for this process is:

- 30 days: time NAHC has to provide tribal contact information to the local government; this is recommended not mandatory.
- 90 days: time tribe has to respond indication whether or not they want to consult. Note: tribes can agree to a shorter timeframe. In addition, consultation does not begin until/unless requested by the tribe within 90 days of receiving notice of the opportunity to consult. The consultation period, if requested, is open-ended. The tribes and local governments can discuss issues for as long as necessary, or productive, and need not result in agreement.
- 45 days: time local government has to refer proposed action, such as adoption or amendment to a general plan or specific plan, to agencies, including the tribes. Referral required even if there has been prior consultation. This opens the 45-day comment period.
- 10 days: time local government has to provide tribes of notice of public hearing.