CITY OF PLACERVILLE

CLAY STREET HANGTOWN CREEK BRIDGE REPLACEMENT PROJECT

DRAFT ENVIRONMENTAL IMPACT REPORT

State Clearinghouse No. 2014082024

Prepared for:

CITY OF PLACERVILLE
3101 CENTER STREET
PLACERVILLE, CA 95667

Prepared by:

Michael Baker INTERNATIONAL

2729 PROSPECT PARK DRIVE, SUITE 220
RANCHO CORDOVA, CA 95670

MARCH 2018

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APPENDICES *Available on CD and at: https://www.cityofplacerville.org/environmental-documents*

LIST OF TABLES

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AB	Assembly Bill
ACM	asbestos-containing material
ADA	Americans with Disabilities Act
amsl	above mean sea level
ASTM	American Society for Testing and Materials
BMP	best management practice
BP	years before present
CAA	Clean Air Act (federal)
CAAQS	California ambient air quality standards
CalEEMod	California emissions estimator
CalEPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CIP	Capital Improvement Program
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
CRHR	California Register of Historical Resources
CRLF	California red-legged frog
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DOT	US Department of Transportation
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
EDCAQMD	El Dorado County Air Quality Management District
EDCTC	El Dorado County Transportation Commission

EIR	environmental impact report
EPA	US Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FGC	Fish and Game Code
FHWA	Federal Highway Administration
GHG	greenhouse gas
HAER	Historic American Engineering Record
HAP	hazardous air pollutant
HBP	Highway Bridge Program
IPCC	Intergovernmental Panel on Climate Change
ISA	initial site assessment
LBP	lead-based paint
LIDAR	light detection and radar
lbs/day	pounds per day
LOS	level of service
MBTA	Migratory Bird Treaty Act
MCAB	Mountain Counties Air Basin
MMRP	mitigation monitoring and reporting program
MND	mitigated negative declaration
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NOA	naturally occurring asbestos
NOC	Notice of Completion
NOP	Notice of Preparation
NO_2	nitrogen dioxide
NOx	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
N_2O	nitrous oxide
OSHA	Occupational Safety and Health Administration
OHP	Office of Historic Preservation
O_3	ozone
PCB	polychlorinated biphenyl
PM	particulate matter

ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
RCRA	Resources Conservation and Recovery Act
REC	recognized environmental condition
RMS	root mean square
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SB	Senate Bill
SIP	State Implementation Plan
SO_2	sulfur dioxide
SWMP	Storm Water Management Plan
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TPZ	tree protection zone
UAOD	United Ancient Order of Druids
US 50	US Highway 50
USACE	US Army Corps of Engineers
USC	United States Code
USFWS	US Fish and Wildlife Service
VOC	volatile organic compound
Writ	Peremptory Writ of Mandate

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EXECUTIVE SUMMARY

ES.1 PURPOSE AND SCOPE OF THE ENVIRONMENTAL IMPACT REPORT

This Draft Environmental Impact Report (EIR) analyzes the potential physical environmental effects associated with construction and operation of the Clay Street Hangtown Creek Bridge Replacement Project (proposed project) pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code Sections 21000–21177).

The EIR also satisfies the requirements of a Peremptory Writ of Mandate (Writ) issued by the El Dorado County Superior Court in February 2012 for the Clay Street/Cedar Ravine Realignment and Clay Street Bridge at Hangtown Creek Replacement Project, for which the City of Placerville previously prepared a Mitigated Negative Declaration (MND). One project alternative previously considered in the MND included: a roundabout at the Main Street/Clay Street/Cedar Ravine Road intersection, supporting the City's Main Street Streetscape Design Development Plan adopted in 2006; replacement of the Clay Street Hangtown Creek Bridge; realignment of Clay Street, resulting in reconfiguration of the Ivy House parking lot into two separate lots; and construction of the El Dorado Trail.

Subsequently, due to public opposition, the roundabout was removed as an alternative for the project on July 8, 2014, by City Council resolution. In November 2014, Placerville voters approved Measure K that amended the City's General Plan to prohibit the construction of roundabouts in the city limits unless approved by voters. On January 27, 2015, City Council directed staff to proceed with the design of the project with the preferred alternative consisting of a four-way stop- or signal-controlled intersection at Main Street/Cedar Ravine/Clay Street, including the realignment of Clay Street. Additionally, the El Dorado Trail portion of the project evaluated in the prior MND has been completed as a separate and independent project. All other elements of the originally proposed project are similar to those evaluated in the prior MND.

ES.2 PROJECT CHARACTERISTICS

PROJECT LOCATION

The proposed project site is located at the east end of an existing commercial area in the downtown historic area of Placerville, El Dorado County (**Figure ES-1**). The proposed project site includes the bridge over Hangtown Creek on Clay Street and the intersections of Main Street with Cedar Ravine Road and Main Street with Clay Street, adjacent to the Ivy House parking lot between Main Street and Hangtown Creek, owned by the City.

BACKGROUND

The existing Clay Street Bridge over Hangtown Creek is located within the City's right-of-way. The most recent Caltrans Bridge Inspection Report (BIR) dated July 26, 2016 lists a sufficiency rating (SR) of 62.6 out of 100. The bridge was previously flagged by the California Department of Transportation (Caltrans) as Functionally Obsolete because it is too narrow for the amount of daily traffic using the bridge. While a SR of less than 80 qualifies the bridge for rehabilitation, Caltrans' Highway Bridge Program (HBP) guidelines require concurrence from Caltrans Structures Local Assistance (SLA) for replacement when the SR is greater than 50. Because of the need to raise the existing bridge to meet the hydraulic requirements outlined in Caltrans' Highway Design Manual (HDM), the additional width required to meet minimum American Association of State Highway and Transportation Officials (AASHTO) standards for the projected Average Daily Traffic (ADT), and the age of the existing bridge, the City determined that full replacement of the

bridge was the most feasible option. The City provided justification to SLA demonstrating that replacement is the most feasible option for the project, to which SLA concurred with the finding.

Given the close proximity of the Clay Street and Cedar Ravine Road intersections, traffic queues from the three-way stop control at Main Street/Cedar Ravine Road routinely extend through the Clay Street intersection, limiting and inducing delay to eastbound Main Street travelers attempting to turn left onto Clay Street. This restriction effectively blocks southbound Clay Street travelers from turning east onto Main Street as well. As a result, southbound vehicles on Clay Street are often operationally restricted from turning left onto Main Street during the PM peak period. In addition, some motorists wishing to travel northbound on Clay Street cut through the Ivy House parking lot to avoid congestion on Main Street. Future traffic conditions are projected to be heavily congested on Main Street.

The purpose of the proposed project is to remove the functionally obsolete existing concrete bridge and replace it with a new concrete bridge designed to current structural and geometric standards that will provide adequate, reliable, and safe service for vehicular, pedestrian, and bicycle traffic.

PROJECT SUMMARY

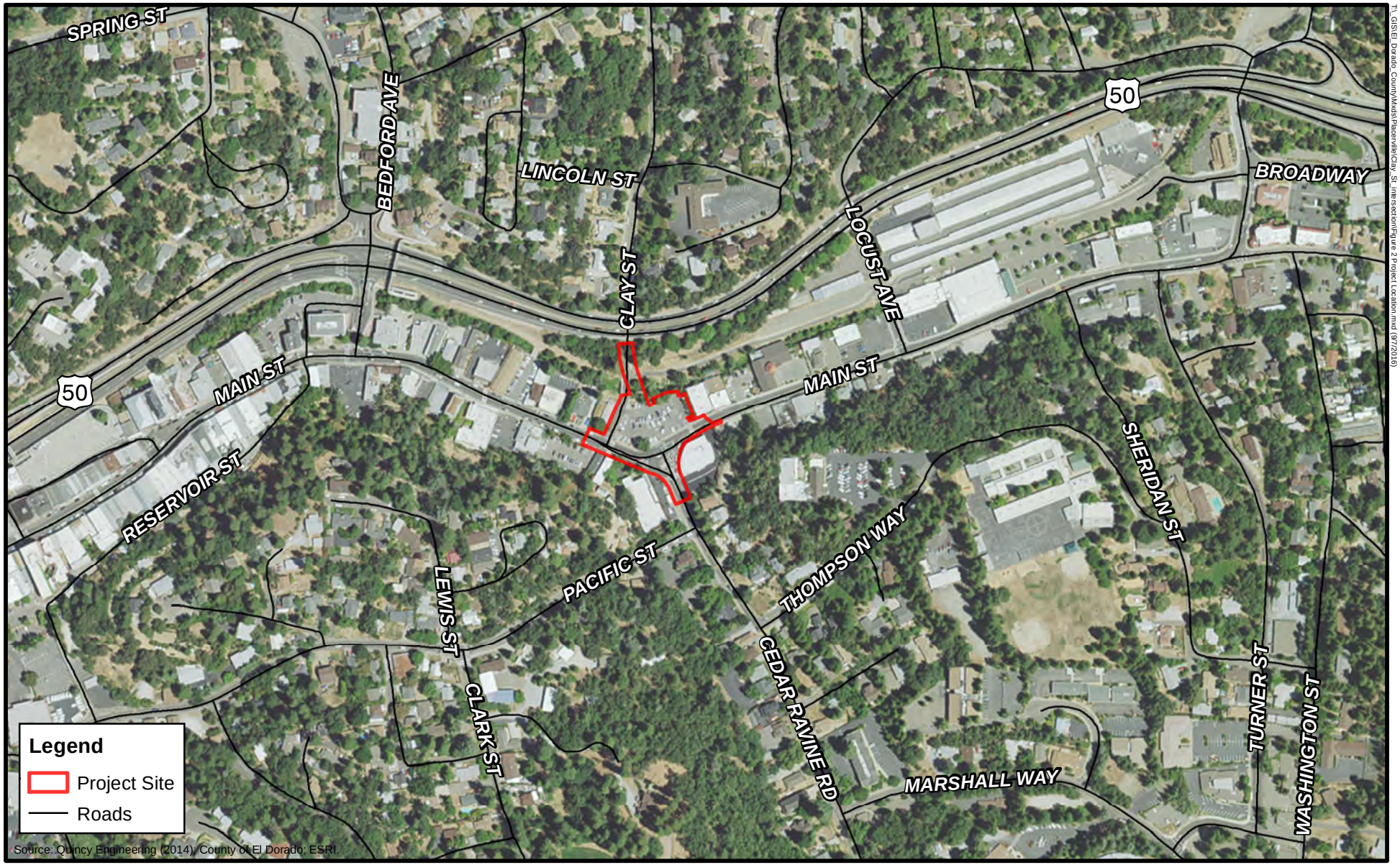
The project proposes the following improvements. **Figure ES-2** is a site plan that shows the locations of the bridge replacement and roadway realignment, lane configurations and striping, and pedestrian/bicycle lane improvements, and **Figure ES-3** is a visual simulation that provides an aerial overview of the proposed project.

- Replace the existing single-lane bridge over Hangtown Creek at Clay Street to increase public safety and usability. The proposed new bridge would be two lanes, approximately 37 feet long and a minimum width of 43.5 feet. The bridge barrier would meet safety standard height and have an architectural treatment to stay in character with the surrounding area and downtown historic area theme. The new bridge deck would be approximately 2 feet higher than the existing bridge structure.

- Realign Clay Street between US Highway 50 and Main Street as needed to accommodate the new bridge structure, bringing Clay Street into the intersection with Cedar Ravine Road at Main Street to form a new four-leg intersection with either all-way stop or signal control.

- Reconstruct the intersection of Main Street, Cedar Ravine Road, and Clay Street. Intersection modifications would require conforming to the existing pavement and would extend along Main Street in both directions and down Cedar Ravine Road. In conjunction with the Clay Street realignment component of the proposed project, the historic Druid Monument located at the intersection of Cedar Ravine Road and Main Street would be moved approximately 45 feet west from its current location to a new pedestrian refuge island on Main Street at the intersection of Cedar Ravine Road.

- Reconfigure the Ivy House parking lot into two separate lots to accommodate the realigned Clay Street. The lots would be owned and maintained by the City. Ingress and egress locations to the parking lots will be limited to Clay Street only; no access would be provided from Main Street.



T:_GIS\El Dorado County\Mxds\Placerville\Clay_St_Intersection\Figure 2 Project Location.mxd (9/7/2016)

ES-1

Project Location

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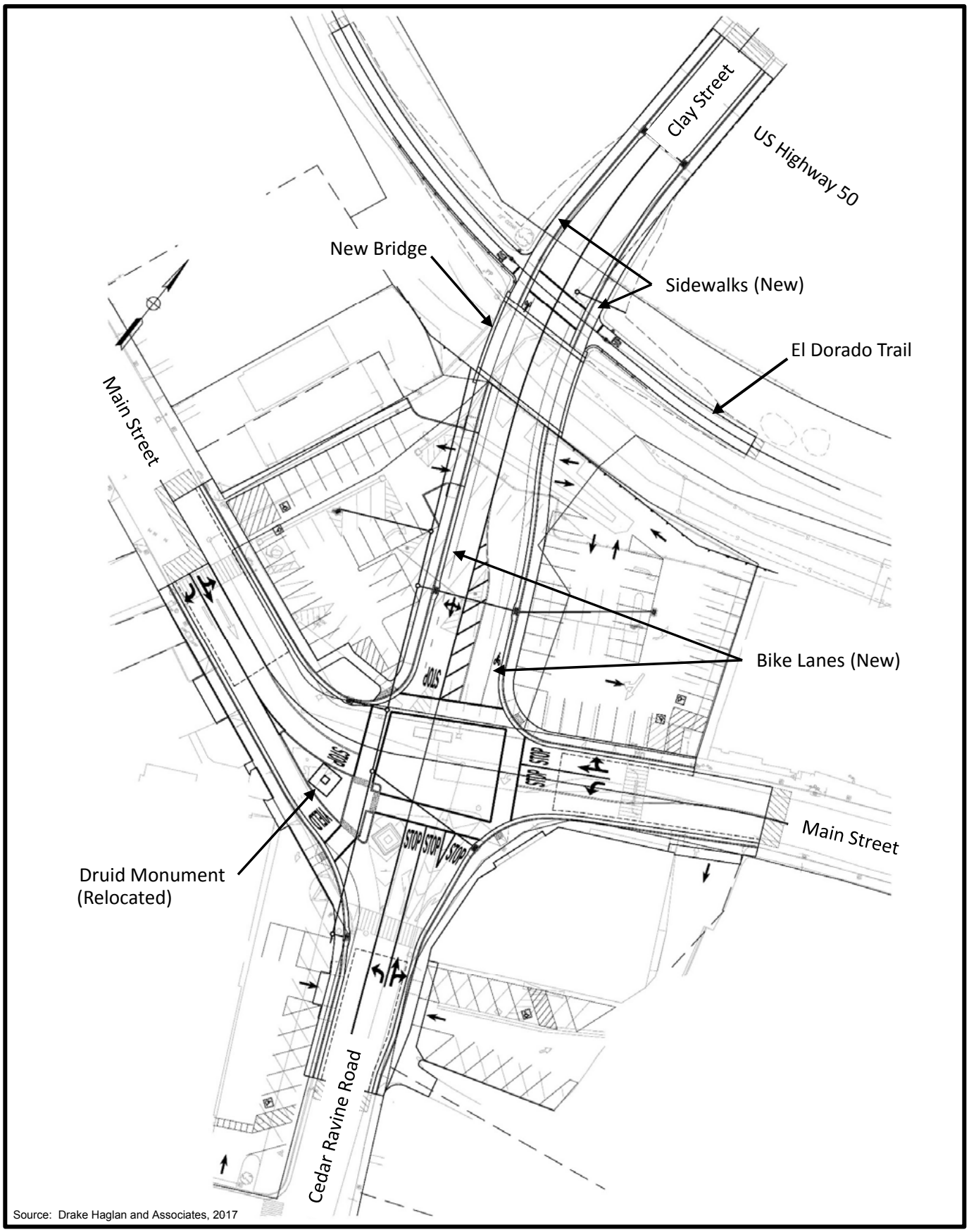
T:_CS\Work\Placerville, City of\Clay Street\Figures



Source: Drake Haglan and Associates, 2017

Not To Scale

FIGURE ES-2
Site Plan

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FIGURE ES-3
Aerial Overview of Proposed Project

Michael Baker
INTERNATIONAL

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Construction Considerations

Stream flow in Hangtown Creek and flows in the Cedar Ravine drainage culvert would be diverted into pipe(s) through the active construction zone. The diversion would be established in conformance with City and County specifications as well as California Department of Fish and Wildlife, Central Valley Regional Water Quality Control Board, US Army Corps of Engineers, and US Fish and Wildlife Service regulatory requirements.

Utilities at the project site include overhead and underground electrical and communications, a 6-inch water line, sanitary sewer, and storm drain facilities. The Cedar Ravine drainage culvert outlets at the creek and is integral with the south abutment/retaining wall of the existing bridge. This outlet would be reconstructed after removal of the existing bridge. Permanent relocations of the waterline and storm drain facilities would be required. Temporary relocation of overhead utilities would be required during construction. Modification of the Cedar Ravine drainage culvert would be required as part of the project and is likely to include reconstruction of portions of the culvert under Main Street and the Ivy House parking lot.

The project is currently not anticipated to require the acquisition of any permanent right-of-way from private property owners, but this will not be fully known until final design occurs. Modifications to the existing Freeway Maintenance Agreement between the City and Caltrans will be required to accommodate the change in geometry of Clay Street within the State's right-of-way. Temporary construction easements or Permits to Enter and Construct will be required from adjacent property owners in order to construct and restripe portions of the parking lots surrounding the project. The project would encroach into the State's right-of-way during the construction phase, which would require an encroachment permit from Caltrans.

During construction, Clay Street would be closed between Main Street and just north of the existing US 50 overpass. Traffic accessing Clay Street north of US 50 would be detoured via Bedford Avenue to Coleman Street or Mosquito Road to Clay Street. The total detour length is approximately 1 mile. Access to residences along Clay Street would be maintained at all times during construction. The portion of the El Dorado Trail that crosses Clay Street and a short distance to the east and west would also be closed temporarily, but a detour would be available at Locust Avenue (to Main Street) and at Bedford Avenue (to Main Street).

Construction is expected to begin in 2020 and take approximately 9 to 12 months to complete.

Permits and Approvals

The following federal and state agency permits and approvals would be required for the project:

- California Department of Fish and Wildlife (Fish and Game Code Section 1601 Streambed Alteration Agreement)
- California Department of Transportation (Encroachment Permit and Funding)[1]

[1] Because the proposed project is federally funded, Caltrans, as the delegated federal oversight agency, is responsible for complying with the requirements of the National Environmental Policy Act (NEPA), including necessary environmental review.

- Central Valley Regional Water Quality Control Board (Clean Water Act Section 401 Water Quality Certification)
- State Water Resources Control Board (Construction General Permit Notice of Intent)
- US Army Corps of Engineers (Clean Water Act Section 404 Wetland Permit)

ES.3 AREAS OF CONCERN AND POTENTIAL ISSUES TO BE RESOLVED

In accordance with Section 15082 of the CEQA Guidelines, the City of Placerville prepared and distributed a Notice of Preparation (NOP) for this project that was circulated for public review on August 11, 2014. The NOP included a summary of probable effects on the environment from the implementation of the project.

Written comments received in response to the NOP were considered in the preparation of the Draft EIR. The complete text of the NOP and NOP comments are included in **Appendix A** in the Draft EIR. Table A-1 at the end of Appendix A in the Draft EIR summarizes the comments and where they are addressed in the Draft EIR. Areas of concern, potential issues raised to date regarding the proposed project through the NOP process, and topics the City has determined should be evaluated in the Draft EIR include the following issue areas:

- Potential for project to increase traffic congestion
- Potential loss of parking
- Potential impacts on visual quality
- Potential loss of historic resources
- Consistency with existing land use plans
- Impacts on trees and vegetation
- Soil contamination
- Potential for urban decay
- Growth inducement potential
- Project objectives
- Greenhouse gas emissions
- Noise
- Hydrology and water quality

As noted in subsection ES.1, above, this Draft EIR also satisfies the requirements of a Writ issued by the El Dorado County Superior Court. The specific topics requiring analysis are listed and the technical section in the Draft EIR in which the topic is evaluated is identified.

- Item "a" (traffic impacts) – Section 4.10, Transportation and Circulation
- Item "b" (parking impacts) – Section 4.10, Transportation and Circulation
- Item "c" (urban decay impacts) – Section 4.8, Land Use
- Item "d" (biological impacts) – Section 4.3, Biological Resources
- Item "e" (cultural resource impacts) – Section 4.4, Cultural Resources
- Item "f" (toxic impacts) – Section 4.6, Hazards and Hazardous Materials
- Item "g" (aesthetic impacts) – Section 4.1, Aesthetics
- Item "h" (growth-inducing impacts) – Section 5.0, Other CEQA Considerations
- Item "I" (inconsistency with area plans and polices) – Sections 4.1 through 4.10 provide consistency evaluations for the resource topics evaluated in those sections.

ES.4 PROJECT ALTERNATIVES

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project that could feasibly attain the basic objectives of the project and avoid and/or lessen the environmental effects of the project. Further, CEQA Guidelines Section 15126.6(e) requires that a "no project" alternative be evaluated in an EIR. In addition to the No Project Alternative, the Draft EIR evaluates an alternative in which the Clay Street Hangtown Creek Bridge would be replaced but Clay Street would not be realigned to create a new four-way intersection with Main Street and Cedar Ravine Road (Clay Street Hangtown Creek Bridge Replacement/No Clay Street Realignment with Cedar Ravine Road Alternative).

In addition, the Draft EIR includes information regarding potential alternatives to the proposed project that were suggested by the public during the NOP comment period.

ES.5 ENVIRONMENTAL REVIEW PROCESS

The review period for this Draft EIR is 45 days, beginning on March 2, 2018 and ending on April 18, 2018. Public comment on the Draft EIR will be accepted in written form only via mail, email, or fax. All comments or questions regarding the Draft EIR should be addressed to:

Pierre Rivas, Director
Development Services Department
City of Placerville
3101 Center Street
Placerville, CA 95667
Fax: (530) 295-2510
privas@cityofplacerville.org

ES.6 SUMMARY OF ENVIRONMENTAL IMPACTS

Table ES-1 summarizes impacts and proposed mitigation measures that would avoid or minimize potential impacts, as explained in detail in the technical sections of the Draft EIR (Sections 4.1 through 4.10). In the table, the level of significance is indicated both before and after the implementation of each mitigation measure.

TABLE ES-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
Aesthetics			
Impact 4.1.1 The proposed project would not affect scenic vistas.	LS	None required.	LS
Impact 4.1.2 The proposed project would change the visual characteristics of the site.	PS	**MM 4.1.2a** The project shall incorporate the following streetscape design concepts: • Low seatwalls shall be placed along the Main Street and Clay Street edges of the reconfigured Ivy House parking lot to offer informal and temporary seating opportunities. • Tree species as identified in Appendix A of the Main Street Streetscape Design Development Plan (incense cedar, tulip tree, valley oak, red oak, and Chinese pistache) shall be planted along Main Street to define public space along the street and to provide shade for the parking lot. • Accent planting in large planting beds shall be provided adjacent to the reconfigured Ivy House parking lot. • New streetlights installed as part of the project (if any) shall have period-appropriate cast iron light pole standards and must meet applicable energy standards and City lighting specifications for public roadways as set forth in Chapter XII, Section B, of the City's Development Guide. **MM 4.1.2b** Cork Oak Tree. The cork oak tree shall be protected in place by establishing a tree protection zone (TPZ) and by implementing requirements for a TPZ set forth in mitigation measure MM 4.3.4a in this Draft EIR and any other necessary measures, as determined by an ISA-certified arborist, to protect the cork oak during construction. Redwood Tree. The redwood tree at the northwest corner of the El Dorado Trail at Clay Street shall be evaluated by an ISA-certified arborist to determine the tree's health. If it is determined the tree would not pose a hazard and can remain in place, the tree shall be protected in place by establishing a TPZ and by implementing requirements for a TPZ set forth in	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		mitigation measure MM 4.3.4a and any other necessary measures, as determined by an ISA-certified arborist, to protect the redwood tree during construction. **MM 4.1.2c** Implement mitigation measures MM 4.3.3a (Riparian and Montane Hardwood-Conifer Habitat).	
Impact 4.1.3 The project would include street lighting.	LS	None required.	LS
Impact 4.1.4 Cumulative development, including the proposed project, could result in impacts on scenic resources and visual quality, and effects associated with nighttime lighting.	LCC	None required.	LCC
Air Quality			
Impact 4.2.1 Construction-generated emissions would not contribute substantially to an existing or projected air quality violation.	LS	None required.	LS
Impact 4.2.2 Sensitive receptors would not be exposed to substantial pollutant concentrations resulting from project construction or operation.	LS	None required.	LS
Impact 4.2.3 Construction of the proposed project has the potential to encounter naturally occurring asbestos (NOA).	LS	None required.	LS
Impact 4.2.4 The proposed project will not result in long-term operational emissions that could violate or substantially contribute to a violation of federal and state standards.	LS	None required.	LS
Impact 4.2.5 The proposed project would not contribute to localized concentrations of carbon monoxide that would exceed applicable ambient air quality standards.	LS	None required.	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 4.2.6 The proposed project would not be a source of any major odor emissions.	LS	None required.	LS
Impact 4.2.7 The proposed project would not conflict with or obstruct implementation of regional air quality management planning and thus would not contribute to cumulative impacts.	LCC	None required.	LCC
Biological Resources			
Impact 4.3.1 Construction of the proposed project could affect five special-status plant species.	PS	**MM 4.3.1** A preconstruction survey for Jepson's onion, Nissenan manzanita, Pleasant Valley mariposa lily, Red Hills soaproot, and Parry's horkelia shall be conducted in the project impact area within 30 days prior to construction. If a specific plant is not found, no further measures are necessary for that plant. If a specific plant is found in the project impact area, the CDFW shall be notified at least 10 days prior to construction impacts in the vicinity of the plant(s) in accordance with the California Native Plant Protection Act of 1977 to allow sufficient time to transplant the individuals to a suitable location or develop other mitigation measures that will offset the loss and maintain the regional species population in coordination with the CDFW.	LS
Impact 4.3.2 Construction of the proposed project could affect two special-status wildlife species.	PS	**MM 4.3.2a** Foothill Yellow-Legged Frog. The following avoidance and minimization efforts shall be implemented to reduce project effects: • A qualified biologist shall conduct a preconstruction survey within 24 hours prior to the start of construction activities within the riparian and aquatic habitat in the study area. • A qualified biologist shall monitor any vegetation removal in Hangtown Creek. The biologist shall monitor the installation of water diversion structures placed in the creek. • The upstream and downstream limits of the project shall be flagged and/or signed to prevent the encroachment of construction personnel and equipment into any sensitive areas during project work. • Prior to construction, environmental awareness training shall be conducted for construction personnel to brief them on how to recognize foothill yellow-legged frog. Construction personnel shall also	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		be informed that if a foothill yellow-legged frog is encountered in the work area, construction shall stop and the CDFW contacted for guidance. A training log sign-in sheet shall be maintained. • If frogs are found at any time during project work, construction shall stop. The contractor shall notify the City, and the City shall contact the CDFW immediately for further guidance and the need for additional mitigation. • The City or its contractor shall submit the name and credentials of the project's biologist(s) to the CDFW for review and approval at least 15 days prior to the onset of construction activities. • Staging areas as well as fueling and maintenance activities shall be a minimum of 100 feet from riparian or aquatic habitats. The City shall ensure its contractor prepares and implements a spill prevention and cleanup plan. • The construction contractor shall implement best management practices to protect water quality and control erosion. • If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 5 millimeters. • Upon completion of construction activities, any barriers to flow shall be removed in a manner that will allow flow to resume with the least disturbance to the substrate. **MM 4.3.2b** Western Pond Turtle. The following avoidance and minimization efforts shall be implemented to reduce project effects: • If dewatering is necessary, the construction area shall be dewatered prior to construction activities. The CDFW shall be notified prior to dewatering activities. • No more than two weeks prior to the commencement of ground-disturbing activities, the City shall retain a qualified biologist to perform surveys for western pond turtle in suitable aquatic and upland habitat within the study area. Surveys shall include western pond turtle nests as well as individuals. The biologist (with the appropriate agency permits) shall temporarily move any identified western pond turtles upstream of the construction area, and temporary barriers shall be	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		placed around the construction area to prevent ingress. Construction shall not proceed until the work area is determined to be free of turtles. The results of these surveys shall be documented in a technical memorandum that will be submitted to the CDFW. • Standard construction BMPs shall be implemented throughout construction to avoid and minimize adverse effects on water quality within the study area.	
Impact 4.3.3 Construction of the proposed project could result in temporary and/or permanent effects on valley foothill riparian and montane hardwood-conifer forest habitat.	PS	**MM 4.3.3a** Riparian and Montane Hardwood-Conifer Habitat. The following avoidance and minimization efforts and compensatory mitigation shall be implemented to reduce project effects: *Avoidance and Minimization* • Prior to removal of any trees, an ISA-certified arborist shall conduct a tree survey in areas that may be impacted by construction activities. This survey shall document tree resources that may be adversely impacted by project implementation. The survey will follow standard professional practices. • Current riparian vegetation, oaks, and other native tree species will be retained to the extent feasible. A tree protection zone (TPZ) shall be established around any tree or group of trees to be retained. The TPZ will be delineated by an ISA-certified arborist. The TPZ shall be defined by the radius of the dripline of the tree(s) plus 1 foot. The TPZ of any protected trees shall be demarcated using fencing that will remain in place for the duration of construction activities. • Construction-related activities shall be limited within the TPZ to those activities that can be completed by hand. No heavy equipment or machinery shall be operated within the TPZ. Grading shall be prohibited within the TPZ. No construction materials, equipment, or heavy machinery shall be stored within the TPZ. • To ensure no net loss of riparian habitat, the City shall create or restore riparian habitat that is of similar function and value to affected habitat. The permanent degradation of riparian and montane hardwood-conifer habitat will be compensated for at a 3:1 ratio through the purchase of similar habitat value from a USACE-approved mitigation bank.	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		Preservation and restoration may occur on-site through a conservation agreement or off-site by purchasing mitigation bank credits. • Mitigation shall also include planting of valley foothill/floodplain/mixed riparian species as appropriate. A planting plan will be implemented as detailed in a restoration plan approved by the CDFW. The plan will include performance standards for revegetation that will ensure successful restoration of the on-site riparian areas. • The City shall protect other wetlands, riverine, and associated riparian habitats located in the vicinity of the study area by installing protective fencing. Protective fencing shall be installed along the edge of construction areas including temporary and permanent access roads where construction will occur within 200 feet of the edge of wetland and riverine habitat (as determined by a qualified biologist). The location of fencing shall be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications shall contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, trenching, grading, or other surface-disturbing activities outside of the designated construction area. Signs shall be erected along the protective fencing at a maximum spacing of one sign per 50 feet of fencing. The signs shall state: "This area is environmentally sensitive; no construction or other operations may occur beyond this fencing. Violators may be subject to prosecution, fines, and imprisonment." The signs shall be clearly readable at a distance of 20 feet and shall be maintained for the duration of construction activities in the area. • Where riparian vegetation occurs along the edge of the construction easement, the City shall minimize the potential for long-term loss of riparian vegetation by trimming vegetation rather than removing the entire plant. Trimming will be conducted per the direction of a biologist and/or certified arborist. *Compensation* • The City shall compensate for the permanent removal of riparian and montane hardwood-conifer habitat vegetation associated with the	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		bridge construction by replacing habitat at a minimum 3:1 ratio (e.g., 3 acres planted for every 1 acre removed) as well as associated native herbaceous species. **MM 4.3.3b** Non-Native Invasive Plants. The following shall be included in the construction contract special provisions to ensure construction would not introduce, establish, and/or spread new invasive weeds in El Dorado County: • All equipment and vehicles will be thoroughly cleaned to remove dirt and weed seeds prior to being transported or driven to or from the project site. • Any borrow site or stockpile will be inspected for the presence of noxious weeds or invasive plants. • If noxious weeds or invasive plants are present, the contractor will remove approximately 5 inches of the surface of the material from the site before transporting to the project. • Before removal, this material will be chemically or mechanically treated to kill the existing noxious weeds and invasive plants, and will not be used for the project without approval.	
Impact 4.3.4 Construction of the proposed project would result in fill that would affect 0.001 acre of intermittent stream (waters of the United States).	S	**MM 4.3.4** In addition to obtaining the CWA Section 404 Nationwide Permit #14, CWA Section 401 Water Quality Certification, and FGC Section 1600–1602 Streambed Alteration Agreement prior to construction, the following avoidance and minimization efforts and compensatory mitigation shall be implemented to reduce project effects: *Avoidance and Minimization* • During construction, water quality shall be protected by implementation of best management practices (BMPs), which will be described in the stormwater pollution prevention plan (SWPPP) required under the NPDES Construction General Permit. • Minimization efforts shall include marking the limits of construction and temporary fencing to prevent affecting Hangtown Creek unnecessarily. Impacts shall also be minimized by conducting in-stream work between June 1 and October 15, unless the RWQCB, USFWS, and CDFW approve work outside that period. • Effects of disturbance to Hangtown Creek and Cedar Ravine Creek and	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		the adjacent riparian corridor shall be minimized by revegetating areas of temporary disturbance within the project footprint with native vegetation. • Implement mitigation measure **MM 4.3.3a**. *Compensation* • The City shall purchase credits from a USACE- and/or CDFW-approved mitigation bank at a minimum 1:1 ratio (1 acre of habitat replaced for every 1 acre filled).	
Impact 4.3.5 Construction of the proposed project could result in the loss of nesting habitat or direct mortality of raptors.	PS	**MM 4.3.5** The following avoidance and minimization measures shall be used when work occurs on or in the vicinity of structures that may be subject to nesting by migratory birds: *Avoid Active Nesting Season*. To avoid and minimize impacts to tree and shrub nesting species, the following measures shall be implemented: • If feasible, all tree and shrub removal and grading activities shall be conducted during the non-breeding season (generally September 1 through January 31). • If grading and tree removal activities are scheduled to occur during the breeding and nesting season (February 1 through August 31), preconstruction surveys shall be performed prior to the start of project activities. *Conduct Preconstruction Nesting Bird Surveys*. If construction, grading, or other project-related activities are scheduled during the nesting season (February 1 to August 31), preconstruction surveys for other migratory bird species shall take place no less than 14 days and no more than 30 days prior to the beginning of construction within 250 feet of suitable nesting habitat. • If the preconstruction surveys do not identify any nesting migratory bird species in areas potentially affected by construction activities, no further mitigation is required. If the preconstruction surveys do identify nesting bird species in areas that may be affected by site construction, the following measures shall be implemented. *Avoid Active Bird Nest Sites*. Should active nest sites be discovered in areas that may be affected by construction activities, additional measures shall be implemented as described below.	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		• If active nests are found, project-related construction impacts shall be avoided by establishing appropriate no-work buffers to limit project-related construction activities near the nest site. The size of the no-work buffer zone shall be determined in consultation with the CDFW, although a 500-foot buffer zone would be used when possible. The no-work buffer zone shall be delineated by highly visible temporary construction fencing. In consultation with the CDFW, monitoring of nest activity by a qualified biologist may be required if the project-related construction activity has the potential to adversely affect the bird's nest or nesting behavior. No project-related construction activity shall commence within the no-work buffer area until a qualified biologist and the CDFW confirms that the nest is no longer active. The following avoidance and minimization measures shall be incorporated for bridge-nesting birds if bridge demolition or construction of the new bridge occurs during the nesting season (February 1 through August 31): • Exclusionary netting shall be installed around the undersides of the existing bridge before February 1 of the construction year to prevent new nests from being formed and/or prevent the reoccupation of existing nests. Exclusionary netting may also be required during construction of the new bridge if it is completed during the breeding season. The construction contractor would be required to do the following: o Adhere to all state and federal laws and regulations pertaining to the protection of migratory birds, their nests, and young birds. o Remove all existing unoccupied nests on the bridge during the non-nesting season (September 1 through January 31). o Keep the bridge free of nests, using exclusionary netting or other approved methods, until construction activities are completed. o Inspect all listed structures for nesting activity a minimum of three days per week; no two days of inspection shall be consecutive. A weekly log shall be submitted to the project biologist. The contractor shall continue inspections until the existing bridge has been removed and construction on the new bridge is completed. If an exclusion device is found to be ineffective or defective, the contractor shall	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		complete repairs to the device within 24 hours. If birds are found trapped in an exclusion device, the contractor shall immediately remove the birds in accordance with USFWS guidelines. o Submit for approval working drawings or written proposals of any exclusion devices, procedures, or methods to the project biologist before installing them. • The method of installing exclusion devices shall not damage permanent features of the new bridge structure. Approval by the project biologist of the working drawings or inspection performed by the authorized project biologist shall in no way relieve the contractor of full responsibility for deterring nesting.	
Impact 4.3.6 Implementation of the proposed project would have a minimal permanent effect on wildlife migration corridors.	LS	None required.	LS
Impact 4.3.7 Cumulative development, including the proposed project, would result in the conversion and/or loss of habitat and potential impacts on biological resources.	LCC	None required.	LCC
Cultural Resources			
Impact 4.4.1 Construction of the intersection improvements at the new Main Street/Cedar Ravine Road/Clay Street four-way intersection would result in the relocation of the Druid Monument from its current location to the west side of the new intersection on Main Street. There is the potential, although unlikely, that the historical resource may be damaged during its relocation.	PS	**MM 4.4.1** The City shall implement the following measures: • The City shall require Historic American Engineering Record (HAER) documentation to be on file with the City prior to issuance of a contract for relocation of the monument. • A consultant, qualified to move the historic monument, shall move the Druid Monument. • The dedication plaque shall be retained, with additional text documenting the movement of the resource. If this addition cannot be made to the existing plaque, a new plaque of like construction will be placed at the monument.	LS
Impact 4.4.2 Construction of the proposed project may result in the disturbance of archaeological	PS	**MM 4.4.2** The City shall implement the following measures during project construction:	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
deposits related to the Ivy House.		• A pre-construction meeting shall be conducted by a professional archaeologist meeting the qualifications outlined in the Secretary of the Interior's Professional Qualification Standards for archaeology to educate construction contractors about the potential for encountering archaeological resources and next steps if a resource is discovered. • Archaeological monitoring in the Ivy House parking lot shall be completed by a professional archaeologist meeting the qualifications outlined in the Secretary of the Interior's Professional Qualification Standards for archaeology. • If prehistoric or historic-period archaeological deposits are discovered during project construction activities at any location within the project site, all work within 25 feet of the discovery shall be redirected and the archaeologist shall assess the situation, consult with agencies as appropriate, and make recommendations regarding the treatment of the discovery. Impacts to archaeological deposits should be avoided by project activities, but if such impacts cannot be avoided, the deposits shall be evaluated for their California Register eligibility. If the deposits are not California Register–eligible, no further protection of the finds is necessary. If the deposits are California Register–eligible, they shall be protected from project-related impacts or such impacts mitigated. Mitigation may consist of, but is not necessarily limited to, systematic recovery and analysis of archaeological deposits, recording the resource, preparation of a report of findings, and accessioning recovered archaeological materials at an appropriate curation facility. Public educational outreach may also be appropriate.	
Impact 4.4.3 Construction of the proposed project would involve the use of heavy equipment that could be a source of vibration that could cause structural damage to historical buildings adjacent to the project site.	PS	**MM 4.4.3** Prior to issuance of construction documents for public bidding, the City shall complete its vibration assessment to identify historic buildings listed on the National Register of Historic Places and/or California Register or have been determined eligible but not yet listed, and the City of Placerville Historical Resources Inventory that could be affected by vibration from project construction activities. As necessary, the City shall refine project work limits, as feasible, and/or identify specific construction methods recommended by Caltrans in its 2013 *Transportation and Construction Vibration Guidance Manual* to protect the resources. Selected	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		methods shall demonstrate the Caltrans-identified risk of structural damage to historical buildings of 0.1 inches per second PPV, or other protective threshold as identified in the analysis, would not be exceeded. Construction contracts shall include all required conditions.	
Impact 4.4.4 Construction of the proposed project could inadvertently destroy or damage undiscovered cultural resources or human remains.	PS	**MM 4.4.4** Any human remains encountered during ground-disturbing activities shall be treated in accordance with California Health and Safety Code Section 7050.5. The City shall inform its contractor(s) of the project's sensitivity for human remains and verify that the following directive has been included in the appropriate contract documents: If human remains are encountered during project construction activities, the City shall comply with the requirements of California Health and Safety Code Section 7050.5. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the El Dorado County coroner has determined the manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation or to his or her authorized representative. At the same time, an archaeologist shall be contacted to assess the situation and consult with agencies as appropriate. Project personnel/construction workers shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American most likely descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.	LS
Impact 4.4.5 Cumulative development, including the proposed project, could result in cumulative impacts on cultural resources in El Dorado County.	LCC	None required.	LCC
Greenhouse Gas Emissions			
Impact 4.5.1 Greenhouse gas emissions generated by the project would not have a significant impact on global climate change.	LCC	None required.	LCC

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 4.5.2 The project would not conflict with the long-term greenhouse gas reduction goals promulgated in the SACOG Metropolitan Transportation Plan/Sustainable Communities Strategy.	LCC	None required.	LCC
Hazards and Hazardous Materials			
Impact 4.6.1 Implementation of the proposed project would involve the use of hazardous materials, but such use would be subject to local, state, and federal standards that regulate hazardous materials to protect the public and the environment.	LS	None required.	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 4.6.2 The Ivy House parking lot contains evidence of soil contamination, and asbestos-containing materials and/or lead-based paint may be present in roadway and bridge components. This could pose a hazard to workers and the public during construction activities.	PS	**MM 4.6.2a** Ivy House Parking Lot Site Investigation. Prior to any ground disturbance, the City of Placerville shall investigate soil and groundwater under the Ivy House parking lot, Main Street fronting the parking lot, and the Clay Street alignment extending north to the bridge for the presence of soil and groundwater contamination. Surface water and sediment sampling in Hangtown Creek shall also be performed to determine whether contaminants have migrated to locations that would be affected by bridge construction. A work plan describing the investigation shall be prepared by a qualified professional and submitted to Caltrans and the El Dorado County Environmental Management Division for review and approval. The work plan shall be implemented prior to any construction activity in the potentially affected area. If the results of the investigation indicate contamination, the level of contamination shall be evaluated by a qualified professional to determine whether the levels would pose an unacceptable health risk to construction workers, who would be the most susceptible to inhalation and soil/groundwater contact hazards, or if activities involving sediment that would be disturbed by bridge replacement could be mobilized and pose a risk to surface water in Hangtown Creek. The City shall provide the study report to Caltrans and the El Dorado County Environmental Management Division, and shall notify the Central Valley RWQCB and/or DTSC, if reporting is required. No work shall be allowed to proceed at any location in the investigation study area until hazardous materials contamination has been remediated to levels that are protective of human health and the environment. **MM 4.6.2b** Testing for Lead-Based Paint (LBP) and Asbestos-Containing Materials (ACM) and Abatement. Prior to bridge demolition and pavement removal, the City of Placerville shall ensure LBP and ACM studies are prepared by a qualified professional and that all recommendations therein are implemented. If LBP and ACM are present at levels requiring abatement and special disposal, the City shall ensure the work is performed in accordance with applicable regulations to protect the environment and public health. A report documenting the study results and abatement and disposal activities shall be submitted to Caltrans and the El Dorado County Environmental Management Division to document compliance with regulatory requirements.	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 4.6.3 Construction of the proposed project could be a source of hazardous emissions near schools.	PS	**MM 4.6.3** Implement mitigation measures MM 4.6.2a and MM 4.6.2b.	LS
Impact 4.6.4 The proposed project would not affect emergency response plans over the long term, but construction of the project could temporarily affect roadways at and adjacent to the project site, which could affect response times or emergency evacuation.	PS	**MM 4.6.4** Implement mitigation measure MM 4.10.3.	LS
Impact 4.6.5 Cumulative development, including the proposed project, could result in cumulative hazardous material and human health risk impacts.	LCC	None required.	LCC
Hydrology and Water Quality			
Impact 4.7.1 Implementation of the proposed project would involve construction activities that could result in temporary water quality impacts, and project operation would generate stormwater runoff that would contain urban pollutants.	PS	**MM 4.7.1a** The City shall implement a SWPPP and BMPs in compliance with the State Construction General Permit and shall implement applicable requirements of the City's Grading Ordinance. The project SWPPP will require the City's construction contractor to identify the location of designated staging areas, would include specific requirements for equipment fueling, maintenance, and storage processes, and will include stormwater BMPs to prevent the release of polluted stormwater into Hangtown Creek and Cedar Ravine Creek. **MM 4.7.1b** Project design for Clay Street and the reconfigured Ivy House parking lot shall include (1) runoff control features in the project's drainage system to ensure post-construction runoff does not exceed pre-development conditions; and (2) water quality BMPs to reduce pollutants in stormwater runoff in accordance with the City's Storm Water Management Plan and applicable MS4 requirements. Low impact design (LID) features shall be incorporated into project design. The City shall be responsible for long-term maintenance and monitoring of the BMPs to ensure their effectiveness in reducing pollutants in runoff. **MM 4.7.1c** The City shall ensure the Locust Avenue parking lot includes stormwater BMPs that meet current City requirements.	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 4.7.2 The proposed project could affect storm drain capacity and flooding potential from stormwater runoff.	PS	**MM 4.7.2** Implement mitigation measure MM 4.7.1b.	LS
Impact 4.7.3 The proposed project would include replacement of the Clay Street Bridge, which is in a FEMA Zone AE and regulatory floodway.	LS	None required.	LS
Impact 4.7.4 Cumulative development, including the proposed project, could result in water quality, drainage, and flooding impacts.	LCC	None required.	LCC
Land Use			
Impact 4.8.1 Implementation of the proposed project would not divide an established community.	NI	None required.	NI
Impact 4.8.2 The proposed project would be consistent with applicable plans.	LS	None required.	LS
Impact 4.8.3 The proposed project would not result in conditions that would cause or contribute to urban decay in Placerville.	LS	None required.	LS
Impact 4.8.4 Cumulative development, including the proposed project, could result in land use planning impacts such as inconsistency with plans or incompatible uses. The proposed project does not propose new land uses that would be inconsistent with plans or result in land use incompatibilities or result in urban decay.	LCC	None required.	LCC
Noise			
Impact 4.9.1 Construction activities would generate noise.	PS	**MM 4.9.1** The project improvement plans shall include the following requirements for construction activities: • Construction contracts must specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		maintained mufflers and other State-required noise attenuation devices. • A sign, legible at a distance of 50 feet, shall be posted at the project construction site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign shall indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator will be identified to address construction noise concerns received. The coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the disturbance coordinator shall notify the City within 24 hours of the complaint and determine the cause of the noise complaint (starting too early, malfunctioning muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the City. All signs posted at the construction site shall include the contact name and the telephone number for the noise disturbance coordinator. • Identification of construction noise reduction methods. These reduction methods may include shutting off idling equipment after 5 minutes, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and using electric air compressors and similar power tools. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers. • Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to the daytime hours between 7 a.m. and 7 p.m., Monday through Friday and between 8 a.m. and 5 p.m. on Saturday, and shall be prohibited on Sunday and federal/state-recognized holidays unless approved in advance by the City if required to meet project schedule.	

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 4.9.2 Construction of the proposed project would be a short-term source of groundborne vibration.	PS	**MM 4.9.2** Vibratory rollers shall not be used in dynamic mode (i.e., rolling motion only with no vibration) within 30 feet of a residential structure or within 15 feet of a modern commercial structure. Other vibratory compaction methods such as plate compactors are acceptable.	LS
Impact 4.9.3 Implementation of the proposed project would not result in substantial increases in ambient noise levels.	NI	None required.	NI
Impact 4.9.4 Implementation of the proposed project would not result in a substantial contribution to cumulative noise levels.	LCC	None required.	LCC
Transportation and Circulation			
Impact 4.10.1 The proposed project, in combination with existing conditions on study roadways, would not result in a significant increase in traffic, nor would the proposed project cause a study roadway to exhibit a level of service worse than LOS C.	LS	None required.	LS
Impact 4.10.2 The proposed project would not increase hazards to vehicles, pedestrians, or bicyclists as a result of project improvements.	LS	None required.	LS
Impact 4.10.3 The proposed project would not impair emergency access by fire, police, and emergency medical equipment and personnel over the long term, but construction of the project could temporarily affect access at and/or adjacent to the project site.	PS	**MM 4.10.3** The City shall prepare and implement a Construction Traffic Management Plan for the duration of construction activities. All construction activities shall be coordinated with the El Dorado County Fire Protection District and the City of Placerville Police Department to ensure that emergency access would be maintained. The City shall also notify El Dorado Transit of activities that could affect transit routes during construction. During construction, emergency access on public roadways shall be available at all times to maintain emergency vehicle access through the area. At no time during the construction period will the entire width of a public roadway be closed to emergency vehicle traffic. The City shall provide advance notification to residents and businesses that could be	LS

Impact	Level of Significance without Mitigation	Mitigation Measure	Resulting Level of Significance
		affected by the roadway improvements and ensure access to all residences and businesses that could be temporarily affected by construction activities will be provided at all times.	
Impact 4.10.4 The proposed project would include new bicycle lanes and sidewalks that would be consistent with the City's Non-Motorized Transportation Plan and Pedestrian Circulation Plan.	LS	None required.	LS
Impact 4.10.5 The proposed project would result in a loss of approximately 16 parking spaces at the Ivy House parking lot, but there are sufficient spaces on City property or within City right-of-way in downtown Placerville to offset this loss.	LS	None required.	LS
Impact 4.10.6 The proposed project would result in a cumulative impact at the study intersections.	CC	None feasible.	SU
Impact 4.10.7 The proposed project would not contribute to any cumulative impacts related to design hazards, parking, emergency access, or alternative modes of transportation.	LCC	None required.	LCC

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1.0 INTRODUCTION

1.1 BACKGROUND AND PURPOSE OF THE EIR

This Draft Environmental Impact Report (EIR) has been prepared in conformance with the California Environmental Quality Act (CEQA) to evaluate the environmental effects of the Clay Street Hangtown Creek Bridge Replacement Project (proposed project). CEQA requires the preparation of an EIR prior to approving any project that may have a significant effect on the environment. For the purposes of CEQA, the term *project* refers to the whole of an action which has the potential for a direct physical change or reasonably foreseeable indirect change in the environment (CEQA Guidelines Section 153789[a]).

The City of Placerville, acting as the lead agency, has prepared this Draft EIR to provide the public and responsible and trustee agencies with information about the potential environmental effects of the proposed project. As described in the provisions of CEQA and in Section 15121(a) of the CEQA Guidelines, an EIR is a public informational document that assesses potential environmental effects of the proposed project and identifies mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. Public agencies are charged with the duty to consider and minimize environmental impacts of a proposed project, where feasible, and are obligated to examine a variety of public objectives including economic, environmental, and social factors.

The EIR also satisfies the requirements of a Peremptory Writ of Mandate (Writ) issued by the El Dorado County Superior Court in February 2012 for the Clay Street/Cedar Ravine Realignment and Clay Street Bridge at Hangtown Creek Replacement Project (El Dorado County Superior Court 2012), for which the City previously prepared a Mitigated Negative Declaration (MND). One project alternative previously considered in the MND included: a roundabout at the Main Street/Clay Street/Cedar Ravine Road intersection, supporting the City's Main Street Streetscape Design Development Plan adopted in 2006; replacement of the Clay Street Hangtown Creek Bridge; realignment of Clay Street, resulting in reconfiguration of the Ivy House parking lot into two separate lots; and construction of the El Dorado Trail.

The court determined that the previous MND did not consider fair arguments that the court found could be made regarding potential impacts of the then-proposed project, which are: (a) traffic impacts; (b) parking impacts; (c) urban decay impacts; (d) biological resource impacts; (e) cultural resource impacts; (f) toxic impacts; (g) aesthetics impacts; (h) growth-inducing impacts; and (i) inconsistency with Area Plans and Policies. The court directed the City to rescind project approvals and prepare an EIR addressing items (a) through (i).

Subsequently, due to public opposition, the roundabout was removed as an alternative for the project on July 8, 2014, by City Council resolution. In November 2014, Placerville voters approved Measure K that amended the City's General Plan to prohibit the construction of roundabouts in the city limits unless approved by voters. On January 27, 2015, City Council directed staff to proceed with the design of the project with the preferred alternative consisting of a four-way stop- or signal-controlled intersection at Main Street/Cedar Ravine/Clay Street, including the realignment of Clay Street. Additionally, the El Dorado Trail portion of the project evaluated in the prior MND has been completed as a separate and independent project. All other elements of the originally proposed project are similar to those evaluated in the prior MND.

1.2 TYPE OF DOCUMENT

PROJECT EIR

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a project EIR, pursuant to CEQA Guidelines Section 15161, and examines all phases of the proposed project (i.e., construction and operation).

1.3 INTENDED USES OF THE EIR

This Draft EIR has been prepared in accordance with the California Environmental Quality Act. The EIR is intended to evaluate the environmental impacts of the proposed project to the greatest extent possible. This EIR, in accordance with CEQA Guidelines Section 15126, should be used as the primary environmental document to evaluate all design and permitting actions associated with the project. Please refer to Section 2.0, Project Description, for a detailed description of the proposed project.

CITY OF PLACERVILLE

The EIR is intended to be used by the City of Placerville as a tool in evaluating the proposed project's environmental impacts and can be further used to modify, approve, or deny approval of the proposed project based on the analysis provided in the EIR. A description of the proposed design and subsequent approvals associated with approval and implementation of the project are described in Section 2.0, Project Description.

KNOWN RESPONSIBLE AGENCIES

For the purpose of CEQA, the term *responsible agency* includes all public agencies other than the lead agency that have discretionary approval power over the project or an aspect of the project.

- California Department of Fish and Wildlife (Fish and Game Code Section 1601 Streambed Alteration Agreement)
- California Department of Transportation (Encroachment Permit and Funding)1
- Central Valley Regional Water Quality Control Board (Clean Water Act Section 401 Water Quality Certification)
- State Water Resources Control Board (Construction General Permit Notice of Intent)
- US Army Corps of Engineers (Clean Water Act Section 404 Wetland Permit)

[1] Because the proposed project is federally funded, Caltrans, as the delegated federal oversight agency, is responsible for complying with the requirements of the National Environmental Policy Act (NEPA), including necessary environmental review.

KNOWN TRUSTEE AGENCIES

For the purpose of CEQA, the term *trustee agency* means a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of California. The California Department of Fish and Wildlife (CDFW) is a trustee agency with authority, in accordance with the provisions of Fish and Game Code Section 1802, to exercise administration over the fish and wildlife resources of California. The CDFW is the only trustee agency for the proposed project. The CDFW is also responsible for issuing a Streambed Alteration Agreement pursuant to Fish and Game Code Section 1602, if necessary, for activities that may substantially affect a stream.

1.4 ORGANIZATION AND SCOPE OF THE EIR

Sections 15122 through 15132 of the CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts.

Sections 4.1 through 4.10 in this EIR provide an integrated presentation of the setting, environmental impacts, and mitigation measures. Potential effects of implementing the proposed project, including cumulative effects, are identified, along with mitigation measures recommended to reduce identified impacts. In cases where no mitigation is available, this fact is noted.

The City determined the scope for this EIR based on the Writ, the Initial Study checklist included with the Notice of Preparation (NOP) (**Appendix A**), and comments in response to the NOP. The Initial Study checklist determined that the following issue areas would result in no impact and are therefore scoped out of this EIR: agriculture and forestry resources, mineral resources, population and housing, and utilities.

This Draft EIR is organized as follows:

EXECUTIVE SUMMARY

This section provides includes the following: a summary of the proposed project and its characteristics, areas of concern and potential issues to be resolved, a summary of the alternatives to the project, and a summary of the project's environmental impacts and associated mitigation measures.

SECTION 1.0 – INTRODUCTION

This section summarizes the purpose of the Draft EIR, describes the environmental procedures that are to be followed according to state law, identified the intended uses of the EIR, and describes the EIR's scope and organization. In addition, this section includes background information about the proposed project.

SECTION 2.0 – PROJECT DESCRIPTION

This section describes and depicts the location of the project both regionally and locally, describes the existing conditions on the project site, and describes surrounding uses. The objectives for the project sought by the City are listed. A detailed list of the approvals from the City and other agencies that are necessary to implement the project is included.

SECTION 3.0 – INTRODUCTION TO THE ANALYSIS

This section describes the approach to the project-specific and cumulative environmental analysis and general assumptions used in the analysis. Impacts not requiring detailed evaluation in the Draft EIR are also presented in this section.

SECTION 4.0 – ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

Section 4.0 contains an analysis of environmental topic areas as identified below. Each subsection contains a description of the existing setting of the project area, identifies project-related impacts, and recommends mitigation measures consistent with the requirements of CEQA Guidelines Sections 15125 through 15126.4. As required by CEQA Section 15130, an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Each topical section contains an analysis of the cumulative setting, potential cumulative impacts, and recommended mitigation measures.

The following environmental topics are addressed in Sections 4.1 through 4.10, which include topics required by the Writ, as well as additional topics the City has determined should be evaluated in the Draft EIR, based on NOP comments (see **Table A-1** at the end of **Appendix A**).

- Section 4.1: Aesthetics ((Writ item "g" [aesthetics impacts])
- Section 4.2: Air Quality
- Section 4.3: Biological Resources (Writ item "d" [biologic impacts])
- Section 4.4: Cultural Resources (Writ Item "e" [cultural resource impacts])
- Section 4.5: Greenhouse Gas Emissions
- Section 4.6: Hazards and Hazardous Materials (Writ item "f" [toxic impacts])
- Section 4.7: Hydrology and Water Quality
- Section 4.8: Land Use (Writ item "c" [urban decay impacts] and Writ item "l" [consistency with area plans and policies])
- Section 4.9: Noise
- Section 4.10: Transportation and Circulation (Writ item "a" [traffic impacts] and Writ item "b" [parking impacts])

SECTION 5.0 – OTHER CEQA TOPICS

This section contains discussion and analysis of various topical issues mandated by CEQA. These include significant environmental effects that cannot be avoided if the proposed project is implemented, growth-inducing impacts (Writ item "h"), and analysis of energy conservation as required by CEQA Guidelines Appendix F.

SECTION 6.0 –ALTERNATIVES TO THE PROPOSED PROJECT

The alternatives analysis consists of the following components: an overview of CEQA requirements for alternatives analysis, descriptions of the alternatives evaluated, a description of alternatives considered but rejected for further analysis in the Draft EIR, a comparison between the anticipated environmental effects of the alternatives and those of the proposed project, and identification of an environmentally superior alternative.

SECTION 7.0 – REPORT PREPARATION

This section lists all authors and agencies that assisted in the preparation of the report by name, title, and company or agency affiliation.

APPENDICES

The appendices include technical data and other materials used to prepare the Draft EIR. Specific documents referenced in the Draft EIR sections are available for review upon request. To request or review the cited references during normal business hours, please contact Mr. Pierre Rivas, City of Placerville Community Development Department, 3101 Center Street, Placerville, CA 95667, (530) 642-5252.

1.5 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR will involve the following procedural steps:

NOTICE OF PREPARATION AND INITIAL STUDY

In accordance with Section 15082 of the CEQA Guidelines, the City of Placerville, as lead agency, published a Notice of Preparation (NOP) of an EIR on August 11, 2014. This notice was circulated to the public, local, state, and federal agencies, and other interested parties for 30 days to solicit comments on the proposed project. The NOP is included in **Appendix A**. The City conducted a scoping meeting on August 27, 2014 to receive input on the content of the EIR.

The City received comment letters on the NOP for the Draft EIR, and a copy of each letter is included in **Appendix A**. A summary of comments and the location where the issue raised in the comment is considered in the Draft EIR are provided in **Table A-1** at the end of **Appendix A.**

DRAFT EIR

This document constitutes the Draft EIR for the Clay Street Hangtown Creek Bridge Replacement Project. This Draft EIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives. Upon completion of the Draft EIR, the City will file the Notice of Completion (NOC) with the California Office of Planning and Research to begin the public review period (Public Resources Code Section 21161). Concurrent with the NOC, the City will provide a Notice of Availability (NOA) of the Draft EIR for public review and invite comment from the general public, agencies, organizations, and other interested parties.

The review period for this Draft EIR is 45 days, beginning on March 2, 2018 and ending on April 18, 2018. Public comment on the Draft EIR will be accepted in written form only via mail, email, or fax. All comments or questions regarding the Draft EIR should be addressed to:

Pierre Rivas, Director
Development Services Department
City of Placerville
3101 Center Street
Placerville, CA 95667
Fax: (530) 295-2510
privas@cityofplacerville.org

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments regarding the adequacy and completeness of the Draft EIR received during the public review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City of Placerville City Council will review and consider the Final EIR. If the City Council finds that the Final EIR is an adequate and complete analysis of the environmental impacts associated with the project, the City Council may certify the Final EIR at a public hearing. The rule of adequacy generally holds that the EIR can be certified if it (1) shows a good faith effort at full disclosure of environmental information and (2) provides sufficient analysis to allow decisions to be made regarding the project in contemplation of its environmental consequences.

Following review and consideration of the Final EIR, the City may take action to approve, approve with conditions, revise, or reject the project. A decision to approve the project would be accompanied by specific conditions of approval, imposing all feasible mitigation measures recommended in the EIR as adopted, by written findings in accordance with CEQA Guidelines Section 15091 and, if applicable, a statement of overriding considerations pursuant to CEQA Guidelines Section 15093. A mitigation monitoring program, as described below, would also be adopted for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. The program would be designed to ensure that these measures are carried out during project implementation.

MITIGATION MONITORING PROGRAM

CEQA Guidelines Section 15097 requires lead agencies to adopt a mitigation monitoring and reporting program (MMRP) to describe mitigation measures that have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The specific reporting or monitoring program required by CEQA is not required to be included in the EIR; however, the MMRP will be presented to the City Council for adoption as a separate document. Throughout the EIR, mitigation measures have been clearly identified and presented in language that will facilitate establishment of a monitoring and reporting program.

REFERENCES

El Dorado County Superior Court. 2012. *Friends of Historic Hangtown v. City of Placerville, et al.* Order Granting Petition for Writ of Mandate. Case No. PC20110145.

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2.0 PROJECT DESCRIPTION

This section describes the Clay Street Hangtown Creek Bridge Replacement Project (proposed project), depicts the location of the project both regionally and locally, describes the existing conditions on the project site and in the vicinity, and includes the project objectives and a general description of the project's technical and environmental characteristics. A list of the approvals required to implement the project is also included. Because the City of Placerville will be required to make a number of decisions on this project, all decisions subject to California Environmental Quality Act (CEQA) are listed, including both actions the City will take now and actions that may be taken in the future necessary to fully implement the project.

2.1 PROJECT LOCATION

The proposed project is located in downtown Placerville, El Dorado County, California. The project site includes the bridge over Hangtown Creek on Clay Street and the intersections of Main Street with Cedar Ravine Road and of Main Street with Clay Street. See **Figure 2.0-1** for a regional map of the area and **Figure 2.0-2** for the project location and existing roadway configuration.

2.2 EXISTING ENVIRONMENTAL CONDITIONS

PROJECT SITE

The project site is located in the downtown historic area of Placerville and includes transportation facilities surrounded by land designated as Commercial in the City of Placerville General Plan. The Ivy House parking lot, owned by the City, is located adjacent to Clay Street to the east between Main Street and Hangtown Creek. Clay Street is a local road that runs north from Main Street approximately 150 feet west of the intersection with Cedar Ravine Road and primarily serves residences and local traffic north of US Highway 50 (US 50). It crosses under US 50 and terminates at Main Street. The intersection at Main Street and Cedar Ravine Road is currently a three-way stop-controlled intersection. Main Street is a two-lane east–west minor arterial. Cedar Ravine Road is a two-lane north–south minor arterial that provides access to Marshall Hospital south of downtown and terminates to the north at Main Street.

Because the project site is in Placerville's downtown historic area, preservation of existing nearby features is important to the City and the community. The monument to the California Druids on Cedar Ravine Road at Main Street and the mature cork oak tree located within the project footprint are valued landmarks. Additionally, the Ivy House parking lot hosts community events such as the weekend Farmers Market and will be considered in project layout and planning.

Cedar Ravine Creek is a tributary of and outlets to Hangtown Creek by way of a drainage culvert connection partially incorporated and adjacent to the existing southern abutment of the Clay Street Hangtown Creek Bridge. This drainage culvert consists of an approximately 234-foot-long open channel along Cedar Ravine Road, which transitions to a closed conduit constructed of various materials and geometrics with varying ages for approximately 286 feet from the intersection of Cedar Ravine Road and Pacific Street to the outfall at Hangtown Creek.

The topography of the project site is relatively flat (with the exception of the creek channel banks) and does not include slopes greater than 20 percent. A topographical map of the project site indicates elevations ranging from approximately 1,865 feet above mean sea level near the south end of the bridge over Hangtown Creek at Clay Street to approximately 1,874 feet above mean sea level on Main Street at the west end of the project site. The project

site generally slopes downward in a northeasterly direction. Existing natural vegetation is limited to the banks of Hangtown Creek.

SURROUNDING USES

Land uses adjacent to the project site include commercial uses north and south of Main Street, east and west of Cedar Ravine Road approaching Main Street, and west of Clay Street, the Ivy House parking lot east of Clay Street and south of Hangtown Creek, and a multi-use trail (El Dorado Trail) north of Hangtown Creek. Farther north, there is residential development along Clay Street on the north side of US 50.

2.3 PROJECT BACKGROUND

CLAY STREET HANGTOWN CREEK BRIDGE

The existing Clay Street Bridge over Hangtown Creek is located within the City's right-of-way. The most recent Caltrans Bridge Inspection Report (BIR) dated July 26, 2016 lists a sufficiency rating (SR) of 62.6 out of 100 (Caltrans 2016). The bridge was previously flagged by the California Department of Transportation (Caltrans) as Functionally Obsolete because it is too narrow for the amount of daily traffic using the bridge. Although the BIR lists the existing bridge as being constructed in 1940, historical records held by the City indicate the bridge was likely built in the 1920s, putting its age closer to 90 years old. The existing structure is a two-span, earth-filled concrete arch that is approximately 32 feet long. The bridge is supported by concrete spread footings; however, there are no as-built bridge plans on record. The bridge carries one lane of traffic across Hangtown Creek and has a clear width of 17 feet between two substandard concrete railings; the total bridge width is approximately 19 feet. Caltrans inspection has also noted some undermining of the slope protection at the north abutment, as well as spalling and deterioration of the concrete railings.

While a SR of less than 80 qualifies the bridge for rehabilitation, Caltrans' Highway Bridge Program (HBP) guidelines require concurrence from Caltrans Structures Local Assistance (SLA) for replacement when the SR is greater than 50. Because of the need to raise the existing bridge to meet the hydraulic requirements outlined in Caltrans' Highway Design Manual (HDM), the additional width required to meet minimum American Association of State Highway and Transportation Officials (AASHTO) standards for the projected Average Daily Traffic (ADT), and the age of the existing bridge, the City determined full replacement of the bridge was most feasible option. The City provided justification to Caltrans SLA demonstrating that replacement is the most feasible option for the project, to which SLA concurred with the finding.

CLAY STREET

Given the close proximity of the Clay Street and Cedar Ravine Road intersections, traffic queues from the three-way stop control at Main Street/Cedar Ravine Road routinely extend through the Clay Street intersection, limiting and inducing delay to eastbound Main Street travelers attempting to turn left onto Clay Street. This restriction effectively blocks southbound Clay Street travelers from turning east onto Main Street as well. As a result, southbound vehicles on Clay Street are often operationally restricted from turning left onto Main Street during the PM peak period. In addition, some motorists wishing to travel northbound on Clay Street cut through the Ivy House parking lot to avoid congestion on Main Street. Future traffic conditions are projected to be heavily congested on Main Street.

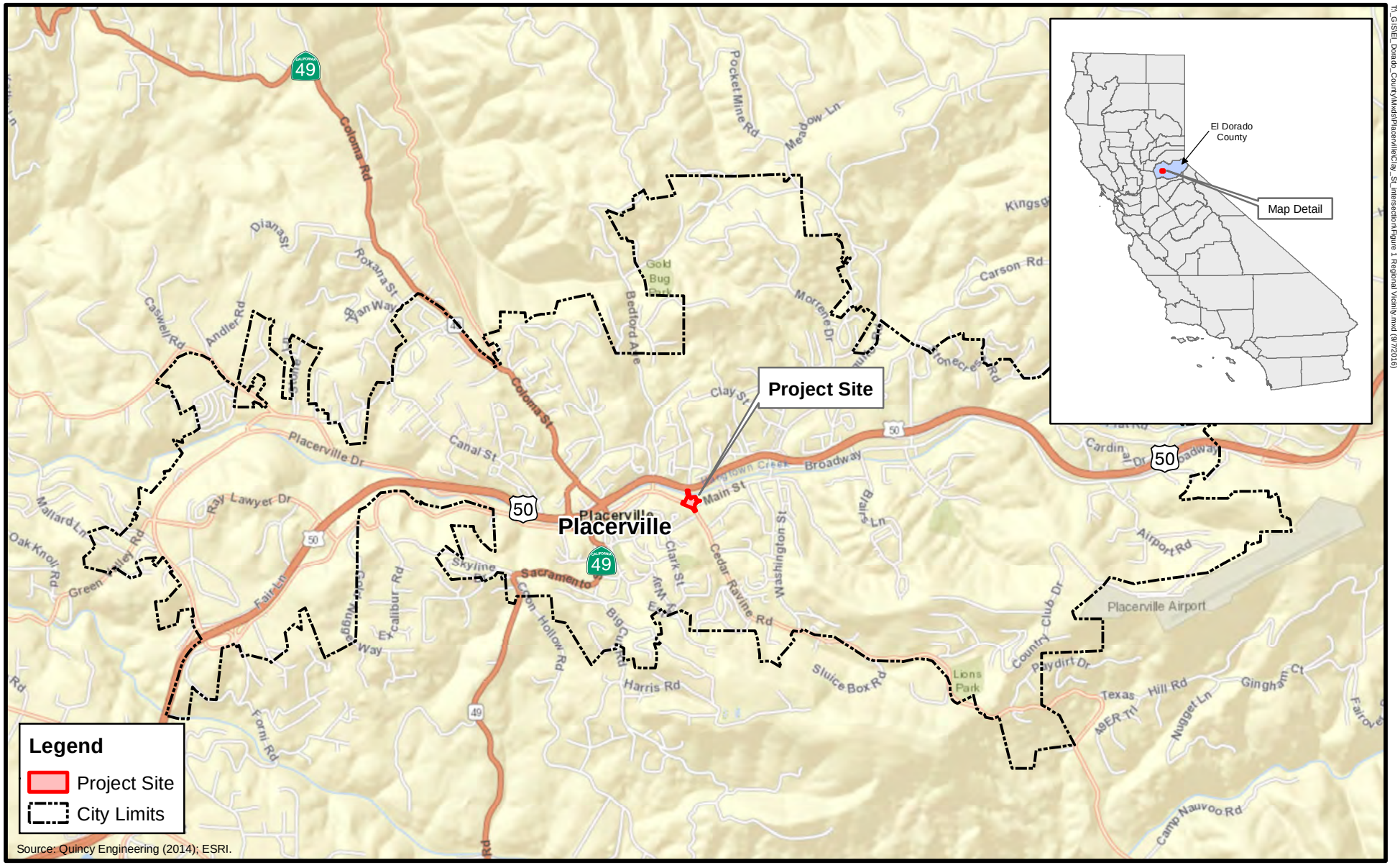

FIGURE 2.0-1
Regional Vicinity

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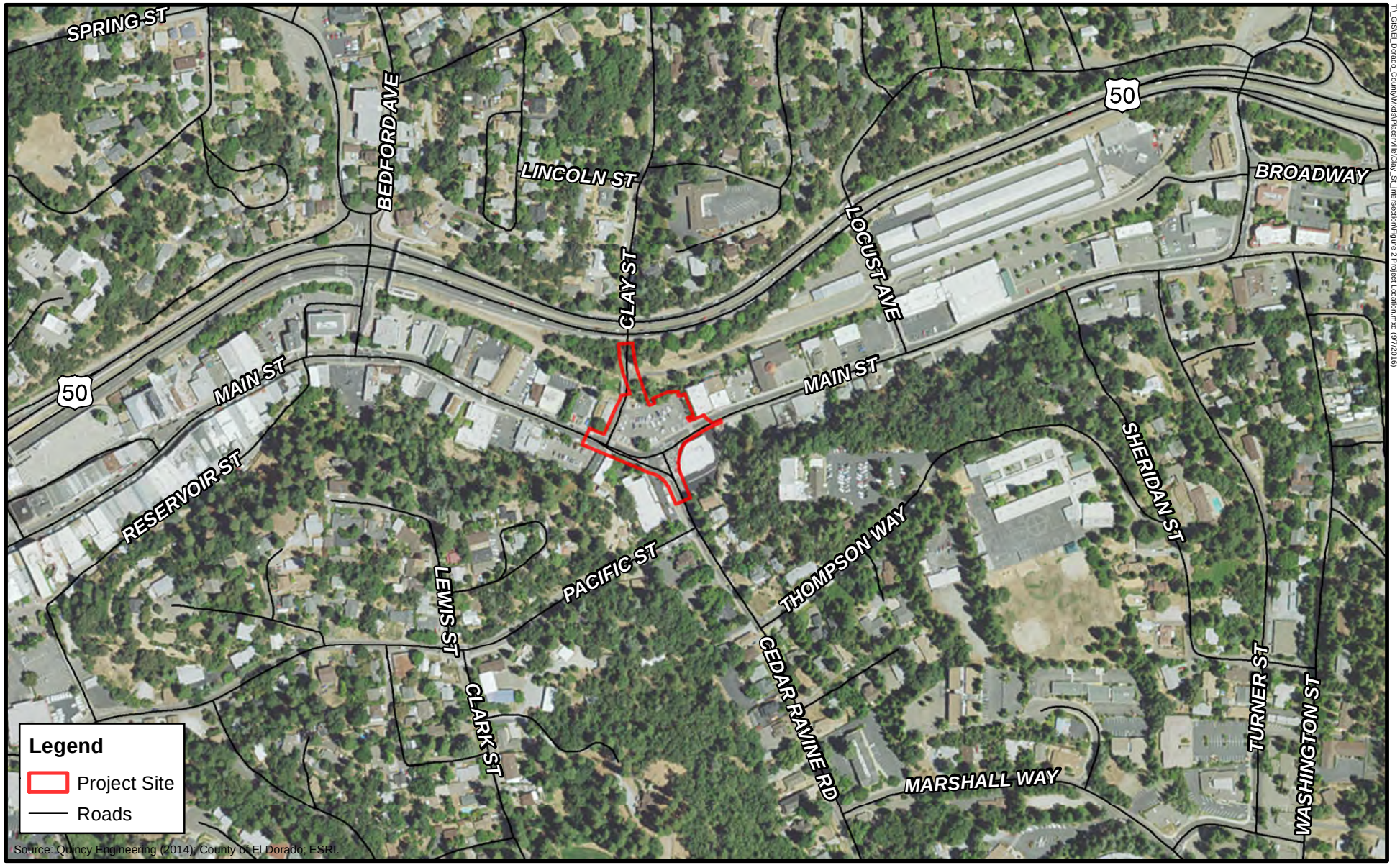

T:_GIS\El Dorado County\Mxds\Placerville\Clay St_Intersection\Figure 2 Project Location.mxd (9/7/2016)

FIGURE 2.0-2

Project Location

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The City's adopted Main Street Streetscape Design Development Plan (Placerville 2006) includes replacement of the bridge with realignment of Clay Street and design recommendations for Main Street to preserve and enhance Main Street's unique character, which the plan recognizes is key to downtown Placerville's continued retail success. When the City adopted the Main Street Streetscape Design Development Plan in January 2006, the plan included a roundabout at the east end where Cedar Ravine Road intersects with Main Street to help improve traffic operations.

Subsequently, due to public opposition, the roundabout was removed as an alternative for the project on July 8, 2014, by City Council resolution. In November 2014, Placerville voters approved Measure K that amended the City's General Plan to prohibit the construction of roundabouts in the city limits unless approved by voters. On January 27, 2015, City Council directed staff to proceed with the design of the project with the preferred alternative consisting of a four-way stop- or signal-controlled intersection at Main Street/Cedar Ravine/Clay Street, including the realignment of Clay Street.

2.4 PROJECT OBJECTIVES

The purpose of the proposed project is to remove the functionally obsolete existing concrete bridge and replace it with a new concrete bridge designed to current structural and geometric standards that will provide adequate, reliable, and safe service for vehicular, pedestrian, and bicycle traffic.

In conjunction with the bridge replacement, the City of Placerville proposes to realign Clay Street, which would allow conformance to the existing adjacent grade and geometrically tie into the Cedar Ravine Road/Main Street intersection. In combination with the new bridge, the proposed project would improve traffic operations on southbound Clay Street and eastbound Main Street and would provide a two-lane street with sidewalks on both sides of the road, which would allow for safer pedestrian and bike connections to the El Dorado Trail and ultimately to the Locust Avenue parking lot.

This project's objectives are to:

- Improve roadway safety and traffic operations.
- Improve pedestrian and bicyclist safety.
- Address functional and structural deficiencies of the necessary crossing structure over Hangtown Creek.
- Minimize impacts to adjacent properties.

2.5 PROJECT CHARACTERISTICS

The proposed project consists of replacement of the existing Clay Street Hangtown Creek Bridge with a new two-lane bridge and realignment of Clay Street to form a new four-way intersection with Main Street and Cedar Ravine Road. **Figure 2.0-3a** is a site plan that shows the locations of the bridge replacement and roadway realignment, lane configurations and striping, and pedestrian/bicycle lane improvements, and **Figure 2.0-3b** is a visual simulation that provides an aerial overview of the proposed project. Additional details about the project components are provided below.

CLAY STREET HANGTOWN CREEK BRIDGE

The proposed new bridge would be approximately 37 feet long and a minimum width of 43.5 feet. The bridge barrier would meet safety standard height and have an architectural treatment to stay in character with the surrounding area and downtown historic area theme. The new bridge deck would be approximately 2 feet higher than the existing bridge structure, allowing for adequate clearance from the high-water elevation of Hangtown Creek. **Figure 2.0-4** illustrates a street-level view of the replacement bridge; this is a conceptual rendering for illustrative purposes only.

CLAY STREET REALIGNMENT AND NEW INTERSECTION IMPROVEMENTS

Clay Street would be realigned to form a four-way intersection consisting of Clay Street, Main Street, and Cedar Ravine Road. The realignment would divide the Ivy House parking lot into two separate lots, as described below. Intersection modifications would require conforming to the existing pavement and would extend along Main Street in both directions and down Cedar Ravine Road. The geographical limits of those modifications are shown in **Figure 2.0-3a** and **Figure 2.0-3b**. The City is considering two options for traffic control at the new intersection: an all-way stop (four-way stop) or a signal. Restriping and reversal of the traffic direction of the private parking lots on the south side may be included to improve intersection operations and safety as part of the final design. **Figure 2.0-3a** shows anticipated intersection lanes, through and turn-lane striping, and the location of sidewalk improvements and bicycle lanes. Improvements would include pedestrian crossings at the realigned intersection that would be designed to meet Americans with Disabilities Act (ADA) guidelines. The project would extend the sidewalk south along Cedar Ravine Road to fill in the existing gap in the sidewalk network on the east side of Cedar Ravine Road between Main Street and Pacific Street. **Figure 2.0-5a, Figure 2.0-5b, Figure 2.0-5c, and Figure 2.0-5d** illustrate simulated views of the proposed intersection configuration as viewed from the south, west, north, and east, respectively.

IVY HOUSE PARKING LOT

To accommodate the Clay Street realignment, the Ivy House parking lot would be subdivided and reconfigured into two separate parking lots, as shown in **Figure 2.0-3a** and **Figure 2.0-3b**. The lots would be owned and maintained by the City. Ingress and egress locations to the parking lots will be limited to Clay Street only; no access would be provided from Main Street.

The current viewing area overlooking Hangtown Creek at the northwest corner of the parking lot and the path leading to the viewing area would be removed and reconstructed to accommodate the bridge abutments and retaining walls necessary for slope and structure stability. New retaining walls would be placed along the channel banks on the south side of the channel, and that area would be raised to grade at the reconfigured Ivy House parking lot.

The realignment of Clay Street would reduce the number of available parking spaces in the Ivy House lot, with the reduction estimated at approximately 16 spaces. The City of Placerville has identified numerous locations in which parking spaces are available to balance the loss of parking spaces. The closest lot is the City-owned Locust Avenue parking lot, approximately 400 feet northeast of the Ivy House lot, with safe pedestrian access via the El Dorado Trail. This lot has the potential to add an estimated 25 spaces, resulting in a potential net gain of approximately 9 spaces.

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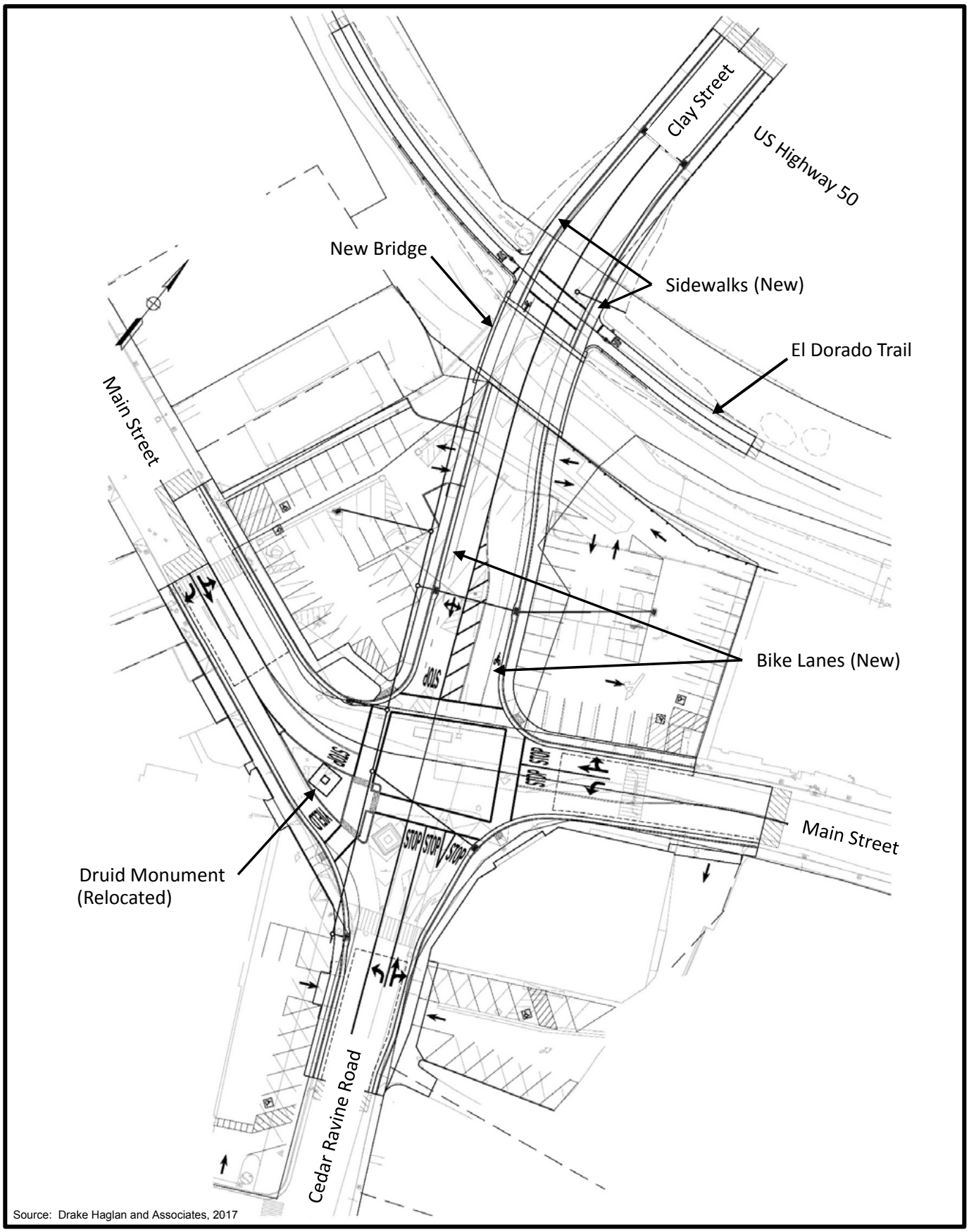

Source: Drake Haglan and Associates, 2017

Not To Scale

FIGURE 2.0-3a
Site Plan

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Source: Drake Haglan and Associates, 2016

FIGURE 2.0-3b
Aerial Overview of Proposed Project

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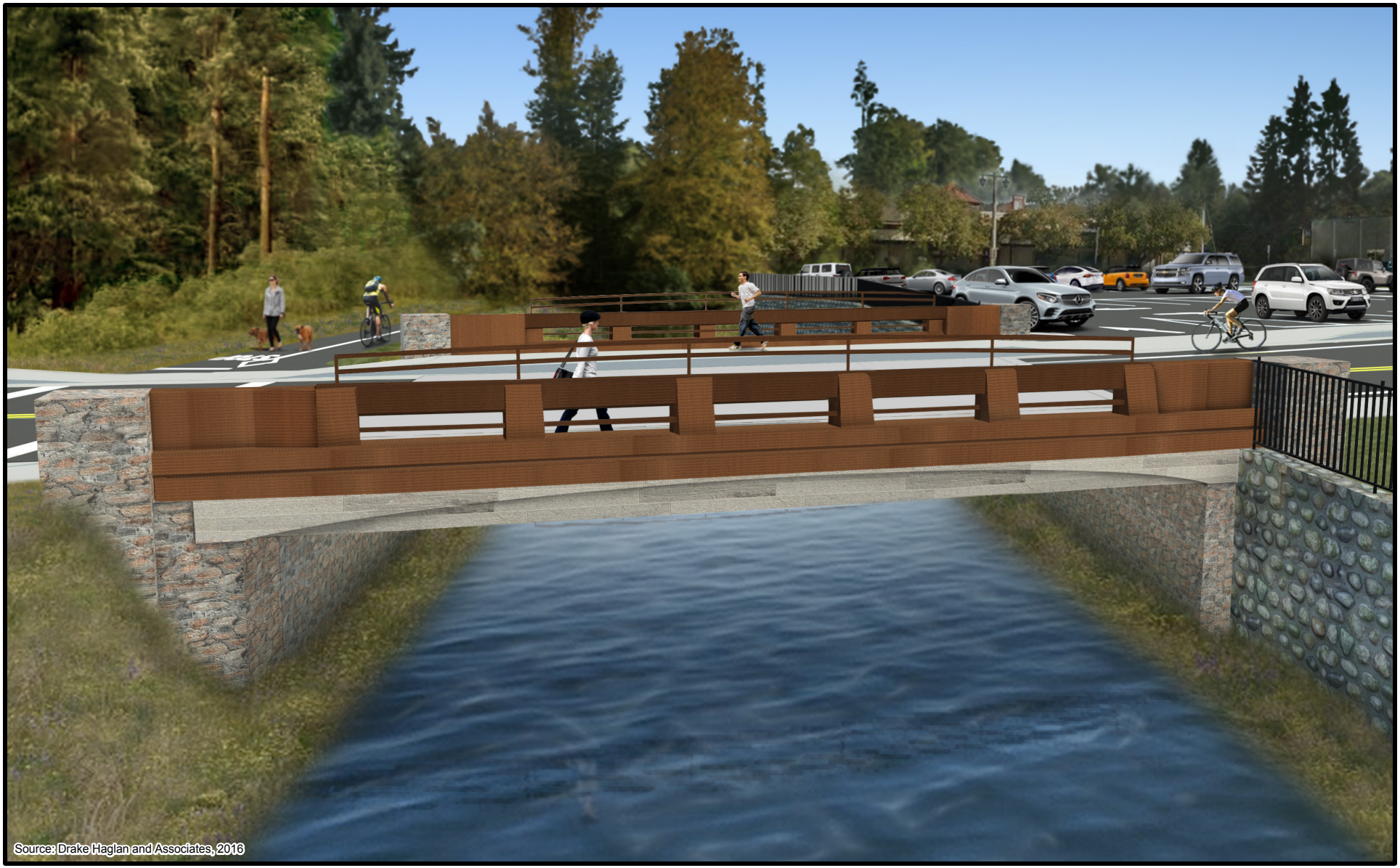

FIGURE 2.0-4
Proposed Bridge Conceptual Design

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FIGURE 2.0-5a
Proposed Intersection (View from South)

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Source: Drake Haglan and Associates, 2016

FIGURE 2.0-5b
Proposed Intersection (View from West)

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Source: Drake Haglan and Associates, 2016

FIGURE 2.0-5c
Proposed Intersection (View from North)

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Source: Drake Haglan and Associates, 2016

FIGURE 2.0-5d
Proposed Intersection (View from East)

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DRUID MONUMENT RELOCATION

The historic Druid Monument located at the intersection of Cedar Ravine Road and Main Street would be moved to a new pedestrian refuge island on Main Street at the intersection of Cedar Ravine Road, where it can be safely viewed up close by the public with reduced potential for collision by vehicles. The monument's historical intent is to be located within the intersection, allowing traffic circulation around the monument. The relocation is necessary to improve circulation and intersection safety for the protection of the monument and those choosing to view it as patrons. The new location for the monument is approximately 45 feet west from its current location, while still remaining within the intersection, respectfully holding to its historical intent. **Figure 2.0-5a, Figure 2.0-5b, Figure 2.0-5c, and Figure 2.0-5d** illustrate views of the new monument location as viewed from the south, west, north, and east, respectively. These figures are conceptual renderings for illustrative purposes only.

LANDSCAPING AND LIGHTING

The proposed project would include new landscaping along the north side of Main Street at the new intersection. The western portion of the stone planter would be removed. The part of the stone planter that contains the cork oak tree would be modified with construction of the new parking lot to conform grades in the area, while preserving the cork oak tree. The City intends to retain the cork oak tree and will protect in place during construction. Existing lighting within the project vicinity would be assessed and adjusted as appropriate along Main Street and the realigned portion of Clay Street for wayfinding and safety.

UTILITY RELOCATION

Utilities at the project site include overhead and underground electrical and communications, a 6-inch water line, sanitary sewer, and storm drain facilities. The Cedar Ravine drainage culvert outlets at the creek and is integral with the south abutment/retaining wall of the existing bridge. This outlet would be reconstructed after removal of the existing bridge. Permanent relocations of the waterline and storm drain facilities would be required. Temporary relocation of overhead utilities would be required during construction.

The portion of the Cedar Ravine drainage culvert between Main Street and the existing bridge is expected to be affected by the Clay Street realignment and parking lot reconstruction. Modification of the culvert would be required as part of the project and is likely to include reconstruction of portions of the culvert under Main Street and the Ivy House parking lot. There is a portion of the existing culvert within close proximity to the Druid Monument. Recent investigation using LIDAR technology indicates the segment close to the monument is in poor condition and could fail, which could impact the monument.

RIGHT-OF-WAY

The project is currently not anticipated to require the acquisition of any permanent right-of-way from private property owners, but this will not be fully known until final design occurs. Modifications to the existing Freeway Maintenance Agreement between the City and Caltrans will be required to accommodate the change in geometry of Clay Street within the State's right-of-way. Temporary construction easements or Permits to Enter and Construct will be required from adjacent property owners in order to construct and restripe portions of the parking lots surrounding the project. The project would encroach into the State's right-of-way during the construction phase, which would require an encroachment permit from Caltrans.

CONSTRUCTION ACTIVITIES

Construction is expected to begin in 2020 and take approximately 9 to 12 months to complete. Construction will consist of the following activities:

- Clearing and grubbing and tree removal (approximately 20 trees) or trimming as needed to accommodate the project.
- Installation and preparation for utility relocations.
- General demolition of bridge, existing retaining walls, sidewalks, asphalt, etc.
- Finish grading and structural backfill of the site that would involve the import of up to 50 cubic yards of fill material.
- Construction of the new bridge, roadway paving, placement of sidewalk, curb, gutter, and associated improvements.
- Signing and striping of the project and intersection improvements.

Stream flow in Hangtown Creek and flows in the Cedar Ravine drainage culvert would be diverted into pipe(s) through the active construction zone. The diversion would be established in conformance with City and County specifications as well as California Department of Fish and Wildlife, Central Valley Regional Water Quality Control Board, US Army Corps of Engineers, and US Fish and Wildlife Service regulatory requirements. The stream diversion would be constructed within the existing channel to protect water flowing in Hangtown Creek from demolition and construction activities. Materials to construct the diversion would consist of pipe(s) as needed to convey flow rates anticipated during construction, and sandbags and plastic sheeting to construct diversion dams in the channel upstream and downstream of the site. All stream diversion work would be contained within the area of disturbance. Equipment used would be light truck-mounted cranes above the channel, with small earthwork equipment (Bobcats, etc.) and laborers within the channel between the diversion dams. The operational timeline for the stream diversion would likely be late April through October, depending on the permit restrictions imposed by the resource agencies.

The general equipment likely to be used during the construction of the proposed project includes but is not limited to backhoes, Bobcats, bulldozer/loaders, dump trucks, haul trucks, excavators, graders, roller/compactors, asphalt grinders, asphalt pavers, water trucks, concrete truck, trucks with seed sprayers, and service vehicles. Contractor site access and laydown areas would be in portions of the road and adjacent parking lots closed to traffic and parking. Due to the close proximity of historic buildings, such as the Pearson's Soda Works building on the south side of Main Street opposite Clay Street, the City will complete necessary evaluations of vibrational effects and will require construction methods be used to ensure vibration levels from heavy construction equipment do not pose a risk of structural damage to historic buildings.

During construction, Clay Street would be closed between Main Street and just north of the US 50 overpass. Traffic accessing Clay Street north of US 50 would be detoured via Bedford Avenue to Coleman Street or Mosquito Road to Clay Street. The total detour length is approximately 1 mile. Access to residences along Clay Street would be maintained at all times during construction. Detailed signage plans would be reviewed and approved by the City and provided in the plan set. Residents would be informed of the project developments and impacts to traffic operations during construction. The portion of the El Dorado Trail that crosses Clay

Street and a short distance to the east and west would also be closed temporarily, but a detour would be available at Locust Avenue (to Main Street) and at Bedford Avenue (to Main Street).

2.6 PROJECT APPROVALS

The following City actions would be taken for the approval and construction of the proposed project:

- City Council certification of the Final EIR
- City Council approval of the project design and release of bid documents for public bidding
- City Council construction contract award

The following federal and state agency permits and approvals would be required for the project:

- California Department of Fish and Wildlife (Fish and Game Code Section 1601 Streambed Alteration Agreement)
- California Department of Transportation (Encroachment Permit and Funding)[1]
- Central Valley Regional Water Quality Control Board (Clean Water Act Section 401 Water Quality Certification)
- State Water Resources Control Board (Construction General Permit Notice of Intent)
- US Army Corps of Engineers (Clean Water Act Section 404 Wetland Permit)

[1] Because the proposed project is federally funded, Caltrans, as the delegated federal oversight agency, is responsible for complying with the requirements of the National Environmental Policy Act (NEPA), including necessary environmental review.

REFERENCES

Caltrans (California Department of Transportation). 2016. Bridge Inspection Report: Bridge Number 25C0117 (Hangtown Creek).

Placerville, City of. 2006. *Main Street Streetscape Design Development Plan.*

3.0 INTRODUCTION TO THE ANALYSIS

The following is an introduction to the project-specific and cumulative environmental analysis and general assumptions used in the analysis. The reader is referred to the individual technical sections (Sections 4.1 through 4.10) of this Draft Environmental Impact Report (Draft EIR) regarding specific assumptions, methodology, and significance criteria used in the analysis.

ANALYSIS ASSUMPTIONS GENERALLY USED TO EVALUATE THE IMPACTS OF THE PROJECT

APPROACH TO THE PROJECT ANALYSIS

Sections 4.1 through 4.10 of this Draft EIR contain a description of current setting conditions (including the applicable regulatory framework), evaluation of the direct and indirect environmental effects resulting from implementation of the proposed project, identification of measures that mitigate the identified significant environmental effects, and, if applicable, identification of whether significant environmental effects of the proposed project would remain after application of proposed mitigation measures.

The replacement of the existing bridge and ultimately realignment of Clay Street to form a four-leg intersection with Main Street and Cedar Ravine Road would include either an all-way stop or a traffic signal, as noted in Section 2.0, Project Description. The potential impacts constructing the new bridge and installing either an all-way stop or a traffic signal are evaluated as design options in each technical section. For most impact topics, there is no substantial difference in environmental impacts between the two options; however, where there are differences (e.g., intersection operations and vehicle idling times), these differences are noted.

ORGANIZATION OF TECHNICAL SECTIONS

The individual technical sections of the Draft EIR follow the following format.

Existing Setting

This subsection includes a description of the physical conditions associated with the technical area of discussion, consistent with California Environmental Quality Act (CEQA) Guidelines Section 15125. The existing setting is generally based on conditions as they existed when the Notice of Preparation for the project was released in August 2014. However, to the extent more current information is available that is relevant to the impact analysis, that data is presented.

Regulatory Framework

This subsection describes the federal, state, regional, and local plans, policies, laws, and regulations that apply to the technical area of discussion.

Impacts and Mitigation Measures

The Impacts and Mitigation Measures subsection of each technical section identifies direct and indirect environmental effects associated with implementation of the proposed project and identifies proposed measures to mitigate environmental effects, where significant impacts are identified. A statement is included in each impact discussion identifying the level of significance the impact will have before and after mitigation. Standards of significance are identified and used to determine whether identified environmental effects are considered "significant" and require

the application of mitigation measures. Each environmental impact analysis is supported by substantial evidence included in the discussion.

This Draft EIR uses the following terminology to describe environmental effects of the proposed project:

Standards of Significance: A set of criteria used by the lead agency to determine at what level or "threshold" an impact would be considered significant. Significance criteria used in this EIR include the CEQA Guidelines; factual or scientific information; regulatory performance standards of local, state, and federal agencies; and adopted City policies and ordinances.

Less Than Significant Impact: A less than significant impact would cause no substantial change in the environmental (no mitigation required).

Significant Impact: A significant impact would cause (or would potentially cause) a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects using specified standards of significance. Mitigation measures and/or project alternatives are identified to reduce project effects on the environment.

Significant Unavoidable Impact: A significant and unavoidable impact would result in a substantial change in the environment that cannot be avoided or mitigated to a less than significant level if the project is implemented.

Less Than Cumulatively Considerable Impact: The project's contribution to a cumulative impact is less than significant when evaluated in the context of reasonably foreseeable development in the surrounding area, and the project's contribution to the impact would not be cumulatively considerable.

Cumulatively Considerable Impact: A cumulative significant impact would result in a new substantial change in the environment from effects of the project when evaluated in the context of reasonably foreseeable development in the surrounding area, and the project's contribution would be cumulatively considerable.

MITIGATION MEASURES

Feasible mitigation measures that could minimize significant adverse impacts are discussed, after which the impact discussion notes whether the impact has been mitigated to a less than significant level or remains significant and unavoidable. CEQA requires that mitigation to lessen the environmental impact must be feasible. CEQA Guidelines Section 15126.4(a)(1) states, "An EIR shall describe feasible measures which could minimize significant adverse impacts…" Feasible is defined as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" (CEQA Section 21061.1).

APPROACH TO THE CUMULATIVE IMPACT ANALYSIS

CEQA requires that an environmental impact report contain an assessment of the cumulative impacts that could be associated with the proposed project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the

effects of past projects, the effects of other current projects, and the effects of probable future projects (as defined by Section 15065). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

> …the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

In addition, Section 15130(b) identifies that the following elements are necessary for an adequate cumulative analysis:

1) Either:

   (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,

   (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not cumulatively considerable, the lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

Definition of Cumulative Setting

CEQA Guidelines Section 15130(a) requires that an EIR "discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." CEQA Guidelines Section 15130(b) states, "The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact."

Table 3.0-1 lists past, present, and probable future projects producing related or cumulative impacts that are considered in the analysis.

TABLE 3.0-1
CUMULATIVE PROJECTS

Project	Characteristics	Location	Status
Cottonwood Park – Phase 4 & 6, Tentative Subdivision Map 2005-01	39-unit single-family residential subdivision on approximately 22.2 acres. Phase 4 consists of 19 single-family lots (Lots 1–19) on 6.2 acres. Phase 6 consists of 20 single-family lots (Lots 20–39) on approximately 16 acres.	North of Clay Street, east of Cottonwood Park Apartments APNs 002-051-27, 002-071-33, and 002-071-34	Approved
Country Club Court Subdivision, Tentative Subdivision Map 2006-03	Single-family residential	South Country Club Drive APN 051-520-11	Approved
Adamo, Tentative Parcel Map 2007-02	Single-family residential	Elysian Way APN 051-441-47	Approved
Marshall Medical Center Offsite Parking and General Plan Amendment and Rezone	To amend the residential General Plan land use and zoning designations for the following APNs to Business Professional: 004-061-11; 004-061-17; 004-061-30; 004-061-37; 004-061-39; 004-061-40; 004-071-08; 004-071-09; 004-071-15; 004-071-16; 004-071-17; 004-071-18; 004-071-19; 004-072-03; 004-072-04; 004-072-05; 004-072-06; 004-073-03; 004-073-04; 004-073-05; 004-073-06; 004-110-15; 051-120-01; 051-120-19 Conditional Use Permit and Site Plan Review request to grade, pave, landscape, light, and operate a 51-stall parking lot on APN 051-120-19, 3292 Washington Street, a conditional use in the proposed Business Professional zone.	3292 Washington Street and the following APNs: 004-061-11; 004-061-17; 004-061-30; 004-061-37; 004-061-39; 004-061-40; 004-071-08; 004-071-09; 004-071-15; 004-071-16; 004-071-17; 004-071-18; 004-071-19; 004-072-03; 004-072-04; 004-072-05; 004-072-06; 004-073-03; 004-073-04; 004-073-05; 004-073-06; 004-110-15; 051-120-01; 051-120-19	Approved
General Plan 2013-2021 Housing Element Implementation	Amend General Plan Land Use Section and the Housing Element, establishing Housing Opportunity (HO) Overlay land use designation; amend General Plan and Zoning designations for specific parcels to allow for optional development of multifamily dwelling units	Placerville – citywide	Approved

Project	Characteristics	Location	Status
994 Thompson Way – Site Plan Review 2015-06	New single-family residence	994 Thompson Way	Approved
996 Thompson Way – Site Plan Review 2015-07	New single-family residence	996 Thompson Way	Approved
967 Lincoln Street – Site Plan Review 2016-01	Existing residence exterior alterations	967 Lincoln Street	Approved
2920 & 2922 Bedford Avenue – SPR 16-04	Exterior alterations of two residential structures in the Bedford Street-Clay Street Residential Historic District	2920 & 2922 Bedford Avenue	Approved
Downtown Placerville Historic District	Amend the Zoning Map and Zoning Ordinance that would establish a Downtown Historic District. Draft boundaries: east to west and south involves the entire length of Main Street, including all parcels zoned Central Business District and Commercial; north: the eastbound lane of US 50. Amend the boundary of the adopted City of Placerville Historic District established by Ordinance 1280, adopted on August 25, 1981, adding four additional residential parcels (3043, 3051, 3049, and 3041 Cedar Ravine) to the Cedar Ravine Residential Historic District that are zoned R-3 (Medium Density Multi-Family).	Main Street, portions of Pacific Street and Cedar Ravine Road	Proposed

Source: Placerville 2014, 2017

EFFECTS FOUND NOT TO BE SIGNIFICANT

The following topics included in Appendix G of the CEQA Guidelines were determined to result in less than significant impacts or no impact.

Geology, Soils, and Paleontological Resources

The project site is mapped as metasedimentary Calaveras Complex, which consists of weathered to highly weathered slate and shale. Soils on the project site are mapped as Placer diggings. Colluvium/alluvium and/or artificial fill is present at the surface. Existing channel banks along Hangtown Creek are moderately steep to nearly vertical and consist of exposed bedrock, show little erosion from stream flow, and appear resistant to scour (Taber 2007; Domenichelli 2009). The topography of the project site is relatively flat (with the exception of the creek channel banks) with elevations ranging from approximately 1,865 feet above mean sea level (amsl) near the south end of the bridge over Hangtown Creek at Clay Street to approximately 1,874 feet amsl on Main Street and slopes of 5 to 6 percent.

El Dorado County has a relatively low potential for seismic activity. The project site is not located in an Alquist-Priolo Earthquake Fault Zone (CGS 2015). The closest fault is the Bear Mountains Fault Zone-West (approximately 8 miles west of the site), which is not an active fault. The colluvial/alluvial and fill soils likely present along Clay Street may be susceptible to densification or liquefaction during periods of high water. However, the overall potential for seismically induced hazards such as liquefaction and lateral spreading is considered low, and these conditions are not a substantial geotechnical concern for the project (Taber 2007).

Project and Cumulative Impacts

A geology, soils, or paleontological resources is considered significant if implementation of the proposed project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: (a) 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 or other substantial evidence of a known fault; (b) strong seismic ground shaking; (c) seismic-related ground failure, including liquefaction; or (d) landslides.

- Result in substantial soil erosion or the loss of topsoil.

- 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.

- Be located on expansive soil, creating substantial risks to life or property.

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Seismic Hazards

The bridge replacement and Clay Street realignment would be subject to seismic hazards such as ground shaking, as are the existing facilities. The proposed project would not include new features or occupied uses that would expose people to earthquake hazards. Because the replacement bridge and realigned Clay Street would be designed to modern engineering standards and current regulatory standards for bridges and roadways, including Caltrans Bridge Design Specifications, the American Association of State Highway and Transportation Officials (AASHTO) "Green Book" (A Policy on Geometric Design of Highways and Streets) and the City of Placerville's standards, this would represent an improvement over existing conditions. The impact is **less than significant**.

Erosion and Scour

Pavement removal on Clay Street and the Ivy House parking lot would expose soil that would require grading and other earthwork to prepare the alignment for the bridge approaches and realigned Clay Street. This would temporarily expose soil to wind and water erosion. The project would result in more than 1 acre of disturbance and therefore would be required to comply with the State's Construction General Permit requirements, which includes preparation of a stormwater pollution prevention plan (SWPPP). The SWPPP must include best management practices to

reduce erosion potential during construction. The proposed project would also be required to comply with Title 8, Chapter 7 of the Placerville City Code, which requires the implementation of measures to control excavation, grading, and earthwork construction to minimize erosion. Compliance with these existing regulations would ensure that the proposed project would not result in substantial erosion or loss of topsoil.

The Hangtown Creek channel is made up of bedrock that shows little erosion from existing flows and appears to be scour-resistant. The scour potential at the bridge consists mostly of abutment scour. The maximum scour predicted at the abutment is 7.6 feet for the right (north) abutment and 7.7 for the left (south) abutment. However, because bedrock is present, abutment scour would only occur to depth of bedrock. Significant scour is not anticipated at the confluence of Hangtown Creek and Cedar Ravine Creek because of the alignment of the new bridge and the outlet of Cedar Ravine Creek. The existing rock channel bottom has not experienced substantial scour downstream of the confluence, and therefore with the project, measurable scour is not expected (Domenichelli 2009).

This impact is **less than significant**.

Soil Hazards

Expansive soils are those with high shrink-swell potential, typically associated with a relatively high percentage of clay. Development of structures on expansive soils can be subject to shrink and swell movement of the underlying soils, potentially creating new stresses on features such as roadways and underground utilities. The Placer diggings soils that underlie the project site consist primarily of stony, cobbly, and gravelly material, which are not highly expansive. As part of project design, the results of soil testing will be used to determine the soil conditions on the site, and bridge abutments and realigned Clay Street will be engineered to account for underlying soil types as required by state and city regulations.

The site materials generally appear to be adequately stable and capable of providing support for the proposed replacement bridge. Site materials are generally expected to be workable by conventional heavy construction equipment (Taber 2007).

This impact is **less than significant**.

Landslide Hazards

Although steep slopes are present south of Main Street and north of the US Highway 50 (US 50) overcrossing at Clay Street, they are composed of bedrock. The proposed project would not involve activities that would alter the stability of the bedrock. There would be **no impact**.

Unique Geologic Features and Paleontological Resources

The project site is flat and covered with impervious surfaces, with the exception of Hangtown Creek. There are no unique geologic features on the project site. The project site is underlain by materials derived from mining development (Placer diggings soils) and metamorphic bedrock, which have little to no potential for containing fossils. There would be **no impact.**

Cumulative Impacts

Geology and soil-related impacts are generally site-specific and are determined by a particular site's soil characteristics, topography, and proposed land uses. The proposed project would not result in new land uses or ground alteration that would place people or structures at risk of geologic hazards. The proposed project's contribution would be **less than cumulatively considerable**.

Public Services (Fire Protection, Law Enforcement, Schools, and Parks/Recreation)

Fire protection in Placerville is provided by the El Dorado County Fire Protection District. The district serves the communities of Placerville, Shingle Springs, Pleasant Valley, Camino, Coloma, Lotus, Gold Hill, Pollock Pines, Kyburz, Strawberry, Pilot Hill, and Cool. The district operates out of 18 stations that protect a primarily rural area. The City of Placerville Police Department provides all law enforcement services within the Placerville city limits. The department has one office, located at 730 Main Street, which is approximately one-third mile east of the project site. Response times vary greatly in the Police Department's service area based on distance, weather, and traffic conditions. The City of Placerville General Plan mandates that the department strive to achieve a response time of 3 minutes for emergency calls, 7 minutes for priority calls, and 10 minutes for routine calls.

Placerville has seven parks comprising approximately 100 acres of parks managed by the City. None of the parks is within the construction limits of the project site. A small area just off the northwest corner of the Ivy House parking lot provides views of Hangtown Creek. This is an informal amenity and is not part of the City's park system. The most extensive multi-use trail in the city is the El Dorado Trail, which extends through El Dorado County for over 23 miles providing opportunity for nature walks, horseback riding, and bicycling. The majority of the trail is located on El Dorado County lands, with some of the portions in Placerville. A recently completed segment of the Class I trail along Hangtown Creek crosses Clay Street and ends at Bedford Avenue.

Project and Cumulative Impacts

A public services impact is considered significant if implementation of the proposed project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered public services facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.

- 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, or include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

The proposed project would not result in a change in land use, add new land uses, or increase population that would, in turn, require additional fire protection and law enforcement services, or schools. There would be no increased demand for staffing or school capacity that could, in turn, result in the need for new or expanded facilities, the construction of which could result in significant environmental effects. There would be **no impact** related to the need for these facilities.

The proposed project does, however, have the potential to affect emergency response times during construction activities as a result of roadway closure, lane narrowing, or detours. This impact is evaluated in detail in Impact 4.10.3 in Section 4.10, Transportation and Circulation, which identifies mitigation to reduce this impact to a less than significant level. As required in mitigation measure **MM 4.10.3**, the City will prepare a Construction Traffic Management Plan that requires the City to coordinate in advance with the Placerville Police Department and the El Dorado County Fire Protection District regarding construction activities that could interfere with use of project site roadways to provide emergency access in or through downtown.

The proposed project would not result in an increase in population that would increase the demand for parks and recreation facilities that would, in turn, result in the need to expand or construct new facilities or increase use of facilities such that physical deterioration would occur. The proposed project would result in the removal of the informal viewing area along Hangtown Creek at the north side of the Ivy House parking lot. The adjacent El Dorado Trail on the north side of Hangtown Creek and the new bridge, which would include sidewalks on both sides of the bridge (whereas only one is present now), would provide viewing opportunities and would be compliant with the Americans with Disabilities Act (ADA). Impacts would be **less than significant**.

Issues Addressed in Initial Study

The Initial Study checklist (**Appendix A**) determined that the following issue areas would result in no impact and would not require analysis in the EIR: agriculture and forestry resources, mineral resources, population and housing, and utilities.

REFERENCES

CGS (California Geological Survey). 2015. Regulatory Maps. http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps.

Domenichelli & Associates. 2009. *Hydrology/Hydraulics Report, El Dorado County, Clay Street Bridge Replacement.*

Placerville, City of. 2014. *Memorandum: CIP Project No.: 406171 (Clay St. Bridge Replacement & Realignment EIR) – Transportation and Circulation and Cumulative Project Impact Analysis)*

———. 2017. Current Development Projects. https://www.cityofplacerville.org/current-development-projects

Taber Consultants. 2007. *Preliminary Foundation Report, Clay Street Bridge at Hangtown Creek, Placerville, California.*

4.1 AESTHETICS

This section describes the existing visual resources of the area that could be affected by the project and discusses the impacts associated with implementing the project.

4.1.1 EXISTING SETTING

VISUAL CONTEXT

The Gold Rush had an influence on Placerville's history and is reflected in the city's physical layout and character. The city's community design was established very early in its history and provides a strong, pleasant sense of place and local identity. Placerville's physical elements include the foothill environment, small-town atmosphere and rural surroundings, vistas, focal points of interest, landmarks, historic downtown area, streetscapes, and many residential neighborhoods.

The downtown area is one of the most defined areas in the city. Placerville's downtown area is bounded on the north by US Highway 50 (US 50), on the south by Miner's Ridge, on the east by the Druid Monument and Cedar Ravine, and on the west by Sacramento Street.

The Main Street segment of the downtown includes many historic buildings, some dating from as early as the 1850s, which define the overall visual character of the downtown area. Aesthetic values are enhanced by these buildings. The Bell Tower, the Druid Monument, veterans memorials, and other visual amenities are among the downtown area's distinctive visual landmarks. The reader is referred to Section 4.4, Cultural Resources, for a detailed description of the historic resources in the project site.

The visual character of the city's streets varies, from broad thoroughfares to small, single-lane carriage roads. US 50 is an important "path" through Placerville and serves as a major link between Sacramento and South Lake Tahoe. It is Placerville's most significant view corridor and is also designated a state scenic highway. However, the highway divides the city into two halves, and because of its scale, US 50 visually overwhelms the surrounding structures and dominates the cityscape with barren cut banks and limited landscaping (Placerville 1990).

PROJECT SITE OVERVIEW

The project site is located in the downtown historic area of Placerville. The project site consists of the existing Clay Street Bridge and Clay Street to the US 50 undercrossing, the Ivy House parking lot, and Main Street where it intersects Clay Street on the north and Cedar Ravine Road on the south, and the recently completed El Dorado Trail. Land uses adjacent to the project site include commercial uses north and south of Main Street, east and west of Cedar Ravine Road approaching Main Street, and west of Clay Street, the Ivy House parking lot east of Clay Street and south of Hangtown Creek, and a multi-use trail (El Dorado Trail) north of Hangtown Creek. Trees line the El Dorado Trail and Hangtown Creek and are present on commercial properties and throughout the background of the landscape. The reader is referred to Section 4.3, Biological Resources, for additional information on vegetation in the project site.

Visual Characteristics of the Project Site

The existing intersection of Main Street and Cedar Ravine Road is an urban visual feature set in an adjacent backdrop comprising low-rise modern- and historic-era structures of varying heights and architectural styles. Steep, hilly terrain on the south and the US 50 overcrossing and steep terrain to the north tend to dominate the overall local viewshed.

The Druid Monument is a 20-foot-tall stone monument set in the intersection of Main Street and Cedar Ravine Road. It consists of a circular stone pillar mounted on a square base set on a concrete platform of three ascending steps. A variegated orange and red stained glass flame atop a metal torch is set on the top of the pillar (see Photo 1 in Section 4.4, Cultural Resources). The reader is referred to Section 4.4, Cultural Resources, for an evaluation of the historic significance of the Druid Monument per Section 15064.5 of the CEQA Guidelines, which concludes that the monument is a significant historical resource under CEQA. The Druid Monument is readily visible when approaching the intersection; however, at a distance, because of its height, width, and light-colored material, the monument tends to blend into the background.

The Ivy House parking lot is visually prominent because of its large expanse of pavement, light poles, and signage. Its southern edge is defined by a short planter made of stone. The planter contains a mature cork oak tree, which is a visual amenity. Landscaping in the planter is generally sparse. The parking lot itself is not historic and does not exhibit unique or special visual qualities, although its location at the end of the downtown historic area and the stone planter are valued by the public. A dense tree canopy and understory shrubs, lining Hangtown Creek, are located on the north side of the existing parking lot, which softens the appearance and provides a visual separation from US 50. A small path and overlook are accessible from the northwest corner of the parking lot, which offers views of Hangtown Creek. This is an informal amenity and is not part of the City's park system.

Within the project site, Clay Street and its continuation across the bridge at Hangtown Creek transitions from two lanes to a narrow roadway. Clay Street is part of Placerville's early network of streets. Like similar streets elsewhere in Placerville, these narrow or single-lane roadways are appreciated by the public for their quaintness. Historic-era structures to the west of Clay Street also contribute to the perceived aesthetic value.

The Clay Street Bridge is a low and narrow concrete arch bridge representative of the early twentieth century era of transportation architecture. The reader is referred to Section 4.4, Cultural Resources, for an evaluation of the historic significance of the Clay Street Bridge per Section 15064.5 of the CEQA Guidelines, which concludes the bridge is not a significant historical resource under CEQA. Within the context of its surroundings, the bridge provides visual interest north and south of the El Dorado Trail and contributes to the quaintness of Clay Street, but it is not unique or aesthetically noteworthy.

The US Highway 50 overcrossing at Clay Street dominates views from Main Street to the north, with mature trees along Hangtown Creek and adjoining the highway also contributing to the visual mass of the structure. These features substantially diminish the overall scale of Clay Street and the bridge relative to their surroundings.

The El Dorado Trail, which parallels Hangtown Creek on the north and intersects with Clay Street, is a paved pedestrian/bicycle trail that physically and visually divides mature trees and understory on the north side of Hangtown Creek. A large redwood tree at the northwest corner of the trail is visually prominent because of its height, but it is surrounded by other mature trees.

Riparian vegetation along Hangtown Creek provides visual relief against the backdrop of US 50, which is elevated over Clay Street, but it is not visually unique or significant.

Lighting and Glare

There are acorn-style streetlights along the north side of Main Street and a cobra-head-style streetlight on the west side of Clay Street at the south end of the bridge; the streetlights are a source of nighttime lighting on and adjacent to the project site. Light also emanates from the interiors and

exteriors of nearby buildings. The Ivy House parking lot is a source of daytime glare from sun reflecting on vehicle windshields.

Views of the Project Site in Downtown Placerville

Commercial businesses adjacent to the intersections of Main Street, Cedar Ravine Road, and Clay Street have direct views of the project site in the immediate vicinity, as do motorists traveling through the east end of the downtown historic area. Views of the project site from the El Dorado Trail are obstructed by a row of trees lining the trail to the south along Hangtown Creek. Views of the project site from residences (at higher elevations than the project site) in the residential area south of downtown Placerville are obstructed by clusters of trees, but as noted above, the US 50 overcrossing dominates views to the north from downtown Placerville. Development at elevations higher than the US 50 overcrossing on the north side of the freeway have views of the site, but views are still dominated by the overcrossing.

Views from US Highway 50

US Highway 50 (and the undercrossing at Clay Street) is directly north of the project site. Tall, mature trees generally obscure views of the project site from the eastbound travel lane, except where the highway crosses Clay Street. The posted speed limit is 40 miles per hour at that location, and as a result, views of the site do not last more than a few seconds. The site is not visible from US 50 in the westbound direction. In the spring and summer, views of the project site and farther south toward the steep, vegetated slope that forms the southern backdrop of the project site from eastbound US 50 are partially obstructed by the adjacent, dense mixed deciduous and conifer tree canopy south of the highway. The Ivy House parking lot is partially visible, but the Main Street/Cedar Ravine Road intersection and the Druid Monument are not visible. Views in the fall and winter are slightly better when leaves are off the trees.

4.1.2 REGULATORY FRAMEWORK

STATE

State Scenic Highway Systems

The California Department of Transportation (Caltrans) administers the California Scenic Highway Program. The program's goal is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to the highways. US 50 is designated a state scenic highway in Placerville (Caltrans 2016). There are no state-designated scenic vistas along the segment of US 50 that passes through Placerville.

LOCAL

City of Placerville General Plan

The City's (1990) General Plan Section V (Natural, Cultural, and Scenic Resources) and Section VII (Community Design) contain policies intended to protect and enhance Placerville's community character and scenic resources and preserve and enhance the city's overall visual attributes. Policies that are applicable to the proposed project's environmental effects related to aesthetics are listed in **Table 4.1-1**, which also includes an analysis of the project's consistency with applicable policies.

TABLE 4.1-1
PROJECT CONSISTENCY WITH GENERAL PLAN NATURAL, CULTURAL, AND SCENIC RESOURCES ELEMENT AND COMMUNITY DESIGN ELEMENT POLICIES

Policies	Consistent?	Analysis
Section V. Policy I.1: Those positive aspects and attributes of the city which are controllable, and which contribute to the quality of life of the city and its environment, shall be preserved and perpetuated. Placerville's positive aspects and attributes are its rural country atmosphere, historical heritage, small town atmosphere, compatible neighborhoods and development, and lack of congestion.	Yes, with mitigation	Replacement of the bridge and division of the Ivy House parking lot into two lots separated by the realigned Clay Street would not change the function of the project site compared to existing conditions. The scale of the existing parking lot would be reduced compared to existing conditions. The small-town atmosphere would be retained with implementation of mitigation measure MM 4.1.2a, which would ensure the project includes landscaping and pedestrian-scale amenities consistent with the city's historical heritage.
Section V. Policy I.4: The City shall condition development approvals to protect natural features such as rock outcrops and trees.	Yes, with mitigation	The cork oak tree, which is a prominent feature at the Ivy House parking lot, will remain in place. The mature redwood at the northwest side of the El Dorado Trail at Clay Street will need to be evaluated to determine its health. If the redwood tree can be retained, it will be protected during construction. Mitigation measure MM 4.1.2b addresses tree protection for the cork oak and redwood tree. The project would result in the removal of approximately 20 trees on the northeast side of the bridge by the El Dorado Trail, which will be mitigated as described in mitigation measure MM 4.3.3a (see Section 4.3, Biological Resources). This mitigation measure also includes requirements for tree protection where trees are within the construction area but would not need to be removed. The trees adjacent to US 50 would not be removed.
Section V. Policy I.5: The City shall preserve creeks in as natural a state as possible.	Yes, with mitigation	The proposed bridge replacement at Hangtown Creek would not modify the creek channel, and natural flow conditions would remain unaffected by the project. Upon completion of the project, Mitigation measure MM 4.3.4 (see Section 4.3, Biological Resources) requires adherence to federal and state permits and regulations to protect the creek. There would be no direct, permanent impacts on Cedar Ravine Creek.
Section V. Policy I.7: The City shall protect the visual character of scenic street and highway corridors.	Yes, with mitigation	The visual character of Main Street, Cedar Ravine Road, and Clay Street would be maintained with implementation of mitigation measure MM 4.1.2a. Views from US 50 would be unaffected by the project, and the project does not propose improvements to US 50 that would result in visual impacts.
Section VII. Policy A.1: The City shall protect and manage Placerville's tree cover for ecological, aesthetic, and economic reasons.	Yes, with mitigation	The cork oak tree, which is a prominent feature at the Ivy House parking lot, will remain in place. The mature redwood at the northwest side of the El Dorado Trail at Clay Street will need to be evaluated to determine its health. If the tree can be retained, it will be protected during construction. Mitigation measure MM 4.1.2b addresses tree protection for the cork oak and redwood tree. The project would result in the removal of approximately 20 trees on the northeast side of the bridge by the El Dorado Trail, but trees will be replaced as described in mitigation measure MM 4.3.3a. This mitigation measure also includes requirements for tree protection where trees are within the construction area but would not need to be removed. The trees adjacent to US 50 would not be removed. Additional trees would be planted along Main Street under

Policies	Consistent?	Analysis
		mitigation measure MM 4.1.2a.
Section VII. Policy A.4: The City shall make every effort to protect riparian vegetation. To this end, buildings and improvements will be set back from watercourses.	Yes, with mitigation	The project would replace the existing bridge and culvert and would not add new features that require setbacks from Hangtown Creek or Cedar Ravine Creek. Riparian vegetation would be protected as required under mitigation measure MM 4.3.3a.
Section VII. Policy A.5: To retain the natural landscape character of Placerville, introduced plants in public and private landscaping should be subordinate to and compatible with existing natural vegetation. The use of native and drought-resistant plants will be encouraged.	Yes, with mitigation	Street plantings required under mitigation measure MM 4.1.2a to ensure consistency with the Main Street Streetscape Design Development Plan will be selected to blend with and enhance the landscape and will include drought-tolerant plants.
Section VII. Policy A.6: The City shall maintain and/or enhance the visual character of scenic street and/or highway corridors.	Yes	Views from US Highway 50 would be unaffected by the project, and the project does not propose improvements to US 50 that would result in visual impacts.
Section VII. Policy D.1: Future road development shall be planned to conform to the topography and to take advantage of views and vistas. The City shall ensure that new street projects are designed to minimize impact on terrain and natural vegetation**.**	Yes, with mitigation	The project would realign Clay Street within the existing footprint of the Ivy House parking lot, which is flat. The project would have no impact on terrain. Although the project would result in some vegetation removal, the loss would be mitigated through mitigation measure MM 4.3.3a, and landscaping would be added, as indicated in mitigation measure MM 4.1.2a.
Section VII. Policy D.2: The City shall attempt to preserve existing trees within street rights-of-way and encourage preservation of all mature trees on private property where visible from the street and where feasible.	Yes, with mitigation	The cork oak tree, which is a prominent feature at the Ivy House parking lot, will remain in place. The mature redwood at the northwest side of the El Dorado Trail at Clay Street will need to be evaluated to determine its health. If the redwood tree can be retained, it will be protected during construction. Mitigation measure MM 4.1.2b addresses tree protection for the cork oak and redwood tree. The project would result in the removal of approximately 20 trees on the northeast side of the bridge by the El Dorado Trail, but trees will be replaced as described in mitigation measure MM 4.3.3a. This mitigation measure also includes requirements for tree protection where trees are within the construction area but would not need to be removed. The trees adjacent to US 50 would not be removed. Additional trees would be planted along Main Street under mitigation measure MM 4.1.2a. The project would not affect trees on public property.
Section VII. Policy D.3: The City shall promote the installation and maintenance of landscaping in public and private areas appropriate to street type, surrounding architecture, general character of the distract, and street beautification programs.	Yes, with mitigation	As required under mitigation measure MM 4.1.2a, the project would include streetscape and landscape design to ensure consistency with the concept design for Main Street and Clay Street in the Main Street Streetscape Design Development Plan.
Section VII. Policy D.4: The City shall use the city street system as the unifying framework of the community through the use of distinctive street design and landscape treatment.	Yes, with mitigation	As required under mitigation measure MM 4.1.2a, the project would include streetscape and landscape design to ensure consistency with the concept design for Main Street and Clay Street in the Main Street Streetscape Design Development Plan.

Policies	Consistent?	Analysis
Section VII. Policy D.5: The City shall require landscaping in any street design that adversely impacts the visual character of a neighborhood.	Yes, with mitigation	Although the project would not adversely impact the visual character of the commercial area in which it is located (see Impact 4.1.2), it would be required to include landscaping as envisioned in the Main Street Streetscape Design Development Plan (mitigation measure MM 4.1.2a).
Section VII. Policy I.1: The City shall ensure that new development will be a positive addition to the city's environment and not detract from the nature and character of appropriate nearby established development because of architectural style, scale, or location.	Yes, with mitigation	Replacement of the bridge and division of the Ivy House parking lot into two lots separated by the realigned Clay Street would not add new uses or development, change the overall function of the project site compared to existing conditions, or have features that would be out of scale relative to nearby development. Mitigation measure MM 4.1.2a requires features to be included in project design to ensure the reconfigured parking lot and intersection contain landscape features consistent with the Main Street Streetscape Design Development Plan.

City of Placerville Main Street Streetscape Design Development Plan

The City's (2006) Main Street Streetscape Design Development Plan presents community design ideas for Main Street, as well as provides cost estimates and implementation guidance. As noted in the plan, Main Street is recognized as a recreational shopping and dining destination, and preservation and enhancement of Main Street's unique character is key to downtown Placerville's continued retail success. The theme that unifies the improvements is derived from elements of style of the American Victorian period, which is the general time frame in which Placerville came into being and many of the most architecturally significant buildings along Main Street were developed.

The plan identified a design and recommended the adoption of a roundabout for the realignment of Clay Street as set forth in the Placerville Streetscape Concept Design (pp. II-18 through II-20; III-5). However, due to public opposition, the roundabout was removed as an alternative for this project on July 8, 2014, by City Council resolution and subsequent passage of Measure K that prohibits roundabouts. Although the roundabout is no longer an option, the realignment of Clay Street to form the fourth leg of the Main Street/Cedar Ravine Road intersection would serve the same purpose, and the design concepts shown on page III-5 in the plan and overall design elements for Main Street (e.g., streetscape, streetlights, seating, street trees, and accent planting) would still apply to the project.

City of Placerville Development Guide

Chapter VI, Section B, of the City's (2016) Development Guide directs that driveways and street intersections require special plantings and accent treatments and should clearly identify these nodes for pedestrians as well as motorists. Focal elements that terminate views such as water features, public art, or other monumentation are encouraged in these areas, located so as not to impede circulation and not to pose risks for public health and safety. Signage used in these focal areas must exemplify high standards of quality and durability in materials and design.

Chapter XII, Section B, establishes requirements for lighting along public rights-of-way.

1) Streetlights and other features within public rights-of-way will reflect a simple design theme of the type and quality illustrated in this section.

2) Streetlights should be consistent throughout the city on similar street types.

3) Light standards and fixtures will be painted black or "forest" green in the streetscapes and public spaces throughout Placerville.

4) Lighting of signs should be subdued and indirect, illuminating the area of the sign only. All signs, entry monumentation, public art, directories, kiosks, or other streetscape elements should be illuminated by concealed fixtures.

4.1.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on criteria derived from Appendix G in the CEQA Guidelines, the proposed project would result in a significant impact to aesthetic or visual resources if the project would:

1) Have a substantial adverse effect on a scenic vista.

2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

3) Substantially degrade the existing visual character or quality of the site and its surroundings.

4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

METHODOLOGY

Visual impacts were evaluated using a combination of site reconnaissance, photo documentation, aerial photographs, and visual simulations of the project prepared by the City's project design engineering consultant. The analysis was based on a determination of whether project features would conflict with the existing urban and historic character of the project site or dominate public views of the area.

IMPACTS AND MITIGATION MEASURES

Scenic Vistas (Standard of Significance 1)

Impact 4.1.1 The proposed project would not affect scenic vistas. This is a **less than significant** impact.

A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. The project site is located in a commercial area containing buildings, structures, roadways, and parking lots. The site itself, which consists of roadways, a bridge, a parking lot, and scattered vegetation, does not exhibit characteristics that would be considered remarkable or indigenous. Riparian vegetation along Hangtown Creek provides visual relief against the backdrop of US 50, which is elevated over Clay Street, but it is not visually unique or significant. The US 50 overcrossing dominates the view of the existing bridge and Clay Street to the north.

The project site is not considered a scenic vista, and public views of the project site are limited to the immediate downtown area. There are no State-designated scenic vistas of Placerville from US Highway 50, which is designated as a state scenic highway, and the site is almost entirely obscured from view from US 50.

The existing small path and overlook accessible from the northwest corner of the Ivy House parking lot, which provides views of Hangtown Creek, would be removed as part of the project. This is an informal feature supported by a deteriorating retaining channel wall and is not a designated scenic vista. However, the El Dorado Trail offers several public view opportunities of Hangtown Creek, and the new bridge would also include sidewalks that would offer views of Hangtown Creek.

As part of the proposed project, the project includes two options for traffic control at the realigned Clay Street intersection. Both the All-Way Stop option and the Signal option would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. Therefore, impacts would be identical.

No scenic vistas would be affected by the proposed project, and the impact would be **less than significant.**

Mitigation Measures

None required.

Scenic Resources and Visual Character (Standards of Significance 2 and 3)

Impact 4.1.2 The proposed project would change the visual characteristics of the site. This is a **potentially significant** impact.

The General Plan recognizes Hangtown Creek and historic buildings in downtown Placerville as scenic resources. The plan includes numerous policies intended to protect those resources as well as the overall visual integrity of downtown Placerville; the policies are listed in **Table 4.1-1**. The project site is visually dominated by the Ivy House parking lot, Main Street, the intersection of Main Street and Cedar Ravine Road, and the Clay Street intersection at Main Street. While these are components of the downtown historic and commercial area and the scenic resource value the buildings provide, they are modern, engineered, transportation-related features that are not unique or visually significant. The Druid Monument is a recognizable and important element of the visual landscape.

The proposed project would not directly affect any adjacent private property that may be a scenic resource, either by physical alteration or property acquisition, or indirectly by removing or limiting access. This analysis focuses on changes on the project site and considers impacts within the overall context of scenic resource value in Placerville.

Figure 2.0-4 in Section 2.0, Project Description, depicts how the replacement bridge could look at street level. This figure is a conceptual rendering for illustrative purposes only. The new Clay Street Bridge barrier would have an architectural stone-type pattern or wood plank pattern and a decorative handrail, which would be visually consistent with the surrounding area and the historic downtown theme. The bridge structure would be larger than the existing bridge, but would only be approximately 2 feet higher than the existing bridge. The design and height would allow the bridge to blend in with its surroundings, such that the aesthetic qualities of Hangtown Creek and nearby historic buildings are maintained and not visually overwhelmed by the bridge. Replacement of the bridge would not add new uses or development or change the overall function of the project site compared to existing conditions. In addition, the new bridge would not diminish views along the Clay Street approach to Hangtown Creek because views are already substantially dominated by the US 50 overcrossing at Clay Street.

The proposed project would result in the removal of the informal viewing area along Hangtown Creek at the north side of the Ivy House parking lot and the path leading to the viewing area to

accommodate the new bridge abutments, raising that area to grade. The adjacent El Dorado Trail on the north side of Hangtown Creek and the new bridge, which would include sidewalks on both sides of the bridge (whereas only one is present now), would provide viewing opportunities and would be compliant with the Americans with Disabilities Act (ADA).

Figures 2.0-5a through **2.0-5d** in Section 2.0, Project Description, show simulated views of the realigned intersection from the south, west, north, and east, respectively. These figures are conceptual renderings for illustrative purposes only.

The proposed realignment of Clay Street and division of the Ivy House parking lot into two lots separated by the realigned Clay Street would not add new uses or development or change the overall function of the project site compared to existing conditions. While the intersection of Clay Street with Main Street would shift east to align with Cedar Ravine Road, there would still be a roadway, but with one intersection instead of two intersections close to each other. A four-leg intersection with additional striping and stop signs or a traffic signal may be perceived as more visually intrusive because it could appear larger than the existing three-way intersection. However, all affected roadways would remain as two lanes that are similar in scale to the existing roadway conditions in the downtown area. The visual prominence of the Druid Monument may be enhanced by its relocation from its existing location in the Main Street/Cedar Ravine Road intersection to a new pedestrian refuge island on Main Street separating the eastbound through lane and eastbound to southbound right turn lane at the realigned Clay Street/Main Street intersection. At its proposed new location, there would be pedestrian access, where the monument could be easily seen by motorists and pedestrians.

The Ivy House parking lot would remain, so a parking lot would continue to be an element of the visual landscape. However, because the lot would be divided into two sections separated by the realigned Clay Street and would include a low stone wall similar to the existing wall, it may appear less prominent. Some trees and understory vegetation would be removed along the northwest side of the existing Ivy House parking lot. The proposed project would include new landscaping along the north side of Main Street at the new intersection. The western portion of the stone planter would be removed. The part of the stone planter that contains the cork oak tree would be modified with construction of the new parking lot to conform grades in the area, while preserving the cork oak tree. The City intends to retain the cork oak tree and will protect it in place during construction. The construction and widening of the replacement bridge and its approaches would result in the removal of approximately 20 trees (see Table 4.3-6 in Impact 4.3.3 in Section 4.3, Biological Resources).

As part of the Clay Street realignment, the project includes two options for traffic control at the realigned intersection. The All-Way Stop option would have stop signs at each leg of the Main Street/Cedar Ravine Road/Clay Street intersection. There are currently stop signs at Cedar Ravine Road and Clay Street, and stop signs are present at other locations along Main Street and its side streets. Stop signs would not appear visually incongruous with the site or its surroundings, nor would the stop signs substantially alter visual qualities.

With the Signal option, a traffic signal instead of stop signs would be installed at the new four-leg intersection. There are currently no traffic signals along Main Street in Placerville. A traffic signal would be a new feature that would tend to make the intersection appear larger and more modern and have less of a "small-town" feel.

Summary

The replacement bridge and new alignment of Clay Street would appear different compared to existing conditions. The cork oak tree in the stone planter would be retained, but removal of approximately 20 trees near Hangtown Creek would also contribute to changes in the viewshed.

Overall, the proposed improvements would change the visual quality of the project site in a manner that some individuals may subjectively perceive as adverse or negative because of their scale, style ("modern-ness"), or location relative to nearby scenic resources in downtown Placerville. This is **potentially significant** impact.

Mitigation Measures

MM 4.1.2a The project shall incorporate the following streetscape design concepts:

- Low seatwalls shall be placed along the Main Street and Clay Street edges of the reconfigured Ivy House parking lot to offer informal and temporary seating opportunities.
- Tree species as identified in Appendix A of the Main Street Streetscape Design Development Plan (incense cedar, tulip tree, valley oak, red oak, and Chinese pistache) shall be planted along Main Street to define public space along the street and to provide shade for the parking lot.
- Accent planting in large planting beds shall be provided adjacent to the reconfigured Ivy House parking lot.
- New streetlights installed as part of the project (if any) shall have period-appropriate cast iron light pole standards and must meet applicable energy standards and City lighting specifications for public roadways as set forth in Chapter XII, Section B, of the City's Development Guide.

Timing/Implementation: *Prior to final design approval*

Enforcement/Monitoring: *City of Placerville Development Services Department, Engineering Division*

MM 4.1.2b Cork Oak Tree. The cork oak tree shall be protected in place by establishing a tree protection zone (TPZ) and by implementing requirements for a TPZ set forth in mitigation measure MM 4.3.4a in this Draft EIR and any other necessary measures, as determined by an ISA-certified arborist, to protect the cork oak during construction.

Redwood Tree. The redwood tree at the northwest corner of the El Dorado Trail at Clay Street shall be evaluated by an ISA-certified arborist to determine the tree's health. If it is determined the tree would not pose a hazard and can remain in place, the tree shall be protected in place by establishing a TPZ and by implementing requirements for a TPZ set forth in mitigation measure MM 4.3.4a and any other necessary measures, as determined by an ISA-certified arborist, to protect the redwood tree during construction.

Timing/Implementation: *Prior to final design approval (incorporate into design) and ground disturbance and during construction*

Enforcement/Monitoring: *City of Placerville Development Services Department, Engineering Division*

MM 4.1.2c Implement mitigation measures MM 4.3.3a (Riparian and Montane Hardwood-Conifer Habitat).

Timing/Implementation: *Prior to ground disturbance and during construction*

Enforcement/Monitoring: *City of Placerville Development Services Department, Engineering Division*

Implementation of mitigation measure **MM 4.1.2a** would ensure the project includes design features consistent with the concepts and elements in the Main Street Streetscape Design Development Plan. The features would integrate modern roadway and parking lot improvements into the city's historical character. Seating walls and landscaping along the reconfigured parking lot would soften the edges of the parking lot and Clay Street and would provide visual relief along Main Street. Implementation of mitigation measure **MM 4.1.2b** would ensure the cork oak tree is protected during construction activities, as well as the redwood tree, if it is determined it should be retained. Mitigation measure **MM 4.1.2c**, which requires implementation of mitigation measure MM 4.3.3a identified in Section 4.3, Biological Resources, to address potential impacts on riparian and montane hardwood-conifer habitat along Hangtown Creek. This would reduce the impact to **less than significant**.

Lighting and Glare (Standard of Significance 4)

Impact 4.1.3 The project would include street lighting. This impact would be **less than significant**.

There are existing sources of nighttime lighting on and adjacent to the project site. Existing lighting within the project vicinity would be assessed and adjusted as appropriate along Main Street and the realigned portion of Clay Street for wayfinding and safety. Lighting modifications, if any, would not represent a substantial change from existing conditions. Any new fixtures installed would be required to comply with the City's lighting specifications for public roadways as set forth in Chapter XII, Section B, of the City's Development Guide, as indicated in mitigation measure MM 4.1.2a.

The existing Ivy House parking lot is a source of daytime glare from vehicle windshields and reflective surfaces. The reconfiguration of the parking lot would place the currently west-facing parking spaces closer to the commercial business on the west side of Clay Street, where they would also face west. This would not substantially increase glare potential, and the closer proximity to the building could benefit from shading by the building in the afternoon. Division of the parking lot would also result in a reduction in the number of spaces and disperse parking spaces, which may also break up glare.

As part of the proposed Clay Street realignment, the project includes two options for traffic control at the realigned Clay Street intersection. The Signal option would include a traffic signal, which would be a source of lighting that would not occur with the All-Way Stop option, and it would be a new source of light that does not exist on the project site. Light emanating from the signal could be considered intrusive or incongruous in the immediate vicinity of the site. However, traffic signals are present in the area (e.g., Bedford Avenue and US 50) and would not be viewed as a substantial new visual alteration of the downtown area as it relates to lighting.

For those reasons, the project features would not be a substantial source of nighttime lighting or glare compared to existing conditions, and impacts would be **less than significant**.

Mitigation Measures

None required.

4.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for the analysis of aesthetics impacts is Placerville. **Table 3.0-1** in Section 3.0, Introduction to the Analysis, identifies approved and pending projects considered in the analysis.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Aesthetics Impacts

Impact 4.1.4 Cumulative development, including the proposed project, could result in impacts on scenic resources and visual quality, and effects associated with nighttime lighting. The project's contribution would be **less than cumulatively considerable**.

Under cumulative conditions, visual impacts could occur as a result of increased urbanization, the loss of open space, the loss of trees, obstructions to views of ridgelines and hillsides, and increased light and glare in the city and surrounding areas. The project site is in a location that is surrounded by existing commercial development in an established area. While the proposed project would result in changes to the visual character of the site, as discussed under Impact 4.1.2, the project site is not visible from areas beyond those immediately adjacent to the site, and the project would not result in visual impacts beyond the project site. There would not be a substantial increase in lighting or source of glare compared to existing conditions. The project would not directly or indirectly cause additional growth and development in Placerville or the surrounding areas of El Dorado County that could lead to cumulative aesthetic impacts. The project's impact to cumulative aesthetic impacts within the cumulative setting area is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

Caltrans (California Department of Transportation). 2016. California Scenic Highway Mapping System. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/.

Placerville, City of. 1990. *General Plan Policy Document*. As amended through 2017.

———. 2006. *Main Street Streetscape Design Development Plan.*

———. 2016. *City of Placerville Development Guide.*

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4.2 AIR QUALITY

This section includes a summary of applicable regulations, a description of existing air quality conditions, and an analysis of potential air quality impacts associated with the proposed project. The analysis considers construction of the project and long-term operation, and evaluates the project's contributions to regional levels and local concentrations of criteria air pollutants (e.g., ozone precursors), toxic air contaminants, naturally occurring asbestos, and odors. The project's contribution to greenhouse gas emissions are evaluated in Section 4.5, Greenhouse Gas Emissions.

4.2.1 EXISTING SETTING

Placerville is located at an elevation of approximately 1,800 feet in the western portion of El Dorado County and the Mountain Counties Air Basin (MCAB), which covers an area of approximately 11,000 square miles. The MCAB lies along the northern part of the Sierra Nevada mountains and encompasses El Dorado (western portion), Plumas, Sierra, Nevada, Placer (middle portion), Amador, Calaveras, Tuolumne, and Mariposa counties.

PHYSICAL AND METEOROLOGICAL CONDITIONS

The MCAB is subject to a combination of topographical and climatic factors that can influence regional and local air quality. The following subsection describes pertinent physical and meteorological conditions that can affect pollutant dispersion and ambient air quality conditions. Throughout the county, the topography is highly variable and includes rugged mountain peaks and valleys with extreme slopes and differences in elevation in the Sierra Nevada, as well as rolling foothills to the west.

The air basin's general climate varies considerably with elevation and proximity to the Sierra Nevada crest. The pattern of mountains and hills causes a wide variation in precipitation, temperature, and localized winds throughout the basin. Temperature variations have an important influence on basin wind flow, dispersion along mountain ridges, vertical mixing, and photochemistry. The Sierra Nevada receive large amounts of precipitation from storms moving in from the Pacific in the winter, with lighter amounts from intermittent "monsoonal" moisture flows from the south and cumulus buildup in the summer. Precipitation levels are highest at upper elevations of the western slope of the Sierra Nevada, but decline rapidly toward the western portion of the basin. Winter temperatures in the mountains can be below freezing for weeks at a time, and substantial amounts of snow can accumulate, but in the western foothills, winter temperatures usually dip below freezing only at night and precipitation is mixed as rain or light snow. In the summer, temperatures in the mountains are mild, with daytime peaks in the 70s to low 80s (degrees Fahrenheit), but the western end of the county can routinely exceed 100 degrees.

From an air quality perspective, the topography and meteorology of the MCAB combine such that local conditions predominate in determining the effect of emissions in the basin. Regional airflows are affected by the mountains and hills, which direct surface air flows, cause shallow vertical mixing, and create areas of high pollutant concentrations by hindering dispersion. Inversion layers, where warm air overlays cooler air, frequently occur and trap pollutants close to the ground. In the winter, these conditions can lead to carbon monoxide "hot spots" along heavily traveled roads and at busy intersections. During summer's longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between reactive organic gases (ROG) and oxides of nitrogen (NOx) that results in the formation of ozone. Because of its long formation time, ozone is a regional pollutant rather than a local problem.

In the summer, the strong upwind valley air flowing into the basin from the Central Valley to the west transports ozone precursors and ozone generated in the Bay Area and the Sacramento and San Joaquin valleys to the western part of the MCAB. These transported pollutants are the predominant cause of ozone in the MCAB and are largely responsible for the exceedances of the state and federal ozone ambient air quality standards in the MCAB. The California Air Resources Board (CARB) has officially designated the MCAB as "ozone impacted" by transport from those areas (13 CCR Section 70500) (EDCAQMD 2002).

CRITERIA AIR POLLUTANTS

Pollutants subject to federal ambient standards are referred to as "criteria" pollutants because the US Environmental Protection Agency (EPA) publishes criteria documents to justify the choice of standards.

One of the most important reasons for air quality standards is the protection of those members of the population who are most sensitive to the adverse health effects of air pollution, termed "sensitive receptors." The term *sensitive receptors* refer to specific population groups, as well as the land uses where they would reside for long periods. Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses are residences, schools, playgrounds, childcare centers, retirement homes or convalescent homes, hospitals, and clinics. Criteria air pollutants, their common sources, and associated health effects are summarized in **Table 4.2-1**.

Attainment Status for Criteria Air Pollutants

Both the California and federal governments use monitoring data to designate areas according to their attainment status for most of the pollutants with ambient air quality standards. The purpose of the designations is to identify those areas with air quality problems and initiate planning efforts to make the air more healthful. There are three basic designation categories: nonattainment, attainment, and unclassified. In addition, the California (state) designations include a subcategory of the nonattainment designation, called nonattainment-transitional. The nonattainment-transitional designation is given to nonattainment areas that are making progress and nearing attainment.

A nonattainment designation indicates that the air quality violates an ambient air quality standard. Although a number of areas may be designated as nonattainment for a particular pollutant, the severity of the problem can vary greatly. To identify the severity of the problem and the extent of planning required, nonattainment areas are assigned a classification that is commensurate with the severity of their air quality problem (e.g., moderate, serious, severe). An attainment designation indicates that the air quality does not violate the established standard. Under the federal Clean Air Act, nonattainment areas that are redesignated as attainment must develop and implement maintenance plans designed to ensure continued compliance with the standard. Finally, an unclassified designation indicates that there is insufficient data for determining attainment or nonattainment. The EPA combines unclassified and attainment into one designation for ozone, carbon monoxide, PM_{10}, and $PM_{2.5}$.

The most current attainment designations for the MCAB portion of El Dorado County are shown in **Table 4.2-2**.

TABLE 4.2-1
CRITERIA AIR POLLUTANTS – SUMMARY OF COMMON SOURCES AND EFFECTS

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects	Control Measures
Particulate Matter (PM) Airborne solid particle and liquid particles Grouped into 2 categories: *Coarse Particles (PM_{10})* – from 2.5 to 10 microns in diameter *Fine Particles ($PM_{2.5}$)* – less than 2.5 microns in diameter	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, motor vehicle exhaust, and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).	Pollution control equipment/methods and reduction of fuel combustion.
Ozone (O_3) A colorless or bluish gas (smog)	Formed by a chemical reaction between volatile organic compounds (VOC) and nitrous oxides (NOx) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.	Pollution control equipment/methods; reducing NOx emissions from power plants and industrial combustion sources; introducing low-emission cars and trucks; using "cleaner" gasoline; use of low-VOC solvents.
Sulfur Dioxide (SO_2) A colorless, nonflammable gas	Formed when fuel containing sulfur, such as coal and oil, is burned; when gasoline is extracted from oil; or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, large ships, and fuel combustion in diesel engines.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel; damage crops and natural vegetation. Impairs visibility. Precursor to acid rain.	Use of low-sulfur fuels, energy conservation (reduces power plant emissions), and pollution control equipment. Ultra low sulfur diesel was phased in during 2006 and became mandatory in 2007.
Carbon Monoxide (CO) An odorless, colorless gas	Formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.	Transportation planning, vehicle emission testing and reduction, efficient combustion techniques, and energy conservation.
Nitrogen Dioxide (NO_2) A reddish-brown gas	Fuel combustion in motor vehicles and industrial sources. Motor vehicle exhaust, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming, and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.	Exhaust gas recirculation in motor vehicles; reduction of combustion temperatures in industrial sources; energy conservation pollution control equipment.
Lead Metallic element	Metal refineries, smelters, battery manufacturers, iron and steel producers, use of leaded fuels by racing and aircraft industries.	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.	Pollution control equipment/methods; use of unleaded fuels.

Source: CAPCOA 2011

TABLE 4.2-2
ATTAINMENT STATUS DESIGNATIONS FOR THE MCAB PORTION OF EL DORADO COUNTY

Pollutant	Federal Standard	California Standard
Ozone (8-Hour)	Severe 15 nonattainment*	Nonattainment
Carbon Monoxide	Attainment	Unclassified
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Nonattainment	Unclassified
Sulfates	No federal standard	Attainment
Lead (particulate)	Attainment	Attainment
Hydrogen Sulfide	No federal standard	Attainment
Visibility Reducing Particles	No federal standard	Unclassified

Source: CARB 2015
** Areas in the "severe 15 nonattainment" class have an 8-hour ozone design value between 0.113 and 0.119 ppm.*

AIR QUALITY CONDITIONS

Ambient Air Quality Monitoring

In El Dorado County, there are three monitoring stations that record ozone levels and one station that records PM_{10} levels. No monitoring stations in the county collect data on carbon monoxide (CO), $PM_{2.5}$, or nitrogen dioxide (NO_2). The closest ozone monitoring station is the Placerville/Gold Nugget Way station. The PM_{10} monitoring station is in the Lake Tahoe Air Basin portion of the county. Because distinct meteorological conditions can influence PM_{10}, data from the Sacramento-Branch Center Road monitoring station in Sacramento County is considered representative for the project site. The Sacramento-Branch Center Road station is approximately 30 miles from Placerville. Data for PM2.5 is from a station in Folsom, approximately 20 miles from Placerville. **Table 4.2-3** summarizes ozone, PM_{10} and $PM_{2.5}$ data for the last years for which complete data are available (2014–2016). The Placerville-Gold Nugget Way station has experienced frequent violations of the federal and state 8-hour ozone standards. As noted above, transported pollutants predominate as the cause of ozone in the MCAB and are largely responsible for the exceedances of the state and federal ozone ambient air quality standards in the basin.

TABLE 4.2-3
AMBIENT OZONE, PM_{10}, AND $PM_{2.5}$ MONITORING DATA (2014–2016)

Pollutant	2014	2015	2016
Ozone (O_3) (Placerville)			
Maximum 1-hour concentration (ppm)	0.104	0.103	0.112
Maximum 8-hour concentration (ppm)	0.090	0.090	0.094
Days above 1-hour standard	1	4	9
Days above 8-hour standard	32	19	41

Pollutant	2014	2015	2016
Particulate Matter (PM_{10}) (Sacramento)			
Average 24-hour concentration ($\mu g/m^3$) (federal/state)	45.0/46.0	44.0/45.0	45.0/44.0
Days above federal/state standard [a]	0	0	0
Particulate Matter ($PM_{2.5}$) (Folsom)			
Average 24-hour concentration (federal/state)	52.0/52.0	38.1/38.1	25.7/25.7
Days above federal/state standard [a]	1	0	0

Source: CARB 2017
Ozone data from Placerville-Gold Nugget Way station; $PM_{2.5}$ from Folsom-Natoma Street station; PM_{10} from Sacramento-Branch Center Road #2 station
ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter
a. Mathematical estimate of how many days concentrations would have been exceeded would have been measured as higher than the level of the standard had each day been monitored.

LAND USES AND SENSITIVE RECEPTORS

The project site is located in a central area of historic downtown Placerville. Surrounding land uses consist primarily of retail and commercial uses, professional offices, and parking lots. US Highway 50 (US 50) runs east to west to the north of the site. The El Dorado Trail, a Class I pedestrian and bicycle path, is parallel to US 50 on the north side of the Clay Street Hangtown Creek bridge. The closest residential uses to the project site are south of Main Street on Cedar Ravine Road. There are no stationary sources of air emissions on or adjacent to the project site.

NATURALLY OCCURRING ASBESTOS

Naturally occurring asbestos (NOA) most commonly occurs in ultramafic rock (i.e., igneous and metamorphic rock with low silica content) that has undergone partial or complete alteration to serpentine rock (or serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, is associated with ultramafic rock, particularly near geologic faults. The project area is in a naturally occurring asbestos review zone delineated by El Dorado County (2005). This delineation does not mean that NOA is present, but it indicates that the project site is in an area where there is the potential for NOA. The El Dorado County Air Quality Management District (ECDAQMD) has adopted specific procedures under its Rule 223-2 that must be followed where there is the potential for NOA to be disturbed during construction activities (see subsection 4.2.2, Regulatory Framework).

4.2.2 REGULATORY FRAMEWORK

Air quality in El Dorado County is regulated by several agencies, including the US Environmental Protection Agency (EPA), California Air Resources Board (CARB), and the El Dorado County Air Quality Management District (EDCAQMD). Each of these agencies develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation.

FEDERAL

The federal Clean Air Act (CAA) was first enacted in 1963 and has been amended numerous times in subsequent years (1965, 1967, 1970, 1977, and 1990). The CAA establishes federal air quality standards, known as national ambient air quality standards (NAAQS), and specifies future dates for achieving compliance. The CAA also mandates that each state submit and

implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA identify specific emission-reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. **Table 4.2-4** lists the NAAQS currently in effect for each criteria pollutant. The California ambient air quality standards (CAAQS) (described below) are also included for reference.

TABLE 4.2-4
NATIONAL AND STATE AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	National Standards
		Concentration	Concentration
Ozone (O_3)	8 Hours	0.070 ppm (137$\mu g/m^3$)	0.070 ppm
	1 Hour	0.09 ppm (180 $\mu g/m^3$)	No standard
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 $\mu g/m^3$)	0.100 ppm
	Annual Arithmetic Mean	0.030 ppm (57 $\mu g/m^3$)	0.053 ppm (100 $\mu g/m^3$)
Sulfur Dioxide (SO_2)	24 Hours	0.04 ppm (105 $\mu g/m^3$)	0.14 ppm (365/$\mu g/m^3$)
	1 Hour	0.25 ppm (665 $\mu g/m^3$)	0.075 ppm (196/$\mu g/m^3$)
	Annual Arithmetic Mean	—	0.030 ppm (80/$\mu g/m^3$)
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 $\mu g/m^3$	No standard
	24 Hours	50 $\mu g/m^3$	150 $\mu g/m^3$
Particulate Matter – Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 $\mu g/m^3$	15 $\mu g/m^3$
	24 Hours	—	35 $\mu g/m^3$
Lead	30-Day Average	1.5 $\mu g/m^3$	—
	Calendar Quarter	—	1.5 $\mu g/m^3$
	Rolling 3-Month Average	—	0.15 $\mu g/m^3$

Source: CARB 2015, 2016
Notes: mg/m^3 = milligrams per cubic meter; ppm = parts per million; ppb = parts per billion; $\mu g/m^3$ = micrograms per cubic meter

STATE

California Clean Air Act

The California Clean Air Act (CCAA), enacted in 1988, established a statewide air pollution control program. The CCAA requires all air districts in the state to endeavor to meet the CAAQS by the earliest practical date. Unlike the federal Clean Air Act, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. The CAAQS are generally more stringent than the NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The CAAQS and NAAQS are listed together in **Table 4.2-4**.

CARB and local air districts are responsible for California's air quality standards, which are to be achieved through district-level air quality management plans that would be incorporated into the SIP. In California, the EPA has delegated authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts, such as the El Dorado County Air Quality Management District.

Under the CCAA, air districts in the Sacramento Federal Nonattainment Area have adopted the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan.[1] This plan outlines how the region continues to meet federal progress requirements (SMAQMD 2017).

LOCAL

El Dorado County Air Quality Management District

The EDCAQMD seeks to improve air quality conditions in the county through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The EDCAQMD also inspects stationary sources, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the federal Clean Air Act and the California Clean Air Act.

Rules and regulations that would apply to the proposed project are:

- Rule 202, Visible Emissions. Limits emissions that are darker in shade than No. 1 on the Ringelmann Chart or of such opacity as to obscure an observer's view to a degree equal to or greater than smoke.

- Rule 205, Nuisance. Prohibits discharge of air contaminants or other material that (1) cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; (2) endanger the comfort, repose, health, or safety of any such persons or the public; or (3) cause, or have a natural tendency to cause, injury, or damage to business or property

- Rule 207, Particulate Matter. Limits particulate matter emissions in excess of 0.1 grains per cubic foot of dry exhaust gas.

[1] Air districts in the Sacramento Federal Nonattainment Area consist of the Sacramento Metropolitan Air Quality Management District and the Yolo-Solano Air Quality Management District, as well as parts of the EDCAQMD, Placer County Air Pollution Control District, and Feather River Air Quality Management District.

- Rule 215, Architectural Coatings. Specifies volatile organic compounds (VOCs) content limits for architectural coatings applied in El Dorado County.

- Rule 223-1, Fugitive Dust. Limits fugitive dust emissions from construction and construction-related activities. The rule requires submission of a detailed Fugitive Dust Control Plan to the EDCAQMD prior to the start of any construction activity for which a grading permit was issued by El Dorado County or by an incorporated city within the county, and implementation of best management practices, which are listed in Tables 1 through 4 in the rule.

- Rule 223-2, Asbestos Hazard Mitigation. Requires an asbestos dust mitigation plan to be prepared, submitted, approved, and implemented when more than 20 cubic yards of earth will be moved at all sites identified as being in an Asbestos Review Area as shown on the El Dorado County Naturally Occurring Asbestos Review Map maintained by the EDCAQMD. Requires testing for NOA prior to construction activities in areas likely to contain NOA and implementation of best management practices to control dust during construction, which are listed in Table 1 in the rule.

- Rule 224, Cutback Asphalt Paving Material. Specifies VOC content limits for cutback asphalt.

Odors

Although offensive odors rarely cause physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and agencies. Facilities commonly known to produce odors include wastewater treatment facilities, chemical manufacturing, painting/coating operations, feed lots/dairies, composting facilities, landfills, and transfer stations. Because offensive odors rarely cause physical harm, no requirements for their control are included in state or federal air quality regulations. The EDCAQMD has no rules or standards related to odor emissions, other than its nuisance rule (Rule 205). Any actions related to odors are opinion-based through citizen complaints to local governments and the EDCAQMD.

Toxic Air Contaminants

Toxic air contaminants (TACs) are not considered criteria pollutants in that the federal and California Clean Air Acts do not address them specifically through the setting national or state ambient air quality standards. Instead, the EPA and CARB regulate hazardous air pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with district rules, they establish the regulatory framework for TACs. At the national level, the EPA has established National Emission Standards for HAPs (NESHAPs), as required by the federal Clean Air Act Amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

At the state level, CARB has authority for the regulation of emissions, including TACs, from motor vehicles, fuels, and consumer products. In California, TACs are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as toxic air contaminants. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC.

Diesel-Exhaust Particulate Matter

Diesel-exhaust particulate matter (DPM) is a TAC. DPM is the primary toxic air contaminant of concern for mobile sources. Of all controlled TACs, emissions of DPM are estimated to be responsible for about 70 percent of the total ambient TAC risk. CARB has made the reduction of the public's exposure to DPM one of its highest priorities, with an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles (CARB 2005).

Naturally Occurring Asbestos

Asbestos has been listed as a TAC by CARB and as a HAP by the EPA. Asbestos is of special concern in El Dorado County because it occurs naturally in surface deposits of several types of ultramafic minerals. Asbestos emissions can also result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining.

The EPA has adopted a NESHAP for asbestos that sets forth emission standards for mills, roadways, manufacturing, demolition and renovation, spraying, fabricating, insulation materials, and waste disposal (40 CFR Part 61, Subpart M). In July 2001, CARB adopted an air toxic control measure (17 CCR Section 93105) limiting emissions from construction, grading, quarrying, and surface mining in areas with ultramafic rock.

In addition to the CARB air toxic control measure, the EDCAQMD has adopted Rule 223-2 (Fugitive Dust-Asbestos Hazard Mitigation). The purpose of this regulation is to reduce the amount of asbestos particulate matter entrained in the ambient air as a result of any construction or construction related activities that disturbs or potentially disturbs naturally occurring asbestos by requiring actions to prevent, reduce or mitigate asbestos emissions. A countywide ordinance was also adopted on January 4, 2000 (Ordinance 4548, codified as Chapter 8.44 of the El Dorado County Ordinance Code) adopting the CARB asbestos content level as a "permissible asbestos content level." For grading, excavation, and construction activities, the ordinance requires an asbestos hazard dust mitigation plan in all areas of the county identified as potentially having asbestiform minerals; the mitigation measures include extensive wetting, covering, and other actions. The project area is in a NOA review zone delineated by El Dorado County (2005), which is based on California Geological Survey mapping.

City of Placerville General Plan

The City's General Plan does not contain any air quality policies that are directly applicable to the proposed project.[2]

4.2.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on criteria derived from Appendix G to the State California Environmental Quality Act (CEQA) Guidelines, the project would have a significant effect on air quality if it would:

1) Conflict with or obstruct implementation of the applicable air quality plan.

[2] Policies address wood-burning stoves and backyard burning of debris, neither of which apply to the project.

2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

4) Expose sensitive receptors to substantial pollutant concentrations.

5) Create objectionable odors affecting a substantial number of people.

The EDCAQMD has published a guidance document for the preparation of the air quality portions of environmental documents that includes thresholds of significance to be used in evaluating land use proposals. Several types of thresholds are recommended.

- **Short-term emissions of ozone-precursor pollutants.** The EDCAQMD considers combined increases in ozone-precursor emissions of reactive organic gases (ROG) and oxides of nitrogen (NOx) greater than 164 pounds per day (lbs/day) (i.e., 82 lbs/day/pollutant) as significant during project construction activities.

- **Long-term emissions of ozone-precursor pollutants.** The EDCAQMD has determined that mass emissions in excess of 82 lbs per day for each of the ozone-precursor pollutants (i.e., ROG and NOx) could affect the district's commitment to attain the federal 1-hour ozone standard in the Sacramento region and thus could have a significant adverse impact on air quality.

- **Long-term increases in localized pollutant emissions.** For the other criteria pollutants, including CO, PM_{10}, SO_2, NO_2, sulfates, lead, and hydrogen sulfide, a project is considered to have a significant impact on air quality if it will cause or contribute significantly to a violation of the applicable national or state ambient air quality standards (**Table 4.2-4**).

- **Offensive odors significance threshold.** A qualitative assessment indicating that a project may reasonably be expected to generate odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property will have a significant adverse air quality impact.

- **Toxic air contaminants significance thresholds.** The recommended significance thresholds for TACs are an increased lifetime probability of contracting cancer greater than 10 in one million (with T-BACT) and a ground-level concentration of non-carcinogenic toxic air pollutants that would result in a Hazard Index of greater than 1.

- **Cumulative contribution.** The EDCAQMD's primary criterion for determining whether a proposed project has significant cumulative impacts is based on the project's consistency with the air quality attainment plan. The applicable plan is the 2013 Ozone Plan. A proposed project is considered cumulatively significant if one or more of the following conditions is met: (1) The project requires a change in the existing land use designation (i.e., general plan amendment, rezone), and projected emissions (ROG, NOx, CO, or PM_{10}) are greater than the emissions anticipated for the site if developed

under the existing land use designation; (2) The project would individually exceed the EDCAQMD's recommended project-level significance thresholds; (3) For impacts that are determined to be significant under the guide, the lead agency for the project does not require the project to implement the emission reduction measures contained in and/or derived from the air quality attainment plan; or (4) The project is located in a jurisdiction that does not implement the emission reduction measures contained in and/or derived from the air quality attainment plan.

METHODOLOGY

Air quality–related impacts were assessed in accordance with methodologies recommended by CARB and the EDCAQMD. Construction-generated criteria air pollutant emissions were modeled using the Road Construction Emissions Model Version 8.1.0 (see **Appendix B**). The Road Construction Emissions Model was developed by the Sacramento Metropolitan Air Quality Management District and can be used to determine the emission impacts of road construction projects. In order to provide a conservative analysis (given that the final design and construction methods have not been determined), project construction-generated emissions assume the hauling of 1,305 tons of demolished asphalt that would hauled off-site as well of the import of 50 cubic yards of fill material onto the project site. The estimated amount of demolished asphalt is derived from the total amount of paving currently within the proposed area of disturbance.

The impacts of the project from mobile-source criteria air pollutant emissions during the post-construction operations was evaluated based on AM and PM peak-hour vehicle traffic numbers coupled with the estimated average vehicle delay at the project-affected intersections as identified in the transportation analysis report prepared for the project (Fehr & Peers 2018 [included in **Appendix D**]). Emissions were calculated by multiplying automobile-idling vehicle emissions factors generated by CARB's EMFAC2014 emission program by the number of peak-hour vehicles and by the seconds of delay experienced per vehicle, both identified in the transportation analysis report (Fehr & Peers 2018). The analysis was conducted for existing conditions (year 2018), the opening year (year 2021), and year 2035, which corresponds to the traffic analysis for cumulative conditions. The average daily volume of traffic through each intersection and average daily delay times are not known; however, a conservative estimate was made of the daily traffic (and the resulting criteria air pollutant and ozone precursor emissions) by multiplying the peak hour data by 10 to obtain pounds per day of emissions. The analysis evaluates both an all-way stop and signal control at the Clay Street/Cedar Ravine Road/Main Street intersection. Model output for calculated emissions is included in **Appendix B**.

IMPACTS AND MITIGATION MEASURES

Short-Term Construction-Generated Emissions of Criteria Air Pollutants (Standard of Significance 2)

Impact 4.2.1 Construction-generated emissions would not contribute substantially to an existing or projected air quality violation. This impact is considered **less than significant**.

Removal of the existing bridge and construction of a new bridge, construction of the realigned Clay Street through the Ivy House parking lot, and intersection improvements at Main Street/Cedar Ravine Road would result in the temporary generation of criteria air pollutant emissions resulting from pavement and concrete removal, grading and excavation, road paving, concrete pouring, and vehicle exhaust associated with construction equipment and worker trips. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities. Construction-generated

emissions would be temporary and would last only as long as construction activities occur (approximately 9 to 12 months).

There are two options for traffic control at the realigned Clay Street intersection. Both the All-Way Stop option and the Signal option would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. There would be no difference in construction air construction emissions between the two options.

The EDCAQMD has adopted guidelines for determining potential adverse effects on air quality in the region. The EDCAQMD guidelines state that construction activities are considered a potentially significant adverse impact if such activities generate total emissions in excess of the district's established thresholds.

Estimated daily emissions of ROG, NOx, CO, SO_2, PM_{10}, and $PM_{2.5}$ are summarized in **Table 4.2-5**. As indicated in the table, construction of the proposed project would not exceed the EDCAQMD significance thresholds for ROG and NO_x. According to the EDCAQMD Guide to Air Quality Assessment (EDCAQMD 2002, Chapter 4, p. 3), if ROG and NOx emissions are under the construction emissions threshold of 82 pounds generated per day and therefore not significant, then emissions of CO and PM_{10} would also not be significant.

Although PM emissions would not exceed thresholds, because of the amount of soil disturbance, the project construction contractor would be required to prepare a Fugitive Dust Control Plan for EDCAQMD approval and implement dust control measures in accordance with EDCAQMD Rule 223-1. The dust control best management practices (BMPs) listed in Tables 1 and 3 of Rule 223-1 (included at the end of **Appendix B** for reference) would be applicable to the project

Therefore, construction air emissions impacts would be **less than significant**. There would be no difference between the All-Way Stop and Signal options because the new intersection improvement would involve identical construction activities.

TABLE 4.2-5
SHORT-TERM CONSTRUCTION EMISSIONS

Construction Phases	Reactive Organic Gases (ROG)	Nitrogen Oxide (NOx)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
	Pounds per Day					
Grubbing/Land Clearing	0.92	10.52	6.63	0.02	12.89	2.98
Grading/Excavation	5.39	58.53	44.10	0.09	15.16	5.04
Drainage/Utilities/Sub-Grade	4.57	46.41	38.16	0.07	14.72	4.70
Paving	1.65	16.21	17.13	0.03	0.99	0.88
Maximum	**5.39**	**58.64**	**44.10**	**0.09**	**15.16**	**5.04**
EDCAQMD Significant Impact Threshold	82	82	—	—	—	—
Exceed EDCAQMD Threshold?	**No**	**No**	—	—	—	—

*Source: Road Construction Emissions Model Version 8.1.0 (see **Appendix B**)*

Mitigation Measures

None required.

Toxic Air Contaminants (Standard of Significance 4)

Impact 4.2.2 Sensitive receptors would not be exposed to substantial pollutant concentrations resulting from project construction or operation. This impact is considered **less than significant**.

Construction Impacts

Removal of the existing bridge and construction of a new bridge, construction of the realigned Clay Street through the Ivy House parking lot, and intersection improvements would involve the use of a variety of gasoline- and diesel-powered equipment that emit exhaust gases. Sensitive receptors in the project vicinity could be exposed to nuisance dust and heavy equipment emissions (e.g., diesel exhaust) during construction. The amount to which the receptors would be exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to toxic air contaminant emission levels that exceed applicable standards). Health-related risks associated with diesel exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. Concentrations of mobile-source diesel exhaust emissions are typically reduced by 70 percent at a distance of approximately 500 feet (CARB 2005). In addition, current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities.

As part of the bridge replacement improvements, the project includes two options for traffic control at the realigned Clay Street intersection. Both the All-Way Stop option and the Signal option would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. There would be no difference in construction-generated TAC emissions between the two options.

Due to the short-term, temporary nature of constructing the proposed project's traffic facility improvements (approximately 9 to 12 months), construction of the proposed project would not expose sensitive receptors to localized concentrations of TAC emissions that would increase adverse health-related risk. Construction impacts would be **less than significant**.

Operational Impacts

The proposed project would not include new land uses that would increase traffic volumes on local roadways, but vehicle traffic on project roadways is an existing source of TAC emissions. The average vehicle delay per vehicle would change at several project intersections with project implementation. The longer a vehicle idles in a single location, the more TAC emissions are generated over the course of its travel than would otherwise have been emitted with reduced idling. According to the transportation analysis report prepared for the project (Fehr & Peers 2018), both the All-Way Stop option and the Signal option would reduce the collective idling times experienced at project intersections compared to conditions without the proposed project. Because idling times would decrease, there would not be a substantial permanent increase in TAC concentration levels during operation compared to existing conditions as a result of the project. For instance, the collective total idling time associated with all project intersections without the proposed project in the opening year (2021) would be 102 seconds per

vehicle in the AM peak hour and 92 seconds in the PM peak hour. The collective total idling times would be reduced to 76 seconds in the AM peak hour and 74 seconds in the PM peak hour under the All-Way Stop option, and to 73 seconds in the AM peak hour and 70 seconds in the PM peak hour under the Signal option. Therefore, the project would not increase TAC emissions.

As a result, operation of the proposed project would not result in an increased exposure of sensitive receptors to localized concentrations of TACs that would exceed applicable standards. This impact is considered to be **less than significant**.

Mitigation Measures

None required.

Naturally Occurring Asbestos (Standard of Significance 4)

Impact 4.2.3 Construction of the proposed project has the potential to encounter naturally occurring asbestos (NOA). The impact would be **less than significant**.

There is no significant occurrence of ultramafic rock where NOA is likely to occur, as reported in the map of Asbestos Review Areas, Western Slope, County of El Dorado, State of California (El Dorado County 2005). However, the entire project area is located in a buffer zone identifying the potential for NOA resulting from a north–south-trending fault that crosses Bedford Avenue and Main Street in the western portion of the project area, indicating that NOA could potentially occur in the area.

Removal of the existing bridge and construction of a new bridge, construction of the realigned Clay Street through the Ivy House parking lot, and intersection improvements would involve ground disturbance that has the potential to encounter NOA because the site is within a buffer zone where NOA may be present. The All-Way Stop and Signal options would involve identical construction activities; therefore, the impact for both options would be the same.

EDCAQMD Rule 223-2 (included at the end of **Appendix B** for reference) requires that an asbestos dust mitigation plan be prepared, submitted to and approved by the EDCAQMD, and implemented by the construction contractor when more than 20 cubic yards of earth will be moved at all sites identified as being in an Asbestos Review Area. Rule 223-2 requires testing for NOA prior to construction activities in areas likely to contain NOA and implementation of best management practices to control dust during construction. With adherence to the BMPs listed in Table 1 in EDCAQMD Rule 223-2, construction-related activities would not be anticipated to result in increased exposure of sensitive land uses to asbestos. This impact is **less than significant.**

Mitigation Measures

None required.

Long-Term Emissions of Criteria Air Pollutants (Standard of Significance 2)

Impact 4.2.4 The proposed project will not result in long-term operational emissions that could violate or substantially contribute to a violation of federal and state standards. This impact is considered to be **less than significant**.

The proposed project does not include new land uses that would increase traffic volumes on local roadways. However, the project would change the average delay per vehicle and thus the length of time vehicles would idle at the project study intersections under both the All-Way Stop option and the Signal option. The longer a vehicle idles in a single location, the more air pollutant emissions are generated over the course of its travel than would otherwise have been emitted with reduced idling. As indicated in Impact 4.2.2, idling times would decrease with the proposed project.

Existing (Year 2018) Conditions Idling Emissions

The emissions currently generated under existing conditions from idling vehicles queuing at the project study intersections during the AM and PM peak hours are shown in **Table 4.2-6**.

TABLE 4.2-6
OPERATIONAL (IDLING) CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (POUNDS) -- EXISTING CONDITIONS (YEAR 2018)

Intersection	Time	Volume	Delay (sec)	Reactive Organic Gases (ROG)	Nitrogen Oxide (NOx)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
US 50/Bedford Ave.	AM Peak	3,275	26	0.161	0.864	0.987	0.016	0.015
	PM Peak	3,563	21	0.141	0.759	0.867	0.014	0.013
	Estimated Daily Emissions			*1.61*	*8.64*	*9.87*	*0.16*	*0.15*
Main St./Bedford Ave.	AM Peak	1,045	18	0.036	0.191	0.218	0.003	0.003
	PM Peak	1,216	22	0.050	0.271	0.310	0.005	0.005
	Estimated Daily Emissions			*0.50*	*2.71*	*3.10*	*0.05*	*0.05*
Main St./Clay St.	AM Peak	986	20	0.037	0.200	0.229	0.004	0.003
	PM Peak	1,087	15	0.031	0.165	0.189	0.003	0.003
	Estimated Daily Emissions			*3.70*	*2.00*	*2.29*	*0.03*	*0.03*
Main St/Cedar Ravine Rd.	AM Peak	1,156	8	0.017	0.094	0.107	0.002	0.002
	PM Peak	1,271	10	0.024	0.129	0.147	0.002	0.002
	Estimated Daily Emissions			*0.24*	*1.29*	*1.47*	*0.02*	*0.02*
Pacific St./Cedar Ravine Rd.	AM Peak	1,001	30	0.057	0.305	0.348	0.006	0.005
	PM Peak	930	24	0.042	0.226	0.259	0.004	0.004
	Estimated Daily Emissions			*0.57*	*3.05*	*3.48*	*0.06*	*0.05*
All Intersections	***Total Daily Emissions***			***6.62***	***17.69***	***20.21***	***0.32***	***0.30***

*Source: EMFAC2014 (see **Appendix B**)*

As part of the bridge replacement improvements, the project includes two options for traffic control at the realigned Clay Street intersection (All-Way Stop and Signal). Both the All-Way Stop option and the Signal option would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. However, there would be differences in idling times associated with the new intersection, as noted above, which would affect emissions. The associated emissions for each option and a comparison of the two options are described below.

All-Way Stop Option Idling Emissions

The opening year (2021) All-Way Stop option conditions idling emissions are shown in **Table 4.2-7.**

TABLE 4.2-7
OPERATIONAL (IDLING) CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (POUNDS) -- ALL-WAY STOP OPTION OPENING CONDITIONS (YEAR 2021)

Intersection	Time	Volume	Delay (sec)	Reactive Organic Gases (ROG)	Nitrogen Oxide (NOx)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
US 50/Bedford Ave.	AM Peak	3,275	27	0.163	1.036	0.983	0.019	0.018
	PM Peak	3,563	21	0.138	0.876	0.832	0.016	0.015
	Estimated Daily Emissions			*1.63*	*10.36*	*9.83*	*0.19*	*0.18*
Main St./Bedford Ave.	AM Peak	1,045	17	0.033	0.208	0.197	0.004	0.004
	PM Peak	1,216	20	0.045	0.285	0.270	0.005	0.005
	Estimated Daily Emissions			*0.45*	*2.85*	*2.70*	*0.05*	*0.05*
Main St./Clay St.	AM Peak	0	—	0.000	0.000	0.000	0.000	0.000
	PM Peak	0	—	0.000	0.000	0.000	0.000	0.000
	Estimated Daily Emissions			*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Main St/Cedar Ravine Rd.	AM Peak	1,215	12	0.027	0.171	0.162	0.003	0.003
	PM Peak	1,346	15	0.037	0.236	0.224	0.004	0.004
	Estimated Daily Emissions			*0.37*	*2.36*	*2.24*	*0.04*	*0.04*
Pacific St./Cedar Ravine Rd.	AM Peak	1,001	20	0.037	0.234	0.223	0.004	0.004
	PM Peak	930	18	0.031	0.196	0.186	0.004	0.003
	Estimated Daily Emissions			*0.37*	*2.34*	*2.23*	*0.04*	*0.04*
All Intersections	***Total Daily Emissions***			***2.82***	***17.91***	***17.00***	***0.32***	***0.31***

*Source: EMFAC2014 (see **Appendix B**)*

Signal Option Idling Emissions

The opening year (2021) Signal option conditions idling emissions are shown in **Table 4.2-8.**

TABLE 4.2-8
OPERATIONAL (IDLING) CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (POUNDS) -- SIGNAL OPTION OPENING CONDITIONS (YEAR 2021)

	Time	Volume	Delay (sec)	Reactive Organic Gases (ROG)	Nitrogen Oxide (NOx)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
US 50/Bedford Ave.	AM Peak	3,275	27	0.163	1.036	0.983	0.019	0.018
	PM Peak	3,563	21	0.138	0.876	0.832	0.016	0.015

	Time	Volume	Delay (sec)	Reactive Organic Gases (ROG)	Nitrogen Oxide (NOx)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
	Estimated Daily Emissions			*1.63*	*10.36*	*9.83*	*0.19*	*0.18*
Main St./Bedford Ave.	AM Peak	1,045	18	0.035	0.220	0.209	0.004	0.004
	PM Peak	1,216	21	0.047	0.299	0.284	0.005	0.005
	Estimated Daily Emissions			*0.47*	*2.99*	*2.84*	*0.05*	*0.05*
Main St./Clay St.	AM Peak	0	—	0.000	0.000	0.000	0.000	0.000
	PM Peak	0	—	0.000	0.000	0.000	0.000	0.000
	Estimated Daily Emissions			*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Main St/Cedar Ravine Rd.	AM Peak	1,215	11	0.025	0.157	0.149	0.003	0.003
	PM Peak	1,346	11	0.027	0.173	0.165	0.003	0.003
	Estimated Daily Emissions			*0.27*	*1.73*	*1.65*	*0.03*	*0.03*
Pacific St./Cedar Ravine Rd.	AM Peak	1,001	17	0.031	0.199	0.189	0.004	0.003
	PM Peak	930	17	0.029	0.185	0.176	0.003	0.003
	Estimated Daily Emissions			*0.31*	*1.99*	*1.89*	*0.04*	*0.03*
All Intersections	***Total Daily Emissions***			***2.68***	***17.07***	***16.21***	***0.31***	***0.29***

*Source: EMFAC2014 (see **Appendix B**)*

Comparison of Idling Emissions from Existing Conditions, All-Way Stop, and Signal Options

The estimated total daily idling emissions of all project study intersection for exiting conditions, the All-Way Stop option, and the Signal option are compared in **Table 4.2-9**.

TABLE 4.2-9
OPERATIONAL (IDLING) CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (POUNDS) COMPARISON OF EXISTING CONDITIONS, ALL-WAY STOP OPTION, AND SIGNAL OPTION

Condition (Total Daily Pounds)	Reactive Organic Gases (ROG)	Nitrogen Oxide (NOx)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Existing	6.62	17.69	20.21	0.32	0.30
All-Way Stop Option	2.82	17.91	17.00	0.32	0.31
Signal Option	2.68	17.07	16.21	0.31	0.29
EDCAQMD Significance Threshold	***82***	***82***	***None***	***None***	***None***
Exceed EDCAQMD Threshold?	***No***	***No***	***No***	***No***	***No***

*Source: EMFAC2014 (see **Appendix B**)*

As shown in **Table 4.2-9**, both options would have reduced emissions compared to existing conditions, except the All-Way Stop option would have higher NO_x emissions compared to existing conditions, but the difference (0.22 pounds per day) is inconsequential. The All-Way Stop

option would have slightly higher emissions compared to the Signal option, but the differences are not substantial. Neither of the options would have operational vehicle idling emissions that would exceed the EDCAQMD Significance Threshold. Therefore, the proposed project would not result in long-term operational emissions that could violate or substantially contribute to a violation of federal and state standards, and the impact would be **less than significant**.

Mitigation Measures

None required.

Carbon Monoxide Hot Spots (Standard of Significance 4)

Impact 4.2.5 The proposed project would not contribute to localized concentrations of carbon monoxide that would exceed applicable ambient air quality standards. This is considered to be a **less than significant** impact.

Carbon monoxide exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the project vicinity have steadily declined.

Removal of the existing bridge and construction of a new bridge, construction of the realigned Clay Street through the Ivy House parking lot, and intersection improvements would not include new land uses that would increase traffic volumes on local roadways that would, in turn, increase CO levels. However, there would be differences in idling times associated with the new intersection, as noted above, which would affect emissions. The longer a vehicle idles in a single location, the more CO emissions are generated over the course of its travel than would otherwise have been emitted with reduced idling. The associated CO emissions for each option and a comparison of the two options are described below.

Both the All-Way Stop option and the Signal option would reduce idling at the project intersections compared to conditions without the project. As previously described, according to the transportation analysis report (Fehr & Peers 2018) prepared for the project, both the All-Way Stop option and the Signal option would reduce collective idling times experienced at the project intersections compared to conditions without the project and therefore would not result in a substantial permanent increase in CO levels during operation. For instance, the collective total idling time associated with all project intersections under the no project scenario in the opening year (2021) would be 102 seconds per vehicle in the AM peak hour and 92 seconds in the PM peak hour. The collective total idling times would be reduced to 76 seconds in the AM peak hour and 74 seconds in the PM peak hour under the All-Way Stop option, and to 73 seconds in the AM peak hour and 70 seconds in the PM peak hour under the Signal option. As shown in **Table 4.2-9**, CO emissions would decrease with either option. Therefore, implementation of the project would not result in a substantial permanent increase in carbon monoxide levels during operation. This impact is **less than significant**.

Mitigation Measures

None required.

Odorous Emissions (Standard of Significance 5)

Impact 4.2.6 The proposed project would not be a source of any major odor emissions. The impact would be considered **less than significant**.

The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.

Removal of the existing bridge and construction of a new bridge, construction of the realigned Clay Street through the Ivy House parking lot, and intersection improvements would result in diesel exhaust emissions from on-site diesel equipment and evaporative emissions associated with the use of architectural coatings such as paints. Emissions from such sources may be considered objectionable to some individuals. However, emissions associated with short-term construction activities would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. As a result, substantial reoccurring emissions of odors during construction would not be anticipated to occur.

Long-term operation of the proposed project would not involve the use of any major odor emission sources. As a result, implementation of the proposed project would not be anticipated to result in the exposure of a substantial number of people to odors.

Odor impacts would be **less than significant**.

Mitigation Measures

None required.

4.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for air quality includes the western El Dorado County portion of the Mountain Counties Air Basin. The western portion of the county is designated as nonattainment for the state and federal ozone standards, the federal $PM_{2.5}$ standard, and the state PM_{10} standard.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Air Quality Impacts (Standards of Significance 1 and 3)

Impact 4.2.7 The proposed project would not conflict with or obstruct implementation of regional air quality management planning and thus would not contribute to cumulative impacts. This impact is **less than cumulatively considerable**.

The western portion of El Dorado County is designated as nonattainment for the state and federal ozone standards. The Sacramento Regional 8-Hour Ozone Attainment and Reasonable

Further Progress Plan was developed by the air districts in the Sacramento region to bring the region into attainment. The region addressed in the plan includes the MCAB portion of El Dorado County, and thus the project site. In addition to not attaining the federal or state ozone standards, the region does not attain the federal $PM_{2.5}$ standard or the state PM_{10} standard. Reduction of particulate matter by all feasible means is necessary to attain PM standards. The PM_{10} Implementation/Maintenance Plan and Re-Designation Request is intended to fulfill Clean Air Act requirements to redesignate the region from nonattainment to attainment of the PM_{10} NAAQS. The $PM_{2.5}$ State Implementation Plan attempts to fulfill requirements to redesignate the region from nonattainment to attainment of the $PM_{2.5}$ NAAQS.

Cumulative Year (2035) No Project Conditions Idling Emissions

Estimated emissions under cumulative no project conditions from idling vehicles queuing at the project study intersections during the AM and PM peak hours are shown in **Table 4.2-10.**

TABLE 4.2-10
OPERATIONAL (IDLING) CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (POUNDS) -- CUMULATIVE NO PROJECT CONDITIONS (YEAR 2035)

Intersection	Time	Volume	Delay (sec)	Reactive Organic Gases (ROG)	Nitrogen Oxide (NOx)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
US 50/Bedford Ave.	AM Peak	4650	95	0.492	4.952	2.675	0.030	0.028
	PM Peak	5240	93	0.543	5.463	2.951	0.033	0.031
	Estimated Daily Emissions			*5.43*	*54.63*	*29.51*	*0.33*	*0.31*
Main St./Bedford Ave.	AM Peak	1770	38	0.075	0.754	0.407	0.005	0.004
	PM Peak	1830	113	0.230	2.318	1.252	0.014	0.013
	Estimated Daily Emissions			*2.30*	*23.18*	*12.52*	*0.14*	*0.13*
Main St./Clay St.	AM Peak	1395	53	0.082	0.829	0.448	0.005	0.005
	PM Peak	1510	79	0.133	1.337	0.722	0.008	0.008
	Estimated Daily Emissions			*1.33*	*13.37*	*7.22*	*0.08*	*0.08*
Main St/Cedar Ravine Rd.	AM Peak	1880	38	0.080	0.801	0.433	0.005	0.005
	PM Peak	2030	73	0.165	1.661	0.897	0.010	0.010
	Estimated Daily Emissions			*1.65*	*16.61*	*8.97*	*0.10*	*0.10*
Pacific St./Cedar Ravine Rd.	AM Peak	1620	47	0.085	0.854	0.461	0.005	0.005
	PM Peak	1690	84	0.158	1.591	0.860	0.010	0.009
	Estimated Daily Emissions			*1.58*	*15.91*	*8.60*	*0.10*	*0.09*
All Intersections	***Total Daily Emissions***			***12.30***	***123.70***	***66.82***	***0.75***	***0.71***

*Source: EMFAC2014 (see **Appendix B**)*

All-Way Stop Option Idling Emissions

Estimated emissions under cumulative All-Way Stop option conditions from idling vehicles queuing at the project study intersections during the AM and PM peak hours are shown in **Table 4.2-11**.

TABLE 4.2-11
OPERATIONAL (IDLING) CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (POUNDS) -- ALL-WAY STOP OPTION CUMULATIVE YEAR CONDITIONS (YEAR 2035)

Intersection	Time	Volume	Delay (sec)	Reactive Organic Gases (ROG)	Nitrogen Oxide (NOx)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
US 50/Bedford Ave.	AM Peak	4650	94	0.487	4.900	2.647	0.030	0.028
	PM Peak	5240	93	0.543	5.463	2.951	0.033	0.031
	Estimated Daily Emissions			*5.43*	*54.63*	*29.51*	*0.33*	*0.31*
Main St./Bedford Ave.	AM Peak	1770	49	0.097	0.972	0.525	0.006	0.006
	PM Peak	1830	111	0.226	2.277	1.230	0.014	0.013
	Estimated Daily Emissions			*2.26*	*22.77*	*12.30*	*0.14*	*0.13*
Main St./Clay St.	AM Peak	0	0	0.000	0.000	0.000	0.000	0.000
	PM Peak	0	0	0.000	0.000	0.000	0.000	0.000
	Estimated Daily Emissions			*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Main St/Cedar Ravine Rd.	AM Peak	1950	68	0.148	1.486	0.803	0.009	0.009
	PM Peak	2115	88	0.207	2.086	1.127	0.013	0.012
	Estimated Daily Emissions			*2.07*	*20.86*	*11.27*	*0.13*	*0.12*
Pacific St./Cedar Ravine Rd.	AM Peak	1620	46	0.083	0.835	0.451	0.005	0.005
	PM Peak	1690	76	0.143	1.440	0.778	0.009	0.008
	Estimated Daily Emissions			*1.43*	*14.40*	*7.78*	*0.09*	*0.08*
All Intersections	***Total Daily Emissions***			***11.19***	***112.66***	***60.68***	***0.69***	***0.64***

*Source: EMFAC2014 (see **Appendix B**)*

Signal Option Idling Emissions

Estimated emissions under cumulative Signal option conditions from idling vehicles queuing at the project study intersections during the AM and PM peak hours are shown in **Table 4.2-12**.

TABLE 4.2-12
OPERATIONAL (IDLING) CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (POUNDS) -- SIGNAL OPTION CUMULATIVE YEAR CONDITIONS (YEAR 2035)

Intersection	Time	Volume	Delay (sec)	Reactive Organic Gases (ROG)	Nitrogen Oxide (NOx)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
US 50/Bedford Ave.	AM Peak	4650	94	0.487	4.900	2.647	0.030	0.028
	PM Peak	5240	88	0.513	5.169	2.792	0.031	0.030
	Estimated Daily Emissions			*5.13*	*51.69*	*27.92*	*0.31*	*0.30*
Main St./Bedford Ave.	AM Peak	1770	38	0.075	0.754	0.407	0.005	0.004
	PM Peak	1830	76	0.155	1.559	0.842	0.009	0.009
	Estimated Daily Emissions			*1.55*	*15.59*	*8.42*	*0.09*	*0.09*
Main St./Clay St.	AM Peak	0	0	0.000	0.000	0.000	0.000	0.000
	PM Peak	0	0	0.000	0.000	0.000	0.000	0.000
	Estimated Daily Emissions			*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Main St/Cedar Ravine Rd.	AM Peak	1950	32	0.069	0.700	0.378	0.004	0.004
	PM Peak	2115	45	0.106	1.067	0.576	0.006	0.006
	Estimated Daily Emissions			*1.06*	*10.67*	*5.76*	*0.06*	*0.06*
Pacific St./Cedar Ravine Rd.	AM Peak	1620	29	0.052	0.527	0.284	0.003	0.003
	PM Peak	1690	50	0.094	0.947	0.512	0.006	0.005
	Estimated Daily Emissions			*0.94*	*9.47*	*5.12*	*0.06*	*0.05*
All Intersections	***Total Daily Emissions***			***8.68***	***87.42***	***47.22***	***0.52***	***0.50***

*Source: EMFAC2014 (see **Appendix B**)*

Comparison of Idling Emissions from All-Way Stop and Signal Options

The estimated total daily idling emissions of all project study intersection under cumulative conditions, for the No Project option, the All-Way Stop option, and the Signal option are compared in **Table 4.2-13**.

TABLE 4.2-13
OPERATIONAL (IDLING) CRITERIA POLLUTANT AND PRECURSOR EMISSIONS (POUNDS) COMPARISON OF CUMULATIVE (2035) CONDITIONS FOR NO PROJECT, ALL-WAY STOP OPTION, AND SIGNAL OPTION

Condition (Total Daily Pounds)	Reactive Organic Gases (ROG)	Nitrogen Oxide (NOx)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
No Project Option	12.30	123.70	66.82	0.75	0.71
All-Way Stop Option	11.19	112.66	60.68	0.69	0.64
Signal Option	8.68	87.42	47.22	0.52	0.50

*Source: EMFAC2014 (see **Appendix B**)*

As shown in **Table 4.12-13**, Both the All-Way Stop option and the Signal option would result in fewer cumulative emissions compared to cumulative conditions without project. The Signal option would have approximately 22 percent lower emissions than the All-Way Stop option under cumulative (2035) conditions.

Analysis

According to the EDCAQMD's (2002) Guide to Air Quality Assessment, a project is considered to have less than significant cumulative air quality impacts if it conforms to the air quality plans described above. A project is considered to conform to the air quality plans if:

1) It does not require a change in the existing land use designation (e.g., a general plan amendment or rezone), or projected emissions of ROG and NOx from the proposed project are equal to or less than the emissions anticipated for the site if developed under the existing land use designation.

2) The project does not exceed the "project alone" significance criteria.

3) The lead agency for the development requires it to implement any applicable emission reduction measures contained in and/or derived from the air quality plans.

4) The development complies with all applicable district rules and regulations.

There would no change in the existing land use designation. As shown in **Impact 4.2.1**, emissions generated from construction would not exceed EDCAQMD thresholds (see **Table 4.2-5**). As shown in **Impact 4.2.4**, when the project is operational in 2021, estimated vehicle idling emissions would not exceed the project-alone EDCAQMD significance thresholds for either the All-Way Stop option or the Signal option (see **Table 4.2-9**). As shown in **Table 4.2-13,** both the All-Way Stop option and the Signal option would result in lower cumulative emissions from vehicle idling at the project study intersections than cumulative No Project conditions. The project would not conflict with implementation of the applicable air quality plans (**Impact 4.2.7**). The project will be required to comply with all applicable EDCAQMD rules and regulations during construction, as explained in **Impact 4.2.1**. Therefore, the project's impacts would be **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

CAPCOA (California Air Pollution Control Officers Association). 2011. *Health Effects*.

CARB (California Air Resources Board). 2005. *Air Quality and Land Use Handbook: A Community* Health *Perspective.*

———. 2015. State and Federal Area Designation Maps. http://www.arb.ca.gov/desig/adm/adm.htm.

———. 2016. *Ambient Air Quality Standards*.

———. 2017. *Air Quality Data Statistics.* http://www.arb.ca.gov/adam/index.html.

DOC (California Department of Conservation). 2000. *A General Location Guide for Ultramafic Rocks in California-Areas More Likely to Contain Naturally Occurring Asbestos.*

EDCAQMD (El Dorado County Air Quality Management District). 2002. *Guide to Air Quality Assessment*.

El Dorado County. 2005. Asbestos Review Areas, Western Slope, County of El Dorado, State of California [map].

Fehr & Peers. 2018. *Clay Street Bridge Replacement Project Transportation Analysis Report.*

SMAQMD (Sacramento Metropolitan Air Quality Management District). 2017. *Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan*.

———. 2010. *PM_{10} Implementation/Maintenance Plan and Re-Designation Request for Sacramento County.*

———. 2013. *$PM_{2.5}$ Implementation/Maintenance Plan and Redesignation Request for Sacramento $PM_{2.5}$ Nonattainment Area.*

4.3 BIOLOGICAL RESOURCES

This section describes the natural resources present in the project study area and includes a discussion of the special-status species and sensitive habitats potentially occurring in the area. The section analyzes impacts on biological resources due to project implementation and includes appropriate mitigation measures to reduce or avoid these impacts. The description of existing conditions and analysis of biological resources impacts and recommended mitigation measures presented in this section incorporate the *Clay Street Realignment and Bridge Replacement Project Natural Environment Study* (Drake Haglan 2016). As defined in the report, the study area for purposes of the biological resources analysis comprises the areas that would be temporarily or permanently impacted by the project (i.e., construction-related activities in the "project impact area") and a 100-foot buffer around the project impact area).

4.3.1 EXISTING SETTING

The biological study area is in downtown Placerville, in the eastern-central portion of El Dorado County. Hangtown Creek is the primary aquatic feature. Cedar Ravine Creek, which is a tributary to Hangtown Creek at the Clay Street Bridge, is confined entirely within an underground culvert in the study area. Flows in Hangtown Creek are supplemented by urban runoff and landscape irrigation. A narrow strip of valley foothill riparian habitat occurs along the northern bank of Hangtown Creek. A series of retaining walls have been constructed along the south bank, and riprap and other retaining walls are in various locations on the north bank of the creek. Hangtown Creek flows west into Weber Creek, which drains to the American River. Site soils are not listed as hydric or as having hydric inclusions.

HABITATS AND NATURAL COMMUNITIES OF SPECIAL CONCERN

Terrestrial habitat types in the study area include ruderal grassland, valley foothill riparian, montane hardwood-conifer forest, and urban (developed). Aquatic habitat types include riverine (perennial and intermittent drainages). **Table 4.3-1** summarizes the acreages of each habitat type in the study area, and the locations are shown in **Figure 4.3-1**. Valley foothill riparian and montane hardwood-conifer forest are sensitive natural communities and are regulated by the California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code (FGC) for the purpose of protecting fish and wildlife resources. Riparian habitat reduces sedimentation and erosion along stream banks as well as provides an important movement corridor for wildlife, overhanging canopies offer shade, and riparian vegetation offers habitats for invertebrates that are a source of food for aquatic and terrestrial life.

Wetlands/Waters of the United States/Waters of the State

Hangtown Creek and Cedar Ravine Creek are waters of the United States, which are considered a sensitive natural community and are regulated by federal and state agencies. Features such as wetlands and other waters of the United States that may fall under the jurisdiction of the US Army Corps of Engineers (USACE) were delineated in the project study area. Hangtown Creek is the only aquatic feature that is considered potentially jurisdictional. It is mapped as a perennial channel on the Placerville, CA, US Geological Survey 7.5-minute quadrangle and was previously mapped as R4SBC (riverine, intermittent, streambed, seasonally flooded) on the National Wetland Inventory map. However, the most current data does not classify Hangtown Creek. The flows are supplemented by urban runoff and landscape irrigation. The ordinary high water mark determination was based primarily on the presence of scour on the north bank and water staining on the south bank and has a width of approximately 3 feet.

TABLE 4.3-1
HABITAT TYPES IN THE STUDY AREA

Habitat Type	Characteristics	Acres within Study Area	Percentage
Upland Communities			
Ruderal grassland	In areas associated with ground disturbance, including grading, vehicle use, and/or intensive vegetation maintenance. Areas remain sparsely vegetated and are dominated by assemblages of introduced weedy species. Unlikely to support special-status plant species. May provide habitat for common bird species.	0.70	3
Valley foothill riparian	Occurs in association with Hangtown Creek as a narrow corridor along bank. White alder (*Alnus rhombifolia*) and arroyo willow (*Salix lasiolepis*) are dominant upper story. Understory consists of shrubs, herbaceous species, annual grasses, and poison oak. May provide cover, nesting, and dispersal habitat for variety of wildlife, including amphibians, reptiles, mammals, and many bird species.	0.72	3
Montane hardwood-conifer forest	Occurs with urban matrix in study area. Tree canopy sparse but dominated by California black oak (*Quercus kelloggii*), valley oak (*Quercus lobata*), interior live oak (*Quercus wislizenii* var.), and other trees. White-leaf manzanita (*Arctostaphylos viscida*) is dominant species in shrub layer. Provides habitat for variety of wildlife species. Mast crops are an important food source for many birds as well as mammals. Canopy cover and understory vegetation are variable, which makes habitat suitable for numerous species.	3.16	14
Urban (developed)	Areas containing ornamental species, paved, or otherwise developed and generally lack natural vegetation. Urban areas include Clay Street, Main Street, Cedar Ravine Road, Pacific Street, Thompson Way, Locust Avenue, the Ivy House parking lot, the El Dorado Trail, and residential and commercial development. Generally provides limited habitat for common wildlife species.	18.23	79
Aquatic Communities			
Riverine (Hangtown Creek) – intermittent	Distinguished by intermittent or continually running water and occurs in association with a variety of terrestrial habitats. Provides water and migration corridor to variety of amphibians, reptiles, and fish species. Vegetation consists of white alder, willow, Fremont cottonwood (*Populus fremontii*), and hydrophytic herbs.	0.27	1
Riverine (Cedar Ravine Creek) – intermittent	Flows are entirely within an underground culvert, except south of the study area where there is defined bank and bed. Flows into the culvert are supplemented by urban runoff and landscape irrigation.	0.06	0
Riverine (drainage ditch) – ephemeral	Ditch receives runoff from Locust Avenue via a paved roadside gutter, then empties into a drain inlet near the US 50 overpass.	0.02	0
Total		23.16	100

Source: Drake Haglan 2016

T:_CS\Work\Placerville, City of\Clay Street\Figures

Legend

- Biological Study Area
- **Habitat Type**
- Riverine (Drainage Ditch)
- Montane Hardwood-Conifer Forest
- Riverine (Cedar Ravine Creek)
- Riverine (Hangtown Creek)
- Ruderal Grassland
- Urban (Developed)
- Valley Foothill Riparian Forest

Source: Drake Haglan and Associates

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FIGURE 4.3-1
Habitat Types

Michael Baker INTERNATIONAL

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REGIONAL SPECIES AND HABITATS OF CONCERN

Special-Status Plants

Six special-status plants have the potential to be present in the study area. **Table 4.3-2** lists the plants and study area conditions. None of the special-status plants was observed during surveys conducted in 2007, 2008, and 2009. Surveys to confirm presence or absence of plants will be required before construction begins.

TABLE 4.3-2
SPECIAL-STATUS PLANTS

Plant Species	General Characteristics	Study Area Conditions
Jepson's onion *(Allium jepsonii)*	Listed by the CNPS as fairly endangered in California. Bulbiferous perennial herb found in serpentine or volcanic soils of chaparral, cismontane woodland, and lower montane coniferous forest. Blooms April through August.	No recorded occurrences within 5 miles of the study area, and none observed during surveys in 2007, 2008, or 2009. However, species known to occur with 6 miles and could disperse into the study area.
Nissenan manzanita *(Arctostaphylos nissenana)*	Listed by the CNPS as fairly endangered in California. Perennial evergreen shrub found in rocky closed-cone coniferous forest and chaparral habitat. Blooms February through March.	Six recorded occurrences within 5 miles of study area, including one 0.5 mile but presumed extant. None observed in the study area in 2007, 2008, or 2009 surveys. Remnant patches of montane hardwood-conifer forest could provide potentially suitable habitat.
Pleasant Valley mariposa lily *(Calochortus clavatus* var. *avius)*	Listed by the CNPS as fairly endangered in California. Perennial bulbiferous herb found in lower montane coniferous forest habitat with Josephine silt loam and volcanic soils. Blooms May through July.	No recorded occurrences within 5 miles of study area, and none observed in study area in 2007, 2008, and 2009 surveys. Remnant patches of montane hardwood-conifer forest could provide potentially suitable habitat.
Red Hills soaproot *(Chlorogalum grandiflorum)*	Listed by the CNPS as fairly endangered in California. Perennial bulbiferous herb found in serpentine, gabbroic, and other soils in chaparral, cismontane woodland, and lower montane coniferous forest. Blooms May through June.	One recorded occurrence approximately 4 miles north of study area. None observed in study area in 2007, 2008, and 2009 surveys. Remnant patches of montane hardwood-conifer forest could provide potentially suitable habitat.

Plant Species	General Characteristics	Study Area Conditions
Parry's horkelia *(Horkelia parryi)*	Listed by the CNPS as fairly endangered in California. Perennial herb found in chaparral and cismontane woodland, Ione Formation, and other soils. Blooms April through September.	One recorded occurrence at unknown location within the study area in 1923; the next closest 7 miles southeast of study area. None observed in study area in 2007, 2008, and 2009 surveys. Mariposa soils and remnant patches of montane hardwood-conifer forest could provide potentially suitable habitat.
Oval-leaved viburnum *(Viburnum ellipticum)*	Listed by the CNPS as endangered in California but common elsewhere. Deciduous shrub found in chaparral, cismontane woodland, and lower montane conifer forest. Blooms May through June.	One recorded occurrence in study area at unknown location in 1901; no other occurrences within 5 or 10 miles of the study area. None observed in study area in 2007, 2008, and 2009 surveys. Mariposa soils and remnant patches of montane hardwood-conifer forest could provide potentially suitable habitat.

Source: Compiled from Drake Haglan 2016, Table 3-2

Special-Status Wildlife Species

Two special-status wildlife species have the potential to occur within the study area. **Table 4.3-3** lists the species and study area conditions.

TABLE 4.3-3
SPECIAL-STATUS WILDLIFE SPECIES

Wildlife Species	General Characteristics	Study Area Conditions
Foothill yellow-legged frog *(Rana boylii)*	State species of concern. Occurs in woodland and forest near streams and rivers. Requires permanent streams in which to reside.	Closest recorded occurrence approximately 9.1 miles northwest, in Indian Creek. None observed in study area during surveys. Hangtown Creek provides marginal breeding and dispersal habitat. Study area provides only marginal habitat due to high levels of disturbance and crayfish and sunfish that are abundant in creek. Cedar Ravine Creek does not provide habitat because it is a culvert.
Western pond turtle *(Emys marmorata)*	State species of concern. Occurs in a variety of permanent and intermittent aquatic habitats such as ponds, marshes, rivers, streams, and ephemeral pools. Requires suitable basking and haul-out sites and upland nesting sites in vicinity of aquatic habitat.	Two recorded occurrences within 5 miles of study area. Hangtown Creek does not provide suitable habitat for most of the year; however, it provides a potential movement corridor. No turtles observed during surveys in 2007, 2008, and 2009. Potential aquatic and upland habitat is present.

Source: Compiled from Drake Haglan 2016, Table 3-3

Another species identified in agency lists is California red-legged frog (CRLF) (*Rana draytonii*), which is a federal threatened species and a state species of concern. Its habitat includes specific aquatic and riparian components. The closest recorded occurrence is 10.6 miles east of the study area at Spivey Pond, on North Fork Weber Creek. The study area and vicinity have been investigated several times in the last 15 years for various projects. CRLF has not been found in the study area, and Hangtown Creek in the study area does not provide suitable habitat. Based on best available information, the study area is unoccupied by CRLF. In addition, the study area is not within critical habitat designation for CRLF nor is it within a core area identified

in the Recovery Plan for the California Red-Legged Frog prepared by the US Fish and Wildlife Service (USFWS) in 2002. Because the species has not been observed in the study area, nor is it expected to occur, no avoidance and minimization efforts are anticipated unless required by CDFW during the permitting process for the project.

MIGRATORY BIRDS AND RAPTORS

Section 3503.5 of the FGC protects all birds in the orders Accipitriformes, Falconiformes, and Strigiformes (collectively known as raptors or birds of prey) and includes hawks, eagles, falcons, and owls. All other migratory bird species, with the exception of non-native and invasive bird species, are protected under the federal Migratory Bird Treaty Act (MBTA).

Swallows, such as the barn swallow (*Hirundo rustica*) and cliff swallow (*Petrochelidon pyrrhonota*), and black phoebes (*Sayornis nigricans*) commonly nest on the undersides of bridges that cross over or are in close proximity to aquatic habitats such as rivers, streams, and lakes. Such bridges provide suitable nesting habitat because of their proximity to nest building materials and optimal foraging habitat. Aquatic habitats and associated corridors provide habitat for large numbers of aquatic and terrestrial insects, which are these species' primary prey items.

Common raptors, such as red-shouldered hawk (*Buteo lineatus*) and red-tailed hawk (*Buteo jamaicensis*), and birds, such as tree swallows (*Tachycineta bicolor*) and sparrows, commonly nest in large trees that overhang or are in close proximity to aquatic habitats such as rivers, streams, and lakes, as well as in close proximity to annual grasslands and agricultural fields. Large trees provide suitable nesting habitat because of their proximity to nest building materials and optimal foraging habitat.

The valley foothill riparian habitat along Hangtown Creek, as well as the patches of montane hardwood-conifer habitat, provides potential nesting and foraging habitat for birds listed by the MBTA. No nests or nesting activity were observed during surveys conducted in 2007, 2008, or 2009. Surveys to assess whether there are nests or nesting activity is occurring will be required before construction begins.

WILDLIFE CORRIDORS

Hangtown Creek and Cedar Ravine Creek provide limited wildlife movement corridors through the study area and through Placerville. Cedar Ravine Creek is entirely enclosed within a culvert through the study area, and Hangtown Creek, with a sparse and highly disturbed riparian corridor, is surrounded by residential and commercial development. The creeks provide a low-quality migration or dispersal corridor for special-status species. As a result, the culvert and highly disturbed riparian corridor would likely discourage the movement of many common aquatic and terrestrial wildlife species dispersing back and forth between suitable habitats to the north and south of the study area, as well as to the east and the west farther upstream and downstream. Trout species may traverse the study area within Hangtown Creek.

TREES

In addition to trees within the valley foothill riparian and montane hardwood-conifer forest habitats, the mature cork oak tree located within the project footprint at the Ivy House parking lot adjacent to the intersection of Cedar Ravine Road and Main Street and a large redwood tree at the northwest corner of the El Dorado Trail and Clay Street are considered by the community as valued elements of the landscape. However, these two trees are not protected by or subject to

the City Code requirements for woodland protection (see subsection 4.3.2, Regulatory Framework, below). Potential impacts related to these trees are addressed in Impact 4.1.2 in Section 4.1, Aesthetics.

INVASIVE PLANT SPECIES

Several invasive and noxious weed species occur in the study area. Species categorized as "high" by the California Invasive Plant Council (Cal-IPC) have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. In the study area, observed species include English ivy, fennel, yellow star-thistle, Scotch broom, and Himalayan blackberry. "Moderate" species observed include ripgut brome, Italian ryegrass, wild oat, and tree-of-heaven.

4.3.2 REGULATORY FRAMEWORK

This section lists specific environmental review and consultation requirements and identifies permits and approvals that must be obtained from local, state, and federal agencies prior to implementation of the proposed project.

FEDERAL

Endangered Species Act

The federal Endangered Species Act (ESA) protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process. Procedures for addressing impacts on federally listed species follow two principal pathways, both of which require consultation with the USFWS, which administers the Endangered Species Act for all terrestrial species. The first pathway, Section 10(a) incidental take permit, applies to situations where a non-federal government entity must resolve potential adverse impacts on species protected under the ESA. The second pathway, Section 7 consultation, applies to projects directly undertaken by a federal agency or private projects requiring a federal permit or approval.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) of 1989 prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This Act encompasses whole birds, parts of birds, bird nests, and eggs, and it makes it unlawful to take (i.e., pursue, kill, harm, harass) any migratory bird or their active nests. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the FGC.

All raptors and their nests are protected from take or disturbance under the MBTA (16 United States Code [USC], Section 703 et seq.) and California statute (FGC Section 3503.5). The golden eagle and bald eagle are also afforded additional protection under the Eagle Protection Act, amended in 1973 (16 USC, Section 669 et seq.).

Clean Water Act

Section 401 of the federal Clean Water Act (CWA) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The Central Valley Regional Water Quality Control Board (RWQCB) regulates Section 401 requirements in the study area.

CWA Section 404 prohibits the discharge of dredged or fill material into "waters of the United States" without a permit from the USACE. The USACE and the US Environmental Protection Agency (EPA) administer the act. In addition to streams with a defined bed and bank, the definition of waters of the United States includes wetland areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 Code of Federal Regulations [CFR] Section 328.3 7b). The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark [33 CFR Section 328.4(c)(1)].

If adjacent wetlands occur, the limits of jurisdiction extend beyond the ordinary high water mark to the outer edge of the wetlands. The presence and extent of wetland areas are normally determined by examination of the vegetation, soils, and hydrology of a site. The majority of jurisdictional wetlands exhibit three wetland criteria: hydrophytic vegetation, wetland hydrology, and hydric soils.

Substantial impacts on jurisdictional wetlands may require an individual permit. Small-scale projects may require a nationwide permit, which typically has an expedited process compared to the individual permit process. Mitigation of wetland impacts is required as a condition of the 404 permit and may include on-site preservation, restoration, or enhancement and/or off-site restoration or enhancement. The characteristics of the restored or enhanced wetlands must be equal to or better than those of the affected wetlands to achieve no net loss of wetlands.

Executive Order 13112 – Invasive Species

Executive Order 13112 directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. USACE permits for the project will include conditions ensuring that the proposed project complies with Executive Order 13112 and does not contribute to the spread of invasive species.

STATE

California Endangered Species Act

Under the California Endangered Species Act (CESA), the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC Section 2070). State-listed species are fully protected under the mandates of the CESA. The CDFW maintains a list of "candidate species" that are species that the CDFW formally notices as being under review for addition to the list of endangered or threatened species. FGC Sections 2050 through 2098 outline the protection provided to California's rare, endangered, and threatened species. FGC Section 2080 prohibits the taking of plants and animals listed under the CESA. "Take" of

protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Section 2081 establishes an incidental take permit program for state-listed species.

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project study area and determine whether the proposed project will have a potentially significant impact on such species.

Species of Special Concern

The CDFW maintains lists of "species of special concern" that serve as species "watch lists." Species with this status have limited distribution or the extent of their habitats has been reduced substantially, such that their populations may be threatened. Thus, their populations are monitored, and they may receive special attention during environmental review. While they do not have statutory protection, they may be considered rare under CEQA and thereby warrant specific protection measures.

Native Plant Protection Act

The Native Plant Protection Act of 1977 (FGC Section 1900 et seq.) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by the CDFW). An exception to this prohibition in the act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW and give that state agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed (FGC Section 1913 exempts from take prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way"). Project impacts on these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

California Native Plant Society

The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts on populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings:

- List 1A: Plants believed extinct
- List 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
- List 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere
- List 3: Plants about Which We Need More Information – A Review List
- List 4: Plants of Limited Distribution – A Watch List

CEQA Guidelines Section 15380 provides for assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Unlisted plant species on CNPS Lists 1A, 1B, and 2 would typically be considered under CEQA.

California Fish and Game Code Section 1602

State and local public agencies are subject to FGC Section 1602, which governs construction activities that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the CDFW. Under Section 1602, a discretionary Streambed Alteration Agreement permit from the CDFW (Region 2 for the proposed project) must be issued by the CDFW to the project applicant prior to the initiation of construction activities within lands under CDFW jurisdiction. As a general rule, this requirement applies to any work undertaken within the 100-year floodplain of a stream or river containing fish or wildlife resources.

California Fish and Game Code Sections 3500 to 5500

FGC Sections 3500 to 5500 outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. The CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Under FGC Section 3503.5 it is unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

NPDES General Permit for Stormwater Discharges Associated with Construction

The State Water Resources Control Board (SWRCB) has adopted a General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (CAS000002, Waste Discharge Requirements, Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ and Order 2012-0006-DWQ). The Construction General Permit applies to any construction activity affecting 1 acre or more. The focus of the permit is to minimize the potential effects of construction runoff on receiving water quality. The permit requires preparation of a stormwater pollution prevention plan (SWPPP) that identifies best management practices (BMPs) describing erosion control measures. Project proponents are required to submit a Notice of Intent, a site map, a signed certification statement, an annual fee, and a SWPPP. The permit program is risk-based, wherein a project's risk is based on the project's potential to cause sedimentation and the risk of such sedimentation on the receiving waters. The project would result in more than 1 acre of disturbance and therefore would be required to implement permit requirements.

The SWPPP must include best management practices to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges. Examples of typical construction best management practices included in SWPPPs include, but are not limited to, using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the drainage system or receiving waters.

LOCAL

City of Placerville General Plan

The City's (1990) General Plan Section V (Natural, Cultural and Scenic Resources Element) includes policies to preserve, protect, enhance, and promote Placerville's resources. Policies that are applicable to the proposed project's environmental effects related to biological resources are listed in **Table 4.3-4,** which also includes an analysis of the project's consistency with applicable policies.

TABLE 4.3-4
PROJECT CONSISTENCY WITH GENERAL PLAN NATURAL RESOURCE POLICIES

Policies	Consistent?	Analysis
Section V. Policy D.1: The City shall make every effort to protect riparian vegetation. To this end, buildings and improvements shall be set back from watercourses.	Yes, with mitigation	The project would replace an existing bridge at Hangtown Creek at its current location. No new buildings are proposed that would be adjacent to a watercourse. Riparian vegetation along the creek would be protected during construction through mitigation measure MM 4.3.3a.
Section V. Policy D.2: The City shall ensure that channel improvements to and tree and brush clearance activities along creeks within the city do not unnecessarily disturb riparian vegetation.	Yes, with mitigation	The project would involve activities along Hangtown Creek. Mitigation measures MM 4.3.3a and MM 4.3.4 would ensure that necessary avoidance and protection measures are implemented during construction to protect riparian habitat.
Section V. Policy 1.5: The City shall preserve creeks in as natural a state as possible.	Yes, with mitigation	The proposed bridge replacement at Hangtown Creek would not modify the creek channel, and natural flow conditions would remain unaffected by the project after construction is completed. Mitigation measure MM 4.3.4 requires adherence to federal and state permits and regulations to protect the creek. There would be no direct, permanent impacts on Cedar Ravine Creek.
Section V. Policy D.6: To retain the natural landscape character of Placerville, introduced plants in public and private landscaping should be subordinate to and compatible with existing natural landscape.	Yes, with mitigation	Street plantings required under mitigation measure MM 4.1.2a to ensure consistency with the Main Street Streetscape Design Development Plan will be selected to blend with and enhance the landscape.
Section V. Policy D.7: The City shall encourage creative site planning which will minimize the destruction of trees.	Yes, with mitigation	Some trees would be removed to accommodate bridge replacement, but the loss would be compensated, as required in mitigation measure MM 4.3.3a.
Section V. Policy D.8: The City shall condition development approval to minimize grading, drainage, disturbance of root systems, and compaction of soil under the drip line of trees during construction.	Yes, with mitigation	The project would involve construction activities around trees that would be retained. Mitigation measure MM 4.3.3a requires implementation of methods determined by a certified arborist to protect root systems.

Policies	Consistent?	Analysis
Section V. Policy D.11: The City shall take action to ensure the protection of Hangtown Creek and the creek area.	Yes, with mitigation	Impacts on Hangtown Creek and its associated riparian habitat would be protected through mitigation measures MM 4.3.3a, which addresses impacts on riparian habitat, and MM 4.3.4, which requires the City to implement measures to protect the creek. A stormwater pollution prevention plan (SWPPP) and best management practices (BMPs) are also required to reduce water quality impacts.

Placerville City Code

Placerville City Code Section 8-13-4 (Woodland Alteration Permit and Plan) includes guidance for the retention and preservation of tree canopies and woodland resources.

Hangtown Creek Master Plan (Draft)

The Hangtown Creek Master Plan is the result of a community effort to improve Hangtown Creek water quality through watershed-based management policies (Hangtown Creek Master Plan Committee 2007). The plan sets forth goals, objectives, policies, and standards addressing: enhancement and maintenance of riparian and aquatic habitat; watershed protection, erosion, and flood control, aesthetic historic and prehistoric values, and creek access and public spaces, among other topics. The plan remains in draft form and has not been adopted by the City.

4.3.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis below is based on the application of the CEQA Guidelines Appendix G thresholds of significance. A project is considered to have significant impacts if implementation of the project will:

1) 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 CDFW or USFWS.

2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

3) 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 wetlands, etc.), through direct removal, filling, hydrological interruption, or other means.

4) 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.

5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

6) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

7) Substantially 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, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

Impacts Not Requiring Detailed Evaluation

Placerville City Code Section 8-13-4 (Woodland Alteration Permit and Plan) provides guidance for the retention and preservation of tree canopies and woodland resources. However, the ordinance is not applicable to the project. There would be no impact, and no further evaluation of standard of significance 5 as it relates to tree preservation is required.

There are no adopted habitat conservation or natural community conservation plans that apply to the project. The study area is not within the critical habitat designation for California red-legged frog, as indicated above. There would be no impact, and no further evaluation of standard of significance 6 is required.

METHODOLOGY

The description of existing conditions and impact analysis presented in this section is taken from the Clay Street Realignment and Bridge Replacement Project Natural Environment Study (Drake Haglan 2016). The study consisted of field reconnaissance, review of agency information pertaining to listed species, and coordination with USFWS and CDFW staff. In addition, potentially jurisdictional wetlands and other waters of the United States were delineated in accordance with USACE methods.

The biological study area (study area) includes all areas that could be impacted by the project (project impact area) and a buffer to accommodate any changes to the project limits and design that may occur as more detailed design is developed. The project impact area includes all areas affected by bridge demolition, construction of the new bridge, realignment of Clay Street, and the staging areas. The study area includes the locations where ground disturbance would occur (project impact area) and a 100-foot buffer around the project impact area.

IMPACTS AND MITIGATION MEASURES

Special-Status Plant Species (Standards of Significance 1 and 7)

Impact 4.3.1 Construction of the proposed project could affect five special-status plant species. This impact would be **potentially significant**.

Construction activities involving disturbance of areas within the project footprint that are not covered by roadways and parking lots have the potential to affect five special-status plant species.

Jepson's Onion

This species has not been previously observed in the study area, and previous botanical surveys indicate that it is not likely to occur within the area that would be impacted by project construction activities. However, because the species is known to occur within 6 miles, it could disperse into the study area prior to construction from populations in the vicinity.

Nissenan Manzanita

This species has not been previously observed in the study area, and two botanical surveys indicate that it is not likely to occur in the area that would be impacted by project construction activities. However, because the species is known to occur within 0.5 mile, it could disperse into the study area prior to construction from populations in the vicinity.

Pleasant Valley Mariposa Lily

This species has not been previously observed in the study area, and two botanical surveys indicate that it is not likely to occur in the area that would be impacted by project construction activities. However, because the species is known to occur within 7 miles, it could disperse into the study area prior to construction from populations in the vicinity.

Red Hills Soaproot

This species has not been previously observed in the study area, and two botanical surveys indicate that it is not likely to occur in the area that would be impacted by project construction activities. However, because the species is known to occur within 5 miles, it could disperse into the study area prior to construction from populations in the vicinity.

Parry's Horkelia

This species has not been previously observed in the study area, and two botanical surveys indicate that it is not likely to occur in the area that would be impacted by project construction activities. However, because the species is known to occur within 7 miles, it could disperse into the study area prior to construction from populations in the vicinity.

Oval-Leaved Viburnum

This species was not identified in the study area during blooming period surveys and has not been identified since it was first recorded in 1901 (location unknown). Mariposa soils and remnant areas of natural habitat occur in small portions of the study area, but there are no gabbro soils. The remnant patches of montane hardwood-conifer forest provide potentially suitable habitat, but the plant is unlikely to be present because there are no gabbro soils. There would be no impact. No further surveys are anticipated unless required by the USFWS or CDFW during the permitting process.

If the plants are present, construction activities could result in the loss of special-status plants, which would be a **potentially significant** impact.

Mitigation Measures

MM 4.3.1 A preconstruction survey for Jepson's onion, Nissenan manzanita, Pleasant Valley mariposa lily, Red Hills soaproot, and Parry's horkelia shall be conducted in the project impact area within 30 days prior to construction. If a specific plant is not found, no further measures are necessary for that plant. If a specific plant is found in the project impact area, the CDFW shall be notified at least 10 days prior to construction impacts in the vicinity of the plant(s) in accordance with the California Native Plant Protection Act of 1977 to allow sufficient time to transplant the individuals to a suitable location or

develop other mitigation measures that will offset the loss and maintain the regional species population in coordination with the CDFW.

Timing/Implementation: *Prior to ground disturbance*

Enforcement/Monitoring: *City of Placerville Development Services Department, Engineering Division*

Implementation of mitigation measure **MM 4.3.1** would ensure that the locations which would be affected by construction activities are investigated for the presence of the special-status plants and that measures are implemented to protect the plants and result in no net loss. This would reduce the impact(s) to a **less than significant** level and would ensure the proposed project would not threaten to eliminate a plant community or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

Special-Status Wildlife Species (Standards of Significance 1 and 7)

Impact 4.3.2 Construction of the proposed project could affect two special-status wildlife species. This impact would be **potentially significant**.

Removal of the existing bridge, construction of the new bridge, and construction activities associated with grading the new alignment for Clay Street on the north and south sides of the bridge have the potential to affect two special-status wildlife species: foothill yellow-legged frog and western pond turtle. There would be no difference between the All-Way Stop and Signal options because the realignment would be in the same location under both options.

Foothill Yellow-Legged Frog

This species was not observed in the study area during numerous investigations. Based on the best available information, it does not currently occupy the study area. Hangtown Creek provides marginal breeding and dispersal habitat. The proposed project would not affect potential breeding habitat because aquatic resources within the study area are unlikely to provide adequate ponding depth and duration to support metamorphosis. However, mortality or injury of frogs in aquatic and upland habitats could occur by crushing by construction equipment or if frogs are displaced from cover, exposing them to predators and desiccation. Trenches left open during the night could trap frogs moving through the construction area. Construction activities could also temporarily impede the movement of juvenile and adult frogs dispersing between breeding areas and summer refugia sites. This is a **potentially significant** impact.

Western Pond Turtle

Potential aquatic and upland habitat for western pond turtle is present in the study area. If turtles are present within the work area during construction, the movement of equipment in uplands and construction of the bridge components could crush turtles or nests containing eggs or young, which could result in mortality or injury. This is a **potentially significant** impact.

Mitigation Measures

MM 4.3.2a Foothill Yellow-Legged Frog. The following avoidance and minimization efforts shall be implemented to reduce project effects:

- A qualified biologist shall conduct a preconstruction survey within 24 hours prior to the start of construction activities within the riparian and aquatic habitat in the study area.
- A qualified biologist shall monitor any vegetation removal in Hangtown Creek. The biologist shall monitor the installation of water diversion structures placed in the creek.
- The upstream and downstream limits of the project shall be flagged and/or signed to prevent the encroachment of construction personnel and equipment into any sensitive areas during project work.
- Prior to construction, environmental awareness training shall be conducted for construction personnel to brief them on how to recognize foothill yellow-legged frog. Construction personnel shall also be informed that if a foothill yellow-legged frog is encountered in the work area, construction shall stop and the CDFW contacted for guidance. A training log sign-in sheet shall be maintained.
- If frogs are found at any time during project work, construction shall stop. The contractor shall notify the City, and the City shall contact the CDFW immediately for further guidance and the need for additional mitigation.
- The City or its contractor shall submit the name and credentials of the project's biologist(s) to the CDFW for review and approval at least 15 days prior to the onset of construction activities.
- Staging areas as well as fueling and maintenance activities shall be a minimum of 100 feet from riparian or aquatic habitats. The City shall ensure its contractor prepares and implements a spill prevention and cleanup plan.
- The construction contractor shall implement best management practices to protect water quality and control erosion.
- If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 5 millimeters.
- Upon completion of construction activities, any barriers to flow shall be removed in a manner that will allow flow to resume with the least disturbance to the substrate.

Timing/Implementation: *Prior to ground disturbance and during construction*

Enforcement/Monitoring: *City of Placerville, Development Services Department, Engineering Division*

MM 4.3.2b Western Pond Turtle. The following avoidance and minimization efforts shall be implemented to reduce project effects:

- If dewatering is necessary, the construction area shall be dewatered prior to construction activities. The CDFW shall be notified prior to dewatering activities.
- No more than two weeks prior to the commencement of ground-disturbing activities, the City shall retain a qualified biologist to perform surveys for western pond turtle in suitable aquatic and upland habitat within the study area. Surveys shall include western pond turtle nests as well as individuals. The biologist (with the appropriate agency permits) shall temporarily move any identified western pond turtles upstream of the construction area, and temporary barriers shall be placed around the construction area to prevent ingress. Construction shall not proceed until the work area is determined to be free of turtles. The results of these surveys shall be documented in a technical memorandum that will be submitted to the CDFW.
- Standard construction BMPs shall be implemented throughout construction to avoid and minimize adverse effects on water quality within the study area.

Timing/Implementation: *Prior to ground disturbance and during construction*

Enforcement/Monitoring: *City of Placerville, Development Services Department, Engineering Division*

Implementation of mitigation measures **MM 4.3.2a** and **MM 4.3.2b** would ensure that the locations which would be affected by construction activities are investigated for the presence of foothill yellow-legged frog and western pond turtle and that measures are implemented to protect these species and result in no net loss. These measures would reduce the impact to a **less than significant** level and would ensure the proposed project would not cause a wildlife population to drop below self-sustaining levels, threaten to eliminate an animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

Habitats and Natural Communities of Special Concern (Standard of Significance 2)

Impact 4.3.3 Construction of the proposed project could result in temporary and/or permanent effects on valley foothill riparian and montane hardwood-conifer forest habitat. This is a **potentially significant** impact.

Construction of the proposed new Clay Street Bridge and its northern and southern approaches would result in temporary and permanent impacts on valley foothill riparian and montane hardwood-conifer forest habitats (see **Table 4.3-5**), which are sensitive natural communities and are regulated by the CDFW under FGC Section 1602. Impacts on riverine habitat (Hangtown Creek and Cedar Ravine Creek) are evaluated in Impact 4.3.4.

TABLE 4.3-5
SUMMARY OF TEMPORARY AND PERMANENT EFFECTS BY HABITAT TYPE

Habitat Community	Permanent (acres)	Temporary (acres)	Total (acres)
Ruderal grassland	0.001	0.00	0.001
Valley foothill riparian*	0.04	0.00	0.04
Montane hardwood-conifer forest*	0.01	0.00	0.01
Urban (developed)	1.30	0.00	1.30
Riverine (Hangtown Creek)*	0.001	0.01	0.01
Riverine (Cedar Ravine Creek)*	0.00	0.03	0.03
Total	**1.35**	**0.04**	**1.39**

Source: Drake Haglan 2016

** Denotes sensitive natural community*

Valley Foothill Riparian

Approximately 0.72 acre of riparian forest is on the northern bank of Hangtown Creek. The retaining walls on the south bank eliminate much of the bank habitat. The construction and widening of the replacement bridge and its approaches would result in a permanent, direct impact of 0.04 acre of riparian habitat and would include the removal of four white alder trees as well as understory shrubs and herbaceous species (**Table 4.3-5** and **Table 4.3-6**). The loss of riparian vegetation could have adverse effects on aquatic habitat in Hangtown Creek. This is a **potentially significant** impact.

Montane Hardwood-Conifer Forest

There are approximately 3.16 acres of montane hardwood-conifer forest in four distinct areas in the study area. Tree canopy is patchy. The construction of the replacement bridge and its approaches would result in a permanent, direct impact of 0.01 acre of montane hardwood-conifer habitat and would include the removal of approximately 20 trees, including eight valley oak trees, as well as understory shrubs and herbaceous species (**Table 4.3-6**). The loss of montane hardwood-conifer habitat could have adverse effects on common terrestrial species such as birds and tree-dwelling mammals. This is a **potentially significant** impact

TABLE 4.3-6
TREES TO BE REMOVED DURING CONSTRUCTION FOR REPLACEMENT BRIDGE AND APPROACHES

Common Name	Scientific Name	Habitat Association (number removed)
White alder	*Alnus rhombifolia*	Riparian (4) Urban (3)
Incense cedar	*Calocedrus decurrens*	Urban (4)
Maple	*Acer* sp.	Urban (1)
Valley oak	*Quercus lobata*	Montane Hardwood-Conifer (8)

Source: Drake Haglan 2016

There is no natural habitat in the Ivy House parking lot or along the realigned Clay Street where it would intersect with Main Street, along Main Street, or along Cedar Ravine Road within the project limits. No sensitive habitats would be affected, and there would be no impact related to this component of the proposed project.

Mitigation Measures

MM 4.3.3a Riparian and Montane Hardwood-Conifer Habitat. The following avoidance and minimization efforts and compensatory mitigation shall be implemented to reduce project effects:

Avoidance and Minimization

- Prior to removal of any trees, an ISA-certified arborist shall conduct a tree survey in areas that may be impacted by construction activities. This survey shall document tree resources that may be adversely impacted by project implementation. The survey will follow standard professional practices.

- Current riparian vegetation, oaks, and other native tree species will be retained to the extent feasible. A tree protection zone (TPZ) shall be established around any tree or group of trees to be retained. The TPZ will be delineated by an ISA-certified arborist. The TPZ shall be defined by the radius of the dripline of the tree(s) plus 1 foot. The TPZ of any protected trees shall be demarcated using fencing that will remain in place for the duration of construction activities.

- Construction-related activities shall be limited within the TPZ to those activities that can be completed by hand. No heavy equipment or machinery shall be operated within the TPZ. Grading shall be prohibited within the TPZ. No construction materials, equipment, or heavy machinery shall be stored within the TPZ.

- To ensure no net loss of riparian habitat, the City shall create or restore riparian habitat that is of similar function and value to affected habitat. The permanent degradation of riparian and montane hardwood-conifer habitat will be compensated for at a 3:1 ratio through the purchase of similar habitat value from a USACE-approved mitigation bank. Preservation and restoration may occur on-site through a conservation agreement or off-site by purchasing mitigation bank credits.

- Mitigation shall also include planting of valley foothill/floodplain/mixed riparian species as appropriate. A planting plan will be implemented as detailed in a restoration plan approved by the CDFW. The plan will include performance standards for revegetation that will ensure successful restoration of the on-site riparian areas.

- The City shall protect other wetlands, riverine, and associated riparian habitats located in the vicinity of the study area by installing protective fencing. Protective fencing shall be installed along the edge of construction areas including temporary and permanent access roads where construction will occur within 200 feet of the edge of wetland and riverine habitat (as determined by a qualified biologist). The location of fencing shall be marked

in the field with stakes and flagging and shown on the construction drawings. The construction specifications shall contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, trenching, grading, or other surface-disturbing activities outside of the designated construction area. Signs shall be erected along the protective fencing at a maximum spacing of one sign per 50 feet of fencing. The signs shall state: "This area is environmentally sensitive; no construction or other operations may occur beyond this fencing. Violators may be subject to prosecution, fines, and imprisonment." The signs shall be clearly readable at a distance of 20 feet and shall be maintained for the duration of construction activities in the area.

- Where riparian vegetation occurs along the edge of the construction easement, the City shall minimize the potential for long-term loss of riparian vegetation by trimming vegetation rather than removing the entire plant. Trimming will be conducted per the direction of a biologist and/or certified arborist.

Compensation

The City shall compensate for the permanent removal of riparian and montane hardwood-conifer habitat vegetation associated with the bridge construction by replacing habitat at a minimum 3:1 ratio (e.g., 3 acres planted for every 1 acre removed) as well as associated native herbaceous species.

Timing/Implementation: *Prior to ground disturbance and during construction*

Enforcement/Monitoring: *City of Placerville Development Services Department, Engineering Services Division*

Implementation of mitigation measure **MM 4.3.3a** would ensure that riparian and montane hardwood-conifer vegetation, oaks, and other native trees are protected during construction activities and, with revegetation, restoration, and/or compensation efforts, that there would be no net loss of habitat. This measure would reduce the impact to a **less than significant** level.

Invasive Species

Bridge construction would occur along the existing road right-of-way within a disturbed corridor in an area surrounded by urban development, where non-native invasive plants are present. The following mitigation measure would be included in the construction contract special provisions to ensure construction would not introduce, establish, and/or spread new invasive weeds into El Dorado County.

MM 4.3.3b Non-Native Invasive Plants. The following shall be included in the construction contract special provisions to ensure construction would not introduce, establish, and/or spread new invasive weeds in El Dorado County:

- All equipment and vehicles will be thoroughly cleaned to remove dirt and weed seeds prior to being transported or driven to or from the project site.

- Any borrow site or stockpile will be inspected for the presence of noxious weeds or invasive plants.
- If noxious weeds or invasive plants are present, the contractor will remove approximately 5 inches of the surface of the material from the site before transporting to the project.
- Before removal, this material will be chemically or mechanically treated to kill the existing noxious weeds and invasive plants, and will not be used for the project without approval.

Timing/Implementation: *During construction*

Enforcement/Monitoring: *City of Placerville Development Services Department, Engineering Division*

Wetlands and Waters of the United States/Waters of the State (Standard of Significance 3)

Impact 4.3.4 Construction of the proposed project would result in fill that would affect 0.001 acre of intermittent stream (waters of the United States). This is a **significant** impact.

Features such as wetlands and other waters of the United States that may fall under the jurisdictional purview of the USACE were delineated in the study area. Hangtown Creek is considered potentially jurisdictional.

Stream flow in Hangtown Creek and flows in the Cedar Ravine drainage culvert would be diverted into pipe(s) through the active construction zone. The stream diversion would be constructed within the existing channel to protect water flowing in Hangtown Creek from demolition and construction activities. Materials to construct the diversion would consist of pipe(s) as needed to convey flow rates anticipated during construction, and sandbags and plastic sheeting to construct diversion dams in the channel upstream and downstream of the site. Equipment used would be light truck-mounted cranes above the channel, with small earthwork equipment (Bobcats, etc.) and laborers within the channel between the diversion dams. The operational timeline for the stream diversion would likely be late April through October, depending on the permit restrictions imposed by the resource agencies. Construction would temporarily impact approximately 0.01 acre of Hangtown Creek, which would result from stream diversion and removal of the existing bridge.

Removal of the existing bridge and construction of the new bridge and its abutments would involve construction activities along the banks of Hangtown Creek. Based on the preliminary project design, rock slope protection (RSP) will be installed on the banks of Hangtown Creek and would result in permanent impacts of approximately 0.001 acre of intermittent stream. This is a **significant** impact.

Prior to construction, the City would be required to obtain the following permits to allow filling 0.001 acre of intermittent stream: USACE Clean Water Act Section 404 Nationwide Permit #14 (Linear Transportation Projects); CDFW Section 1600–1602 Streambed Alteration Agreement; and RWQCB Clean Water Act Section 401 Water Quality Certification.

Temporary impacts on Cedar Ravine Creek would result from realignment of Clay Street if segments of the culvert conveying creek flows are damaged or uncovered during construction.

This could affect 0.03 acre of the creek. This is a **potentially significant** impact. There would be no permanent impacts on Cedar Ravine Creek.

These impacts would be identical for both the All-Way Stop and Signal options because the realignment location is the same.

Mitigation Measures

MM 4.3.4 In addition to obtaining the CWA Section 404 Nationwide Permit #14, CWA Section 401 Water Quality Certification, and FGC Section 1600–1602 Streambed Alteration Agreement prior to construction, the following avoidance and minimization efforts and compensatory mitigation shall be implemented to reduce project effects:

Avoidance and Minimization

- During construction, water quality shall be protected by implementation of best management practices (BMPs), which will be described in the stormwater pollution prevention plan (SWPPP) required under the NPDES Construction General Permit.
- Minimization efforts shall include marking the limits of construction and temporary fencing to prevent affecting Hangtown Creek unnecessarily. Impacts shall also be minimized by conducting in-stream work between June 1 and October 15, unless the RWQCB, USFWS, and CDFW approve work outside that period.
- Effects of disturbance to Hangtown Creek and Cedar Ravine Creek and the adjacent riparian corridor shall be minimized by revegetating areas of temporary disturbance within the project footprint with native vegetation.
- Implement mitigation measure **MM 4.3.3a**.

Compensation

- The City shall purchase credits from a USACE- and/or CDFW-approved mitigation bank at a minimum 1:1 ratio (1 acre of habitat replaced for every 1 acre filled).

Timing/Implementation: *Prior to ground disturbance and during construction*

Enforcement/Monitoring: *City of Placerville Development Services Department, Engineering Division*

Implementation of mitigation measure **MM 4.3.4** would ensure that the appropriate permits and approvals are obtained and that temporary and permanent impacts are mitigated in accordance with agency requirements to ensure no net loss of acreage or value to waters of the United States. This mitigation would reduce the impact to **less than significant**.

Raptors and Migratory Birds (Standards of Significance 1, 4, and 7)

Impact 4.3.5 Construction of the proposed project could result in the loss of nesting habitat or direct mortality of raptors. This impact is **potentially significant**.

Suitable nesting habitat for various birds, including raptors and migratory bird species, occurs within the study area. Removal of trees and other appropriate nesting habitat associated with constructing the proposed new bridge and its approaches could result in the loss of trees used by nesting migratory birds or direct mortality to these species. In addition to loss of nests associated with tree removal, construction activities in the vicinity of active nests in trees proposed for retention could potentially disturb the birds and cause them to abandon their nests. The loss or disturbance of active nests or direct mortality is prohibited by the MBTA and FGC Section 3503.5. This impact is considered **potentially significant**.

Mitigation Measures

MM 4.3.5 The following avoidance and minimization measures shall be used when work occurs on or in the vicinity of structures that may be subject to nesting by migratory birds:

Avoid Active Nesting Season. To avoid and minimize impacts to tree and shrub nesting species, the following measures shall be implemented:

- If feasible, all tree and shrub removal and grading activities shall be conducted during the non-breeding season (generally September 1 through January 31).

- If grading and tree removal activities are scheduled to occur during the breeding and nesting season (February 1 through August 31), preconstruction surveys shall be performed prior to the start of project activities.

Conduct Preconstruction Nesting Bird Surveys. If construction, grading, or other project-related activities are scheduled during the nesting season (February 1 to August 31), preconstruction surveys for other migratory bird species shall take place no less than 14 days and no more than 30 days prior to the beginning of construction within 250 feet of suitable nesting habitat.

- If the preconstruction surveys do not identify any nesting migratory bird species in areas potentially affected by construction activities, no further mitigation is required. If the preconstruction surveys do identify nesting bird species in areas that may be affected by site construction, the following measures shall be implemented.

Avoid Active Bird Nest Sites. Should active nest sites be discovered in areas that may be affected by construction activities, additional measures shall be implemented as described below.

- If active nests are found, project-related construction impacts shall be avoided by establishing appropriate no-work buffers to limit project-related construction activities near the nest site. The size of the no-work buffer zone shall be determined in consultation with the CDFW, although

a 500-foot buffer zone would be used when possible. The no-work buffer zone shall be delineated by highly visible temporary construction fencing. In consultation with the CDFW, monitoring of nest activity by a qualified biologist may be required if the project-related construction activity has the potential to adversely affect the bird's nest or nesting behavior. No project-related construction activity shall commence within the no-work buffer area until a qualified biologist and the CDFW confirms that the nest is no longer active.

The following avoidance and minimization measures shall be incorporated for bridge-nesting birds if bridge demolition or construction of the new bridge occurs during the nesting season (February 1 through August 31):

- Exclusionary netting shall be installed around the undersides of the existing bridge before February 1 of the construction year to prevent new nests from being formed and/or prevent the reoccupation of existing nests. Exclusionary netting may also be required during construction of the new bridge if it is completed during the breeding season. The construction contractor would be required to do the following:

    - Adhere to all state and federal laws and regulations pertaining to the protection of migratory birds, their nests, and young birds.

    - Remove all existing unoccupied nests on the bridge during the non-nesting season (September 1 through January 31).

    - Keep the bridge free of nests, using exclusionary netting or other approved methods, until construction activities are completed.

    - Inspect all listed structures for nesting activity a minimum of three days per week; no two days of inspection shall be consecutive. A weekly log shall be submitted to the project biologist. The contractor shall continue inspections until the existing bridge has been removed and construction on the new bridge is completed. If an exclusion device is found to be ineffective or defective, the contractor shall complete repairs to the device within 24 hours. If birds are found trapped in an exclusion device, the contractor shall immediately remove the birds in accordance with USFWS guidelines.

    - Submit for approval working drawings or written proposals of any exclusion devices, procedures, or methods to the project biologist before installing them.

- The method of installing exclusion devices shall not damage permanent features of the new bridge structure. Approval by the project biologist of the working drawings or inspection performed by the authorized project biologist shall in no way relieve the contractor of full responsibility for deterring nesting.

Timing/Implementation: *Prior to ground disturbance and during construction*

Enforcement/Monitoring: *City of Placerville Development Services Department, Engineering Division*

Implementation of mitigation measure **MM 4.3.5** would ensure preconstruction surveys are performed to identify whether there are any active nests that could be directly affected by vegetation removal or indirectly disturbed, that construction activities occur outside the nesting season if possible, and if nests are present, that protective measures are used. This mitigation would reduce potential impacts on migratory birds and raptors to **less than significant** and would ensure the proposed project would not cause a wildlife population to drop below self-sustaining levels or threaten to eliminate an animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

Wildlife Migration Corridors (Standard of Significance 4)

Impact 4.3.6 Implementation of the proposed project would have a minimal permanent effect on wildlife migration corridors. This impact is **less than significant**.

Hangtown Creek and Cedar Ravine Creek provide limited wildlife movement corridors for common wildlife and special-status species through the study area under existing conditions. The proposed project would not reduce wildlife movement potential because no permanent improvements are proposed within Hangtown Creek that would create physical barriers to dispersal. The culverted section of Cedar Ravine Creek would continue to allow flow into Hangtown Creek. Construction activities could temporarily affect dispersal for foothill yellow-legged frog, as described in Impact 4.3.2; however, no additional impacts beyond those described in Impact 4.3.2 would occur, and mitigation measure **MM 4.3.2.a** would reduce impacts to less than significant.

Mitigation Measures

None required.

4.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting includes Placerville as well as the western foothill region (west slope) of El Dorado County, where the impacts of urbanization and threats to biological diversity and sensitive biological resources are considered most serious. **Table 3.0-1** in Section 3.0, Introduction to the Analysis, identifies approved and pending projects considered in the analysis.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Biological Resources Impacts

Impact 4.3.7 Cumulative development, including the proposed project, would result in the conversion and/or loss of habitat and potential impacts on biological resources. The proposed project's contribution would be **less than cumulatively considerable.**

Impacts on biological resources are primarily the result of urbanization, habitat fragmentation, water pollution, and conversion of natural land to agricultural uses. Potential development of Placerville and the western portions of El Dorado County would further increase impacts on

biological resources and would increase indirect impacts on adjoining land areas. These impacts would contribute to cumulative impacts on biological resources in the region, including the loss of woodland habitat, increased urbanization, habitat fragmentation and water pollution, and potential loss of protected species.

The proposed project is the replacement of an obsolete bridge and modification of an intersection in downtown Placerville. These activities would not result in the conversion of vacant or undeveloped land to urban uses that would result in loss or fragmentation of habitat. The study area does not constitute a critical or sensitive habitat resource in the context of the cumulative setting area, and therefore construction would not contribute to any cumulative impact.

The proposed project could affect special-status plant and wildlife species. Pre-construction surveys for species and implementation of avoidance and/or protection measures, as identified in mitigation measures **MM 4.3.1**, **MM 4.3.2a**, and **MM 4.3.3b** would reduce impacts, which would ensure the project's impacts would not be cumulatively considerable. The proposed project would result in a direct, permanent impact on 0.04 acre of valley foothill riparian habitat and 0.01 acre of montane hardwood-conifer forest habitat. Although the City has not identified any current or future projects in the vicinity of the study area or Hangtown Creek that would impact these habitats, this does not preclude the potential for other projects in the city to result in impacts on valley foothill riparian and montane hardwood-conifer forest habitat. Implementation of avoidance and minimization efforts and compensatory mitigation described in mitigation measure **MM 4.3.3a** would ensure that the project would not result in a cumulatively considerable effect on valley foothill riparian and montane hardwood-conifer forest habitat.

The proposed project would result in a direct, permanent impact on approximately 0.001 acre of intermittent stream. The City has a sewer project that will extend from Clay Street to Locust Avenue, which may have small impacts on Hangtown Creek and Cedar Ravine Creek. The sewer project may be constructed concurrently with the bridge replacement project. However, the bridge replacement project, along with the sewer project, will not result in cumulative impacts on Hangtown Creek due to the small amount of reasonably foreseeable future impacts and the existing baseline conditions of the creek. Implementation of avoidance and minimization efforts and compensatory mitigation described in mitigation measure **MM 4.3.4** would ensure that the project does not result in a cumulatively considerable effect on Hangtown Creek or Cedar Ravine Creek.

While the project may result in temporary impacts on raptors and nesting birds during construction, the project's impacts would be minimized through implementation of preconstruction surveys and avoidance/protection measures, as identified in mitigation measure **MM 4.3.5**.

For these reasons, the project's contribution to cumulative impacts on biological resources in western El Dorado County is considered **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

Drake Haglan & Associates. 2016. *Clay Street Realignment and Bridge (25C-0117) Replacement Project Natural Environment Study.*

Hangtown Creek Master Plan Committee. 2007. *Hangtown Creek Master Plan (Draft)*.

Placerville, City of. 1990. *General Plan Policy Document*. As amended through 2017.

4.4 CULTURAL RESOURCES

This section evaluates impacts on historical and archaeological resources that may occur with implementation of the proposed project. The existing setting, relevant regulations, potential impacts associated with the project, and mitigation measures warranted to avoid, eliminate, or reduce any identified significant impacts are discussed in this section.

The description of existing conditions presented in this section summarizes information presented in technical reports prepared for the proposed project (PAR 2018a, 2018b, 2018c, 2018d; Simons 2009) and research and evaluations prepared by Michael Baker International.

4.4.1 EXISTING SETTING

PREHISTORIC CONTEXT

North-Central Sierra cultural chronology is divided into four patterns: Late Pleistocene (12,000 to 10,000 years before present [BP], Early Holocene (10,000 to 7000 BP), Archaic (8000 to 3200 BP), and Sierran (4000 BP). Paleo-Indian peoples appear to have formed relatively small groups, were highly mobile, and settled around wetlands (e.g., lakes and rivers) where large game congregated. There is no convincing evidence indicating the American River watershed was occupied during the Late Pleistocene. Cultural remains assigned to this time occur at the Rancho Murieta sites, located approximately 9 miles east of Sacramento. A general warming trend at approximately 10,000–7000 BP resulted in the drying of Pleistocene lakes and wetlands, and a shift in habitat distributions during the Late Pleistocene. In the western Sierra Nevada foothills, remnant wetlands persisted longer, becoming focal points for use of land and resources. In the Archaic Period, land use was probably associated with a highly mobile lifeway. Sites from this period seem to have mainly experienced short-term seasonal use, with permanent villages or occupation sites apparently lacking.

After approximately 4000 BP (Sierran Pattern), the climate became cooler and wetter. Regional land use increased in the American River watershed. A primary causal factor was increasing familiarity and a resultant focus on exploitation of a broad range of Sierran plant and animal resources. During the Early Sierran, seasonal base camps were situated in prime locations, and small family-based groups appear to have moved from camp to camp. Middle Sierran land use in the Sierra foothills was characterized by irregular occupation, ephemeral site use, lower population numbers and density, and signs of social disruption. The Late Sierran Period was characterized by intensive land use of the Sierra foothills in which there was widespread, active trade, permanent settlements in some areas, and large populations. The ethnohistoric pattern of land use was probably established at this time (600–150 BP).

ETHNOGRAPHIC CONTEXT

The project site is situated in the ethnographic territory of the Nisenan, also referred to as the Southern Maidu. Nisenan territory extended across the watersheds of the Yuba, Bear, and American rivers and the lower watershed of the Feather River. The neighboring Miwok, whose main territory was south of the Cosumnes River, occupied the southernmost part of Southern Nisenan territory. It extended from a few miles south of the confluence of the American River with the Sacramento River to the Cosumnes River.

A Southern Hill Nisenan tribelet occupied the area located between the Cosumnes River and the South Fork of the American River north of Placerville. The tribelet had strong affiliations with groups living along the lower drainages and ridges of the American River. Archaeologists have placed two ethnohistoric Nisenan/Southern Maidu villages near Placerville: Ekelepakan and Indak.

The Nisenan established permanent villages along stream and river courses and on gentle slopes with a southern exposure. Large populations were concentrated along the banks of major waterways, streams, sloughs, and wetlands. Hill Nisenan villages often were located on ridges and large flat areas adjacent to watercourses. Fishing, plant gathering, and hunting formed the basis of Nisenan subsistence.

HISTORIC CONTEXT

Jedediah Smith was one of the earliest Euro-Americans to visit the Placerville area. In May 1827, Smith and his party attempted to cross the Sierra Nevada by way of the American River watershed, following the approximate route of US 50, passing through the vicinity of Placerville.

Starting in 1839, John A. Sutter was the first to develop land granted in the Sacramento Valley as part of the inland frontier that the Mexican government wanted stabilized. The site for Sutter's colony, New Helvetia, was located on a knoll about 4 miles east of the Sacramento River, and by 1841, Sutter had built an adobe fort on the knoll. During the autumn of 1847, a mill was built on the South Fork of the American River at the site of present-day Coloma in El Dorado County, approximately 5 miles north of Placerville. On January 24, 1848, while inspecting the tail race and adjacent streambed, James Marshall, the mill's superintendent, discovered gold.

The Marshall gold discovery quickly produced a massive influx of settlers into California. In a short period of time, small, often short-lived, mining camps dotted the landscape along the western slope of the Sierra Nevada (from Downieville/Sierra City in the north to Mariposa/Coarsegold in the south). The Gold Rush produced profound effects on the development of early American Period transportation, mercantilism, and commerce in California. Initially, costs associated with these activities were high, lowering as locally produced and outside goods and commodities entered the California marketplace. Through the 1860s and 1870s, mining diminished in importance in California, with agriculture increasingly assuming a dominant role.

As the site of the initial gold discovery, El Dorado County was an early focal point of settlement. After the boom of the early 1850s, mining declined in importance, and by the 1880s, agriculture, ranching, and lumber production became the predominant economic activities in the county.

Placerville History

During the Gold Rush, El Dorado County and Placerville were early focal points of mining activities. In 1848, the first gold discoveries were made along Hangtown Creek, near Cedar Ravine, with miners using gold pans and rockers/cradles. Cedar Ravine was the first Placerville ravine worked for gold, producing over $1 million in gold. Placerville, initially known as Old Dry Diggings and Hangtown, began as a thriving mining camp and quickly grew. During 1851, miners began digging into hills to recover gold-bearing gravels. A number of tunnels were driven into the hills along Cedar Ravine. Sluices were introduced, and ditches and flumes built to supply them with water. Placer mining continued during 1852, and quartz mining started with limited initial success. Construction began on the South Fork Canal to bring water for placer mining. During 1853, placer mining continued, along with construction of the South Fork Canal. In May 1854, the community was incorporated, and became the El Dorado county seat in 1857. Also in 1854, hydraulic mining began. Tunnel mining was revived, with the Cedar Springs tunnel the scene of hydraulic mining. Quartz mining became important, with construction of stamp mills to process ore. Placer mining declined but was still pursued along Hangtown Creek and Cedar Ravine.

By 1880, the local economy had transitioned from mining to logging and agriculture. In April 1888, the Central Pacific Railroad completed a branch line from Folsom to Placerville. During

1913, the Lincoln Highway route was established through Placerville down Main Street. In the mid-1920s, it became US Highway 50. By 1930, the highway was fully completed, following construction of the Utah segment.

After its redesignation in 1925 as US Highway 50, its route through Placerville continued to be along Main Street. During the late 1920s and 1930s, much of the winding, narrow roadway between Lake Tahoe and Placerville was reconstructed. Further improvements and realignments occurred during the decade after World War II. These included construction of an expressway through Placerville, bypassing the highly congested Main Street route. The 1.5-mile route generally followed the course of Hangtown Creek north of Main Street. Construction of this portion of US 50 included movement or destruction of a number of buildings and facilities, elimination of portions of several streets, excavation of immense amounts of soil, and utility relocations.

Clay Street-Main Street-Cedar Ravine Neighborhood

By 1853, several Placerville businesses were located at or in the immediate vicinity of the intersection of Main Street and Cedar Ravine Road. On the southeast corner was the Methodist Episcopal Church. At the southwest corner was Dolton's Fountain House. Along the south side of Main Street west from the Fountain House were Johnson's and Griffin's houses, the Miller blacksmith shop, and the Vance house and livery stable. Along the north side of Main Street across from Cedar Ravine was the Cedar Ravine House, N. C. Fassett's store, and Burns and McBride's store. Carpenters G. J. and J. E. Cole had their shop above the Cedar Ravine House.

A major fire on July 6, 1856, destroyed the Cedar Ravine Hotel, William L. Hale's grocery store, and a few small buildings east of the hotel. On the south side of Main Street, the Vance house and livery stable were consumed. Also destroyed were J. McPearson's syrup factory, the Old Fountain Hotel, which was being used as a grocery, and a blacksmith's shop on Cedar Ravine Road. The fire reached its limit at Cedar Ravine near the Methodist Episcopal Church.

By 1862, Burns and McBride's grocery store had relocated west to the north side of Main Street on the plaza. None of the other 1853 businesses were listed. W. S. Burns had a house on Main Street near Cedar Ravine. George and James Vance, teamsters, lived on Main Street.

After the 1856 fire, in the late 1850s to early 1860s, the area around the intersection of Main Street, Cedar Ravine, and ultimately Clay Street was occupied by a jumble of saddler's shops, butcher shops, and so forth. The streets were a quagmire from rains, flooding streams, and mining activities, which resulted in 4-foot-square holes up to 4 feet deep being excavated in the streets. E. L. Parker consolidated a number of small lots into a large lot. During 1864, he built the three-story brick Central House on the corner of Main and Clay streets. The luxurious hotel was first operated by George Congdon.

Sanborn Insurance Maps dating from 1891, 1895, 1899, 1910, and 1910–1940 depict progressive changes to the Main Street-Clay Street-Cedar Ravine neighborhood. During this 50-year period, the western part of the Clay Street (Ivy House) parking lot contained the Ivy House. Built in 1864, the Ivy House, originally known as the Upper Central House, was at the northeast corner of Main and Clay streets. During its century of existence, the Ivy House served many roles. From 1871 to 1894, it housed the Placerville Academy, headed by E. B. Conklin. After 1894, the Ivy House was again a hotel, bar, and restaurant. In 1962, before the Ivy House was demolished, the Native Daughters of the Golden West placed two historical markers at its site. Although the structure no longer exists, and has been turned into a paved parking lot, the area is called the Ivy House parking lot.

Between 1891 and 1910, the area east of the Ivy House lacked structures. The 1940 Sanborn Map reveals that a service station (with an associated underground storage tank for gasoline) was present just east of the Ivy House. A motel with 15 rooms was located along the east side of what is now the Ivy House parking lot. At some point, Cedar Ravine Creek was placed in an underground culvert, which runs from Pacific Street along Cedar Ravine Road, under Main Street and cuts diagonally across the west-central portion of the Ivy House parking lot. Its outfall is into Hangtown Creek, immediately west from the south end of the current Clay Street Hangtown Creek Bridge.

In 1891, along the west side of Clay Street, there was a large lot with a small building in the southwest corner facing Main Street. By 1895–1899, this building was gone, replaced by a larger building with a small building to its northeast. Both were located away from the street along the lot's west side. In 1910–1940, in addition to the 1895–1899 structures, a building fronted Clay Street, with a smaller structure to the north.

At the southeast corner of Main Street and Cedar Ravine Road, the Methodist Episcopal Church was present from 1891 to 1910–1940, renamed the El Dorado County Federated Church by 1940. The 1891 and 1895 maps depict a small structure just northeast from the church. By 1899, this small building was next to a larger, irregularly shaped structure, also present on the 1910 and 1910–1940 maps.

The 1891, 1895, 1899, and 1910 Sanborn Maps depict Blair's Lumber Yard at the southwest corner of Cedar Ravine Road and Main Street. It occupied a large lot extending south from Main Street along the west side of Cedar Ravine Road to Pacific Street. By 1910–1940, the complex had become the Diamond Match Lumber Company. A large structure housed a mill at the corner of Cedar Ravine Road and Pacific Street. Along the south side of Main Street west of the lumber yard complex, the 1891, 1895, 1899, 1910, and 1910–1940 Sanborn Maps show a complex of adjoining buildings. Through time, these housed various businesses and offices or were used for storage.

Druid Monument

As Placerville developed a stable population of businessmen and merchants, community members joined together and many formed fraternal organizations for support, including financial assistance. These societies included the Masonic Order, the Odd Fellows, and others less well known today. Among the latter group was the United Ancient Order of Druids (UAOD), which was founded by Frederick Sieg as the first California Grove No. 1 of the Order in Placerville in 1859. The UAOD recognized that the Druid Groves were an important part in the lives of Gold Rush–era pioneers as a mutual aid and protection group, providing physical and economic assistance to fellow members and their families.

In 1926, at the height of the popularity and membership numbers of Druidism in the United States, the Druid Grove No. 1 (the Placerville order) elected to recognize Sieg and his founding of their organization in California. They brought their suggestion to the Grand Grove (the main organization arm of the group in California). The City of San Francisco offered a choice location for a monument in Golden Gate Park, but the Grand Grove thought it more fitting that it be erected in Placerville. They voted to spend $10,000 on the object, a large sum of money in 1926, and hired John Antone Porporato, a leading architect in San Francisco, to design the monument.

The Druid Grove began discussions with the Board of Trustees in Placerville. Together, the trustees and representatives from various groves met and determined that the junction of Main,

Broadway, and Cedar Ravine would be the location. The local newspaper reported, "Not only will it answer for a beautiful monument…it will also be a regulation of traffic." Porporato designed the monument as a 20-foot-tall Corinthian column with a stained glass torch emblematic of Druidism on top. The light, according to Druid orders, represents the light that dispels the darkness of ignorance and superstition. The same glass torch, which was lit by a red light, would "help regulate traffic at night time."

The Druid Monument (**Photo 1**) consists of a circular stone pillar mounted on a square base set on a concrete platform of three ascending steps. A variegated orange and red stained glass flame atop a metal torch is set on the top of the pillar. The west-facing façade of the square base has a plaque affixed that reads, "THE DRUIDS OF CALIFORNIA ERECTED THIS MEMORIAL TO FREDERICK SIEG WHO INSTITUTED THE ORDER IN THIS STATE A.C. 1859. PRESENTED TO THE CITY OF PLACERVILLE SEPT. 5, 1926." At the bottom right of this elevation, the stand is inscribed with the name of the designer and reads, "J. A. PORPORATO, ARCHITECT." Originally, small porcelain drinking fountains were affixed to the north and south elevations. These were removed sometime in the late 1960s or 1970s. In their place, two bronze plaques have been added that depict symbols from the Druid organization, including a triangular emblem depicting a flaming pyre, topped with a crossed spear and long-handled stick, oaks, mistletoe, a daffodil, and an all-seeing eye.

The Druids were excited for the completion of the monument. One quoted in the Mountain Democrat, July 16, 1926, wrote:

> What a wonderful monument this will be to the early pioneers and to the quaint City of Placerville, nestling in the canyon of the high Sierras, the first monument of importance to greet the eyes of tourists coming from the east and the last to greet their sight on their return journey, to tell of the wonders of California, the State of sunshine, peace and happiness. All who have cameras will snap shots of our beautiful monument to prove to the home folks that California is a lover of the beautiful in art; that Placerville is the city where the Portals of the Past is recreated as a gift from the present generation to countless thousands yet unborn, and that the Druids of California have shown proper veneration and respect for the founder of their great fraternity in California. The California Druid, the official organ of the grand grove, will receive its share of praise because one of its staff suggested the city, while the city of Placerville will be known far and near as the city wherein this historic monument is erected.

The monument's dedication on September 5, 1926, was a grand affair and attended by numerous Druid Groves throughout California. A special train was issued from San Francisco, carrying visiting members and officers dressed in their grand robes who marched from the railroad depot to the Odd Fellows Hall on arrival.

The group formed a column and then marched to the site of the monument, where a ceremony was held. After attendees sang the Star-Spangled Banner, a series of speeches began, starting with the architect, John Porporato, turning the monument over to the Past Noble Grand Arch A. H. Williams, who was acting as master of ceremonies. After more singing and more speeches, the Druidic flame on the top of the memorial shaft was lit. As planned, the monument became an attraction in Placerville, with Druids from throughout California coming annually to visit the shrine.

In 1972, the monument was restored and rededicated in honor of the late Senator H. E. Dillinger, a lifelong Druid member. His wife had the monument's stained-glass flame repaired and furnished two bronze plaques to cover the pipe fittings of the drinking fountains that had been removed sometime in the 1960s.

PHOTO 1 – DRUID MONUMENT

The Druids continue to hold annual pilgrimages to the shrine. The Union Cemetery, where Sieg lies buried, has also become an important site for the group. In June 2010, the Druids used the site as an esteemed location to initiate their new Noble Grand Arch of the California United Ancient Order of Druids for that year.

Clay Street Hangtown Creek Bridge

The Clay Street Hangtown Creek Bridge (25C-117) is a one-lane, closed-spandrel, reinforced-concrete arch bridge over Hangtown Creek (see **Photo 2** and **Photo 3**). The bridge is approximately 32 feet long and 17 feet wide. It likely replaced a timber stringer with a wood deck set upon rubble-stone abutments. The current bridge is built on remnants of the rubble-stone, as evidenced in the north abutment. The closed-spandrel arch bridge is the most basic of the reinforced concrete bridge types. This bridge, however, is slightly unusual in that the bridge structure is combined with the outfall of the sunken Cedar Ravine drainage culvert into Hangtown Creek. The culvert opening is located at the south end of the bridge's western elevation.

The construction date is not known, although the local Mountain Democrat newspaper references a new bridge at this location in 1881 (Mountain Democrat, November 5, 1881). Later, in 1919, the presumably wooden bridge was damaged by high waters and a new bridge was proposed (Mountain Democrat, March 15, 1919). At a meeting of the City Council in April 1919, "Plans were submitted by F. F. Fisher and A. S. Lyon for a bridge over Hangtown Creek at the Clay Street crossing, arch plans of the former being adopted. The clerk was instructed to advertise for steel and concrete for the structure" (Mountain Democrat, April 12, 1919). While the construction date of the current bridge is unknown, based on the Mountain Democrat newspaper archives and a historical map on file with the City that depicts the bridge, the bridge appears to have been constructed sometime between 1919 and 1928 (PAR 2018b).

According to City planning staff, other bridges were constructed in Placerville during this same early twentieth century period. Most, if not all, have been replaced with modern girder and concrete deck bridges, primarily as a result of the construction of US 50. Others have been gradually replaced to allow for two-lane roads, as opposed to the original narrow bridges.

PHOTO 2 – CLAY STREET BRIDGE, LOOKING NORTH

PHOTO 3 – CLAY STREET BRIDGE, LOOKING SOUTH

Cedar Ravine Culvert

The Cedar Ravine Culvert is an underground feature extending through the project site from the west side of the intersection of Cedar Ravine Road and Pacific Street to Hangtown Creek.

Cedar Ravine Creek was a natural drainage, until it was modified into a mining ditch during the historic mining period in the Placerville area. The purpose of the ditch was to carry drainage water away from mines in the Cedar Ravine area to Hangtown Creek. Today, the Cedar Ravine Culvert consists of a combination of corrugated metal piping and reinforced concrete box culvert. This culvert consists of a 234-foot-long open culvert along Cedar Ravine Road, which transitions to a combination of 66-inch-diameter corrugated metal pipe and concrete box culvert for 286 feet from the Cedar Ravine Road/Main Street intersection to the outfall at Hangtown Creek. The culvert outfall is a concrete arch-shape incorporated into the existing southern abutment of the Clay Street Hangtown Creek Bridge.

The undergrounding process began as early as the 1880s and continued into the modern era. The City also made changes in 2003 and 2004 when they added a concrete bottom to the corrugated metal pipe section because it had rusted through. All City improvements were made after the historic mining period. In addition to culvert undergrounding and improvement projects, there are numerous utilities crossing the culvert contained within smaller conduits and pipes punched through the walls of the culvert (PAR 2018b).

The nearby mines of Cedar Ravine Mine and Cedar Spring Mine are not well documented but can be loosely associated with the Cedar Ravine Culvert because of their location within Cedar Ravine and their proximity, located within one mile of the city [Main Street] (Noble 2002).

CULTURAL RESOURCES EVALUATION RECOMMENDATIONS

The results of records searches in 2007 and 2015, along with site observations, indicate there is no evidence of prehistoric-era cultural resources in the areas that would be affected by project construction activities (PAR 2018a; Simons 2009).

The Druid Monument, Clay Street Hangtown Creek Bridge, Cedar Ravine culvert, and artifacts found beneath the Ivy House parking lot have been evaluated for historic significance under both federal and state criteria. Resource evaluation recommendations are presented below.

Druid Monument

The Druid Monument is recommended eligible for listing in the National Register of Historic Places (NRHP) by the California Department of Transportation (Caltrans), per the Caltrans Section 106 Programmatic Agreement, for the purposes of the proposed project only. The monument is recommended eligible as a commemorative object under Criteria A and C, as well as Criterion Consideration F. Under Criterion A, it is recommended eligible for its association with the development of traffic control in Placerville's downtown. Under Criterion C, it is recommended eligible as the work of the master architect J. A. Porporato. Criterion Consideration F relates to commemorative properties. The Druid Monument was erected to commemorate Frederick Sieg for establishing the Druid order in California; therefore, the monument is considered a commemorative object. The monument is significant as a commemorative property for its traditional association and its symbolic value. It has become an icon for the Druid organization in California (whose members from throughout the state make annual pilgrimages to the monument). The Druid Monument qualifies as a commemorative object as a pilgrimage site for the Druids, as a recognition of Druid values, and as a highly recognizable landmark in downtown

Placerville for the past 90 years. As such, it is recommended eligible under Criterion Consideration F.

The monument's period of significance dates to 1926, when it was erected. It has strong integrity of design, materials, workmanship, setting, feeling, and association. The monument remains centrally located at the crossroads of Main Street and Cedar Ravine Road. As a result, its integrity of location is still very good. The removal of the small porcelain drinking fountains and replacement with small plaques on two sides of the monument is a minor change and does not diminish its integrity sufficiently to render it ineligible for listing in the NRHP (PAR 2018b).

The Druid Monument is listed in the City of Placerville's Historic Resources Inventory, it is specifically identified as historic monument under Section 8-16-1 (Monuments) of the Placerville City Code, and is therefore a historical resource as defined by California Environmental Quality Act (CEQA) Section 15064.5.

Clay Street Hangtown Creek Bridge

The Clay Street Hangtown Creek Bridge (Clay Street Bridge) was previously evaluated by Caltrans in 2004 and found to be individually ineligible for inclusion in the NRHP. That determination was partially based on an assumed build date of 1940, which has since been revised (earlier build date). The bridge was subsequently reevaluated in 2017 for its eligibility for inclusion on the NRHP. According to PAR (2018b), "The bridge lacks association with any significant event, movement, era or person noted in state or local history, is not eligible under criteria A or B. While it does represent a type of bridge construction that was a style commonly found in the Motherlode and elsewhere in the early twentieth century (a sturdy, low and narrow concrete arch bridge representative of this period of transportation architecture), the bridge does not rise to the level of being individually eligible for listing on the NRHP under Criterion C. The bridge has not yielded, nor is it likely to yield, any information important in our history or prehistory, rendering it ineligible under Criterion D." NRHP evaluation requirements and criteria are described in subsection 4.4.2, Regulatory Framework, below.

In 2018, Michael Baker International architectural historians completed an evaluation of the Clay Street Bridge for inclusion in the California Register of Historical Resources (California Register). CEQA requirements for evaluation and criteria are described in subsection 4.4.2, Regulatory Framework, below. The bridge is recommended not eligible for inclusion in the California Register, and the evaluation is presented below.

- Criterion 1: The Clay Street Bridge is not associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. The bridge construction date is not known with certainty, though it appears to have been constructed circa 1926 (between 1919 and 1928). The bridge does not appear to be tied to significant planning or development activities in the community. There are no known state highway improvement programs during this period.

- Criterion 2: The Clay Street Bridge is not associated with the lives of persons important to local, California, or national history. Research did not yield information that F. F. Fisher and A. S. Lyon, who submitted plans for the bridge during an April 1919 meeting of the City Council, are persons important to local, California, or national history.

- Criterion 3: The Clay Street Bridge does not embody the distinctive characteristics of a type, period, region, or method of construction or represent the work of a master or possess high artistic values. The Clay Street Bridge represents a common bridge type. Closed-spandrel, concrete arch bridges were common from the 1890s through the 1920s, but became less common as engineers developed techniques to save material and weight by eliminating the fill between the deck and the arch—the open spandrel concrete arch. Therefore, the Clay Street Bridge should be considered a late example of its type. Due to its construction atop a previous bridge abutment and its combination with a drainage outfall, the bridge may not be the best candidate to "embody the distinctive characteristics" of its [common] type.

- Criterion 4: The Clay Street Bridge has not yielded, and does not have the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

- Integrity: The Clay Street Bridge possesses moderate to good integrity. The arch ring is intact, as are the barrel, spandrel walls, and railings. The abutments are in near-original condition, as are the wingwalls. The north abutment is unusual in that it was constructed atop an earlier stone bridge foundation, which detracts from the bridge's ability be a good example of its type. The north abutment has been slightly modified through the installation of bags filled with concrete to reinforce the structure. The bridge design is slightly compromised through the installation of utility lines to the exterior of the western and eastern elevations. It appears as though some concrete repair work may have taken place at the southern side of the bridge, though this does not detract from the bridge's integrity. The bridge has some minor damage to concrete on the northern approach, including the loss of a section of wall cap.

Therefore, the Clay Street Bridge does not appear eligible for listing in the California Register under Criterion 1, 2, 3, or 4 because it lacks association with a historic context, is not associated with lives of persons important to local, California or national history, is a late example of a common bridge type, does not represent the work of a master, and is not likely to yield information important to the prehistory or history of the local area, California or the nation. Additionally, the resource was evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines using the criteria outlined in Section 5024.1 of the California Public Resources Code, and it does not appear to be a historical resource for the purposes of CEQA.

Cedar Ravine Culvert

The Cedar Ravine Culvert is recommended not eligible for inclusion in the NRHP. It is a remnant of a mining drainage likely following a natural drainage and enhanced in the 1870s. It carried drainage water from mines south of Placerville to Hangtown Creek. The ditch was modified repeatedly with the addition of crossings and underground sections so that today the entire ditch is confined to a culvert in the project site. The culvert is one of numerous drainages dating from the mining era in Placerville and, lacking association with any significant event, movement, era, or person noted in state or local history, it does not appear eligible under Criterion A or B. As a ditch later undergrounded in piping, it does not represent a particular type of construction found in the Motherlode and elsewhere in the early twentieth century. Similar culverts are present throughout Placerville and the county. As a result, it is recommended as not significant under Criterion C. Criterion D relates to resources that have yielded or may yield information important to the understanding of history or prehistory. The culvert is of common design and has been modified greatly over time. It can be traced on historic maps, so its route is well understood. As a result, the culvert is not significant under Criterion D.

The integrity of the culvert has been significantly impacted in the past. The formerly stone-lined open culvert was likely in place as early as the 1870s and used into the later nineteenth century. Over time, the City of Placerville has made numerous alterations to the culvert for purposes of safety and transportation. At one point, a wooden platform was constructed over the culvert at its intersection with Main Street to allow wagons and horses to pass over the drainage. Over time, other sections of the culvert were also placed in conduits and then covered with earth and road asphalt. This has included a variety of materials including modern corrugated metal pipe and concrete box culverts.

While this resource was at one time associated with the historic mining era in Placerville, it has been so substantially altered that it no longer conveys its historical-era appearance and has lost integrity of materials, design, workmanship, setting, feeling, and association. It is, as a result, not eligible for listing on the NRHP (PAR 2018b).

In 2018, Michael Baker International cultural resources staff completed an evaluation of the Cedar Ravine Culvert for inclusion in the California Register. The culvert is recommended not eligible for inclusion in the California Register, and the evaluation is presented below.

- Criterion 1: The Cedar Ravine Culvert is not associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. The Cedar Ravine Culvert is one of many mining ditches in the City that are loosely associated with various mines. While this resource is associated with the mining history of the City, it lacks association with a significant mine or a historic context.

- Criterion 2: The Cedar Ravine Culvert is not associated with the lives of persons important to local, California, or national history. Research did not indicate any associations with significant people.

- Criterion 3: The Cedar Ravine Culvert does not embody the distinctive characteristics of a type, period, region, or method of construction or represent the work of a master or possess high artistic values. Originally, the Cedar Ravine Culvert was an open ditch. Today, it is a combination of corrugated metal pipe, board-formed concrete box, and concrete box form with corrugated metal decking for its roof. It does not represent a particular construction type in the Mother Lode and elsewhere in the twentieth century. Similar culverts are present throughout the City and region.

- Criterion 4: The Cedar Ravine Culvert has not yielded, and does not have the potential to yield, information important to the prehistory or history of the local area, California, or the nation. The culvert is a remnant of a combination of a natural drainage and one of numerous mining ditches that drained to Hangtown Creek. The many alterations to the Cedar Ravine Culvert have diminished or destroyed its potential to yield important information.

- Integrity: The Cedar Ravine Culvert lacks integrity due to multiple alterations and poor condition. As previously stated, the Cedar Ravine Culvert has undergone many alterations including undergrounding, lining, additions and modifications to the lining with utilities. Integrity: Additionally, the City has investigated the culvert using LIDAR technology and has determined that much of the culvert is in poor condition and found that there are some sections that may be prone to failure.

For the reasons described above, the Cedar Ravine Culvert does not appear eligible for listing in the California Register under Criterion 1, 2, 3, or 4 because it lacks association with a historic context, is not associated with lives of persons important to local, California or national history, is a remnant example of a mining ditch, does not represent the work of a master, and is not likely to yield information important to the prehistory or history of the local area, California or the nation. Additionally, the resource was evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines using the criteria outlined in Section 5024.1 of the California Public Resources Code, and it does not appear to be a historical resource for the purposes of CEQA.

Ivy House Parking Lot Archaeological Deposits

The Ivy House, as well as other former structures including a gas station and a motel, occupied the current location of the Ivy House parking lot. An Extended Phase I cultural resources study was prepared to determine whether subsurface historic-era cultural features and/or artifacts are present under the parking lot and adjoining locations that could be affected by the proposed project (Simons 2009). Six trenches were excavated in 2009 to depths ranging from 2 to 8 feet. Fill materials, presumably from historic-era grading and leveling of the lot, and native soil (sandy silt, gravel, and cobbles) were found. A moderate scattering of historic artifacts and materials dating from circa 1900 to approximately 1940 were found. These included fragmentary and complete glass containers, glass marbles, ceramic fragments, and miscellaneous metal objects. Construction materials included brick fragments, square nails, iron pipe fragments, electrical cable, and decomposing redwood lumber.

The potential for the presence of undiscovered subsurface features would be greatest within or adjacent to the footprints of former historic structures (i.e., the Ivy House and/or the former gas station). Therefore, any potential additional deposits not associated with the fill level are assumed eligible for the NRHP under Criterion D for the purposes of the proposed project only, per the Caltrans Section 106 Programmatic Agreement. The Ivy House archaeological deposits are assumed eligible for inclusion in the California Register for purposes of the project and would be historical resources as defined in CEQA Guidelines Section 15064.5.

Hangtown Creek Retaining Walls

There are retaining walls that line the channel banks of Hangtown Creek at the Clay Street bridge crossing. The Hangtown Creek retaining walls have been previously evaluated and determined to be ineligible for listing in the NRHP and California Register (PAR 2018b).

SECTION 106 NATIVE AMERICAN CONSULTATION

Native American consultation was completed by PAR Environmental and Caltrans as part of requirements under Section 106 of the National Historic Preservation Act. This section summarizes consultation efforts documented in the Historic Property Survey Report prepared by PAR (2018a). The consultation log is presented in **Table 4.4-1**.

PAR sent a letter to the Native American Heritage Commission (NAHC) on July 28, 2007, requesting a search of the Sacred Lands file. The NAHC responded on August 7, 2007, indicating that the Sacred Lands File revealed no Native American cultural resources within the project site. The NAHC also provided a list of Native American individuals and organizations that might have concerns with or interest in the project. All individuals and organizations were contacted on December 5, 2007. Letters were re-sent in December 2008 and were followed up with phone calls in January 2009. No responses to this original request for information were received.

Due to project design changes, tribes were re-contacted in 2016 and a letter was sent to the NAHC. Emails were sent to the tribes on February 11, 2016, and follow-up telephone calls made on February 18, 2016. The NAHC responded on October 24, 2016, indicating that the Sacred Lands File revealed no Native American cultural resources within the project site, and provided a list of six tribal organizations that may have concerns with or an interest in the project. Of those six, four were contacted by email or mail on October 25, 2016 (the other two had been contacted in February 2016). Follow-up phone calls were made on October 31, 2016. Rose Enos (Maidu/Washoe) was interested in whether there were any burials in the area or if any major ground-disturbing activities were going to take place. She was informed that the majority of the project site is paved and previously surveyed. Grayson Coney (Tsi Akim Maidu) stated that Placerville was outside their traditional territory and therefore they had no concerns about the project. None of the tribes identified any cultural resources in the project site or voiced any concerns about the project.

TABLE 4.4-1
NATIVE AMERICAN CONSULTATION LOG

Name	Organization	Information Sought	Date(s) Contacted	Response
Debbie Pilas-Treadway	NAHC	Native American concerns	7/28/07 (letter); 10/19/16 (letter)	8/7/07 (letter); 10/24/16 (letter)
John Tayaba	Shingle Springs Band of Miwok Indians	Native American concerns	12/5/08 (letter)	No response received.
Rose Enos	Maidu/Washoe	Native American concerns	12/5/08 (letter); 2/20/16 (phone)	2/20/16 (phone) Interested in any burials or major groundbreaking activities.
Jessica Tavares	United Auburn Indian Community	Native American concerns	12/18/08 (letter)	No response received.
Christopher Suehead	Todd Valley Miwok-Maidu Cultural Foundation (Colfax Todds Valley Consolidated Tribe)	Native American concerns	12/5/08 (letter)	No response received. Also see Pamela Cubbler.
Nicholas Fonseca	Shingle Springs Band of Miwok Indians	Native American concerns	12/5/08 (letter)	No response received. Also see Daniel Fonseca.
N/A	United Auburn Indian Community	Native American concerns	12/5/08 (letter)	No response received. Also see Marcos Guerrero.
Martinez-Alire	Ione Bank of Mikwok Indians	Native American concerns	10/25/16 (email); 10/31/16 (phone)	See Grayson Coney.
Cosme Valdez	Nashville-El Dorado Miwok	Native American concerns	10/25/16 (email); 10/31/16 (phone)	Email invalid. No response received.
Grayson Coney	Tsi Akim Maidu	Native American concerns	10/25/16 (email); 10/31/16 (phone)	No concerns about project, not in tradition tribal territory.
Don Ryberg	Tsi Akim Maidu	Native American concerns	10/25/16 (email); 10/31/16 (phone)	No response received.
Pamela Cubbler	Colfax Todds Valley Consolidated Tribe	Native American concerns	2/11/16 (letter); 2/18/16 (phone)	No response received.
Daniel Fonseca	Shingle Springs Band of Miwok Indians	Native American concerns	2/11/16 (letter); 2/18/16 (phone)	No response received.
Marcos Guerrero	United Auburn Indian Community	Native American concerns	2/11/16 (letter); 2/18/16 (phone)	No response received.

Source: PAR: 2018a

ASSEMBLY BILL 52 NATIVE AMERICAN CONSULTATION

Assembly Bill (AB) 52 was implemented on July 1, 2015. AB 52 requires the a lead agency (in this case, the City) to begin consultation with any California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project prior to the release of a negative declaration or mitigated negative declaration if (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification and requests the consultation (Public Resources Code Section 21080.3.1[d]).

The Notice of Preparation (NOP) for the proposed project was circulated on August 11, 2014. Therefore, AB 52 consultation was not required completed for the project, and no tribal cultural resources were identified within the project site.

4.4.2 REGULATORY FRAMEWORK

FEDERAL

National Historic Preservation Act

Federal regulations for cultural resources are governed primarily by Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties and, if appropriate, afford the Advisory Council on Historic Preservation an opportunity to comment on such undertakings. The council's implementing regulations, "Protection of Historic Properties," can be found in 36 Code of Federal Regulations (CFR) Part 800.

The goal of the Section 106 review process is to offer a measure of protection to sites that are determined eligible for listing on the National Register of Historic Places. The criteria for determining NRHP eligibility are found in 36 CFR Part 60. Those criteria state that eligible resources comprise districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

a) That are associated with events that have made a significant contribution to the broad patterns of our history; or

b) That are associated with the lives of significant persons in or past; or

c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d) That have yielded or may be likely to yield, information important in history or prehistory

Ordinarily cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions or used for religious purposes, structures 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 are not 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 in the following categories:

a) A religious property deriving primary significance from architectural or artistic distinction or historical importance; or

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; or

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; or

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; or

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; or

f) A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or

g) A property achieving significance within the past 50 years if it is of exceptional importance

Amendments to the NHPA (1986 and 1992) and subsequent revisions to the implementation regulations have strengthened the provisions for Native American consultation and participation in the Section 106 review process. Federal regulations apply if the proposed project requires a federal permit (i.e., Clean Water Act Section 404 permit, as is required for the proposed project) or if it uses federal funding.

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects are to be protected and preserved. Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

STATE

California Register of Historical Resources

The California Office of Historic Preservation (OHP) maintains the California Register of Historical Resources. Historic properties listed, or formally designated for eligibility to be listed, on the National Register of Historic Places are automatically listed on the California Register. State Landmarks and Points of Interest are also automatically listed. The California Register can also include properties designated under local preservation ordinances or identified through local historical resource surveys.

California Environmental Quality Act

CEQA requires that lead agencies determine whether projects may have a significant effect on archaeological and historical resources. This determination applies to those resources that meet significance criteria qualifying them as "unique," "important," listed, or eligible for listing on the California Register. If the agency determines that a project may have a significant effect on a significant resource, the project is determined to have a significant effect on the environment, and these effects must be addressed. If a cultural resource is found not to be significant under the qualifying criteria, it need not be considered further in the planning process.

CEQA emphasizes avoidance of archaeological and historical resources as the preferred means of reducing potential significant environmental effects resulting from projects. If avoidance is not feasible, an excavation program or some other form of mitigation must be developed to mitigate the impacts. In order to adequately address the level of potential impacts, and thereby design appropriate mitigation measures, the significance and nature of the cultural resources must be determined. The following are steps typically taken to assess and mitigate potential impacts on cultural resources for the purposes of CEQA:

- Identify cultural resources.
- Evaluate the significance of the cultural resources found.
- Evaluate the effects of the project on cultural resources.
- Develop and implement measures to mitigate the effects of the project on cultural resources that would be significantly affected.

The California Register of Historical Resources serves as the authoritative guide to resources that are considered significant under CEQA. However, simply because a resource is not currently listed in the California Register does not mean that it is not a historical resource. A "historical resource" includes but is not limited to any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant (Public Resources Code [PRC] Section 5020.1). Section 15064.5 of the State CEQA Guidelines specifies criteria for evaluating the importance of cultural resources. Native American concerns and the concerns of other interested persons and corporate entities, including but not limited to museums, historical commissions, associations, and societies, must be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains (Health and Safety Code Section 7050.5, PRC Section 5097.94 et seq.).

Any object, building, structure, site, area, place, record, or manuscript that 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 to be a historical resource, provided that the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource is to be considered by the lead agency to be "historically significant" if the resource meets any of the following criteria for listing on the California Register (PRC Section 5024.1(c), 14 California Code of Regulations [CCR] 4852):

- Criterion 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

- Criterion 2: Is associated with the lives of persons important in our past.
- Criterion 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.
- Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history.

PRC Section 21083.2 also addresses the identification and protection of unique archaeological resources. A unique archaeological resource, as defined in this section, is an archaeological artifact, object, or site about which it can be demonstrated there is a high probability that it meets any 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 associated with a scientifically recognized important prehistoric or historic event or person.

State Laws Pertaining to Human Remains

Section 7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are subject to the coroner's authority. If the remains are determined to be Native American, the coroner must contact the Native American Heritage Commission. CEQA Guidelines Section 15064.5 specifies the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

Assembly Bill 52

AB 52 (Chapter 532, Statutes of 2014) became law on January 1, 2015. It establishes a formal consultation process for California tribes as part of CEQA and equates significant impacts on tribal cultural resources with significant environmental impacts (new PRC Section 21084.2). AB 52 requires formal consultation with California Native American tribes prior to determining the level of environmental document if a tribe has requested to be informed by the lead agency of proposed projects. The NOP for the proposed project was issued on August 11, 2014. Therefore, AB 52 requirements do not apply to the proposed project.

Senate Bill 18

As of March 1, 2005, Senate Bill (SB) 18 (Government Code Sections 65352.3 and 65352.4) requires that, prior to the adoption or amendment of a general plan proposed on or after March 1, 2005, a city or county must consult with Native American tribes with respect to the possible preservation of, or the mitigation of impacts on, specified Native American places, features, and objects located within that jurisdiction. SB 18 is not applicable to the proposed project because the project does not involve adoption or amendment to the City's General Plan.

LOCAL

City of Placerville General Plan

The City's (1990) General Plan Section V (Natural, Cultural, and Scenic Resources Element) includes policies to preserve and enhance Placerville's historical and Native American heritage. Policies that are applicable to the proposed project's environmental effects related to cultural resources are listed in **Table 4.4-2,** which also includes an analysis of the project's consistency with applicable policies.

TABLE 4.4-2
PROJECT CONSISTENCY WITH GENERAL PLAN CULTURAL RESOURCES POLICIES

Policies	Consistent?	Analysis
Section V. Policy G.1: The City shall set as a high priority the protection and enhancement of Placerville's historically and architecturally significant buildings and sites.	Yes, with mitigation	The Druid Monument and Ivy House archaeological deposits are historical resources that the proposed project has the potential to impact. Mitigation measures MM 4.4.1 and 4.4.2 will reduce impacts. Mitigation measure MM 4.4.3 will reduce potential construction-generated vibration impacts on historical resources such as buildings adjacent to the project site.
Section V. Policy H.1: The City shall not knowingly approve any public or private project that may adversely affect an archeological site without consulting the California Archeological Inventory at California State University, Sacramento, conducting a site evaluation as may be indicated, and attempting to mitigate any adverse impacts according to the recommendations of a qualified archeologist. City implementation of this policy shall be guided by Appendix K of the State CEQA Guidelines.	Yes, with mitigation	As stated above, the Ivy House archaeological deposits are historical resources that the project has the potential to impact. Mitigation measure MM 4.4.2 will reduce impacts on archaeological deposits and, relatedly, MM 4.4.4 requires that if human remains are discovered, they are managed in accordance with applicable regulations. The City is actively consulting with the California Office of Historic Preservation regarding the effects to historic properties.

4.4.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance:

1) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

3) Disturb any human remains, including those interred outside of formal cemeteries.

METHODOLOGY

The description of existing conditions and evaluation of resources to determine their significance under CEQA is based on the following studies and reports. These studies consisted of records searches, extensive literature review, interviews and consultation, and site inspections.

- Historic Property Survey Report for Clay Street Realignment and Bridge (25C-0117) Replacement Project, Placerville, El Dorado County, California (PAR 2018a)
- Historical Resources Evaluation Report, Clay Street Realignment and Bridge (25C-0117) Replacement Project, Placerville, El Dorado County, California (PAR 2018b)
- Archaeological Survey Report, Clay Street Realignment and Bridge (25C-0117) Replacement Project, Placerville, El Dorado County, California (PAR 2018c)
- Extended Phase 1 Report for the Clay Street Realignment and Bridge (25C-0117) Replacement Project, Placerville, El Dorado County, California (PAR 2018d)
- Extended Phase I Report for the Clay Street Realignment Project, El Dorado County, California (Simons 2009)

The Clay Street Bridge and Cedar Ravine Culvert were evaluated in accordance with CEQA requirements by Michael Baker International cultural resources staff in 2018, and the results are presented in this section.

As described in subsection 4.4.1, Existing Setting, only the Druid Monument and the Ivy House archaeological deposits within the project site are historical resources for the purposes of CEQA. The Clay Street Bridge and Cedar Ravine Culvert are not historical resources under CEQA, and there would be no impact on these resources. As such, the impact analysis is limited to potential effects on the Druid Monument and the Ivy House archaeological deposits. Potential impacts on subsurface resources are evaluated based on the assumption that resources may be present.

IMPACTS AND MITIGATION MEASURES

Historical Resources – Druid Monument (Standard of Significance 1)

Impact 4.4.1 Construction of the intersection improvements at the new Main Street/Cedar Ravine Road/Clay Street four-way intersection would result in the relocation of the Druid Monument from its current location to the west side of the new intersection on Main Street. There is the potential, although unlikely, that the historical resource may be damaged during its relocation. This is a **potentially significant** impact.

The Druid Monument located at the intersection of Cedar Ravine Road and Main Street could be relocated (depending on final design of the intersection) up to 45 feet west of its current location to a new pedestrian refuge island separating eastbound Main Street traffic and southbound Cedar Ravine Road traffic (see **Figure 2.0-3a, Figure 2.0-3b,** and **Figures 2.0-5a** through **2.0-5d** in Section 2.0, Project Description). The monument's historical intent is to be located within the intersection, allowing traffic circulation around the monument. The relocation is necessary to improve circulation and intersection safety for the protection of the monument from vehicle collisions and those choosing to view it as patrons.

The Druid Monument is listed on the City of Placerville's Historic Resources Inventory. In addition, it is recommended eligible for listing on the NRHP, per the Caltrans Section 106 Programmatic Agreement for the purposes of this project only. The monument is recommended eligible as a commemorative object under Criteria A and C, as well as Criterion Consideration F. Under Criterion A, it is recommended eligible for its association with the development of traffic control in downtown Placerville. Under Criterion C, it is recommended eligible as the work of the master architect J. A. Porporato. Its period of significance is 1926. The Druid Monument also appears eligible for listing in the California Register.

According to OHP (2011) Technical Assistance Series #6 California Register and National Register: A Comparison, the State Historic Resources Committee "encourages the retention of historical resources on site…however, it is recognized that moving an historic…object is sometimes necessary to prevent its destruction." Therefore, a moved object may retain eligibility at its moved location if the move was completed to prevent its demolition and the new location is compatible with the original character and use of the historical resource. Further, "a historical resource should retain its historic features and compatibility in orientation, setting, and general environment" (OHP 2011).

The monument would remain located within the intersection with traffic circulating around it, as it has been historically, and therefore would retain its California Register eligibility. However, the relocation efforts may result in damage to the historical resource, which would be a **potentially significant impact**. As a part of the National Environmental Policy Act (NEPA) environmental review process for this project that will be undertaken by Caltrans, Historic American Engineering Record (HAER) documentation of the Druid Monument will be prepared by a professional meeting the qualifications outlined in the Secretary of the Interior's Professional Qualification Standards for history or architectural history. This documentation will document the Druid Monument and must be provided to the City before it is moved in case the monument is damaged during its relocation.

As part of the Clay Street realignment, the project includes two options for traffic control at the new intersection. The All-Way Stop option and the Signal option would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. Both options would result in relocation of the Druid Monument to the same new location. Therefore, impacts would be identical. Replacement of the existing Clay Street Hangtown Creek Bridge would not affect the Druid Monument.

Mitigation Measures

MM 4.4.1 The City shall implement the following measures:

- The City shall require Historic American Engineering Record (HAER) documentation to be on file with the City prior to issuance of a contract for relocation of the monument.
- A consultant, qualified to move the historic monument, shall move the Druid Monument.
- The dedication plaque shall be retained, with additional text documenting the movement of the resource. If this addition cannot be made to the existing plaque, a new plaque of like construction will be placed at the monument.

Timing/Implementation:	*Prior to relocation (HAER documentation on file; contract with qualified consultant to relocate monument); after relocation (dedication plaques)*
Monitoring/Enforcement:	*City of Placerville Development Services Department, Planning Division*

The City intends, through project design, to retain the resource status of the monument. Mitigation measure **MM 4.4.1** identifies procedures that would be followed to ensure the monument's significance is preserved. Impacts would be reduced to **less than significant**.

Historical Resources – Ivy House Archaeological Deposits (Standards of Significance 1 and 2)

Impact 4.4.2 Construction of the proposed project may result in the disturbance of archaeological deposits related to the Ivy House. This is a **potentially significant** impact.

The southern approach to the replacement bridge would be within the Ivy House parking lot. Clay Street would be realigned through the reconfigured Ivy House parking lot to form a four-way intersection consisting of Clay Street, Main Street, and Cedar Ravine Road (see **Figures 2.0-3a** and **2.0-3b** in Section 2.0, Project Description).

The Ivy House archaeological deposits are located under the Ivy House parking lot. Known deposits include artifacts and materials dating from circa 1900 to approximately 1940 and include fragmentary and complete glass containers, glass marbles, ceramic fragments, and miscellaneous metal objects. Construction materials include brick fragments, square nails, iron pipe fragments, electrical cable, and decomposing redwood lumber. The potential is high for additional deposits. The Ivy House archaeological deposits have been assumed eligible for inclusion in the NRHP under Criterion D under the Caltrans Section 106 Programmatic Agreement and are assumed historical resources as defined in CEQA Guidelines Section 15064.5.

Because construction of the proposed project has the potential to result in the disturbance of Ivy House archaeological deposits, this would be a **potentially significant** impact.

The All-Way Stop and Signal options would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. Therefore, impacts would be identical.

Mitigation Measures

MM 4.4.2 The City shall implement the following measures during project construction:

- A pre-construction meeting shall be conducted by a professional archaeologist meeting the qualifications outlined in the Secretary of the Interior's Professional Qualification Standards for archaeology to educate construction contractors about the potential for encountering archaeological resources and next steps if a resource is discovered.
- Archaeological monitoring in the Ivy House parking lot shall be completed by a professional archaeologist meeting the qualifications outlined in the Secretary of the Interior's Professional Qualification Standards for archaeology.

- If prehistoric or historic-period archaeological deposits are discovered during project construction activities at any location within the project site, all work within 25 feet of the discovery shall be redirected and the archaeologist shall assess the situation, consult with agencies as appropriate, and make recommendations regarding the treatment of the discovery. Impacts to archaeological deposits should be avoided by project activities, but if such impacts cannot be avoided, the deposits shall be evaluated for their California Register eligibility. If the deposits are not California Register–eligible, no further protection of the finds is necessary. If the deposits are California Register–eligible, they shall be protected from project-related impacts or such impacts mitigated. Mitigation may consist of, but is not necessarily limited to, systematic recovery and analysis of archaeological deposits, recording the resource, preparation of a report of findings, and accessioning recovered archaeological materials at an appropriate curation facility. Public educational outreach may also be appropriate.

Timing/Implementation: *During project construction*

Monitoring/Enforcement: *City of Placerville Development Services Department, Planning Division*

Implementation of mitigation measure **MM 4.4.2** would ensure that provisions are in place to reduce impacts on prehistoric or historic-period archaeological resources. Should archaeological deposits be encountered, impacts on such resources should be avoided or further investigation should be conducted to offset the loss of scientifically consequential information that would occur if avoidance is not possible. This would reduce the impact to a **less than significant** level. In addition, as part of the

Historical Resources Adjacent to the Project (Standard of Significance 1)

Impact 4.4.3 Construction of the proposed project would involve the use of heavy equipment that could be a source of vibration that could cause structural damage to historical buildings adjacent to the project site. This impact is considered **potentially significant.**

There are several historical resources immediately adjacent to the project site that are listed or eligible for inclusion in the NRHP, California Register and/or City of Placerville Historical Resources Inventory. These include the Pearson's Soda Works Building (594 Main Street, south of Main Street opposite Clay Street), 582 Main Street (the Stable Building), 585 Main Street (west side of Clay Street), 3059 Cedar Ravine Road (Combellack-Blair House, north of Thompson Way), 3062 Cedar Ravine Road (Blair-Thompson House, north of Thompson Way), 2985 Clay Street (James B. Blair House, north of US 50), and 589 Main Street (west side of Clay Street). There are also other historical resources in the vicinity of the proposed project (PAR 2018b: Table 1 and City of Placerville Historical Resources Inventory), but these are located beyond the area of potential vibrational effects.

The proposed project would involve the use of, but not limited to, heavy equipment such as backhoes, milling machines, trucks, graders, roller/compactors, asphalt grinders, and asphalt pavers. The use of this equipment could be a source of vibration that could cause structural damage to adjacent historical resources. The reader is referred to Section 4.9, Noise, for information about the concepts of ground-borne vibration and its effects on people and

structures, in general.[1] There are existing sources of vibration along Main Street, Clay Street, and Cedar Ravine Road from regular traffic operations, which include passenger vehicles and trucks.

The effects of vibration on structures have been the subject of extensive research. Table 4.9-6 in Section 4.9, Noise, lists different types of construction equipment and associated vibration levels at various distances. The Caltrans *Transportation and Construction Vibration Guidance Manual* notes that historical buildings would have no risk of structural damage for continuous vibrations below a PPV of 0.1 inches per second (Caltrans 2013).

The City recognizes the potential for construction of the proposed project to produce vibration from heavy equipment use within a few feet of an historical resource, including but not limited to the Pearson's Soda Works Building. This could result in damage to building architectural elements or the structure itself, which would be a **potentially significant impact**. The City has proactively initiated efforts to address this issue and reduce potential impacts as part of ongoing project planning and intends to complete necessary evaluations of vibrational effects and will require specific construction methods be used to ensure vibration levels from heavy construction equipment do not pose a risk of structural damage to historical resources.

After construction, the proposed project would not increase vibration levels on local streets because it would not result in new land uses that would generate new traffic along Main Street, Clay Street, or Cedar Ravine Road compared to existing conditions (see Impact 4.10.1 in Section 4.10, Transportation and Circulation).

Mitigation Measure

MM 4.4.3 Prior to issuance of construction documents for public bidding, the City shall complete its vibration assessment to identify historic buildings listed on the National Register of Historic Places and/or California Register or have been determined eligible but not yet listed, and the City of Placerville Historical Resources Inventory that could be affected by vibration from project construction activities. As necessary, the City shall refine project work limits, as feasible, and/or identify specific construction methods recommended by Caltrans in its 2013 *Transportation and Construction Vibration Guidance Manual* to protect the resources. Selected methods shall demonstrate the Caltrans-identified risk of structural damage to historical buildings of 0.1 inches per second PPV, or other protective threshold as identified in the analysis, would not be exceeded. Construction contracts shall include all required conditions.

Timing/Implementation:	*Prior to issuance of construction documents for public bidding*
Monitoring/Enforcement:	*City of Placerville Development Services Department, Engineering Division*

[1] Several different methods are typically used to quantify vibration. One is the peak particle velocity (PPV), which is expressed as units of inches per second. Caltrans uses the inches per second PPV in evaluating construction-generated vibration for potential building damage, and this unit of measurement is appropriate for this analysis.

Implementation of mitigation measure **MM 4.4.3** would ensure construction methods are used to minimize the potential for vibration produced by construction equipment to damage historic building elements or structures adjacent to the project site. This would reduce the impact to a **less than significant** level.

Undiscovered Human Remains (Standards of Significance 2 and 3)

Impact 4.4.4 Construction of the proposed project could inadvertently destroy or damage undiscovered human remains. This impact is considered **potentially significant.**

Construction of the proposed project would result in ground-disturbing activities. Results of Native American Sacred Lands Files searches and consultation indicate there are no known Native American resources in the project site. Investigations did not identify any prehistoric, unique archaeological resources, or human remains in the project site. There are no known cemeteries or Native American burial sites. However, there is a possibility of unanticipated and accidental archaeological discoveries during ground-disturbing project-related activities. This is a potentially significant impact.

The All-Way Stop and Signal options would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. Therefore, impacts would be identical.

Mitigation Measures

MM 4.4.4 Any human remains encountered during ground-disturbing activities shall be treated in accordance with California Health and Safety Code Section 7050.5. The City shall inform its contractor(s) of the project site's sensitivity for human remains and verify that the following directive has been included in the appropriate contract documents:

If human remains are encountered during project construction activities, the City shall comply with the requirements of California Health and Safety Code Section 7050.5. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the El Dorado County coroner has determined the manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation or to his or her authorized representative. At the same time, an archaeologist shall be contacted to assess the situation and consult with agencies as appropriate. Project personnel/construction workers shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American most likely descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Timing/Implementation: *During project construction*

Monitoring/Enforcement: *City of Placerville Development Services Department, Planning Division*

Mitigation measure **MM 4.4.4** would ensure that human remains (if any) encountered during project activities are treated in a manner consistent with state law and reduce impacts on human remains to a less than significant level as required by CEQA. This would occur through respectful coordination with descendant communities to ensure the traditional and cultural values of said community are incorporated in the decision-making process concerning the disposition of human remains. Implementation of this mitigation measure would reduce the potential impact to a **less than significant** level.

4.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative context for the cultural resources analysis encompasses El Dorado County. While the project-specific analysis for cultural resources necessarily includes separate analyses for prehistoric resources, historic resources, and human remains, the cumulative analysis combines these resources into a single, nonrenewable resource base of a broad cultural and regional system of which the resources are a part. While some resources are unique and nonrenewable, potential impacts related to cultural resources are generally site-specific and as such cannot be accurately assessed on a cumulative basis.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Cultural Resources Impacts

Impact 4.4.5 Cumulative development, including the proposed project, could result in cumulative impacts on cultural resources in El Dorado County. The project's contribution is **less than cumulatively considerable**.

El Dorado County has been inhabited by Native Americans for thousands of years, and explorers ushered in the historic-period era in the 1800s. Before the area was inhabited by humans, now-extinct plants and animals existed that have the potential to be present in fossilized form. Historical resources, human remains, and paleontological resources are unique and nonrenewable significant resource types associated with the county's cultural history. Placerville contains most of the county's known built environment historical resources.

Urban development that has occurred over the past several decades in the county has resulted in the demolition and alteration of innumerable resources, some of which may have met CEQA Guidelines Section 15064.5 criteria for significance. It is reasonable to assume that present and future development activities could continue to damage and/or destroy significant resources. Potential impacts on significant cultural resources must be mitigated on a case-by-case basis.

Construction of the proposed project would impact two historical resources: the Druid Monument and the Ivy House archaeological deposits. There is the potential that historic buildings adjacent to the project site could be affected by vibration form construction equipment. There is also the potential to encounter previously unknown resources and/or human remains during ground-disturbing activities. The proposed project's potential impacts on these resources would be mitigated to less than significant through implementation of mitigation measures **MM 4.4.1, MM 4.4.2, MM 4.4.3,** and **MM 4.4.4**. As such, the project's contribution to cumulative impacts related to cultural resources would be less than cumulatively considerable.

Mitigation Measures

None required.

REFERENCES

Bridgehunter.com. 2002–2017. Various searches for closed-spandrel, reinforced-concrete arch bridges in California. Accessed January 5, 2018. https://bridgehunter.com/.

Caltrans (California Department of Transportation). 2013. *Transportation and Construction Vibration Guidance Manual.*

Mountain Democrat. 1881–1926. Various newspaper articles. Accessed January 3, 2018. Newspaperarchive.com.

OHP (California Office of Historic Preservation). 2011. *Technical Assistance Series #6 California Register and National Register: A Comparison.*

PAR (PAR Environmental Services, Inc.). 2018a. *Historic Property Survey Report for Clay Street Realignment and Bridge (25C-0117) Replacement Project, Placerville, El Dorado County, California.* (Confidential Report: available to Professional Archaeologists who meet the Secretary of the Interior Standards for Archaeology)

———. 2018b. *Historical Resources Evaluation Report, Clay Street Realignment and Bridge (25C-0117) Replacement Project, Placerville, El Dorado County, California.*

———. 2018c. *Archaeological Survey Report, Clay Street Realignment and Bridge (25C-0117) Replacement Project, Placerville, El Dorado County, California.* (Confidential Report: available to Professional Archaeologists who meet the Secretary of the Interior Standards for Archaeology)

———. 2018d. *Extended Phase 1 Report for the Clay Street Realignment and Bridge (25C-0117) Replacement Project, Placerville, El Dorado County, California.* (Confidential Report: available to Professional Archaeologists who meet the Secretary of the Interior Standards for Archaeology)

———. 1990. *City of Placerville General Plan Policy Document*. As amended through 2017,

Simons, Dwight. 2009. *Extended Phase I Report Clay Street Realignment and Bridge (25C-0117) Replacement Project, El Dorado County, California*. Tremaine and Associates, Inc. (Confidential Report: available to Professional Archaeologists who meet the Secretary of the Interior Standards for Archaeology)

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4.5 GREENHOUSE GAS EMISSIONS

This section discusses the proposed project's contribution to greenhouse gas (GHG) emissions and the associated effects of climate change. The reader is referred to Section 4.2, Air Quality, for a discussion of project impacts associated with air quality.

4.5.1 EXISTING SETTING

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (IPCC 2014, pp. 3 and 5).

Table 4.5-1 describes the primary GHGs attributed to global climate change, including a description of their physical properties, primary sources, and contribution to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weigh each gas by its global warming potential (GWP). Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (IPCC 2013, p. 467).

TABLE 4.5-1
GREENHOUSE GASES

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[a]
Methane (CH_4)	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about12 years.[b]
Nitrous Oxide (N_2O)	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. Nitrous oxide is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.[c]

Sources: [a] EPA 2016a, [b] EPA 2016b, [c] EPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice it to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of the California Environmental Quality Act (CEQA), greenhouse gas impacts to global climate change are inherently cumulative.

GREENHOUSE GAS EMISSIONS SOURCES

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural emissions sectors. California is a significant emitter of CO_2e in the world and produced approximately 440 million gross metric tons of CO_2e in 2015. In the state, the transportation sector is the largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction (CARB 2017a). Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water), respectively, two of the most common processes for removing carbon dioxide from the atmosphere.

EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT

The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to provide the world with a scientific view on climate change and its potential effects. According to the IPCC (2014), global average temperature is expected to increase relative to the 1986–2005 period by 0.3 to 4.8 degrees Celsius (°C) (0.5–8.6 degrees Fahrenheit [°F]) by the end of the twenty-first century (2081–2100), depending on future GHG emission scenarios. According to the California Natural Resources Agency (2012, p. 2), temperatures in California are projected to increase 2.7°F above 2000 averages by 2050 and, depending on emission levels, 4.1–8.6°F by 2100.

Physical conditions beyond average temperatures could be indirectly affected by the accumulation of GHG emissions. For example, changes in weather patterns resulting from increases in global average temperature are expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. Based on historical data and modeling, the California Department of Water Resources projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050 (DWR 2008, p. 4). An increase in precipitation falling as rain rather than snow also could lead to increased potential for floods because water that would normally be held in the Sierra Nevada until spring could flow into the Central Valley concurrently with winter storm events (CNRA 2012, p. 5). This scenario would place more pressure on California's levee/flood control system.

Another outcome of global climate change is sea level rise. The sea level rose approximately 7 inches during the last century and, assuming that sea level changes along the California coast continue to track global trends, the sea level along the state's coastline in 2050 could be 10–18 inches higher than in 2000 and 31–55 inches higher by the end of this century (CNRA 2012, p. 9).

As the existing climate throughout California changes over time, the ranges of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the state if suitable conditions are no longer available (CNRA 2012, pp. 11 and 12).

Changes in precipitation patterns and increased temperatures are expected to alter the distribution and character of natural vegetation and the associated moisture content of plants and soils. An increase in the frequency of extreme heat events and drought is also expected. These changes are expected to lead to increased frequency and intensity of large wildfires (CNRA 2012, p. 11).

4.5.2 REGULATORY FRAMEWORK

STATE

California has adopted various administrative initiatives and enacted legislation relating to climate change, many of which set aggressive goals for GHG emissions reductions in the state.

California Global Warming Solutions Act (Assembly Bill 32)

The primary acts that have driven GHG regulation and analysis in California include the California Global Warming Solutions Act of 2006 (AB 32) (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599), which instructs the California Air Resources Board to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The act directed the California Air Resources Board

(CARB) to set a greenhouse gas emissions limit based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020.

AB 32 Scoping Plan

CARB adopted a Scoping Plan to achieve the goals of Assembly Bill (AB) 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and the state's Climate Action Team early actions and additional GHG reduction measures by both entities,[1] identifies additional measures to be pursued as regulations, and outlines the adopted role of a cap-and-trade program. Additional development of these measures and adoption of the appropriate regulations occurred through the end of year 2013 (CARB 2008).

AB 32 requires CARB to update the Scoping Plan at least once every five years. CARB adopted the first major update to the Scoping Plan in May 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG reduction necessary to likely avoid risking irreparable damage. It identifies the actions the State of California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32. The Scoping Plan update also looks beyond 2020 toward the 2050 goal established in Executive Order S-3-05, though not yet adopted as state law, and observes that "a mid-term statewide emission limit will ensure that the State stays on course to meet our long-term goal." The Scoping Plan update does not establish or propose any specific post-2020 goals, but identifies such goals adopted by other governments or recommended by various scientific and policy organizations (CARB 2014). Executive Order B-30-15 (signed April 29, 2015) endorses the effort to set interim GHG reduction targets for year 2030 (40 percent below 1990 levels).

Senate Bill 32 and 2017 Scoping Plan

Signed into law on September 2016, Senate Bill (SB) 32 codifies the 2030 target in Executive Order B-30-15 (see below). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. SB 32 states that the intent is for the Legislature and appropriate agencies to adopt complementary policies that ensure the long-term emissions reductions advance specified criteria. On December 14, 2017, CARB adopted the 2017 Climate Change Scoping Plan (2017 Scoping Plan), which lays out the framework for achieving the mandate of SB 32 (2016) to reduce statewide GHG emissions to at least 40 percent below 1990 levels by the end of 2030 (CARB 2017b). The 2017 Scoping Plan includes guidance to local governments in Chapter 5, including plan-level GHG emissions reduction goals and methods to reduce communitywide GHG emissions. In its guidance, CARB recommends that "local governments evaluate and adopt robust and quantitative locally appropriate goals that align with the statewide per capita targets and the State's sustainable development objectives and develop plans to achieve the local goals." CARB further states that "it is appropriate for local jurisdictions to derive evidence-based local per capita goals [or some other metric that the local jurisdiction deems appropriate, such as mass emissions or per service population] based on local emissions sectors and population projections that are consistent with the framework used to develop the statewide per capita targets" (CARB

[1] The Climate Action Team, led by the Secretary of the California Environmental Protection Agency (CalEPA) is a group of state agency secretaries and heads of agency, boards, and departments. The CAT members work to coordinate statewide efforts to implement global warming emissions reduction programs and the state's Climate Adaptation Strategy.

2017b, pp. 99–100). Because the proposed project would not involve new land uses that would generate vehicle trips or new area sources that would generate additional GHG emissions, any policies or reductions requirements that will subsequently be adopted would not apply to the project.

California Executive Orders

Two Executive Orders—California Executive Order 5-03-05 (2005) and California Executive Order B-30-15 (2015)—highlight GHG emissions reduction targets, though such targets have not been adopted by the State and remain only a goal of the Executive Orders. Specifically, Executive Order 5-03-05 seeks to achieve a reduction of GHG emissions of 80 percent below 1990 levels by 2050 and Executive Order B-30-15 seeks to achieve a reduction of GHG emissions of 40 percent below 1990 levels by 2030. Technically, a governor's Executive Order does not have the effect of new law but can only reinforce existing laws. For instance, as a result of the AB 32 legislation, the State's 2020 reduction target is backed by the adopted AB 32 Scoping Plan, which provides a specific regulatory framework of requirements for achieving the 2020 reduction target. Executive Orders S-03-05 and B-30-15 do not have any such framework and provide no specific emissions reduction mechanisms.

California Environmental Quality Act

Lead agencies must evaluate climate change and greenhouse gas emissions of projects subject to CEQA; however, the CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or specific thresholds of significance and do not specify GHG reduction mitigation measures. Instead, the guidelines allow lead agencies to choose methodologies and make significance determinations based on substantial evidence, as discussed in further detail below. No state agency has promulgated binding regulations for analyzing GHG emissions, determining their significance, or mitigating significant effects in CEQA documents. Thus, lead agencies exercise their discretion in determining how to analyze greenhouse gases.

REGIONAL

Metropolitan Transportation Plan/Sustainable Communities Strategy

The Sacramento Area Council of Governments' (SACOG) 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) is the latest update of a long-range policy and planning program that establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035, and thus establishes an overall GHG target for the region beyond 2020.

The MTP/SCS for the Sacramento region proactively links land use, air quality, and transportation needs. The MTP/SCS supports the Sacramento Region Blueprint, which implements smart growth principles, including housing choice, compact development, mixed-use development, natural resource conservation, use of existing assets, quality design, and transportation choice. It also provides increased transportation options while reducing congestion, shortening commute times, and improving air quality. The proposed project is included as a line item (ELD 19257) (SACOG 2016).

LOCAL

El Dorado County Air Quality Management District

The project site is under the jurisdiction of the El Dorado County Air Quality Management District (EDCAQMD), which regulates air quality according to the standards established in the federal and California Clean Air Acts and amendments to those acts. The EDCAQMD also regulates GHG emission contributions from land use projects through GHG significance thresholds, which were developed in association with a committee of air districts in the Sacramento region and are intended to establish a uniform scale to measure the significance of land use development projects in its jurisdiction.

City of Placerville General Plan

The City's General Plan does not contain any policies related to greenhouse gas emissions.

4.5.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. An impact related to greenhouse gas emissions is considered significant if the project would:

1) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The California Natural Resources Agency has noted that impacts of GHG emissions should focus on the cumulative impact on climate change. Thus, CEQA amendments continue to make clear that the significance of GHG emissions is most appropriately considered on a cumulative level.

Addressing GHG generation impacts requires an agency to make a determination as to what constitutes a significant impact. The amendments to the CEQA Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions will have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the project's GHG emissions (14 California Code of Regulations Section 15064.4(a)).

The assessment of GHG emissions in this Draft EIR is based on guidance from the EDCAQMD. The EDCAQMD, in association with a committee of air districts in the Sacramento region, has developed "bright-line" GHG thresholds in order to provide a uniform scale to measure the significance of land use development projects in its jurisdiction.

- For the evaluation of construction-related emissions, the EDCAQMD recommends using the mass emission threshold of 1,100 metric tons of CO_2e per year.

- For the evaluation of operational emissions, the EDCAQMD recommends a two-tier approach:

  – Tier I. Operational emissions of a project would not have a significant impact on the environment if they are less than 1,100 metric tons of CO_2e per year.

  – Tier II. Projects with operational emissions that exceed 1,100 metric tons of CO_2e per year, but are able to demonstrate a 21.7 percent reduction from a "No Action Taken" scenario compared to the proposed project operating in 2020 would not conflict with CARB's Scoping Plan.

The City of Placerville has not adopted a climate action plan. The General Plan does not contain goals or policies that specifically address how GHG emissions should be evaluated or how reductions may be achieved, nor does it include thresholds of significance for evaluating GHG emissions using either a bright-line or an efficiency-based approach. As such, it is appropriate to evaluate the proposed project's impacts against thresholds established by another jurisdiction.

For the purposes of this analysis, the City of Placerville in its discretion is using the EDCAQMD-recommended construction-level significance threshold of 1,100 metric tons of CO2e per year and the operational-level significance Tier I threshold of 1,100 metric tons of CO2e per year. These thresholds are intended to evaluate a project for consistency with GHG targets established in AB 32 and SB 32.

In the case that estimated emissions fall below either of these thresholds, a project's impacts will be considered less than significant in terms of the contribution to GHG emissions. In the case that estimated emissions surpass a threshold, a project will be considered significant.

METHODOLOGY

GHG-related impacts were assessed in accordance with methodologies recommended by CARB and the EDCAQMD, based on the project components described in Section 2.0, Project Description, of this Draft EIR. Construction-generated GHG emissions were modeled using the Road Construction Emissions Model Version 8.1.0 (see **Appendix B**). The model was developed by the Sacramento Metropolitan Air Quality Management District and can be used to determine the emission impacts of road construction projects. In order to provide a conservative analysis, project construction-generated emissions took into account the hauling of 1,305 tons of demolished asphalt that would hauled off-site as well of the import of 50 cubic yards of fill material onto the project site. The estimated amount of demolished asphalt is derived from the total amount of paving currently within the proposed area of disturbance.

The impacts of the project from mobile-source GHG emissions during the post-construction operations was evaluated based on AM and PM peak-hour vehicle traffic numbers coupled with their estimated average vehicle delay at the project-affected intersections as identified in the transportation analysis report prepared for the project (Fehr & Peers 2018 [included in **Appendix D**]). Emissions were calculated by multiplying automobile-idling vehicle emissions factors generated by CARB's EMFAC2014 emission program by the number of peak-hour vehicles and by the seconds of delay experienced per vehicle, both identified in the transportation analysis report (Fehr & Peers 2018). The analysis was conducted for existing conditions (year 2018), the opening year (year 2021), and year 2035, which corresponds to the traffic analysis for cumulative conditions. The analysis evaluates both an all-way stop and signal control at the Clay Street/Cedar Ravine Road/Main Street intersection. The average daily volume of traffic through each intersection and average daily delay times are not known; however, a conservative estimate was made of the daily traffic (and

the resulting GHG emissions) by multiplying the peak hour data by 10, and then by 365 days per year. Model output for calculated emissions is included in **Appendix B**.

IMPACTS AND MITIGATION MEASURES

Greenhouse Gas Emissions (Standards of Significance 1 and 2)

Impact 4.5.1 Greenhouse gas emissions generated by the project would not have a significant impact on global climate change. This impact is **less than cumulatively considerable**.

Construction Impacts

Demolition of the existing Clay Street Bridge and construction of the new bridge, construction activities associated with the Clay Street realignment through the Ivy House parking lot, and new intersection modifications would generate GHG emissions, primarily from heavy equipment and vehicle exhaust. Estimated emissions are identified in **Table 4.5-2**. As shown, construction would generate approximately 581 metric tons of CO_2e during the 9- to 12-month construction period. This would be a one-time occurrence. When amortized over the life of the proposed project (i.e., long-term contribution), emissions would be substantially lower on an annual basis. Therefore, emissions would not exceed EDCAQMD significance thresholds for construction-generated GHG emissions, and the impact would be **less than significant**.

The All-Way Stop option and the Signal option would involve identical construction activities. Therefore, the GHG impact for both options would be the same and are accounted for in the estimated GHG construction emissions.

TABLE 4.5-2
CONSTRUCTION-RELATED GREENHOUSE GAS EMISSIONS (METRIC TONS PER YEAR)

Construction Activities	Metric Tons of CO_2e
Year 2020	581
EDCAQMD Significant Impact Threshold	1,100
Exceed EDCAQMD Threshold?	**No**

*Source: EMFAC2014. See **Appendix B** for emission model outputs.*

Operational Impacts

There would be long-term regional emissions associated with vehicle idling lengths at the new intersection. However, the proposed project would not increase the number of vehicle trips or vehicle miles traveled; therefore, the only potential source of GHG emissions would be attributable to vehicle idling times under the two intersection control options.

The proposed project's operational GHG emissions for the All-Way Stop and Signal options are summarized and compared to existing conditions in **Tables 4.5-3** and **4.5-4,** respectively. The net change between operational conditions (2021) and existing conditions (2018) is compared to the EDCAQMD greenhouse gas significance threshold.

All-Way Stop Option

As shown in **Table 4.5-3**, operation of the All-Way Stop option would reduce emissions by approximately 269 metric tons of CO_2e annually as a result of improved intersection operations that reduce vehicle idling. Therefore, emissions would not exceed EDCAQMD significance thresholds for operational greenhouse gas emissions, and the impact would be **less than significant**.

TABLE 4.5-3
OPERATIONAL (IDLING) GREENHOUSE GAS EMISSIONS (METRIC TONS PER YEAR) FOR ALL-WAY STOP OPTION

Project Conditions	Intersections					Total
	US 50/ Bedford Ave.	Main Street/ Bedford Ave.	Main St./Clay St.	Main St./Cedar Ravine Rd.	Pacific St./Cedar Ravine Rd.	
Metric Tons CO_2e per Year						
Existing Conditions	777.2	244.2	180.0	116.0	274.1	1,591.4
All-Way Stop Option	764.6	210.3	0.0	174.6	173.1	1,322.6
					Net Change	**-268.8**
					EDCAQMD Significant Impact Threshold	1,100
					Exceed EDCAQMD Threshold?	**No**

*Source: EMFAC2014. See **Appendix B** for emission model outputs.*

Signal Option

As shown in **Table 4.5-4**, operation of the Signal option would reduce emissions by approximately 331 metric tons of CO_2e annually as a result of improved intersection operations that reduce vehicle idling. Therefore, emissions would not exceed EDCAQMD significance thresholds for operational greenhouse gas emissions in the year 2021, and the impact would be **less than significant**.

TABLE 4.5-4
OPERATIONAL (IDLING) GREENHOUSE GAS EMISSIONS (METRIC TONS PER YEAR) FOR SIGNAL OPTION

Project Conditions	Intersections					Total
	US 50/ Bedford Ave.	Main Street/ Bedford Ave.	Main St./Clay St.	Main St./Cedar Ravine Rd.	Pacific St./Cedar Ravine Rd.	
Metric Tons CO_2e per Year						
Existing Conditions	777.2	244.2	180.0	116.0	274.1	1,591.4
Signal Option	764.6	220.8	0.0	128.0	147.1	1,260.5
					Net Change	**-330.9**
					EDCAQMD Significant Impact Threshold	1,100
					Exceed EDCAQMD Threshold?	**No**

*Source: EMFAC2014. See **Appendix B** for emission model outputs.*

Cumulative Year (2035) Operational GHG Emissions

The proposed project's cumulative (2035) operational GHG emissions for the All-Way Stop and Signal options are summarized and compared to the cumulative no project conditions in **Tables 4.5-5** and **4.5-6,** respectively. The difference between cumulative plus and cumulative no project is compared to the EDCAQMD greenhouse gas significance threshold.

As shown in **Table 4.5-5**, operation of the All-Way Stop option under cumulative conditions would reduce emissions by approximately 939 metric tons of CO_2e annually compared with the cumulative no project as a result of improved intersection operations that reduce vehicle idling. Therefore, the impact would be **less than cumulatively considerable.**

TABLE 4.5-5
OPERATIONAL (IDLING) GREENHOUSE GAS EMISSIONS (METRIC TONS PER YEAR) – CUMULATIVE YEAR (YEAR 2035) FOR ALL-WAY STOP OPTION

Project Conditions	Intersections					Total
	US 50/ Bedford Ave.	Main Street/ Bedford Ave.	Main St./Clay St.	Main St./Cedar Ravine Rd.	Pacific St./Cedar Ravine Rd.	
	Metric Tons CO_2e per Year					
No Project Option	4,639.5	1,968.7	1,135.7	1,410.8	1,351.5	10,506.2
All-Way Stop Option	4,639.5	1,933.9	0.0	1,771.9	1,222.8	9,568.0
					Net Change	**-938.6**

*Source: EMFAC2014. See **Appendix B** for emission model outputs.*

As shown in **Table 4.5-6**, operation of the Signal option under cumulative conditions would reduce emissions by approximately 3082 metric tons of CO_2e annually compared to cumulative no project conditions as a result of improved intersection operations that reduce vehicle idling. Therefore, emissions from the Signal option would not exceed EDCAQMD significance thresholds for operational greenhouse gas emissions in the year 2035, and the impact would be **less than cumulatively considerable**.

TABLE 4.5-6
OPERATIONAL (IDLING) GREENHOUSE GAS EMISSIONS (METRIC TONS PER YEAR) – CUMULATIVE YEAR (YEAR 2035) FOR SIGNAL OPTION

Project Conditions	Intersections					Total
	US 50/ Bedford Ave.	Main Street/ Bedford Ave.	Main St./Clay St.	Main St./Cedar Ravine Rd.	Pacific St./Cedar Ravine Rd.	
	Metric Tons CO_2e per Year					
No Project Option	4,639.5	1,968.7	1,135.7	1,410.8	1,351.5	10,506.2
Signal Option	4,390.0	1,324.1	0.0	906.1	804.5	7,424.7
					Net Change	**-3,081.5**

*Source: EMFAC2014. See **Appendix B** for emission model outputs.*

Both options would contribute to a reduction of GHG emissions during the opening year (2021) compared with existing conditions, and both would contribute to a reduction of GHG emissions under cumulative plus project conditions compared to cumulative no project conditions. Therefore, the proposed project would generate GHG emissions at levels that are below the EDCAQMD significance threshold. Therefore, the project's contribution would be **less than cumulatively considerable**.

Mitigation Measures

None required.

Consistency with Applicable Plans (Standards of Significance 1 and 2)

Impact 4.5.2 The project would not conflict with the long-term greenhouse gas reduction goals promulgated in the SACOG Metropolitan Transportation Plan/Sustainable Communities Strategy. This impact is **less than cumulatively considerable**.

The proposed project is a "line item project" in the MTP/SCS. MTP/SCS line-item projects are projects planned for in the MTP/SCS with a specific geographic location, a completion year, and an associated project cost. Because the project itself is included in the MTP/SCS as a line-item project, it is consistent with the MTP/SCS. Therefore, it can be assumed that regional mobile emissions will decrease in line with the goals of the MTP/SCS. Implementing SACOG's MTP/SCS will reduce the regional GHG emissions from transportation, helping to achieve 2020 and 2035 emission reduction targets. This impact is **less than cumulatively considerable**.

As discussed in Impact 4.5.2, operation of proposed project would not result in an increase in GHG emissions. Therefore, the project would not be inconsistent with the 2017 Scoping Plan.

Mitigation Measures

None required.

REFERENCES

CARB (California Air Resources Board). 2008. *Climate Change Scoping Plan Appendices* (Appendix F).

———. 2014. *First Update to the Climate Change Scoping Plan*. http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm.

———. 2017a. California Greenhouse Gas Inventory for 2000–2015 – by Sector and Activity. https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_sector_sum_2000-15.pdf

———. 2017b. *California's 2017 Climate Change Scoping Plan.*

CNRA (California Natural Resources Agency). 2012. *Our Changing Climate: Vulnerability and Adaptation to the Increasing Risks of Climate Change in California*. http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf.

DWR (California Department of Water Resources). 2008. *Climate Change Impacts on California's Water*.

EPA (US Environmental Protection Agency). *Carbon Dioxide*.

———. 2016b. *Methane*.

———. 2016c. *Nitrous Oxide*.

Fehr & Peers. 2018. *Clay Street Bridge Replacement Project Transportation Analysis Report.*

IPCC (Intergovernmental Panel on Climate Change). 2013. *Carbon and Other Biogeochemical Cycles.* In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. http://www.climatechange2013.org/ images/report/WG1AR5_ALL_FINAL.pdf.

———. 2014. *Climate Change 2014 Synthesis Report: Approved Summary for Policymakers.* http://www.ipcc.ch/.

SACOG (Sacramento Area Council of Governments). 2016. *Metropolitan Transportation Plan/ Sustainable Communities Strategy 2035.* Appendix A (Project List Updated March 2017*).* https://www.sacog.org/2016-mtpscs

4.6 HAZARDS AND HAZARDOUS MATERIALS

This section addresses the potential presence of hazardous materials and conditions in the project area. It evaluates impacts that may occur during construction as a result of use of hazardous materials during construction and the potential for construction activities to encounter hazardous materials contamination.

4.6.1 EXISTING SETTING

HAZARDOUS MATERIALS DEFINED

Under Title 22 of the California Code of Regulations (CCR), the term *hazardous substance* refers to both hazardous materials and hazardous wastes. A hazardous material is a substance or combination of substances that may cause or significantly contribute to an increase in serious, irreversible, or incapacitating illness, or may pose a substantial presence or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated or are being stored until they can be disposed of properly. Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific CCR Title 22 criteria.

Public health is potentially at risk whenever hazardous materials are or will be used or may be present as a result of past uses. It is necessary to differentiate between the "hazard" of these materials and the acceptability of the "risk" they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure, in addition to the inherent toxicity of a material. Factors that can influence the potential health effects when human beings are exposed to hazardous materials include the dose the person is exposed to, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person's body), and the individual's unique biological susceptibility.

HAZARDOUS MATERIALS CONTAMINATION

Drake Haglan & Associates (2016) prepared an initial site assessment (ISA) for the project. The purpose of the ISA was to identify whether there are any recognized environmental conditions (REC) that could adversely affect the bridge replacement or roadway modifications. RECs are defined by the American Society for Testing and Materials (ASTM) as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

The ISA included site reconnaissance conducted on December 3, 2015, a review of environmental databases, and a review of historical data sources such as aerial photographs and topographic maps. A database report was obtained from Environmental Database Resources, Inc., consisting of information compiled from various government records, such as GeoTracker (State Water Resources Control Board), EnviroStor (California Department of Toxic Substances Control), and numerous other databases containing information about known and potential contaminated sites.

According to the ISA, there is one REC in the immediate project area that has the potential to affect the project. On the1940 Sanborn Map, there was a service station (with an associated underground storage tank for gasoline) just east of the Ivy House. The disposition of the tank is unknown. During trenching activities performed in 2009 to investigate the area for subsurface

cultural resources, hydrocarbon odors were detected in a 6-foot-deep trench in the south-central portion of the parking lot near where the former gas station was located. The Central Valley Regional Water Quality Control Board (RWQCB), the Placerville Building Department, and the El Dorado County Environmental Health Department reported they have no records for that location. The ISA identified this as a REC because of its location and shallow depth to groundwater, and the site is anticipated to be a source of contamination likely to affect the project area. The ISA identified other locations near the project site, where contamination from former underground storage tanks has been investigated, but concluded they would not be RECs that could affect project construction.

The ISA identified the following other potential environmental issues in the project area and on surrounding properties: lead-based paint (LBP) and/or asbestos-containing materials (ACM); petroleum hydrocarbons from former and current business operations in the project area, including gasoline underground storage tanks at former gasoline service stations; and abandoned underground storage tanks. As defined by the ASTM, lead-based paint and ACM are not RECs because these are typical construction waste management issues.

Lead has been used in commercial, residential, roadway, and ceramic paint and as a gasoline additive, among other uses. It is recognized as toxic to human health and the environment and is widely regulated in the United States. Structures constructed prior to 1978 are presumed to contain LBP unless proven otherwise. The existing Clay Street Bridge was built in 1926. Painted areas on the existing bridge structure may be of concern due to the possible use of LBP. Additionally, pavement striping and thermoplastic paint used on roadways often contain lead. Testing has not been performed to determine if lead is present; therefore, there is potential for the bridge and associated features to contain LBP.

New uses of ACM were banned by the US Environmental Protection Agency (EPA) in 1989. Among many other uses, ACMs have been documented in the rail shim sheet packing, bearing pads, support piers, and expansion joint material of bridges. Testing for ACM has not yet been performed, but due to the age and structure type of the Clay Street Bridge, ACM may be present. Surfacing materials installed prior to 1981 are considered presumed ACM and treated accordingly. These materials must be surveyed, sampled, and assessed in accordance with 40 CFR 763 (Asbestos Hazard Emergency Response Act).

The potential for aerially deposited lead from vehicle exhaust resulting in elevated lead concentrations in soil adjacent to the project area is considered low based on low traffic volumes along Main Street and Clay Street during the time leaded gasoline was in use.

No large power substations or step-down transformers, which are known to contain polychlorinated biphenyls (PCB), were noted within the project area. No spills or hazardous materials response events related to transformers were noted.

The project area is in a naturally occurring asbestos (NOA) review zone delineated by El Dorado County, which is based on California Geological Survey mapping. Disturbance of NOA can result in air emissions that may be hazardous to human health. Additional information is presented in Section 4.2, Air Quality.

CORTESE LIST SITES

Government Code Section 65962.5 requires compilation of a list of hazardous waste and substances sites to be used as a planning document by state and local agencies and developers to comply with the California Environmental Quality Act (CEQA) requirements in

providing information about the location of hazardous materials release sites. This list is commonly known as the Cortese List. As of February 2018, the project site encompassing all areas that could be affected by project construction activities is not on the Cortese List (DTSC 2018; SWRCB 2018). However, as noted above, it is anticipated there may be contamination associated with a former gas station that was located in the western part of the existing Ivy House parking lot.

HAZARDOUS EMISSIONS NEAR SCHOOLS

CEQA Guidelines Section 15186 requires consideration of projects within one-quarter mile of a school to ensure that potential health impacts resulting from exposure to hazardous materials, wastes, and substances are evaluated. There is one public school within one-quarter mile of the project site—Sierra Elementary School at 1100 Thompson Way.

4.6.2 REGULATORY FRAMEWORK

FEDERAL

Several federal agencies regulate hazardous substances. These include the EPA, the Occupational Safety and Health Administration (OSHA), and the US Department of Transportation (DOT). Applicable federal regulations and guidelines are contained primarily in Titles 10, 29, 40, and 49 of the Code of Federal Regulations (CFR).

The key federal laws governing the use, storage, and disposal of hazardous materials that are relevant to the proposed project are the Resources Conservation and Recovery Act (RCRA), Hazardous and Solid Waste Amendments Act, and Toxic Substances Control Act, which address hazardous materials and wastes, and the Comprehensive Environmental Response, Compensation, and Liability Act and the Superfund Amendments and Reauthorization Act, which address cleanup of contamination. Specific regulations for implementation of these statutes are codified in Title 40 of the CFR. Federal regulations have also been adopted regarding the removal and disposal of ACM and items containing PCB.

CFR Title 29, Part 1910 describes the federal Hazard Communication Standard, which requires that workers be informed of the hazards associated with the materials they handle, which includes workers at construction sites. Training in chemical work practices must include methods in the safe handling of hazardous substances, use of emergency response equipment, and an explanation of the building emergency response plan and procedures.

The transportation of hazardous materials on roadways and by rail and air is regulated by the DOT and the EPA. The DOT and the EPA coordinate their efforts, especially at the regional level, to obtain compliance with both RCRA and Hazardous Materials Transportation Act regulations. Under the authority of the RCRA, the EPA regulates the transportation of hazardous materials. The EPA coordinates its transportation ordinances with the requirements of the act and any statutes promulgated by the DOT pursuant to the act.

STATE

Hazardous Materials Management

The primary state laws pertaining to hazardous materials and wastes that may be applicable to the proposed project, depending on the activity, include the Hazardous Waste Control Law, Hazardous Substances Information and Training Act, the Air Toxics Hot Spots and Emissions

Inventory Law, the Underground Storage of Hazardous Substances Act, and Porter-Cologne Water Quality Control Act.

At the state level, the California Environmental Protection Agency (CalEPA) is the "umbrella" agency under which a number of the state's environmental agencies operate. These subordinate agencies include the California Air Resources Board, the Department of Pesticide Regulation, the Department of Toxic Substances Control (DTSC), the California Department of Resources Recycling and Recovery (CalRecycle), the Office of Environmental Health Hazard Assessment, and the State Water Resources Control Board.

Within the CalEPA, the DTSC has primary regulatory responsibility for hazardous waste management. The Cal/EPA has adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The program is implemented at the local level by a local agency—the Certified Unified Program Agency (CUPA). The El Dorado County Environmental Management Department is the CUPA for the county.

The California Highway Patrol, Caltrans, and the DTSC implement and enforce state and federal laws regarding hazardous materials transportation.

General Construction Permit Stormwater Pollution and Prevention Plan

Certain projects are required to comply with the National Pollutant Discharge Elimination System (NPDES) general construction permit to manage stormwater runoff (see Section 4.7, Hydrology and Water Quality). This permit requires a stormwater pollution prevention plan (SWPPP) that identifies best management practices (BMPs) for the handling of fuels and oils, including measures to minimize the potential for spills and procedures for spill cleanup if it were to occur. Implementation of these BMPs is intended to minimize the potential for accidental spills on construction sites by requiring the designation of safe, covered storage areas for such materials as well as safe handling practices.

Contaminated Sites Investigation and Remediation

The DTSC and the Regional Water Quality Control Board are the two primary agencies for issues pertaining to sites where hazardous materials have resulted in environmental contamination (e.g., soil and groundwater). The Central Valley RWQCB is the regional authority for water quality. Local jurisdictions, such as El Dorado County, may also be involved in site remediation projects, such as leaking underground storage tanks. These agencies implement a regulatory process to address the release of hazardous materials that could be harmful to public health and the environment.

Asbestos-Containing Materials and Lead-Based Paint

Federal and state asbestos regulations prohibit emissions of asbestos from demolition or construction activities, among others; specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos fibers; and require notice to federal and local government agencies prior to beginning renovation or demolition that could disturb asbestos-containing building materials. The El Dorado Air Quality Management District (EDCAQMD) and Cal/OSHA are the agencies with primary responsibility for enforcement of asbestos regulations.

Cal/OSHA standards establish a maximum safe exposure level for types of construction work where lead exposure may occur, including demolition of structures where LBP is present;

removal or encapsulation of materials containing lead; and new construction, alteration, repair, or renovation of structures with materials containing lead. Inspection, testing, and removing lead-containing building materials must be performed by State-certified contractors who are required to comply with applicable health and safety and hazardous waste regulations.

LOCAL

City of Placerville General Plan

The City's (1990) General Plan Section VI (Health and Safety Element) includes health and safety policies, the goal of which is to minimize public health and safety threats and nuisances to residents and to minimize the potential for property damage and loss. Policies that are applicable to the proposed project's environmental effects related to hazardous materials are listed in **Table 4.6-1**, which also includes an analysis of the project's consistency with applicable policies.

TABLE 4.6-1
PROJECT CONSISTENCY WITH GENERAL PLAN HEALTH AND SAFETY ELEMENT POLICIES

Policies	Consistent?	Analysis
Section V. Policy B.7: The City shall, to the maximum extent possible, prevent the dumping of wastes and other substances, such as pesticides, soil sterilants, and toxic wastes harmful to soil structure, soil organisms, or fertility.	Yes, with mitigation	Construction contract specifications will require compliance with federal, state, and local laws regarding disposal of hazardous wastes and materials used during construction. Hazardous materials would not be used during operation. Mitigation measures MM 4.6.2a and MM 4.6.2b require testing for hazardous materials in soil and groundwater and in the bridge structure and pavement. If contamination is present, the mitigation measures require management in accordance with applicable laws and regulations. This mitigation reduces the potential for hazardous materials or waste to be inadvertently or inappropriately disposed.
Section IV. Policy F.2: Within its authority, the City shall regulate the production, use, storage, and transport of hazardous materials to protect the health of Placerville residents.	Yes, with mitigation	The proposed project consists of roadway improvements and bridge replacement and would not include the use, storage, or transport of hazardous materials beyond those used during normal construction activities. Hazardous materials use during project operation would be limited to common items such as landscape and maintenance products.

4.6.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on criteria derived from Appendix G in the CEQA Guidelines, the proposed project would result in a significant impact to the environment or to human health and safety if the project would:

1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

2) 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.

3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

4) Be located on a site that is included on a list of hazardous materials sites compiled by Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

5) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.

6) For a project in the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.

7) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

8) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas where residences are intermixed with wildlands.

Impacts Not Evaluated in Detail

The Initial Study/NOP (**Appendix A**) determined that the project would not expose people to aircraft hazards from public or private airports, and there would be no impact. No further analysis of standards of significance 5 and 6 is required.

The project site is an urbanized area. It is not within or adjacent to a high fire or extreme high fire hazard area as shown on Figure VIII-2 in the City's (1989) General Plan Background Report. No development is proposed that would involve occupied structures which could be exposed to fire hazards. There would be no impact, and no further analysis of standard of significance 8 is required.

METHODOLOGY

The analysis of the proposed project's potential to create hazards to the public health or the environment associated with hazardous materials is based on information in the Initial Site Assessment and a review of project plans.

PROJECT IMPACTS AND MITIGATION MEASURES

Hazardous Materials/Hazardous Wastes (Standards of Significance 1 and 2)

Impact 4.6.1 Implementation of the proposed project would involve the use of hazardous materials, but such use would be subject to local, state, and federal standards that regulate hazardous materials to protect the public and the environment. The impact would be **less than significant.**

During demolition of the Clay Street Hangtown Creek Bridge and construction of the replacement bridge, realigned Clay Street, and intersection improvements, hazardous materials would be used during all phases of construction. Heavy machinery used during site preparation would contain fuel, oils, and lubricants. Various materials such as adhesives, solvents, paints, etc., would also be used. The amount and types of hazardous materials would be limited and would be on-site only for the duration of construction activities (approximately 9 months). The types of hazardous materials that would be used are not acutely hazardous substances as defined in the California Health and Safety Code (which references federal regulations). The use, storage, transportation, and disposal of hazardous materials is highly regulated, as described in the Regulatory Framework subsection, above, and the City of Placerville requires its contractors to comply with all applicable laws and regulations. When used properly, the types and amounts of hazardous materials that would be used during construction would not pose a substantial health risk to construction workers, residents, employees, visitors, and school-age children on the project site and in adjacent areas.

The potential for hazardous materials used during construction to be conveyed to Hangtown Creek or Cedar Ravine Creek would be minimized through implementation of a stormwater pollution prevention plan (SWPPP) and best management practices (BMPs), which are required by the State as part of the Construction General Permit and compliance monitored by the City (see mitigation measure **MM 4.7.1a** in Section 4.7, Hydrology and Water Quality). BMPs would reduce the potential for hazardous materials to be discharged to the creeks or storm drain inlets draining to the creeks. BMPs that would be implemented by the construction contractor would include a hazardous materials control and spill response plan to regulate the use of hazardous materials, as well as the use of straw wattles, berms, or similar barriers to reduce the potential for contaminated runoff.

Operation of the proposed project would involve minimal use of hazardous materials, which would be limited to maintenance products for landscaping and occasional cleaning.

With implementation of existing laws and regulations pertaining to hazardous materials use identified in the Regulatory Framework subsection, above, which would be monitored and enforced by the City during construction activities, the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or 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. Impacts would be **less than significant**.

The All-Way Stop and Signal options would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. Impacts for both options would be identical and would be as described above.

Mitigation Measures

None required.

Hazardous Materials Contamination (Standards of Significance 2 and 4)

Impact 4.6.2 The Ivy House parking lot contains evidence of soil contamination, and asbestos-containing materials and/or lead-based paint may be present in roadway and bridge components. This could pose a hazard to workers and the public during construction activities and would be a **potentially significant** impact.

Painted areas on the existing bridge structure may contain LBP. Additionally, pavement striping and thermoplastic paint used on roadways often contain lead. Because of the age and structure type of the Clay Street Bridge, ACM may be present. The ISA recommended that testing be performed. Demolition waste from the bridge and roadway could contain LBP and ACM at levels that may require management as hazardous waste. If the features are not tested prior to removal, construction workers and the public could be exposed to dust containing the contaminants, or improper disposal at a landfill not permitted to accept the waste could occur. This is a **potentially significant** impact.

During trenching activities performed in 2009 to investigate the area for subsurface cultural resources, hydrocarbon odors were detected in a 6-foot-deep trench in the south-central portion of the Ivy House parking lot near where a former gas station was located. The ISA identified this location as a REC because of its location and shallow depth to groundwater, and the site is anticipated to be a source of contamination likely to affect the project area. The ISA recommended that testing be performed. Project construction would involve subsurface disturbance of soil under the Ivy House parking lot and in the vicinity. If contaminants are present in soil, there is the potential for an inadvertent release of contaminants to the environment through dust, stormwater runoff, movement of soil on-site, or improper disposal. Because there is the potential for inadvertent release of contaminants that may pose a risk to human health and the environment, this impact is **potentially significant**.

The All-Way Stop and Signal options would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. Impacts for both options would be identical and would be as described above.

Mitigation Measures

MM 4.6.2a Ivy House Parking Lot Site Investigation. Prior to any ground disturbance, the City of Placerville shall investigate soil and groundwater under the Ivy House parking lot, Main Street fronting the parking lot, and the Clay Street alignment extending north to the bridge for the presence of soil and groundwater contamination. Surface water and sediment sampling in Hangtown Creek shall also be performed to determine whether contaminants have migrated to locations that would be affected by bridge construction. A work plan describing the investigation shall be prepared by a qualified professional and submitted to Caltrans and the El Dorado County Environmental Management Division for review and approval.

The work plan shall be implemented prior to any construction activity in the potentially affected area. If the results of the investigation indicate contamination, the level of contamination shall be evaluated by a qualified professional to determine whether the levels would pose an unacceptable health risk to construction workers, who would be the most susceptible to inhalation and soil/groundwater contact hazards, or if activities involving sediment that would be disturbed by bridge replacement could be mobilized and pose a risk to surface water in Hangtown Creek. The City shall provide the study report to Caltrans and the El Dorado County Environmental Management Division, and shall notify the Central Valley RWQCB and/or DTSC, if reporting is required.

No work shall be allowed to proceed at any location in the investigation study area until hazardous materials contamination has been remediated to levels that are protective of human health and the environment.

Timing/Implementation: *Prior to ground disturbance and during construction*

Enforcement/Monitoring: *City of Placerville Development Services Department, Engineering Division*

MM 4.6.2b Testing for Lead-Based Paint (LBP) and Asbestos-Containing Materials (ACM) and Abatement. Prior to bridge demolition and pavement removal, the City of Placerville shall ensure LBP and ACM studies are prepared by a qualified professional and that all recommendations therein are implemented. If LBP and ACM are present at levels requiring abatement and special disposal, the City shall ensure the work is performed in accordance with applicable regulations to protect the environment and public health. A report documenting the study results and abatement and disposal activities shall be submitted to Caltrans and the El Dorado County Environmental Management Division to document compliance with regulatory requirements.

Timing/Implementation: *Prior to bridge demolition and pavement removal*

Enforcement/Monitoring: *City of Placerville Development Services Department*

Mitigation measures **MM 4.6.2a** and **MM 4.6.2b** require testing for contaminants and appropriate management of contaminants in accordance with local, state, and federal laws and regulations. This mitigation would ensure that impacts related to hazardous materials contamination would be **less than significant**.

Environmental Effects of Remediation

Remediation activities, such as excavation of contaminated soil or groundwater and operation of treatment systems (e.g., soil vapor extraction), could involve activities that could result in the release of hazardous materials through dust or other emissions or extraction of contaminated groundwater, to name a few. Removal of LBP and ACM has the potential to generate dust and debris containing these materials. Remediation and abatement projects are required to be implemented in accordance with established hazardous materials and waste laws and regulations. Moreover, the benefits of remediation and abatement generally outweigh the risks associated with the cleanup activities themselves. In addition, under mitigation measures **MM 4.6.2a** and **MM 4.6.2b**, the specific environmental protection measures to control dust and discharge of contaminants to soil or water would be identified and implemented to protect public health and the environment. The project would also prepare and implement a stormwater pollution prevention plan (SWPPP) and best management practices (BMPs), which are required by the State as part of the Construction General Permit and compliance monitored by the City, as required under mitigation measure **MM 4.7.1a** (see Impact 4.7.1 in Section 4.7, Hydrology and Water Quality.

Hazardous Emissions Near Schools (Standard of Significance 3)

Impact 4.6.3 Construction of the proposed project could be a source of hazardous emissions near schools. This is a **potentially significant** impact.

There is one public school within one-quarter mile of the project site—Sierra Elementary School at 1100 Thompson Way. Project operation would not be a source of hazardous emissions, as described in Impact 4.6.1. Construction activities have the potential to encounter contaminants in soil and structures, which, if not properly managed, could result in dust containing contaminants, which could pose a risk to nearby students and employees at the school, as described in Impact 4.6.2. Because there is the potential for hazardous materials or wastes to be encountered during construction, as described in Impact 4.6.2, which could be a source of emissions, this is a **potentially significant** impact. The reader is referred to Impact 4.2.2 in Section 4.2, Air Quality, for an analysis of toxic air contaminants, such as diesel particulate matter, during construction.

The All-Way Stop and Signal options would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. Impacts for both options would be identical and would be as described above.

Mitigation Measure

MM 4.6.3 Implement mitigation measures **MM 4.6.2a** and **MM 4.6.2b**.

Mitigation measures **MM 4.6.2a** and **MM 4.6.2b** require testing for contaminants and appropriate management of contaminants in accordance with local, state, and federal laws and regulations. Implementation of these measures would ensure that impacts related to hazardous materials emissions near schools would be **less than significant**.

Emergency Response or Evacuation Plans (Standard of Significance 7)

Impact 4.6.4 The proposed project would not affect emergency response plans over the long term, but construction of the project could temporarily affect roadways at and adjacent to the project site, which could affect response times or emergency evacuation. This impact is **potentially significant**.

Construction

During construction, Clay Street would be closed between Main Street and just north of the existing US 50 overpass. Traffic accessing Clay Street north of US 50 would be detoured via Bedford Avenue to Coleman Street or Mosquito Road to Clay Street. The total detour length is approximately 1 mile. This could affect emergency response or evacuation, which is considered a **potentially significant** impact.

Construction of the intersection modifications at Main Street/Cedar Ravine Road has the potential to cause lane closures or narrowing, or detours, depending on the activity, in the immediate vicinity of the project site. This could affect emergency response or evacuation, which is considered a **potentially significant** impact.

The All-Way Stop and Signal options would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. Impacts would be identical and as described above.

Operation

The proposed project would not increase congestion at intersections and along roadways in a manner that would interfere with emergency response times because it would not generate new trips. As described in Impact 4.10.1 (see Section 4.10, Transportation and Circulation), the project would not degrade intersection operations to unacceptable conditions, nor would it affect operations on US 50. The project also would not result in design hazards that could affect intersection or roadway safety, and it would result in an improvement over existing conditions, particularly at the Clay Street Bridge by providing a wider two-lane bridge (see Impact 4.10.2), which could benefit emergency response. The operational impact would be **less than significant**.

Operational impacts for both the All-Way Stop and Signal options would be identical and would be as described above.

Mitigation Measures

MM 4.6.4 Implement mitigation measure **MM 4.10.3**.

Implementation of mitigation measure **MM 4.10.3** (see Section 4.10) would ensure that one lane for traffic remains open at all times along Main Street and Cedar Ravine Road and that any potential lane closure, narrowing, or Clay Street detour is coordinated with emergency response providers in Placerville and El Dorado County. This would reduce the impact to a **less than significant** level.

4.6.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

Hazardous materials impacts are site-specific. The cumulative setting for hazardous materials impacts associated with the proposed project consists of the project listed in **Table 3.0-1** in Section 3.0, Introduction to the Analysis.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Hazards and Hazardous Materials Impacts

Impact 4.6.5 Cumulative development, including the proposed project, could result in cumulative hazardous material and human health risk impacts. The proposed project's contribution to cumulative hazards impacts would be **less than cumulatively considerable**.

The cumulative effect of ongoing development within the cumulative setting could increase the use of hazardous materials citywide as a result of construction and activities and residential and nonresidential land uses. Construction of the proposed project would involve routine hazardous materials use typically associated with construction activities, which would be regulated through contract specifications. Operation of the project would not involve the use of hazardous materials. The project's contribution to impacts associated with hazardous materials use, transport, storage, and disposal would be less than cumulatively considerable.

Construction of the proposed project could result in hazardous materials contamination impacts and the potential to affect emergency response. However, these impacts would be site-specific

and limited to the duration of construction only, and mitigation measures **MM 4.6.2a, MM 4.6.2b,** and **MM 4.10.3** would reduce those impacts to less than significant. Therefore, the project's contribution would be **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

Drake Haglan & Associates. 2016. *Clay Street Realignment and Bridge Replacement Project Initial Site Assessment.*

DTSC (California Department of Toxic Substances Control). 2018. EnviroStor. Accessed February 28. https://www.envirostor.dtsc.ca.gov/public/.

El Dorado County. 2004. *El Dorado County General Plan: Public Health, Safety, and Noise Element*.

Placerville, City of. 1989. *City of Placerville General Plan Background Report.*

———. 1990. *General Plan: Health and Safety Element*. As amended through 2017.

SWRCB (State Water Resources Control Board). 2018. GeoTracker. Accessed February 28. https://geotracker.waterboards.ca.gov/.

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4.7 HYDROLOGY AND WATER QUALITY

This section evaluates the proposed project's potential environmental impacts associated with hydrology and water quality. Topics evaluated are potential effects of construction activities and proposed project operation on water quality, erosion, storm drainage capacity, and flood hazards.

4.7.1 EXISTING SETTING

PHYSIOGRAPHY AND GEOLOGY

The project site is along the western edge of the Sierra Nevada foothills. The topography in Placerville varies from rolling hills, typical of land forms that developed on the soft mudstone of the Great Valley Sequence, to flat land. Elevations on the project site range from approximately 1,865 feet above mean sea level near the south end of the bridge over Hangtown Creek at Clay Street to approximately 1,874 feet above mean sea level on Main Street at the west end of the site. Overall, the site is relatively flat (with the exception of the Hangtown Creek channel banks) and slopes north approximately 5 to 6 percent. The immediate area surrounding the project site is mapped as metasedimentary Calaveras Complex. Bedrock is present in the Hangtown Creek channel and consists of moderately weathered shale and slate.

CLIMATE AND PRECIPITATION

The climate in Placerville is characterized by sunny, dry summers and relatively wet winters. Precipitation averages 47 inches per year, with snowfall once or twice a year of approximately 5 inches. The greatest amount of rainfall occurs during November through April. Cloudburst storms, sometimes lasting as long as three hours, can occur any time from late fall to early spring, and may occur as an extremely severe sequence within a general winter rainstorm. These high intensity storms can produce peak flows equal to or somewhat greater than those of general rainstorms in portions of the city (Placerville 1989).

SURFACE WATER AND DRAINAGE

The project site is in the Hangtown Creek watershed, which encompasses approximately 9.4 square miles, of which 5.8 square miles (approximately 87 percent) are within the city limits. The Hangtown Creek headwaters are approximately 0.6 mile upstream of the city limits in Smith Flat. Hangtown Creek runs east to west south of US Highway 50 (US 50) until it crosses under the highway near Placerville Drive where it continues west and terminates at Weber Creek approximately 1.1 miles downstream of the city limits. Weber Creek is tributary to the South Fork of the American River (Placerville 2005). In the Placerville area, the drainage system generally consists of a network of roadside ditches, channels, and culverts that route drainage to Hangtown Creek or Weber Creek (Drake Haglan 2016).

Hangtown Creek

Hangtown Creek runs west to east through the entire length of the project site. Historically, the creek was a source of water and the location of placer mining in the area. As Placerville grew, Hangtown Creek was used primarily as a sewer and storm drain. Many of the historic buildings on Main Street are built next to and in some cases straddle the creek. In the late 1800s, construction of the Southern Pacific Railroad corridor adjacent to the creek channel further constrained the creek along its northerly bank. Pipe sewers in the 1900s were constructed using Hangtown Creek as the primary route for the aboveground pipelines to convey sewage to the first treatment plant, and the creek still serves as the primary route to the Hangtown Creek Water Reclamation Facility, which is farther downstream on Hangtown Creek. In the 1990s, the Central Pacific

Railroad right-of-way was replaced by a rails-to-trails recreational trail, a multi-use paved segment of which (the El Dorado Trail) is located between Hangtown Creek and US 50 (Drake Haglan 2016).

Clay Street Hangtown Creek Bridge

The Clay Street Bridge is supported on concrete wall abutments at the banks and a central concrete pier, which appears to merge with the channel walls to the east of bridge and is assumed to be part of the channel structure for Cedar Ravine Creek. Existing channel banks are moderately steep to nearly vertical and heavily vegetated. Walls and hardened bank areas are present both up- and downstream of the bridge. The channel bottom is approximately 10 feet below the bridge deck (Taber 2007). The top of the existing bridge deck (not including railings) is at an elevation of 1,867.25 feet above mean sea level (amsl), and the top soffit of the bridge arch is at 1,864.75 feet amsl.

Multiple utilities, including sewer lines, manhole risers, and a water line, run below or adjacent to the bridge. Multiple drain/culvert pipes discharge to the stream in the vicinity of the bridge, including a 24-inch pipe near the eastern side of the northern abutment and an approximately 6- to 8-inch-diameter drain approximately 10 feet west of the southern abutment. Additional drainpipes are present at random intervals along retaining structures on both sides of the creek (Taber 2007; Domenichelli 2009).

As part of the development of the preliminary design for the proposed replacement bridge, and to ensure the new bridge would not cause or exacerbate flood hazards, a hydraulic model of Hangtown Creek water elevations was created to predict where the creek water elevation would be relative to the existing bridge itself during the 50-year and 100-year storm events. The model takes into account features that would tend to impede flows from structures such as the bridge deck and abutments. Based on the model, the existing bridge is predicted to overtop during the 100-year event. While the bridge would pass the 50-year flow, the model predicts there would be no clearance at the top soffit at the bridge arch under existing conditions (Domenichelli 2009). The California Department of Transportation's (Caltrans) 2014 Bridge Inspection Report also notes that the bridge does not pass 100-year stormwater flows.

Cedar Ravine Creek

Cedar Ravine Creek is a tributary to Hangtown Creek and outlets at the creek by way of a drainage culvert. The culvert consists of a 234-foot-long open culvert along Cedar Ravine Road, which transitions to a 66-inch corrugated metal pipe extending 286 feet from the intersection of Cedar Ravine Road and Main Street to the outfall at Hangtown Creek (under the Ivy House parking lot). The Cedar Ravine culvert outlets at the creek and is integral with the south abutment/retaining wall of the existing bridge. Under existing conditions, based on hydraulic modeling as described above, the culvert conveys approximately 300 cubic feet per second (cfs) flow. For a 50-year storm, the model predicts the flow to increase to 381 cfs, and for a 100-year storm, 450 cfs. Roadway flooding during large storms is a result of the capacity limits of the culvert (Domenichelli 2009).

The modeled data for the Cedar Ravine Creek culvert is a component of the overall hydraulics and hydrology of Hangtown Creek. The data indicates roadway flooding may still occur as a result of capacity limitations. Such conditions would occur regardless of whether the proposed project is approved and implemented. Identification of improvements to the culvert to remedy an existing condition does not require analysis or mitigation for the proposed project because the project proposes no changes to the culvert's location that would affect the model

assumptions and it would not discharge additional flows to the culvert, nor does the project result in hydrologic or hydraulic impacts that would require culvert capacity improvements.

FLOODING

100-Year Flood Hazard

Hangtown Creek has been substantially constrained through the city as a result of adjacent development and existing aboveground trunk sewers. As a result, there has been a long history of flood problems. Because the creek is constrained to a small area, large storm events are amplified (Drake Haglan 2016).

The Federal Emergency Management Agency (FEMA) (2008) has delineated an area of 100-year flood hazard along Hangtown Creek. From approximately Mosquito Road on the east and extending west through Placerville, the area is designated Zone AE, indicating a 100-year floodplain with base flood elevations determined. Zone AE is between Main Street and approximately the El Dorado Trail (south of US 50). In addition, FEMA has delineated a regulatory floodway within the creek. The floodway is the channel of a stream plus any adjacent floodplain area that must be kept free of encroachment so that the 1 percent annual chance flood can be carried without substantial increases in flood heights.

GROUNDWATER

The California Department of Water Resources has delineated groundwater hydrologic basins throughout the state. The project site is not in one these basins, and the nearest basin is the South American Groundwater Subbasin approximately 20 miles south-southwest and downstream of the site. However, some groundwater likely occurs in isolated pockets, including shallow alluvial materials associated with surface waters or fractures in the underlying bedrock (Drake Haglan 2016).

Small areas of seepage have been observed in the Hangtown Creek channel bank near the north bridge abutment approximately 1 foot above the creek water surface. No visible seepage was noted away from the stream banks along the El Dorado Trail or neighboring parking areas. Groundwater is assumed to be at or near the level of Hangtown Creek in the immediate vicinity of the bridge. Farther from the creek, groundwater depth may vary greatly with surrounding topography and underlying geology (Taber 2007).

WATER QUALITY

Water quality in Hangtown Creek and Cedar Ravine Creek is a function of land uses that contribute stormwater runoff flows and the presence of the city's trunk sewer system. Land uses that drain toward the creeks include urban development (residential, commercial, office, light industrial, and roadways/parking lots) and rural agriculture (crops, orchards, and grazing). Urban and agricultural uses contribute numerous pollutants such as petroleum hydrocarbons, metals, organic compounds (e.g., pesticides and herbicides), nutrients, bacteria, and sediment that can be carried in stormwater flows to the creek. Recreational uses on unpaved trails and construction activities also contribute sediment and other pollutants. Under existing conditions, a major storm event could substantially damage the trunk sewer system if trees along the creek fall or if debris flows into the creek, which would damage the system and release bacteria (Drake Haglan 2016).

Downstream of the project, the Hangtown Creek Water Reclamation Facility discharges treated water under a permit issued by the State Water Resources Control Board to the City of Placerville (NPDES Permit Order No. R5-2014-0015). The facility is in compliance with most discharge requirements; however, the City is required to demonstrate progress on achieving compliance with copper and zinc effluent limitations issued by the State in 2010.

As noted above, Hangtown Creek is tributary to Weber Creek, which is tributary to the South Fork of the American River. In general, water quality in the American River is very good from headwaters to the confluence with the Sacramento River. Streams in the upper watershed are typically clear, cold streams that are highly oxygenated, low in dissolved ions and nutrients, and exhibit low instream plant or algal growth. However, erosion from land use activities (past and present), roads, and recreational use throughout the American River watershed contribute to instream sediment problems.

The South Fork American River is listed on the federal Clean Water Act Section 303(d) list of impaired water bodies for mercury from historical mining activities. Hangtown Creek, Weber Creek, and Cedar Ravine Creek are not included on the Section 303(d) list of impaired water bodies.

4.7.2 REGULATORY FRAMEWORK

FEDERAL

Clean Water Act

The federal Clean Water Act (CWA) was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the United States. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The following summarizes information on specific CWA sections that are applicable to the proposed project.

Permits for Fill Placement in Waters and Wetlands (Section 404)

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the United States. Waters of the United States refers to oceans, bays, rivers, streams, lakes, ponds, and wetlands, including any or all of the following: areas within the ordinary high water mark of a stream, including nonperennial streams with a defined bed and bank and any stream channel that conveys natural runoff, even if it has been realigned, and seasonal and perennial wetlands, including coastal wetlands. The US Army Corps of Engineers (USACE) is responsible for administering program requirements and regulations.

Water Quality Certification (Section 401)

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the United States must obtain certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect state water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401.

Permits for Stormwater Discharge (Section 402)

CWA Section 402 regulates construction-related stormwater discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program, administered by the US Environmental Protection Agency (EPA). In California, the State Water Resources Control Board (SWRCB) is authorized by the EPA to oversee the NPDES program through the Regional Water Quality Control Boards (RWQCBs) (see the related discussion under Porter-Cologne Water Quality Control Act). The project area is under the jurisdiction of the Central Valley RWQCB.

NPDES permits are required for projects that disturb more than 1 acre of land. The NPDES permitting process requires the applicant to file a public notice of intent to discharge stormwater and to prepare and implement a stormwater pollution prevention plan (SWPPP). The SWPPP includes a site map and a description of proposed construction activities. In addition, it describes the best management practices (BMPs) that would be implemented to prevent soil erosion and discharge of other construction-related pollutants (e.g., petroleum products, solvents, paints, cement) that could contaminate nearby water resources. Permittees are required to conduct annual monitoring and reporting to ensure that BMPs are correctly implemented and effective in controlling the discharge of stormwater-related pollutants. Because the proposed project would disturb more than 1 acre of land, an NPDES permit and a SWPPP would be required for construction activities.

Section 402(p) of the CWA regulates stormwater discharges from municipal separate storm sewer systems (MS4s) and industrial activities. An MS4 is a conveyance system or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) designed or used for collecting or conveying stormwater. In California, the federal stormwater regulations for Small (serving populations of 100,000 people or less) MS4s (separate storm sewers) are implemented through Water Quality Order No. 2003-01005-DWQ NPDES General Permit No. CAS000004 (Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems [General Small MS4 Permit]), which the SWRCB adopted on April 30, 2003. The main goal of the General Small MS4 Permit is to protect water quality from urban runoff pollution.

Federal Emergency Management Agency

El Dorado County is a participant in the National Flood Insurance Program, a federal program administered by FEMA. Participants in the program must satisfy certain mandated floodplain management criteria.

STATE

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act governs the coordination and control of water quality in the state and includes provisions relating to non-point source pollution. California Water Code Section 13260 requires "any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements)."

RWQCBs are responsible for establishing water quality standards and objectives that protect the beneficial uses of surface water and groundwater. Water quality objectives and beneficial uses are listed in the Central Valley RWQCB Basin Plan and apply to the project. The beneficial uses

for the South Fork of the American River include municipal, industrial, and recreational uses, freshwater habitat, migration and spawning, and wildlife habitat.

NPDES General Permit for Stormwater Discharges Associated with Construction

The SWRCB has adopted a General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (CAS000002, Waste Discharge Requirements, Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ and Order 2012-0006-DWQ). The Construction General Permit applies to any construction activity affecting 1 acre or more. The focus of the permit is to minimize the potential effects of construction runoff on receiving water quality. The permit requires preparation of a SWPPP that identifies best management practices describing erosion control measures. Project proponents (which includes the City of Placerville) are required to submit a notice of intent, a site map, a signed certification statement, an annual fee, and a SWPPP. The permit program is risk-based, wherein a project's risk is based on the project's potential to cause sedimentation and the risk of such sedimentation on the receiving waters. The project would result in more than 1 acre of disturbance and therefore would be required to implement permit requirements.

The SWPPP must include best management practices to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges. Examples of typical construction best management practices included in SWPPPs include, but are not limited to, using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the drainage system or receiving waters.

Small amounts of construction-related dewatering are covered under the Construction General Permit. Coverage under the Construction General Permit typically covers uncontaminated dewatering activities, which are considered in the permit to be authorized non–stormwater discharges. As part of the Construction General Permit, all dewatering discharges are required to be filtered or treated, using appropriate technology, from sedimentation basins.

Waste Discharge Requirements for Dewatering and Other Low Threat Discharges to Surface Waters

The Central Valley RWQCB has adopted a NPDES Low Threat Discharge and Dewatering General Permit (Order No. R5-2008-0081/NPDES Permit No. CAG995001), which applies specifically to dewatering activities that typically involve reporting and monitoring requirements. Under the permit, dewatering discharges must be treated prior to discharge to any local waterway.

LOCAL

City of Placerville General Plan

The City's (1990) General Plan Section VI (Health and Safety Element) contains policies concerning flood hazards. Section V (Natural, Cultural, and Scenic Resources) includes policies regarding water quality protection. Policies that are applicable to the proposed project's environmental effects related to hydrology and water quality are listed in **Table 4.7-1**, which also includes an analysis of the project's consistency with applicable policies.

TABLE 4.7-1
PROJECT CONSISTENCY WITH GENERAL PLAN HEALTH AND SAFETY ELEMENT AND NATURAL, CULTURAL, AND SCENIC RESOURCE ELEMENT POLICIES

Policies	Consistent?	Analysis
Section VI. Policy C.3: Non-residential development shall be anchored and flood proofed to prevent damage from 100-year flood, or alternatively, elevated to at least one foot above the 100-year flood level.	Yes	The proposed bridge replacement would be designed to convey the 100-year flood as required by FEMA.
Section VI. Policy C.5: The City shall provide for channel improvements to and tree and brush clearance along watercourses in Placerville to reduce flooding.	Yes	The proposed project includes replacement of the bridge facility over Hangtown Creek at Clay Street, which will convey the 100-year flood. The project does not require channel improvements, and the project would not interfere with the City's efforts to maintain watercourses in Placerville.
Section V. Policy A.5: The City shall require in new development sound anti-pollution practices to protect water quality.	Yes	The realignment of Clay Street, bridge replacement, and parking lot reconfiguration would not be a new source of runoff because they are replacing existing facilities that already generate runoff which is conveyed to the storm drain and Hangtown Creek. The project would include required stormwater quality protection features to ensure compliance with state laws and regulations and City requirements set forth in the City Code and SWMP.

City of Placerville City Code

Title 4, Chapter 9, of the City Code addresses flood damage and defines areas of special flood hazard as identified by FEMA or the Federal Insurance Administration. Development of any features associated with the Clay Street Bridge replacement will need to demonstrate compliance with applicable floodplain and floodway regulations.

Title 8, Chapter 7, of the City Code addresses grading, erosion, and sediment control and is also known as the City's Grading Ordinance. Title 8, Chapter 7, sets forth rules and regulations to control excavation, grading and earthwork construction, including fills and embankments; establishes the administrative procedures for issuance of permits; and provides for approval of plans and inspection of grading construction and all grading specific to single parcel site improvements, except single-family residence construction unless exceeding prescriptive standards as defined by the City. The proposed project would be required to comply with the provisions of the Grading Ordinance.

City of Placerville Storm Water Management Plan

The City has been specifically designated by the Central Valley RWQCB as the owner and operator of a Small MS4. The City has developed and implements a Storm Water Management Plan (SWMP) that addresses the Small MS4 General Permit requirements (Placerville 2005). The SWMP identifies best management practices that address the six minimum program areas identified below. The selected BMPs must reduce pollutants in stormwater runoff to a technology-based standard of the Maximum Extent Practicable to protect water quality. In

compliance with these requirements, the SWMP includes measurable goals and timetables for implementation. The six minimum control measures identified in the SWMP are listed below.

- Public Education and Outreach on Storm Water Impacts
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Storm Water Runoff Control
- Post-Construction Storm Water Management in New Development and Redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations

The BMPs in support of each of these measures are also included in the plan. The BMPs primarily involve establishment of adequate legal authority, education of the public and City employees, drainage system mapping and evaluation, and revision of the existing City of Placerville procedures and design standards. Implementation of the SWMP will result in additional City and private capital and operation costs for management of urban runoff to protect the quality of waters in Hangtown Creek.

Hangtown Creek Comprehensive Watershed Plan

The Hangtown Creek Comprehensive Watershed Plan was prepared in 2012 and provides a new hydrologic model of Hangtown Creek Watershed, an updated hydraulic model of the creek, and an evaluation of potential projects that could reduce future flood damages. Peak flow rates for the 10-, 25, 50-, and 100-year recurrence interval storm events were estimated to be higher than the 1983 FEMA Flood Insurance Study, but lower than those indicated in other recent studies performed by others in the watershed. Although peak flows have increased due to development, the majority of the increase in peak discharge rates were determined to be attributable to the more detailed methodology used in the model. The hydraulic modeling of Hangtown Creek indicates more significant flood risk to structures in the stream corridor than shown on FEMA floodplain maps, primarily due to the higher discharge rates. Eighteen potential projects were evaluated to determine the feasibility for reducing peak flow rates and flood damages. Only four projects, were determined to be potentially feasible (RBF 2012). None of the four projects is located at the Clay Street crossing.

Hangtown Creek Master Plan (Draft)

The Hangtown Creek Master Plan is the result of a community effort to improve Hangtown Creek water quality through watershed-based management policies (Hangtown Creek Master Plan Committee 2007). The plan sets forth goals, objectives, policies, and standards addressing: enhancement and maintenance of riparian and aquatic habitat; watershed protection, erosion, and flood control, aesthetic historic and prehistoric values, and creek access and public spaces, among other topics. The plan remains in draft form and has not been adopted by the City.

4.7.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The following standards to determine whether the proposed project would result in significant impacts to hydrology and water quality are based on California Environmental Quality Act (CEQA) Guidelines Appendix G. A significant impact on hydrology and water quality would occur if implementation of the proposed project would result in any of the following:

1) Violate any water quality standards for waste discharge requirements.

2) 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).

3) 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.

4) 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.

5) 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.

6) Otherwise substantially degrade water quality.

7) 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.

8) Place within a 100-year flood hazard area structures that would impede or redirect flood flows.

9) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of a failure of a levee or dam.

10) Inundation by seiche, tsunami, or mudflow.

Impacts Not Evaluated in Detail

The Initial Study prepared for the proposed project (**Appendix A**) determined that the proposed project would have no impact associated with depleting groundwater supplies. The project would not result in the placement of housing in a 100-year flood zone. The proposed project would also have no impact related to inundation by dam failure, seiche, tsunami, or mudflow, as there is no large water body in the area capable of generating such an event. There would be no impact, and standards of significance 2, 7, 9, and 10 are not further evaluated.

METHODOLOGY

Evaluation of the proposed project's hydrology and water quality impacts was based on the results and recommendations identified in the project's hydrology/hydraulics report (Domenichelli 2009), water quality study (Drake Haglan 2016), and geotechnical investigation (Taber 2007). Other sources of information used to describe existing conditions and evaluate impacts include the City of Placerville General Plan and the City of Placerville General Plan Background Report.

IMPACTS AND MITIGATION MEASURES

Water Quality (Standards of Significance 1, 3, 5, and 6)

Impact 4.7.1 Implementation of the proposed project would involve construction activities that could result in temporary water quality impacts, and project operation would generate stormwater runoff that would contain urban pollutants. This is a **potentially significant** impact.

Construction Impacts

Construction activities have the potential to generate pollutants and sediment that could affect water quality via stormwater runoff from the project site that drains to Hangtown Creek. Construction would include the use of construction equipment, which requires oil, grease, and fuels and other chemical constituents involved in construction. Spills or leaks from construction equipment could also be conveyed in stormwater that flows toward the creek, which could affect water quality. This is a **potentially significant** impact.

Temporary disturbance to the stream banks of Hangtown Creek would occur during replacement of the bridge and reconstruction of the Cedar Ravine drainage outlet. Disturbance of stream banks may loosen soils on the site, resulting in a temporary increase in erosion of sediment, which could have water quality impacts. New bridge approaches from the realigned Clay Street would also be constructed, which would expose soil to erosion and could contribute sediment to runoff entering Hangtown Creek. Groundwater is shallow near Hangtown Creek, and temporary dewatering may be necessary to allow proper placement of project features. Construction dewatering, if necessary, would be required to comply with the dewatering provisions of the Construction General Permit or obtain coverage under the Central Valley RWQCB's Low-Threat Discharges to Surface Water permit. Groundwater discharged directly into Hangtown Creek may require treatment to minimize adverse water quality effects.

As described in Impact 4.3.4 in Section 4.3, Biological Resources, prior to construction, the City would be required to obtain the following permits to allow the filling of 0.001 acre of intermittent stream: Clean Water Act Section 404 Nationwide Permit #14 (Linear Transportation Projects); California Fish and Game Code Section 1600–1602 Streambed Alteration Agreement; and Clean Water Act Section 401 Water Quality Certification.

Pavement removal on Clay Street and the Ivy House parking lot would expose soil that would require grading and other earthwork to construct the realigned Clay Street. This activity would temporarily expose soil to wind and water erosion, and heavy equipment use could be a source of pollutants that could enter stormwater runoff.

The project would result in more than 1 acre of disturbance and therefore would be required to comply with the State's Construction General Permit requirements, which include preparation of

a SWPPP. The SWPPP must include BMPs to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges. Examples of typical construction best management practices included in SWPPPs include, but are not limited to, using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the drainage system or receiving waters.

Chapter 7 of the Placerville City Code contains standards regarding grading, erosion, and sediment control). The Grading Ordinance regulates grading on private property in the incorporated area of the city. The purpose of the ordinance, in part, is to avoid pollution of watercourses with nutrients, sediments, or other earthen materials generated on or caused by surface runoff on or across the permit area. The proposed project would be required to comply with the provisions of the ordinance as part of the grading activities for the project.

Operational Impacts

The potential for urban pollutants to be generated in stormwater runoff typically depends on the amount of impervious surfaces (e.g., roadways and parking lots) and land use activities that would contribute pollutants. The potential impacts on the water quality in Hangtown Creek would be a function of the rate and volume of runoff discharged to the creek through storm drains and/or overland flow and changes in impervious surface.

Clay Street at the bridge approach and the bridge surface would be widened compared to existing conditions, which would slightly increase the amount of impervious surface that would generate stormwater runoff containing urban pollutants. Stormwater runoff that is currently generated on the project site contains urban pollutants such as metals, oil, grease, sediment, bacteria, nutrients, and potentially herbicides and pesticides associated with maintenance. The proposed project would not change the types of land uses on the project site; there would still be roadways and a parking lot, with some landscaping and vegetation. The types of pollutants would not change, only the rate and volume, which would not be substantial. However, an increase in pollutant loads would not result because the proposed project would not increase the number of vehicles in downtown (see Impact 4.10.1 in Section 4.10, Transportation and Circulation) that could be a source of pollutants. The project would reduce the number of parking spaces in the Ivy House parking lot, so there would be fewer vehicles at that location which would be a source of pollutants. The Locust Avenue lot has been identified as the nearest City lot that may be used as replacement parking for the spaces lost at the Ivy House parking lot. The Locust Avenue lot was owned and leased by Caltrans prior to the City's acquisition of the lot in 2014, and it is unknown what BMPs may be present. As such, through the use of replacement parking at the Locust Avenue lot, the project could result in a secondary (indirect) impact on stormwater quality because vehicles would park there.

The All-Way Stop and Signal options would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. The impact for both options would be identical and would be as described above.

Mitigation Measures

MM 4.7.1a The City shall implement a SWPPP and BMPs in compliance with the State Construction General Permit and shall implement applicable requirements of the City's Grading Ordinance. The project SWPPP will require the City's construction contractor to identify the location of designated staging areas, would include specific requirements for equipment fueling, maintenance, and storage processes, and will include stormwater BMPs to prevent the release of polluted stormwater into Hangtown Creek and Cedar Ravine Creek.

Timing/Implementation: *SWPPP shall be completed and permits obtained prior to ground disturbance; compliance with BMPs and permit requirement shall be monitored during construction*

Enforcement/Monitoring: *City of Placerville Development Services Department, Engineering Division*

MM 4.7.1b Project design for Clay Street and the reconfigured Ivy House parking lot shall include (1) runoff control features in the project's drainage system to ensure post-construction runoff does not exceed pre-development conditions; and (2) water quality BMPs to reduce pollutants in stormwater runoff in accordance with the City's Storm Water Management Plan and applicable MS4 requirements. Low impact design (LID) features shall be incorporated into project design. The City shall be responsible for long-term maintenance and monitoring of the BMPs to ensure their effectiveness in reducing pollutants in runoff.

Timing/Implementation: *Prior to final design approval and verified during construction*

Enforcement/Monitoring: *City of Placerville Development Services Department, Engineering Division*

MM 4.7.1c The City shall ensure the Locust Avenue parking lot includes stormwater BMPs that meet current City requirements.

Timing/Implementation: *Prior to use of the Locust Avenue lot in conjunction with closure of the Ivy House parking lot*

Enforcement/Monitoring: *City of Placerville Development Services Department, Engineering Division*

Mitigation measures **MM 4.7.1a** through **MM 4.7.1c** require the City to implement regulatory requirements to reduce pollutants in stormwater runoff during construction and operation. This mitigation would ensure the proposed project would not violate water quality regulations, result in erosion or siltation that could adversely affect water quality, or be a substantial source of pollution that could affect water quality, and would reduce water quality impacts to a **less than significant** level. In addition, mitigation measure **MM 4.3.4** identified in Section 4.3, Biological Resources, requires that the appropriate Clean Water Act permits and approvals are obtained in accordance with agency requirements to ensure water quality is protected in Hangtown Creek.

Storm Drain Capacity (Standards of Significance 4 and 5)

Impact 4.7.2 The proposed project could affect storm drain capacity and flooding potential from stormwater runoff. The impact would be **potentially significant**.

The new bridge surface would be wider compared to existing conditions, and the Ivy House parking lot would be extended farther north. This has the potential to increase the amount of impervious surface that would generate stormwater runoff compared to existing conditions, although the amount would not be substantial. Increases in the rate or amount of stormwater runoff have the potential to cause flooding if storm drain capacity is not sufficient or if the rate or volume of stormwater entering a natural channel raises water surface elevations. The Cedar Ravine drainage culvert, which outlets into Hangtown Creek, would be relocated and reconstructed in conjunction with the bridge replacement, which would ensure capacity is maintained.

The All-Way Stop and Signal options would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. The impact for both alternatives would be identical and would be as described above. Because the proposed project could increase the rate and/or volume of stormwater runoff compared to existing conditions, the project has the potential to cause or exacerbate flooding. This impact is considered **potentially significant**.

Mitigation Measures

MM 4.7.2 Implement mitigation measure **MM 4.7.1b**.

Implementation of mitigation measure **MM 4.7.1b** would ensure the rate and/or volume of stormwater generated by the project's new impervious surfaces would not exceed pre-development conditions. This mitigation would reduce the potential for exceeding storm drain capacity or causing flooding and would reduce the impact to **less than significant.**

Flood Hazards (Standard of Significance 8)

Impact 4.7.3 The proposed project would include replacement of the Clay Street Bridge, which is in a FEMA Zone AE and regulatory floodway. This impact is considered **less than significant**.

The existing Clay Street Bridge passes over Hangtown Creek, for which FEMA has delineated a 100-year special flood hazard zone (AE) and a regulatory floodway. Hydraulic modeling has indicated the existing bridge may nearly overtop during a 100-year event and would pass the 50-year event, but there would be no clearance to the soffit. The proposed replacement bridge would not cause or increase the potential for overtopping and flooding the bridge deck because it would be designed to pass flows for the 100-year storm and the 50-year storm. The proposed bridge deck is calculated to have 1.73 feet of clearance between the deck soffit under a 50-year storm event, and there would be 1.0 feet of clearance for a 100-year event, which exceeds freeboard and clearance requirements. **Table 4.7-2** summarizes this data.

TABLE 4.7-2
TOP OF BRIDGE DECK FREEBOARD AND SOFFIT CLEARANCE

	Bridge Deck 100-Year Freeboard (feet)	Bridge Deck 50-Year Freeboard (feet)	Soffit Clearance 100-Year (feet)	Soffit Clearance 50-Year (feet)
Existing Bridge	0.5	2.0	0.0	0.0
With Proposed Bridge Replacement	3.0	3.73	1.0	1.73

Source: Domenichelli 2009, Table 7

FEMA requires that Zone AE be kept free of encroachment so that the 100-year flood can be carried without substantial increases in flood heights. **Table 4.7-3** compares water surface elevations between existing conditions and with the proposed bridge replacement, based on the results of the hydraulic modeling. The results show no difference in water surface elevations downstream of the bridge, and upstream water surface elevations would decrease for the 100-year event and the 50-year event. The model also indicates that the velocity of water flowing under the bridge would be slower than existing conditions.

TABLE 4.7-3
COMPARISON OF WATER SURFACE ELEVATIONS (WSE) AND VELOCITIES

	100-Year Event			50-Year Event		
	WSE Downstream of Bridge (feet)	WSE Upstream of Bridge (feet)	Velocity at Bridge (feet per second)	WSE Downstream of Bridge (feet)	WSE Upstream of Bridge (feet)	Velocity at Bridge (feet per second)
Existing Conditions	1,864.3	1,866.8	16.6	1,863.9	1,865.3	15.2
With Proposed Bridge Replacement	1,864.3	1,865.6	11.9	1,863.9	1,864.9	11.3
Difference	0.0	-1.2	-4.7	0.0	-0.4	-3.9

Source: Domenichelli 2009, Table 8

The All-Way Stop and Signal options would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. The impact for both alternatives would be identical and would be as described above. Because water surface elevations would not increase either upstream or downstream of the bridge, and the replacement bridge would provide sufficient freeboard to pass flows, the proposed project would not exacerbate or cause flood hazards on the bridge deck, along Clay Street, El Dorado Trail, Main Street, or Cedar Ravine Road, and at land uses surrounding these facilities. Therefore, this impact is **less than significant**.

Mitigation Measures

None required.

4.7.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The project site is located in the 9.4-square-mile Hangtown Creek watershed, which is the cumulative setting for the proposed project.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Hydrology and Water Quality Impacts

Impact 4.7.4 Cumulative development, including the proposed project, could result in water quality, drainage, and flooding impacts. The proposed project's contribution to cumulative water quality impacts is considered **less than cumulatively considerable**.

Continued development and urbanization in the Hangtown Creek watershed has the potential to increase stormwater runoff and infiltration, which may result in cumulative water quality impacts in the Hangtown Creek watershed area. As described under Impact 4.7.1, construction and operation of the proposed project could result in water quality impacts, although such impacts are not substantial due to the nature of the project (roadway realignment and bridge replacement). Mitigation measures **MM 4.7.1a** through **MM 4.7.1c** would reduce the proposed project's water quality impacts by requiring the project to include features to ensure the amount of runoff generated by the project does not exceed pre-existing conditions and that the drainage system design includes stormwater quality BMPs meeting regulatory requirements. The replacement bridge would provide sufficient freeboard to pass flows, so the proposed project would not exacerbate or cause flood hazards on the bridge deck, along Clay Street, El Dorado Trail, Main Street, or Cedar Ravine Road, and at land uses surrounding these facilities. As such, the project would not result in a cumulative contribution to flooding along Hangtown Creek and would result in an improvement over existing conditions. The proposed project's contribution to hydrology and water impacts would be **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

Domenichelli & Associates. 2009. *Hydrology/Hydraulics Report, El Dorado County, Clay Street Bridge Replacement.*

Drake Haglan & Associates. 2016. *Water Quality Technical Memorandum for the Clay Street Realignment and Bridge Replacement Project.*

El Dorado County Water Agency. 2007. *Water Resources Development and Management Plan*.

FEMA (Federal Emergency Management Agency). 2008. Map No. 06017C0756E.

Hangtown Creek Master Plan Committee. 2007. *Hangtown Creek Master Plan (Draft)*.

Placerville, City of. 1989. *City of Placerville General Plan Background Report.*

———. 1990. *General Plan Policy Document.* As amended through 2017.

———. 2005. *City of Placerville Storm Water Management Plan.*

RBF (RBF Consulting). 2012. *Hangtown Creek Comprehensive Watershed Plan*.

Taber Consultants. 2007. *Preliminary Foundation Report, Clay Street Bridge at Hangtown Creek, Placerville, California.*

4.8 LAND USE

This section discusses the proposed project's potential environmental impacts associated with land use. Existing land uses in the project area are characterized in the context of the City of Placerville General Plan and other relevant adopted plans and policies.

4.8.1 EXISTING SETTING

PLACERVILLE

Placerville is characterized by a range of existing land uses, including single-family residential, multi-family residential, public/quasi-public, commercial, industrial, and open space. According to the City's (1990) General Plan, the majority of land within the city limits is occupied by single-family residential and commercial uses. Historically, the City of Placerville has focused on two main considerations regarding land use planning: the desire to retain the city's unique heritage and character, and the need to address problems presented by the city's unique topographical features. The proposed project is located in a developed area of relatively flat topography.

PROJECT SITE

The project site is located at the east end of Placerville's proposed Downtown Historic District, in a central area of the city. The project site consists of the existing Clay Street Hangtown Creek Bridge and Clay Street to the US Highway 50 (US 50) overpass, the Ivy House parking lot, and Main Street where it intersects Clay Street on the north and Cedar Ravine Road on the south, and the recently completed El Dorado Trail.

Land uses adjacent to the project site include commercial uses north and south of Main Street, east and west of Cedar Ravine Road approaching Main Street, and west of Clay Street, the Ivy House parking lot east of Clay Street and south of Hangtown Creek, and a multi-use trail (El Dorado Trail) north of Hangtown Creek.

The parcel containing the Ivy House parking lot is designated as Commercial in the General Plan and zoned Commercial. It is used for regular events such as the Farmers Market, which is held on Saturday, and periodically for special events.

A small area, Ivy House Park, just off the northwest corner of the Ivy House parking lot provides views of Hangtown Creek. This is an informal amenity and is not part of the City's park system.

4.8.2 REGULATORY FRAMEWORK

LOCAL

City of Placerville General Plan

The City's General Plan was adopted on January 23, 1990, and has been amended several times through its latest amendment in 2017. The General Plan serves as the overall guiding policy document for land use, development, and environmental quality for the city.

Section I (Land Use Element), Section V (Natural, Cultural, and Scenic Resources), and Section VII (Community Design Element) of the General Plan include policies to preserve the small-town, rural character of the city, while providing for a land use pattern and mix that meets the residential, commercial, and employment needs of Placerville's existing and future residents. Policies that are applicable to the proposed project's environmental effects related to land use

are listed in **Table 4.8-1**, which also includes an analysis of the project's consistency with applicable policies.

TABLE 4.8-1
PROJECT CONSISTENCY WITH GENERAL PLAN LAND USE POLICIES

Policies	Consistent?	Analysis
Section I. Policy C.2: The City shall assist the private sector in maintaining and improving the economic viability of downtown through the provision of public facilities and services and the enactment of land use policies and decisions supportive of downtown's primary commercial role.	Yes, with mitigation	The City's adopted Main Street Streetscape Design Development Plan includes realignment of Clay Street and design recommendations for Main Street to preserve and enhance Main Street's unique character, which the plan recognizes is key to downtown Placerville's continued retail success (Placerville 2006). The project would not alter the existing land uses on the project site. It would provide safe access for all modes of transportation and continue to provide parking facilities. The project would include design features, as required in mitigation measure MM 4.1.2a, to create a pedestrian-scale environment in keeping with the plan. Historic resources such as the Druid Monument would be preserved and protected, as required in mitigation measure MM 4.4.1.
Section I. Policy C.9: The City's planning for commercial areas shall be guided by the following principles: a) Contribute to the City's objective to become a balanced community; b) have a positive economic impact on the community; c) provide for adequate parking and vehicular access; and d) be designed and landscaped in a manner sensitive to Placerville's character.		
Section V. Policy I.1: Those positive aspects and attributes of the city which are controllable, and which contribute to the quality of life of the city and its environment, shall be preserved and perpetuated. Placerville's positive aspects and attributes are its rural country atmosphere, historical heritage, small town atmosphere, compatible neighborhoods and development, and lack of congestion.		
Section VII. Policy D.4: The City shall use the city street system as the unifying framework of the community through the use of distinctive street design and landscape treatment.	Yes, with mitigation	As required in mitigation measure MM 4.1.2a, the project would include streetscape and landscape design to ensure consistency with the concept design for Main Street and Clay Street in the Main Street Streetscape Design Development Plan.
Section VII. Policy I.1: The City shall ensure that new development will be a positive addition to the city's environment and not detract from the nature and character of appropriate nearby established development because of architectural style, scale, or location.	Yes, with mitigation	Replacement of the Clay Street Hangtown Creek Bridge, realignment of Clay Street, and division of the Ivy House parking lot into two lots separated by the realigned Clay Street would not add new uses or development, change the overall function of the project site compared to existing conditions, or have features that would be out of scale relative to nearby development. Mitigation measure MM 4.1.2a requires features to be included in project design to ensure the reconfigured parking lot and intersection contain landscape features consistent with the Main Street Streetscape Design Development Plan.

City of Placerville Main Street Streetscape Design Development Plan

The City's (2006) Main Street Streetscape Design Development Plan presents community design ideas for Main Street, as well as provides cost estimates and implementation guidance. As noted in the plan, Main Street is recognized as a recreational shopping and dining destination, and preservation and enhancement of Main Street's unique character is key to downtown Placerville's continued retail success.

The plan identified a design and recommended the adoption of a roundabout for the realignment of Clay Street as set forth in the Placerville Streetscape Concept Design (p. II-18 through II-20; III-5). However, due to public opposition, the roundabout was removed as an alternative for this project on July 8, 2014, by City Council resolution and subsequently by Measure K. Although the roundabout is no longer an option, the realignment of Clay Street to form the fourth leg of the Main Street/Cedar Ravine Road intersection would serve the same purpose, and the design concepts shown on page III-5 in the plan and overall design elements for Main Street (e.g., streetscape, street lights, seating, street trees, and accent planting) would still apply to the project.

Hangtown Creek Master Plan (Draft)

The Hangtown Creek Master Plan is the result of a community effort to improve Hangtown Creek water quality through watershed-based management policies (Hangtown Creek Master Plan Committee 2007). The plan sets forth goals, objectives, policies, and standards addressing: enhancement and maintenance of riparian and aquatic habitat; watershed protection, erosion, and flood control, aesthetic historic and prehistoric values, and creek access and public spaces, among other topics. The plan remains in draft form and has not been adopted by the City.

4.8.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

According to California Environmental Quality Act (CEQA) Guidelines Appendix G, impacts to land use are considered significant if implementation of the project would result in any of the following conditions:

1) Physically divide an established community.

2) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the City of Placerville General Plan and Zoning Ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

3) Conflict with any applicable habitat conservation plan or natural community conservation plan.

The current CEQA Guidelines Appendix G does not include a checklist item for assessing urban decay. Urban decay is a socioeconomic consideration, which generally does not require analysis under CEQA unless there is a chain of cause and effect that significant adverse physical impacts related to economic and social changes and/or effects would occur. The term *urban decay* is not defined in CEQA or by state statute or judicial decision. Therefore, for the purpose of this analysis, urban decay is defined as extended long-term business vacancies, directly or indirectly resulting in physical deterioration to properties or structures that is so prevalent,

substantial, and lasting such a significant period of time that it impairs the proper utilization of the properties and structures, and affects the health, safety, and welfare of the surrounding community. Physical deterioration includes abandoned buildings, boarded doors and windows, long-term unauthorized use of properties and parking lots, extensive or offensive graffiti painted on buildings, dumping of refuse or overturned dumpsters on properties, dead trees and shrubbery, and uncontrolled weed growth. For purposes of this Draft EIR, an urban decay impact would be significant if the project would:

4) Directly or indirectly result in extended long-term business vacancies that could lead to physical deterioration to properties or structures that is so prevalent, substantial, and lasting such a significant period of time that it impairs the proper utilization of the properties and structures, and affects the health, safety, and welfare of Placerville.

Impacts Not Evaluated in Detail

No adopted habitat conservation or natural community conservation plan applies to the project. There would be no impact, and no further evaluation of standard of significance 3 is required.

METHODOLOGY

Evaluation of the proposed project's potential land use impacts was based on review of planning documents pertaining to the project area, including the City of Placerville General Plan and Main Street Streetscape Design Development Plan, and field review of the project site and surroundings.

PROJECT IMPACTS AND MITIGATION MEASURES

Division of Established Community (Standard of Significance 1)

Impact 4.8.1 Implementation of the proposed project would not divide an established community. There would be **no impact**.

Division of an established community commonly occurs as a result of development and construction of features that result in a physical barrier to easy and frequent travel between two or constituent parts of a community. A large linear feature such as a new freeway, major arterial parkway, or rail line with few crossings through an established community is an example of a feature that could physically divide an existing community.

The proposed project is a bridge replacement project in the downtown historic area of Placerville. The improvements would replace the Clay Street Bridge over Hangtown Creek and realign Clay Street to form a four-leg intersection with the existing Main Street/Cedar Ravine Road intersection. The realignment of Clay Street would result in dividing the existing Ivy House parking lot into two separate lots, with the realigned Clay Street in between. No new land uses are proposed. All access to existing businesses in the immediate project area adjoining the site would remain over the long term.

Although the existing Ivy House parking lot would be separated into two lots, this would not be considered division of an established community because the lot does not contain occupied uses, and the regular and special events that are held in the parking lot can be accommodated elsewhere in Placerville in close proximity to the parking lot (see Impact 4.8.3, below). The realigned Clay Street would continue to provide access to locations north of US 50.

Because the proposed project would not involve construction of features that would physically divide the downtown historic area of Placerville, there would be **no impact**.

Mitigation Measures

None required.

Consistency with Applicable Plans (Standard of Significance 2)

Impact 4.8.2 The proposed project would be consistent with applicable plans. This is considered to be a **less than significant** impact.

CEQA Guidelines Section 15125(d) requires an EIR to discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans, noting that such discussion is a component of the environmental setting.

As provided in Appendix G of the CEQA Guidelines, the question to be answered is whether a project would conflict with a plan, policy, or regulation adopted "for the purpose of avoiding or mitigating an environmental effect." Further, as stated in CEQA Guidelines Section 15358(b), "effects analyzed under CEQA must be related to a physical change." A policy inconsistency is considered to be a significant adverse environmental impact only when it conflicts with a policy adopted for the purpose of avoiding or mitigating an environmental effect, and it is anticipated that the inconsistency would result in a significant adverse physical impact (based on the established significance criteria).

The All-Way Stop and Signal options would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. Therefore, impacts would be identical, as described below.

City of Placerville General Plan

Each technical section of this Draft EIR (Sections 4.1 through 4.10) includes a table in the Regulatory Framework subsection with a list of applicable General Plan policies, or notes where there are no applicable policies. Each section provides an analysis as to whether the project would be consistent with applicable policies. No inconsistencies with the General Plan were identified, assuming implementation of the mitigation measures included in this Draft EIR.

Table 4.8-1 above lists relevant General Plan land use policies, and as indicated in the table, the proposed project would not be inconsistent with the General Plan land use policies, assuming implementation of mitigation measures identified in this Draft EIR. The impact would be **less than significant**.

The CEQA Guidelines do not require detailed analysis of every policy in the General Plan. Thus, the policies of the General Plan that are considered in this Draft EIR are limited to those directed at avoiding or mitigating environmental effects. Policies that are not related to environmental issues will be addressed by the City Council during the decision-making process based on information provided by City staff.

While this Draft EIR considers the project's consistency with applicable policies of the City of Placerville General Plan concerning environmental matters pursuant to CEQA Section 15125(d), the Placerville City Council will ultimately make the determination of the project's consistency with the General Plan for all relevant policies.

Main Street Streetscape Design Development Plan

The bridge replacement and associated Clay Street realignment, which would result in reconfiguration of the Ivy House parking lot, is part of the Main Street Streetscape Design Development Plan adopted by the City Council in 2006, as noted above. As stated on page I-1 in the plan:

> Over the last decade several new 'Big Box' retail stores have appeared in the region. This change in the retail dynamic has placed a greater focus on Main Street as a recreational shopping and dining destination.
>
> Placerville's abundance of wealth in history and architectural character provide an excellent background for these shopping activities. Consequently, preservation and enhancement of Main Street's unique character is key to Downtown's continued retail success.

As further stated on page II-1 in the plan, the plan's goals are to:

- Preserve and enhance the historical character and assets of Downtown;
- Improve the pedestrian shopping experience and thus bolster Downtown's retail economic viability; and
- Develop a plan that is aesthetically cohesive and economically viable, a plan that can be implemented through a multi-phase and multi-year effort.

Although the roundabout design put forth in the plan is no longer an option, the proposed project is not contrary to the plan, nor would the project impede the plan's implementation. There would be no inconsistency with the plan, and therefore the impact would be **less than significant**.

In addition to an evaluation of consistency with the General Plan and the Main Street Streetscape Design Development Plan, this Draft EIR evaluates the proposed project's consistency with the regional 2013 Ozone Plan (Impact 4.2.7 in Section 4.2, Air Quality), the State's Assembly Bill (AB) 32 Scoping Plan (Impact 4.5.1 in Section 4.5, Greenhouse Gas Emissions), and the Sacramento Area Council of Governments' Metropolitan Transportation Plan/Sustainable Communities Strategy (Impact 4.5.2 in Section 4.5, Greenhouse Gas Emissions). These plans have been adopted for the purpose of reducing the environmental effects of criteria air pollutant and greenhouse gas emissions. As indicated in the impact discussions, the proposed project would be consistent with those plans, and impacts are **less than significant.**

Mitigation Measures

None required.

Urban Decay (Standard of Significance 4)

Impact 4.8.3 The proposed project would not result in conditions that would cause or contribute to urban decay in Placerville. This is a **less than significant** impact.

The proposed project is in the downtown historic area of Placerville. The improvements would replace the existing Clay Street Bridge over Hangtown Creek, realign Clay Street to form a four-leg intersection at Main Street/Cedar Ravine Road, and reconfigure the Ivy House parking lot into two lots separated by Clay Street. No new land uses are proposed. The bridge replacement and realignment of Clay Street to form the new four-leg intersection would occur entirely on public property owned by the City of Placerville and would be constructed by the City's construction contractor. Restriping and reversal of the traffic direction of the private parking lots

south of the Main Street/Cedar Ravine Road intersection may be included to improve intersection operations and safety as part of the final design, but no private property acquisition is anticipated to implement the project, nor would any driveways or other access to businesses be permanently removed. The All-Way Stop and Signal options would involve the same intersection improvements, and there would be no difference between the two options with regard to physical changes. Although temporary construction easements may be required for the proposed project, all access to existing businesses in the immediate project area adjoining the site would remain over the long term. As noted in Impact 4.8.2, the project would implement a component of the City's adopted Main Street Streetscape Design Development Plan.

Members of the public have expressed a variety of concerns regarding: reconfiguration of the Ivy House parking lot into two separate lots; visual changes at the project site associated with the new bridge and a new four-leg intersection; need to relocate the Farmers Market, which is held in the Ivy House parking lot, along with other events on occasion; and increased potential for traffic congestion, and opine that such changes could cause urban decay. These issues are addressed below.

Loss of Parking Spaces at Ivy House Parking Lot

Community members and business owners have speculated that the reconfiguration of the Ivy House parking lot, which would result in the loss of approximately 16 parking spaces, would have negative economic effects because people would have to seek parking elsewhere, which could discourage people from visiting downtown. The project's impact on parking facilities is evaluated in this Draft EIR in Impact 4.10.5 in Section 4.10, Transportation and Circulation. In 2014, the City of Placerville acquired a parking lot on Locust Avenue adjacent to the El Dorado Trail, approximately 400 feet northeast of the Ivy House lot. The lot on Locust Avenue will provide approximately 25 spaces for public parking that are intended to offset the loss of spaces at the Ivy House lot. The net result of the modifications to the Ivy House lot and the availability of the Locust Avenue lot would be a gain of approximately 9 public parking spaces. **Figure 4.10-3** in Section 4.10 shows the number of parking spaces in downtown and the percentage of occupancy for other lots in downtown. As illustrated by the data, the parking lots do not operate at full capacity, and it is reasonable to assume that local residents and visitors would be able to find parking and could continue to visit retail businesses downtown during the approximately 9- to 12-month construction period as well as after construction is complete. As such, the proposed Ivy House parking lot reconfiguration would not be expected to indirectly result in decreased retail sales due to lack of parking facilities near downtown businesses that would, in turn, result in urban decay.

For businesses immediately adjoining the project site on Main Street and Cedar Ravine Road, access to those businesses will be maintained at all times during the approximately 9- to 12-month construction period, as provided in mitigation measure **MM 4.10.3**. Nine to 12 months of project construction are not expected to result in a long-term change in visitation and traffic patterns to the downtown area that would trigger the closure of businesses and lead to physical deterioration to properties or structures that is so prevalent, substantial, and lasting a significant period of time that it impairs the proper utilization of the properties and structures, and the health, safety, and welfare of the city. As an example, construction activities associated with the El Dorado Trail in the downtown area did not result in the permanent closure of downtown businesses that triggered physical deterioration of the area.

Changes in Visual Characteristics of the Project Site

This Draft EIR evaluates the impacts of the proposed project on the visual character of the project site and how those changes could affect its surroundings, including scenic resources. The evaluation is presented in Impact 4.1.2, in Section 4.1, Aesthetics.

The new bridge structure would be larger than the existing bridge, but would only be approximately 2 feet higher than the existing bridge. The design and height would allow the bridge to blend in with its surroundings, such that the aesthetic qualities of Hangtown Creek and nearby historic buildings are maintained and not visually overwhelmed by the bridge. In addition, the new bridge would not diminish views along the Clay Street approach to Hangtown Creek because views are already substantially dominated by the US 50 overcrossing at Clay Street.

The analysis in Impact 4.1.2 in Section 4.1, Aesthetics, concludes that aspects of the project would make the Main Street/Clay Street/Cedar Ravine Road intersection appear "modern" and more visible compared to existing conditions, which would be a significant aesthetics impact. Mitigation measure **MM 4.1.2a** identifies design features that must be incorporated into project design to ensure the project integrates modern roadway and parking lot improvements in order to blend with the city's historical character. Mitigation measure **MM 4.1.2b** would protect the cork oak tree. Mitigation measure **MM 4.3.3a** in Section 4.3, Biological Resources, includes measures for riparian habitat and tree protection and replacement. Implementation of the recommended design features and tree protection measures would help enhance the pedestrian experience. As such, the project would not degrade the visual environment in a manner that would make downtown less attractive and thus vulnerable to urban decay.

Saturday Farmers Market

The Saturday Farmers Market is a popular event in the local community for residents and visitors alike and is held in the Ivy House parking lot. Under the proposed project, the Ivy House parking lot would be divided into two lots, separated by the realigned Clay Street. It is unknown at this time if the Farmers Market (operating under a special event permit issued by the City) would relocate. The proposed project would not preclude use of the reconfigured Ivy House parking lot. The decision to continue to hold the Farmers Market in the two separate lots or relocate would at the discretion of the operator. In addition to the Ivy House parking lot, other options are available for the Farmers Market. For example, the El Dorado Trail and/or the Locust Avenue parking lot, which are readily accessible to pedestrians and bicyclists via the El Dorado Trail, would provide adequate space for vendor booths. In addition, if the Farmers Market were held along the El Dorado Trail or at the Locust Avenue lot, this could result in less traffic congestion on Main Street when the Ivy House parking lot (either under its current configuration or divided into two lots with the proposed project) is closed for the event. If the Farmers Market relocates, parking would be available in the reconfigured Ivy House parking lot and in the Locust Avenue lot (if vendor booths are on the trail), as well as in other locations downtown. As such, it is unlikely that the proposed project would result in fewer visitors to the Farmers Market or to downtown on Saturdays such that the project would result in urban decay because of decreased business in downtown.

Traffic Congestion on Main Street

Traffic congestion on Main Street and the potential for the project to increase traffic and result in further congestion was identified by the public as a potential effect that would discourage people from visiting downtown Placerville. This Draft EIR evaluates how the project could affect local roadways in Impact 4.10.1 in Section 4.10, Transportation and Circulation. The proposed project does not include land uses that would generate new trips on the local roadway system,

but the proposed bridge replacement, which would realign Clay Street to create a new intersection at Main Street and Cedar Ravine Road, would change how the intersection and nearby intersections operate. Results of the analysis indicate that the proposed project would improve traffic operations at the four-leg intersection. That is, the proposed project would not increase traffic congestion on Main Street compared to existing conditions. Traffic congestion in Placerville is an existing condition that would not be exacerbated by the project. As such, it is reasonable to conclude that the project would not result in conditions leading to urban decay as a result of traffic congestion and potential effects on access to businesses. In addition, the project would provide improved pedestrian and bicycle facilities on the new bridge and along Clay Street and pedestrian crossings at the realigned intersection, which would improve safety.

Summary

For the reasons explained above, the proposed project would neither directly nor indirectly result in extended long-term business vacancies that could lead to physical deterioration to properties or structures that is so prevalent, substantial, and lasting such a significant period of time that it impairs the proper utilization of the properties and structures, and affects the health, safety, and welfare of Placerville. This impact is **less than significant.**

Mitigation Measures

None required.

4.8.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for land use consists of the projects listed in **Table 3.0-1** in Section 3.0, Introduction to the Analysis. Future growth under cumulative conditions may result in a variety of land use impacts such as inconsistency with land use plans and land use compatibility. The cumulative impact analysis herein focuses on the project's contribution to cumulative impacts.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Land Use Planning Conflicts

Impact 4.8.4 Cumulative development, including the proposed project, could result in land use planning impacts such as inconsistency with plans or incompatible uses. The proposed project does not propose new land uses that would be inconsistent with plans or result in land use incompatibilities or result in urban decay. The project's contribution would be **less than cumulatively considerable**.

The project's land use impacts are site-specific and limited to roadway realignment and bridge replacement, which would not involve a change in land use that could be inconsistent with the General Plan or result in land use incompatibility. The proposed project would not result in any urban decay impacts. The project's contribution to land use impacts is **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

El Dorado County. 2004. *El Dorado County General Plan*.

Hangtown Creek Master Plan Committee. 2007. *Hangtown Creek Master Plan (Draft)*.

Placerville Airport Land Use Commission. 1996. *Placerville Airport Comprehensive Land Use Plan*.

Placerville, City of. 1990. *General Plan Policy Document*. As amended through 2017.

———. 2006. *Main Street Streetscape Design Development Plan.*

———. 2014. *Memorandum: CIP Project No.: 406171 (Clay St. Bridge Replacement and Realignment EIR) – Transportation and Circulation and Cumulative Project Impact Analysis*.

4.9 NOISE

This section includes a description of ambient noise conditions, a summary of applicable regulations, and an analysis of potential noise impacts associated with the proposed project.

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as the mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. Noise is a subjective reaction to different types of sounds. Noise is typically defined as airborne sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. A typical noise environment consists of a base of steady "background" noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway. Perceptions of sound and noise are highly subjective from person to person.

Measuring Sound

Sound levels are described using the decibel (dB) scale. The decibel scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound and twice as loud as a 60 dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB (Caltrans 2013a). Typical noise levels associated with common noise sources are shown in **Figure 4.9-1**.

The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

Sound Propagation and Attenuation

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics. No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3 dB per doubling of distance is assumed (Caltrans 2013a).

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA (FHWA 2006). The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

NOISE DESCRIPTORS

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL are measures of community noise. Each is applicable to this analysis and is defined in **Table 4.9-1**.

The A-weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

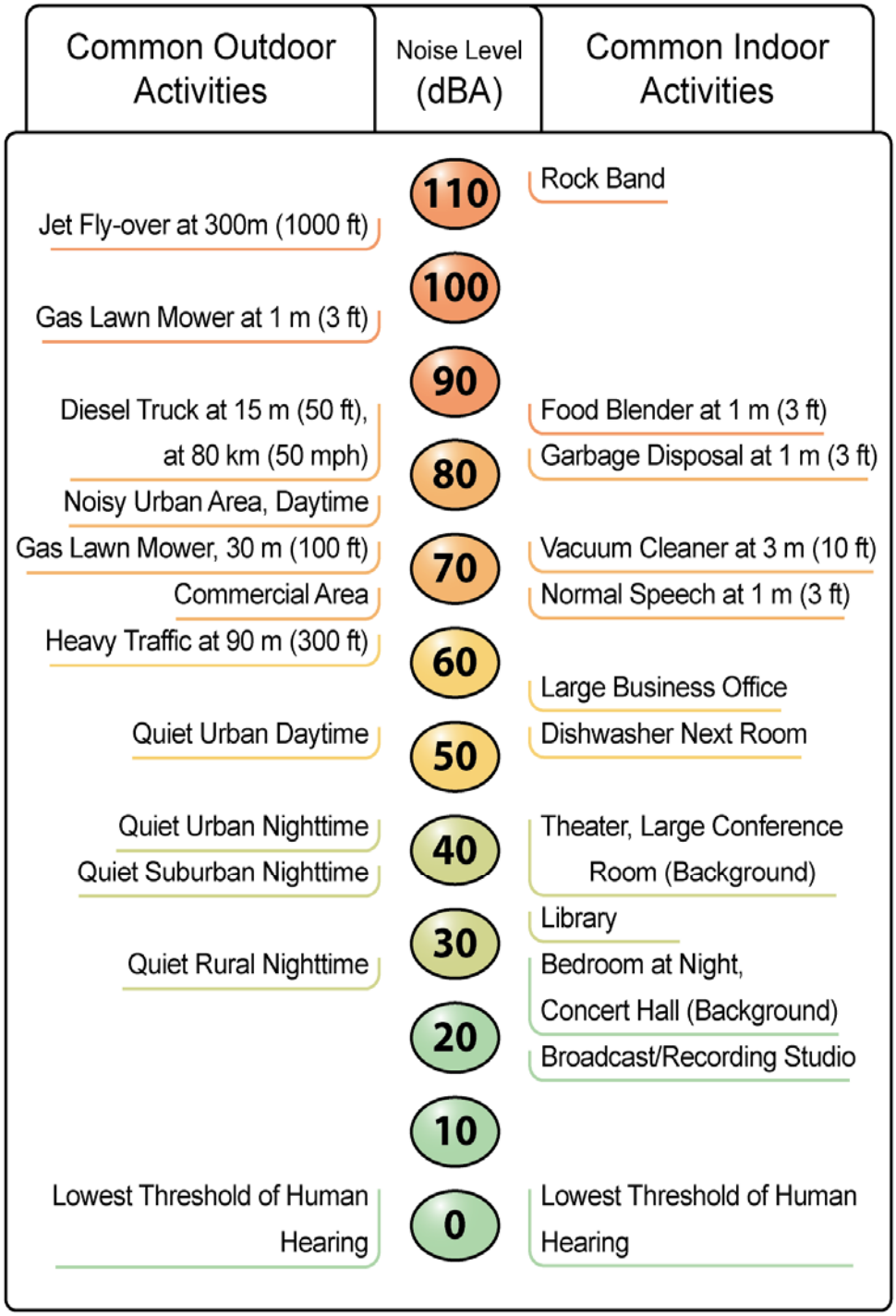
The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

HUMAN RESPONSE TO NOISE

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings that can provide noise levels as low as 20 dBA and quiet, suburban, residential streets that can provide noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep.

FIGURE 4.9-1
TYPICAL NOISE LEVELS



Source: Adapted from Caltrans 2013a: Table 2-5.

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TABLE 4.9-1
DEFINITIONS OF ACOUSTICAL TERMS

Term	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	A 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level, CNEL	A 24-hour average L_{eq} with a 5 dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher noise levels associated with urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted for understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10 dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

EFFECTS OF NOISE ON PEOPLE

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even in a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise, but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The federal Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. There continues to be disagreement about the relative annoyance of different sources such as noise from aircraft flying overhead and transportation noise. For vehicle operations on the ground, the noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance.

FUNDAMENTALS OF ENVIRONMENTAL GROUNDBORNE VIBRATION

Sources of earthborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration. For the purposes of this

analysis, a PPV descriptor with units of inches per second is used to evaluate construction-generated vibration for building damage and human complaints.

Table 4.9-2 summarizes the reactions of people and the effects on buildings produced by continuous vibration levels. The human response (annoyance) levels shown in **Table 4.9-2** are generalized; vibration may be found to be annoying at much lower levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

TABLE 4.9-2
HUMAN REACTION AND DAMAGE TO BUILDINGS FOR CONTINUOUS OR FREQUENT INTERMITTENT VIBRATION LEVELS

Peak Particle Velocity (inches per second)	Human Response	Effect on Buildings
0.08	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to historical buildings
0.25	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to older residential structures
0.5	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Threshold at which there is a risk of damage to new residential structures and modern/commercial buildings

Source: Caltrans 2013b

4.9.1 EXISTING SETTING

AMBIENT NOISE ENVIRONMENT

The project site consists of the Clay Street Hangtown Creek Bridge, Clay Street, the Main Street/Cedar Ravine Road intersection, and the Ivy House parking lot. Land uses surrounding the project site consist of commercial and retail uses on the west, south, and east. Hangtown Creek, the El Dorado Trail, and US Highway 50 comprise the land uses to the north. Ambient noise levels at the proposed project site are primarily influenced by vehicle traffic on area roadways. No major non-transportation noise sources are in the immediate vicinity of the project site.

Existing roadway noise levels were calculated for the roadway segments in the project vicinity using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and traffic volumes from the project transportation impact analysis (Fehr & Peers, 2018 [included in **Appendix D**]). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to

reflect average vehicle noise rates identified for California by the California Department of Transportation (Caltrans). The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels.

Table 4.9-3 summarizes the modeled existing traffic noise levels at 75 feet from the centerline of each project roadway corresponding to the volume of traffic accommodated by each roadway. Additionally, **Table 4.9-3** identifies the traffic noise along these roadways coupled with the traffic noise currently generated on US 50.

TABLE 4.9-3
EXISTING TRAFFIC NOISE LEVELS

Roadway Segment	Surrounding Uses	L_{dn} (dB) at 75 Feet from Roadway Centerline from Roadway Traffic	L_{dn} (dB) at 75 Feet from Roadway Centerline from Roadway Traffic and US 50[1]
Bedford Avenue			
Between US 50 and Main Street	Institutional	57.6	65.2
Main Street			
West of Bedford Avenue	Commercial & Institutional	57.2	64.3
Between Bedford Avenue and Clay Street	Commercial & Institutional	59.5	65.0
Between Clay Street and Cedar Ravine Road	Commercial	59.2	63.3
East of Cedar Ravine Road	Church, Commercial & Institutional	58.3	63.3
Clay Street			
North of Main Street	Commercial	50.0	63.3
Cedar Ravine Road			
Between Main Street and Pacific Street	Commercial & Residential	57.7	61.9
South of Pacific Street	Residential	57.8	60.9

*Notes: Traffic noise levels were calculated using the FHWA roadway noise prediction model. Refer to **Appendix C** for noise modeling assumptions and results.*

1. *Combined noise levels from local roadway traffic and US 50 traffic derived by Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol (2013a)*

L_{dn} = A 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime

dB = A-weighted decibels

As shown, the traffic-generated noise level on project-vicinity roadways ranges from 50.0 to 59.5 dBA L_{dn}. However, when the noise generated by local traffic is combined with the traffic noise generated on US 50, modeled noise levels range from 60.9 to 65.2 dBA L_{dn}. As previously described, L_{dn} equals the 24-hour average noise level with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime.

NOISE-SENSITIVE LAND USES

Noise-sensitive land uses are generally considered to include those uses which would result in noise exposure that could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Land uses such as parks, historic sites, cemeteries, and recreation areas are also considered sensitive to increases in exterior noise levels. Schools,

churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The closest noise-sensitive land uses to the project site are residences adjacent to the project site fronting Cedar Ravine Road.

4.9.2 REGULATORY FRAMEWORK

LOCAL

City of Placerville General Plan

Section VI (Health and Safety Element) of the General Plan includes policies intended to ensure that city residents are not subjected to noise beyond acceptable levels. The General Plan includes noise criteria for the evaluation of proposed land uses with regard to land use compatibility, in accordance with those recommended by the State of California. There is one policy that is applicable to the proposed project's environmental effects related to noise, which is listed in **Table 4.9-4**, which also includes an analysis of the project's consistency with the policy.

TABLE 4.9-4
PROJECT CONSISTENCY WITH GENERAL PLAN HEALTH AND SAFETY ELEMENT POLICIES

Policies	Consistent?	Analysis
Section VI. Policy I.1: The City shall attempt, insofar as possible, to protect areas within the city where the present noise environment is considered acceptable.	Yes	The proposed project consists of bridge replacement and a roadway realignment would not include new land uses that would generate new sources of noise. Construction noise would be short-term.

4.9.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Following Appendix G of the California Environmental Quality Act (CEQA) Guidelines, noise impacts are considered to be significant if implementation of the project would result in any of the following:

1) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies.

2) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

5) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, exposure of people residing or working in the project area to excessive noise levels.

6) For a project within the vicinity of a private airstrip, exposure of people residing or working in the project area to excessive noise levels.

Impacts Not Evaluated in Detail

The Initial Study/Notice of Preparation (**Appendix A**) determined that the proposed project would not subject people to excessive noise caused by an airport. Because no impacts are anticipated relative to standards of significance 5 and 6, no further analysis of these issues is required in this Draft EIR.

IMPACTS AND MITIGATION MEASURES

Short-Term Construction Noise (Standard of Significance 4)

Impact 4.9.1 Construction activities would generate noise. This is a **potentially significant** short-term impact.

The project site is located in an urbanized environment. Existing sensitive receptors include the single-family residential uses adjacent to the site along Cedar Ravine Road to the south. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earthmovers, material handlers, and portable generators, can reach high levels. Although noise ranges are generally similar for all construction phases, the ground clearing and excavation phase tends to involve the most heavy-duty equipment having a higher noise-generation potential.

Typical noise levels generated by construction equipment are shown in **Table 4.9-5**. Operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Other primary sources of acoustical disturbance would be due to random incidents, which would last less than 1 minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts).

TABLE 4.9-5
TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Typical Noise Level (dBA) at 50 Feet from Source	
	L_{max}	L_{eq}
Backhoe/Front End Loader	80	76
Compactor (ground)	80	73
Concrete Mixer Truck	85	81
Concrete Mixer (vibratory)	80	73
Concrete Pump Truck	82	75
Concrete Saw	90	83
Crane	85	77
Dozer/Grader/Excavator/Scraper	85	81
Generator	82	79
Gradall	85	81

Equipment	Typical Noise Level (dBA) at 50 Feet from Source	
	L_{max}	L_{eq}
Jackhammer	85	78
Impact Hammer/Hoe Ram (mounted)	90	83
Pavement Scarifier/Roller	85	78
Paver	85	82
Pneumatic Tools	85	82
Pumps	77	74
Truck (dump/flat bed)	84	80

Source: FTA 2006

As shown in **Table 4.9-5**, noise levels associated with individual construction equipment used for typical construction projects can reach levels of up to approximately 90 dBA L_{max} (FTA 2006). However, construction noise may not be noticeable, given existing traffic noise associated with US 50.

The All-Way Stop and Signal options would involve the same bridge replacement, intersection and roadway realignment, and parking lot reconfiguration. The anticipated construction equipment would include but is not limited to the following equipment types: backhoe, Bobcat, bulldozer/loader, dump truck, haul truck, excavator, grader, roller/compactor, asphalt grinder, asphalt paver, water truck, concrete truck, trucks with seed sprayers, and service vehicles. Noise levels associated with individual construction equipment used for typical construction projects can reach levels of up to approximately 90 dBA L_{max} at 50 feet. Due to the temporary nature of construction, coupled with the fact that construction-related noise is a generally accepted reality in urbanized environments, the City of Placerville does not promulgate standards or limits for construction-generated noise.

Nonetheless, there are residences directly adjacent to the construction boundary to the south of the project site, and while it is acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to the sensitive receptors, these residences would be subject to temporary construction noise potentially reaching beyond 90 dBA L_{max}. This is a **potentially significant** impact.

Mitigation Measures

MM 4.9.1 The project improvement plans shall include the following requirements for construction activities:

- Construction contracts must specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other State-required noise attenuation devices.

- A sign, legible at a distance of 50 feet, shall be posted at the project construction site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign shall indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator will be identified to address construction noise concerns

received. The coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the disturbance coordinator shall notify the City within 24 hours of the complaint and determine the cause of the noise complaint (starting too early, malfunctioning muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the City. All signs posted at the construction site shall include the contact name and the telephone number for the noise disturbance coordinator.

- Identification of construction noise reduction methods. These reduction methods may include shutting off idling equipment after 5 minutes, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and using electric air compressors and similar power tools.

- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

- Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to the daytime hours between 7 a.m. and 7 p.m., Monday through Friday and between 8 a.m. and 5 p.m. on Saturday, and shall be prohibited on Sunday and federal/state-recognized holidays unless approved in advance by the City if required to meet project schedule.

Timing/Implementation: *Throughout all stages of construction*

Monitoring/Enforcement: *City of Placerville Development Services Department, Engineering Division*

With implementation of mitigation measure **MM 4.9.1**, construction activities would be limited to the daytime hours. Implementation of the proposed mitigation measures, including use of mufflers and shielding of equipment, would reduce construction-generated noise levels by approximately 10 dBA (EPA 1971). With mitigation, construction noise would not be anticipated to result in substantial increases in sleep disruption and levels of annoyance to occupants of nearby residential dwellings. Because construction activities would be short term, this impact would be considered **less than significant**.

Short-Term Construction Groundborne Vibration (Standard of Significance 2)

Impact 4.9.2 Construction of the proposed project would be a short-term source of groundborne vibration. This impact is considered **potentially significant**.

Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with short-term, construction-related activities. would involve the use of, but not limited to, heavy equipment such as backhoes, milling machines, trucks, graders, roller/compactors, asphalt grinders, and asphalt pavers. The use of this equipment could be a source of groundborne vibration.

The effects of vibration on structures has been the subject of extensive research. The Caltrans *Transportation and Construction Vibration Guidance Manual* (2013) summarizes the results of 6

studies reporting groundborne vibration that could cause structural or architectural damage to various classes of buildings and provides recommendations for thresholds to prevent damage to structures or exposure of persons to excessive construction-related vibrations (see **Table 4.9-2**).

Groundborne vibration levels associated with representative construction equipment are summarized in **Table 4.9-6**.

TABLE 4.9-6
REPRESENTATIVE VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Peak Particle Velocity at 25 Feet (inches per second)	Peak Particle Velocity at 50 Feet (inches per second)	Peak Particle Velocity at 100 Feet (inches per second)
Large vibratory roller	0.210	0.098	0.046
Large bulldozer	0.089	0.031	0.011
Loaded truck	0.076	0.026	0.009
Rock breaker	0.059	0.020	0.007
Jackhammer	0.035	0.012	0.004
Small bulldozer/tractor	0.003	0.001	0.000

Source: FTA 2006; Caltrans 2013b

The nearest residential structure to the project site is adjacent to the construction area for the section of Cedar Ravine Road that would be reconstructed south of Main Street. Based on the vibration levels presented in **Table 4.9-6**, and conservatively assuming the use of a large vibratory roller for compacting soil and asphalt, ground vibration generated by heavy-duty equipment is not estimated to exceed approximately 0.160 inches per second PPV at that location. This would be below the human response annoyance level and older residential structures damage threshold of 0.25 inches per second PPV. The use of a large vibratory roller within 15 feet of the commercial buildings immediately adjacent to the intersection improvements could result in vibration levels above the threshold of 0.5 inches per second PPV for preventing damage to modern/commercial buildings. This is a **potentially significant impact**. The use of smaller vibratory compaction methods (e.g., plate compacter) would not produce vibration levels exceeding 0.5 inches per second PPV. Groundborne vibration levels would be identical for either the All-Way Stop or the Signal options because options would require the same construction activities.

Historic structures are more susceptible to groundborne vibration than newer or modern structures, as indicated in **Table 4.6-2**. Potential vibration impacts on historic buildings adjacent to the project site are evaluated in **Impact 4.4.3** in Section 4.4, Cultural Resources, which identifies mitigation to reduce impacts.

Once construction is complete, all construction-generated groundborne vibration would cease. The proposed project would not result in activities that would increase operational sources of vibration, such as heavy truck travel, or stationary industrial sources.

Mitigation Measures

MM 4.9.2 Vibratory rollers shall not be used in dynamic mode (i.e., rolling motion only with no vibration) within 30 feet of a residential structure or within 15 feet of a

modern commercial structure. Other vibratory compaction methods such as plate compactors are acceptable.

Timing/Implementation: *Throughout all stages of construction*

Monitoring/Enforcement: *City of Placerville Development Services Department, Engineering Division*

Implementation of mitigation measure **MM 4.9.2** would ensure methods are used to minimize vibration at residential and commercial structures adjacent to the project construction area. In addition, mitigation measure **MM 4.9.1** would limit construction activities to daytime hours, so vibration that could affect residential uses would not occur at night. This would reduce construction-related groundborne vibration impacts to a **less than significant** level.

Periodic or Long-Term Increases in Ambient Noise Levels (Standards of Significance 1, 3, and 4)

Impact 4.9.3 Implementation of the proposed project would not result in substantial increases in ambient noise levels. There would be **no impact**.

The proposed project involves replacement of the existing Clay Street Bridge and realignment of Clay Street. Therefore, it does not include new land uses that would increase traffic volumes on local roadways that would, in turn, result in an increase in ambient noise levels. It is important to note that the project site is already exposed to traffic noise from US 50, which is the predominant noise source in the area.

While neither the All-Way Stop option nor the Signal option would include new land uses that would increase traffic volumes on local roadways, the average idling time per vehicle would change at several project intersections. According to the transportation analysis report (Fehr & Peers 2018) prepared for the project, both options would reduce the collective idling times experienced at the project intersections compared to conditions without the project. For instance, the collective total idling time associated with all project intersections under the no project scenario in the opening year (2018) would be 102 seconds per vehicle in the AM peak hour and 92 seconds in the PM peak hour. The collective total idling times would be reduced to 76 seconds in the AM peak hour and 74 seconds in the PM peak hour for the All-Way Stop option, and to 73 seconds in the AM peak hour and 70 seconds in the PM peak hour for the Signal option. Therefore, because both options would reduce the collective idling times, and thus noise generated from idling experienced at the project intersections compared to conditions without the project, the project would result a decrease in ambient noise levels and would not generate a substantial permanent increase in ambient noise levels during operation. There would be **no impact**.

Mitigation Measures

None required.

4.9.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for the analysis of noise impacts includes the project study intersections and surrounding vicinity.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Increases in Ambient Noise and Vibration Levels

Impact 4.9.4 Implementation of the proposed project would not result in a substantial contribution to cumulative noise or vibration levels. This impact would be **less than cumulatively considerable**.

Construction activities associated with the proposed project and cumulative projects may overlap, resulting in cumulative construction noise and vibration in the area. However, as analyzed above, construction noise and vibration impacts primarily affect the areas immediately adjacent to the construction site. Construction noise and vibration for the proposed project was determined to be less than significant following compliance with mitigation measures **MM 4.9.1** and **MM 4.9.2**. Project-level construction noise and vibration would affect local receptors and would not contribute cumulatively to construction noise and vibration in other areas of Placerville beyond the immediate vicinity of the project site. It would be a temporary, short-term source of noise and vibration only.

The proposed project does not include new land uses that would increase traffic volumes on local roadways that would, in turn, increase ambient noise levels. Both the All-Way Stop option and the Signal option would reduce idling, and thus noise generated by idling vehicles, at the majority of project intersections compared to conditions without the project and therefore would not result in a substantial permanent increase in ambient noise levels during operation. This impact is **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

Caltrans (California Department of Transportation). 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol.*

———. 2013b. *Transportation- and Construction Vibration Guidance Manual.*

EPA (US Environmental Protection Agency). 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*.

Fehr & Peers. 2018. *Clay Street Bridge Replacement Project Transportation Analysis Report.*

FHWA (Federal Highway Administration). 2006. *Roadway Construction Noise Model User's Guide Final Report.*

FTA (Federal Transit Administration). 2006. *Transit Noise and Vibration Impact Assessment.*

Placerville, City of. 1990. *City of Placerville General Plan Policy Document*. As amended through 2017.

4.10 TRANSPORTATION AND CIRCULATION

This section describes the transportation and circulation conditions in the area surrounding the project site and identifies transportation impacts associated with development of the proposed project. The analysis in this section incorporates the results of a transportation analysis report prepared by Fehr & Peers (2018) and included as **Appendix D**.

4.10.1 EXISTING SETTING

The project site is located at the east end of downtown Placerville, south of US Highway 50 (US 50) and includes the Clay Street Bridge over Hangtown Creek, the Ivy House parking lot, Clay Street, and the intersections of Main Street, Cedar Ravine Road, and Clay Street.

ROADWAY SYSTEM

Study Intersections

The study intersections evaluated in the traffic analysis for the roadway network within the project site and surrounding area are listed below and shown in **Figure 4.10-1.**

1) US 50/Bedford Avenue
2) Bedford Avenue/Main Street
3) Clay Street/Main Street
4) Cedar Ravine Road/Main Street
5) Cedar Ravine Road/Pacific Street

The first study intersection is one of three signalized intersections on US 50 in Placerville. The other study intersections have stop control. The Bedford Avenue and Cedar Ravine Road intersections on Main Street have all-way stop control. The other two study intersections have stop signs only for the minor street approaches (Clay Street and Pacific Street, respectively), and the other approaches are uncontrolled.

Intersection Operations Level of Service

Level of service (LOS) is a qualitative measure describing the operating condition for vehicles at intersections. Six levels of service, A through F, represent driving conditions from best to worst, respectively. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion with stop-and-go conditions. For this analysis, intersections operating over capacity (LOS F) are considered to have unacceptable operations.

The level of service rating for an intersection is based on the average control delay expressed in seconds per vehicle. For signal-controlled and all-way stop-controlled intersections, level of service is based on the average control delay experienced on all approaches and movements. At two-way or side-street stop-controlled intersections, intersection level of service is assigned using the highest delay for any turning movement rather than for the intersection as a whole. If an approach consists of a single lane from which multiple movements can be made, the level of service is based on the average control delay for all movements from that approach. The criteria for the individual levels of service are listed in **Table 4.10-1**.

TABLE 4.10-1
LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS IN THE STUDY AREA

Level of Service	Average Control Delay per Vehicle (seconds)	Description
A	≤10.0	Little or No Delay
B	10.1 to 15.0	Short Traffic Delays
C	15.1 to 25.0	Average Traffic Delays
D	25.1 to 35.0	Long Traffic Delays
E	35.1 to 50.0	Very Long Traffic Delays
F	>50.0	Extreme Traffic Delays with Intersection Capacity Exceeded

Source: Fehr & Peers 2018

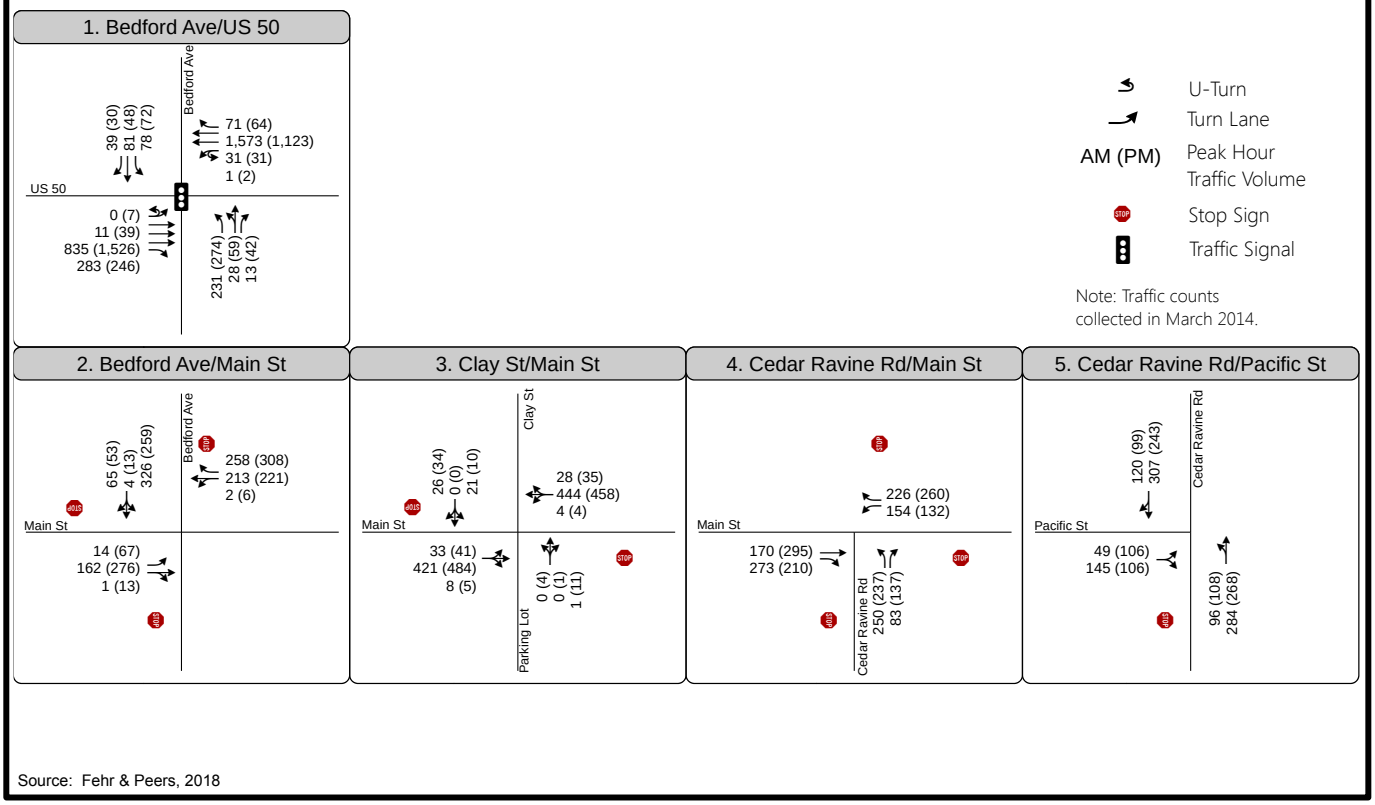
The volumes of motor vehicles were counted at the study intersections during the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods on a typical weekday in March 2014. Traffic volumes were determined using these counts, and this data was used to determine study intersection delay and level of service. The study intersections and their associated traffic counts under existing conditions are depicted in **Figure 4.10-1,** and intersection levels of service are listed in **Table 4.10-2.** An eastbound right-turn lane has been installed at the intersection of Pacific Street and Cedar Ravine Road since the collection of traffic counts and field observations in March 2014. This additional lane is included in the existing plus project and cumulative condition scenarios.

During existing conditions, the US 50/Bedford Avenue intersection operates at LOS C during the AM and PM peak hours. High traffic demands on US 50 are controlled by adjacent signals to the west, particularly during the PM peak hour, when signal operations upstream at Spring Street constrain the traffic demand on the eastbound US 50 approach to Bedford Avenue. As a result, the average delay on the high-volume US 50 approaches is low, resulting in overall LOS C conditions.

The remaining study intersections operate at LOS C or better during peak hours, with one exception. The Pacific Street/Cedar Ravine Road intersection is at LOS D during the AM peak hour due to traffic queues on northbound Cedar Ravine Road extending back from the Main Street intersections, which results in high delay for the eastbound left turn movement.

The peak-hour traffic volumes at unsignalized intersections were also evaluated to determine if the peak-hour volume warrant for traffic signal installation has been met under existing conditions. As shown in **Table 4.10-2**, the Main Street/Bedford Avenue intersection satisfies the signal warrant during the PM peak hour. However, this condition does not necessarily indicate that a signal should be installed. Other factors beyond volume and capacity can supersede the traffic warrant, including intersection safety and ancillary traffic impacts.

T:_CS\Work\Placerville, City of\Clay Street\Figures



Source: Fehr & Peers, 2018

Not To Scale

FIGURE 4.10-1

Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions

Michael Baker INTERNATIONAL

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TABLE 4.10-2
PEAK-HOUR INTERSECTION LEVEL OF SERVICE – EXISTING CONDITIONS

Intersection[1]	Control	AM Peak Hour			PM Peak Hour		
		LOS	Delay[1]	Signal Warrant?[2]	LOS	Delay[1]	Signal Warrant?[2]
1. US 50/Bedford Ave	Signal	C	26	—	C	21	—
2. Main St/Bedford Ave	All-Way Stop	C	18	No	C	22	Yes
3. Main St/Clay St	Side-Street Stop	C	20	No	B	15	No
4. Main St/Cedar Ravine Rd	All-Way Stop	A	8	No	B	10	No
5. Pacific St/Cedar Ravine Rd	Side-Street Stop	D	30	No	C	24	No

Source: Fehr & Peers 2018

Notes:

1. *Average intersection delay, in seconds per vehicle, reported for all-way stop intersections. Worst movement delay, in seconds per vehicle, reported for side-street stop streets.*
2. *Indicates if the peak-hour volume warrant from the California Manual of Uniform Traffic Control Devices (2014) is met. Satisfying the peak-hour warrant should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of signal warrants should be investigated based on field-measured traffic data and a thorough study of traffic and roadway conditions.*

OBSERVED CONDITIONS

Given the close proximity of the Clay Street and Cedar Ravine Road intersections, traffic queues from the three-way stop control at Main Street/Cedar Ravine Road routinely extend through the Clay Street intersection during peak times, limiting and inducing delay to eastbound Main Street travelers attempting to turn left onto Clay Street. This restriction effectively blocks southbound Clay Street travelers from turning east onto Main Street as well. As a result, southbound vehicles on Clay Street have few opportunities to turn left onto Main Street during the PM peak period. In addition, some motorists wishing to travel northbound on Clay Street cut through the Ivy House parking lot to avoid congestion on Main Street.

PEDESTRIAN, BICYCLE, AND TRANSIT FACILITIES

Figure 4.10-2 shows the bicycle, pedestrian, and transit facilities in the project study area. No on-street (Class II) bicycle lanes are marked in the study area. However, the El Dorado Trail, a Class I separated bikeway, starts at Bedford Street and heads east, parallel to and just south of US 50.

Current pedestrian facilities in the study area include sidewalks, crosswalks, and a pedestrian overcrossing. Sidewalks are provided in the study area with the following three exceptions:

- West side of Bedford Avenue between US 50 and Main Street
- East side of Clay Street between US 50 and Main Street
- Approximately midblock on the east side of Cedar Ravine Road between Main Street and Pacific Street

The volume of pedestrians and bicycles was counted at the study intersections during the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods on a typical weekday in March 2014. During peak hours, bicycle volume was low (less than 4 bicycles per hour on Main

Street), but the pedestrian volume was relatively high (up to 25 pedestrians per hour crossing at Main Street/Clay Street).

Pedestrians are restricted from crossing at some study intersections. At US 50/Bedford Avenue, pedestrians are prohibited from crossing; no crosswalks are provided. Instead, a pedestrian overcrossing of US 50 is provided just east of the intersection. At Bedford Avenue/Main Street, no crosswalk is provided on the east side of the intersection although there are crosswalks on the other approaches and a midblock crosswalk exists about 350 feet to the east. No crosswalks are provided immediately at the Main Street/Cedar Ravine Road intersection. Instead, the crossings are marked 50 to 100 feet upstream of the intersection. On the south leg, the upstream location is more convenient for pedestrian travel since it lines up with the sidewalk on Main Street and the crossing distance is shorter.

El Dorado Transit's Placerville eastbound and westbound routes offer hourly service weekdays from 7:00 AM to 5:00 PM through the study area. The eastbound route travels south on Bedford Avenue and then turns right onto Main Street. Later in the route, the bus turns left from Pacific Street to northbound Cedar Ravine Road and then turns right onto Main Street. The westbound route follows westbound Main Street through the project area. The Saturday Express route offers hourly service on Saturdays from 9:00 AM to 5:00 PM in both directions along Main Street. No transit stops are located adjacent to the Clay Street and Cedar Ravine Road intersections at Main Street.

PARKING FACILITIES

The project site includes the Ivy House parking lot, and the proposed project would modify its parking supply. To determine the project's effect on parking supply, a survey of area parking facilities was conducted in March and September 2014 within approximately one-quarter mile of the project site. The surveyed parking areas or lots are shown in **Figure 4.10-3**. For each parking area, the number of reserved (for vehicles displaying a disabled placard) and total parking spaces are listed. In addition to on-street parking areas, the following public parking lots are provided: Ivy House (north of the Main Street/Cedar Ravine Road intersection), Mooney (southwest of the Main Street/Clay Street intersection), and Town Hall (adjacent to the Town Hall about midway between Bedford Avenue and Clay Street on Main Street). The remaining lots are signed for customer and employee use.

The occupancy of each lot was surveyed in 15-minute intervals during typical weekday afternoon (3:00 to 7:00 PM) and weekend midday (11:00 AM to 3:00 PM) periods in March 2014. For the typical midweek day (Wednesday) surveyed, the Ivy House parking lot had a maximum of 42 of the total 72 spaces occupied. All surveyed parking areas had less than 75 percent peak occupancy during the afternoon/evening period. A follow-up parking survey was conducted during the morning of September 6, 2014, to determine parking demand on a Saturday while the Farmers Market was operating in the Ivy House parking lot.

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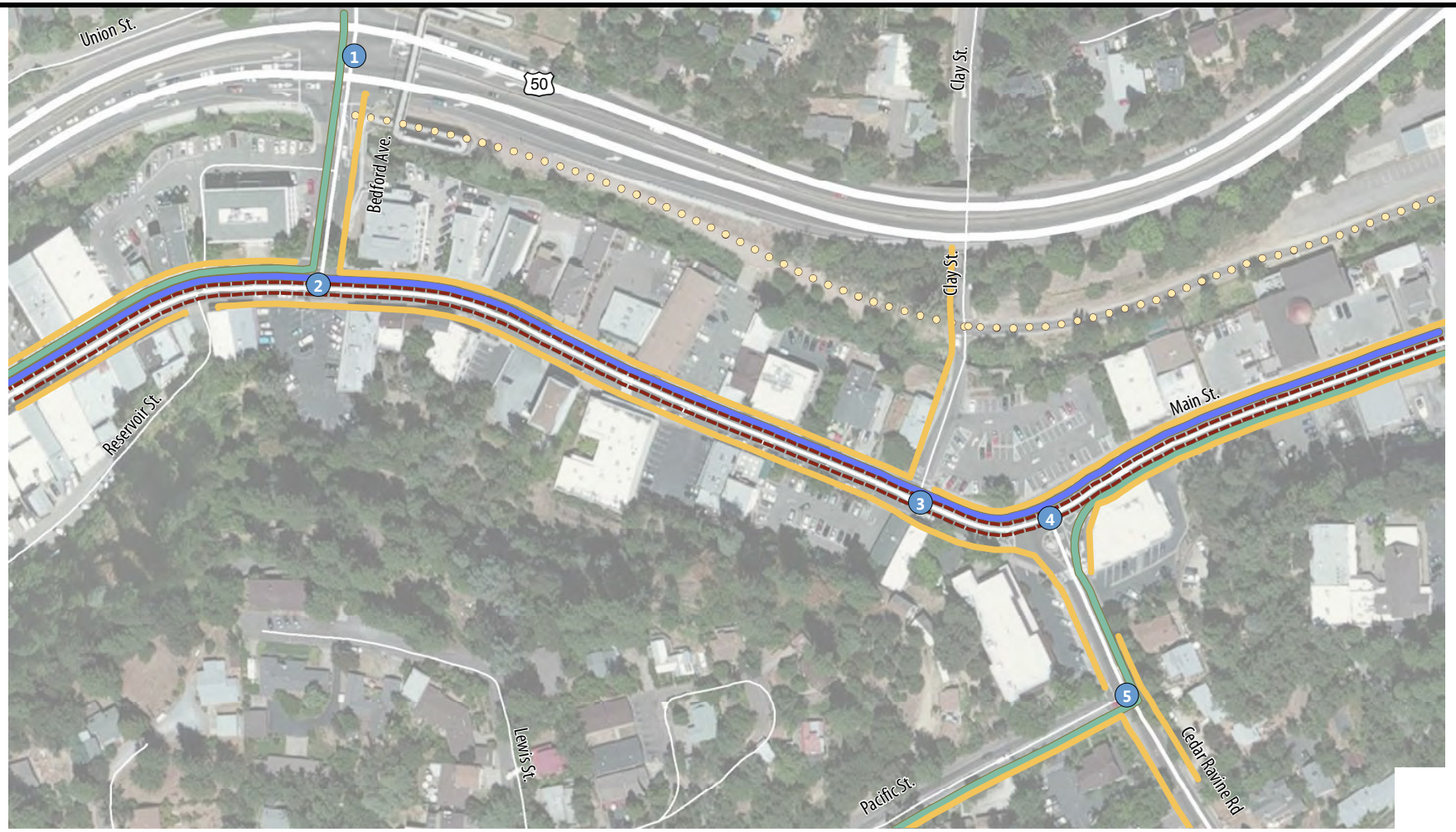

Source: Fehr & Peers, 2018

Not To Scale

FIGURE 4.10-2
Bicycle, Pedestrian, and Transit Facilities

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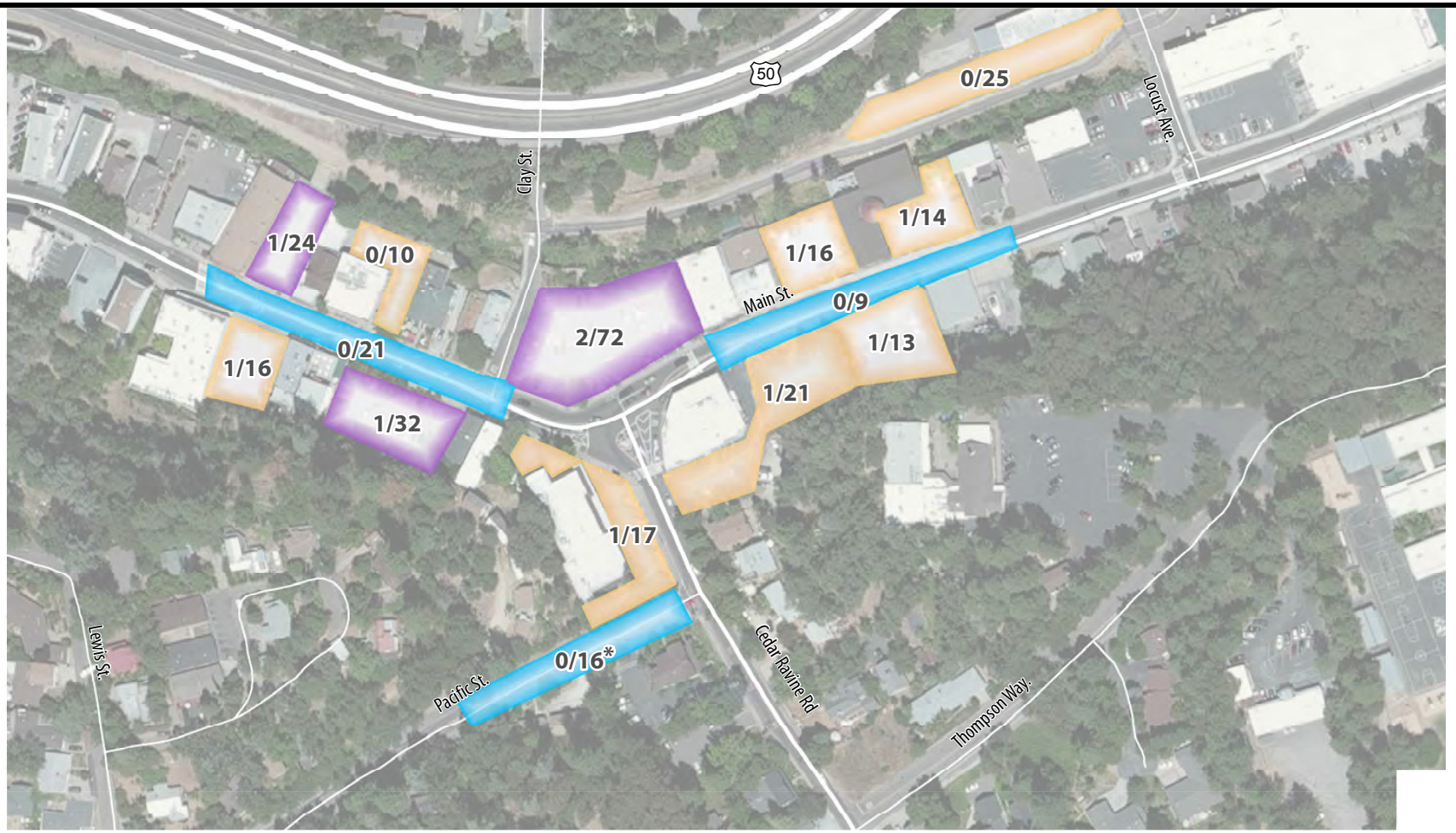

Public Lot

Private Lot

On-Street Parking

5/25 Handicap/Unrestricted Spaces

*Parking spaces were reduced with the installation of a left turn pocket in 2015.

Source: Fehr & Peers, 2018

Not To Scale

FIGURE 4.10-3

Parking Facilities - Space Available

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In March 2014, the Saturday peak occupancy at the Ivy House parking lot was lower than midweek, with 31 of 72 spaces occupied. Two parking lots and the on-street parking areas along Main Street west of Clay Street had peak utilizations of greater than 50 percent. The lot west of the Independent Restaurant and Bar (629 Main Street) had the highest utilization: 88 percent, or 15 of 17 spaces occupied.

The September 2014 date represents a higher demand and lower supply due to the Farmers Market operating in the Ivy House parking lot. As a result, parking spaces were completely occupied (100 percent) for the on-street parking areas along Main Street and at the Mooney and Town Hall public lots. The private lot on the southwest corner of the Main Street/Cedar Ravine Road intersection also had a high utilization.

SAFETY

Table 4.10-3 lists crashes reported within 100 feet of the Clay Street and Cedar Ravine Road intersections with Main Street (data supplied by the City of Placerville for the 11-year period from January 2004 through December 2015). **Figure 4.10-4** shows the reported location of these crashes and includes nearby crashes up to 200 feet from the intersections. A total of 23 crashes were reported in the 11-year period. The most prevalent crash type is a hit object crash (seven), followed by sideswipe and rear-end crashes. Of the 23 crashes, two involved an injury (head-on and auto-pedestrian collisions), and the rest involved property damage only.

Four crashes (three of them sideswipes) involved parking maneuvers. At the Clay Street intersection, sideswipe and rear-end collisions are more frequent on Clay Street and are likely related to the side-street stop control where drivers on Main Street do not expect to stop. At Cedar Ravine Road, the most frequent collision type is hit object, which is related to the Druid Monument's location in the roadway.

TABLE 4.10-3
VEHICLE CRASHES BY TYPE

Intersections	Head On	Side Swipe	Rear End	Broad-side	Hit Object	Auto-Ped	Other	Total
3. Main St/Clay St	0	3	4	0	2	0	1	10
4. Main St/Cedar Ravine Rd	1	2	1	3	5	1	0	13

Source: Fehr & Peers 2018

4.10.2 REGULATORY FRAMEWORK

STATE

California Department of Transportation Highway 50 Corridor System Management Plan

Corridor System Management Plans are long-term planning documents produced by the California Department of Transportation (Caltrans) for selected state highways. The plans document existing and planned travel demand by mode and the supporting infrastructure on the highway and adjacent roadways. The existing, concept, and ultimate facility for US 50 at Bedford Avenue is a four-lane expressway. The current configuration is expected to remain due to topographical and environmental constraints.

REGIONAL

Metropolitan Transportation Plan/Sustainable Communities Strategy

Regional transportation planning in western El Dorado County is the responsibility of the Sacramento Area Council of Governments (SACOG). SACOG prepares the Metropolitan Transportation Plan/Sustainable Communities Strategy in conjunction with federally mandated long-range transportation planning for the six-county area that includes El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties. The 2016 MTP/SCS identifies $35 billion in funding to operate, maintain, and expand roadway, bicycle, pedestrian, and transit facilities throughout the region. The proposed project is included as a line item (ELD 19257) (SACOG 2016).

Sacramento-Placerville Transportation Corridor Master Plan

The Sacramento-Placerville Transportation Corridor Master Plan outlines a strategy for interim and long-term uses for the former Sacramento-Placerville railroad corridor (El Dorado County Department of Transportation 2003). This corridor was purchased by the Sacramento-Placerville Transportation Corridor Joint Powers Authority, which comprises representatives of El Dorado County, Sacramento County, the Sacramento Regional Transit District, and the City of Folsom. The plan identifies multiple possible uses such as excursion trains, trails, and utility easements.

LOCAL

El Dorado County Transportation Commission

The El Dorado County Transportation Commission (EDCTC) was designated as the Regional Transportation Planning Agency for El Dorado County on July 23, 1975. As the designated agency, the commission serves as the planning and programming authority for transportation projects on the western slope of El Dorado County. The EDCTC consists of three members of the El Dorado County Board of Supervisors and three members of the Placerville City Council. The Caltrans District 3 director and a City of South Lake Tahoe council member serve as ex-officio members.

El Dorado County Long Range Transit Plan

The EDCTC's (2003) El Dorado County Long Range Transit Plan outlines long-term planning steps required in order for public transit service in the county to respond to continued growth of the county's population. The plan recommends a focus on commuters traveling to Sacramento County, as well as key markets such as elderly/disabled services and activity center shuttles. The county's transit system serves Placerville. The downtown historic area is identified in the County's General Plan Transportation and Circulation Element as one of many attractions in El Dorado County responsible for most of the travel demand on the transportation system in the county.

City of Placerville Non-Motorized Transportation Plan

The City adopted the final Non-Motorized Transportation Plan in October 2010 (EDCTC 2010). This plan was created to address several issues related to non-motorized transportation. The plan is meant to provide a blueprint for the development of an ultimate bikeway system through the city, as well as providing for compliance with the California Streets and Highways Code (Sections 890–894.2). In addition, the plan's Pedestrian Element is meant to identify some of the missing links in the city's pedestrian system and includes pedestrian-friendly and traffic-calming concepts that can be utilized to improve the conditions of pedestrian travel in the city.

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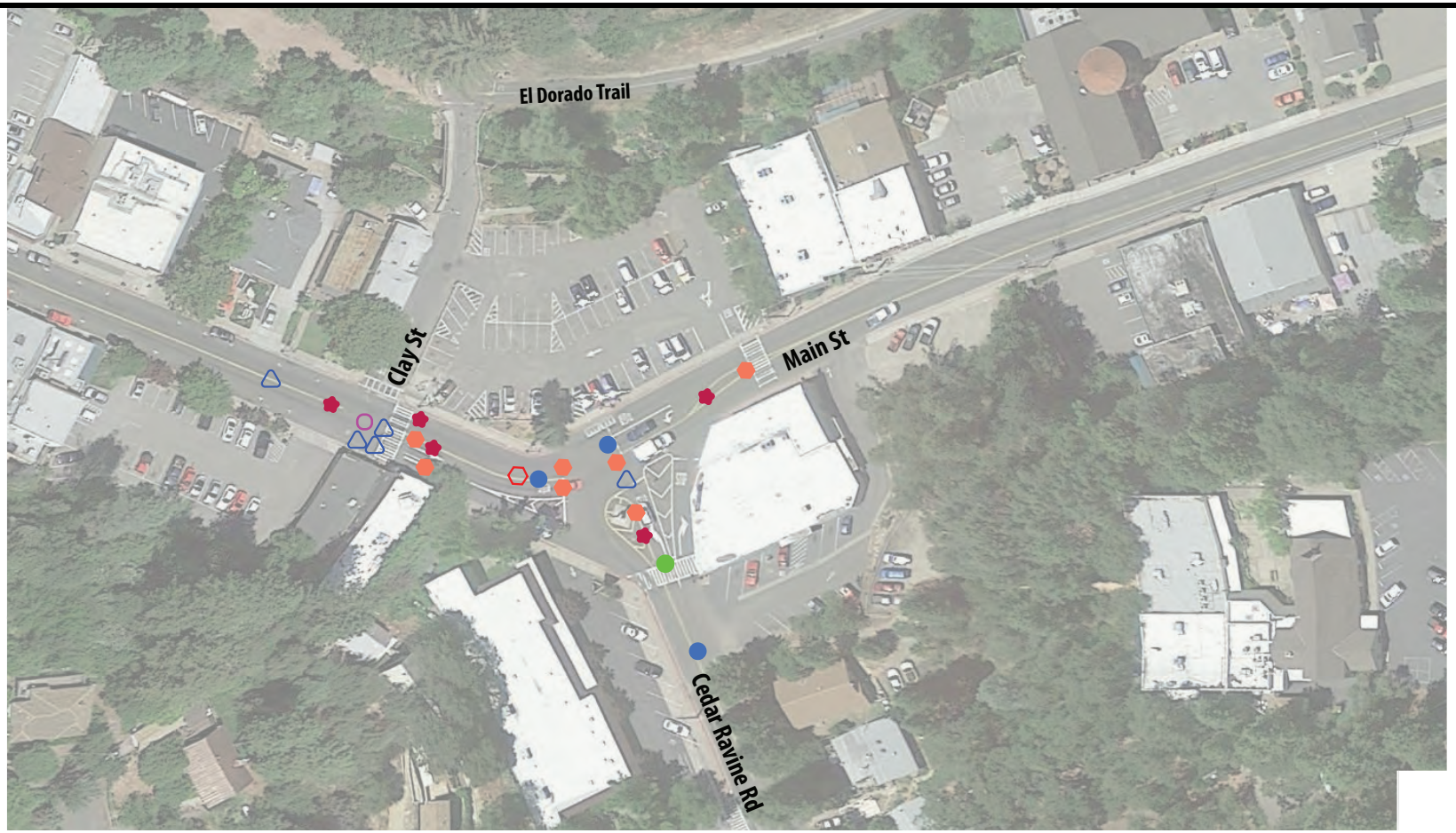

Collision Type
- Auto-Pedestrian
- Hit Object
- Sideswipe
- Other
- Rear End
- Broadside
- Head on

Source: Fehr & Peers, 2018

Not To Scale

FIGURE 4.10-4
Collision History

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City of Placerville Pedestrian Circulation Plan

The City adopted the Pedestrian Circulation Plan on January 23, 2007 (EDCTC 2007). The Pedestrian Circulation Plan includes priorities and options for funding a subsequent Pedestrian Circulation Improvement Program for the ultimate construction and maintenance of an extensive sidewalk network throughout the city. In order to improve the sidewalk system in Placerville, the City has increased the number of funding options to generate sufficient revenue to repair existing sidewalks. The City uses the following three methods to fund sidewalk improvements:

1) Property-owner maintenance of existing sidewalks – Per City Code, maintenance of existing sidewalks is the responsibility of the adjacent property owners.

2) Deferred frontage improvement agreements – Improvement or construction of sidewalks is "deferred" until adjacent properties enter into agreements or construct sidewalks.

3) Conditions on development projects – New development is required to install sidewalks within the development area as a condition of project approval. However, in the past, this condition has been waived on many development projects.

City of Placerville General Plan

Section III (Transportation Element) of the City's General Plan includes policies that provide guidance for and promote the development of a circulation system that is beneficial for all modes of transportation, correlated with the planned land use pattern in the city, and facilitates easy access through and within Placerville. Section I (Land Use) and Section VII (Community Design) also contain policies regarding pedestrian safety and parking.

Applicable policies and the proposed project's consistency with those policies are described in **Table 4.10-4**.

TABLE 4.10-4
PROJECT CONSISTENCY WITH GENERAL PLAN TRANSPORTATION ELEMENT POLICIES

Policies	Consistent?	Analysis
Section I. Policy C.9.c: Provide for adequate parking and vehicular access.	Yes	The proposed project would result in a loss of approximately 16 spaces at the Ivy House parking lot, owned by the City. The City has other existing locations, including the Locust Avenue parking lot approximately 400 feet from Clay Street with access along El Dorado Trail where replacement parking (and excess capacity) would be available, along with other parking lots in the city.
Section III. Policy A.1: The City shall strive to attain the highest possible traffic levels of service consistent with the financial resources available and within the limits of technical feasibility.	Yes	The proposed project would improve traffic circulation on at the intersections of Main Street, Cedar Ravine Road, and Clay Street.

Policies	Consistent?	Analysis
Section III. Policy A.2: Streets shall be dedicated, widened, extended, and constructed according to the City's Master Street Plan and the street cross-sections shown in the Street Standards figures in Part I [of the Master Street Plan]. Rights-of-way shall be reserved according to the specifications of the Master Street Plan. Deviations from the street cross-sections shown in Part I shall be allowed based upon a determination by the Public Works Director that safe and adequate public access and circulation are preserved by such deviations.	Yes	The proposed project involves bridge replacement and improvements to existing roadway facilities. All project components will be constructed in accordance with the requirements of the City's Master Street Plan.
Section III. Policy A.9: The City shall aggressively pursue state and federal funding to implement the City's Circulation Plan.	Yes	Funding for the proposed project has been programmed from multiple federal, state, and local sources including the Highway Bridge Program (HBP), Regional Surface Transportation Program (RSTP) Exchange, and local developer Traffic Impact Mitigation (TIM) fees.
Section III. Policy B.2: In the development of new projects, the City shall give special attention to maintaining adequate corner-sight distances at city street intersections and at intersections of city streets and private access drives and roadways.	Yes	The proposed project design has been designed to meet the City's street and parking standards. Additionally, the proposed project will provide a safer facility for vehicles and pedestrians.
Section III. Policy F.1: Pedestrian circulation needs and convenience in the downtown shall be given priority over the needs of through traffic.	Yes	The proposed project would provide a safer facility for vehicles and pedestrians.
Section VII. Policy C.9: The City shall promote design concepts which will contribute to better pedestrian convenience and safety.	Yes	The project design includes pedestrian crosswalks at the new intersection and new pedestrian facilities along Clay Street and the new bridge, and will fill a gap in the sidewalk along Cedar Ravine Road, which will improve safety and provide more convenient access.

As part of the General Plan, the Circulation Plan Diagram is the roadway-specific map that illustrates the official classification of existing and proposed streets and roads within the Placerville General Plan area. The General Plan classifies Main Street and Cedar Ravine Road as minor arterials and Clay Street as a local street.

According to the General Plan, the City defines minor arterials and local streets as follows:

- Minor Arterial – A continuous street located to provide direct route between, but not through separate neighborhoods. Minor arterials should be planned to discourage through traffic in residential neighborhoods and adjacent to schools.

- Local Street – A street, other than a collector or arterial, providing access to abutting property and designed to discourage through traffic.

City of Placerville Main Street Streetscape Design Development Plan

The City's (2006) Main Street Streetscape Design Development Plan presents community design ideas for Main Street, as well as cost estimates and implementation guidance. The plan recommends the adoption of a roundabout for the realignment of Clay Street as set forth in the Placerville Streetscape Concept Design (pp. II-18 through II-20; III-5). Due to public opposition, the roundabout was removed as an alternative for this project on July 8, 2014, by City Council resolution and subsequently by the passage of Measure K.

4.10.3 PROJECT IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. According to CEQA Guidelines Appendix G, transportation and circulation impacts are considered significant if implementation of the project would result in any of the following conditions:

1) 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.

2) Conflict with an applicable congestion management program, including but not limited to level of service standards established by the county congestion management agency for designated roads or highways.

3) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

4) Result in inadequate emergency access.

5) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

In addition, the analysis in this section evaluates the proposed project's impacts on parking facilities because the project would involve reconfiguration of the Ivy House parking lot. A parking impact would be considered significant impact implementation of the project would:

6) Result in the need for replacement parking at alternate locations, the construction of which could result in environmental impacts.

METHODOLOGY

The analysis contained in this section is based on the transportation analysis report prepared by Fehr & Peers (2018), which is included in **Appendix D**.

To determine intersection delay and level of service, Synchro/SimTraffic, a microsimulation analysis tool that models the interaction of vehicles, traffic control, and lane geometry, was utilized. The traffic volumes (vehicles, bicycles, and pedestrians), traffic control (signal or stop sign), and roadway configuration (number and type of turning lanes) was entered into a

simulation model that accounts for interaction between adjacent intersections, between queues in turn pockets and through lanes, and between vehicles and pedestrians. This methodology is consistent with the intersection analysis procedures in the Transportation Research Board's Highway Capacity Manual 2010.

Based on the intersection count data, the peak-hour factor for existing conditions was set to 0.89 for the AM peak hour and 0.93 for the PM peak hour. Under cumulative conditions, the peak-hour factor is assumed to be 0.95 to reflect the growth in traffic volume. The truck percentage is assumed to be 3 percent for the AM peak hour and 2 percent for the PM peak hour under all scenarios. These are default values recommended in the Highway Capacity Manual. The peak-hour traffic volumes at the proposed Main Street/Cedar Ravine Road/Clay Street intersection were evaluated, and the peak-hour volume warrant for the traffic signal installation was not met.

The eastbound right-turn lane at the Pacific Street/Cedar Ravine Road intersection installed in March 2014 is included in the existing plus project and cumulative condition scenarios. No other widening improvements were assumed at the study intersections when analyzing cumulative conditions.

Cumulative Analysis

The cumulative year traffic volumes were developed using the El Dorado County Travel Demand Forecasting Model (Version EDC_CAT_03_2014). A detailed subarea model was prepared for the project study area by adding roadway links, adjusting how traffic accesses the network, and verifying land use data. The land use growth included in the model was found to be consistent with recently approved tentative maps including Cottonwood Park Phases 4 and 6, Adams Way, and Country Club/Cedar Ravine rezone sites. Consistent with the 2010 California Regional Transportation Plan Guidelines, the subarea model was validated to existing traffic volumes. The validated model was used to generate traffic volumes for cumulative conditions. The overall traffic growth rate from the travel demand forecasting model, approximately 2 percent per year, is consistent with growth in population (1 percent per year) and employment (4 percent per year) planned for the study area.

The All-Way Stop and Signal options have the same roadway connections, and both options assume realignment of Clay Street. However, the change in travel distance is not significant enough to shift travel routes for average travel patterns. As a result, the same set of AM and PM peak-hour travel demand forecasts were used to analyze the two intersection controls under cumulative year conditions.

The peak-hour signal warrant was applied to the unsignalized study intersections under cumulative conditions. The peak-hour signal warrant is met for all study intersections except the Main Street/Clay Street intersection under cumulative no project conditions (see **Appendix D**, Table 6). Initial intersection analysis showed very high delay with the existing stop control at the intersections where the signal warrant was met. As a result, signal control is assumed for the study intersections at Main Street/Bedford Avenue and Pacific Street/Cedar Ravine Road under cumulative plus project conditions. Otherwise, without assuming those signals in the traffic model for cumulative conditions, the analysis would be rendered inconclusive because poor operations at these intersections would cause vehicle queue spillback through adjacent intersections that would overwhelm project area traffic operations, and the Main Street/Cedar Ravine Road/Clay Street intersection would operate unacceptably in the traffic model due to vehicle queue spillback from these intersections.

PROJECT IMPACTS AND MITIGATION MEASURES

Intersection Operations (Standards of Significance 1 and 2)

Impact 4.10.1 The proposed project, in combination with existing conditions on study roadways, would not result in a significant increase in traffic, nor would the proposed project cause a study roadway to exhibit a level of service worse than LOS C. The impact would be **less than significant**.

The proposed project does not include land uses that would generate new trips on the local roadway system. However, in conjunction with the Clay Street Bridge replacement, Clay Street would be realigned to create a new intersection at Main Street/Cedar Ravine Road, which would change how the current Main Street/Cedar Ravine Road intersection and nearby intersections operate. The weekday AM and PM peak-hour intersection average delay and level of service of the proposed project with the two different intersection controls are summarized in **Table 4.10-5** and shown in **Figure 4.10-5**.

TABLE 4.10-5
PEAK-HOUR INTERSECTION LEVELS OF SERVICE – EXISTING PLUS PROJECT CONDITIONS

Intersection[1]	Existing Control	Existing Conditions		Existing Plus Project (All-Way Stop)		Existing Plus Project (Signal)	
		AM	PM	AM	PM	AM	PM
1. US 50/Bedford Ave	Signal	C/26	C/21	C/27	C/21	C/27	C/21
2. Main St/Bedford Ave	All-Way Stop	C/18	C/22	C/17	C/20	C/18	C/21
3. Main St/Clay St[1]	Side-Street Stop	C/20	B/15	—	—	—	—
4. Main St/Cedar Ravine Rd[1]	All-Way Stop	A/8	B/10	B/12	B/15	B/11	B/11
5. Pacific St/Cedar Ravine Rd	Side-Street Stop	D/30	C/24	C/20	C/18	C/17	C/17

Source: Fehr & Peers 2018

1. These intersections are combined as part of the proposed project, and the modified intersection operation is shown in the Existing Plus Project condition.

All-Way Stop Option

The Bedford Avenue intersections (#1 and #2) would be minimally affected by the proposed project. The level of service would remain at LOS C under existing plus project conditions, and the delay changes are negligible. With Clay Street aligned into the Main Street/Cedar Ravine Road intersection (#4), the overall delay would increase, but the resulting LOS B conditions are acceptable. The all-way stop would result in acceptable LOS C conditions. The delay reduction at the Pacific Street/Cedar Ravine Road intersection is primarily the result of the recent restriping of the Pacific Street approach to provide separate left- and right-turn lanes. The impact would be **less than significant**.

Signal Option

The Bedford Avenue intersections (#1 and #2) would be minimally affected by this option. The level of service would remain at LOS C, and the delay changes are negligible. With Clay Street aligned into the Main Street/Cedar Ravine Road intersection (#4), the overall delay would increase, but the resulting LOS B conditions are acceptable. The signal control would provide lower delay than the all-way stop control, but the level of service would remain the same.

Installing a signal at the Main Street/Cedar Ravine Road intersection would reduce queues on Cedar Ravine Road compared to the all-way stop control, which would result in lower delay at the Pacific Street intersection. This option would result in acceptable LOS C conditions. The impact would be **less than significant**.

To accommodate the Clay Street realignment, the Ivy House parking lot would be subdivided and reconfigured into two separate parking lots, as shown in **Figure 2.0-3a** and **Figure 2.0-3b** (see Section 2.0, Project Description). The lots would be owned and maintained by the City. Ingress and egress locations to the parking lots would be limited to Clay Street only; no access would be provided from Main Street. This would eliminate northbound cut-through traffic to Clay Street that currently contributes to some of the observed traffic operations and congestion.

Weekend Congestion on US 50 and Cut-Through Traffic

For weekend conditions, both the All-Way Stop option and the Signal option would be expected to have similar travel conditions as weekday conditions under existing conditions (i.e., no project). When US 50 is congested in Placerville, some drivers seek non-highway routes through the city, including Main Street and Cedar Ravine Road. For example, a westbound diversion route using Main Street, Clay Street, and Lincoln Street to travel between US 50/Mosquito Road and US 50/Bedford Avenue would have the approximately 1.7-mile route shortened by about 120 feet (0.02 mile) and a delay reduction at the Main Street/Clay Street intersection of about 2 seconds, assuming that intersection delays would be comparable to the weekday PM peak hour under existing conditions. With these small changes, the proposed project will not significantly reduce travel time on the alternate route, and the impact would be **less than significant**.

Mitigation Measures

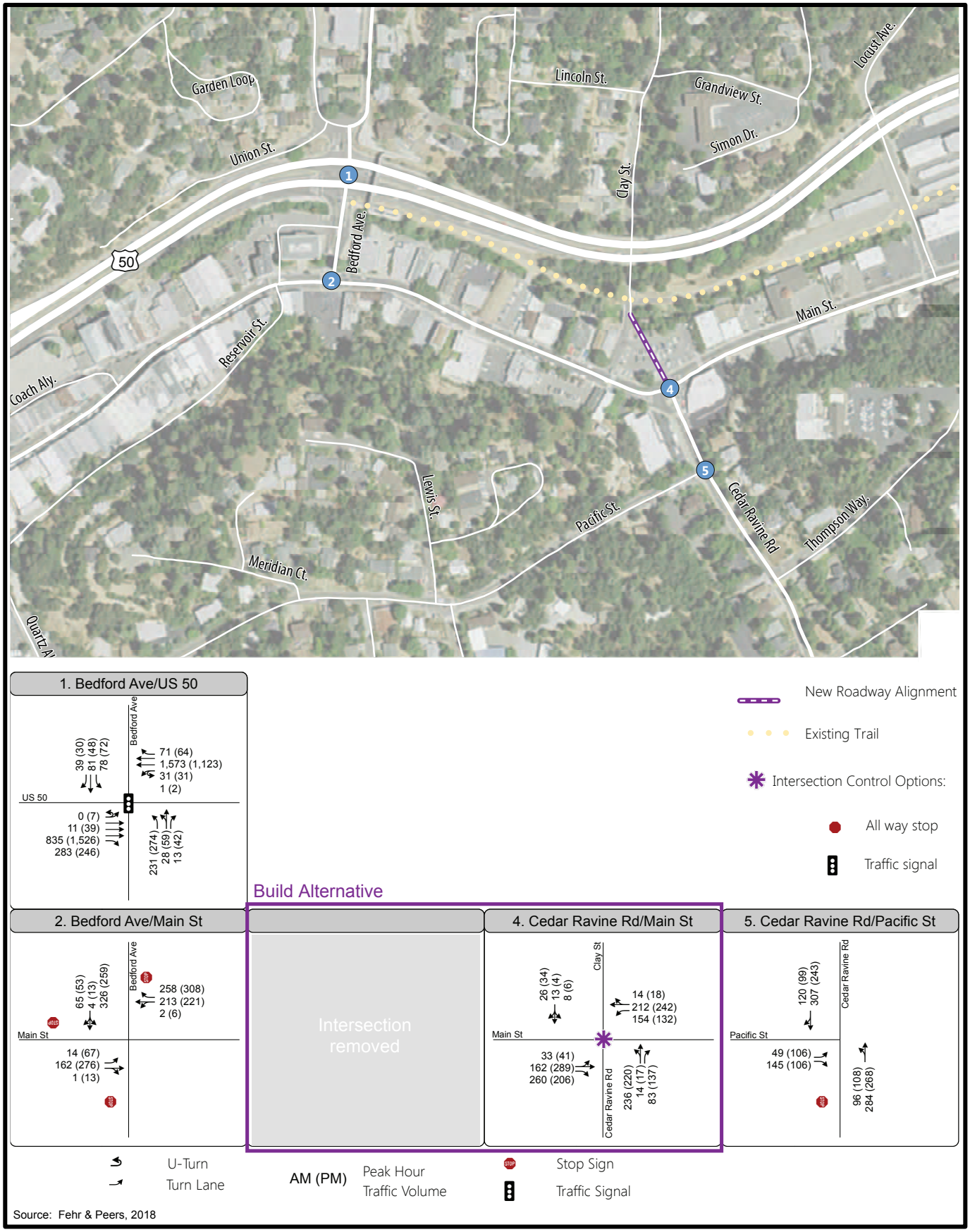
None required.

Design Hazards (Standard of Significance 3)

Impact 4.10.2 The proposed project would not increase hazards to vehicles, pedestrians, or bicyclists as a result of project improvements. This is a **less than significant** impact.

The proposed project would remove the existing bridge and replace it with a new bridge designed to current structural and geometric standards that will provide adequate, reliable, and safe service for traffic. The proposed project design has been designed to meet the City's street and parking standards. The realignment of the Clay Street intersection, adjustment of the approaches to the Main Street/Cedar Ravine Road intersection, and modification of the crosswalks have the potential to affect vehicle-vehicle and vehicle-pedestrian conflicts. In addition, the new bridge and realignment would maintain access and improve safety for vehicular, pedestrian, and bicycle traffic.

As part of the new intersection improvements, two options are being considered for intersection control: All-Way Stop and Signal. Under either option, the Druid Monument at the intersection of Cedar Ravine Road and Main Street would be relocated (depending on final design of the intersection) up to 45 feet west of its current location to a new pedestrian refuge island separating eastbound Main Street traffic and southbound Cedar Ravine Road traffic (see **Figure 2.0-3a, Figure 2.0-3b,** and **Figures 2.0-5a** through **2.0-5d** in Section 2.0, Project Description).



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Not To Scale

FIGURE 4.10-5

Peak Hour Traffic Volumes and Lane Configurations - Existing Plus Project Conditions

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All-Way Stop Option

Bringing Clay Street into the Main Street/Cedar Ravine Road intersection would reduce the potential for sideswipe and rear-end collisions compared to the existing side-street control at the existing Clay Street/Main Street intersection. Adjusting the northbound and westbound approaches at Cedar Ravine Road may help to reduce vehicle turning speed and reduce intersection conflicts. Moving the crosswalk on the east leg into the intersection may help to reduce the number of pedestrians crossing outside of crosswalks. The project design would not result in hazards such as collision risk that would pose safety problems to motorists, pedestrians, or bicycles, and the impact is **less than significant**.

Signal Option

The Signal option includes the same improvements as the All-Way Stop option, with the exception of a signal instead of a four-way stop. According to the traffic study, a traffic signal would have higher potential for broadside (due to red light violations) and rear-end collisions (sudden stops for red lights) than the All-Way Stop option. The Signal option would likely require moving the crosswalk on the south leg into the intersection. However, this could be beneficial by making pedestrians more visible to drivers and by providing a controlled crossing time with the use of pedestrian signals. The Signal option would not substantially increase safety hazards such as collision hazards compared to existing conditions, and the impact is **less than significant**.

Mitigation Measures

None required.

Emergency Access (Standard of Significance 4)

Impact 4.10.3 The proposed project would not impair emergency access by fire, police, and emergency medical equipment and personnel over the long term, but construction of the project could temporarily affect access at and/or adjacent to the project site. This impact is **potentially significant**.

The proposed project would not increase congestion at intersections and along roadways in a manner that would interfere with emergency access because it would not generate new trips. As described in Impact 4.10.1, the project would not degrade intersection operations to unacceptable conditions. The project also would not result in design hazards that could affect intersection or roadway safety and would result in an improvement over existing conditions (see Impact 4.10.2). The project would not affect operations on US 50 or its ramps.

The All-Way Stop option and the Signal option would involve the same bridge replacement and intersection and roadway improvements. Long-term impacts for both intersection control options would be identical and would be as described above.

However, construction of the bridge replacement, parking lot reconstruction, and intersection modifications have the potential to cause lane closures or narrowing, or detours, depending on the activity, in the immediate vicinity of the project site. Clay Street would be closed between Main Street and just north of the US 50 overpass. Traffic accessing Clay Street north of US 50 would be detoured via Bedford Avenue to Coleman Street or Mosquito Road to Clay Street. The total detour length is approximately 1 mile. This could affect emergency access, which is considered a **potentially significant** impact.

Mitigation Measures

MM 4.10.3 The City shall prepare and implement a Construction Traffic Management Plan for the duration of construction activities.

All construction activities shall be coordinated with the El Dorado County Fire Protection District and the City of Placerville Police Department to ensure that emergency access would be maintained. The City shall also notify El Dorado Transit of activities that could affect transit routes during construction. During construction, emergency access on public roadways shall be available at all times to maintain emergency vehicle access through the area. At no time during the construction period will the entire width of a public roadway be closed to emergency vehicle traffic. The City shall provide advance notification to residents and businesses that could be affected by the roadway improvements and ensure access to all residences and businesses that could be temporarily affected by construction activities will be provided at all times.

Timing/Implementation: *Prior to and throughout all stages of construction*

Monitoring/Enforcement: *City of Placerville Development Services Department, Engineering Division*

Implementation of mitigation measure **MM 4.10.3** would ensure that one lane remains open to traffic at all times and that any potential lane closure, narrowing, or detour is coordinated with emergency response providers in Placerville and El Dorado County. The measure will also ensure that access to temporarily affected businesses is maintained. This mitigation would reduce the impact to a **less than significant** level.

Pedestrian, Bicycle, and Transit Facilities (Standard of Significance 5)

Impact 4.10.4 The proposed project would include new bicycle lanes and sidewalks that would be consistent with the City's Non-Motorized Transportation Plan and Pedestrian Circulation Plan. This impact is considered **less than significant**.

The proposed project would provide Class II on-street bicycle lanes on Clay Street to connect the El Dorado Trail (a Class I bicycle facility) to Main Street. Sidewalks would be provided on both sides of the realigned Clay Street, consistent with City standards. These improvements would connect the sidewalk network on Main Street with the El Dorado Trail and the neighborhood north of US 50.

During construction, Clay Street would be closed between Main Street and just north of the existing bridge at the US 50 underpass. This would result in a temporary closure and/or detour at the El Dorado Trail crossing on Clay Street. However, upon completion of the project, the trail segment would be reopened, and there would be no permanent loss of this facility.

The project would extend the sidewalk south along Cedar Ravine Road to fill in the existing gap in the sidewalk network on the east side of Cedar Ravine Road between Main Street and Pacific Street, which would be a benefit of the proposed project.

The realignment of Clay Street and the bridge replacement would not permanently affect bus routes or stops or transit times in the project area. However, construction activities would result in detours, lane narrowing or closures, which could result in transit delays. Implementation of mitigation measure **MM 4.10.3** would ensure the City notifies El Dorado Transit in advance of construction so that it can provide notice to its customers.

Both the All-Way Stop option and the Signal option would include the pedestrian and bicycle facilities described above, which would represent an improvement over existing conditions. There would be no permanent adverse impacts on alternative transportation facilities, and impacts would be **less than significant**.

Mitigation Measures

None required.

Parking (Standard of Significance 6)

Impact 4.10.5 The proposed project would result in a loss of approximately 16 parking spaces at the Ivy House parking lot, but there are sufficient spaces on City property or within City right-of-way in downtown Placerville to offset this loss. This is considered a **less than significant** impact.

The proposed project would realign Clay Street through the existing Ivy House parking lot. The project would provide two new parking lots: one to the east of the realigned roadway that would expand the remaining Ivy House parking lot and one to the west that would use the former Clay Street right-of-way. The east lot would have approximately 32 spaces, and the west lot would have approximately 26 spaces. The approximately 58 spaces provided after the project is constructed would be 16 fewer than currently available at the existing lot.

In 2014, the City of Placerville acquired a parking lot on Locust Avenue adjacent to the El Dorado Trail (shown on **Figure 4.10-2**). This lot will provide approximately 25 spaces for public parking that are intended to offset the loss of spaces at the Ivy House lot. The net result of the modifications to the Ivy House lot and the availability of the Locust Avenue lot would be a gain of approximately 9 public parking spaces.

During project construction, the Ivy House parking lot would be unavailable. However, the downtown area has an adequate number of existing spaces to accommodate the temporary parking demand. The City will notify businesses of potential temporary closure and would ensure access to businesses are maintained through implementation of mitigation measure **MM 4.10.3**.

Both the All-Way Stop option and the Signal option would result in the reconfiguration of the Ivy House parking lot and loss of parking spaces. Impacts would be identical, as described above. Because replacement parking exists and would not require additional improvements, the construction of which could result in environmental effects, parking impacts would be **less than significant**.

Mitigation Measures

None required.

4.10.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative traffic analysis incorporates the growth assumptions in the El Dorado County Travel Demand Forecasting Model. The land use growth included in the model includes the recently approved tentative maps including Cottonwood Park Phases 4 and 6, Adams Way, and Country Club/Cedar Ravine rezone sites, and the Marshall Medical Marshall Center Offsite Parking and General Plan Amendment and Rezone.

The cumulative context for the analysis of traffic, pedestrian and bicycle facilities, parking facilities, safety, and emergency access impacts is limited to downtown Placerville.

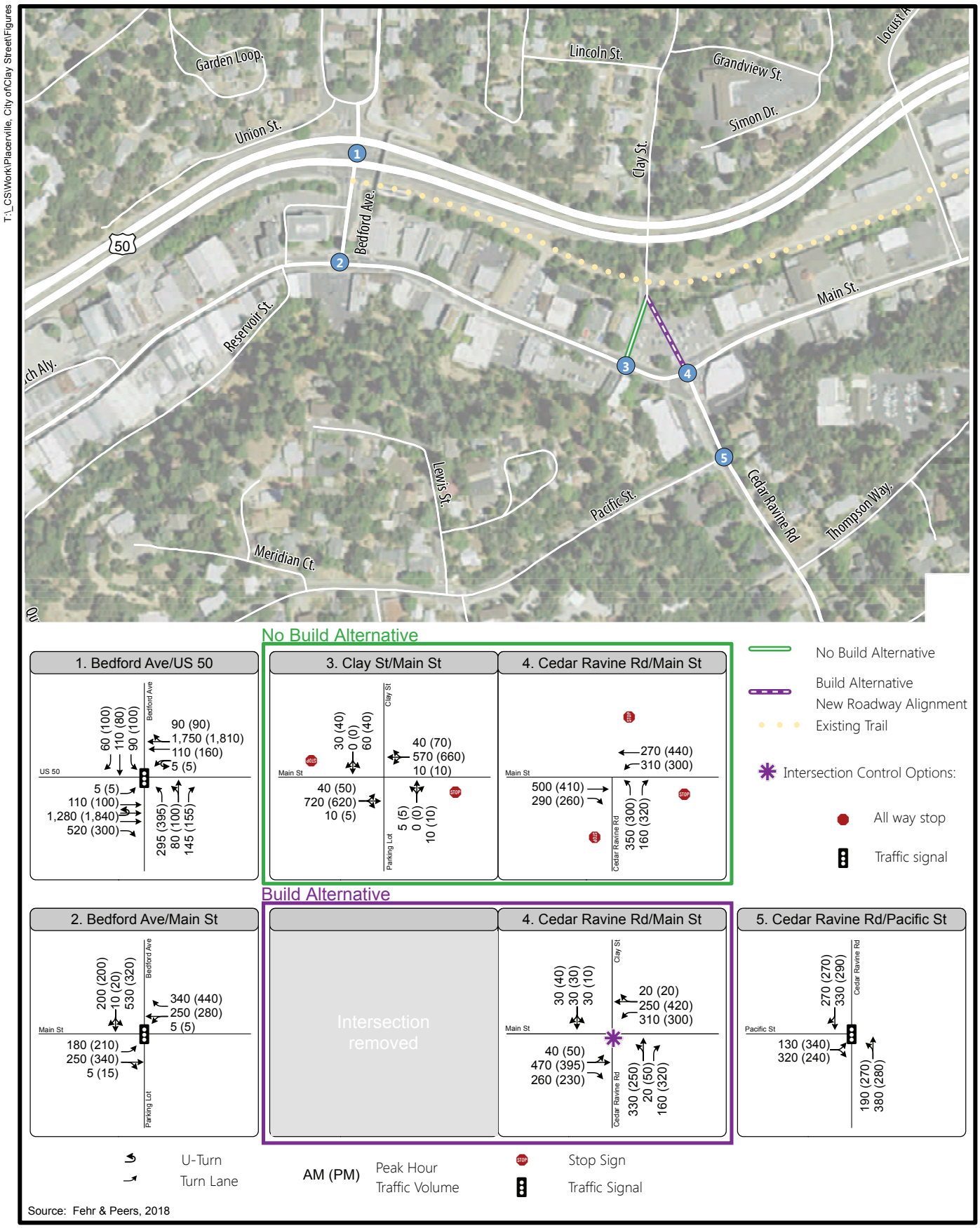
CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Intersection Operations

Impact 4.10.6 The proposed project would result in a cumulative impact at the study intersections. The proposed project's incremental contribution to this cumulative effect would be **cumulatively considerable**.

Under cumulative conditions, congestion on US 50 during both peak hours would create queuing on Bedford Avenue that would extend upstream onto eastbound and westbound Main Street and to Clay Street and Cedar Ravine Road. As a result of the congestion, westbound Main Street at Bedford Avenue would serve about 88 and 70 percent of the traffic demand during the AM and PM peak hours, respectively. With the forecast growth in traffic volume, average peak-hour delay would increase at all study intersections, with all intersections having LOS D or worse conditions during both peak hours under the cumulative no project condition (see **Table 4.10-6**). As explained in the Methodology subsection, above, the peak-hour signal warrant is met for all study intersections except the Main Street/Clay Street intersection under cumulative no project conditions. Therefore, signal control is assumed for the study intersections at Main Street/Bedford Avenue and Pacific Street/Cedar Ravine Road under cumulative plus project conditions, as shown in **Table 4.10-6**. Otherwise, without assuming those signals in the traffic model, the analysis would be rendered inconclusive because poor operations at these intersections would cause vehicle queue spillback through adjacent intersections that would overwhelm project area traffic operations, and the Main Street/Cedar Ravine Road/Clay Street intersection would operate unacceptably in the traffic model due to vehicle queue spillback from these intersections. The need for signals at the two intersections is due to congestion on US 50 and not the proposed project.

Figure 4.10-6 depicts peak-hour traffic volumes and lane configurations under cumulative plus project conditions.



Not To Scale

FIGURE 4.10-6

Peak Hour Traffic Volumes and Lane Configurations - Cumulative Conditions

Michael Baker INTERNATIONAL

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TABLE 4.10-6
PEAK-HOUR INTERSECTION LEVELS OF SERVICE – CUMULATIVE PLUS PROJECT CONDITIONS

Intersection	Control	Cumulative Conditions without Project		Cumulative Plus Project (All-Way Stop Option)		Cumulative Plus Project (Signal Option)	
		AM	PM	AM	PM	AM	PM
1. US 50/Bedford Ave	Signal	F/95	F/93	F/94	F/93	F/95	F/90
2. Main St/Bedford Ave	Signal	D/38	F/111	D/49	F/111	C/34	F/88
3. Main St/Clay St	Side-Street Stop	F/53	F/79	—	—	—	—
4. Main St/Cedar Ravine Rd[1]	All-Way Stop[2]	E/38	F/73	**F/68**	**F/88**	C/26	D/50
5. Pacific St/Cedar Ravine Rd	Signal	D/47	F/84	D/46	E/76	E/69	**F/90**

Source: Fehr & Peers 2018
Notes: LOS and average intersection delay, in seconds per vehicle, is reported for signal and all-way stop intersections. Worst movement delay, in seconds per vehicle, is reported for side-street stop intersections.
Bold font *indicates LOS F conditions in the All-Way Stop and Signal options when the delay is greater than cumulative no project conditions.*
1. Intersection includes Clay Street as fourth leg in the All-Way Stop and Signal options.
2. Intersection has signal control in Signal option.

All-Way Stop Option

Adding the Clay Street approach to the existing all-way stop control at Main Street/Cedar Ravine Road would result in a change in intersection operations from LOS E to LOS F. This would cause queuing on all approaches. Vehicle queues on eastbound Main Street would extend into the Bedford Avenue intersection and increase intersection delay. As noted in the Methodology subsection, above, the Main Street/Bedford Avenue and Pacific Street/Cedar Ravine Road intersections would need to be signalized to avoid significant vehicle queues in the project area, which would be a result of congestion on US 50, not as a result of the proposed project. These signals would also be required with an eastbound yield right onto Cedar Ravine Road. Implementation of the Signal option would partially mitigate the All-Way Stop option's significant impact, but the two signals at Main Street/Bedford Avenue and Pacific Street/Cedar Ravine Road would still also be required. For the reasons explained below, this option's impact would be **cumulatively considerable**.

During the PM peak hour, the four-leg Main Street/Cedar Ravine Road/Clay Street intersection would have a higher delay than cumulative no project conditions, although both would have LOS F conditions. However, this would be a result of the intersection modification that would reduce the total number of intersections operating at LOS F from five under no project conditions to three under the All-Way Stop option. The delay at the other study intersections would be the same or lower than cumulative no project conditions.

Signal Option

The Signal option would have lower delay at all study intersections but one during both peak hours. The signal at the new four-leg Main Street/Cedar Ravine Road/Clay Street intersection would operate with LOS C and LOS D conditions during the AM and PM peak hours, respectively. Adding a southbound left turn pocket lane would reduce the southbound approach delay, but LOS D conditions would remain for the PM peak hour. The Pacific Street/Cedar Ravine Road

intersection would have higher delays due to vehicle queues from Main Street that would extend through Pacific Street. This option's significant impact would be **cumulatively considerable**.

Under the Signal option, installation of a 100-foot northbound left turn pocket lane to the Pacific Street/Cedar Ravine Road intersection would improve intersection operations from LOS E/F conditions to LOS C/D conditions (Fehr & Peers 2018 [Appendix D]: Table 8), assuming traffic signals are installed at the Main Street/Bedford Avenue and Pacific Street/Cedar Ravine Road intersections. However, there may not be sufficient space to add a left-turn lane at Pacific Street/Cedar Ravine Road.

For both the All-Way Stop and Signal options, traffic signal installation at Main Street/Bedford Avenue and Pacific Street/Cedar Ravine Road is not currently programmed in the City's Capital Improvement Program (CIP) or included in the City's traffic impact fee program. The City periodically updates its CIP with new projects in response to planned growth and anticipates that the identified traffic signal improvements would be candidate projects for inclusion in future CIP updates. However, the signal improvements at the Main Street/Bedford Avenue and Pacific Street/Cedar Ravine Road intersections are not included in the current CIP, their implementation is not certain. Therefore, because a left-turn pocket may not be feasible and due to the uncertainty related to installation of the two signals at those two intersections, the impact would be **cumulatively considerable** and **significant and unavoidable** for both options.

Mitigation Measures

None feasible.

Design Hazards, Parking, Emergency Access, and Alternative Modes of Transportation

Impact 4.10.7 The proposed project would not contribute to any cumulative impacts related to design hazards, parking, emergency access, or alternative modes of transportation. The impact would be **less than cumulatively considerable**.

Impacts such as potential design hazards, emergency access, parking, and alternative modes of transportation are site-specific. The project would not increase design hazards as a result of the intersection realignment and bridge replacement. Replacement parking would be available. There would be temporary impacts on emergency access during construction, but over the long term the project would improve emergency access. The proposed project would add pedestrian and bicycle facilities and during operation would not affect transit stops or travel times. The project's contribution would be **less than cumulatively considerable**.

Mitigation Measures

None required.

REFERENCES

EDCTC (El Dorado County Transportation Commission). 2003. *Western El Dorado County Short Range and Long Range Transit Plan Study.*

———. 2007. *Pedestrian Circulation Plan.*

———. 2010. *Non-Motorized Transportation Plan*.

El Dorado County Department of Transportation. 2003. *Sacramento-Placerville Transportation Corridor Master Plan.*

Fehr & Peers. 2018. *Clay Street Bridge Replacement Project Transportation Analysis Report.*

Placerville, City of. 1990. *City of Placerville General Plan Policy Document*. As amended through 2017.

———. 2006. *Main Street Streetscape Design Development Plan.*

SACOG (Sacramento Area Council of Governments). 2016. *Metropolitan Transportation Plan/ Sustainable Communities Strategy 2035.* Appendix A (Project List Updated March 2017*).* https://www.sacog.org/2016-mtpscs.

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5.0 OTHER CEQA TOPICS

This section identifies the significant and unavoidable impacts of the proposed project, the potential for growth inducement, and energy conservation.

5.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

California Environmental Quality Act (CEQA) Guidelines Section 15126.2(b) requires an environmental impact report (EIR) to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. In addition, Section 15093(a) of the CEQA Guidelines allows the decision-making agency to determine whether the benefits of a proposed project outweigh the unavoidable adverse environmental impacts of implementing the project. The City can approve a project with unavoidable adverse impacts if it prepares a Statement of Overriding Considerations setting forth the specific reasons for making such a judgment.

The proposed project would result in the following significant and unavoidable impact.

Transportation and Circulation

- Impact 4.10.6: The proposed project would result in a cumulative impact at the study intersections. The proposed project's incremental contribution to this cumulative effect would be cumulatively considerable.

5.2 GROWTH-INDUCING IMPACTS

INTRODUCTION

CEQA Guidelines Section 15126.2(d) requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

> The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth.

A project can have direct and/or indirect growth inducement potential. For example, direct growth inducement potential would result if a project involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities or if it involved a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand (*Napa Citizens for Honest Government v. Napa County Board of Supervisors*). Similarly, a project would indirectly induce growth if it removed an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth-inducing.

The CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans establish land use development patterns and include growth policies that allow the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

ANALYSIS

The proposed project does not include the construction of new homes or businesses that would attract additional population to Placerville, nor does it include the development of new utility infrastructure that would provide additional capacity that could induce growth. No changes in land use designations or zoning would occur that would change the type or intensity of development which would induce growth. The proposed project would not result in an increase in traffic volumes that would require additional roadway capacity.

The bridge replacement and realignment of Clay Street would result in the one-lane segment of Clay Street between the El Dorado Trail and the south side of the bridge being widened to two lanes. Clay Street is two lanes north of the project site and two lanes south of the bridge. This would not increase capacity; it would provide for safer vehicle, pedestrian, and bicycle travel compared to existing conditions. The restriping of turn lanes at the Main Street/Cedar Ravine Road intersection with the addition of the realigned Clay Street is required to provide for safe vehicle turning movements and pedestrian access at the intersection. It would not increase roadway volume capacity on either Main Street or Cedar Ravine Road. The roadway facility improvements would therefore not be growth-inducing.

Table 3.0-1 in Section 3.0, Introduction to the Analysis, lists approved and proposed land use projects in the vicinity of the proposed project. Among those is Cottonwood Phase 4 and 6, a residential subdivision on approximately 22.2 acres north of Clay Street and east of the Cottonwood Apartments. This is an approved project for which the City adopted a Mitigated Negative Declaration that, among other items, evaluated that project's growth-inducing effects. The full buildout of Cottonwood Phase 4 and 6 will occur under existing approvals. The proposed project is necessary to accommodate traffic generated by that project, and the Cottonwood subdivision was required to contribute to the Clay Street and bridge project between US Highway 50 and Main Street. As such, while the project would induce growth commensurately with existing approved development, it would not provide additional capacity beyond that necessary for approved growth.

5.3 ENERGY CONSERVATION

INTRODUCTION

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the California legislature adopted Assembly Bill (AB) 1575, which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct state responses to energy emergencies, and—perhaps most importantly—promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary

consumption of energy caused by a project. Thereafter, the California Natural Resources Agency created Appendix F of the CEQA Guidelines.

CEQA Guidelines Appendix F requires a determination whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. For the reasons set forth below, this EIR concludes that the proposed project would not result in this type of energy consumption.

PROJECT ENERGY CONSUMPTION AND CONSERVATION

Construction activities associated with the project would be short term and temporary, and would result in the consumption of fuel to power equipment. Construction-related fuel use associated with the proposed project is summarized in **Table 5.0-1.**

TABLE 5.0-1
PROJECT CONSTRUCTION FUEL USE

Project Activity	Estimated Fuel Use
Construction	56,135 gallons

*Sources: See **Appendix E.***

As shown in **Table 5.0-1**, the construction-related fuel use over the life of project construction would be 56,135 gallons. Overall, this demand for fuel would not result in the need for new or altered facilities given the temporary nature of construction. Additionally, construction activities are not anticipated to result in an inefficient use of energy, as construction contractors would purchase their own gasoline and diesel fuel from local suppliers and would conserve the use of their supplies to minimize costs to the project.

None of the components of the proposed project would include the provision of new permanent structures or the need for consistent and ongoing new vehicular travel beyond existing conditions; therefore, by their nature, neither the All-Way Stop option nor the Signal option would result in the consumption of energy resources from long-term operations. Once completed, neither option would result in a permanent increase in traffic or result in a new traffic route, nor would the option have an effect on vehicle miles traveled, and thus fuel use, because they would not increase traffic volumes or add roadway capacity. Both the All-Way Stop option and the Signal option involve realignment of an existing road and creation of a new four-way intersection that would, in turn, reduce idling delay at the intersection compared to conditions without the proposed project (see Section 4.10, Transportation and Circulation). The reduction in idling would result in less fuel being consumed during operation compared to existing conditions. Existing lighting within the project vicinity would be assessed and adjusted as appropriate along Main Street and the realigned portion of Clay Street. The amount of energy use associated with new lighting, if any, would be negligible and would be more energy efficient than existing lighting through the anticipated use of LED lighting. Furthermore, all new lighting would be for wayfinding and safety, which would not be considered wasteful or unnecessary.

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6.0 ALTERNATIVES TO THE PROPOSED PROJECT

6.1 INTRODUCTION

GENERAL CEQA REQUIREMENTS

An environmental impact report (EIR) must evaluate a reasonable range of alternatives to the proposed project or to the location of the proposed project that could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. The EIR must evaluate the comparative merits of the alternatives (California Environmental Quality Act [CEQA] Guidelines Section 15126.6). The EIR need not evaluate the environmental effects of alternatives in the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project.

The primary intent of the alternatives analysis is to disclose other ways that the project objectives could be attained while substantially reducing or avoiding the significant environmental impacts of the proposed project. The objectives of the proposed project and environmental impacts requiring mitigation are listed below.

Alternatives included and evaluated in the EIR must be feasible alternatives. However, the Public Resources Code and the CEQA Guidelines direct that the EIR need "set forth only those alternatives necessary to permit a reasoned choice." The CEQA Guidelines define "a range of reasonable alternatives" and thus limit the number and type of alternatives that need to be evaluated in a given EIR. An EIR is not required to analyze alternatives when the effects of the alternative "cannot be reasonably ascertained and whose implementation is remote and speculative" (CEQA Guidelines Section 15126.6(f)(3)).

Project Objectives

The objectives of the proposed project are to:

- Improve roadway safety and traffic operations.
- Improve pedestrian and bicyclist safety.
- Address functional and structural deficiencies of the necessary crossing structure to Hangtown Creek.
- Minimize impacts to adjacent properties.

Impact Avoidance

Alternatives should provide a means of avoiding altogether or reducing the significant environmental impacts that would otherwise result from implementation of the proposed project.

Significant and Unavoidable Impacts

The technical analysis in Sections 4.1 through 4.10 identified the following significant impact that would remain significant, and there is no feasible mitigation to reduce this impact to a less than significant level:

Transportation and Circulation

- Impact 4.10.6: The proposed project would result in a cumulative impact at the study intersections. The proposed project's incremental contribution to this cumulative effect would be cumulatively considerable.

Potentially Significant Impacts Mitigated to Less Than Significant Level

All other potentially significant impacts of the proposed project listed below would be reduced to less than significant levels with mitigation measures included in this Draft EIR.

Aesthetics

- Impact 4.1.2: The proposed project would change the visual characteristics of the site.

Biological Resources

- Impact 4.3.1: Construction of the project could affect five special-status plant species.
- Impact 4.3.2: Construction of the project could affect two special-status wildlife species.
- Impact 4.3.3: Construction of the project could result in temporary and/or permanent effects on valley foothill riparian and montane hardwood-conifer forest habitat.
- Impact 4.3.4: Construction of the proposed project would result in fill that would affect 0.001 acre of intermittent stream (waters of the United States).
- Impact 4.3.5: Construction of the project could result in the loss of nesting habitat or direct mortality of raptors.

Cultural Resources

- Impact 4.4.1: Construction of the intersection improvements at the new Main Street/Cedar Ravine Road/Clay Street four-way intersection would result in the relocation of the Druid Monument from its current location to the west side of the new intersection on Main Street. There is the potential, although unlikely, that the historical resource may be damaged during its relocation.
- Impact 4.4.2: Construction of the proposed project may result in the disturbance of archaeological deposits related to the Ivy House.
- Impact 4.4.3: Construction of the proposed project would involve the use of heavy equipment that could be a source of vibration that could damage historical buildings adjacent to the project site.
- Impact 4.4.4: Construction of the proposed project could inadvertently destroy or damage undiscovered cultural resources or human remains.

Hazards and Hazardous Materials

- Impact 4.6.2: The Ivy House parking lot contains evidence of soil contamination, and asbestos-containing materials and/or lead-based paint may be present in roadway and

bridge components. This could pose a hazard to workers and the public during construction activities.

- Impact 4.6.3: Construction of the proposed project could be a source of hazardous emissions near schools.

- Impact 4.6.4: The proposed project would not affect emergency response plans over the long term, but construction of the project could temporarily affect roadways at and adjacent to the project site, which could affect response times or emergency evacuation.

Hydrology and Water Quality

- Impact 4.7.1: Implementation of the proposed project would involve construction activities that could result in temporary water quality impacts, and project operation would generate stormwater runoff that would contain urban pollutants.

- Impact 4.7.2: The proposed project could affect storm drain capacity and flooding potential from stormwater runoff.

Noise

- Impact 4.9.1: Construction activities would generate noise.

- Impact 4.9.2: Construction of the proposed project would be a short-term source of groundborne vibration.

Transportation and Circulation

- Impact 4.10.3: The proposed project would not impair emergency access by fire, police, and emergency medical equipment and personnel over the long term, but construction of the project could temporarily affect access at and/or adjacent to the project site.

6.2 ALTERNATIVES ANALYSIS

In accordance with the provisions of CEQA Guidelines Section 15126.6, the following alternatives to the proposed project are evaluated in this Draft EIR.

- No Project Alternative

- Clay Street Hangtown Creek Bridge Replacement/No Clay Street Realignment with Cedar Ravine Road Alternative

The environmental effects of each of these alternatives are identified and compared with those environmental impacts resulting from the proposed project that are identified in environmental issue areas in Sections 4.1 through 4.10. **Table 6.0-1** at the end of this section compares the environmental impacts of each alternative, and indicates whether the level of significance would change, or if the level of significance would remain the same whether the magnitude of the impact would be reduced or greater than the proposed project. Also, an environmentally superior alternative is identified.

COMPARATIVE ANALYSIS OF ENVIRONMENTAL IMPACTS

No Project Alternative

As provided by State CEQA Guidelines Section 15126.6(e)(3)(A), the evaluation of the No Project Alternative considers the environmental effects of the project site remaining in its existing state against the environmental impacts that may occur if the proposed project is approved.

Under the No Project Alternative, the Clay Street Bridge would not be replaced, and the intersections at Main Street, Cedar Ravine Road, and Clay Street would remain the same as existing conditions. The number and location of parking spaces would remain the same with 72 spaces in the Ivy House parking lot. This alternative would not include any improvements to the project area other than routine maintenance of existing facilities.

The No Project Alternative would avoid all of the environmental impacts of the proposed project. However, it would not meet any of the project objectives.

Clay Street Hangtown Creek Bridge Replacement/No Clay Street Realignment with Cedar Ravine Road Alternative

Description of Alternative

Under the Clay Street Hangtown Creek Bridge Replacement/No Clay Street Realignment with Cedar Ravine Road Alternative (hereafter referred to as the Bridge Replacement/No Clay Street Realignment Alternative), the existing Clay Street Bridge would be demolished, and a new two-lane bridge would be constructed. For a two-lane bridge, applicable engineering standards (American Association of State Highway and Transportation Officials) require minimum 11-foot lanes in each travel direction, plus a minimal shoulder, and curbs, gutters, and sidewalks. Meeting these requirements, the minimum width of the bridge would be 32 feet between curbs (11-foot lanes and 5-foot shoulders) and a 6-foot sidewalk on each side, excluding the bridge railings, for a total minimum width of 44 feet.

Clay Street would not be realigned to create the four-way intersection with Main Street and Cedar Ravine Road, and the Ivy House parking lot would not be divided to accommodate the realignment. The Druid Monument would remain in its existing location.

Comparative Analysis of Environmental Impacts

Aesthetics

Aesthetics impacts resulting from replacement of the existing single-lane Clay Street Bridge with a new two-lane bridge would be identical to the proposed project. However, because Clay Street would not be realigned to form the four-way intersection with Main Street and Cedar Ravine Road, this alternative would not result in the removal of the low stone wall and relocation of the Druid Monument, which are visual elements that may be valued by the public in the context of the downtown area. These potentially significant impacts identified for that component of the proposed project would be avoided. In addition, without the Clay Street realignment, no new lighting would be installed, nor would the traffic signal at the new intersection (one of two options for traffic control), so this alternative would not introduce those new sources of light that would occur with the proposed project. Aesthetics impacts of the Bridge Replacement/No Clay Street Realignment Alternative would be reduced compared to the proposed project.

Air Quality

The Bridge Replacement/No Clay Street Realignment Alternative would result in fewer short-term air emissions (criteria pollutants, toxic air contaminants [TACs], and potentially naturally occurring asbestos) during construction because there would be no construction activities associated with the Clay Street realignment. Construction emissions were determined to be less than significant for the proposed project, and this alternative therefore would result in a reduced construction emissions impact. Criteria air pollutant and ozone precursor emission, localized carbon monoxide, and TACs were determined to be less than significant for the proposed project under each traffic control option because the proposed project would reduce idling times. The Bridge Replacement/No Clay Street Realignment Alternative would not reduce vehicle idling times under existing plus project conditions, and would minimally change idling times under cumulative conditions. Thus, if the realignment with the new intersection were not constructed, the reduction in idling-related emissions associated with the proposed project would not be realized, but emissions would not be greater than existing conditions.

Biological Resources

Most of the biological resources impacts resulting from the proposed project (protected species, habitat, and wetlands) are the result of removal of the existing Clay Street Bridge and construction of the new bridge and its approaches due to the presence of Hangtown Creek and habitat along the creek. Under the Bridge Replacement/No Clay Street Realignment Alternative, these potentially significant impacts would be identical to the proposed project and would require mitigation as identified for the proposed project (mitigation measures **MM 4.3.1** through **MM 4.3.5**). This alternative could result in the removal of fewer trees because Clay Street would not be realigned, but mitigation would still be required to protect nesting bird species. Overall, biological resources impacts would be similar to the proposed project.

Cultural Resources

Under the Bridge Replacement/No Clay Street Realignment Alternative, the significant impacts for the relocation of the Druid Monument and potential vibration-related impacts on some historic buildings immediately adjacent to the project site (e.g., Pearson's Soda Works) would not occur, thus avoiding this impact compared to the proposed project. However, some work may occur in the Ivy House parking lot for bridge approaches, and there is still the potential for inadvertent discovery of cultural resources during construction of the bridge approaches. This alternative would not involve as much ground disturbance as the proposed project because Clay Street would not be realigned, and work would generally be in the vicinity of Hangtown Creek and its approaches, which have already been disturbed by bridge construction. Therefore, the potential for vibration to affect buildings and inadvertent discovery impacts are reduced under this alternative, but mitigation measures **MM 4.4.2** and **MM 4.4.4** would still be required.

Greenhouse Gas Emissions

Greenhouse gas (GHG) emissions generated during construction would be reduced compared to the proposed project because the Clay Street realignment component of the proposed project would not be constructed. The proposed project would result in a decrease in GHG emissions compared to existing and cumulative without project conditions because idling times would be reduced. Thus, if the realignment with the new intersection were not constructed, the reduction in idling-related GHG emissions associated with the proposed project would not be realized. This alternative's GHG emissions would therefore be the same as existing conditions. GHG emissions

and consistency with applicable GHG reduction plans were determined to be less than significant for the proposed project, and would be the same for this alternative.

Hazards and Hazardous Materials

Under the Bridge Replacement/No Clay Street Realignment Alternative, construction activities would involve the use of hazardous materials, and impacts would be similar to the less than significant impacts identified for the proposed project. This alternative would not involve pavement removal and grading at the Ivy House parking lot, where there is a potential for soil contamination; therefore, this impact would not occur under this alternative. However, identical to the proposed project, the existing bridge may contain areas painted with lead-based paint and/or asbestos-containing materials could be in the bridge structure due to its age. This impact, for which mitigation was identified for the proposed project (**MM 4.6.2b**) would be identical. During construction, as with the proposed project, Clay Street would be closed between Main Street and the US 50 overpass to allow for removal of the existing bridge and construction of the new bridge, and a temporary detour would be required. Identical to the proposed project, this could affect emergency response times, which would be a potentially significant impact requiring mitigation (**MM 4.10.3**). However, because the intersection improvements would not occur, this alternative would reduce the overall emergency response impact.

Hydrology and Water Quality

Construction-related water quality impacts would be similar to the proposed project because there would be soil disturbance along the banks of Hangtown Creek to remove the existing bridge and construct the replacement bridge and its approaches, and mitigation measure **MM 4.7.1a** would be required to reduce impacts to less than significant. Operational stormwater runoff, storm drain capacity, and water quality impacts would be similar to the proposed project, and mitigation identified for the proposed project (**MM 4.7.1b**) would still be required to ensure runoff from the new bridge surface and its approaches is managed in accordance with applicable post-construction best management practices in the City's Storm Water Management Plan and MS4 requirements. This alternative would result in replacement of the bridge in a flood hazard zone, and the less than significant impact would be identical to the proposed project.

Land Use

With the Bridge Replacement/No Clay Street Realignment Alternative, if the bridge is replaced and the existing intersection location is maintained, this would cause the back of sidewalk on the west side of Clay Street to encroach onto the private property parcel adjacent to Clay Street, requiring the City to acquire permanent right-of-way. It would also violate the City standard requiring a 5-foot setback between a sidewalk and a structure. Maintaining the existing intersection would also require a retaining wall along the southwest corner of the bridge due to the elevation difference between the new road and the existing ground; the retaining wall would impact access to the existing private driveway at that location. This alternative could result in potential encroachment and parcel access impacts that would not occur with the proposed project.

Noise

The Bridge Replacement/No Clay Street Realignment Alternative would involve construction activities, but none would occur in close proximity to noise-sensitive residential uses because the intersection improvements at Main Street/Cedar Ravine Road would not occur. However, construction noise would still be audible in the vicinity of the bridge and may be disruptive at

adjacent retail and commercial businesses along Clay Street. Like the proposed project, mitigation measure **MM 4.9.1** would be necessary to ensure noise levels are managed consistent with City requirements. Groundborne vibration impacts would be reduced compared to the proposed project but mitigation measure **MM 4.9.2** would still be required. Identical to the proposed project, this alternative would not result in any permanent sources of noise or vibration beyond that which already occurs.

Transportation and Circulation

Under the proposed project, both the Signal and the All-Way stop options would worsen intersection operations at study intersections under cumulative conditions by either increasing delay and/or queue lengths. As explained in Impact 4.10.6, there is no feasible mitigation to reduce the project's contribution to this impact, and the impact is significant and unavoidable. The Bridge Replacement/No Clay Street Realignment Alternative would avoid this impact because the new four-way intersection would not be constructed.

As with the proposed project, the Bridge Replacement/No Clay Street Realignment Alternative would result in a two-lane bridge that would be wider than the current bridge. The City has investigated the feasibility of bridge widening to current standards while maintaining the existing Clay Street alignment as much as possible and meeting the standard 5-foot setback requirement. As a result of the widened bridge roadway, the intersection of Clay Street and Main Street would still need to shift approximately 15 to 20 feet to the east, further reducing the distance between the Cedar Ravine/Main Street intersection and the Clay Street intersection from 100 feet to 80 feet. The El Dorado County Highway Design Manual (Section 205.2, June 2009), which is used by the City, requires that "adjacent intersections along the same roadway, but on opposite sides and not having conflicting left turn ingress movements, shall have sufficient distance, centerline to centerline, to allow protected left turn out pockets on the arterial highway for both access points if these pockets are permitted or required. If protected left turn out pockets are not required then the minimum offset distance, centerline to centerline, should be 100 feet." The distance between the two intersections would be less than 100 feet and would not meet City design standards. The bike lane on the west side would also need to terminate prior to the intersection in order to tie the roadway back into the existing intersection location. This would force cyclists to share a lane with vehicles approaching the intersection. This alternative could result in potential safety impacts that would not occur with the proposed project. Existing traffic volumes and other conditions do not support an exception to a standard design, given the likely safety and operational issues that would result. Maintaining the existing alignment would result in the loss of approximately nine parking stalls, approximately five fewer stalls than the proposed project.

This alternative would reduce some of the proposed project's less than significant construction traffic impacts because there would be no improvements at Main Street/Cedar Ravine Road, but it would still require mitigation measure **MM 4.10.3** for construction traffic management.

6.3 ALTERNATIVES CONSIDERED BUT NOT SELECTED FOR DETAILED ANALYSIS

In addition to the alternatives analyzed herein, several alternatives were considered during the formulation of the project site plan and review of the project, but the alternatives were rejected from detailed analysis in the Draft EIR because they either did not reduce any of the significant impacts identified for the project or failed to meet the basic objectives of the project. Alternatives suggested by the public during the Notice of Preparation (NOP) review period were also considered.

CONSTRUCT NEW BRIDGE PARALLEL TO CLAY STREET BRIDGE WITH CLAY STREET REALIGNMENT

This alternative would involve constructing a second bridge across Hangtown Creek and realigning Clay Street. The bridge would be a new two-lane facility, with the existing bridge retained as a pedestrian/bicycle bridge. Constructing a new bridge would result in construction impacts similar to those identified for the proposed project because work would occur along the channel and would not reduce any of those impacts. This alternative would not avoid or substantially reduce any of the project's potentially significant operational impacts requiring mitigation, nor would it eliminate the significant and unavoidable cumulative intersection operation impact. While this alternative would meet project objectives, it could result in a greater aesthetics impact than the proposed project because it would create an additional feature across Hangtown Creek that, when combined with the existing bridge, would increase the overall scale of the crossing and its visibility. This may be perceived as more visually intrusive than a new replacement bridge. As such, because this alternative would not avoid or substantially lessen any of the proposed project's impacts and could result in an additional visual impact, it is not a feasible alternative to the proposed project under CEQA that requires detailed evaluation in the Draft EIR.

CLAY STREET BRIDGE REHABILITATION/CLAY STREET REALIGNMENT

Rehabilitating the existing Clay Street Bridge and realigning Clay Street would involve substantial physical improvements that would result in construction impacts similar to those of the proposed project. All other operational impacts would be the same as with the proposed project. As such, because this alternative is largely a variant of the proposed project and would not avoid or substantially lessen any of the impacts, and because bridge rehabilitation would not provide any additional traffic, bicycle, or pedestrian operations benefit compared to the proposed project, it is not a feasible alternative to the proposed project under CEQA that requires detailed evaluation in the Draft EIR.

CLAY STREET BRIDGE REHABILITATION/NO CLAY STREET REALIGNMENT

Environmental impacts of rehabilitating the existing Clay Street Bridge with no associated Clay Street realignment would result in construction-period impacts similar to those identified for the bridge replacement component of the proposed project. While this alternative would avoid the project's significant and unavoidable cumulative traffic operations impact, it would not meet any of the project objectives and would have little benefit to traffic operations or pedestrian and bicyclist safety. As such, this is not a feasible alternative to the proposed project under CEQA that requires detailed evaluation in the Draft EIR.

ROUNDABOUT INSTEAD OF FOUR-WAY INTERSECTION

Some individuals who submitted comments on the NOP suggested the roundabout be reconsidered. This is not a feasible alternative due to public opposition, and the roundabout was removed as an alternative for the then-proposed project on July 8, 2014, by City Council resolution. In November 2014, Placerville voters approved Measure K that amended the City's General Plan to prohibit the construction of roundabouts in the city limits unless approved by voters. As such, it is not a feasible alternative to the proposed project under CEQA that requires detailed evaluation in the Draft EIR.

RETAIN CLAY STREET BRIDGE AND WIDEN CLAY STREET SOUTH OF THE BRIDGE ONLY

This alternative would avoid the significant and unavoidable cumulative study intersections operation impact (Impact 4.10.6) because it would not result in the new four-way intersection with the realigned Clay Street at Main Street/Cedar Ravine Road. It would reduce the severity of the less than significant impacts associated with bridge removal, Clay Street realignment, and parking lot reconfiguration (e.g., aesthetics, biological resources, hazardous materials contamination, hydrology and water quality, relocation of the Druid Monument). However, this alternative would not meet any of the project objectives and would have little benefit to traffic operations or pedestrian and bicyclist safety. It would also be inconsistent with the City's Main Streetscape Design Development Plan, which identified the need to improve traffic operations at the Main Street/Cedar Ravine Road intersection. As such, it is not a feasible alternative to the proposed project under CEQA that requires detailed evaluation in the Draft EIR.

RETAIN CLAY STREET BRIDGE AND RIGHT TURN ONLY AND/OR TRAFFIC SIGNAL AT CLAY STREET/MAIN STREET INTERSECTION

This alternative would avoid the significant and unavoidable cumulative study intersections operation impact (Impact 4.10.6) because it would not result in the new four-way intersection with the realigned Clay Street at Main Street/Cedar Ravine Road. It would reduce the severity of the impacts associated with bridge removal, Clay Street realignment, and parking lot reconfiguration (e.g., aesthetics, biological resources, hazardous materials contamination, hydrology and water quality, Ivy House archaeological deposits and relocation of the Druid Monument). This alternative would not meet any of the project objectives and would have little benefit to traffic operations or pedestrian and bicyclist safety. It would also be inconsistent with the City's Main Streetscape Design Development Plan, which identified the need to improve traffic operations at the Main Street/Cedar Ravine Road intersection. As such, this is not a feasible alternative to the proposed project under CEQA that requires detailed evaluation in the Draft EIR.

OTHER ALTERNATIVES SUGGESTED BY THE PUBLIC

Other alternatives suggested by commenters included closing the parking lot and closing Clay Street to vehicle traffic. While these alternatives would avoid environmental impacts, they would not meet project objectives and are not considered feasible alternatives under CEQA requiring detailed evaluation in the Draft EIR.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires an EIR to identify the "environmentally superior" alternative from among the range of reasonable alternatives evaluated. The No Project Alternative would be the environmentally superior alternative because it would avoid all of the impacts of the proposed project. However, it would not meet project objectives.

CEQA Guidelines Section 15126.6(e)(2) states that if the environmentally superior alternative is the No Project Alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives. Among the choice of remaining alternatives, the Bridge Replacement/No Clay Street Realignment Alternative would be the environmentally superior alternative. This alternative would avoid the project's significant and unavoidable cumulative traffic operations impact and would reduce construction-related impacts. This alternative would only achieve two of the four objectives, as it could result in safety impacts that would not occur with the proposed project.

TABLE 6.0-1
COMPARISON OF ENVIRONMENTAL IMPACTS OF ALTERNATIVES

Issue	Proposed Project	No Project Alternative	Bridge Replacement/No Clay Street Realignment Alternative
Aesthetics	LS/MM	NI	Reduced compared to proposed project
Air Quality (construction and operation)	LS	NI	Operational emissions increased compared to proposed project, but no change from existing conditions
Biological Resources	LS/MM	NI	Similar to proposed project
Cultural Resources			
Druid Monument	LS/MM	NI	Avoided
Ivy House Archaeological Deposits	LS/MM	NI	Reduced compared to proposed project
Potential vibration effects on historic buildings adjacent to site	LS/MM	NI	Avoided
Inadvertent Discovery	LS/MM	NI	Similar to proposed project
Greenhouse Gas Emissions	LS	NI	Operational emissions increased compared to proposed project, but no change from existing conditions
Hazards and Hazardous Materials	LS/MM	NI	Reduced compared to proposed project
Hydrology and Water Quality	LS/MM	NI	Similar to proposed project
Land Use	LS	NI	Increased compared to proposed project
Noise and Vibration			
Construction	LS/MM	NI	Reduced compared to proposed project
Operation	LS	NI	Similar to proposed project
Transportation and Circulation			
Intersection Operations (Existing Plus Project)	LS	NI	Reduced compared to proposed project
Pedestrian/Bicycle Hazards	LS	NI	Increased compared to proposed project
Parking Facilities	LS	NI	Reduced compared to proposed project
Emergency Access			
Construction	LS/MM	NI	Similar to proposed project
Operation	LS	NI	Similar to proposed project
Intersection Operations (Cumulative)	**SU**	NI	Avoided

NI – no impact
LS – less than significant impact
LS/MM – less than significant with mitigation
SU – significant and unavoidable

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APPENDICES

Appendix A: Notice of Preparation/Initial Study and Comment Letters Received
Appendix B: Air Quality and Greenhouse Gas Emissions Data
Appendix C: Noise Modeling Data
Appendix D: Traffic Study
Appendix E: Energy Use Data

Available on CD and at: https://www.cityofplacerville.org/environmental-documents