Pioneer Bluff Bridge Project

CITY OF WEST SACRAMENTO

Initial Study with Proposed Mitigated Negative Declaration

Prepared by the
City of West Sacramento

January 2013

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General Information about this Document

WHAT'S IN THIS DOCUMENT:

The City of West Sacramento has prepared this Initial Study, which examines the potential environmental impacts of the alternatives being considered for the proposed project located in the City of West Sacramento, California. The document describes the project being proposed, the existing environment that could be affected by the project, the potential impacts from the project, and the proposed avoidance, minimization and/or mitigation measures.

WHAT YOU SHOULD DO:

Please read this Initial Study. Additional copies of this document as well as the technical studies are available for review at the City of West Sacramento City Hall, 1110 West Capitol Avenue, West Sacramento, CA 95691; and Arthur F. Turner Community Library, 1212 Merkley Avenue, West Sacramento, CA 95691. An electronic copy of the Initial Study may be viewed online at the following website: http://www.cityofwestsacramento.org. The public circulation period begins January 11, 2013 and ends February 11, 2013.

We welcome your comments. If you have any comments regarding the proposed project, or if you have concerns you would like addressed at a public hearing, please send your written comments and/or request to the City of West Sacramento no later than February 11, 2013.

- Submit comments via postal mail to the City of West Sacramento at the following address no later than February 11, 2013:

  Jay Davidson, P.E.
  Project Manager
  City of West Sacramento
  1110 West Capitol Avenue
  West Sacramento, CA 95691

- Submit comments via email to jayd@cityofwestsacramento.org

- Submit comments by the deadline: February 11, 2013

WHAT HAPPENS NEXT:

After comments are received from the public and reviewing agencies, the City of West Sacramento may: (1) give environmental approval to the proposed project, (2) undertake additional environmental studies, (3) abandon the project, or (4) decide to modify the alternatives under consideration based on comments received. If the project is given environmental approval and funding is appropriated, the City could design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to the City of West Sacramento, Attn: Jay Davidson, P.E., City of West Sacramento, 1110 West Capitol Avenue, 2nd Floor, West Sacramento, CA 95691. Phone No. (916) 617-4645.

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CONSTRUCT THE PIONEER BLUFF BRIDGE OVER THE BARGE CANAL IN THE CITY OF WEST SACRAMENTO, YOLO COUNTY, CALIFORNIA.

INITIAL STUDY
with Proposed Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

CITY OF WEST SACRAMENTO

1/11/13
Date

Jay Davidson, P.E.
Project Manager
Engineering Division
City of West Sacramento

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Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

PROJECT DESCRIPTION

The City of West Sacramento's (City) Department of Public Works proposes to build a bridge that will connect the existing two-lane South River Road from the South River Road cul-de-sac on the north side of the Barge Canal to South River Road on the south side of the Barge Canal. The project is located on the eastern edge of the City within Yolo County. The project area and vicinity is bounded on the north by an industrial area and US 50/Capital City Freeway, on the east by the Sacramento River, on the south by undeveloped land and the Southport Community, and on the west by Jefferson Boulevard.

The purpose of the Pioneer Bluff Bridge Project is to construct a bridge that connects South River Road across the Barge Canal. This connection is necessary to provide an additional north-south roadway alternative to avoid heavy north-south congestion on Jefferson Boulevard.

The project consists of the following components:

- The bridge will be high enough to allow for a 200-year flood event.
- A standard storm drain system that will utilize existing ditches and features wherever possible. Road runoff will be filtered through a bioswale before it is released into the Barge Canal.
- A design speed of 45 miles per hour.

  The project will conform to existing driveways; no acquisition of new right-of-way will be required.

Existing overhead and underground utilities exist within the project area. The underground utilities are to be protected in place with exception of adjusting manholes, valve covers, and utility boxes/vaults to the finished grade.

Construction is expected to begin in the summer of 2013 and will require approximately 9 months to complete.

DETERMINATION

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the City's intent to adopt an MND for this project. This does not mean that the City's decision regarding the project is final. This MND is subject to modification based on comments received by interested agencies and the public.

The City of West Sacramento has prepared an Initial Study for this project, and pending public review, has determined from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no impacts on agriculture and forest resources, mineral resources, and population and ho using.

The project would have less than significant impact on, air quality, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, land use and planning, noise, public services, recreation.

The project would have less than significant impact with mitigation incorporated on biological resources, hydrology and water quality, transportation/traffic, and mandatory findings of significance.

Jay Davidson

Jay Davidson, P.E.
Project Manager
Engineering Division
City of West Sacramento

1/11/13
Date

Executive Summary

The City of West Sacramento's (City) Department of Public Works proposes to build a bridge that will connect the existing two-lane South River Road from the South River Road cul-de-sac on the north side of the Barge Canal to South River Road on the south side of the Barge Canal. The project is located on the eastern edge of the City within Yolo County. The project area and vicinity is bounded on the north by an industrial area and US 50/Capital City Freeway, on the east by the Sacramento River, on the south by undeveloped land and the Southport Community, and on the west by Jefferson Boulevard. The purpose of the Pioneer Bluff Bridge Project is to construct a bridge that connects South River Road across the Barge Canal. This connection is necessary to provide an additional north-south roadway alternative to avoid heavy north-south congestion on Jefferson Boulevard. The bridge is anticipated to be funded through Prop 1B funding.

This environmental document is prepared in conformance with the requirements of the California Environmental Quality Act (CEQA) Public Resources Code 21000-21178. The City of West Sacramento is the Lead Agency for CEQA implementation.

Table ES-1. Summary of Potential Impacts from Alternatives

Resource	Potential Impacts		Summary of Avoidance, Minimization, and/or Mitigation Measures
	No-Build Alternative	Build Alternative	
Aesthetics	No impact.	Less than significant.	Aesthetics will be coordinated during final design to meet local goals.
Agriculture and Forest Resources	No impact.	No impact.	N/A
Air Quality	No impact.	Less than significant.	During construction, compliance with applicable air pollution control district and air quality management district regulations, and dust control measures.
Biological Resources	No impact.	Less than significant with mitigation incorporated.	ESA fencing, construction worker training, erosion control measures to avoid effects on water quality, construction timing to avoid impacts on fish, re-planting.

Resource	Potential Impacts		Summary of Avoidance, Minimization, and/or Mitigation Measures
	No-Action Alternative	Build Alternative	
Cultural Resources	No impact.	No impact.	Standard measures for accidental discovery.
Geology and Soils	No impact.	No impact.	N/A
Greenhouse Gas Emissions	No impact.	No impact.	N/A
Hazards and Hazardous Materials	No impact.	Less than significant.	Require construction equipment to be equipped with spark arresters; clear dry vegetation prior to construction.
Hydrology and Water Quality	No impact.	Less than significant with mitigation incorporated. Temporary construction impact for work in the Barge Canal.	Best Management Practices (BMPs) during construction.
Land Use and Planning	No impact.	Less than significant.	N/A
Mineral Resources	No impact.	No impact.	N/A
Noise	No impact.	Less than significant.	Compliance with City of West Sacramento noise ordinances during construction.
Population and Housing	No impact.	No impact.	N/A
Public Services	No impact.	Temporary construction impacts less than significant.	Minimization of temporary construction impacts to traffic flow through construction phasing, signage, and other measures in Traffic Control Plan.

Resource	Potential Impacts		Summary of Avoidance, Minimization, and/or Mitigation Measures
	No-Action Alternative	Build Alternative	
Recreation	No impact.	Less than significant. South bank will remain zoned for recreations and parks, except for addition of bridge.	N/A
Transportation/Traffic	Only two crossings of Barge Canal would exist in the City.	Less than significant with mitigation incorporated.	Signalization of South River Road/15th Street intersection. Minimization of temporary construction impacts to traffic flow through construction phasing, signage, and other measures in Traffic Control Plan.
Utilities and Service Systems	No impact.	Less than significant.	Coordination with utilities and service providers will take place during final design.
Mandatory Findings of Significance	No impact.	Less than significant with mitigation.	ESA fencing, construction worker training, erosion control measures to avoid effects on water quality, construction timing to avoid impacts on fish.

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List of Abbreviations

AB	Assembly Bill
APE	Area of Potential Effects
ARPA	Archaeological Resources Protection Act
BMPs	Best Management Practices
BOD	Biological Oxygen Demand
BSA	Biological Study Area
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CERFA	Community Environmental Response Facilitation Act (CERFA) of 1992
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CH_4	methane
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CRHR	California Register of Historic Resources
CW	Commercial-Water Related
dBA	Decibel A-weighted
DO	Dissolved oxygen
EIR	Environmental Impact Report
E.O.	Executive Order
EPA	Environmental Protection Agency

ESA	Environmentally Sensitive Area
FESA	Federal Endangered Species Act
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
GHG	greenhouse gases
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
JPA	Joint Powers Authority
La	Lang sandy loam
Ldn	day-night average sound level
Leq	equivalent continuous sound level
Lb	pound
Lmax	maximum sound level
LOS	Level of Service
Ma	Made land
Maf	Million acre-feet
MBTA	Migratory Bird Treaty Act
MCE	Maximum Credible Earthquake
mg/m^3	Milligrams per cubic meter
MND	Mitigated Negative Declaration
Mph	miles per hour
MRZ	Mineral Resource Zone
MTIP	Metropolitan Transportation Improvement Program
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Protection Act

NES	Natural Environment Study
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OSHA	Occupational Safety and Health Act
PG&E	Pacific Gas and Electric
PA	Programmatic Agreement
Pb	lead
PFC	Perfluorocarbons
PM	particulate matter
ppb	parts per billion
ppm	parts per million
PRC	Public Resources Code
Qha	Quaternary Holocene alluvium
R1UBV	Riverine, Tidal, Unconsolidated Bottom, Permanent-tidal
RCRA	Resource Conservation and Recovery Act of 1976
ROG	Reactive organic compounds
RP	Recreations-Parks
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Council of Governments
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO_2	sulfur dioxide
SF_6	Sulfur hexafluoride

SPCCP	Spill Prevention, Control, and Countermeasure Program
Stone Lock	William G. Stone Navigational Lock
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	Sacramento Water Resources Control Board
SVAB	Sacramento Valley Air Basin
TSCA	Toxic Substances Control Act
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VELB	Valley elderberry longhorn beetle
VMT	Vehicle miles traveled
VOC	volatile organic compounds
WF	Water Front
YSAQMD	Yolo-Solano Air Quality Management District

Chapter 1 Proposed Project

1.1 Introduction

The purpose of the Pioneer Bluff Bridge Project is to construct a bridge that connects South River Road across the Barge Canal. This connection is necessary to provide an additional north-south roadway alternative to avoid heavy north-south congestion on Jefferson Boulevard. This bridge will also provide a new route for vehicles to avoid congestion associated with the movement of railroad cargo goods across Jefferson Boulevard.

1.2 Alternatives

Two alternatives are being considered for this project—the Build Alternative (see Figure 1: Project Vicinity, Figure 2: Project Location, and Figure 3: Project Layout) and the No-Build Alternative.

1.2.1 Build Alternative

The City of West Sacramento's (City) Department of Public Works proposes to build a bridge that provides a gap closure and will connect the existing two-lane South River Road from the South River Road cul-de-sac on the north side of the Barge Canal to South River Road on the south side of the Barge Canal. The project is located on the eastern edge of the City within Yolo County. The project area and vicinity is bounded on the north by an industrial area and US 50/Capital City Freeway, on the east by the Sacramento River, on the south by undeveloped land and the Southport Community, and on the west by Jefferson Boulevard.

South River Road – North of Barge Canal

The typical cross section for the South River Road includes two 12-foot lanes and two 6-foot shoulders. The road improvements will conform to the existing driveways. This portion of South River Road will be within the existing 60-foot right-of-way corridor.

The project will include signalization of the South River Road/15th Street intersection. Associated improvements include overlay and restriping at the intersection.

Pioneer Bluff Bridge

The bridge will be 615 feet long and approximately 80 feet wide. The bridge is an eight-span concrete slab bridge supported by seven piers with five columns per pier. Each column will be 42-inches in diameter and will be supported by pile footings. The bridge will include one 12-foot lane in each direction and one future un-striped 12-foot lane in each direction, a 2-foot raised median, shoulders, and two 6-foot walkways separated from traffic by a concrete barrier.

South River Road – South of Barge Canal

The new bridge ties into the existing South River Road levee road at a perpendicular

alignment. There will be approximately 550 feet of improvements on South River Road that consist of resurfacing and conforming to the existing pavement. A typical cross section for this portion will include two 12-foot lanes.

Project Components

The project consists of the following components:

- The bridge will be high enough to allow for a 200-year flood event.
- A design speed of 45 miles per hour (mph).
- A storm drain system that will utilize existing ditches and features wherever possible. Road runoff will be filtered through a bioswale.
- The project will conform to existing driveways; no acquisition of new right-of-way will be required.
- The project will provide 3:1 slopes on the levee sides and will maintain a 60 foot right-of-way corridor.

Existing overhead and underground utilities exist within the project area. Utilities are to be protected in place with exception of adjusting manholes, valve covers, and utility boxes/vaults to the finished grade.

Construction is expected to begin in the summer of 2013 and will require approximately 9 continuous months. Construction activities shall be limited to daylight hours when possible. Night work will only be considered when required to meet schedule or to avoid high water events.

Construction Equipment and Staging Areas

Typical equipment for roadway construction will include heavy construction earthmoving equipment. Typical bridge construction equipment will include cranes, pile drivers, drill rigs, excavators, and concrete pumps. The canal will be dewatered by methods determined appropriate by the contractor. It is anticipated that the contractor will use bladder dams and rock/fill to establish berms for the area that will be dewatered. First, areas where the rock will be placed will be dewatered by utilizing bladder dams. Once the area is dry, rock and fill will be placed into the canal. Once the rock is in place, the bladder dams will be removed. To remove the berms after construction of the bridge is complete, the bladder dams will be re-installed, the rock and fill will be removed, and then the bladder dams will be removed. The contractor may construct work pads that extend into the canal from the north and south banks.

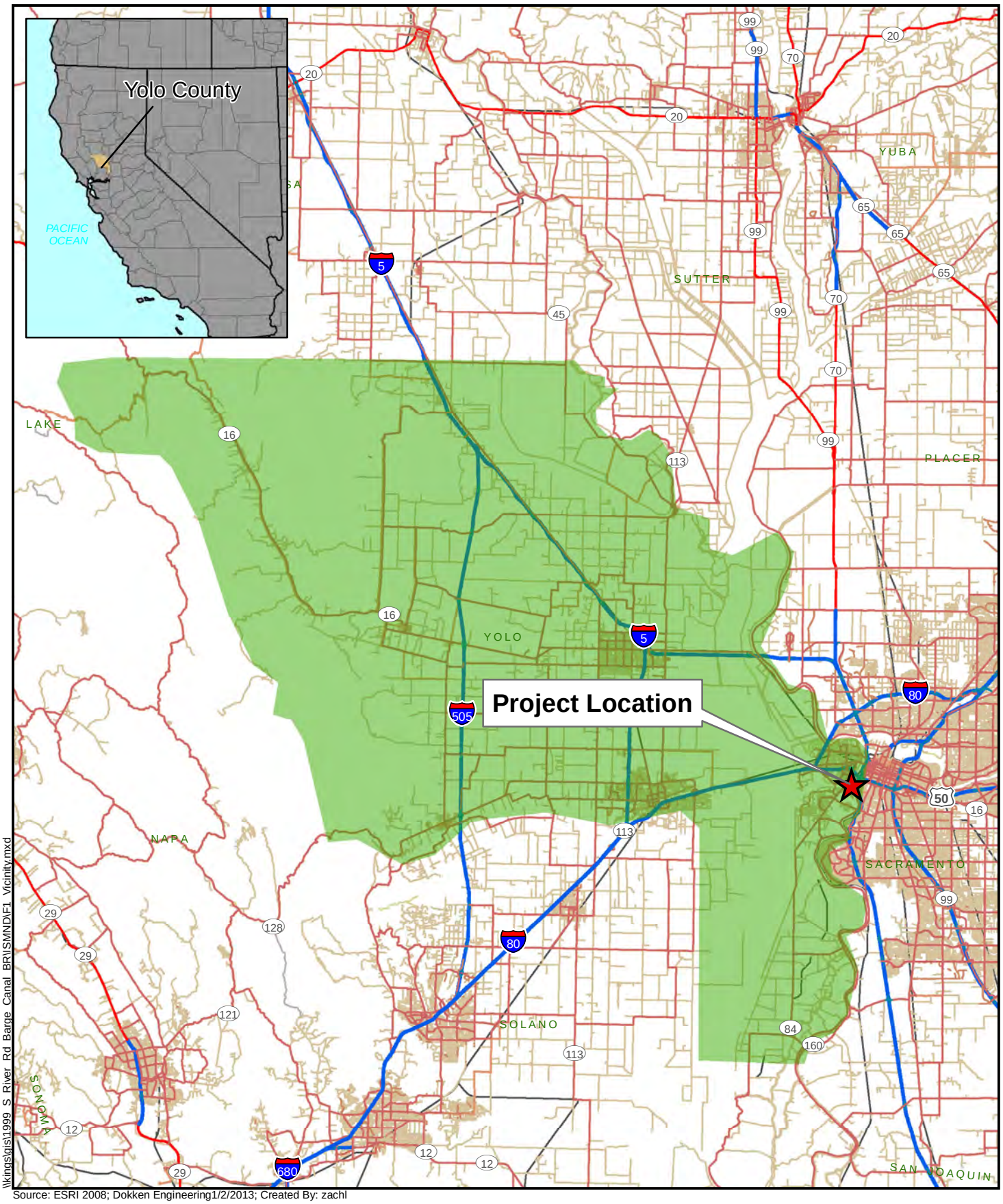
Two primary staging areas are considered, one on the south side of the canal and one on the north side of the canal. The southern staging area is located east of Jefferson Boulevard on a piece of land that is graded and has old asphalt paving. The northern staging area is on a piece of the City's decommissioned wastewater treatment plant. The northern staging area is within the industrial area east of South River Road.

1.2.2 No-Project Alternative

The State CEQA Guidelines (Section 15126[e]) require consideration of a no-project alternative that represents the existing conditions, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved. For purposes of this analysis, it is assumed that, under the No-Project Alternative, no canal crossing would be constructed.

1.3 Permits and Approvals Needed

Agency	Permit/Approval	Status
State Water Resources Control Board	Section 402 Notice of Intent	To be obtained prior to construction
Central Valley Regional Water Quality Control Board	Water quality certification under Section 401 of the Clean Water Act	To be obtained prior to construction
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	To be obtained prior to construction
United States Army Corps of Engineers	Section 404 Nationwide Permit 14	To be obtained prior to construction
Central Valley Flood Protection Board	Encroachment Permit	To be obtained prior to construction.
National Oceanic and Atmospheric Administration	Section 7 Biological Opinion	In progress
U.S. Fish and Wildlife Service	Section 7 Biological Opinion	In progress



Source: ESRI 2008; Dokken Engineering1/2/2013; Created By: zachl

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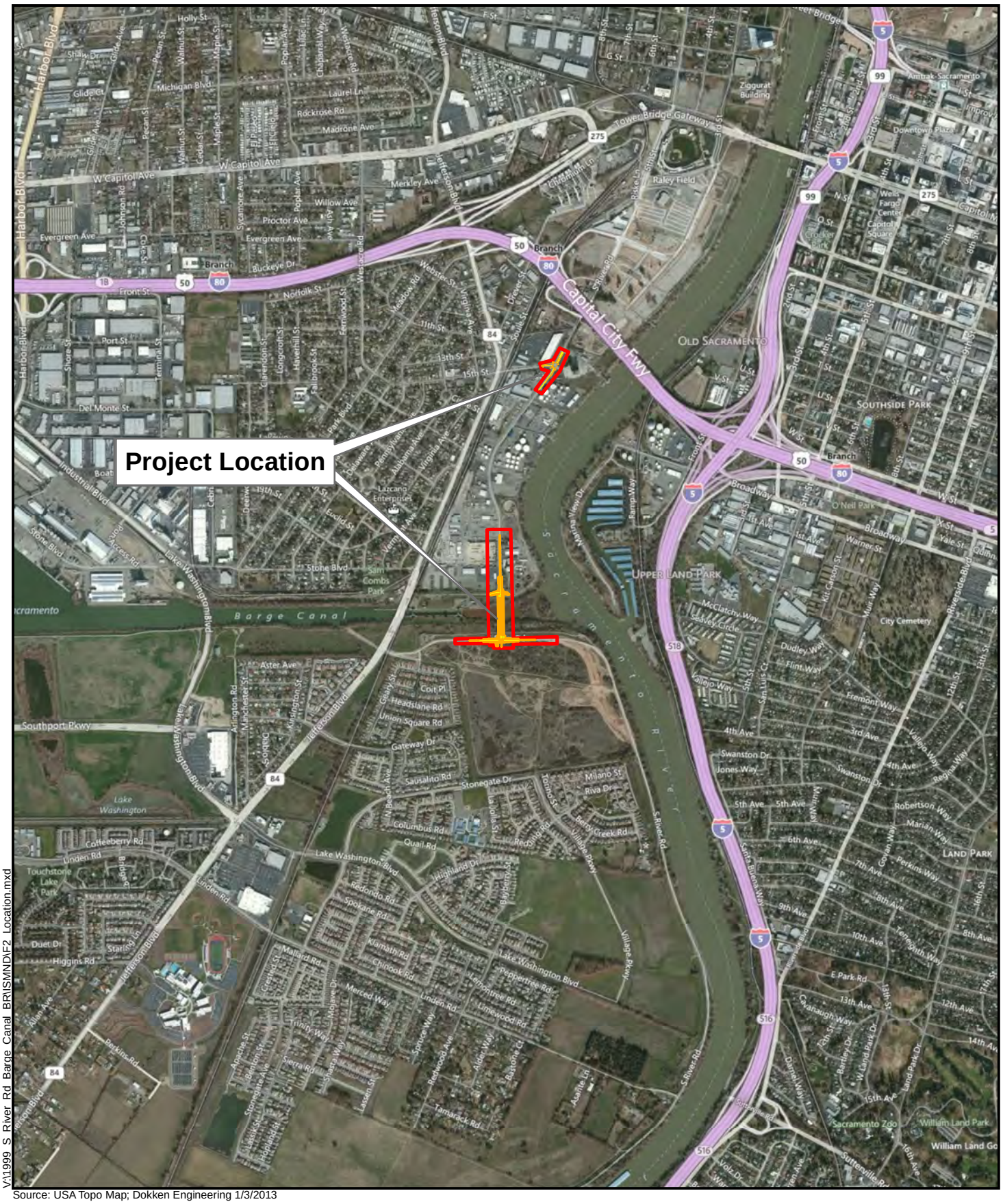
0 10 20 Miles

FIGURE 1
Project Vicinity
Pioneer Bluff Bridge Project
City of West Sacramento, California



V:\1999 S River Rd Barge Canal BRISMNDIF2 Location.mxd

Source: USA Topo Map; Dokken Engineering 1/3/2013

0 0.25 0.5 0.75 1 Miles

FIGURE 2
Project Location
Pioneer Bluff Bridge Project
City of West Sacramento, California

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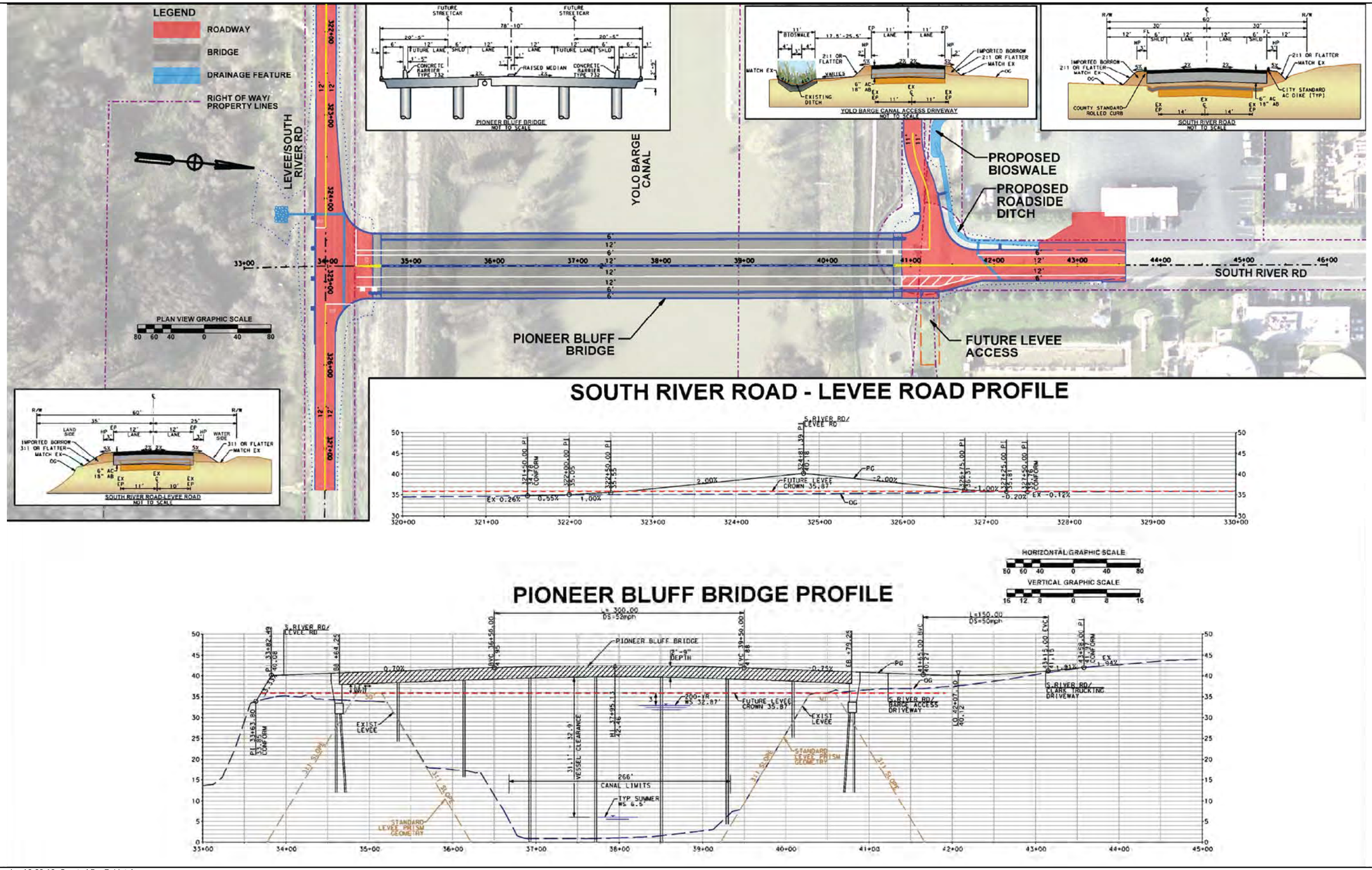

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Source: Dokken Engineering 12-20-12; Created By: Z. Liptak

FIGURE 3a
Project Layout
Pioneer Bluff Bridge Project
City of West Sacramento, California

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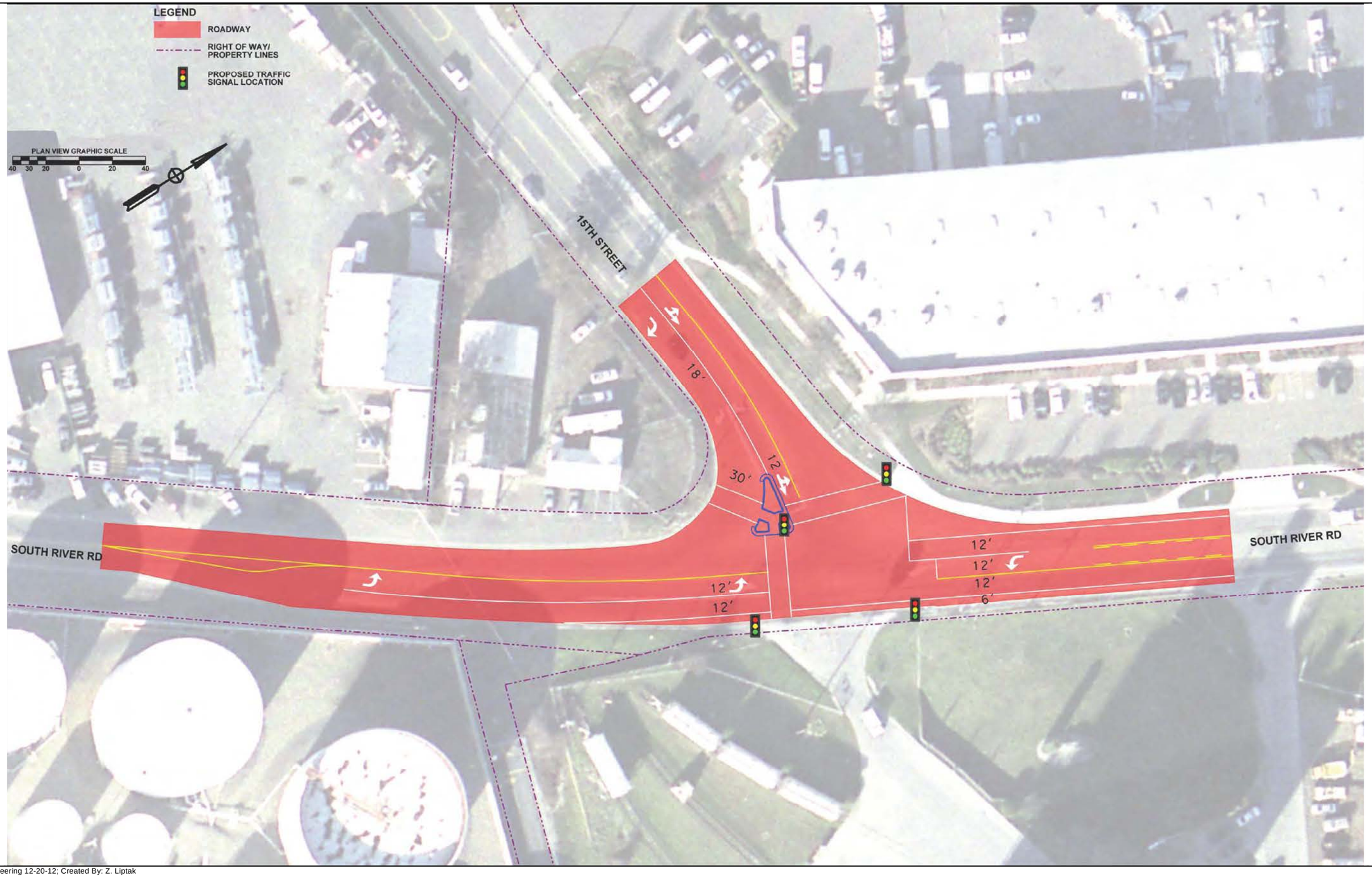

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Source: Dokken Engineering 12-20-12; Created By: Z. Liptak

FIGURE 3b
Project Layout
Pioneer Bluff Bridge Project
City of West Sacramento, California

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Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter explains the impacts that the project would have on the human, physical, and biological environments in the project area. It describes the existing environment that could be affected by the project, potential impacts from the alternatives, and proposed avoidance, minimization, and/or mitigation measures. Any indirect impacts are included in the general impacts analysis and discussions that follow.

As part of the environmental analysis conducted, the following environmental issue (Agriculture and Forest Resources) was considered, but no potential for adverse impacts were identified. Consequently, there is no further discussion regarding this issue in the document:

- Agriculture and Forest Resources—No Important Farmland (which includes Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance) is within or near the proposed project area as shown by the Yolo County Important Farmland Map (2011). The nearest Important Farmland is far, at approximately 1 mile south of the project site. Land within the project study area is zoned Waterfront (WF), Recreations and Parks (RP), and Commercial-Water Related (CW) (see Figure 4). There is no Williamson Act contract land in the project study area. The nearest Williamson Act contract land is approximately 3.5 miles northwest of the project site and outside of West Sacramento (California Department of Conservation, Division of Land Resources Protection 2008).

2.1 AESTHETICS

REGULATORY SETTING

CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of aesthetic, natural, scenic and historic environmental qualities (CA Public Resources Code Section 21001[b])."

AFFECTED ENVIRONMENT

South River Road and nearby roads are not designated Scenic Highways in the National Scenic Byways Program nor are they State Scenic Highways (Caltrans 2007). The project area is also not considered a scenic vista regionally or locally in the City's General Plan.

Industrial uses exist along South River Road north of Barge Canal. The Stone Lock facility property is at the northwest side of the bridge and the out-of-service City of West Sacramento Wastewater Treatment Plant is at the northeast side of the bridge. All parcels located north of Barge Canal are zoned Waterfront.

The land south of the canal currently contains vacant parcels, which are zoned for Waterfront and Recreation and Parks. The Southport Gateway development occurs south

Source: Bings Maps Hybrid 2012; Dokken Engineering. Created by Z. Liptak 12/04/12

0 500 1,000 1,500 2,000 Feet

FIGURE 4
Zoning Map
Pioneer Bluff Bridge Project
City of West Sacramento, California

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of these vacant parcels. These residences are bound by berms along the edges of the developments.

The Barge Canal waterway east of Jefferson Boulevard is currently not used for recreational purposes and it is not a designated scenic area. Views of the waterway are currently restricted, as both the north south banks of the project are fenced and gated from the public. The visual character or quality of the site would encounter less than significant impact.

The proposed project falls within the jurisdiction of the City of West Sacramento. Land use changes and development in West Sacramento are subject to policies of the City West Sacramento General Plan including visual resource and aesthetic policies, design guidelines, and ordinances such as tree preservation and removal ordinances (City of West Sacramento 2009).

ENVIRONMENTAL CONSEQUENCES

The Pioneer Bluff Bridge would introduce a new vertical element into the viewshed. The bridge would be seen by travelers on South River Road, north and south of the bridge and by workers in the adjacent industrial land uses (see Figure 5 for existing view). The bridge would remove some natural vegetation along Barge Canal and would increase the amount of impervious surfaces in the viewshed. While the bridge would be a new man-made element, the project vicinity currently has other man-made elements such as the Stone Lock facilities and the out-of-service West Sacramento Wastewater Treatment Plant. Due to the lack of designated or recognized visual scenic resources and the existence of industrial land use currently along Barge Canal, aesthetic impacts would be less than significant. Further, views from the nearest residential areas would not be affected (see Figures 6). Minimization measure AES-1 will ensure aesthetic treatments are considered during final design of the bridge, to meet the City's goals.

Figure 5. Existing view along South River Road, facing south towards the bridge location

Figure 6. Typical View from Southport Gateway

Lights would be located on the new bridge. These added light sources are not anticipated to result in substantial light and glare impacts because this would minimally increase the amount of ambient light existing viewer groups already experience. Minimization of glare would be taken into account through implementation of AES-2.

Construction of the proposed project would temporarily change views experienced by drivers, pedestrians, and other people in the project area since construction equipment would be visible from neighboring areas. Additionally, grading activities may expose soils. These impacts are temporary, and therefore, not considered substantial.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No mitigation is required; however, the following avoidance and/or minimization measures will be implemented to minimize potential impacts:

AES-1: During final design, aesthetics will be considered by the City for consistency with local goals and standards.

AES-2: Selection of lighting fixtures will take into account minimizing glare, while taking into account safety needs.

2.2 AIR QUALITY

REGULATORY SETTING

The Clean Air Act (CAA) as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), lead (Pb), and sulfur dioxide (SO_2).

Regional level conformity in California is concerned with how well the region is meeting the standards set for CO, NO_2, O_3, and PM. California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTP[s]) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as the Sacramento Area Council of Governments (SACOG) for Yolo County and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Federal and State Ambient Air Quality Standards

California and the federal government have established standards for several different pollutants. For some pollutants, separate standards have been set for different measurement periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). The pollutants of greatest concern in the project area are ozone, particulate matter-2.5 microns ($PM_{2.5}$) and particulate matter-10 microns (PM_{10}). Table 1 shows the state and federal standards for a variety of pollutants.

State Regulations

Responsibility for achieving California's air quality standards, which are more stringent than federal standards, is placed on the California Air Resources Board (CARB) and local air districts, and is to be achieved through district-level air quality management plans that will be incorporated into the SIP. In California, the EPA has delegated authority to prepare SIPs to the CARB, which, in turn, has delegated that authority to individual air districts.

The CARB has traditionally established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological

data, and approving state implementation plans.

Responsibilities of air districts include overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality–related sections of environmental documents required by CEQA.

The California CAA of 1988 substantially added to the authority and responsibilities of air districts. The California CAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The California CAA focuses on attainment of the state ambient air quality standards, which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards.

The California CAA requires designation of attainment and nonattainment areas with respect to state ambient air quality standards. The California CAA also requires that local and regional air districts expeditiously adopt and prepare an air quality attainment plan if the district violates state air quality standards for CO, SO_2, NO_2, or ozone. These Clean Air Plans are specifically designed to attain these standards and must be designed to achieve an annual 5% reduction in district-wide emissions of each nonattainment pollutant or its precursors. Where an air district is unable to achieve a 5% annual reduction, the adoption of "all feasible measures" on an expeditious schedule is acceptable as an alternative strategy (Health and Safety Code Section 40914(b)(2)). No locally prepared attainment plans are required for areas that violate the state PM_{10} standards.

The California CAA requires that the state air quality standards be met as expeditiously as practicable but, unlike the federal CAA, does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards.

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) provides ARB recommendations for the siting of new sensitive land uses (including residences) near freeways, distribution centers, ports, refineries, chrome plating facilities, dry cleaners, and gasoline stations. The handbook recommends that new development be placed at distances from such facilities.

Local Regulations

The air quality management agencies of direct importance in Yolo County include the EPA, CARB, and Yolo-Solano Air Quality Management District (YSAQMD). The EPA has established federal standards for which the CARB and YSAQMD have primary implementation responsibility. The CARB and YSAQMD are responsible for ensuring that state standards are met. The YSAQMD is responsible for implementing strategies for air quality improvement and recommending mitigation measures for new growth and development. At the local level, air quality is managed through land use and development planning practices, and is implemented in the County through the general planning process. The YSAQMD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws.

AFFECTED ENVIRONMENT

The project is included in the Sacramento Area Council of Governments' (SACOG) Final 2013-16 Metropolitan Transportation Improvement Program (MTIP) which was found to be conforming by the Federal Highway Administration (FHWA) and Federal Transportation Administration (FTA) on December 14, 2012. The 2013/16 MTIP is the current programming document. The project is under SACOG ID YOL15180, which has the following project description: "Reconstruct and widen South River Road to 4 lanes from US50 on-ramp to Stonegate Boulevard, including a new 4-lane bridge over barge canal." Please see Appendix F of this Initial Study for the project listing.

The project is also in the Final Metropolitan Transportation Plan (MTP)/Sustainable Communities Strategy (SCS) 2035, adopted by SACOG in April 19, 2012. The project is listed in page 98 of the MTP/SCS 2035 Appendix A, under the following project description: "Reconstruct and widen South River Road to 4 lanes from US 50 on-ramp to Stonegate Boulevard, including a new 4-lane bridge over barge canal." Please see Appendix F of this Initial Study for the project listing.

The project site is located within Yolo County, which is located in the Sacramento Valley Air Basin (SVAB). The SVAB is bound on the west by the Coast Ranges, on the north and east by the Cascade Range and Sierra Nevada, and includes Sacramento, Shasta, Tehama, Butte, Glenn, Colusa, Sutter, Yuba, Yolo, and parts of Solano and Placer Counties. The YSAQMD has jurisdiction over air quality issues within the Solano County portion of the SVAB. The federal and state governments have established ambient air quality standards for six criteria pollutants: ozone, CO, NO_2, SO_2, particulate matter ($PM_{2.5}$ and PM_{10}), and lead. Within the YSAQMD, ozone and $PM_{2.5}$ and PM_{10} are considered pollutants of concern.

The area's climate is Mediterranean and characterized by hot, dry summers and cool, rainy winters. During winter, the North Pacific storm track intermittently dominates Sacramento Valley weather, and fair weather alternates with periods of extensive clouds and precipitation. Periods of dense and persistent low-level fog, which is most prevalent between storms, are also characteristic of winter weather in the valley. The frequency and persistence of heavy fog in the valley diminishes with the approach of spring. The average yearly temperature range for the Sacramento Valley is 20 to 115°F, with summer high temperatures often exceeding 90°F and winter low temperatures occasionally dropping below freezing.

In general, the prevailing wind in the Sacramento Valley is from the southwest, from marine breezes flowing through the Carquinez Strait. The Carquinez Strait is the major corridor for air moving into the Sacramento Valley from the west. Incoming airflow strength varies daily with a pronounced diurnal cycle. Influx strength is weakest in the morning and increases in the evening hours. Associated with the influx of air through the Carquinez Strait is the Schultz Eddy, which is formed when mountains on the valley's western side divert incoming marine air. The eddy contributes to the formation of a low-level southerly jet 500 to 1,000 feet above the surface that is capable of speeds in excess of 35 miles per hour (mph). This jet is important for air quality in the Sacramento Valley because of its ability to transport air pollutants over large distances.

The SVAB's climate and topography contribute to the formation and transport of photochemical pollutants throughout the region. The region experiences temperature

inversions that limit atmospheric mixing and trap pollutants, resulting in high pollutant concentrations near the ground surface. Generally, the lower the inversion base height from the ground and the greater the temperature increase from base to top, the more pronounced the inhibiting effect of the inversion will be on pollutant dispersion. Consequently, the highest concentrations of photochemical pollutants occur from late spring to early fall when photochemical reactions are greatest because of more intense sunlight and the lower altitude of daytime inversion layers. Surface inversions (those at altitudes of 0–500 feet [ft] above sea level) are most frequent during winter, and subsidence inversions (those at 1,000–2,000 ft above sea level) are most common in summer.

Existing air quality conditions in the project area can be characterized in terms of the ambient air quality standards that the state of California (California Ambient Air Quality Standards [CAAQS]) and the federal government NAAQS have established for several different pollutants. For some pollutants, separate standards have been set for different measurement periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). Table 1 shows the state and federal standards for a variety of pollutants.

Exposure and disturbance of rock and soil that contains asbestos can result in the release of fibers to the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (proper rock name serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include: unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present. Based on the map of naturally-occurring asbestos locations contained in *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos* (California Department of Conservation, Division of Mines and Geology 2000), major ultramafic rock formations are not found in Yolo County.

Table 1. Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Averaging Time**	**California Standards [1]**		**National Standards [2]**		
		Concentration [3]	**Method [4]**	**Primary [3,5]**	**Secondary [3,6]**	**Method [7]**
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	15 µg/m^3		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[8]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[9]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[9]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[9]	—	
Lead[10,11]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[11]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[12]	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			
See footnotes on next page ...						
For more information please call ARB-PIO at (916) 322-2990						**California Air Resources Board (6/7/12)**

Source: CARB 2012a

(Table 1, continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

9. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

   Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

10. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

11. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (6/7/12)**

The nearest air quality monitoring stations in the vicinity of the proposed project area are the West Sacramento 15th Street station, UC Davis-Campus, Campbell Road West of Highway 113 & South of Hutchison Drive, and 41929 E. Gibson Road in Woodland, California. Air quality monitoring data from these monitoring stations is summarized in Table 2. This data represents air quality monitoring data of O_3, NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$ measured for the last three years (2009–2011) in which complete data is available.

Table 2. Air Quality Monitoring Data

Pollutant	Time Averaging	2009	2010	2011	Standards	
		Max	Max	Max	National	State
Carbon Monoxide	8 hour	N/A	N/A	N/A	9 ppm	9 ppm
	1 hour	N/A	N/A	N/A	35 ppm	20 ppm
Nitrogen dioxide (NO_2)	Annual Arithmetic Mean	N/A	N/A	N/A	53 ppb	0.030 ppm (30 ppb)
	1 hour	43 ppb	37 ppb	40 ppb	100 ppb	0.18 ppm (180 ppb)
Ozone	1 hour	0.092 ppm	0.094 ppm	0.087 ppm	N/A	0.09 ppm
	Number of days exceeded	0 days	0 days	0 days		
	8 hour	0.082 ppm	0.073 ppm	0.082 ppm	0.075 ppm	0.07 ppm
	Number of days exceeded	7 days	3 day	2 days		
Particulate Matter 10 micrometer diameter (PM_{10})	24 Hour	67 mg/m^3	58 mg/m^3	56 mg/m^3	150 mg/m^3	50 mg/m^3
	Annual Arithmetic Mean	N/A	N/A	N/A	N/A	20 mg/m^3
Particulate Matter (2.5 micrometer diameter) ($PM_{2.5}$)	24 Hour	27.6 mg/m^3	26.7 mg/m^3	39.4 mg/m^3	35 mg/m^3	N/A
	Annual Arithmetic Mean	7.5 mg/m^3	5.7 mg/m^3	7.6 mg/m^3	15 mg/m^3	12 mg/m^3

Source:
US Environmental Protection Agency. Accessed November 30, 2012. AirData [internet database] available at http://www.epa.gov/airdata/ad_rep_mon.html.
California Environmental Protection Agency. Accessed November 30, 2012. Air Quality Data Query Tool [internet database] available at http://www.arb.ca.gov/aqmis2/aqdselect.php.

The 8-hour NAAQS for ozone was exceeded 1 times in 2009; 0 times in 2010; and 1 times in 2011 at the UC Davis Campus monitoring station. The 8-hour CAAQS for ozone was

exceeded 7 times in 2009; 3 times in 2010; and 2 times in 2011 at the UC Davis Campus monitoring station. As shown in Table 3, the Sacramento Valley Air Basin is currently classified as a nonattainment area under the CAAQS for 1-hour O_3, 8-hour O_3, and PM_{10}. The project area is currently classified as a nonattainment area under the NAAQS for 8-hour O_3 and $PM_{2.5}$. The Sacramento Valley Air Basin is in attainment or unclassified for all other standards.

Table 3. Attainment for Sacramento Valley Air Basin

Pollutant	Attainment Status	
	Federal	State
O_3 – 1-hour	No Federal Standard	Nonattainment -Serious
O_3 – 8-hour	Nonattainment	Nonattainment
PM_{10}	Unclassified	Nonattainment
$PM_{2.5}$	Nonattainment	Unclassified
CO	Unclassifiable/Attainment	Attainment
NO_2	Unclassified/Attainment	Attainment
SO_2	Unclassified	Attainment
Sulfates	No Federal Standard	Attainment
Lead	Unclassifiable/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility Reducing Particles	No Federal Standard	Unclassified
Source: California Air Resources Board, 2012b		

The State CEQA Guidelines further state that the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the determinations above. The YSAQMD has specified significance thresholds within its *Handbook for Assessing and Mitigating Air Quality Impacts* (YSAQMD 2007) to determine whether mitigation is needed for project-related air quality impacts. The YSAQMD's thresholds of significance for construction- and operation-related emissions are presented in Table 4.

Table 4. Yolo Solano Air Quality Management District Construction Thresholds of Significance

Thresholds of Significance	
Pollutant	**Construction (pounds per day)**
Reactive Organic Gases (ROG)	54.8 lbs/day (10 tons/year)
NO_x	54.8 lbs/day (10 tons/year)
PM_{10}	80 lbs/day
CO	NA
ROG: reactive organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; PM_{10}: particulate matter 10 microns or less in aerodynamic diameter; Emissions of CO from construction activities are not considered to be an issue of concern because the AQMD do not consider construction activities to be a major source of CO. In addition, the AQMD is in attainment status for CO. Source: Yolo Solano Air Quality Management District 2007	

ENVIRONMENTAL CONSEQUENCES

Construction and grading would not occur in an area with ultramafic rock that could be a source of emissions of naturally-occurring asbestos. Major ultramafic rock formations are not found in Yolo County (California Department of Conservation, Division of Mines and Geology 2000).

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and various other activities. Emissions from construction equipment also are anticipated and would include CO, NOx, volatile organic compounds (VOCs), directly-emitted particulate matter (PM_{10} and $PM_{2.5}$), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NOx and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction would involve clearing, cut-and-fill activities, grading, removing or improving existing roadways, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. If not properly controlled, these activities would temporarily generate PM_{10} and $PM_{2.5}$, and small amounts of CO, SO_2, NOx, and VOCs. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by EPA to add 1.09 tonne (1.2 tons) of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. Fugitive dust would be controlled during construction per measure AQ-1 and AQ-2.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NOx, VOCs and some soot particulate (PM_{10} and $PM_{2.5}$) in exhaust emissions. Construction activities will not increase traffic congestion in the area, so CO and other emissions from traffic would not temporary increase slightly in the immediate area surrounding the construction site.

SO_2 is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Off-road diesel fuel meeting Federal Standards can contain up to 5,000 parts per million (ppm) of sulfur, whereas on-road diesel is restricted to less than 15 ppm of sulfur. However, under California law and CARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel, so SO_2-related issues due to diesel exhaust will be minimal. Some phases of construction, particularly asphalt paving, would result in short-term odors in the immediate area of each paving site(s). Such odors would be quickly dispersed below detectable thresholds as

distance from the site(s) increases.

Construction emissions of ROG, NOx, CO, and PM_{10} were estimated using the *Road Construction Emissions Model* (Version 7.1.2) and presented in Table 5, which are compared to emission thresholds set by the YSAQMD. The road construction model is a public-domain spreadsheet model formatted as a series of individual worksheets. The model enables users to estimate emissions using a minimum amount of project-specific information. The model estimates emissions for load hauling (on-road heavy-duty vehicle trips), worker commute trips, construction site fugitive PM_{10} dust, and off-road construction vehicles. Although exhaust emissions are estimated for each activity, fugitive dust estimates are currently limited to the major dust-generating activities, which include grubbing/land clearing and grading/excavation. In addition, dust estimates do not account for any control measures required by the YSAQMD.

Table 5. Road Construction Emissions Model Compared to Thresholds of Significance

Thresholds of Significance		
Pollutant	**Road Construction Emissions Model Estimates**	**YSAQMD Threshold (pounds per day)**
ROG	4.9 lbs/day	54.8 lbs/day (10 tons/year)
NOx	54.6 lbs/day	54.8 lbs/day (10 tons/year)
PM_{10}	12.5 lbs/day	80 lbs/day
CO	4,673.0 lbs/day	NA

ROG: reactive organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; PM_{10}: particulate matter 10 microns or less in aerodynamic diameter; Emissions of CO from construction activities are not considered to be an issue of concern because the AQMD do not consider construction activities to be a major source of CO. In addition, the AQMD is in attainment status for CO.

Source: Modeling using the *Roadway Construction Emissions Model* 7.1.2 (Sacramento Metropolitan Air Quality Management District 2012).

For both the build and no-build alternatives, the amount of air quality pollutants emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT will be nearly equivalent for the build alternative when compared to the no build alternative, as the new bridge will attract rerouted trips from elsewhere in the transportation network, as well as improve efficiency on nearby roadways. These rerouted trips from elsewhere in the transportation network would lead to similar volume of emissions, just in a new, previously inaccessible, area. The change in location of these emissions will be slightly offset by lower overall emission rates due to increased speeds; according to EPA's MOBILE6 emissions model, emissions, except for diesel particulate, matter decreases as speed increases. The extent to which these speed-related emissions decreases will offset overall emissions cannot be reliably projected due to the inherent deficiencies of technical models.

While the new bridge is anticipated to bring traffic from Jefferson Boulevard onto South River Road north and south of Barge Canal, air emissions would be improved by providing vehicles an alternative to idling while waiting at the train crossing on Jefferson Boulevard. Overall ambient emissions are not anticipated to be higher with the proposed project.

In summary, emissions along South River Road would be offset by lower emissions along Jefferson Boulevard, where speeds would increase and congestion would be reduced. Also, emissions will be lower in other locations when traffic shifts away. Further, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide emission levels to be significantly lower than today. Operational air quality impacts would not be substantial. The proposed project would not conflict with or obstruct implementation of the applicable air quality plan. Emissions from construction would have a less than significant impact and would not violate any air quality standard or contribute substantially to an existing or projected air quality violation, nor would it result in a cumulatively considerable net increase of any criteria pollutant. Further, the project would have a less than significant impact regarding exposing sensitive receptors to pollutant concentrations or objectionable odors.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

All of the construction impacts to air quality are short-term in duration and, therefore, will not result in adverse or long-term impacts. Implementation of the following measures will reduce any air quality impacts resulting from construction activities:

AQ-1: The contractor shall comply with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

AQ-2: The contractor shall control dust by applying either water or dust palliative, or both.

AQ-3: The construction contractor shall implement control measures to reduce emissions of NOX, ROG, and PM_{10}. The contractor shall:

- Minimize idling time to 5 minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required.
- To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintaining heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions.
- Use electric equipment when feasible.
- Properly maintain equipment according to manufacturers' specifications.

2.3 BIOLOGICAL RESOURCES

2.3.1 Natural Communities

REGULATORY SETTING

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors

are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as Critical Habitat under the Federal Endangered Species Act are discussed in Section 2.3.4 of this document. Wetlands and other waters are also discussed in the following section, Section 2.3.2.

AFFECTED ENVIRONMENT

A Biological Study Area (BSA) is shown in Figure 7a and 7b. The only natural community within the project's BSA is Valley Foothill Riparian. This community is dominated by valley oak, sandbar willow, and black willow, with herbaceous understory consisting of annual grass species such as wild oat and reed canary grass.

ENVIRONMENTAL CONSEQUENCES

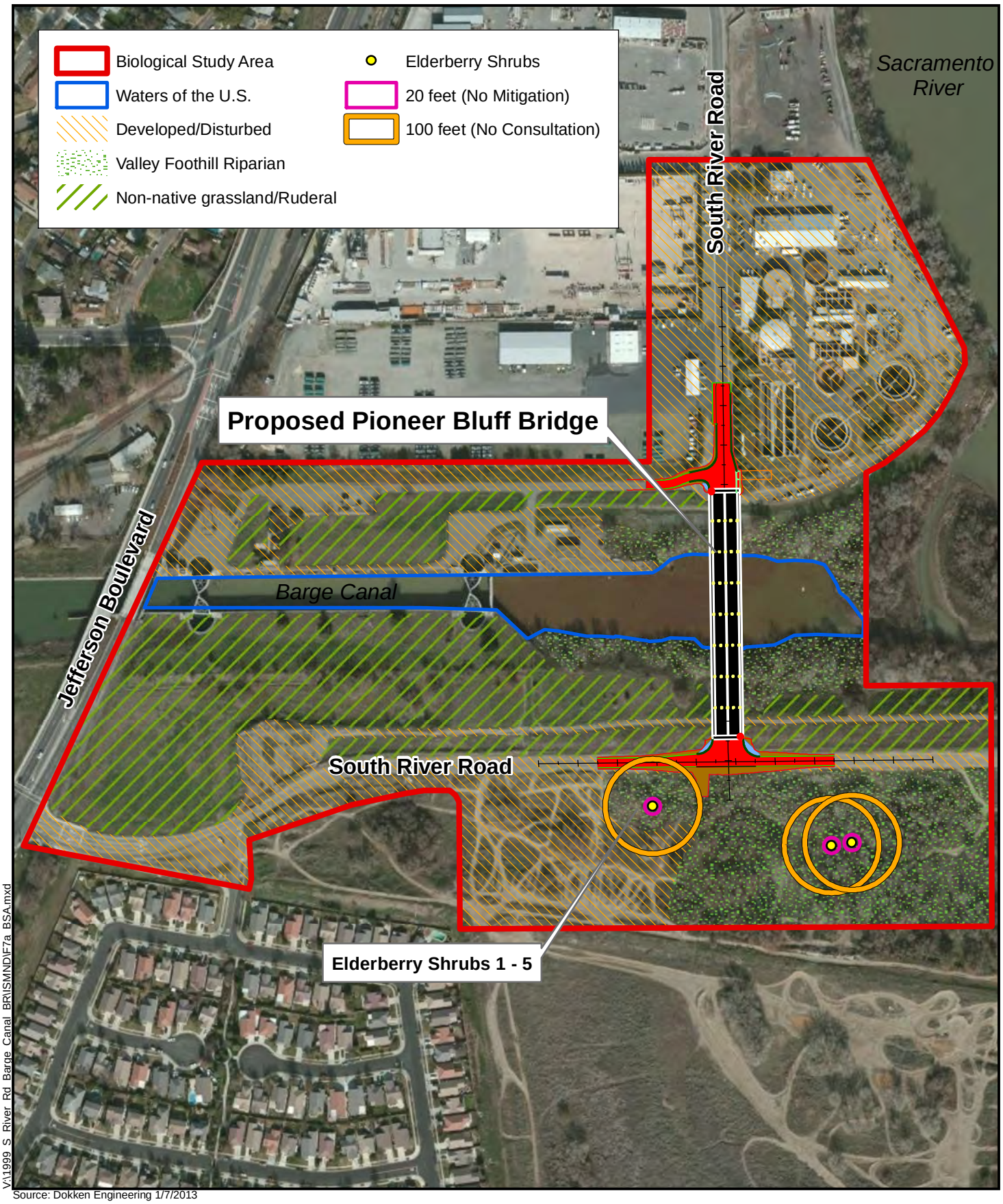
The proposed project will result in direct impacts to Valley Foothill Riparian vegetation. The impacts will include permanent removal of approximately 0.35 acre of riparian vegetation for construction of the bridge.

Construction will require removal of approximately 1.24 acres of natural riparian vegetation for grading and general construction access. BIO-1 will limit the footprint as feasible. Impacts to natural riparian vegetation are considered temporary because the areas can be restored by implementing measure BIO-2. Impacts to natural communities are less than significant.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

BIO-1: Temporary construction staging areas and access roads shall be strategically placed to avoid and/or minimize impacts, when possible. ESA fencing shall be installed in coordination with a biologist in order to minimize the construction footprint to avoid and/or minimize impacts to sensitive habitat areas.

BIO-2 The project will create a re-vegetation plan to compensate for loss of riparian vegetation. Re-vegetation will take place somewhere near the project area.



V:\1999 S. River Rd Barge Canal BRISMNDIF7a BSA.mxd

Source: Dokken Engineering 1/7/2013

0 250 500 750 1,000 Feet

FIGURE 7a
Biological Study Area and Vegetation Types
Pioneer Bluff Bridge Project
City of West Sacramento, California

V:\1999 S. River Rd Barge Canal BRIS\MND\F7b_BSA.mxd

Source: Dokken Engineering 1/3/2013

0 250 500 750 1,000 Feet

FIGURE 7b
Biological Study Area and Vegetation Types
Pioneer Bluff Bridge Project
City of West Sacramento, California

2.3.2 WETLANDS AND OTHER WATERS

REGULATORY SETTING

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S. Code [USC] 1344) is the primary law regulating wetlands and surface waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that states that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the EPA.

The Executive Order for the Protection of Wetlands (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Wildlife (CDFW), the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Wildlife Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCBs also issue water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

AFFECTED ENVIRONMENT

The Barge Canal is a jurisdictional wetland and is mapped in the National Wetlands Inventory Map as riverine, tidal, unconsolidated bottom, permanent-tidal (R1UBV) (USFWS 2012; see map in Appendix E). No other wetlands or waters are in the BSA.

ENVIRONMENTAL CONSEQUENCES

The proposed project would result in permanent fill to the jurisdictional Barge Canal. Bridge footings will result in approximately 195 square feet (0.01 acre) of permanent impact and approximately 70,000 square feet (1.6 acres) of temporary impact. As a result, Clean Water Act Section 401 or 404 permits would be necessary. The City will coordinate with the U.S. Army Corps of Engineers for the Section 404 Nationwide Permit 14 and the RWQCB for the Section 401 Water Quality Certification. A Fish and Wildlife Code Section 1602 Streambed Alteration Agreement would also be coordinated with through CDFW. These approvals would be coordinated during the permitting phase of the project.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

BIO-3: Clean Water Act Section 401 and 404 permits and a Fish and Wildlife Code Section 1602 Streambed Alteration Agreement shall be obtained prior to construction.

2.3.3 PLANT SPECIES

REGULATORY SETTING

The U.S. Fish and Wildlife Service (USFWS) and CDFW share regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see Section 2.3.5 on threatened and endangered species in this document for detailed information.

This section of the document discusses all the other special-status plant species, including CDFW fully protected species and species of special concern, USFWS candidate species, and non-listed California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 USC, Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Wildlife Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at Fish and Wildlife Code, Section 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100-21177.

AFFECTED ENVIRONMENT

A biological survey was conducted on November 16, 2012 to identify plant species in the BSA compared with findings from previous surveys. Background research using USFWS and CDFW databases had indicated that there were five special-status plant species with potential to occur on the project site. Of the five, the survey identified only one special-status plant species, Northern Californian black walnut (*Juglans hindsii*), which is, CNPS 1B.1 listed within the BSA. The complete list of potential sensitive plants species on site and their likelihood to occur are included in Appendix B of this document. Except for the Northern Californian black walnut, all other special-status plant species were presumed absent due to unsuitable habitat for their requirements.

Twenty four specimens of blue elderberry (*Sambucus mexicana*) shrubs with a total of 45 stems were identified south of the Barge Canal, south of South River Road within the BSA. While elderberry shrubs are not special-status, they are habitat for the Federally-threatened valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*). The valley elderberry longhorn beetle is further discussed under section 2.3.5 Threatened and Endangered Species.

The City of West Sacramento has Ordinance 89-4 addressing tree preservation. In the ordinance, the City provides the following definitions for heritage and native oak trees:

- A heritage tree means any living tree with a trunk circumference of 75 inches [diameter of 24 inches] or more, or any living native oak (any species of the genus *Quercus*) with a trunk circumference of 50 inches [diameter of 16 inches] or more, both measured 4 feet 6 inches above ground level. The circumference of multi-trunk trees shall be based on the sum of the circumference of each trunk.

- "Native Oak Tree" means a living tree of any species of the *Quercus* Genus (all oaks, including the nine native California oaks); for example, the Interior Live Oak (*Quercus wislizenii*), Valley Oak, California White Oak (*Quercus lobata*), or Blue Oak (*Quercus douglasii*).

The project footprint includes a total of 322 riparian trees (over 4 inches in diameter). Of these, 36 are heritage trees and/or native oak trees. A majority of these trees may require removal. The project will save as many riparian and heritage trees as possible.

ENVIRONMENTAL CONSEQUENCES

Several Northern Californian black walnut trees are in the permanent footprint for the bridge and would be removed for construction. This direct impact is considered less than significant due to the number of these species in the general vicinity. This direct impact would be minimized by obtaining a tree permit and subsequently tree replacement, as included in measures BIO-4 and BIO-5.

No direct impacts would occur on elderberry shrubs because none are within 20 feet of the project footprint. Five elderberry shrubs with 9 stems will be indirectly impacted, because they are within 100 feet of the project footprint. Activities nearest to the elderberry shrubs consist of grading and improvements to South River Road.

The project will require removal of Native Oak Trees: Black oak (*Quercus kelloggii*), and

Valley oak (*Quercus lobata*) within the construction area. Pre-construction survey will be conducted before removal. By following the City of West Sacramento's tree ordinance, impacts will be mitigated.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

BIO-4: A tree permit will be obtained from the City of West Sacramento's Tree Administrator to remove Heritage or Landmark trees. Replacement trees will be planted in accordance with conditions of the tree permit.

2.3.4 Animal Species

REGULATORY SETTING

Many state and federal laws regulate impacts to sensitive wildlife. The USFWS, the National Oceanic and Atmospheric Administration (NOAA) Fisheries and the CDFW are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.5 in this document. All other special-status animal species are discussed here, including CDFW species of special concern and migratory birds.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the Fish and Wildlife Code
- Section 4150 and 4152 of the Fish and Wildlife Code

AFFECTED ENVIRONMENT

The Natural Environmental Study (NES) 2013, Biological Assessment/Essential Fish Habitat Assessment for the Barge Canal Crossing and Village Parkway Extension Project (2006), William G. Stone Navigational Lock Property Transfer (2005), and the Biological Assessment for the Valley Elderberry Longhorn Beetle and Delta Smelt for the Barge Canal Crossing and Village Parkway Extension Project (2006) serve the basis for much of this section. A search of USFWS, CDFW, and CNPS databases indicted 21 special-status animal species with potential to occur within or near the BSA. Based on biological surveys and conditions of the project site, the following was found:

Of the 21 special-status animal species with potential to occur within or near the BSA, 11 species are not expected, seven have a low to moderate potential to occur, and one has a moderate/high potential to occur. The table in Appendix B includes these species in further in detail.

The biological surveys conducted on November 16, 2012 identified 1 special-status animal species within the BSA. The White-tailed kite (*Elanus leucurus*), fully protected by CDFW was identified foraging southwest of the project area. In addition, elderberry shrubs were located south of South River Road within the BSA. VELB exit holes were identified on shrubs outside the BSA, but no VELB were observed. Further discussion is included under Section 2.3.5 Threatened and Endangered Species.

ENVIRONMENTAL CONSEQUENCES

The following bird species was observed within the BSA or found to have a high potential to occur within the BSA: The project would have a permanent, direct impact on approximately 0.35 acre of potentially suitable riparian habitat; and a temporary, direct impact on 1.24 acres of suitable riparian habitat.

Purple Martin

The purple martin (*Prongne subis*) is state listed by CDFW as a Special Species of Concern. The species is a summer migrant, arriving in March and departing late September. It inhabits riparian habitats with tall, old, isolated trees for nesting, in proximity to a body of water (Zeiner 1988). During the November 16, 2012 field survey, no purple martins were identified but project site contain minimal habitat suitable for nesting.

Impacts to purple martin would be less than significant with mitigation incorporated. Measures followed are BIO-5 to BIO-12.

Fish

The following fish species have been documented to have a low to moderate potential within the BSA: North American green sturgeon, Delta smelt, Longfin smelt, Central Valley steelhead, Central Valley spring-run chinook salmon, and Sacramento river winter-run chinook salmon. None of these species were observed in the BSA. For each of these species, the project would have a permanent direct impact on 0.01 acre of waters of the US. Noise during construction would be a temporary, indirect impact. In the long-term, potentially suitable habitat would be improved because native plants would be used to revegetate the project site. With a combination of low habitat suitability and seasonality for the species listed above, construction can commence at times with less potential to effect. Due to the project scope and the nature of the impacts, the project will not impact the viability of the overall population of these species. More fish discussion following this section in Section 2.3.5.

AVOIDANCE, MINIMIZATION, AND/OR ABATEMENT MEASURES

BIO-5: Should pre-construction surveys or work associated with construction discover the presence of any sensitive species, habitats would be avoided, as feasible, using Environmentally Sensitive Area (ESA) fencing to clearly define the limits of disturbance. ESA fence shall be installed along the construction limits to prevent

unnecessary encroachment into the riparian areas adjacent to the construction site.

BIO-6: To ensure compliance with MBTA and CDFW code, vegetation removal and work should be avoided outside the nesting season (defined as February 15 – August 15). If this is not possible and vegetation removal or work is to occur during the nesting season, a pre-construction survey shall be conducted. The pre-construction survey shall be performed by a qualified biologist, to determine the presence of nesting birds and ensure active nests are not directly or indirectly impacted during construction. The pre-construction survey area will include the limits of the project impact area plus a 300-ft buffer. If work is planned to begin in an area during the nesting season (February 15 – August 15), all vegetation removal shall be completed within two weeks of the nesting survey if the survey determines no active nests are present.

A specific focused survey for Swainson's hawk survey will take place within the proposed project limits of disturbance, including a 500-ft buffer where legal access is available; otherwise a visual survey shall be conducted out to 500 feet. The biologist will be qualified to identify Swainson's hawks and other migratory birds. The survey will occur when the species is known to be most active (i.e., sunrise to late morning, afternoon to sunset). All potential nests will be mapped as well as any individuals sighted.

BIO-7: If the nest of a protected bird is found, the perimeter shall be flagged and a qualified biologist will coordinate with USFWS and CDFW to determine an appropriate buffer distance for protection of the nest. The contractor shall stop work in the nesting area until the buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the project biologist and in coordination with wildlife agencies) in the protected area until the biologist has determined that nesting activities are complete.

BIO-8: Temporary staging areas, storage areas, and access roads involved with this Project will take place, to the extent feasible, in the area of direct impact.

BIO-9: Construction activities shall be limited to daylight hours when possible. Night work will only be considered when required to meet schedule or to avoid high water events.

BIO-10: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel. The project biologist shall conduct a pre-construction meeting to ensure that construction crews are informed of the approved limits of disturbance and of the sensitive animals and habitats in the vicinity. The awareness training will be provided to all construction personnel to brief them on the need to avoid effects to biological resources, particularly riparian habitat and special-status wildlife habitat (i.e., elderberry shrubs), and the penalties for not complying with the biological opinion and other regulatory permits. At a minimum, the training shall include 1) the purpose for resource protection; 2) a description of sensitive species and their habitats; 3) environmentally responsible construction practices; 4) the protocol to resolve conflicts that may arise at any time during the construction process; and 5) the general provisions of FESA and CESA, the

need to adhere to the provisions of FESA and CESA, and the penalties associated with violation of FESA and CESA.

BIO-11: Prior to clearing/grubbing, grading, and/or construction activities within or adjacent to native habitats on the Project site, a qualified biologist shall supervise the installation of temporary construction fencing along the approved limits of disturbance, including construction staging areas and access routes, to prevent additional habitat impacts into adjacent habitats to be avoided. Fencing shall be installed in a manner that does not impact habitats to be avoided.

BIO-12: Native fill will be utilized whenever possible.

2.3.5 Threatened and Endangered Species

REGULATORY SETTING

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 USC Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the USFWS and the National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated Critical Habitat. Critical Habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an Incidental Take statement. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Wildlife Code, Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The CDFW is the agency responsible for implementing CESA. Section 2081 of the Fish and Wildlife Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Wildlife Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For projects requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Wildlife Code.

AFFECTED ENVIRONMENT

The Natural Environment Study (NES) (2013) included evaluation of threatened and/or endangered species potentially within the BSA. For the NES, literature research was conducted through the CDFW California Natural Diversity Database (CNDDB) (CNDDB 2010), and the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants (CNPS 2009) to identify habitats and special-status species having the

potential to occur within the BSA. USFWS was contacted to help identify habitats and special-status species having the potential to occur within the BSA. An official species list was issued from the USFWS, and a discussion between USFWS and the project biologist took place to identify potential habitats and special-status species to consider. Table B-1 included in Appendix B is a compilation of the currently listed federally threatened or endangered species (USFWS, CDFW, and CNPS databases) that could potentially occur within the BSA. The query identified five plant species of special-status and 20 wildlife species of special-status.

Field surveys conducted on November 16, 2012 documented existing biological resources, searched for suitable habitat, and determined presence of Federal and State protected species.

Based on the NES findings, field surveys, and review of previous biological studies, eight threatened and endangered species have the potential to occur in the project BSA. Previous biological studies in this area include the Biological Assessment/Essential Fish Habitat Assessment for the Barge Canal Crossing and Village Parkway Extension Project (2006), William G. Stone Navigational Lock Property Transfer (2005), and Biological Assessment for the Valley Elderberry Longhorn Beetle and Delta Smelt for the Barge Canal Crossing and Village Parkway Extension Project (2006) and NES 2013.

The eight threatened and endangered species that have the potential to occur in the BSA are:

- Swainson's hawk (*Bueto swainsoni*)—State Threatened
- White-tailed kite (*Elanus leucurus*)—State Fully Protected
- Valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*)—Federally Threatened
- Delta smelt (*Hypomesus transpacificus*)—Federally Threatened, State Endangered
- Longfin smelt (*Spirinchus thaleichthys*)—State Threatened
- Central Valley steelhead (*Oncorhynchus mykiss*)—Federally Threatened
- Sacramento River Winter-run Chinook salmon (*Oncorhynchus tshmrytscha*)—Federally and State Endangered
- Central Valley Spring-run Chinook salmon—Federally and State Threatened
- North American green sturgeon (*Acipenser medirostris*)—Federally Threatened

The BSA includes potential habitat of these species due to the presence of Barge Canal and riparian vegetation along its banks. Swainson's hawk and white-tailed kite are two bird species typically found in riparian habitats. The project is also located in Critical Habitat for Central Valley steelhead, and Critical Habitat for Delta smelt is located within the BSA. Sacramento River Winter-run Chinook salmon, Central Valley spring-run Chinook salmon, and North American green sturgeon Critical Habitat is outside the BSA.

Suitable habitat for VELB is also within the BSA, as twenty-four elderberry shrubs are found south of South River Road.

ENVIRONMENTAL CONSEQUENCES

In June 10, 2008, USFWS issued a Section 7 formal consultation letter to USACE for the previous South River Road Barge Canal Crossing and Village Parkway Extension Project. The letter addressed impacts to VELB, and Delta smelt and its Critical Habitat. In the letter, USFWS deemed the project appropriate to append to the Service's December 1, 2004, *Formal Programmatic Consultation on the Issuance of Section 10 and 404 Permits for Projects with Relatively Small Effects on the Delta smelt and its Critical Habitat within the Jurisdiction of the Sacramento Fish and Wildlife Office of the U.S. Fish and Wildlife Service, California* (Delta Smelt Programmatic Consultation) (Service file number 1-1-04-F-0345) and to the Service's *Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the [VELB]* (Beetle Programmatic Consultation) (Service file number 1-1-96-F-0066). Informal consultation with NOAA for Central Valley steelhead and Sacramento River winter-run Chinook salmon was initiated but not completed (NOAA letter, reference number 2007/02103). Further discussion on threatened and endangered species follows.

Swainson's Hawk

Swainson's hawk is State-listed as threatened and has a high potential to occur within the BSA. The Swainson's hawks nest throughout the Central Valley in large trees in riparian corridors and in isolated trees in or adjacent to agricultural fields (England et al. 1997). The species have been documented on CNDDB with more than 20 occurrences within a 5 mile radius of the project site. While the project site contains suitable habitat for nesting and foraging, no Swainson's hawks or raptor nests were identified during the November 16, 2012 field survey. Direct impacts to Swainson's Hawk would be avoided through measures BIO-5 through BIO-12.

White-tailed Kite

The White-tailed kite is a fully protected species by CDFW and inhabits valley margins with scattered oaks and river bottomlands in California. For perching and nesting, dense-topped trees are preferred (Zeiner 1988). One white-tailed kite was observed adjacent to the BSA. There is potentially adequate nesting habitat present, no known nests were observed. The project would ensure there are no impacts on white-tailed kite through avoidance measures. Impacts to white-tailed kite would be avoided through measures BIO-5 through 12.

Valley Elderberry Longhorn Beetle

VELB is Federally-listed as endangered and is closely associated with blue elderberry shrub, an obligate host for beetle larvae. Blue elderberry is considered a typical riparian shrub (Barr 1991) in California that inhabits moist valley oak woodlands associated with riparian corridors (Roberts et al. 1977; Katibah et al. 1984; Warner 1984). Elderberry stems within the BSA had VELB exit holes. This indicates previous use by VELB.

Impacts to VELB would be less than significant with incorporation of avoidance and

mitigation measures. Pertinent mitigation measures outlined in the USFWS' Section 7 formal consultation letter from 2007 would be implemented for this project, and would include construction worker training, and barrier fencing. No direct impacts would occur on VELB and no measures to compensate for direct impacts are necessary. No elderberry shrubs are within 20 feet of the project footprint. Five elderberry shrubs will be indirectly impacted, because they are within 100 feet of the project footprint. Activities nearest to the elderberry shrubs consist of grading and improvements to South River Road. The Biological Opinion for the South River Road Barge Canal Crossing and Village Parkway Extension Project from 2008 will be amended to reflect the current project's reduced impacts. The VELB avoidance measures are listed as BIO-13.

Delta Smelt

Delta smelt are Federally-listed as threatened and State-listed as endangered. Critical Habitat is designated from the Delta into the Sacramento River. Estuarine rearing habitat for juvenile and adult delta smelt are typically found in the waters of the lower Delta and Suisun Bay. They typically occupy open shallow waters but also occur in the main channel in the region where fresh and brackish water mix.

Delta smelt are not anticipated to utilize the project area due to limited connectivity from the Sacramento River to the Barge Canal during dry seasons, and stagnant waters not habitable for Delta smelt food source (primarily small crustaceans) due to low habitable level of dissolved oxygen available in the waters. Closure of the Stone Locks and sedimentation of the Barge Canal within the project vicinity has led to degraded water quality (much of the water is stagnant). Based on samples collected in November 2012, dissolved oxygen in the Barge Canal range is as low as 4.5 mg/L—levels which are typically too low for Delta smelt. While Delta smelt Critical Habitat is in the project area, the project may affect and is not likely to adversely modify Critical Habitat. There is no longer connectivity between the Pacific Ocean/Delta and Barge Canal from the Deep Water Ship Canal. As a result, the Barge Canal is no longer used for Delta smelt migration.

Although not anticipated, the species has potential to access the project location from the Sacramento River. Due to this potential for access, the project proposes to implement applicable mitigation measures outlined below. These measures would include construction windows to avoid work during fish migration periods as feasible and water quality measures. These measures are BIO-14 to BIO-18. Informal consultation will be re-initiated on the Pioneer Bluff Bridge project to reflect current project impacts and to revise the mitigation measures.

Longfin Smelt

Longfin smelt are listed as threatened by CDFW. Being only state listed, Longfin smelt has no designation of Critical Habitat. This species is an anadromous fish found in California's San Francisco Estuary and the Sacramento-San Joaquin delta, which supports the largest longfin smelt population. They spend their adult lives in bays and estuaries and migrate to freshwater for spawning from January to March (CDFW 2009).

Longfin smelt are not anticipated in the project area due to limited connectivity from the Sacramento River to the Barge Canal during dry seasons. With stagnant waters at Barge

Canal, there is also no habitat for Delta smelt food sources (primarily small crustaceans) due to low habitable level of dissolved oxygen available in the waters.

While incidental take of longfin smelt is not anticipated, the project proposes to implement avoidance and minimization measures to limit the construction window to avoid smelt migration periods and to include water quality measures. These measures are BIO-14 to BIO-18.

Central Valley Steelhead

Central Valley steelhead is listed federally as threatened. The Lower Sacramento River in the vicinity of the project area has been documented to contain wild populations of steelhead migrating upstream to their natal spawning grounds between August and February (NMFS 2009). Juvenile steelhead in the Sacramento River Basin migrate downstream during most months of the year but peak in spring (March – June), with a second smaller peak in the fall (October-November) (NMFS 2005). This species is known to occur in the Sacramento River and it is presumed present at the Sacramento River on a seasonal basis.

Central Valley steelheads are not anticipated to utilize the project area due to stressful levels of dissolved oxygen available in the waters, limited connectivity from the Sacramento River to the Barge Canal during dry seasons, and no suitable spawning or rearing habitat. While Central Valley steelhead Critical Habitat is within the project area, Central Valley steelhead are not anticipated to enter the project area due to poor habitat conditions. The project may affect, but will not adversely modify Critical Habitat. Although unlikely to occur, potential construction-related direct effects to Central Valley steelhead would include the temporary increase in sedimentation and turbidity and the risks associated with accidental spills of hazardous chemicals and materials into waters. Mitigation measures BIO-14 through BIO-18 would be implemented to avoid or minimize these potential impacts. No incidental take is anticipated.

Chinook Salmon-Sacramento River Winter-run

Winter-run Chinook salmon is Federally and State-listed as endangered. Critical Habitat for winter-run Chinook includes the Sacramento River from Keswick Dam (River Mile [RM] 302) to Chipps Island (RM 0) in the Sacramento-San Joaquin River Delta (Delta) (58 FR 33212), which does not include the Barge Canal or the Sacramento Deep Water Ship Channel. Adult winter-run Chinook salmon immigration (upstream migration) through the Sacramento River Basin occurs from December through July, with peak immigration in March. Winter-run Chinook salmon spawn between late April and mid-August, with peak spawning generally occurring in June (NMFS 2009).

Winter-run Chinook salmon are not anticipated to utilize the project area due to limited connectivity from the Sacramento River to the Barge Canal during dry seasons and no suitable spawning or rearing habitat. The project is located outside designated Critical Habitat for this species and the project area has low habitable level of dissolved oxygen available in the waters. Dissolved oxygen in the Barge Canal is as low as 4.5 mg/L—levels which are low and stressful to salmonids. Chinook salmon function best in waters with high dissolved oxygen content; Chinook are anticipated to exhibit avoidance behavior at the entrance to the Barge Canal prior to entering the project area.

Although not anticipated, the species has potential access from the Sacramento River to the project location. Due to this potential access, the project proposes to implement mitigation measures BIO-14 through BIO-18. Informal consultation will be re-initiated on the Pioneer Bluff Bridge project to reflect current project impacts and to revise the mitigation measures. Incidental take is not anticipated.

Chinook salmon-Central Valley Spring-run

Spring-run Chinook salmon are Federally and State-listed as threatened. Critical Habitat is designated for spring-run Chinook salmon in the Sacramento River, but the Sacramento Deep Water Ship Channel and Barge Canal is excluded.

Spring-run Chinook salmon enter the Sacramento River from late-March through September with peak abundance of immigrating adults in the Sacramento River Basin from May through June. The primary differences in the habitat requirements between the winter and spring runs are the duration and the time of year that the different life stages of the species utilize the habitat. The project is located outside designated Critical Habitat for spring-run Chinook (NMFS 2005, NMFS 2009).

Spring-run chinook salmon are not anticipated to utilize the project area due to stressful level of dissolved oxygen available in the waters, limited connectivity from the Sacramento River to the Barge Canal during dry seasons, and the project is located outside designated Critical Habitat for this species.

Although not anticipated, the species has potential access from the Sacramento River to the project location. Due to this potential access, the project proposes to implement mitigation measures BIO-14 through BIO-18. Informal consultation will be re-initiated on the Pioneer Bluff Bridge project to reflect current project impacts and to revise the mitigation measures. Incidental take is not anticipated.

North American Green Sturgeon

Green sturgeon is Federally-listed as threatened. Although anadromous, green sturgeon is primarily a marine dwelling species of estuaries, bays and oceanic waters. Mature green sturgeons spawning is relatively infrequent and believed to occur once every 2 to 5 years, from March to July in cold, clean waters (NMFS 2012).

While not anticipated, the species has potential to access the project location. The species would not spawn or migrate within the Barge Canal. North American green sturgeon are not anticipated to utilize the project area due to stressful level of dissolved oxygen available in the waters, limited connectivity from the Sacramento River to the Barge Canal during dry seasons, and the project is located outside the designated Critical Habitat for this species.

The proposed project may affect, not likely to adversely affect, Swainson's hawk, white-tailed kite, VELB, Delta smelt, Central Valley steelhead, winter and spring-run Chinook salmon species, or green sturgeon. Avoidance, minimization, and mitigation measures BIO-1 through BIO-18 would be implemented.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

BIO-13: Install Construction Barrier Fencing to Protect Beetle Habitat Adjacent to the Construction Zone. The City or its contractor will install orange construction barrier fencing to identify environmentally sensitive areas that are to be avoided. The construction specifications will require that a qualified biologist identify the location of valley foothill riparian and other sensitive biological habitat (i.e., elderberry shrubs) on site and identify areas to avoid during construction. Barrier fencing will be installed a minimum of 20 feet from all elderberry shrubs that have been identified near the project corridor (#1-5). Before construction, the construction contractor will work with the project engineer and a resource specialist to identify the locations for the barrier fencing and will place stakes around the sensitive resources sites to indicate these locations. The protected area will be designated an environmentally sensitive area and clearly identified on the construction specifications. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period. The following paragraph will be included in the construction specifications:

The contractor's attention is directed to the areas designate "environmentally sensitive areas." These areas are protected, and no entry by the contractor for any purpose will be allowed unless specifically authorized in writing by the project proponent. The contractor will take measures to ensure that contractor's forces do not enter or disturb these areas, including giving written notice to employees and subcontractors.

Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer. The fencing will be commercial-quality woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). The fencing will be tightly strung on posts with maximum 10-foot spacing.

BIO-14: A barrier, such as a water inflated dam, shall be installed at the opening of the live Barge Canal channel between August 1 and November 30. During dewatering a biologist will be present to monitor and relocate, if necessary, species.

BIO-15: Implement Stormwater Pollution Prevention Plan (SWPPP) Measures to protect water quality. Implement erosion control and Best Management Practices (BMPs). Contract specifications will include the following Best Management Practices (BMPs), where applicable, to reduce erosion during construction.

- Implementation of the project will also require approval of a site-specific SWPPP that would implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques.

- Scheduling. A specific work schedule will be implemented to coordinate the timing of land disturbing activities and the installation of erosion and sedimentation control practices to reduce on-site erosion and off-site sedimentation.

- Preservation of Existing Vegetation. In addition to measures above, existing vegetation shall be protected in place where feasible to provide an effective form of erosion and sediment control, as well as watershed protection, landscape beautification, dust control, pollution control, noise reduction, and shade.

- Mulching. Loose bulk materials shall be applied to the soil surface as a temporary cover to reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff.

- Soil Stabilizers. Stabilizing materials shall be applied to the soil surface to prevent the movement of dust from exposed soil surfaces on construction sites as a result of wind, traffic, and grading activities.

- Slope Roughening/Terracing/Rounding. Roughening and terracing will be implemented to create unevenness on bare soil through the construction of furrows running across a slope, creation of stair steps, or by utilization of construction equipment to track the soil surface. Surface roughening or terracing reduces erosion potential by decreasing runoff velocities, trapping sediment, and increasing infiltration of water into the soil, aiding in the establishment of native vegetative cover from seed.

BIO-16: Develop and implement a Spill Prevention, Control, and Countermeasure Program (SPCCP) for construction activities. The Contractor will develop and implement a SPCCP to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. This would include refueling of equipment away from the waterway. The SPCCP will be completed prior to construction.

BIO-17: Pursuant to Executive Order 13112 and the control of invasive species:

- All landscaping and revegetation shall consist of a biologist approved plant and/or seed mix from native, locally adapted species.

- Prior to arrival at the project site and prior to leaving the project site, construction equipment that may contain invasive plants and/or seeds shall be cleaned to reduce the spreading of noxious weeds.

BIO-18: Implementation of the following mitigation measures will minimize and offset effects to Critical Habitat:

The City shall prepare a riparian restoration plan prior to construction. This plan will include restoration of areas impacted by the proposed Project, and will aim to reestablish a healthy riparian corridor around the Barge Canal.

2.4 CULTURAL RESOURCES

REGULATORY SETTING

CEQA established statutory requirements for establishing the significance of historical resources in PRC Section 21084.1. The CEQA Guidelines (Section 10564.5[c]) also require consideration of potential project impacts to "unique" archaeological sites that do not qualify as historical resources. The statutory requirements for unique archaeological sites that do not qualify as historical resources are established in PRC Section 21083.2. These two PRC sections operate independently to ensure that significant potential effects on historical and archaeological resources are considered as part of a project's environmental analysis. Historical resources, as defined in Section 15064.5 as defined in the CEQA regulations, include 1) cultural resources listed in or eligible for listing in the California Register of Historical Resources; 2) cultural resource included in a local register of historical resources; 3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in one of several historic themes important to California history and development.

Under CEQA, a project may have a significant effect on the environment if the project could result in a substantial adverse change in the significance of a resource, meaning the physical demolition, destruction, relocation, or alteration of the resource would be materially impaired. This would include any action that would demolish or adversely alter the physical characteristics of an historic resource that convey its historic significance and qualify it for inclusion in the CRHR or in a local register or survey that meets the requirements of PRC Section 5020.1(l) and 5024.1(g). PRC Section 5024 also requires state agencies to identify and protect sate-owned resources that meet National Register of Historic Place listing criteria. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocation, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

CEQA and the CEQA Guidelines also recommend provisions be made for the accidental discovery of archaeological sites, historical resources, or Native American human remains during construction (PRC Section 21083.2(i) CCR Section 15064.5[d and f]).

AFFECTED ENVIRONMENT

An Area of Potential Effects (APE) was outlined to encompass permanent project features, staging areas, and other areas of potential ground disturbance during construction (see Figure 8). A records search was conducted through the California Historical Resources Information System. A sacred lands search and contact list of Native American individuals and organizations was requested from the Native American Heritage Commission on December 3, 2012. Consultation letters were sent to Native American individuals and organizations on December 15, 2012. The records search obtained on December 6, 2012 indicated that no previously recorded archaeological sites are located within a 0.25 mile radius of the project site and one previously recorded historic site is located within the APE. This site, P-57-00564, West Sacramento Wastewater Treatment Plant, was previously evaluated as ineligible for listing on the California Register of Historical Resources (CRHR). Historic topographic maps and additional background research identified one unrecorded historic resource within the APE – the Barge Canal.

Archaeological field surveys were conducted on November 20, 2012 and November 29, 2012, for the purpose of identifying and recording archaeological resources. The field survey confirmed that the Barge Canal has been abandoned and no longer retains integrity. Due to this lack of integrity it does not qualify as a historical resource or historic property. No additional archaeological or historic resources were identified within or near the APE.

ENVIRONMENTAL CONSEQUENCES

The project would have no impact on historical resources as defined in §15064.5 or archaeological resources pursuant to §15064.5. Background research and field survey did not identify prehistoric archaeological resources; properties in the APE are also ineligible for listing in the CRHR or lack integrity to qualify as a historical resource or historic property.

With any project requiring ground disturbance, there is always the possibility that unmarked burials may be unearthed during construction. This impact is considered potentially significant. Implementation of Mitigation Measure CR-1 and CR-2 would reduce this impact to a less-than significant level.

The project is located on Quaternary Holocene alluvium (Qha) (California Department of Conservation 2011), which consist of recent sedimentary deposits. Based on the project's location on recent deposits and disturbance from construction of the Barge Canal, there is a low potential for paleontological resources at the project site. No impact is anticipated on paleontological resources.

Similarly, no unique geologic features are at the project site, therefore no impact is anticipated.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

CR-1: In accordance with Section 7052.5 of the Health and Safety Code, construction or excavation shall be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC. According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052).

CR-2: Comply with State Laws Relating to Native American Remains. If human remains of Native American Origin are discovered during project construction, it will be necessary to comply with state laws relating to the disposition of Native American burials, which fall under the jurisdiction of the NAHC (Public Resources Code Section 5097). If any human remains are discovered or recognized in any location other than a dedicated cemetery, the project proponent or its contractor shall ensure that there will be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent human remains, until:

1. the Yolo County coroner has been informed and has determined no investigation of the cause of death is required, or

2. if the remains are of Native American origin, the descendents of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98 or the NAHC is unable to identify a descendant or the descendant fails to make a recommendation within 24 hours after being notified by the NAHC.

Based on the project's location relative to the Sacramento River, it is appropriate to monitor excavation during construction of the bridge abutments.

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APE
Potential Staging Areas
Pioneer Bluff Bridge
Roadway Work
Striping
Parcel Boundary

South River Rd.
058-260-0180
058-260-0190
067-180-0010
058-260-0020
067-180-0040
067-180-0010
067-180-0040
Jefferson Blvd.
William G. Stone Navigation Lock
067-180-0030
Barge Canal
South River Rd.
067-180-0030
Project Area A

Project Areas
Project Area B
Project Area A

058-350-0020
058-290-0040
058-350-0010
15th Street
058-280-0060
058-280-0030
058-280-0050
South River Road
Project Area B

V:\1999_S_River_Rd_Barge_Canal_BR\SMND\F8_APE-ISMND.mxd

Source: BING Maps Aerial 2012; Dokken Engineering 1/10/2013;

0 100 200 300 400 Feet

Figure 8
Cultural Area of Potential Effects
Pioneer Bluff Bridge Project
West Sacramento, Yolo County, California

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2.5 GEOLOGY AND SOILS

REGULATORY SETTING

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures.

The City of West Sacramento Community Development Department, Engineering Division has published Standard Specifications to provide minimum standards for the design, construction, repair and alteration of streets, roadways, alleys, drainage, sewerage, parks, landscaping, irrigation and water supply facilities (City of West Sacramento 2002). These Standard Specifications specifically include guidance on earthwork and are based on Caltrans 1999 Standard Specifications. Any items which are not included in these Standards shall be designed in accordance with the State Highway Design Manual, State Traffic Manual, Subdivision Ordinance or Zoning Ordinance as hereinafter defined, the General Plan, Master Plans, and any applicable Specific Plan of the City of West Sacramento, generally accepted engineering practice, or as directed by the City Engineer.

AFFECTED ENVIRONMENT

The following information is from the EIR for the South River Road Barge Canal Crossing and Village Parkway Extension Project (City of West Sacramento 2007) and work performed by Blackburn Consulting for the Geotechnical Report (2006).

The project site is on Lang sandy loam (La), a somewhat poorly drained soil on alluvial fans, and Made land (Ma), which consists of randomly mixed material redeposited by the construction of the Deep Water Channel, turning basin, and Stone Locks Groundwater is 12 to 33 feet below ground with elevations from 18 to 0.5 feet.

The project is not located within an Alquist Priolo Earthquake Fault Zone. The nearest seismic sources are the Coast Ranges-Sierran Block Boundary Zone, approximately 24 miles to the west, and the Dunnigan Hills Fault, approximately 23 miles to the northwest.

The potential for liquefaction, which occurs when saturated soils are subjected to ground shaking, was evaluated in the Draft Geotechnical Report (2006). Despite the presence of loose granular soils below the encountered groundwater levels at this site, the potential for seismically induced ground distress (e.g., liquefaction, densification, settlement, lateral spreading, etc.) is believed to be slight at this predominantly flat, low-seismicity site. Overall, it appears this site has an adequate surface layer thickness of unliquefiable soil sufficient to prevent detrimental damage (e.g., sand boils, surface fissuring, liquefaction settlement, etc.) associated with liquefiable soil zones at depth.

Laboratory test results indicate a non-corrosive soils environment for both concrete and steel. All metal pipe alternatives are allowable for these soils (Blackburn Consulting 2006).

The majority of the action area is situated on flat or very gently sloping topography where the potential for slope failure is minimal to low.

ENVIRONMENTAL CONSEQUENCES

The project would not expose people or structures to potential substantial adverse effects, involving rupture of a known fault, strong seismic ground shaking, seismic-related ground failure, or landslides. The project is not on an Alquist Priolo Earthquake Fault Zone requiring special study for fault rupture hazard. Seismic ground shaking is unlikely based on the distance to the nearest sources, Coast Ranges-Sierran Block Boundary Zone which is 24 miles to the west, and Dunnigan Hills Fault, which is 23 miles to the northwest. Seismic-related failure, including liquefaction, is also a less than significant impact because the potential is believed to be slight at this predominantly flat, low-seismicity site. As noted in the Geotechnical Report, it appears this site has an adequate surface layer thickness of un-liquefiable soil sufficient to prevent detrimental damage (e.g., sand boils, surface fissuring, liquefaction etc.) associated with liquefiable soil zones at depth (Blackburn Consulting 2006). The project area is located on a flat area. No impact from landslides would occur with the project. Design and construction in accordance with Caltrans' seismic design criteria will ensure that substantial impacts due to seismic forces and displacements are avoided or minimized to the extent feasible.

Erosion and loss of top soil would be a less than significant impact with mitigation. Grading and earthwork during construction may result in erosion and sedimentation. This impact would be mitigated through implementation of the Stormwater Pollution Prevention Plan (SWPPP) which would incorporate erosion control methods. Measure GEO-1 details this.

The project is not on a geologic unit or soil that is unstable or that would become unstable as a result of the project. On-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse is not anticipated. Additional recommendations from the Draft Geotechnical Report (Blackburn 2006) would also be considered during final design of the project to ensure that this impact is less than significant. No mitigation is required.

In the Draft Geotechnical Report (2006), Blackburn Consulting indicated that "based on field descriptions and laboratory testing, cohesive soils are at least moderately expansive." Blackburn Consulting indicated that they expect these materials (minus organic material, debris, etc.) to be suitable for use as general fill, but not suitable for use as structure backfill or for use as fill behind abutments (i.e., Caltrans "Expansive Soil Exclusion Zone") (Blackburn 2006). These precautions, along with compliance with Caltrans' design criteria, which include specifications for foundation design, would ensure that this impact is less than significant. No additional mitigation is required regarding expansive soils.

The proposed project does not propose septic tanks. As a result, there would be no impacts concerning the soil's adequacy for septic tanks.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

GEO-1: The City and contractor shall implement a SWPPP to include erosion control methods. This SWPPP shall be prepared for the Section 402 permit, *NPDES General Permit for Discharges of Storm Water Associated with Construction Activity*.

2.6 GREENHOUSE GAS EMISSIONS

REGULATORY SETTING

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include CO_2, CH_4, NO_X, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with greenhouse gas emissions and climate change at the state level. AB 1493 requires the CARB to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the EPA. The waiver was denied by the EPA in December 2007 and efforts to overturn the decision had been unsuccessful. See *California v. Environmental Protection Agency*, 9th Cir. Jul. 25, 2008, No. 08-70011. On January 26, 2009, it was announced that EPA would reconsider their decision regarding the denial of California's waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. On June 30, 2009 EPA granted California the waiver. California is expected to enforce its standards for 2009 to 2011 and then look to the federal government to implement equivalent standards for 2012 to 2016. The granting of the waiver will also allow California to implement even stronger standards in the future. The state is expected to start developing new standards for the post-2016 model years later this year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the EPA to regulate GHG as a pollutant under the Clean Air Act (Massachusetts vs. [EPA] et al., 549 U.S. 497

(2007). The court ruled that GHG does fit within the Clean Air Act's definition of a pollutant, and that the EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.

On December 7, 2009, the EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6)--in the atmosphere threaten the public health and welfare of current and future generations.

- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the EPA's proposed greenhouse gas emission standards for light-duty vehicles, which were jointly proposed by EPA and the Department of Transportation's National Highway Safety Administration on September 15, 2009.[1]

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(1) and 15130. To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

As part of its supporting documentation for the Draft *Climate Change Scoping Plan*, CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Figure 9 is a graph from that update that shows the total GHG emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.

[1] http://www.epa.gov/climatechange/endangerment.html

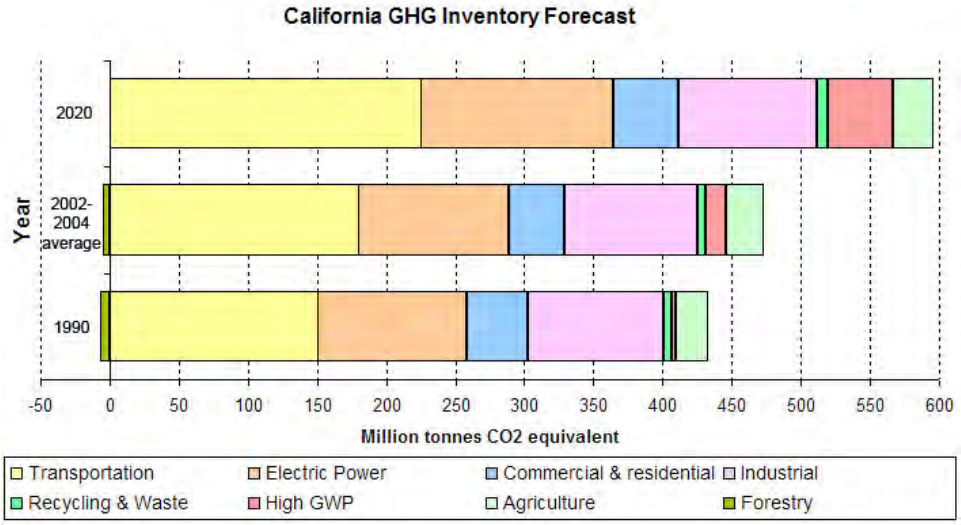


Figure 9. California Greenhouse Gas Inventory

Taken from : http://www.arb.ca.gov/cc/inventory/data/forecast.htm

AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES

GHG emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. As discussed in Section 2.2, Air Quality, construction of the project would be in compliance with applicable air quality rules.

GHG emissions produced during operations are those that result from potentially increased traffic volumes or changes in automobile speeds. The proposed project would not increase the number of automobiles in the traffic system. By providing a new crossing and alternate route, overall traffic flow is expected to improve, and the project is not anticipated to increase CO_2 emissions. Lower speeds, such as those experienced in congested areas, generally result in higher CO_2 emissions rates. No impact to greenhouse gas emissions or climate change would result from operations.

CO_2 emissions from construction of the bridge were estimated and are far below that of the significance threshold of 10,000 metric tons of CO_2/year (used by the Bay Area Air Quality Management District). As shown in Table 6, the project is estimated to emit 346.5 metric tons total for construction of the project. Construction of the project is anticipated to take 9 months.

Table 6. Construction CO_2 Emissions Compared to Threshold of Significance

Greenhouse Gas	Road Construction Emissions Model Estimates	Threshold (metric tons/year)
CO_2	346.5 metric tons total for the project	10,000 metric tons/year
Notes: City of West Sacramento uses the threshold guided by the Bay Area Air Quality Management District, which is a threshold of 10,000 metric tons of CO_2/year. Source: Modeling using the *Roadway Construction Emissions Model* 7.1.2 (Sacramento Metropolitan Air Quality Management District 2012).		

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.7 HAZARDS AND HAZARDOUS MATERIALS

REGULATORY SETTING

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

AFFECTED ENVIRONMENT

The Phase I Initial Site Assessment for the South River Widening and Village Parkway Extension (Blackburn Consulting 2005) and Limited Phase II Environmental Site Assessment for the South River Widening Project (Blackburn Consulting 2006), (Phase I and Phase II studies), provides the bases for much of the following discussion. The Initial Site Assessment and Environmental Site Assessment evaluated the potential for hazardous materials or petroleum hydrocarbons to exist within the study area, and were based on a governmental records search, select agency interviews, aerial photograph and topographic map review, visual site survey, and soil borings.

The Phase I and Phase II studies included a 1-mile radius search on federal, state, and local listings of known hazardous sites and hazardous waste handlers. The radius search identified no mapped sites within 1 mile of the study area. An updated radius search was obtained in December 2012, which confirmed similar results; there are no new listings

within the Pioneer Bluff Bridge project site. As documented in the Phase I and Phase II studies, parcels within the project footprint do not have known contamination except for the Clark Trucking Service property on 2000 South River Road, just north of the Stone Lock. Below is a summary of the parcels affected by the project:

- Parcel 058-260-002, Clark Trucking Service, Inc., 2000 South River Road: Former UST site with a recorded diesel release to soil only, now closed. Files regarding tank removal and contamination are archived at the RWQCB. Phase II Environmental Site Assessment indicated no contamination detected in 11.5 foot depth borings.

- Parcel 067-180-004, Stone Lock: No recorded soil or groundwater contamination other than removal of a 500 gallon generator tank in 1995 for the William G. Stone navigational lock. The site is reported as closed by Yolo County. The Phase II Environmental Site Assessment indicated no contamination detected in 11.5 foot depth boring.

- Parcel 067-180-003: Parcel includes fill for South River Road but no contaminated sources noted.

- Parcel 058-260-019, West Sacramento Wastewater Treatment Plan: Potential Right-of-Way Acquisition Impact—Known soil contamination on site, and/or known groundwater. Phase II study indicated no contamination detected in 11.5 foot depth boring.

The Phase II study concluded that there is a reduced potential for significant petroleum hydrocarbon contaminated soil being encountered within the proposed roadway construction depths, estimated at 10 feet existing grade, or less.

The Phase II study found that aerially deposited lead was detected near the South River Road surface and near surface soils in the vicinity of the US 50/Capitol City Freeway. The Pioneer Bluff Bridge is not in the vicinity of US 50/Capitol City Freeway. Aerially deposited lead for the bridge project is therefore not a concern.

Under the CEQA checklist, consideration of hazardous emissions, handling of hazardous or acutely hazardous materials or substances or waste within ¼ mile of an existing or proposed school, is required. There are no schools within ¼ mile of the project area.

ENVIRONMENTAL CONSEQUENCES

The bridge would not create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials in excess of current conditions in the area and surrounding areas. The bridge does not propose new hazardous waste facilities in the vicinity. While the bridge may be used for traffic to the industrial land uses on South River Road north of Barge Canal, the amount of transport is not anticipated to be significantly in excess of those currently used because South River Road would only be improved at the south intersection with the bridge.

Since the bridge is not a hazardous waste facility, the project would not create a significant hazard to the public or the environment through reasonably forseeable upset

and accident conditions involving the release of hazardous materials into the environment. While construction of the project could potentially result in accidental releases of small quantities of potentially toxic substances (such as diesel fuel or hydraulic fluids), protective measures will be included in construction documents, as is standard.

Operation or construction of the bridge would not result in emitting hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school. The nearest schools are Stonegate Elementary School and Jedediah Smith Elementary School, which are both approximately ½ mile away.

The bridge location is not on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The only known contamination is at the Clark Trucking Service facility on 2000 South River Road. The project is anticipated to include driveway improvements at the Clark Trucking Service facility. As discussed in the Affected Environment section, the Phase II Environmental Site Assessment indicated no contamination detected in 11.5 foot depth borings for this parcel. Bores were taken along South River Road adjacent to the Clark Trucking Service facility and the West Sacramento Wastewater Treatment Plant, and at the Stone Navigation Lock adjacent to the Clark Truck Service parcel.

The project is anticipated to enhance emergency responses or emergency evacuation because it adds a third crossing of Barge Canal. When the bridge is opened, it is anticipated that the roadway would better serve emergency vehicles and local traffic since flooding hazard would be removed.

The project would have less than significant impact on exposing people or structures to a significant risk or loss, injury or death involving wildland fires. Construction activities would result in a slightly elevated risk of fires. The project would implement measure HAZ-1 and HAZ-2 to reduce the potential for fire during construction of the bridge.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

HAZ-1: Require Spark-Generating Construction Equipment be Equipped with Manufacturers' Recommended Spark Arresters: The City shall require contractors to fit any construction equipment that normally includes a spark arrester with an arrester in good working order. Subject equipment includes, but is not limited to, heavy equipment and chainsaws. Implementation of this measure will minimize a source of construction-related fire.

HAZ-2: Before Construction Begins, Clear Materials That Could Serve as Fire Fuel from Areas Slated for Construction Activities: If dry vegetation or other fire fuels exist on or near staging areas, welding areas, or any other area on which equipment will be operated, contractors shall clear the immediate area of fire fuel. To maintain a firebreak and minimize the availability of fire fuels, the City shall require contractors to maintain areas subject to construction activities clear of combustible natural materials to the extent feasible. To avoid conflicts with policies to preserve riparian habitat, areas to be cleared shall be identified with the assistance of a qualified biologist.

2.8 HYDROLOGY AND WATER QUALITY

Section 401 of the Clean Water Act requires water quality certification from the SWRCB or from a RWQCB when the project requires a Clean Water Act Section 404 permit. Section 404 of the Clean Water Act requires a permit from the USACE to discharge dredged or fill material into waters of the U.S.

Along with Clean Water Act Section 401, Clean Water Act Section 402 establishes the NPDES permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

All construction projects over 1 acre require a SWPPP to be prepared and implemented during construction. Construction activities less than 1 acre require a Water Pollution Control Program.

AFFECTED ENVIRONMENT

Much of the information below, pertinent to the proposed Pioneer Bluff Bridge, is from the Village Parkway Extension Project EIR (City of West Sacramento 2007).

Water Quality

The water quality of the Sacramento River near the project is generally good to excellent, with relatively cool water temperatures, low biological oxygen demand (BOD), medium to high dissolved oxygen, and low mineral and nutrient content. The Sacramento River receives agricultural drainage that fluctuates seasonally; contains elevated levels of pesticide, herbicide, and fertilizer residues; and contains increased levels of sediment. Trace metal and synthetic organic compounds, some of which are potentially toxic, are found in sediments and fish tissues throughout the main stem of the river. Sources of these pollutants include historical and current practices, such as abandoned mining sites and industrial and municipal point-source discharges; and various non-point-source discharges, such as urban run-off and agricultural drainage return flows.

All sections of the Sacramento River are listed on the 303(d) list for unknown toxicity while Knights Landing to the Delta is also listed for mercury and diazinon. Mercury is primarily a legacy of gold mining while diazinon, a pesticide, is primarily from agricultural return flows. Urban use of diazinon is expected to be on the decline as the nonagricultural unrestricted use of diazinon has been phased out by the EPA.

Groundwater

The project is located within the Yolo Sub-basin of the Sacramento Valley Groundwater Basin. Throughout the Yolo Sub-basin, groundwater depths are between 20 and 420 feet, and storage capacity is roughly estimated at 6.5 million acre-feet (maf). In the project area, groundwater is generally shallow (between 0 and 10 feet below ground surface) and strongly influenced by water levels in the nearby Deep Water Ship Channel.

Groundwater quality found within the Yolo Subbasin is characterized as a sodium magnesium, calcium magnesium, or magnesium bicarbonate type. The groundwater quality is considered good for both agriculture and municipal uses despite its elevated hardness (California Department of Water Resources 2004). Total dissolved solids range from 107 parts per million (ppm) to 1300 ppm and average 574 ppm based on Title 22 data obtained from public supply water samples (California Department of Water Resources 2004).

Flooding

The new bridge would be constructed within Zone A, the 100-year flood zone, as mapped in the Federal Emergency Management Agency Flood Insurance Rate Maps for Community-Panel Numbers 0607280010B and 0607280005B. Barge Canal is mapped as being in Zone A (see maps in Appendix E).

ENVIRONMENTAL CONSEQUENCES

The project is not anticipated to violate any water quality standards or waste discharge requirements with mitigation incorporated. In the long-term, the new bridge and associated roadway would add impervious surfaces resulting in less natural infiltration. As a result, additional runoff could potentially cause increased erosion. This increase in impervious surfaces and potential runoff would be accommodated for in the design of the project. Drainage design for the project would accommodate for storm water flows following the City of West Sacramento's design standards. In the short-term, construction-related earth disturbing activities would potentially cause soil erosion and sedimentation to local waterways. Such construction activities would involve grading that would require heavy equipment such as earth moving devices. This potential impact would be mitigated for through erosion control methods in the SWPPP and requirements of the NPDES General Construction Permit. This measure is GEO-1 and HYD-1.

The project would have less than significant impact on depletion of groundwater supplies or interference with groundwater recharge. As a transportation facility, the project does not increase the usage of groundwater supplies. New impervious surfaces from the bridge structure would not affect groundwater recharge because it is located over a water channel. The length of new roadway on upland areas, along the south bank of Barge Canal to South River Road is approximately 300 feet. This length of roadway would not be enough to significantly impact the amount of water infiltrating into the ground.

Due to the presence of shallow groundwater in the project area, trenching and excavation associated with the proposed bridge construction, including the bridge support system and the barge canal road, may reach a depth that can expose the ground water table, presenting a direct path for contaminants to enter the groundwater basin. Primary construction-related contaminants that could degrade groundwater in the project area include increased turbidity, oil and grease, and hazardous materials from construction equipment.

Large trucks used to transport construction materials to the site could leak hazardous materials such as oil and gasoline. Improper use of fuels, oils, and other construction-related hazardous materials may also pose a threat to surface water or groundwater quality. Implementation of the Spill Prevention, Control, and Countermeasure Program, discussed in measure BIO-19, would further protect against water quality contamination.

Because of the protective measures incorporated into the project design and required as a condition of construction-related permits, this impact is considered less than significant. No mitigation is required.

The project would result in an increase in impervious surfaces, which would create an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff. Additional runoff can contribute to increased flood potential of natural stream channels, accelerated soil erosion and stream channel scour, and increased transport of pollutants to waterways. Implementation of the NPDES permit and the City's storm water management plan (SWMP) would ensure that post-development discharges are minimized compared to pre-development discharges. These policies will be implemented in accordance with the stormwater BMP recommendations made by the Final Drainage Report for the proposed project (WRECO 2006) as outlined in Mitigation Measure HYD-1. Implementation of mitigation measure HYD-1 will ensure adequate capacity of the proposed drainage system. As a result, erosion and flooding impacts associated with alteration of existing drainage patterns would be less than significant.

The project would not place housing within a 100-year flood hazard area. Only the bridge would be constructed within the 100-year flood zone, Zone A.

The project is designed to be compliant with current USACE standards. Through early coordination, USACE requested the proposed design include additional special design parameters: use of 3:1 slopes on the levee, increase the levee crown to 30' versus the standard 20' crown, and piles within the levee be cast-in-drilled-hole piles, maintain levee maintenance and access throughout the project, and closely coordinate with USACE regarding improvements/changes to the existing levees. By meeting USACE criteria, there would less than significant impact regarding flood hazards and impeding or redirecting flood flows. HYD-3 was included to reflect continued coordination with USACE.

The increased amount of impervious surface created by the proposed project would contribute an incremental amount of additional runoff that may contain hazardous chemicals such as oil and gasoline from associated vehicles. While such chemicals may remain on the road surface during the dry months, the storm season months would result in washing such contaminants into local water bodies. To ensure minimization of the impacts from polluted runoff and to maintain water quality in public facilities, the City has prepared a SWMP in compliance with its municipal storm water NPDES permit. Strategies outlined in the SMWP include structural and non-structural controls for the storage, detention, or treatment for stormwater runoff. Possible structural controls to remove pollutants include detention ponds, vegetative areas, and runoff pretreatment. Non-structural strategies include alternative construction, site design with buffers to protect waterways and appropriate zoning. The SWMP also outlines the need to evaluate the BMPs maintained in the SWPPP. Implementation of the measures in the SWMP would be sufficient to ensure that water quality impacts from project operation are less than significant.

The proposed project would not involve the use of groundwater supplies. The incremental increase in impervious surfaces resulting from the proposed project is not expected to substantially affect groundwater recharge in a manner that would significantly reduce groundwater supplies. Therefore, this impact is considered less than significant. No mitigation is required.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

HYD-1: The storm drain system will be designed to accommodate the project and comply with current standards to

HYD-2: Implement a Spill Prevention, Control, and Countermeasure Program during construction to protect against water quality contamination.

HYD-3: Coordinate with USACE to ensure construction near the levees meet USACE standards.

2.9 LANDUSE AND PLANNING

AFFECTED ENVIRONMENT

The proposed project is within areas zoned WF, RP, and C-W. WF is designated for high density mixed uses which capitalize on the City's river frontage. RP is designated for recreation and parks. The purpose of the C-W Zone is to provide specifically planned, integrated commercial land uses related to the waterfront and to historical restoration where appropriate with public and private recreation facilities and integrated public and private open space. The City's General Plan Circulation Element designates South River Road across the canal as "Future Arterial." South River Road approaching the bridge is designated as "Collector" roadways.

The project site is not located within a Habitat Conservation Plan area.

Recent major development projects in the City are shown in Table 7.

Table 7. Projects in Vicinity

Name	Status	Acreage	Proposed/ Existing Use
U.S. 50/Harbor Boulevard Interchange	Completed	--	Transportation
Harbor/ Industrial Intersection Realignment	Approved	--	Transportation
SacPort Regional Petroleum Terminal	Approved	20	Industrial
Enligna	Approved	15	Industrial
Primafuel	Approved	12.2	Industrial

Name	Status	Acreage	Proposed/ Existing Use
Pan Pacific Cement	Operational	20	Industrial
Cemex	Operational	27	Industrial
Main Drain Pump Station	Completed	--	Public/ Quasi-Public
Seaway International Trade Center	Approved	473	Mixed-Use
Westbridge Plaza	Phase 1 Completed	16.8	Commercial/ Retail
Sacramento River Deep Water Shipping Channel Deepening	Approved	N/A	Maritime
OPDE Solar	Approved	4 sites of approximately 35 acres each	Industrial
Source: City of West Sacramento (2011)			

ENVIRONMENTAL CONSEQUENCES

The project would not divide an established community; north of Barge Canal consists of commercial/industrial land uses, and south of Barge Canal is currently undeveloped. As a new crossing, the project would provide improved north-south connectivity through the City.

The project would not conflict with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigation an environmental effect. As described in the City's General Plan, a new crossing of the Barge Canal is a priority project.

The project would not conflict with habitat conservation plans or natural community conservation plans. There are currently no habitat conservation plans or natural community conservation plans in this area. The Yolo County Habitat Joint Powers Authority (JPA) is currently working on a Yolo Natural Heritage Program Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP); projected adoption for the HCP/NCCP is December 2013 at the earliest (JPA 2012). Also, based on drafts of the HCP/NCCP, the Pioneer Bluff Bridge project would not be a covered activity in the plan. The HCP/NCCP will be a natural community conservation plan under the

California Natural Community Conservation Planning Act.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.10 MINERAL RESOURCES

AFFECTED ENVIRONMENT

There are no known mineral resources are at the project site. The City's General Plan (2009) indicates the project site is located in Mineral Resource Zone 3 (MRZ-3), which consist of the following:

MRZ-3a: Areas containing known mineral occurrences of undetermined mineral resource significance. Further exploration of these areas could result in the reclassification of specific localities as MRZ-2a or MRZ-2b."

MRZ-3b: Areas containing inferred mineral occurrences of undetermined mineral resource significance. Land classified MRZ-3b represents areas in geologic settings that appear to be favorable environments for the occurrence of specific mineral deposits. Further exploration could result in the reclassification of all or part of these areas as MRZ-3a or specific localities as MRZ-2a or MRZ-2b.

As stated in the General Plan, "Lands classified as…MRZ-3 are not affected by state policies pertaining to the maintenance of access to regionally significant mineral deposits under the California Surface Mining and Reclamation Act of 1975."

ENVIRONMENTAL CONSEQUENCE

There are no known mineral resources or locally important resources at the project site. Since the Barge Canal is a highly disturbed area, the disturbance of important mineral resources is not anticipated. As stated in the General Plan, "Lands classified as…MRZ-3 are not affected by state policies pertaining to the maintenance of access to regionally significant mineral deposits under the California Surface Mining and Reclamation Act of 1975."

The project would not result in impacts to mineral resources.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.11 NOISE

REGULATORY SETTING

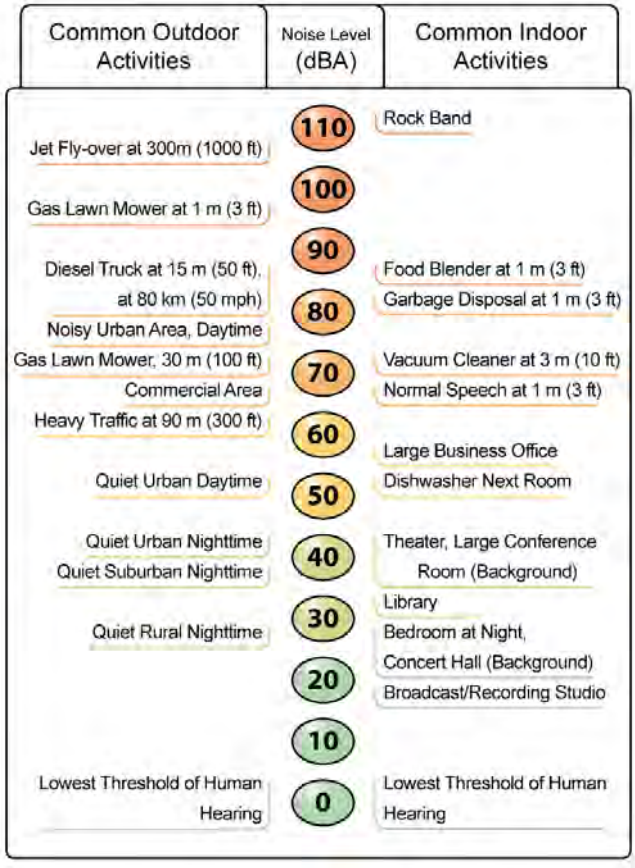
CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

Table 8 identifies real world examples of common noise causing activities and their measurements in A-weighted decibels (dBA).

Table 8. Noise Levels of Common Activities



Local Regulations and Standards

Noise standards in the City of West Sacramento are defined in the General Plan Noise Element and noise guidelines contained in Chapter 17.32 from the City's municipal code. The following is a brief discussion of each as they apply to the project.

City of West Sacramento General Plan Noise Element

The City of West Sacramento has established noise-level performance standards for projects affected by non-transportation sources and transportation sources. Noise is generally characterized as an equivalent continuous sound level (Leq) averaged over time,

day-night average sound level (Ldn), or CNEL (Community Noise Equivalent Level).

For residences exposed to noise from transportation noise sources, the City has established a criterion of 60 dBA Ldn/CNEL for residential land uses. The noise element also states the following criteria may be used as tests of significance for roadway improvement projects.

a. Where existing or projected future traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of residential uses, increase of over 5 dB Ldn due to a roadway improvement project would be considered significant; and

b. Where existing or projected future traffic noise levels range between 60 and 65 dB Ldn at the outdoor activity areas of residential uses, an increase of over 3 dB Ldn due to a roadway improvement project would be considered significant; and

c. Where existing or projected future traffic noise levels are greater than 65 dB Ldn at the outdoor activity areas of residential uses, an increase of over 1.5 Db Ldn increase due to a roadway improvement project would be considered significant.

AFFECTED ENVIRONMENT

The project area includes industrial land uses and vacant parcels. The existing noise environment in the project area is dominated by traffic noise from traffic traveling on Business 80 and traffic on primary roadways in the area such as Jefferson Boulevard. Aircraft departures from Sacramento Executive Airport and other aircraft overflights also affect noise levels in the project area.

In general, noise sensitive land-uses include residences, schools, hospitals, churches, and parks. No sensitive land-uses exist within the project area, with the closest residences being approximately 800 feet away.

The existing noise environment in the project area has been characterized both with sound level measurements taken in the project area and traffic noise modeling as described below.

The noise monitoring was conducted in the residential area adjacent to the project area. Traffic noise from local roads was the dominant noise source observed during attended monitoring. Measured L_{eq} noise levels were 48.1 dBA for measurement site ST-3, which is located in the residential subdivision to the southwest of the project area.

ENVIRONMENTAL CONSEQUENCES

Permanent

The project would have less than significant impact on noise levels in the long-term. Noise modeling results of the South River Road Barge Canal Crossing and Village Parkway Extension Project were reviewed to characterize anticipated noise levels. Results were reviewed for four receptors P-12, P-13, P-14, and P-15 located along Hearst and Randolph Avenue shown in Figure 10. As shown in Table 9 below, future predicted noise levels would be less than significant using the City's criteria. Since existing noise levels are less than 60 Ldn; a significant impact would occur if the change is over 5 dB Ldn. As

shown in the table, the change is 4 dB or less for the potentially affected receptors to the bridge project. This information is considered a conservative estimate, as it assumes a 4-lane bridge in year 2025 and future potential extension south beyond the bridge. The proposed project would only consist of 2 lanes of traffic and will terminate at the existing South River Road.

Table 9 . Predicted Noise Levels*

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Difference (dB)	Significant Impact?
P-12	51	52	56	+4	No
P-13	51	52	57	+4	No
P-14	51	52	56	+2	No
P-15	51	52	56	+3	No
*From Draft Environmental Impact Report for the South River Road Barge Canal Crossing and Village Parkway Extension Project.					

Potential project noise impacts are therefore limited to construction noise. The project would have less than significant impact regarding long-term exposure of persons to or generation of noise levels, groundborne vibration or noise, and ambient noise levels.

Construction

Pile driving for construction of the barge canal crossing would result in groundborne vibration. It is anticipated that vibratory and impact pile driving methods would be used. Since the nearest residence to the proposed location of the channel crossing is about 800 feet away, adverse impacts due to vibration during pile driving events are not anticipated.

V:\1999 S. River Rd Barge Canal BRISMNDIF9 NoiseReceptorLocations-010203.mxd

Source: BING Maps Hybrid 2012; Dokken Engineering. Created By Z. Liptak, 12-07-12

FIGURE 10
Noise Receptor Locations
Pioneer Bluff Bridge Project
City of West Sacramento, California

0 250 500 750 1,000 Feet

Other construction activities associated with the proposed project may cause a small amount of groundborne vibration. Vibration from these activities would be short-term. Therefore, no adverse vibration effects from construction are expected.

The assessment of potential construction noise levels was based on methodology developed by the Federal Transit Administration (FTA) (Federal Transit Administration 1995). Table 10 summarizes noise levels produced by commonly used construction equipment. Individual types of construction equipment are expected to generate noise levels ranging from 74 to 89 dBA at a distance of 50 feet. The construction noise level at a given receiver depends on the type of construction activity, the noise level generated by that activity, and the distance and shielding between the activity and noise receivers.

Table 10. Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 feet from Source
Sonic Pile Driver	96
Grader	85
Bulldozers	85
Truck	88
Loader	85
Roller	74
Air Compressor	81
Backhoe	80
Pneumatic Tool	85
Paver	89
Concrete Pump	82
Source: Federal Transit Administration, 1995	

Generally, noise levels at construction sites vary from 65 dBA to a maximum of nearly 96 dBA when heavy equipment is used. Highest construction noise levels would be during removal of existing concrete with a mounted impact hammer, a concrete saw, or a jackhammer. A mounted impact hammer, concrete saw, or jackhammer may reach noise levels of approximately 90 dBA at a distance of 50 feet. Construction noise would be intermittent, and noise levels would vary depending on the type of construction activity.

No significant adverse noise impacts from construction are anticipated because construction noise would be short-term and intermittent, and construction would be conducted in accordance with City ordinances as appropriate, as included in minimization measure NOI-1. Construction is anticipated to take 9 months.

AVOIDANCE, MINIMIZATION, AND/OR ABATEMENT MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.12 POPULATION AND HOUSING

REGULATORY SETTING

CEQA also requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…"

AFFECTED ENVIRONMENT

The City's General Plan indicates the project site is zoned for Waterfront and Recreations and Parks. No housing is located at the project site. Residential neighborhoods begin approximately 0.2 mile to the southwest.

ENVIRONMENTAL CONSEQUENCES

The project would have no direct impact on population growth since it does not propose new homes. The bridge would serve existing and planned population growth, and would not induce population growth. The project does not displace existing housing or people.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.13 PUBLIC SERVICES

AFFECTED ENVIRONMENT

Public services serving the project area include the West Sacramento Fire Department, West Sacramento Police Department, public schools, and City parks. Station #45, 2040 Lake Washington Boulevard, approximately 1 mile southwest of the proposed bridge serves the area south of Barge Canal, and Station #41, 132 15th Street, serves the area north of Barge Canal. The nearest public school is Stonegate Elementary School, 2500 La Jolla Street, West Sacramento, approximately 0.5 mile to the south-southwest. Jedediah Smith Elementary School is also approximately 0.5. mi east of the proposed bridge, but it is across the Sacramento River in the City of Sacramento, outside of any potential for effects. The nearest public parks are the Barge Canal Recreational Access, located at South River Road and Jefferson Boulevard, approximately 0.3 mi west of the proposed bridge. Other nearby parks are Sam Combs Park, approximately 0.3 mi west-northwest, and Southport Gateway Park, approximately 0.4 mi southwest of the proposed bridge. While not a designated park, the south bank of Barge Canal in the project footprint is zoned for Recreations and Parks (RP).

ENVIRONMENTAL CONSEQUENCES

The proposed project would improve accessibility to the Southport area of West Sacramento. By implementing the project, service and potential emergency response times may be improved by providing an alternate access across the Barge Canal. Construction of the bridge would not result in a population increase; the project accommodates existing and planned growth. The project would not create an increase in

demand for fire or police services, schools, or recreation facilities.

There is currently no through-traffic at the bridge site and there is little existing traffic on South River Road south of Barge Canal. Response times are not anticipated to be affected during construction. Minor traffic control, as described in measure PS-1/TRA-1, would further minimize effects.

Utility relocations may be required and would occur in consultation with the owners or operators of the affected utilities.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following measure is also found under Section 2.15 of this document:

PS-1/TRA-2: Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a traffic control plan.

2.14 RECREATION

AFFECTED ENVIRONMENT

As stated in the previous section, the nearest public parks are the Barge Canal Recreational Access, Sam Combs Park, and Southport Gateway Park. The south bank of Barge Canal in the project footprint is zoned for "Recreations and Parks" (RP).

ENVIRONMENTAL CONSEQUENCES

The proposed bridge would not 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. The bridge would not provide a closer connection to any of the nearby parks.

Bicycle facilities do not currently exist along South River Road. The bridge and roadway widths are designed to allow for bicycle lanes in the future. The proposed project does not include recreational facilities, nor does it require the construction or expansion of recreational facilities.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.15 TRANSPORTATION/TRAFFIC

AFFECTED ENVIRONMENT

South River Road is a "Collector" roadway from Stone Boulevard northward and along Barge Canal and the Sacramento River levee. Across the Barge Canal, it is a "Future Arterial" designated in the City's General Plan. The City's General Plan includes the bridge under its major transportation projects, with the following project description: "Construct new four-lane bridge across Barge Canal, east of Jefferson Bridge." While the

bridge would be open to two lanes of traffic upon completion of the project, the bridge structure would be wide enough to allow for 4-lanes. This is also consistent with what is planned in the Sacramento Area Council of Governments 2011 Metropolitan Transportation Improvement Program for South River Road, which is the following larger project, listed in page 128 of the 2011 MTIP: "Reconstruct and widen South River Road to 4 lanes from U.S. 50 on-ramp to Stonegate Boulevard, including a new 4-lane bridge over barge canal."

The traffic Level of Service policy in the General Plan is:

> "To maintain LOS "C" on all streets within the city except at intersections and on roadway segments within one-quarter mile of a freeway interchange or bridge crossing of the Deep Water Ship Channel, barge canal, or Sacramento River, where LOS "D" shall be deemed acceptable.

ENVIRONMENTAL CONSEQUENCES

The project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. This takes 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, pedestrians and bicycle paths, and mass transit. As stated in the affected environment section, the bridge would be open to two lanes of traffic upon completion of the project, and the bridge structure would be wide enough to allow for 4-lanes in the future to be consistent with local and regional plans.

The project would add a new, third crossing over the Barge Canal. Currently only Jefferson Boulevard and Industrial Boulevard cross Barge Canal.

It is anticipated that the project, with mitigation incorporated, would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. A traffic analysis conducted in December 2012 found that the Jefferson Boulevard/Stone Road, Jefferson Boulevard/15th Street, and Jefferson Boulevard/Park Boulevard intersections would experience a drop in average delay with construction of the proposed project. The proposed project would also reduce vehicle delay by 20-30% and reduce queue spillback onto US 50 during the unit train crossing.

The traffic analysis found that the proposed project would increase traffic on South River Road, triggering the need for a traffic signal at opening day. As a result, signalization of 15th Street/South River Road was included into the project and is reflected as mitigation measure TRA-1. Study intersections at South River Road/Linden Road, South River Road/Jefferson Boulevard, Jefferson Boulevard/Stone Boulevard, and Jefferson Boulevard/15th Street are unlikely to degrade to unacceptable levels with the project. Further traffic analysis is being conducted to determine if the South River Road/Marina Greens Drive intersection would need improvements due to an increase in eastbound and westbound traffic.

The project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. The nearest

airport is the Sacramento Executive Airport, which is 5 miles southeast.

Design features would comply with City standards, or as appropriate, would be approved as non-standard features. The project would not increase hazards due to design features or incompatible uses. The project would not substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

The project would have less than significant impact on emergency access. There is currently no through-traffic at the bridge site and there is little existing traffic on South River Road south of Barge Canal. Response times are not anticipated to be affected during construction. In the long-term, it is anticipated that the bridge would better serve emergency vehicles by providing a new crossing over Barge Canal.

There would be no conflicts with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, and performance or safety of such facilities. The bridge structure would be wide enough to accommodate for bicycle lanes and pedestrian facilities for future planned projects.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following measure is also found under Section 2.13 of this document:

TRA-1: The project shall include signalization of the South River Road/15th Street intersection.

PS-1/TRA-2: Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a traffic control plan.

2.16 UTILITIES AND SERVICE SYSTEMS

AFFECTED ENVIRONMENT

As described in Section 2.13, public services serving the project area include the following: Fire Station #45, Fire Station #41, Stonegate Elementary School, Jedediah Smith Elementary School, Barge Canal Recreational Access, Sam Combs Park, Southport Gateway Park, and the south bank of Barge Canal zoned for “Recreations and Parks” (RP). Water, sewer, electric, and petroleum lines are currently located in the project area. Utilities along South River Road north of Barge Canal include the following: a Kinder Morgan petroleum line, natural gas and electric lines owned by PG&E, overhead poles with utilities owned by PG&E and AT&T, and sewer and water lines owned by the City of West Sacramento.

ENVIRONMENTAL CONSEQUENCES

The proposed project would not result in a population increase. The bridge accommodates existing and planned growth in the area. The project would not create an increase in demand for fire or police services, schools, or recreation facilities. No mitigation is required for effects to public services.

No permanent impacts to public utilities are anticipated. As a transportation project, there would be no exceedances of wastewater treatment requirements and construction of new water or wastewater treatment facilities would not need to be expanded.

As a transportation project, no impacts to wastewater treatment services or water supply would result. The project would not generate substantial solid waste during operation. During construction, solid waste may be generated during construction, however, the amount will not exceed landfill capacities.

The proposed project would comply with federal, state, and local statutes and regulations related to solid waste.

Utilities within the project footprint would be protected in place. Coordination with utility owners would take place during final design of the project.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.17 MANDATORY FINDINGS OF SIGNIFICANCE

REGULATORY SETTING

The CEQA Checklist includes the following questions under Mandatory Findings of Significance:

Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a 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)?

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

ENVIRONMENTAL CONSEQUENCES

As discussed in Section 2.3, Biological Resources, the project would have less than significant impact with mitigation implemented. Threatened and endangered fish species are not anticipated to be within the BSA due to poor environmental conditions; measures are proposed to further lessen the potential for impact. With these measures cumulatively considerable impacts are not anticipated.

Further, cultural studies concluded that the project would have no effect on known cultural resources. Standard measures for inadvertent discover would also avoid potential

impacts.

The project would not have adverse effects on human beings, either directly or indirectly. The project does not require relocation of housing and impacts to noise and air is anticipated to be less than significant.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Please see measures BIO-1 through BIO-18 and CR-1 and CR-2.

Chapter 3 Comments and Coordination

INTRODUCTION

This chapter summarizes the City's efforts to identify, address and resolve project-related issues through early and continuing coordination.

SCOPING PROCESS

Environmental studies, including biological assessments and biological opinions, for the previous Village Parkway Extension Project provided a basis for scoping potential environmental issues. It was determined that early coordination with USFWS, USACE, NOAA, and CDFW would be beneficial in verifying appropriate measures for potential impacts to threatened and endangered species.

CONSULTATION AND COORDINATION WITH PUBLIC AGENCIES

Coordination with the following agencies has been reinitiated for the Pioneer Bluff Bridge:

U.S. Fish and Wildlife Service

U.S. Army Corps of Engineers

National Oceanic Atmospheric Administration

California Department of Fish and Wildlife

Central Valley Flood Protection Board

Regional Water Quality Control Board

Native American Heritage Commission (NAHC)

PUBLIC PARTICIPATION

The public comment period for the project provides the opportunity for public comment and participation. The comment period will be properly noticed in the local newspaper and this Initial Study/Proposed Mitigated Negative Declaration will be available at public facilities.

Chapter 4 List of Preparers

CITY OF WEST SACRAMENTO

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DOKKEN ENGINEERING

Project Design, Environmental Document, Biology, Cultural

Rick Liptak, P.E., Project Manager.

Juann Ramos, P.E., Project Engineer.

Namat Hosseinion, Senior Environmental Planner. B.A. and M.A., Anthropology; 14 years environmental planning experience. Contribution: Environmental manager.

Sarah Holm, Associate Environmental Planner. B.A., Biology and B.S., Environmental Science; 6 years environmental planning experience. Contribution: Environmental manager, biological resources.

Cherry Zamora, Associate Environmental Planner. B.A. and M.A., Geography; 8 years environmental planning experience. Contribution: Environmental document preparation.

Angela Scudiere, Environmental Planner/Biologist. B.S. in Biological Sciences (plant emphasis), 3 year environmental planning experience. Contribution: Biological resources.

Carolyn Daman, Environmental Planner/Biologist. B.S. in Zoology; 7 years experience in biological studies.

Amy Dunay, Environmental Planner/Archaeologist. M.A. in Archaeology; 4 years of experience in cultural resources/environmental planning. Contribution: Cultural Resources and Hazardous Waste.

Zach Liptak, Environmental Assistant. B.S in Environmental Studies (in progress); 2 years environmental planning experience. Contribution: Air quality and noise.

Chapter 5 Distribution List

Notice of Availability (unless IS hardcopies specified)

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Land Representative
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Pittsburg, CA 94565

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2820 KOVR Drive
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City of West Sacramento-
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1031 Triangle Ct
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Sacramento Regional County
Sanitation District
10060 Goethe Road
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Regional Agencies

Sacramento Area Council of
Governments
1415 L Street, Suite 300
Sacramento, CA 95814

Yolo County Transportation
District
350 Industrial Way
Woodland, CA 95776

Yolo County
Planning and Public Works
292 West Beamer Street
Woodland, CA 95696

City of West Sacramento
Police Department
550 Jefferson Boulevard
Broderick, CA 95605

City of West Sacramento Fire
Department
2040 Lake Washington Blvd
West Sacramento, CA 95691

City of West Sacramento
Jay Davidson, P.E.
1110 West Capitol Avenue
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Attn: Mike Luken
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City of West Sacramento
Attn: Jim Bermudez
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Wheatland, CA 95692

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Williams, CA 95987

Cortina Winton Environmental
Protection Agency
P.O. Box 16360
Williams, CA 95987

Yocha Dehe Wintun Nation
Marshall McKay, Chairperson
P.O. Box 18
Brooks, CA 95606

Federal Agencies

National Oceanic and
Atmospheric Administration
National Marine Fisheries
Service
Attn: Dylan Van Dyne
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814-4708

US Army Corps of Engineers
Sacramento District
Attn: Marc Fugler
1325 J Street, Rm 1350
Sacramento, CA 95814

US Fish & Wildlife Service
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650 Capitol Mall, 8th Flr
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Central Valley Flood Protection
Board
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3310 El Camino Ave, LL40
Sacramento, CA 95821
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Central Valley Flood Protection
Board
Attn: James Herota
3310 El Camino Avenue,
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Sacramento, CA 95821

State Agencies

State Clearinghouse
Office of Planning & Research
1400 Tenth Street
P.O.Box 3044
Sacramento, CA 95812-3044
(IS Hardcopies)

California Department of Fish
& Wildlife
Attn: Crystal Spurr
Senior Environmental Scientist
Bay Delta Region
4001 N. Wilson Way
Stockton, CA 95205
(IS Hardcopy)

Caltrans District 3
703 B Street
Marysville, CA

California Transportation
Commission
Attn: Laura Pennebaker
1120 N Street, MS 52
Sacramento, CA 95814
(IS Hardcopy)

California Department of
Transportation
Attn: Dawn Cheser
1120 N. Street
Sacramento, CA 95814
(IS Hardcopy)

California Department of Fish
and Wildlife, Region 3
Attn: Scott Wilson
7329 Silverado Trail
Napa, CA 94558

California Department of Fish and Wildlife, Region 2
Attn: Paul Hofmann
402 S. Merrill Avenue
Willows, CA 95988

California Department of Fish and Wildlife, Water Branch
Attn: Gina Ford
830 S Street
Sacramento, CA 95811

VIA State Clearinghouse:

- Air Resources Board
- California Dept. of Boating and Waterways
- Native American Heritage Commission
- Central Valley RWQCB
- California State Lands Commission
- Department of Toxic Substances Control

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Appendix A CEQA Checklist

Supporting documentation of all CEQA checklist determinations is provided in Chapter 2 of this Initial Study. Documentation of "No Impact" determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or compensation measures is under the appropriate topic headings in Chapter 2.

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CEQA Environmental Checklist

City of West Sacramento	**N/A**	**N/A**
Dist.-Co.-Rte.	P.M/P.M.	E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

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

II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	☐	☐	☒	☐
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIV. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☒	☐
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒
XV. RECREATION:				
a) Would the project 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?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Appendix B Listed and Proposed Species Potentially Occurring or Known to Occur in the Project Area

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Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
Plant Species					
Wooly rose-mallow	*Hibiscus lasiocarpos var. occidentalis*	Fed: CA: CNPS	-- -- 1B.2	A perennial rhizomatous herb inhabiting freshwater wetlands, wet banks, and marshes. Flowers June-September (0-394 feet).	**Presumed absent**: No suitable marsh habitat present in project area; habitat determined unsuitable for wooly rose-mallow.
Northern California Black Walnut	*Juglans hindsii*	Fed: CA: CNPS	-- -- 1B.1	A deciduous tree inhabiting near streams and disturbed slopes in southern Sacramento valley. Flowers April-May (0-1,444 feet).	**Present:** Observed onsite during field survey November 16, 2012 near north side of the canal on the disturbed slope. Habitat evaluated as suitable for Northern California black walnut.
Sanford's arrowhead	*Sagittaria sanfordii*	Fed: CA: CNPS:	-- -- 1B.2	A perennial rhizomatous herb inhabiting freshwater marshes, swamps, ponds and ditches. Flowers May-October (0-2,132 feet).	**Presumed absent:** No suitable marsh habitat present in project area; habitat determined unsuitable for sanford's arrowheard.
Suisun Marsh aster	*Symphotrichum lentum*	Fed: CA: CNPS	-- -- 1B.2	A perennial rhizomatous herb inhabiting wetlands, freshwater marsh, and brackish-marsh communities. Flowers May-November (0-984 feet).	**Presumed absent**: No suitable marsh habitat present in project area; habitat determined unsuitable for suisun marsh aster.
Bearded popcornflower	*Plagiobothrys hystriculus*	Fed: CA: CNPS	-- -- 1B.1	An annual herb inhabiting mesic valley and foothill grassland, vernal pool margins and vernal swales. Flowers April-May (0-899 feet).	**Presumed absent**: No suitable foothill grassland or vernal pools present in project area; habitat determined unsuitable for bearded popcornflower.
Avian Species					
Tricolored blackbird	*Agelaius tricolor*	Fed: CA: DFG:	-- -- SSC	Inhabits Freshwater Marsh, Swamp and Wetland communities that can support large colonies often in the Central Valley area. Requires protected dense nesting	**Presumed absent**: Project area lacks wetland communities that can support colonies with dense nesting habitat; habitat determined unsuitable for tricolored blakbirds.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
				habitat, preferably in emergent wetland vegetation and foraging area with insect prey in close proximity to colony.	
Burrowing owl	*Athene cunicularia*	Fed: CA: DFG:	-- -- SSC	Species inhabits arid, open areas with sparse vegetation cover such as deserts, abandoned agricultural areas, grasslands, and disturbed open habitats. Requires friable soils for burrow construction (Below 5,300 feet).	**Presumed absent:** Project area lacks arid, open, sparse vegetation cover; habitat determined unsuitable for burrowing owls.
Swainson's hawk	*Buteo swainsoni*	Fed: CA: DFG:	-- T --	Inhabits grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, alfalfa or grain fields that support a stable rodent prey base. Breeds march to late August.	**High potential**: Project site contains trees, riparian vegetation and grassland potentially suitable for Swainson's hawk nesting and foraging. Within a 5 mile radius of project, more than 20 CNDDB occurrences documented. No Swainson's hawks or Swainson's hawk nests were observed onsite.
White-tailed kite	*Elanus leucurus*	Fed: CA: DFG:	-- -- FP	Inhabits rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Prefers open grasslands, meadows or marshes for foraging close to isolated, dense-topped trees for nesting and perching. Breeds February- October.	**Present**: Observed foraging over non-native disturbed grasslands outside study area on November 16, 2012 during field survey. Site presents possible nesting and foraging habitat. No nests were observed.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
Purple martin	*Progne subis*	Fed: CA: DFG:	-- -- SSC	Present in California as a summer migrant, arriving in March and departing by late September. Inhabits valley foothill and montane hardwood/hardwood-conifer, coniferous habitats and riparian habitats. Nests in tall, old, isolated trees or snags in open forest or woodland and in proximity to a body of water. Frequently nests within former woodpecker cavities; may nest in human-made structures such as nesting boxes, under bridges and in culverts. Breeds April-August.	**High Potential**: Project site contains riparian habitats, with proximity to water. Nearest CNDDB occurrence within 2 miles north and east of project site.
Bank swallow	*Riparia riparia*	Fed: CA: DFG:	-- T --	A migratory colonial nester inhabiting lowland and riparian habitats west of the desert during spring - fall. Majority of current breeding populations occur along the Sacramento and Feather rivers in the north Central Valley. Requires vertical banks or cliffs with fine textured/sandy soils for nesting (tunnel and burrow excavations). Nests exclusively near streams, rivers, lakes or the ocean. Breeds May-Jul.	**Presumed absent**: Project site lacks vertical banks or cliffs, and sandy soils required for bank swallows; habitat determined unsuitable for bank swallows.
Least Bell's vireo	*Vireo bellii pusillus*	Fed: CA:	E E	Summer resident of southern California inhabiting low	**Presumed absent:** Project site does not contain low/dense vegetation, willow dominating forests

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
		DFG:	--	riparian habitats in the vicinity of water and dry river bottoms. Prefers willows, baccharis, mesquite and other low, dense vegetation as nesting sites (below 2000 feet).	required for nesting for Least bell's vireo. No documentation on CNDDB within 5 miles.
Mammal Species					
American badger	*Taxidea taxus*	Fed: CA: DFG:	-- -- SSC	Prefers treeless, dry, open stages of most shrub and herbaceous habitats with friable soils and a supply of rodent prey. Species also inhabits forest glades and meadows, marshes, brushy areas, hot deserts, and mountain meadows. Species maintains burrows within home ranges estimated between 338-1,700 acres, dependent on seasonal activity. Burrows are frequently re-used, but new burrows may be created nightly. Young are born in March and April within burrows dug in relatively dry, often sandy, soil, usually in areas with sparse over story cover. Species is somewhat tolerant of human activity, but is sensitive to automobile mortality, trapping, and persistent poisons (up to 12,000 feet).	**Presumed absent.** Project site heavily disturbed and not comprised of sufficient prey availability. Surveys conducted in November 2012 observed no specimens or suitable burrows. Habitat was determined unsuitable for American badger.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
Amphibian Species					
California tiger salamander	*Ambystoma californiense*	Fed: CA: DFG:	T T SSC	Inhabits annual grasslands and the grassy understory of Valley-Foothill Hardwood communities. Requires underground refuges, especially ground squirrel burrows and vernal pools or other seasonal water sources for breeding.	**Presumed absent.** Vernal pools and other seasonal waters not present onsite nor the preferred grassy understory of valley-foothill hardwood habitats; habitat unsuitable for California tiger salamander.
California red-legged frog	*Rana draytonii*	Fed: CA: DFG:	T -- SSC	Inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development and must have access to estivation habitat. Occurs from elevations near sea level to 5,200 ft.	**Presumed absent**. Permanent source of deep water and riparian vegetation not present onsite; habitat unsuitable for California red-legged frog.
Reptile Species					
Giant garter snake	*Thamnophis gigas*	Fed: CA: DFG:	T T --	Inhabits marsh, swamp, wetland and riparian scrub habitats. Species requires adequate water during species' active season (early-spring through mid-fall), emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for	**Presumed absent.** Marsh, swamp, wetland vegetation habitats not present onsite; habitat unsuitable for Giant garter snake.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
				escape cover and foraging habitat. Requires grassy banks and openings in waterside vegetation for basking and higher elevation uplands for cover and refuge from flood waters during winter dormant season.	
Invertebrate Species					
Vernal pool fairy shrimp	*Branchinecta lynchi*	Fed: CA: DFG:	T -- --	Endemic to the grasslands of the Central Valley, Central Coast mountains and South Coast Mountains, in astatic rain-filled pools. Inhabits small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools. Species is dependent on seasonal fluctuations.	**Presumed absent:** Vernal sandstone-depression pools and grassy swale, earth slump, or basalt-flow depression pools are not present onsite; habitat unsuitable for vernal pool fairy shrimp.
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	Fed: CA: DFG:	T -- --	Requires elderberry shrubs (*Sambucus* sp.) as host plants. Typically in moist valley oak woodlands associated with riparian corridors in the lower Sacramento River and upper San Joaquin River drainages. Prefers elderberries 2-8 inches in diameter; some preference toward 'stressed' elderberries.	**High:** The site transects the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel) within a riparian corridor. Focused surveys on 3/17/2006 found the presence of requisite elderberry shrubs; updated focused surveys conducted on 11/16/2012 and 11/20/2012 re-confirmed elderberry shrubs in the Biological Study Area have old exit holes. No beetles were observed.
Vernal pool tadpole shrimp	*Lepidurus packardi*	Fed: CA: DFG:	E -- --	Inhabits vernal pools and swales containing clear to highly turbid waters such as pools located in grass	**Presumed absent:** Vernal pools and swales required for vernal pool tadpole shrimp are not present onsite; habitat unsuitable for Vernal pool tadpole shrimp.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
				bottomed swales of unplowed grasslands, old alluvial soils underlain by hardpan, and mud-bottomed pools with highly turbid water.	
Fish Species					
North American green sturgeon	*Acipenser medirostris*	Fed: CA: DFG:	T -- SSC	Most marine sturgeon species. Currently believed to only spawn in the Sacramento River, Rogue River, Klamath and Trinity Rivers (Klamath River basin) to spawn. Known to occupy other river bodies including the lower Feather River; spawning not recorded. Large cobbles preferred for spawning, but may utilize a range of substrates from bedrock to sand. Spawning occurs Mar-Jul.	**Low to Moderate Potential:** The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to the Sacramento River to a narrow, shallow back channel that is often dry. Although not anticipated, the species has potential to access the project location during moderate to high flow events. The species would not spawn or migrate within the Barge Canal. The project is approximately 2 miles south of I Street Bridge the southern limits of Final Critical Habitat for Southern DPS North American green sturgeon.
Sacramento perch	*Archoplites interruptus*	Fed: CA: DFG:	-- -- SSC	Inhabits sloughs, lakes, and slow moving rivers of the Central Valley. Prefers turbid lakes, reservoirs and ponds warmed by summer heat and absent of plants; may occasionally occur in clear water among beds of aquatic vegetation. Species tolerates high temperatures, high salinities, high turbidity, and low water clarity. Young require aquatic and overhanging vegetation for cover. Spawns March-August	**Presumed absent**: Project site lacks slow moving rivers, lakes or ponds; habitat unsuitable for Sacramento perch.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
				in water temperatures between 64-84°F	
Delta smelt	*Hypomesus transpacificus*	Fed: CA: DFG:	T E --	Occurs within the Sacramento-San Joaquin Delta and seasonally within the Suisun Bay, Carquinez Strait and San Pablo Bay. Most often occurs in partially saline waters.	**Low to Moderate Potential:** The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to main stem Sacramento River to a narrow, shallow back channel that is often dry. Although not anticipated, the species has potential to access the project location during moderate to high flow events. The project is within delta smelt Critical Habitat
Longfin smelt	*Spirinchus thaleichthys*	Fed: CA: DFG:	-- T --	Occurs within the San Francisco Bay-Delta. Most often occurring in bays and estuaries until migration to fresh water.	**Low to Moderate Potential**: The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to main stem Sacramento River to a narrow, shallow back channel that is often dry. Although not anticipated, the species has potential to access the project location during moderate to high flow events. The project is within habitat area.
Central Valley steelhead	*Oncorhynchus mykiss*	Fed: CA: DFG:	T -- --	Spawning occurs in small tributaries on coarse gravel beds in riffle areas. Central Valley steelhead are found in the Sacramento River system; the principal remaining wild populations spawn annually in Deer and Mill Creeks in Tehama County, in the lower Yuba River, a small population in the lower Stanislaus River and, though potentially extirpated, from the San Joaquin basin.	**Low to Moderate Potential:** The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to main stem Sacramento River to a narrow, shallow back channel. Although not anticipated, the species has potential to access the project location during moderate to high flow events. Critical Habitat for the California Central Valley steelhead is present within the Biological Study Area. No spawning habitat or migration routes occur within the project area

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
Central Valley spring-run chinook salmon	*Oncorhynchus tshawytscha*	Fed: CA: DFG:	T T --	Spring-run Chinook enter the Sacramento-San Joaquin River system to spawn, requiring larger gravel particle size and more water flow through their redds than other salmonids. Remaining runs occur in Butte, Mill, Deer, Antelope, and Beegum Creeks, tributaries to the Sacramento River. Known to occur in Siskiyou and Trinity counties.	**Low to Moderate Potential:** The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to the Sacramento River to a narrow, shallow back channel that is often dry. Although not anticipated, the species has potential to access the project location during moderate to high flow events. Critical Habitat for the spring-run Chinook is directly adjacent to the BSA within the main stem Sacramento River. No spawning habitat or migration routes occur within the project area.
Winter-run chinook salmon, Sacramento River	*Oncorhynchus tshawytscha*	Fed: CA: DFG:	E E --	Winter-run Chinook are currently restricted within the Sacramento River below Keswick dam; species does not spawn in tributaries. Species requires cold water over gravel beds to spawn.	**Low to Moderate Potential:** The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to the Sacramento River to a narrow, shallow back channel that is often dry. Critical Habitat for the winter-run Chinook is directly adjacent to the BSA within the main stem Sacramento River. No spawning habitat or migration routes occur within the project area.
Sacramento splittail	*Pogonichthys macrolepidotus*	Fed: CA: DFG:	-- -- SSC	Historically inhabited low moving rivers, sloughs, and alkaline lakes of the Central Valley; now restricted to the Delta, Suisun Bay and associated marshes. Species is adapted to fluctuating environments with tolerance to water salinities from 10-18 ppt., low oxygen levels (< 1.0 mg/L) and temperatures of 41-75°F. Spawns late	**Presumed absent:** The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to the Sacramento River to a narrow, shallow back channel that is often dry. Site lacks low moving rivers, Delta and marshes, spawning habitat or migration routes; habitat unsuitable for Sacramento splittail.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
				February- early July, with a peak in March-April; requires flooded vegetation for spawning activity and protective cover for young.	

Federal Designations (Fed):
(FESA, USFWS)
END: Federally listed, endangered
THR: Federally listed, threatened

State Designations (CA):
(CESA, CDFW)
END: State-listed, endangered
THR: State-listed, threatened

Other Designations

DFG_SSC: DFG Species of Special Concern
SSC: Species of Special Concern

California Native Plant Society (CNPS) Designations:

Note: according to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Wildlife Code. This interpretation is inconsistent with other definitions.

1A: Plants presumed extinct in California.
1B: Plants rare and endangered in California and throughout their range.
2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
3: Plants about which need more information; a review list.
4: Plants of limited distribution; a watch list.

Plants 1B, 2, and 4 extension meanings:
_.1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
_.2 Fairly endangered in California (20-80% occurrences threatened)
_.3 Not very endangered in California (<20% of occurrences threatened or no current threats known)

Potential for Occurrence Criteria:
Present: Species was observed on site during a site visit or focused survey.
High: Habitat (including soils and elevation factors) for the species occurs on site and a known occurrence has been recorded within 5 miles of the site.
Moderate: Moderate quality habitat (including soils and elevation factors) for the species occurs on site and a known occurrence occurs within 5 miles of the site; or suitable habitat strongly associated with the species occurs on site, but no records were found within the database search.
Low: Low quality habitat (including soils and elevation factors) for the species occurs on site.
Presumed Absent: Focused surveys were conducted and the species was not found, or species was found within the database search but habitat (including soils and elevation factors) do not exist on site, or the known geographic range of the species does not include the survey area.

Source: United States Fish and Wildlife Service (2010), California Natural Diversity Data Base (2010), California Native Plant Society Electronic Inventory (CNPS 2010).

Appendix C Mitigation and/or Minimization Summary

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Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
Aesthetics	AES-1: During final design, aesthetics will be considered by the City for consistency with local goals and standards.		
	AES-2: Selection of lighting fixtures will take into account minimizing glare, while taking into account safety needs.		
Air Quality	AQ-1: The contractor shall comply with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances. AQ-2: The contractor shall control dust by applying either water or dust palliative, or both. AQ-3: The construction contractor shall implement control measures to reduce emissions of NOX, ROG, and PM_{10}. The contractor shall: • Minimize idling time to 5 minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. • To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintaining heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions. • Use electric equipment when feasible. • Properly maintain equipment according to manufacturers' specifications.	Contractor	Construction

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
Biological Resources	BIO-1: Temporary construction staging areas and access roads shall be strategically placed to avoid and/or minimize impacts, when possible. ESA fencing shall be installed in coordination with a biologist in order to minimize the construction footprint to avoid and/or minimize impacts to sensitive habitat areas. BIO-2 The project will create a re-vegetation plan to compensate for loss of riparian vegetation. Re-vegetation will take place somewhere near the project area. BIO-3: Clean Water Act Section 401 and 404 permits and a Fish and Wildlife Code Section 1602 Streambed Alteration Agreement shall be obtained prior to construction. BIO-4: A tree permit will be obtained from the City of West Sacramento's Tree Administrator to remove Heritage or Landmark trees. Replacement trees will be planted in accordance with conditions of the tree permit. BIO-5: Should pre-construction surveys or work associated with construction discover the presence of any sensitive species, habitats would be avoided, as feasible, using Environmentally Sensitive Area (ESA) fencing to clearly define the limits of disturbance. ESA fence shall be installed along the construction limits to prevent unnecessary encroachment into the riparian areas adjacent to the construction site. BIO-6: To ensure compliance with MBTA and CDFW code, vegetation removal and work should be avoided outside the nesting season (defined as February 15 – August 15). If this		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	is not possible and vegetation removal or work is to occur during the nesting season, a pre-construction survey shall be conducted. The pre-construction survey shall be performed by a qualified biologist, to determine the presence of nesting birds and ensure active nests are not directly or indirectly impacted during construction. The pre-construction survey area will include the limits of the project impact area plus a 300-ft buffer. If work is planned to begin in an area during the nesting season (February 15 – August 15), all vegetation removal shall be completed within two weeks of the nesting survey if the survey determines no active nests are present. A specific focused survey for Swainson's hawk survey will take place within the proposed project limits of disturbance, including a 500-ft buffer where legal access is available; otherwise a visual survey shall be conducted out to 500 feet. The biologist will be qualified to identify Swainson's hawks and other migratory birds. The survey will occur when the species is known to be most active (i.e., sunrise to late morning, afternoon to sunset). All potential nests will be mapped as well as any individuals sighted. BIO-7: If the nest of a protected bird is found, the perimeter shall be flagged and a qualified biologist will coordinate with USFWS and CDFW to determine an appropriate buffer distance for protection of the nest. The contractor shall stop work in the nesting area until the buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the project biologist and in coordination with wildlife agencies) in the protected area until the biologist has determined that nesting activities are complete. BIO-8: Temporary staging areas, storage areas, and access roads		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	involved with this Project will take place, to the extent feasible, in the area of direct impact. BIO-9: Construction activities shall be limited to daylight hours when possible. Night work will only be considered when required to meet schedule or to avoid high water events. BIO-10: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel. The project biologist shall conduct a pre-construction meeting to ensure that construction crews are informed of the approved limits of disturbance and of the sensitive animals and habitats in the vicinity. The awareness training will be provided to all construction personnel to brief them on the need to avoid effects to biological resources, particularly riparian habitat and special-status wildlife habitat (i.e., elderberry shrubs), and the penalties for not complying with the biological opinion and other regulatory permits. At a minimum, the training shall include 1) the purpose for resource protection; 2) a description of sensitive species and their habitats; 3) environmentally responsible construction practices; 4) the protocol to resolve conflicts that may arise at any time during the construction process; and 5) the general provisions of FESA and CESA, the need to adhere to the provisions of FESA and CESA, and the penalties associated with violation of FESA and CESA. BIO-11: Prior to clearing/grubbing, grading, and/or construction activities within or adjacent to native habitats on the Project site, a qualified biologist shall supervise the installation of temporary construction fencing along the approved limits of disturbance, including construction staging areas and access routes, to prevent additional habitat impacts into adjacent habitats to be avoided.		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	Fencing shall be installed in a manner that does not impact habitats to be avoided. BIO-12: Native fill will be utilized whenever possible. BIO-13: Install Construction Barrier Fencing to Protect Beetle Habitat Adjacent to the Construction Zone. The City or its contractor will install orange construction barrier fencing to identify environmentally sensitive areas that are to be avoided. The construction specifications will require that a qualified biologist identify the location of valley foothill riparian and other sensitive biological habitat (i.e., elderberry shrubs) on site and identify areas to avoid during construction. Barrier fencing will be installed a minimum of 20 feet from all elderberry shrubs that have been identified near the project corridor (#1-5). Before construction, the construction contractor will work with the project engineer and a resource specialist to identify the locations for the barrier fencing and will place stakes around the sensitive resources sites to indicate these locations. The protected area will be designated an environmentally sensitive area and clearly identified on the construction specifications. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period. The following paragraph will be included in the construction specifications: The contractor's attention is directed to the areas designate "environmentally sensitive areas." These areas are protected, and no entry by the contractor for any purpose will be allowed unless specifically authorized in writing by the project proponent. The contractor will take measures to ensure that contractor's forces o not enter or		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	disturb these areas, including giving written notice to employees and subcontractors. Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer. The fencing will be commercial-quality woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). The fencing will be tightly strung on posts with maximum 10-foot spacing. BIO-14: A barrier, such as a water inflated dam, shall be installed at the opening of the live Barge Canal channel between August 1 and November 30. During dewatering a biologist will be present to monitor and relocate, if necessary, species. BIO-15: Implement Stormwater Pollution Prevention Plan (SWPPP) Measures to protect water quality. Implement erosion control and Best Management Practices (BMPs). Contract specifications will include the following Best Management Practices (BMPs), where applicable, to reduce erosion during construction. • Implementation of the project will also require approval of a site-specific SWPPP that would implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques. • Scheduling. A specific work schedule will be		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	implemented to coordinate the timing of land disturbing activities and the installation of erosion and sedimentation control practices to reduce on-site erosion and off-site sedimentation. • Preservation of Existing Vegetation. In addition to measures above, existing vegetation shall be protected in place where feasible to provide an effective form of erosion and sediment control, as well as watershed protection, landscape beautification, dust control, pollution control, noise reduction, and shade. • Mulching. Loose bulk materials shall be applied to the soil surface as a temporary cover to reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff. • Soil Stabilizers. Stabilizing materials shall be applied to the soil surface to prevent the movement of dust from exposed soil surfaces on construction sites as a result of wind, traffic, and grading activities. • Slope Roughening/Terracing/Rounding. Roughening and terracing will be implemented to create unevenness on bare soil through the construction of furrows running across a slope, creation of stair steps, or by utilization of construction equipment to track the soil surface. Surface roughening or terracing reduces erosion potential by decreasing runoff velocities, trapping sediment, and increasing infiltration of water into the soil, aiding in the establishment of native		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	vegetative cover from seed. BIO-16: Develop and implement a Spill Prevention, Control, and Countermeasure Program (SPCCP) for construction activities. The Contractor will develop and implement a SPCCP to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. This would include refueling of equipment away from the waterway The SPCCP will be completed prior to construction. BIO-17: Pursuant to Executive Order 13112 and the control of invasive species: • All landscaping and revegetation shall consist of a biologist approved plant and/or seed mix from native, locally adapted species. • Prior to arrival at the project site and prior to leaving the project site, construction equipment that may contain invasive plants and/or seeds shall be cleaned to reduce the spreading of noxious weeds. BIO-18: Implementation of the following mitigation measures will minimize and offset effects to Critical Habitat: The City shall prepare a riparian restoration plan prior to construction. This plan will include restoration of areas impacted by the proposed Project, and will aim to reestablish a healthy riparian corridor around the Barge Canal.		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
Greenhouse Gases	N/A		
Cultural Resources	CR-1: In accordance with Section 7052.5 of the Health and Safety Code, construction or excavation shall be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC. According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). CR-2: Comply with State Laws Relating to Native American Remains. If human remains of Native American Origin are discovered during project construction, it will be necessary to comply with state laws relating to the disposition of Native American burials, which fall under the jurisdiction of the NAHC (Public Resources Code Section 5097). If any human remains are discovered or recognized in any location other than a dedicated cemetery, the project proponent or its contractor shall ensure that there will be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent human remains, until: 1. the Yolo County coroner has been informed and has determined no investigation of the cause of death is required, or 2. if the remains are of Native American origin, the descendents of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating	City, Contractor,	Construction

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98 or the NAHC is unable to identify a descendant or the descendant fails to make a recommendation within 24 hours after being notified by the NAHC. Based on the project's location relative to the Sacramento River, it is appropriate to monitor excavation during construction of the bridge abutments.		
Geology and Soils	GEO-1: The City and contractor shall implement a SWPPP to include erosion control methods. This SWPPP shall be prepared for the Section 402 permit, NPDES General Permit for Discharges of Storm Water Associated with Construction Activity.		
Hazards and Hazardous Materials	HAZ-1: Require Spark-Generating Construction Equipment be Equipped with Manufacturers' Recommended Spark Arresters: The City shall require contractors to fit any construction equipment that normally includes a spark arrester with an arrester in good working order. Subject equipment includes, but is not limited to, heavy equipment and chainsaws. Implementation of this measure will minimize a source of construction-related fire. HAZ-2: Before Construction Begins, Clear Materials That Could Serve as Fire Fuel from Areas Slated for Construction Activities: If dry vegetation or other fire fuels exist on or near staging areas, welding areas, or any other area on which equipment will be operated, contractors shall clear the immediate area of fire fuel. To maintain a firebreak and minimize the availability of fire fuels, the City shall require		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	contractors to maintain areas subject to construction activities clear of combustible natural materials to the extent feasible. To avoid conflicts with policies to preserve riparian habitat, areas to be cleared shall be identified with the assistance of a qualified biologist.		
Hydrology and Water Quality	HYD-1: The storm drain system will be designed to accommodate the project and comply with current standards. HYD-2: Implement a Spill Prevention, Control, and Countermeasure Program during construction to protect against water quality contamination. HYD-3: Coordinate with USACE to ensure construction near the levees meet USACE standards.		
Landuse and Planning	N/A		
Mineral Resources	N/A		
Noise	N/A		
Population and Housing	N/A		
Public Services	PS-1/TRA-2: Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a traffic control plan.		
Recreation	N/A		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
Transportation and Traffic	TRA-1: The project shall include signalization of the South River Road/15th Street intersection. PS-1/TRA-2: Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a traffic control plan.		
Mandatory Findings of Significance	Please see measures BIO-1 through BIO-24 and CR-1 and CR-2.		

Appendix D Agency Consultation

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
81420-2008-F-1510-1

JUN 10 2008

Mr. William H. Guthrie
Senior Project Manager, Delta Office
Regulatory Branch
U.S. Army Corps of Engineers
1325 J Street, Room 1480
Sacramento, California 95814-2922

Subject: Section 7 Formal Consultation on the South River Road Barge Canal Crossing and Village Parkway Extension Project (Corps file number 200500887), West Sacramento, Yolo County, California

Dear Mr. Guthrie:

This is in response to the U.S. Army Corps of Engineers' (Corps) March 27, 2007, letter requesting consultation with the U.S. Fish and Wildlife Service (Service) on the South River Road Barge Canal Crossing and Village Parkway Extension Project, located along the Sacramento River Deep Water Ship Channel in West Sacramento, Yolo County, California. Your letter was received in our office on March 30, 2007. The Service has reviewed the biological information describing the effects of the proposed project on the federally threatened valley elderberry beetle (*Desmocerus californicus dimorphus*) (beetle) and delta smelt (*Hypomesus transpacificus)* and its critical habitat. The Service has deemed the project appropriate to append to the Service's December 1, 2004, *Formal Programmatic Consultation on the Issuance of Section 10 and 404 Permits for Projects with Relatively Small Effects on the Delta Smelt (Hypomesus transpacificus) and its Critical Habitat within the Jurisdiction of the Sacramento Fish and Wildlife Office of the U.S. Fish and Wildlife Service, California* (Delta Smelt Programmatic Consultation) (Service file number 1-1-04-F-0345) and to the Service's *Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle* (Beetle Programmatic Consultation) (Service file number 1-1-96-F-0066). This response is in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S. C. 1531 *et seq.*).

The findings and recommendations in this formal consultation are based on (1) the March 27, 2007, letter requesting consultation, (2) the May, 2006, biological assessment prepared by Jones and Stokes, (3) the February 2007, *Draft Environmental Impact Report for the South River Road*

Barge Canal Crossing and Village Parkway Extension Project prepared by Jones and Stokes, (4) additional information provided via email by Dokken Engineering, and (5) additional information available to the Service.

Project Description

The City of West Sacramento's (City) Department of Community Development proposes to reconstruct the existing two-lane South River Road from the Yolo Barge Canal to the Capital City Freeway off-ramp, located on the eastern edge of the City within Yolo County. The project area and vicinity is bounded by the north by U.S. Highway 50/Capital City Freeway interchange at South River Road/Riske Lane, on the east by the Sacramento River, on the south by the Village Parkway/Stonegate Drive intersection, and on the west by Jefferson Boulevard. The Port of Sacramento is located northwest of the proposed project area. The project would improve the existing South River Road, provide a crossing for the barge canal, and extend Village Parkway from Stonegate Road to the bridge across property being transferred to the City by the Corps.

South River Road

The typical cross section for the South River Road includes two 12-foot lanes in each direction, a 14-foot raised landscaped median/left-turn pocket, two 6-foot bike lanes, a 8-foot parking/landscaping area, curb and gutter, and two 10-foot sidewalks. South River Road will ultimately encompass a 110-foot right-of-way corridor.

Barge Canal Bridge

A 3-span bridge would be constructed over the barge canal. Eight octagonal columns will support the bridge on footings placed below the river bottom. The bridge will have enhanced lighting, an enhanced exterior concrete rail, and be designed to accommodate the Promenade Bike Trail. Bridge schematics show the bridge to be approximately 465 feet in length and 85 feet in width.

Village Parkway Extension

The typical cross section for the Village Parkway Extension includes two 12-foot lanes in each direction, a 16-foot raised landscaped median/left-turn pocket, two 6-foot bike lanes, curb and gutter in each direction, and two 6-foot sidewalks set back from the curb by 5-foot landscaping strips. The overall right-of-way is a basic 98-foot width plus the embankment footprints and an access provision of 10 feet at the toe of the embankment.

Construction Access, Equipment, and Staging Areas

Most staging would occur within the 110-foot-wide project corridor. If additional staging areas are required during construction, they will be located within developed or previously disturbed areas that do not support sensitive biological resources (i.e., riparian woodlands, seasonal wetlands, elderberry shrubs). Two potential staging areas are being considered, with one on each

side of the barge canal. The southern staging area could be located south of the barge canal, immediately east of Jefferson Boulevard. The northern staging area could be on a piece of the City's decommissioned wastewater treatment plant pending timing and plant decommissioning.

Access to these staging areas is paved. Access to the southern staging area is available on the south from Village Parkway and from Jefferson Boulevard to the west.

Roadway construction will use normal heavy construction earthmoving equipment. Bridge construction equipment will include cranes, pile drivers, drill rigs, falsework, excavators, and concrete pumps. To construct the bridge, a working platform will be constructed in the barge canal and used for drilling the shaft foundations for the bridge. The platform could also be used as a construction bridge across the barge canal and for the support of falsework for the bridge superstructure.

Conservation and Minimization Measures

1. *Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel.* Before the start of construction activities, including grading, a qualified biologist will conduct mandatory contractor/worker awareness training for construction personnel. The awareness training will be provided to all construction personnel to brief them on the need to avoid effects to biological resources, particularly riparian habitat and special-status wildlife habitat (i.e., elderberry shrubs), and the penalties for not complying with the biological opinion and other regulatory permits. If new construction personnel are added to the project, the contractor will ensure that the new personnel receive the mandatory training before starting work.

2. *Install Construction Barrier Fencing to Protect Beetle Habitat Adjacent to the Construction Zone.* The City or its contractor will install orange construction barrier fencing to identify environmentally sensitive areas that are to be avoided. The construction specifications will require that a qualified biologist identify the location of riparian woodland, seasonal wetlands, and other sensitive biological habitat (i.e., elderberry shrubs) on site and identify areas to avoid during construction. Barrier fencing will be installed a minimum of 20 feet from all elderberry shrubs that have been identified near the project corridor (#2, 3, 4, and 5).

   Before construction, the construction contractor will work with the project engineer and a resource specialist to identify the locations for the barrier fencing and will place stakes around the sensitive resources sites to indicate these locations. The protected area will be designated an environmentally sensitive area and clearly identified on the construction specifications. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period. The following paragraph will be included in the construction specifications:

   > The contractor's attention is directed to the areas designate "environmentally sensitive areas." These areas are protected, and no entry by the contractor for any

purpose will be allowed unless specifically authorized in writing by the project proponent. The contractor will take measures to ensure that contractor's forces do not enter or disturb these areas, including giving written notice to employees and subcontractors.

Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer. The fencing will be commercial-quality woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). The fencing will be tightly strung on posts with a maximum 10-foot spacing.

3. *Transplant Elderberry Shrubs that Occur within the Project Corridor and will be Directly Affected by Roadway Construction.* The City shall ensure that any elderberry shrub that will be directly affected (removed) by construction activities is transplanted to a Service-approved conservation area or mitigation bank. The closest Service-approved mitigation site is the Wildlands, Inc. River Ranch Conservation Bank in Yolo County.

   As currently designed, the proposed project would require transplantation of one elderberry shrub within the project corridor. The elderberry shrub will be transplanted when it is dormant (after it loses its leaves) in the period starting approximately in November and ending in the first 2 weeks of February. A qualified specialist familiar with elderberry shrub transplantation procedures will supervise the transplanting. The location of the conservation area transplantation site will be approved by the Service before removal of the elderberry shrub.

   The transplanting procedure entails the following steps: (1) the affected shrub will be cut back 3–6 feet above the ground or up to 50% of its height, whichever is greater; (2) the shrub will be removed using suitable equipment, taking as much of the root system as possible, wrapping the root ball in burlap and securing it with wire, and dampening the burlap with water to keep the roots wet; (3) the shrub will be replanted immediately at the mitigation site in holes of adequate size with the root ball planted so that its top is level with the existing ground. The soil will be compacted around the roots. The planting area must be at least 1,800 square feet; and (4) the shrub will have its own water retention basin measuring 3 feet in diameter with a continuous berm measuring approximately 8 inches wide at the base and 6 inches high. The soil around the shrubs will be saturated with water. The shrubs should be monitored and watered accordingly.

4. *Compensate for Direct Effects on Valley Elderberry Longhorn Beetle Habitat.* The City will compensate for direct impacts (i.e., transplanting of one elderberry shrub) on all elderberry stems measuring 1 inch or more at ground level. Compensation will include replacement plantings of elderberry seedlings or cuttings and associated native plantings in a Service-approved conservation area or mitigation bank, at a ratio between 1:1 and 8:1 (ratio of new plantings to affected stems), depending on the diameter of the stem at

ground level, the presence or absence of exit holes, and whether the shrub is located in riparian habitat.

5. *Implement Stormwater Pollution Prevention Plan (SWPPP) Measures to Protect Water Quality.* Implement erosion control and Best Management Practices (BMPs). Development and implement a Spill Prevention, Control, and Countermeasure Program for construction activities.

6. *Develop and Implement a Spill Prevention, Control, and Countermeasure Program (SPCCP) for Construction Activities.* The Contractor will develop and implement a SPCCP to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. The SPCCP will be completed prior to construction.

7. *Employ Measures to Minimize Noise Impacts on Special-Status Fish Species.* Potential injury and mortality associated with pile driving will be avoided or minimized by: (1) in-channel construction, including riverbank and channel-bed construction below the Ordinary High Water Mark , will be limited to the summer low-precipitation period to reduce the likelihood of adverse effects on adult fish spawning and migration; (2) pile-driving activities will be limited to the summer low-flow period, decreasing the distance the sound waves travel; (3) the number and size of piles will be limited to the minimum necessary to meet the engineering and design requirements of the project; (4) vibratory hammers will be used whenever feasible; and (5) the smallest pile driver and minimum force necessary to complete the work will be used.

Evaluations under Programmatic Consultations

Valley Elderberry Longhorn Beetle

This letter is an agreement by the Service to append the proposed project to the, Beetle Programmatic Consultation. The project applicant has proposed to plant elderberry seedlings and associated native riparian species in accordance with the Service's 1999 Conservation Guidelines (Table 1).

Table 1: Proposed compensation ratios for the valley elderberry longhorn beetle for the proposed Project.

Location	Stems (maximum diameter at ground level)	Exit Holes	# of Stems	Elderberry Seedling Ratio	# Elderberry Seedlings required	Associated Native Ratio	# Associated Natives required
Non-Riparian	1-3 inches	No	25	1:1	25	1:1	25
Non-Riparian	3-5 inches	No	11	2:1	22	1:1	22
Non-Riparian	>5 inches	Yes	6	6:1	36	2:1	72
Total			**42**		**83**		**119**

Therefore, prior to any ground disturbing activities associated with the proposed project, the project applicant shall fulfill the conservation measures mentioned above in the *Conservation and Minimization Measures* including the purchasing of credits sufficient to plant 83 elderberry shrub seedlings and 119 associated riparian native species at a Service-approved valley elderberry longhorn beetle conservation bank.

Delta Smelt

This letter is an agreement by the Service to append the proposed project to the Delta Smelt Programmatic Consultation. Minimization of effects for projects appended to the Programmatic Consultation involves the implementation of the reasonable and prudent measures described in the Programmatic consultation. The Service is tracking losses of habitat permitted under the Programmatic Consultation in each county under the jurisdiction of the Sacramento Fish and Wildlife Office. The Service will evaluate the effectiveness of the Delta Smelt Programmatic Consultation to ensure that continued implementation will not result in unacceptable effects to the ecosystem upon which the listed species depends.

The Barge Canal Bridge will cover approximately 0.64 acre of shallow water habitat (SWH). SWH is defined as all waters between Mean High Water and 9.84 feet below Mean Lower Low Water mark. These waters are within the photic zone and are highly productive. A shadow zone is the shadow created by a structure placed over or in the waterways of the Delta within the SWH zone. This causes a loss of productivity, thinning, and loss of aquatic vegetation and prevention of its growth.

Minimization of Adverse Effects

Adverse effects will be minimized by the time of year that the work will take place. By performing in-water work during the approved work window for delta smelt August 1 through November 30, effects will be minimized. Purchasing credits from the Delta Smelt Conservation Fund will ensure no net loss of SWH.

Terms and Conditions

To be exempt from the prohibitions of section 9 of the Endangered Species Act for the delta smelt, the Corps must ensure that the permittee complies with the following terms and conditions, which implements the reasonable and prudent measures described in the Delta Smelt programmatic biological opinion:

1. Consistent with the programmatic opinion, the applicant shall deposit $76,800.00 (1.92 acres [3:1 ratio] worth of conservation credits) into the Delta Smelt Conservation Fund. A copy of the Conservation Fund receipt must be provided to the Corps and the Service prior to construction.

2. The applicant will also perform all construction activities during the appropriate work window, between August 1 and November 30 of any given year, thus minimizing effects to smelt.

3. To minimize the effects on delta smelt caused by the mobilization of bottom material that may contain toxins, the use of silt trapping devices shall be employed during all in-water work, where appropriate.

4. To minimize the effects on delta smelt resulting from the permanent loss of spawning and refugial habitat due to actions listed in the Description of the Proposed Action section of the programmatic biological opinion, the Corps shall avoid areas having emersed or submersed plants to the maximum extent possible.

5. The Corps shall ensure that the permittee complies with the Reporting Requirements in the Delta Smelt Programmatic Consultation.

This concludes formal consultation on the South River Road Barge Canal Crossing and Village Parkway Extension Project. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action.

If you have any questions regarding this opinion on the South River Road Barge Canal Crossing and Village Parkway Extension Project, please contact Kim Squires or Ryan Olah, at (916) 414-6625.

Sincerely,

Chris Nagano
Deputy Assistant Field Supervisor

cc
Jay Davidson, City of West Sacramento, West Sacramento, California
Michael Vondergeest, Jones and Stokes, Sacramento, California

Appendix E Resource Maps

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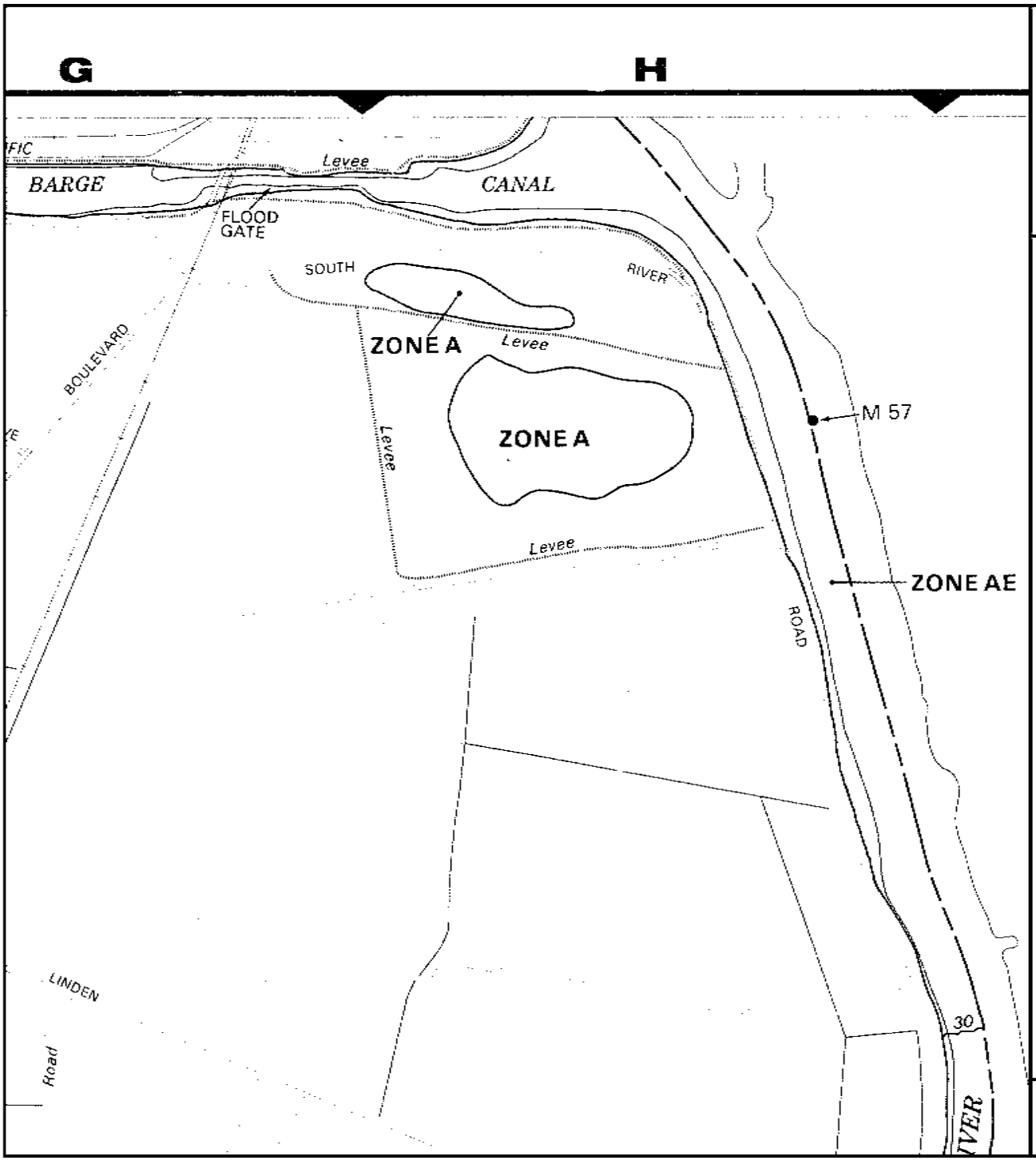

APPROXIMATE SCALE IN FEET

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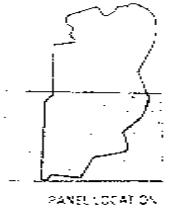
NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CITY OF
WEST
SACRAMENTO,
CALIFORNIA
YOLO COUNTY

PANEL 10 OF 10
(SEE MAP INDEX FOR PANELS NOT PRINTED)

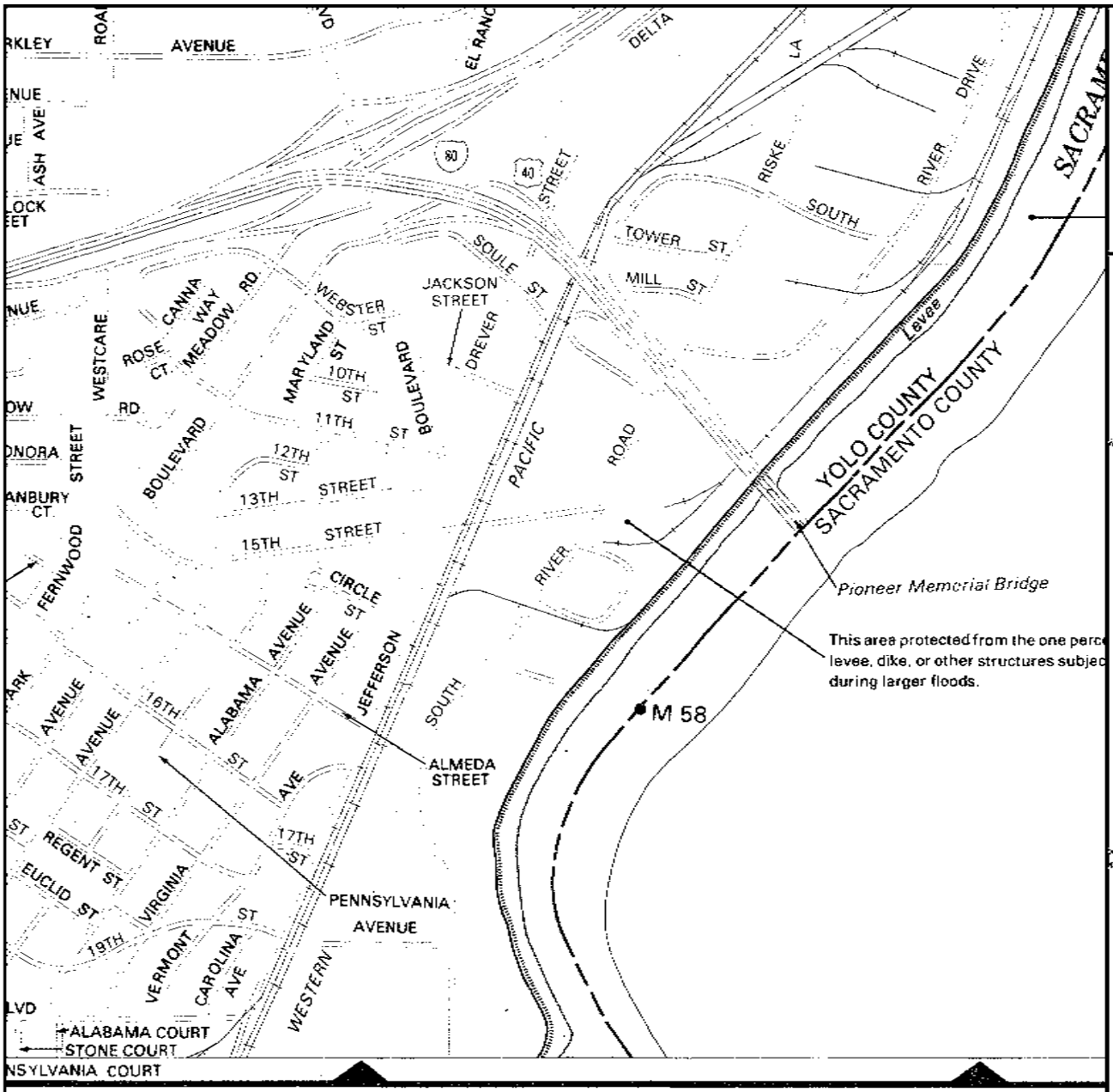


PANEL LOCATION

COMMUNITY-PANEL NUMBER
060728 0010 B

MAP REVISED:
JANUARY 19, 1995

Federal Emergency Management Agency



APPROXIMATE SCALE IN FEET

1000 0 1000

NATIONAL FLOOD INSURANCE PROGRAM

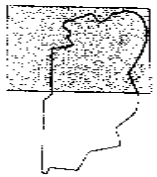
FIRM

FLOOD INSURANCE RATE MAP

CITY OF
WEST
SACRAMENTO,
CALIFORNIA
YOLO COUNTY

PANEL 5 OF 10

(SEE MAP INDEX FOR PANELS NOT PRINTED)



PANEL LOCATION

COMMUNITY-PANEL NUMBER
060728 0005 B

MAP REVISED:
JANUARY 19, 1995

Federal Emergency Management Agency

U.S. Fish and Wildlife Service
National Wetlands Inventory

Pioneer Bluff Bridge Project

Dec 20, 2012

Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Riparian

- Herbaceous
- Forested/Shrub

User Remarks:

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Appendix F MTIP and MTP listings

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SACOG ID **YOL19223** | Yol | Lead Agency **City of West Sacramento Dept of Public Works**

Project TItle

Sacramento River Deep Water Ship Channel Deepening

EA Number:n/a | Last Revised 13-00 | Completion Year **2017**

Project Description

Dredge remainder of 35 miles of 43 mile ship channel an additional 5' to 35' in depth. This 15% increase in channel depth will allow larger ships and thus will increase allowable ship capacity by 40% (from 25,000 tons to 35,000 tons). Ship channel boundaries are from Collinsville (just above Suisun Bay) up to West Sacramento.

Federal Project
Regionally Significant

Total Cost **$157,464,000**

Fed FY	Revenue Source	Engineering	Right of Way	Construction	Total Revenue
<13		$13,546,000			$13,546,000
2013	Local Agency Funds		$46,285,000	$14,408,000	$60,693,000
2013	Other Fed - Energy and Water Dvlp Appro Act			$73,225,000	$73,225,000
2013	State Bond - Trade Corridor Program			$10,000,000	$10,000,000
		$13,546,000	**$46,285,000**	**$97,633,000**	**$157,464,000**

SACOG ID **YOL15180** | Yol | Lead Agency **City of West Sacramento Dept of Public Works**

Project TItle

South River Rd.

EA Number:n/a | Last Revised 13-00 | Completion Year **2017**

Project Description

Reconstruct and widen South River Road to 4 lanes from US50 on-ramp to Stonegate Boulevard, including a new 4-lane bridge over barge canal.

Other

Total Cost **$26,750,000**

Fed FY	Revenue Source	Engineering	Right of Way	Construction	Total Revenue
<13		$1,000,000			$1,000,000
2013	Local - Developer - Transportation Improvement Fee	$2,000,000			$2,000,000
2014	Local - Developer - Transportation Improvement Fee		$4,000,000		$4,000,000
2015	Local - Developer - Transportation Improvement Fee		$3,000,000		$3,000,000
2016	Local - Developer - Transportation Improvement Fee			$5,000,000	$5,000,000
>16				$11,750,000	$11,750,000
		$3,000,000	**$7,000,000**	**$16,750,000**	**$26,750,000**

Final Metropolitan Transportation Plan / Sustainable Communities Strategy Project List

/1/ Project Analysis projects are anticipated to begin early stages of development including project design, preliminary engineering, environmental clearance, and ROW acquisition by 2035. These projects remain eligible to seek federal and state funding, but under the financial constraint requirements for projecting revenues, the construction phase is not covered. If/when additional revenues for these projects become available, these projects will require future amendments to the MTP/SCS to reflect full construction costs.

COUNTY	LEAD AGENCY	TITLE	PROJECT DESCRIPTION	TOTAL COST (2010 DOLLARS)	TOTAL COST (YEAR OF EXPENDITURE DOLLARS)	MTP/SCS Status
Yolo	City of West Sacramento Dept of Public Works	Industrial Boulevard Widening	In West Sacramento, Industrial Boulevard from the Palamidessi Bridge at the Barge Canal to Harbor Boulevard: widen from 4 to 6 lanes.	*MTIP Project: Year of Expenditure Costs Only*	$ 16,440,000	**Project complete by 2035**
Yolo	City of West Sacramento Dept of Public Works	Lake Washington Blvd.	Lake Washington Blvd.: Widen the Palamidessi Bridge over the barge canal from 4 to 6 lanes.	*MTIP Project: Year of Expenditure Costs Only*	$ 10,100,000	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	Lake Washington Blvd.	Widen Lake Washington Blvd. from 2 to 6 lanes from Jefferson Blvd. to the new Palamidessi Bridge at the barge canal.	$ 4,000,000	$ 4,994,327	**Project complete by 2035**
Yolo	City of West Sacramento Dept of Public Works	Port of West Sacramento Entrance	This project includes the construction of a new port entrance, including the installation of a new rail crossing near Beacon and Industrial Boulevards. This project will increase the efficiency and safety of travel to, from and within the Port, and is required prior to the construction of a new area project. This project will improve transportation operations, and is likely to lead to significant positive economic benefits.	$ 2,400,000	$ 3,285,328	**Project complete by 2035**
Yolo	City of West Sacramento Dept of Public Works	Port Wharf & Pier Rehab	Replacement and upgrade of 3000' of wharf fendering to accommodate larger vessels calling at Port	$ 5,000,000	$ 5,217,310	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	Rail relocation & reconfiguration study	Service Plan: Study rail relocation and reconfiguration through West Sacramento. The intent of the study will be to seek implementing a proposed solution and leveraging public and private funding for implementation.	$ 1,000,000	$ 1,022,000	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	Road Rehab	Rehabilitate various roads in West Sacramento.	*MTIP Project: Year of Expenditure Costs Only*	$ 481,203	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	Road Rehab Stimulus	Sacramento Avenue, Jefferson Boulevard, F Street and various location: Rehabilitate with overlays and slurry seal.	*MTIP Project: Year of Expenditure Costs Only*	$ 3,230,000	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	Sacramento River Deep Water Ship Channel Deepening	Dredging remainder of 35 miles of 43 mile ship channel an additional 5' to 35' in depth. This 15% increase in channel depth will allow larger ships and thus will increase allowable ship capacity by 40% (from 25,000 tons to 35.000 tons). Ship channel boundaries are from Collinsville (just above Suisun Bay) up to West Sacramento.	*MTIP Project: Year of Expenditure Costs Only*	$ 70,000,000	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	South River Rd.	Reconstruct and widen South River Road to 4 lanes from US50 on-ramp to Stonegate Boulevard, including a new 4-lane bridge over barge canal.	*MTIP Project: Year of Expenditure Costs Only*	$ 26,750,000	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	Tower Bridge Gateway Modification (East Phase)	In West Sacramento, Tower Bridge Gateway (former State Route 275) from Tower Bridge to the UPRR underpass: reconfigure road from a controlled access expressway to an arterial roadway with signalized at-grade intersections at 3rd and 5th Streets.	*MTIP Project: Year of Expenditure Costs Only*	$ 13,889,000	**Project complete by 2020**

CITY OF WEST SACRAMENTO **AGENDA REPORT**

MEETING DATE: February 20, 2013 **ITEM #** 5

SUBJECT:

CONSIDERATION AND APPROVAL OF THE PIONEER BLUFF BRIDGE PROJECT AND ADOPTION OF RESOLUTION 13-14 CERTIFYING THE MITIGATED NEGATIVE DECLARATION AND APPROVING THE MITIGATION, MONITORING, AND REPORTING PLAN

REPORT COORDINATED OR PREPARED BY:

Jay M. Davidson, Senior Civil Engineer

[ ] Council [X] Staff

[ ] Other

Greg Fabun, Director of Public Works

ATTACHMENT [X] Yes [ ] No [ ] Information [ ] Direction [X] Action

OBJECTIVE

The objective of this report is to obtain City Council approval of the Pioneer Bluff Bridge Project and adopt Resolution 13-14 that certifies and approves the environmental documents.

RECOMMENDED ACTION

It is respectfully recommended that the City Council:

1. Approve the Pioneer Bluff Bridge Project; and
2. Adopt Resolution 13-14 certifying the Mitigated Negative Declaration and approving the Mitigation, Monitoring, and Reporting Plan for the Pioneer Bluff Bridge Project.

BACKGROUND

In November 2012, the Port Commission and City Council agreed to reallocate the Trade Corridor Improvement Fund (TCIF) allocation from the Channel Deepening Project to the Pioneer Bluff Bridge. On December 6, 2012, the California Transportation Commission (CTC) approved the Port's request to redirect $9.678 million in TCIF funding to the Pioneer Bluff Bridge Project.

The Pioneer Bluff Bridge represents the fifth and final phase of the $21.84 million West Sacramento Rail Plan. The bridge will provide an alternate vehicular route from Highway 50 to the Southport community thereby reducing traffic delays on Jefferson Boulevard and Highway 50/Business 80 associated with goods movement at the Port of West Sacramento and other rail users in the West Sacramento Industrial area.

The Pioneer Bluff Bridge Project is essentially a scaled back version of the original South River Road Bridge and Village Parkway Extension Project that removes the Village Parkway extension and South River Road expansion. The Pioneer Bluff Bridge is a 615-feet long, four-lane bridge, over the now decommissioned Sacramento Barge Canal that will initially be striped for two-lanes to conform to the existing roadway on both sides of the canal. The project is being designed to accommodate future roadway improvements and streetcar.

At the City Council meeting on January 9, 2013, staff presented an overview of the Pioneer Bluff Bridge Project and Council awarded a professional services contract to Dokken Engineering to complete the design, right-of-way, environmental analysis and regulatory permitting for the project.

An Initial Study and Mitigated Negative Declaration (IS/MND) was prepared for the project and made available for public review beginning January 11, 2013, through February 11, 2013. A public notice was published in the Sacramento Bee on January 11, 2013, and the News-ledger on January 16, 2013. During the public review period, a copy of the draft Mitigated Negative Declaration was made available for review at City Hall, the Arthur F. Turner Library and the City website. Staff received 11 responses during the public review period. All comments received during that period have been addressed in the final Mitigated Negative Declaration.

ANALYSIS

The Pioneer Bluff Bridge is vital to providing traffic circulation on the eastern side of the City between the north and south sides of the Barge Canal. The project is in the City's Capital improvement Program and pivotal to the

Circulation Element of the City General Plan. The project is also contained within the traffic impact fee program for the City. The Trade Corridor Investment Fund Grant gives the City an opportunity to not only improve goods movement to and from the Port, but to vastly improve traffic circulation in the City. Without the TCIF funding, the project would have to be funded entirely out of the Traffic Impact Fee Program at a date uncertain in the future.

The City of West Sacramento has examined the potential environmental impacts to the study area associated with improvements within the entire project. Pursuant to the California Environmental Quality Act (CEQA), all required environmental research and analyses have been performed. All environmental surveys, resource agency coordination, and contacting of interested parties have been conducted.

The CEQA documents are a Mitigated Negative Declaration and Mitigation, Monitoring, and Reporting Plan (Attachments 2 and 3) requiring certification and approval by the City Council. The CTC requires a Resolution approving the final environmental documents for consideration of grant funding approval. The environmental documents are scheduled for consideration with the CTC on March 5, 2013. Approval of Resolution 13-14 will adopt the Mitigated Negative Declaration and the Mitigation, Monitoring, and Reporting Plan for the proposed project allowing the City to proceed with the project.

Strategic Plan Integration
This proposed project is contained within the comprehensive traffic model for the City to accommodate future growth at the Port and throughout the City in a manner consistent with the City Council adopted "West Sacramento Vision 2026" document, which includes the guiding principles of Vibrant Neighborhoods, People Feeling Safe and Secure, Comfortable Living, and Pride in Our Community.

Alternatives
1. Staff recommends approval of the Pioneer Bluff Bridge Project and adoption of Resolution 13-14 certifying the Mitigated Negative Declaration and adopting the Mitigation, Monitoring, and Reporting Plan.
2. Council may choose to make adjustments or modifications to the project and/or the environmental documents; however, such actions could delay completion of this project, and jeopardize the TCIF funding, which requires timely completion of design, environmental analysis and regulatory permitting.

Coordination and Review
This report was prepared with the cooperation of the Planning Division of the Community Development Department. The project is being coordinated with the City Manager's office, Public Works Department, Community Development Department, the Department of Administrative Services, the Sacramento Area Council of Governments (SACOG), CALTRANS and the California Transportation Commission (CTC).

Budget/Cost Impact
Adoption of Resolution 13-14 certifying the Mitigated Negative Declaration and adopting the Mitigation, Monitoring, and Reporting Plan will not have any fiscal impacts. The cost of preparing the environmental documents is included in the consultant contract with Dokken Engineering for the design of this project.

ATTACHMENT(S)
1) Resolution 13-14
2) Mitigated Negative Declaration
3) Mitigation, Monitoring, and Reporting Plan
4) Project Maps

ATTACHMENT 1

RESOLUTION 13-14

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF WEST SACRAMENTO CERTIFYING THE MITIGATED NEGATIVE DECLARATION AND APPROVAL OF THE MITIGATION, MONITORING, AND REPORTING PLAN FOR THE PIONEER BLUFF BRIDGE PROJECT

WHEREAS, on February 20, 2013, the City of West Sacramento City Council approved the Pioneer Bluff Bridge Project (the "Project") that connects to South River Road on both sides of the Barge Canal and signalization at the intersection at 15th Street and South River Road;

WHEREAS, the City has prepared a Mitigated Negative Declaration in accordance with the California Environmental Quality Act, CEQA Guidelines, and all other applicable laws and regulations;

WHEREAS, an Initial Study with proposed Mitigated Negative Declaration (IS/MND) for the project was made available by the City for public review beginning January 11, 2013, through February 11, 2013; and

WHEREAS, on February 20, 2013, the City, acting as the lead agency under CEQA, certified and adopted the Mitigated Negative Declaration and Mitigation, Monitoring, and Reporting Plan for the Pioneer Bluff Bridge Project.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of West Sacramento hereby:

1. Certifies that it has reviewed and considered the proposed Mitigated Negative Declaration for the Project and certifies the proposed Mitigated Negative Declaration, and that the Mitigated Negative Declaration reflects the independent judgment of the City as lead agency under CEQA; and

2. Adopts the Mitigation, Monitoring, and Reporting Plan for the Project.

PASSED AND ADOPTED by the City Council of the City of West Sacramento this 20th day of February, 2013, by the following vote:

AYES:
NOES:
ABSENT:

_____
Christopher L. Cabaldon, Mayor

ATTEST:

_____
Kryss Rankin, City Clerk

Pioneer Bluff Bridge Project

CITY OF WEST SACRAMENTO

Initial Study with Mitigated Negative Declaration

Prepared by the
City of West Sacramento

CITY OF WEST SACRAMENTO

February 2013

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General Information about this Document

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to the City of West Sacramento, Attn: Jay Davidson, P.E., City of West Sacramento, 1110 West Capitol Avenue, 2nd Floor, West Sacramento, CA 95691. Phone No. (916) 617-4645.

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CONSTRUCT THE PIONEER BLUFF BRIDGE OVER THE BARGE CANAL IN THE CITY OF WEST SACRAMENTO, YOLO COUNTY, CALIFORNIA.

INITIAL STUDY
with Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

CITY OF WEST SACRAMENTO

_____
Date of Approval

_____
Jay Davidson, P.E.
Project Manager
Engineering Division
City of West Sacramento

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Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

PROJECT DESCRIPTION

The City of West Sacramento's (City) Department of Public Works proposes to build a bridge that will connect the existing two-lane South River Road from the South River Road cul-de-sac on the north side of the Barge Canal to South River Road on the south side of the Barge Canal. The project is located on the eastern edge of the City within Yolo County. The project area and vicinity is bounded on the north by an industrial area and US 50/Capital City Freeway, on the east by the Sacramento River, on the south by undeveloped land and the Southport Community, and on the west by Jefferson Boulevard.

The purpose of the Pioneer Bluff Bridge Project is to construct a bridge that connects South River Road across the Barge Canal. This connection is necessary to provide an additional north-south roadway alternative to avoid heavy north-south congestion on Jefferson Boulevard.

The project consists of the following components:

- The bridge will be high enough to allow for a 200-year flood event.
- A design speed of 45 miles per hour (mph).
- A storm drain system that will utilize existing ditches and features wherever possible. Road runoff will be filtered through a bioswale.
- Traffic control devices including stop signs or signals as determined necessary.

The project will conform to existing driveways; no acquisition of new right-of-way will be required.

Existing overhead and underground utilities exist within the project area. The underground utilities are to be protected in place with exception of adjusting manholes, valve covers, and utility boxes/vaults to the finished grade.

Construction is expected to begin in the summer of 2013 and will require approximately 9 months to complete.

DETERMINATION

The City of West Sacramento has prepared an Initial Study for this project, and following public review, has determined from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no impacts on agriculture and forest resources, mineral resources, and population and housing.

The project would have less than significant impact on, air quality, cultural resources,

geology and soils, greenhouse gas emissions, hazards and hazardous materials, land use and planning, noise, public services, recreation.

The project would have less than significant impact with mitigation incorporated on biological resources, hydrology and water quality, transportation/traffic, and mandatory findings of significance.

Therefore, the City of West Sacramento has adopted a Mitigated Negative Declaration.

_____ _____

Jay Davidson, P.E. Date
Project Manager
Engineering Division
City of West Sacramento

Executive Summary

The City of West Sacramento's (City) Department of Public Works proposes to build a bridge that will connect the existing two-lane South River Road from the South River Road cul-de-sac on the north side of the Barge Canal to South River Road on the south side of the Barge Canal. The project is located on the eastern edge of the City within Yolo County. The project area and vicinity is bounded on the north by an industrial area and US 50/Capital City Freeway, on the east by the Sacramento River, on the south by undeveloped land and the Southport Community, and on the west by Jefferson Boulevard. The purpose of the Pioneer Bluff Bridge Project is to construct a bridge that connects South River Road across the Barge Canal. This connection is necessary to provide an additional north-south roadway alternative to avoid heavy north-south congestion on Jefferson Boulevard. The bridge is anticipated to be funded through Prop 1B funding.

This environmental document is prepared in conformance with the requirements of the California Environmental Quality Act (CEQA) Public Resources Code 21000-21178. The City of West Sacramento is the Lead Agency for CEQA implementation.

Table ES-1. Summary of Potential Impacts from Alternatives

Resource	Potential Impacts		Summary of Avoidance, Minimization, and/or Mitigation Measures
	No-Build Alternative	Build Alternative	
Aesthetics	No impact.	Less than significant.	Aesthetics will be coordinated during final design to meet local goals.
Agriculture and Forest Resources	No impact.	No impact.	N/A
Air Quality	No impact.	Less than significant.	During construction, compliance with applicable air pollution control district and air quality management district regulations, and dust control measures.
Biological Resources	No impact.	Less than significant with mitigation incorporated.	ESA fencing, construction worker training, erosion control measures to avoid effects on water quality, construction timing to avoid impacts on fish, re-planting.

Resource	Potential Impacts		Summary of Avoidance, Minimization, and/or Mitigation Measures
	No-Action Alternative	Build Alternative	
Cultural Resources	No impact.	Less than significant.	Standard measures for accidental discovery.
Geology and Soils	No impact.	Less than significant.	N/A
Greenhouse Gas Emissions	No impact.	Less than significant.	N/A
Hazards and Hazardous Materials	No impact.	Less than significant.	Require construction equipment to be equipped with spark arresters; clear dry vegetation prior to construction.
Hydrology and Water Quality	No impact.	Less than significant with mitigation incorporated. Temporary construction impact for work in the Barge Canal.	Best Management Practices (BMPs) during construction.
Land Use and Planning	No impact.	Less than significant.	N/A
Mineral Resources	No impact.	No impact.	N/A
Noise	No impact.	Less than significant.	Compliance with City of West Sacramento noise ordinances during construction.
Population and Housing	No impact.	No impact.	N/A
Public Services	No impact.	Temporary construction impacts less than significant.	Minimization of temporary construction impacts to traffic flow through construction phasing, signage, and other measures in Traffic Control Plan.

Resource	Potential Impacts		Summary of Avoidance, Minimization, and/or Mitigation Measures
	No-Action Alternative	Build Alternative	
Recreation	No impact.	Less than significant. South bank will remain zoned for recreations and parks, except for addition of bridge.	N/A
Transportation/Traffic	Only two crossings of Barge Canal would exist in the City.	Less than significant with mitigation incorporated.	Signalization of South River Road/15th Street intersection. Minimization of temporary construction impacts to traffic flow through construction phasing, signage, and other measures in Traffic Control Plan.
Utilities and Service Systems	No impact.	Less than significant.	Coordination with utilities and service providers will take place during final design.
Mandatory Findings of Significance	No impact.	Less than significant with mitigation.	ESA fencing, construction worker training, erosion control measures to avoid effects on water quality, construction timing to avoid impacts on fish and nesting birds.

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List of Abbreviations

AB	Assembly Bill
APE	Area of Potential Effects
ARPA	Archaeological Resources Protection Act
BMPs	Best Management Practices
BOD	Biological Oxygen Demand
BSA	Biological Study Area
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CERFA	Community Environmental Response Facilitation Act (CERFA) of 1992
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CH_4	methane
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CRHR	California Register of Historic Resources
CW	Commercial-Water Related
dBA	Decibel A-weighted
DO	Dissolved oxygen
EIR	Environmental Impact Report
E.O.	Executive Order
EPA	Environmental Protection Agency

ESA	Environmentally Sensitive Area
FESA	Federal Endangered Species Act
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
GHG	greenhouse gases
HCP	Habitat Conservation Plan
HFC	Hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
JPA	Joint Powers Authority
La	Lang sandy loam
Ldn	day-night average sound level
Leq	equivalent continuous sound level
Lb	pound
Lmax	maximum sound level
LOS	Level of Service
Ma	Made land
Maf	Million acre-feet
MBTA	Migratory Bird Treaty Act
MCE	Maximum Credible Earthquake
mg/m^3	Milligrams per cubic meter
MND	Mitigated Negative Declaration
Mph	miles per hour
MRZ	Mineral Resource Zone
MTIP	Metropolitan Transportation Improvement Program
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Protection Act

NES	Natural Environment Study
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OSHA	Occupational Safety and Health Act
PG&E	Pacific Gas and Electric
PA	Programmatic Agreement
Pb	lead
PFC	Perfluorocarbons
PM	particulate matter
ppb	parts per billion
ppm	parts per million
PRC	Public Resources Code
Qha	Quaternary Holocene alluvium
R1UBV	Riverine, Tidal, Unconsolidated Bottom, Permanent-tidal
RCRA	Resource Conservation and Recovery Act of 1976
ROG	Reactive organic compounds
RP	Recreations-Parks
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Council of Governments
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO_2	sulfur dioxide
SF_6	Sulfur hexafluoride

SPCCP	Spill Prevention, Control, and Countermeasure Program
Stone Lock	William G. Stone Navigational Lock
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	Sacramento Water Resources Control Board
SVAB	Sacramento Valley Air Basin
TSCA	Toxic Substances Control Act
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VELB	Valley elderberry longhorn beetle
VMT	Vehicle miles traveled
VOC	volatile organic compounds
WF	Water Front
YSAQMD	Yolo-Solano Air Quality Management District

Chapter 1 Proposed Project

1.1 Introduction

The purpose of the Pioneer Bluff Bridge Project is to construct a bridge that connects South River Road across the Barge Canal. This connection is necessary to provide an additional north-south roadway alternative to avoid heavy north-south congestion on Jefferson Boulevard. This bridge will also provide a new route for vehicles to avoid congestion associated with the movement of railroad cargo goods across Jefferson Boulevard.

1.2 Alternatives

Two alternatives are being considered for this project—the Build Alternative (see Figure 1: Project Vicinity, Figure 2: Project Location, and Figure 3: Project Layout) and the No-Build Alternative.

1.2.1 Build Alternative

The City of West Sacramento's (City) Department of Public Works proposes to build a bridge that provides a gap closure and will connect the existing two-lane South River Road from the South River Road cul-de-sac on the north side of the Barge Canal to South River Road on the south side of the Barge Canal. The project is located on the eastern edge of the City within Yolo County. The project area and vicinity is bounded on the north by an industrial area and US 50/Capital City Freeway, on the east by the Sacramento River, on the south by undeveloped land and the Southport Community, and on the west by Jefferson Boulevard.

South River Road – North of Barge Canal

The typical cross section for the South River Road includes two 12-foot lanes and two 6-foot shoulders. The road improvements will conform to the existing driveways. This portion of South River Road will be within the existing 60-foot right-of-way corridor.

The project will include signalization of the South River Road/15th Street intersection. Associated improvements include overlay and restriping at the intersection.

Pioneer Bluff Bridge

The bridge will be 615 feet long and approximately 80 feet wide. The bridge is an eight-span concrete slab bridge supported by seven piers with five columns per pier. Each column will be 42-inches in diameter and will be supported by pile footings. The bridge will include one 12-foot lane in each direction and one future un-striped 12-foot lane in each direction, a 2-foot raised median, shoulders, and two 6-foot walkways separated from traffic by a concrete barrier.

South River Road – South of Barge Canal

The new bridge ties into the existing South River Road levee road at a perpendicular

alignment. There will be approximately 550 feet of improvements on South River Road that consist of resurfacing and conforming to the existing pavement. A typical cross section for this portion will include two 12-foot lanes.

Project Components

The project consists of the following components:

- The bridge will be high enough to allow for a 200-year flood event.
- A design speed of 45 miles per hour (mph).
- A storm drain system that will utilize existing ditches and features wherever possible. Road runoff will be filtered through a bioswale.
- Traffic control devices including stop signs or signals as determined necessary.

The project will conform to existing driveways; no acquisition of new right-of-way will be required.

The project will provide 3:1 slopes on the levee sides and will maintain a 60 foot right-of-way corridor.

Existing overhead and underground utilities exist within the project area. Utilities are to be protected in place with exception of adjusting manholes, valve covers, and utility boxes/vaults to the finished grade.

Construction is expected to begin in the summer of 2013 and will require approximately 9 continuous months. Construction activities shall be limited to daylight hours when possible. Night work will only be considered when required to meet schedule or to avoid high water events.

Construction Equipment and Staging Areas

Typical equipment for roadway construction will include heavy construction earthmoving equipment. Typical bridge construction equipment will include cranes, pile drivers, drill rigs, excavators, and concrete pumps. The canal will be dewatered by methods determined appropriate by the contractor. It is anticipated that the contractor will use bladder dams and rock/fill to establish berms for the area that will be dewatered. First, areas where the rock will be placed will be dewatered by utilizing bladder dams. Once the area is dry, rock and fill will be placed into the canal. Once the rock is in place, the bladder dams will be removed. To remove the berms after construction of the bridge is complete, the bladder dams will be re-installed, the rock and fill will be removed, and then the bladder dams will be removed. The contractor may construct work pads that extend into the canal from the north and south banks.

Two primary staging areas are considered, one on the south side of the canal and one on the north side of the canal. The southern staging area is located east of Jefferson Boulevard on a piece of land that is graded and has old asphalt paving. The northern staging area is on a piece of the City's decommissioned wastewater treatment plant. The

northern staging area is within the industrial area east of South River Road.

1.2.2 No-Project Alternative

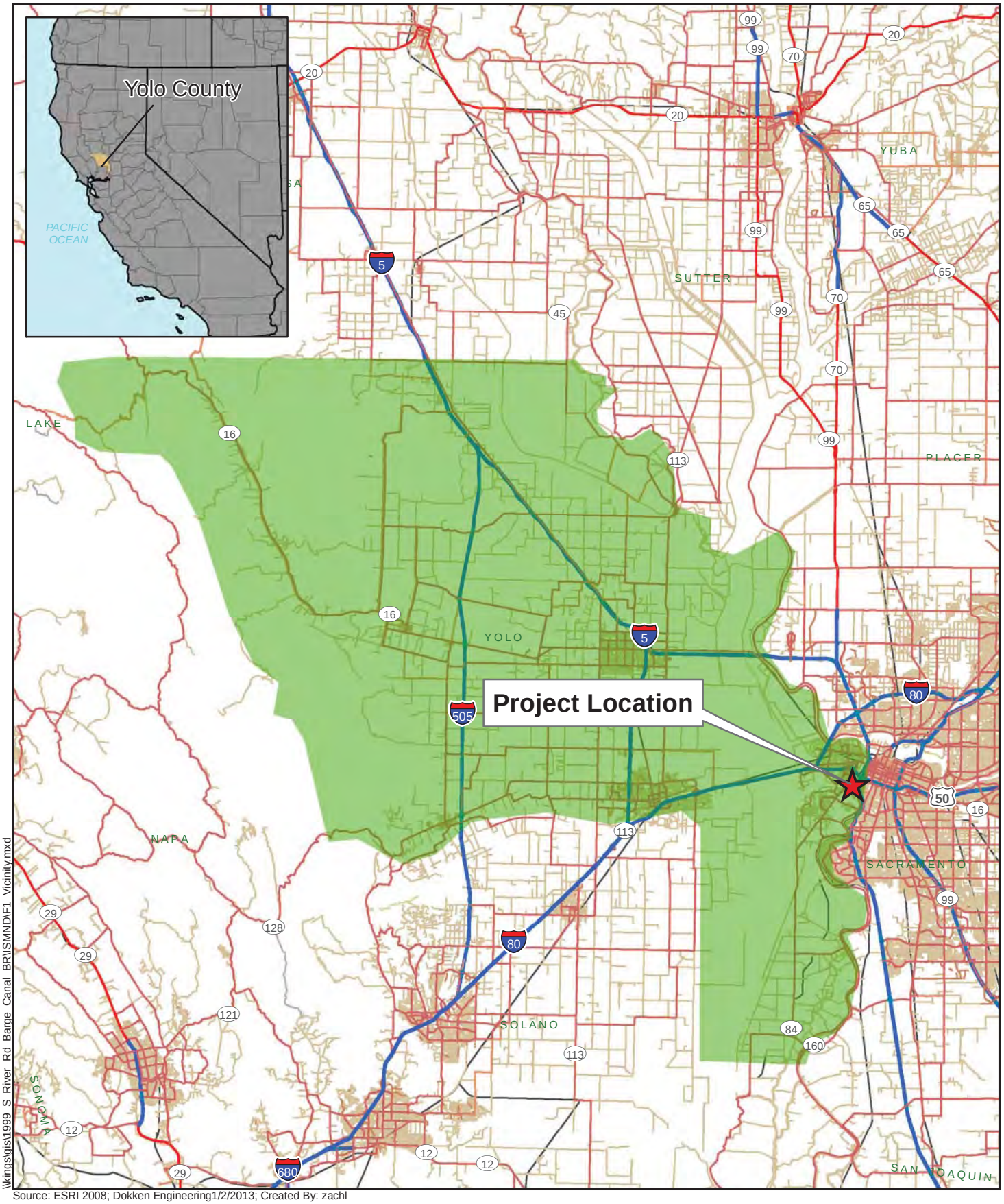
The State CEQA Guidelines (Section 15126[e]) require consideration of a no-project alternative that represents the existing conditions, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved. For purposes of this analysis, it is assumed that, under the No-Project Alternative, no canal crossing would be constructed.

1.3 Identification of Preferred Alternative

The Build Alternative was chosen as the preferred alternative by the City of West Sacramento. This determination was based on results of the public comment period. No comments resulted in changing the anticipated environmental consequences to significant levels. The Build Alternative was found to provide the greatest public good with the least private harm.

1.4 Permits and Approvals Needed

Agency	Permit/Approval	Status
State Water Resources Control Board	Section 402 Notice of Intent	To be obtained prior to construction
Central Valley Regional Water Quality Control Board	Water quality certification under Section 401 of the Clean Water Act	To be obtained prior to construction
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	To be obtained prior to construction
United States Army Corps of Engineers	Section 404 Nationwide Permit 14	To be obtained prior to construction
Central Valley Flood Protection Board	Encroachment Permit	To be obtained prior to construction.
National Oceanic and Atmospheric Administration	Section 7 Biological Opinion	In progress
U.S. Fish and Wildlife Service	Section 7 Biological Opinion	In progress

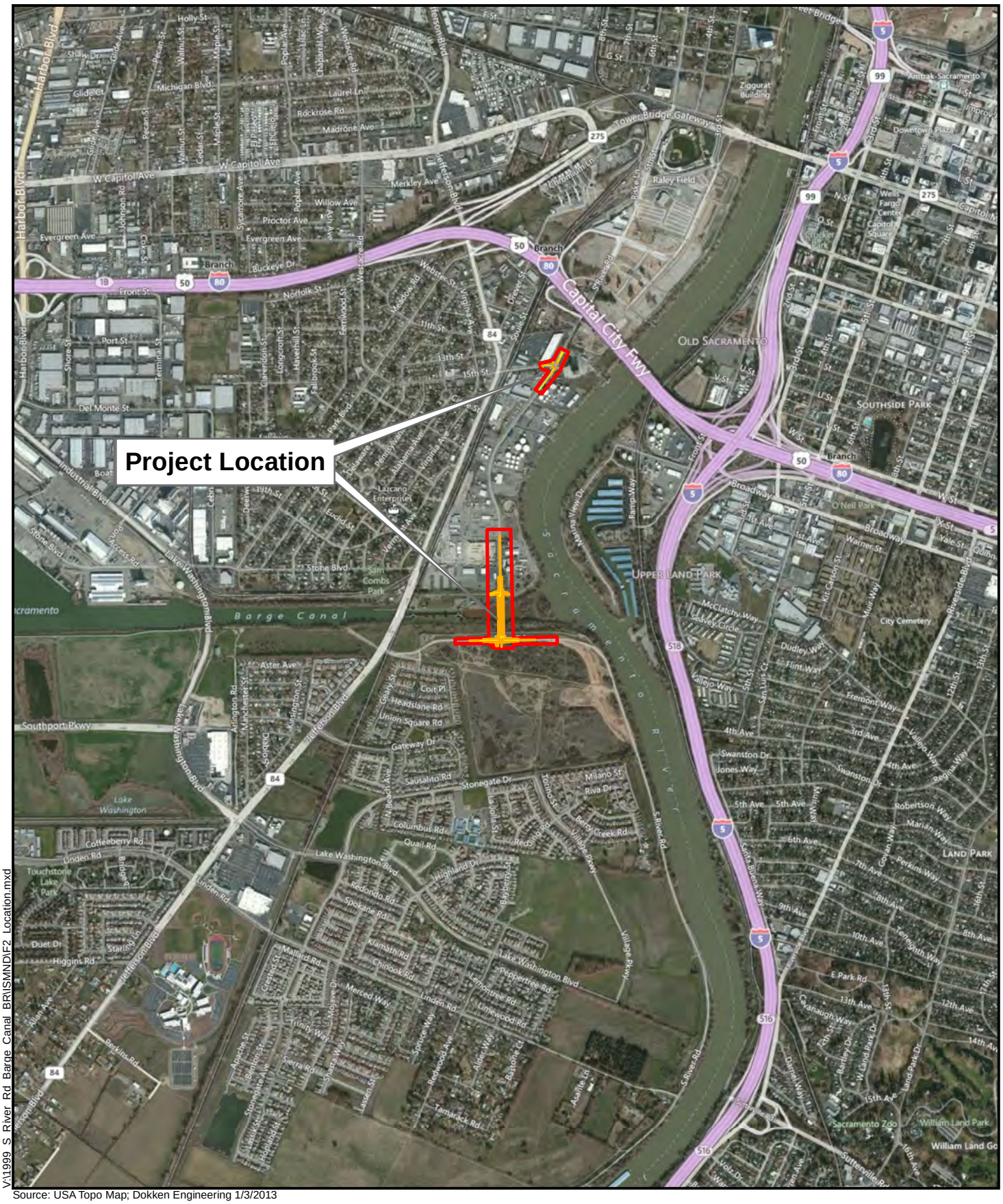


\\kingslgis\1999_S_River_Rd_Barge_Canal_BR\SMND\F1_Vicinity.mxd

Source: ESRI 2008; Dokken Engineering1/2/2013; Created By: zachl

0 10 20 Miles

FIGURE 1
Project Vicinity
Pioneer Bluff Bridge Project
City of West Sacramento, California



V:\1999 S River Rd Barge Canal BRISMNDIF2 Location.mxd

Source: USA Topo Map; Dokken Engineering 1/3/2013

0 0.25 0.5 0.75 1 Miles

FIGURE 2
Project Location
Pioneer Bluff Bridge Project
City of West Sacramento, California

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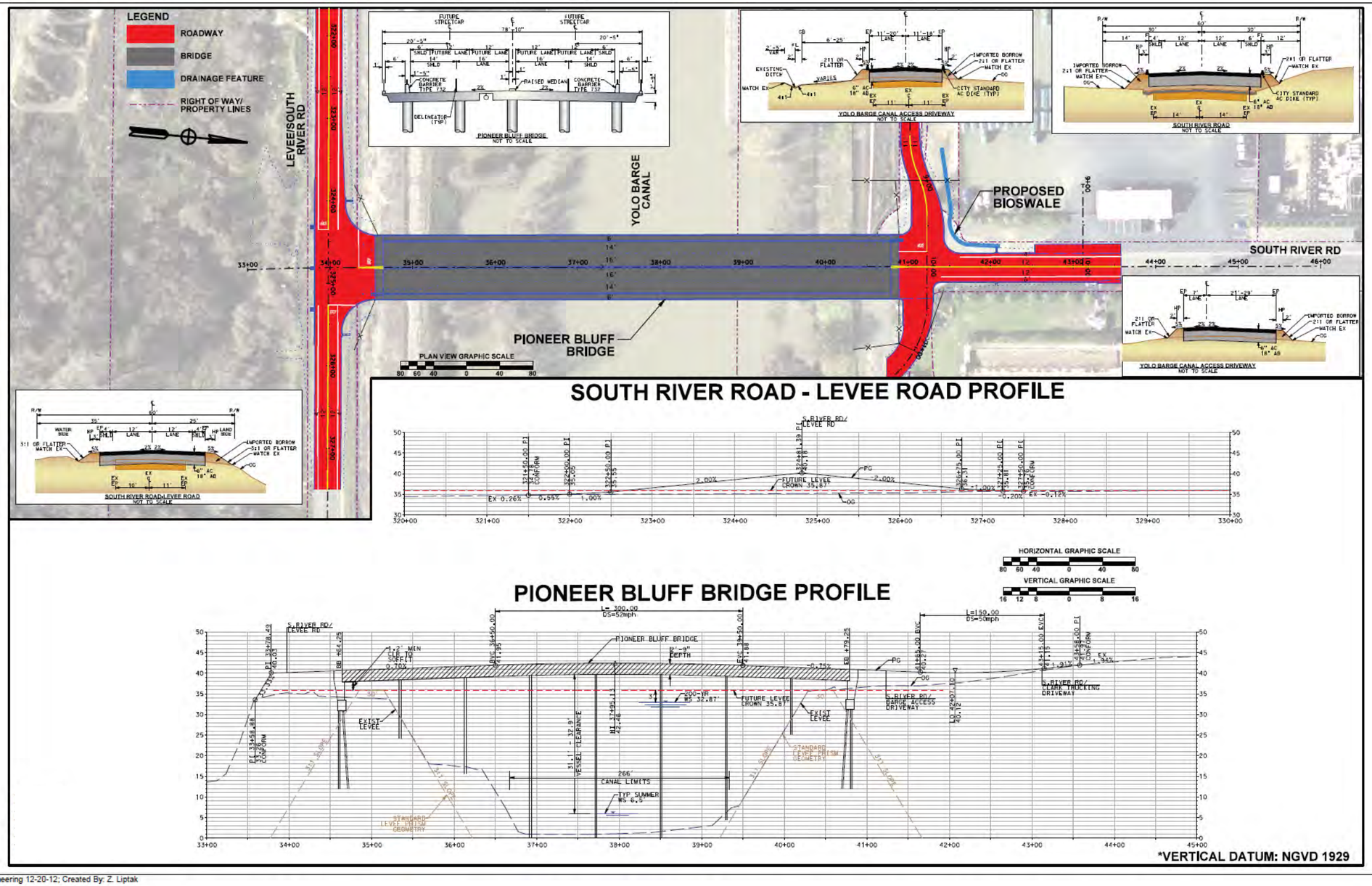

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Source: Dokken Engineering 12-20-12; Created By: Z. Liptak

FIGURE 3a
Project Layout
Pioneer Bluff Bridge Project
City of West Sacramento, California

Figure 3a. Proposed Layout

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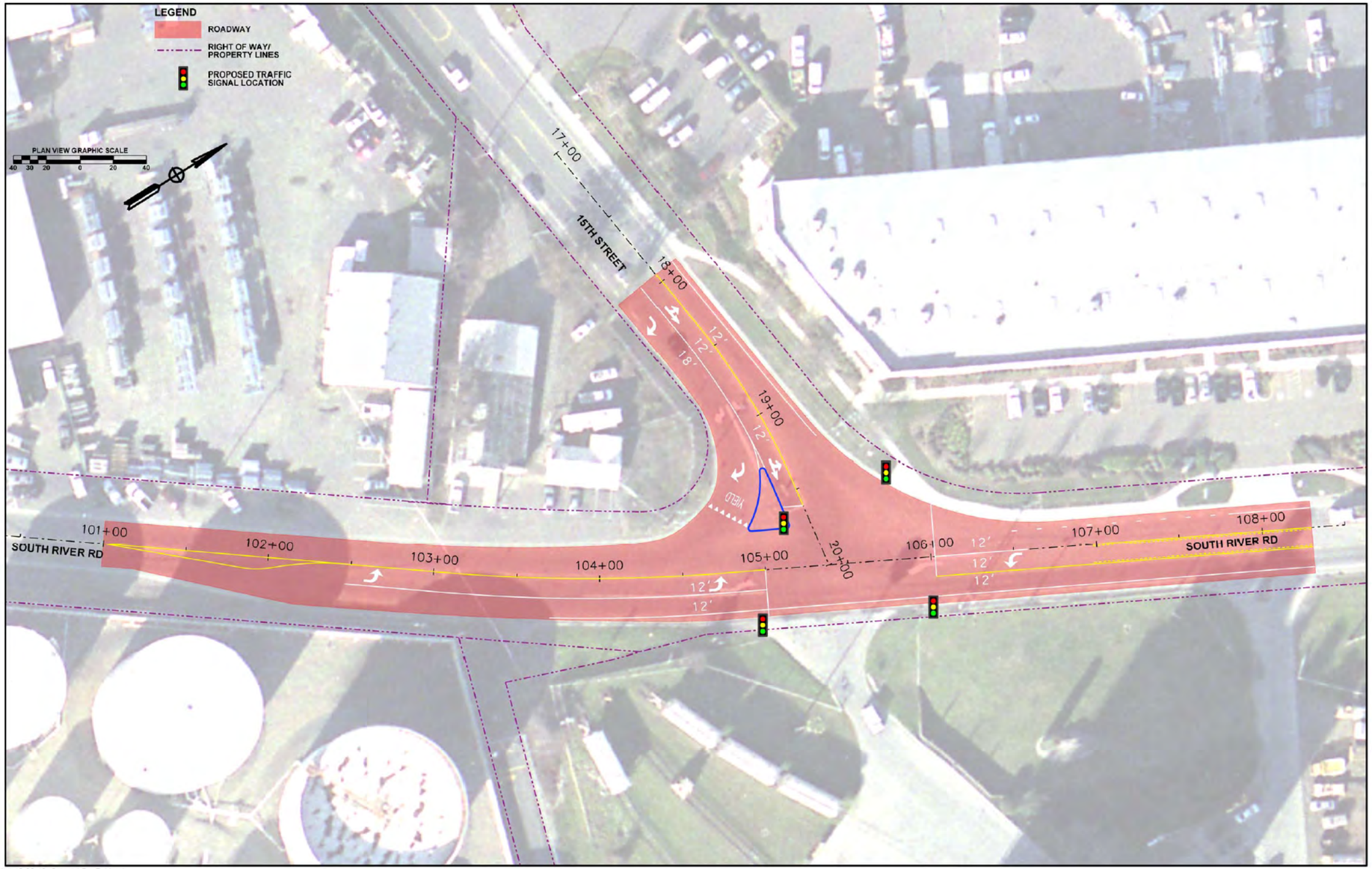

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Source: Dokken Engineering 12-20-12; Created By: Z. Liptak

FIGURE 3b
Project Layout
Pioneer Bluff Bridge Project
City of West Sacramento, California

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Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter explains the impacts that the project would have on the human, physical, and biological environments in the project area. It describes the existing environment that could be affected by the project, potential impacts from the alternatives, and proposed avoidance, minimization, and/or mitigation measures. Any indirect impacts are included in the general impacts analysis and discussions that follow.

As part of the environmental analysis conducted, the following environmental issue (Agriculture and Forest Resources) was considered, but no potential for adverse impacts were identified. Consequently, there is no further discussion regarding this issue in the document:

- Agriculture and Forest Resources—No Important Farmland (which includes Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance) is within or near the proposed project area as shown by the Yolo County Important Farmland Map (2011). The nearest Important Farmland is far, at approximately 1 mile south of the project site. Land within the project study area is zoned Waterfront (WF), Recreations and Parks (RP), and Commercial-Water Related (CW) (see Figure 4). There is no Williamson Act contract land in the project study area. The nearest Williamson Act contract land is approximately 3.5 miles northwest of the project site and outside of West Sacramento (California Department of Conservation, Division of Land Resources Protection 2008).

2.1 AESTHETICS

REGULATORY SETTING

CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of aesthetic, natural, scenic and historic environmental qualities (CA Public Resources Code Section 21001[b])."

AFFECTED ENVIRONMENT

South River Road and nearby roads are not designated Scenic Highways in the National Scenic Byways Program nor are they State Scenic Highways (Caltrans 2007). The project area is also not considered a scenic vista regionally or locally in the City's General Plan.

Industrial uses exist along South River Road north of Barge Canal. The Stone Lock facility property is at the northwest side of the bridge and the out-of-service City of West Sacramento Wastewater Treatment Plant is at the northeast side of the bridge. All parcels located north of Barge Canal are zoned Waterfront.

The land south of the canal currently contains vacant parcels, which are zoned for Waterfront and Recreation and Parks. The Southport Gateway development occurs south

\\kingsgis\1999_S_River_Rd_Barge_Canal_BRI\SMND\F4_Zoning.mxd

Source: Bings Maps Hybrid 2012; Dokken Engineering. Created by Z. Liptak 12/04/12

0 500 1,000 1,500 2,000 Feet

FIGURE 4
Zoning Map
Pioneer Bluff Bridge Project
City of West Sacramento, California

of these vacant parcels. These residences are bound by berms along the edges of the developments.

The Barge Canal waterway east of Jefferson Boulevard is currently not used for recreational purposes and it is not a designated scenic area. Views of the waterway are currently restricted, as both the north south banks of the project are fenced and gated from the public. The visual character or quality of the site would encounter less than significant impact.

The proposed project falls within the jurisdiction of the City of West Sacramento. Land use changes and development in West Sacramento are subject to policies of the City West Sacramento General Plan including visual resource and aesthetic policies, design guidelines, and ordinances such as tree preservation and removal ordinances (City of West Sacramento 2009).

ENVIRONMENTAL CONSEQUENCES

The Pioneer Bluff Bridge would introduce a new vertical element into the viewshed. The bridge would be seen by travelers on South River Road, north and south of the bridge and by workers in the adjacent industrial land uses (see Figure 5 for existing view). The bridge would remove some natural vegetation along Barge Canal and would increase the amount of impervious surfaces in the viewshed. While the bridge would be a new man-made element, the project vicinity currently has other man-made elements such as the Stone Lock facilities and the out-of-service West Sacramento Wastewater Treatment Plant. Due to the lack of designated or recognized visual scenic resources and the existence of industrial land use currently along Barge Canal, aesthetic impacts would be less than significant. Further, views from the nearest residential areas would not be affected (see Figures 6). Minimization measure AES-1 will ensure aesthetic treatments are considered during final design of the bridge, to meet the City's goals.

Figure 5. Existing view along South River Road, facing south towards the bridge location

Figure 6. Typical View from Southport Gateway

Lights would be located on the new bridge. These added light sources are not anticipated to result in substantial light and glare impacts because this would minimally increase the amount of ambient light existing viewer groups already experience. Minimization of glare would be taken into account through implementation of AES-2.

Construction of the proposed project would temporarily change views experienced by drivers, pedestrians, and other people in the project area since construction equipment would be visible from neighboring areas. Additionally, grading activities may expose soils. These impacts are temporary, and therefore, not considered substantial.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No mitigation is required; however, the following avoidance and/or minimization measures will be implemented to minimize potential impacts:

AES-1: During final design, aesthetics will be considered by the City for consistency with local goals and standards.

AES-2: Selection of lighting fixtures will take into account minimizing glare, while taking into account safety needs.

2.2 AIR QUALITY

REGULATORY SETTING

The Clean Air Act (CAA) as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), lead (Pb), and sulfur dioxide (SO_2).

Regional level conformity in California is concerned with how well the region is meeting the standards set for CO, NO_2, O_3, and PM. California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTP[s]) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as the Sacramento Area Council of Governments (SACOG) for Yolo County and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Federal and State Ambient Air Quality Standards

California and the federal government have established standards for several different pollutants. For some pollutants, separate standards have been set for different measurement periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). The pollutants of greatest concern in the project area are ozone, particulate matter-2.5 microns ($PM_{2.5}$) and particulate matter-10 microns (PM_{10}). Table 1 shows the state and federal standards for a variety of pollutants.

State Regulations

Responsibility for achieving California's air quality standards, which are more stringent than federal standards, is placed on the California Air Resources Board (CARB) and local air districts, and is to be achieved through district-level air quality management plans that will be incorporated into the SIP. In California, the EPA has delegated authority to prepare SIPs to the CARB, which, in turn, has delegated that authority to individual air districts.

The CARB has traditionally established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological

data, and approving state implementation plans.

Responsibilities of air districts include overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality–related sections of environmental documents required by CEQA.

The California CAA of 1988 substantially added to the authority and responsibilities of air districts. The California CAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The California CAA focuses on attainment of the state ambient air quality standards, which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards.

The California CAA requires designation of attainment and nonattainment areas with respect to state ambient air quality standards. The California CAA also requires that local and regional air districts expeditiously adopt and prepare an air quality attainment plan if the district violates state air quality standards for CO, SO_2, NO_2, or ozone. These Clean Air Plans are specifically designed to attain these standards and must be designed to achieve an annual 5% reduction in district-wide emissions of each nonattainment pollutant or its precursors. Where an air district is unable to achieve a 5% annual reduction, the adoption of "all feasible measures" on an expeditious schedule is acceptable as an alternative strategy (Health and Safety Code Section 40914(b)(2)). No locally prepared attainment plans are required for areas that violate the state PM_{10} standards.

The California CAA requires that the state air quality standards be met as expeditiously as practicable but, unlike the federal CAA, does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards.

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) provides ARB recommendations for the siting of new sensitive land uses (including residences) near freeways, distribution centers, ports, refineries, chrome plating facilities, dry cleaners, and gasoline stations. The handbook recommends that new development be placed at distances from such facilities.

Local Regulations

The air quality management agencies of direct importance in Yolo County include the EPA, CARB, and Yolo-Solano Air Quality Management District (YSAQMD). The EPA has established federal standards for which the CARB and YSAQMD have primary implementation responsibility. The CARB and YSAQMD are responsible for ensuring that state standards are met. The YSAQMD is responsible for implementing strategies for air quality improvement and recommending mitigation measures for new growth and development. At the local level, air quality is managed through land use and development planning practices, and is implemented in the County through the general planning process. The YSAQMD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws.

AFFECTED ENVIRONMENT

The project is included in the Sacramento Area Council of Governments' (SACOG) Final 2013-16 Metropolitan Transportation Improvement Program (MTIP) which was found to be conforming by the Federal Highway Administration (FHWA) and Federal Transportation Administration (FTA) on December 14, 2012. The 2013/16 MTIP is the current programming document. The project is under SACOG ID YOL15180, which has the following project description: "Reconstruct and widen South River Road to 4 lanes from US50 on-ramp to Stonegate Boulevard, including a new 4-lane bridge over barge canal." Please see Appendix F of this Initial Study for the project listing.

The project is also in the Final Metropolitan Transportation Plan (MTP)/Sustainable Communities Strategy (SCS) 2035, adopted by SACOG in April 19, 2012. The project is listed in page 98 of the MTP/SCS 2035 Appendix A, under the following project description: "Reconstruct and widen South River Road to 4 lanes from US 50 on-ramp to Stonegate Boulevard, including a new 4-lane bridge over barge canal." Please see Appendix F of this Initial Study for the project listing.

The project site is located within Yolo County, which is located in the Sacramento Valley Air Basin (SVAB). The SVAB is bound on the west by the Coast Ranges, on the north and east by the Cascade Range and Sierra Nevada, and includes Sacramento, Shasta, Tehama, Butte, Glenn, Colusa, Sutter, Yuba, Yolo, and parts of Solano and Placer Counties. The YSAQMD has jurisdiction over air quality issues within the Solano County portion of the SVAB. The federal and state governments have established ambient air quality standards for six criteria pollutants: ozone, CO, NO_2, SO_2, particulate matter ($PM_{2.5}$ and PM_{10}), and lead. Within the YSAQMD, ozone and $PM_{2.5}$ and PM_{10} are considered pollutants of concern.

The area's climate is Mediterranean and characterized by hot, dry summers and cool, rainy winters. During winter, the North Pacific storm track intermittently dominates Sacramento Valley weather, and fair weather alternates with periods of extensive clouds and precipitation. Periods of dense and persistent low-level fog, which is most prevalent between storms, are also characteristic of winter weather in the valley. The frequency and persistence of heavy fog in the valley diminishes with the approach of spring. The average yearly temperature range for the Sacramento Valley is 20 to 115°F, with summer high temperatures often exceeding 90°F and winter low temperatures occasionally dropping below freezing.

In general, the prevailing wind in the Sacramento Valley is from the southwest, from marine breezes flowing through the Carquinez Strait. The Carquinez Strait is the major corridor for air moving into the Sacramento Valley from the west. Incoming airflow strength varies daily with a pronounced diurnal cycle. Influx strength is weakest in the morning and increases in the evening hours. Associated with the influx of air through the Carquinez Strait is the Schultz Eddy, which is formed when mountains on the valley's western side divert incoming marine air. The eddy contributes to the formation of a low-level southerly jet 500 to 1,000 feet above the surface that is capable of speeds in excess of 35 miles per hour (mph). This jet is important for air quality in the Sacramento Valley because of its ability to transport air pollutants over large distances.

The SVAB's climate and topography contribute to the formation and transport of photochemical pollutants throughout the region. The region experiences temperature

inversions that limit atmospheric mixing and trap pollutants, resulting in high pollutant concentrations near the ground surface. Generally, the lower the inversion base height from the ground and the greater the temperature increase from base to top, the more pronounced the inhibiting effect of the inversion will be on pollutant dispersion. Consequently, the highest concentrations of photochemical pollutants occur from late spring to early fall when photochemical reactions are greatest because of more intense sunlight and the lower altitude of daytime inversion layers. Surface inversions (those at altitudes of 0–500 feet [ft] above sea level) are most frequent during winter, and subsidence inversions (those at 1,000–2,000 ft above sea level) are most common in summer.

Existing air quality conditions in the project area can be characterized in terms of the ambient air quality standards that the state of California (California Ambient Air Quality Standards [CAAQS]) and the federal government NAAQS have established for several different pollutants. For some pollutants, separate standards have been set for different measurement periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). Table 1 shows the state and federal standards for a variety of pollutants.

Exposure and disturbance of rock and soil that contains asbestos can result in the release of fibers to the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (proper rock name serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include: unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present. Based on the map of naturally-occurring asbestos locations contained in *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos* (California Department of Conservation, Division of Mines and Geology 2000), major ultramafic rock formations are not found in Yolo County.

Table 1. Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Averaging Time**	**California Standards [1]**		**National Standards [2]**		
		Concentration [3]	**Method [4]**	**Primary [3,5]**	**Secondary [3,6]**	**Method [7]**
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	15 µg/m^3		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[8]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[9]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[9]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[9]	—	
Lead[10,11]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[11]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[12]	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			
See footnotes on next page ...						
For more information please call ARB-PIO at (916) 322-2990				**California Air Resources Board (6/7/12)**		

Source: CARB 2012a

(Table 1, continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

9. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

   Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

10. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

11. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (6/7/12)**

The nearest air quality monitoring stations in the vicinity of the proposed project area are the West Sacramento 15th Street station, UC Davis-Campus, Campbell Road West of Highway 113 & South of Hutchison Drive, and 41929 E. Gibson Road in Woodland, California. Air quality monitoring data from these monitoring stations is summarized in Table 2. This data represents air quality monitoring data of O_3, NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$ measured for the last three years (2009–2011) in which complete data is available.

Table 2. Air Quality Monitoring Data

Pollutant	Time Averaging	2009	2010	2011	Standards	
		Max	Max	Max	National	State
Carbon Monoxide	8 hour	N/A	N/A	N/A	9 ppm	9 ppm
	1 hour	N/A	N/A	N/A	35 ppm	20 ppm
Nitrogen dioxide (NO_2)	Annual Arithmetic Mean	N/A	N/A	N/A	53 ppb	0.030 ppm (30 ppb)
	1 hour	43 ppb	37 ppb	40 ppb	100 ppb	0.18 ppm (180 ppb)
Ozone	1 hour	0.092 ppm	0.094 ppm	0.087 ppm	N/A	0.09 ppm
	Number of days exceeded	0 days	0 days	0 days		
	8 hour	0.082 ppm	0.073 ppm	0.082 ppm	0.075 ppm	0.07 ppm
	Number of days exceeded	7 days	3 day	2 days		
Particulate Matter 10 micrometer diameter (PM_{10})	24 Hour	67 mg/m^3	58 mg/m^3	56 mg/m^3	150 mg/m^3	50 mg/m^3
	Annual Arithmetic Mean	N/A	N/A	N/A	N/A	20 mg/m^3
Particulate Matter (2.5 micrometer diameter) ($PM_{2.5}$)	24 Hour	27.6 mg/m^3	26.7 mg/m^3	39.4 mg/m^3	35 mg/m^3	N/A
	Annual Arithmetic Mean	7.5 mg/m^3	5.7 mg/m^3	7.6 mg/m^3	15 mg/m^3	12 mg/m^3

Source:
US Environmental Protection Agency. Accessed November 30, 2012. AirData [internet database] available at http://www.epa.gov/airdata/ad_rep_mon.html.
California Environmental Protection Agency. Accessed November 30, 2012. Air Quality Data Query Tool [internet database] available at http://www.arb.ca.gov/aqmis2/aqdselect.php.

The 8-hour NAAQS for ozone was exceeded 1 times in 2009; 0 times in 2010; and 1 times in 2011 at the UC Davis Campus monitoring station. The 8-hour CAAQS for ozone was

exceeded 7 times in 2009; 3 times in 2010; and 2 times in 2011 at the UC Davis Campus monitoring station. As shown in Table 3, the Sacramento Valley Air Basin is currently classified as a nonattainment area under the CAAQS for 1-hour O_3, 8-hour O_3, and PM_{10}. The project area is currently classified as a nonattainment area under the NAAQS for 8-hour O_3 and $PM_{2.5}$. The Sacramento Valley Air Basin is in attainment or unclassified for all other standards.

Table 3. Attainment for Sacramento Valley Air Basin

Pollutant	Attainment Status	
	Federal	State
O_3 – 1-hour	No Federal Standard	Nonattainment -Serious
O_3 – 8-hour	Nonattainment	Nonattainment
PM_{10}	Unclassified	Nonattainment
$PM_{2.5}$	Nonattainment	Unclassified
CO	Unclassifiable/Attainment	Attainment
NO_2	Unclassified/Attainment	Attainment
SO_2	Unclassified	Attainment
Sulfates	No Federal Standard	Attainment
Lead	Unclassifiable/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility Reducing Particles	No Federal Standard	Unclassified
Source: California Air Resources Board, 2012b		

The State CEQA Guidelines further state that the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the determinations above. The YSAQMD has specified significance thresholds within its *Handbook for Assessing and Mitigating Air Quality Impacts* (YSAQMD 2007) to determine whether mitigation is needed for project-related air quality impacts. The YSAQMD's thresholds of significance for construction- and operation-related emissions are presented in Table 4.

Table 4. Yolo Solano Air Quality Management District Construction Thresholds of Significance

Thresholds of Significance	
Pollutant	**Construction (pounds per day)**
Reactive Organic Gases (ROG)	54.8 lbs/day (10 tons/year)
NO_x	54.8 lbs/day (10 tons/year)
PM_{10}	80 lbs/day
CO	NA
ROG: reactive organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; PM_{10}: particulate matter 10 microns or less in aerodynamic diameter; Emissions of CO from construction activities are not considered to be an issue of concern because the AQMD do not consider construction activities to be a major source of CO. In addition, the AQMD is in attainment status for CO. Source: Yolo Solano Air Quality Management District 2007	

ENVIRONMENTAL CONSEQUENCES

Construction and grading would not occur in an area with ultramafic rock that could be a source of emissions of naturally-occurring asbestos. Major ultramafic rock formations are not found in Yolo County (California Department of Conservation, Division of Mines and Geology 2000).

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and various other activities. Emissions from construction equipment also are anticipated and would include CO, NOx, volatile organic compounds (VOCs), directly-emitted particulate matter (PM_{10} and $PM_{2.5}$), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NOx and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction would involve clearing, cut-and-fill activities, grading, removing or improving existing roadways, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. If not properly controlled, these activities would temporarily generate PM_{10} and $PM_{2.5}$, and small amounts of CO, SO_2, NOx, and VOCs. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by EPA to add 1.09 tonne (1.2 tons) of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. Fugitive dust would be controlled during construction per measure AQ-1 and AQ-2.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NOx, VOCs and some soot particulate (PM_{10} and $PM_{2.5}$) in exhaust emissions. Construction activities will not increase traffic congestion in the area, so CO and other emissions from traffic would not temporary increase slightly in the immediate area surrounding the construction site.

SO_2 is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Off-road diesel fuel meeting Federal Standards can contain up to 5,000 parts per million (ppm) of sulfur, whereas on-road diesel is restricted to less than 15 ppm of sulfur. However, under California law and CARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel, so SO_2-related issues due to diesel exhaust will be minimal. Some phases of construction, particularly asphalt paving, would result in short-term odors in the immediate area of each paving site(s). Such odors would be quickly dispersed below detectable thresholds as

distance from the site(s) increases.

Construction emissions of ROG, NOx, CO, and PM_{10} were estimated using the *Road Construction Emissions Model* (Version 7.1.2) and presented in Table 5, which are compared to emission thresholds set by the YSAQMD. The road construction model is a public-domain spreadsheet model formatted as a series of individual worksheets. The model enables users to estimate emissions using a minimum amount of project-specific information. The model estimates emissions for load hauling (on-road heavy-duty vehicle trips), worker commute trips, construction site fugitive PM_{10} dust, and off-road construction vehicles. Although exhaust emissions are estimated for each activity, fugitive dust estimates are currently limited to the major dust-generating activities, which include grubbing/land clearing and grading/excavation. In addition, dust estimates do not account for any control measures required by the YSAQMD.

Table 5. Road Construction Emissions Model Compared to Thresholds of Significance

Thresholds of Significance		
Pollutant	**Road Construction Emissions Model Estimates**	**YSAQMD Threshold (pounds per day)**
ROG	4.9 lbs/day	54.8 lbs/day (10 tons/year)
NOx	54.6 lbs/day	54.8 lbs/day (10 tons/year)
PM_{10}	12.5 lbs/day	80 lbs/day
CO	4,673.0 lbs/day	NA

ROG: reactive organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; PM_{10}: particulate matter 10 microns or less in aerodynamic diameter; Emissions of CO from construction activities are not considered to be an issue of concern because the AQMD do not consider construction activities to be a major source of CO. In addition, the AQMD is in attainment status for CO.

Source: Modeling using the *Roadway Construction Emissions Model* 7.1.2 (Sacramento Metropolitan Air Quality Management District 2012).

For both the build and no-build alternatives, the amount of air quality pollutants emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT will be nearly equivalent for the build alternative when compared to the no build alternative, as the new bridge will attract rerouted trips from elsewhere in the transportation network, as well as improve efficiency on nearby roadways. These rerouted trips from elsewhere in the transportation network would lead to similar volume of emissions, just in a new, previously inaccessible, area. The change in location of these emissions will be slightly offset by lower overall emission rates due to increased speeds; according to EPA's MOBILE6 emissions model, emissions, except for diesel particulate, matter decreases as speed increases. The extent to which these speed-related emissions decreases will offset overall emissions cannot be reliably projected due to the inherent deficiencies of technical models.

While the new bridge is anticipated to bring traffic from Jefferson Boulevard onto South River Road north and south of Barge Canal, air emissions would be improved by providing vehicles an alternative to idling while waiting at the train crossing on Jefferson Boulevard. Overall ambient emissions are not anticipated to be higher with the proposed project.

In summary, emissions along South River Road would be offset by lower emissions along Jefferson Boulevard, where speeds would increase and congestion would be reduced. Also, emissions will be lower in other locations when traffic shifts away. Further, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide emission levels to be significantly lower than today. Operational air quality impacts would not be substantial. The proposed project would not conflict with or obstruct implementation of the applicable air quality plan. Emissions from construction would have a less than significant impact and would not violate any air quality standard or contribute substantially to an existing or projected air quality violation, nor would it result in a cumulatively considerable net increase of any criteria pollutant. Further, the project would have a less than significant impact regarding exposing sensitive receptors to pollutant concentrations or objectionable odors.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

All of the construction impacts to air quality are short-term in duration and, therefore, will not result in adverse or long-term impacts. Implementation of the following measures will reduce any air quality impacts resulting from construction activities:

AQ-1: The contractor shall comply with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

AQ-2: The contractor shall control dust by applying either water or dust palliative, or both.

AQ-3: The construction contractor shall implement control measures to reduce emissions of NOX, ROG, and PM_{10}. The contractor shall:

- Minimize idling time to 5 minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required.
- To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintaining heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions.
- Use electric equipment when feasible.
- Properly maintain equipment according to manufacturers' specifications.

2.3 BIOLOGICAL RESOURCES

2.3.1 Natural Communities

REGULATORY SETTING

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors

are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as Critical Habitat under the Federal Endangered Species Act are discussed in Section 2.3.4 of this document. Wetlands and other waters are also discussed in the following section, Section 2.3.2.

AFFECTED ENVIRONMENT

A Biological Study Area (BSA) is shown in Figure 7a and 7b. The only natural community within the project's BSA is Valley Foothill Riparian. This community is dominated by valley oak, sandbar willow, and black willow, with herbaceous understory consisting of annual grass species such as wild oat and reed canary grass.

ENVIRONMENTAL CONSEQUENCES

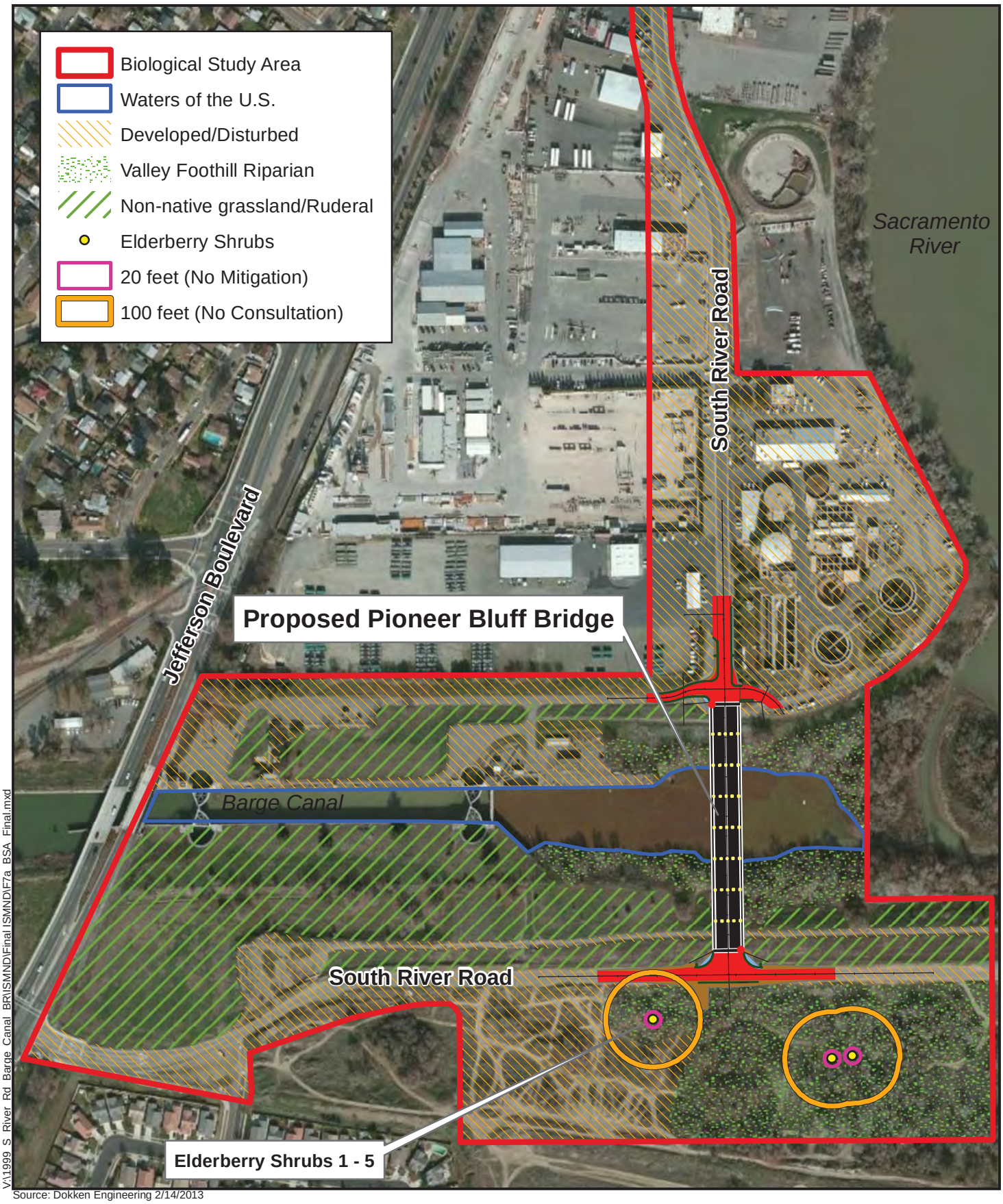
The proposed project will result in direct impacts to Valley Foothill Riparian vegetation. The impacts will include permanent removal of approximately 0.01 acre of riparian vegetation for construction of the bridge.

Construction will require temporary removal of approximately 1.16 acres of natural riparian vegetation for grading and general construction access. BIO-1 will limit the footprint as feasible. Impacts to natural riparian vegetation are considered temporary because the areas can be restored by implementing measure BIO-2. Impacts to natural communities are less than significant.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

BIO-1: Temporary construction staging areas and access roads shall be strategically placed to avoid and/or minimize impacts, when possible. ESA fencing shall be installed in coordination with a biologist in order to minimize the construction footprint to avoid and/or minimize impacts to sensitive habitat areas.

BIO-2 The project will create a re-vegetation/tree-replacement plan to compensate for loss of riparian vegetation. The re-vegetation plan will include replacement ratios and submission to CDFW for review and approval prior to any ground disturbing activities associated with the proposed project.



V:\1999 S. River Rd Barge Canal BR\SMND\Final ISMND\F7a BSA Final.mxd

Source: Dokken Engineering 2/14/2013

0 250 500 750 1,000 Feet

FIGURE 7a
Biological Study Area and Vegetation Types
Pioneer Bluff Bridge Project
City of West Sacramento, California

V:\1999 S. River Rd Barge Canal BRI\SMND\Final ISMND\F7b BSA Final.mxd

Source: Dokken Engineering 2/14/2013

0 250 500 750 1,000 Feet

FIGURE 7b
Biological Study Area and Vegetation Types
Pioneer Bluff Bridge Project
City of West Sacramento, California

2.3.2 WETLANDS AND OTHER WATERS

REGULATORY SETTING

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S. Code [USC] 1344) is the primary law regulating wetlands and surface waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that states that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the EPA.

The Executive Order for the Protection of Wetlands (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Wildlife (CDFW), the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Wildlife Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCBs also issue water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

AFFECTED ENVIRONMENT

The Barge Canal is a jurisdictional water feature and is mapped in the National Wetlands Inventory Map as riverine, tidal, unconsolidated bottom, permanent-tidal (R1UBV) (USFWS 2012; see map in Appendix E). No other wetlands or waters are in the BSA.

ENVIRONMENTAL CONSEQUENCES

The proposed project would result in permanent fill to the jurisdictional Barge Canal. Bridge footings will result in approximately 195 square feet (less than 0.01 acre) of permanent impact and approximately 51,000 square feet (1.16 acres) of temporary impact. As a result, Clean Water Act Section 401 or 404 permits would be necessary. The City will coordinate with the U.S. Army Corps of Engineers for the Section 404 Nationwide Permit 14 and the RWQCB for the Section 401 Water Quality Certification. A Fish and Wildlife Code Section 1602 Streambed Alteration Agreement would also be coordinated with through CDFW. These approvals would be coordinated during the permitting phase of the project.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

BIO-3: Clean Water Act Section 401 and 404 permits and a Fish and Wildlife Code Section 1602 Streambed Alteration Agreement shall be obtained prior to construction.

2.3.3 PLANT SPECIES

REGULATORY SETTING

The U.S. Fish and Wildlife Service (USFWS) and CDFW share regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see Section 2.3.5 on threatened and endangered species in this document for detailed information.

This section of the document discusses all the other special-status plant species, including CDFW fully protected species and species of special concern, USFWS candidate species, and non-listed California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 USC, Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Wildlife Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at Fish and Wildlife Code, Section 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100-21177.

AFFECTED ENVIRONMENT

A biological survey was conducted on November 16, 2012 to identify plant species in the BSA compared with findings from previous surveys. Background research using USFWS and CNDDB databases had indicated that there were five special-status plant species with potential to occur on the project site. Of the five, the survey identified only one special-status plant species, Northern California black walnut (*Juglans hindsii*), which is, CNPS 1B.1 listed within the BSA. The complete list of potential sensitive plants species on site and their likelihood to occur are included in Appendix B of this document. Except for the Northern California black walnut, all other special-status plant species were presumed absent due to unsuitable habitat for their requirements.

The City of West Sacramento has Ordinance 89-4 addressing tree preservation. In the ordinance, the City provides the following definitions for heritage and native oak trees:

- A heritage tree means any living tree with a trunk circumference of 75 inches [diameter of 24 inches] or more, or any living native oak (any species of the genus *Quercus*) with a trunk circumference of 50 inches [diameter of 16 inches] or more, both measured 4 feet 6 inches above ground level. The circumference of multi-trunk trees shall be based on the sum of the circumference of each trunk.

- "Native Oak Tree" means a living tree of any species of the *Quercus* Genus (all oaks, including the nine native California oaks); for example, the Interior Live Oak (*Quercus wislizenii*), Valley Oak, California White Oak (*Quercus lobata*), or Blue Oak (*Quercus douglasii*).

The project is anticipated to remove 21 trees protected by the City as heritage trees. The project is anticipated to remove approximately 117 riparian trees within CDFW jurisdiction. The project will save as many riparian and heritage trees as possible.

ENVIRONMENTAL CONSEQUENCES

Direct impact to 21 heritage trees and/or native oak trees would take place with the construction of the project. This impact is considered less than significant due to the number of these species in the general vicinity. This direct impact would be minimized by avoiding as many trees as possible and would be mitigated by obtaining a tree permit and subsequently completing tree replacement, as included in measures BIO-4 and BIO-5.

While several Northern California black walnut trees are in the vicinity of the proposed bridge, the project would not require their removal. No direct impacts on Northern California black walnut trees would result from the project; per measure BIO-5, Environmentally Sensitive Area (ESA) fencing shall be placed to minimize removal.

The project will require removal of Native Oak Trees: Black oak (*Quercus kelloggii*), and Valley oak (*Quercus lobata*) within the construction area. Pre-construction survey will be conducted before removal. By following the City of West Sacramento's tree ordinance, impacts will be mitigated.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

BIO-4: A tree permit will be obtained from the City of West Sacramento's Tree Administrator to remove Heritage or Landmark trees. Replacement trees will be planted in accordance with conditions of the tree permit.

A revegetation plan/tree replacement plan will include replacement ratios and will be submitted to CDFW for review and approval prior to any ground disturbing activities associated with the project.

BIO-5: Should pre-construction surveys or work associated with construction discover the presence of any sensitive species, habitats would be avoided, as feasible, using Environmentally Sensitive Area (ESA) fencing to clearly define the limits of disturbance. ESA fence shall be installed along the construction limits to prevent unnecessary encroachment into the riparian areas adjacent to the construction site. ESA fencing shall also be placed to avoid removal of Northern California black walnut trees.

2.3.4 Animal Species

REGULATORY SETTING

Many state and federal laws regulate impacts to sensitive wildlife. The USFWS, the National Oceanic and Atmospheric Administration (NOAA) Fisheries and the CDFW are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.5 in this document. All other special-status animal species are discussed here, including CDFW species of special concern and migratory birds.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the Fish and Wildlife Code
- Section 4150 and 4152 of the Fish and Wildlife Code

AFFECTED ENVIRONMENT

The Natural Environmental Study (NES) 2013, Biological Assessment for Central Valley

Steelhead (Oncorhynchus mykiss), Central Valley Spring-run and Sacramento River Winter-run Chinook Salmon (Oncorhynchus tshawytscha) and North American Green Sturgeon (Acipenser medirostris) (2012), William G. Stone Navigational Lock Property Transfer (2005), and the Biological Assessment for Delta Smelt (Hypomesus transpacificus), Delta Smelt Critical Habitat, and Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus) (2013) serve the basis for much of this section. A search of USFWS, and CDFW databases indicted 21 special-status animal species with potential to occur within or near the BSA. Based on biological surveys and conditions of the project site, the following was found:

ENVIRONMENTAL CONSEQUENCES

The project would have a permanent, direct impact on less than 0.01 acre of riparian habitat; and a temporary, direct impact on 1.16 acres of suitable riparian habitat.

Purple Martin

The purple martin (*Prongne subis*) is not a State or Federally listed species, but is a CDFW Special Species of Concern. The species is a summer migrant, arriving in March and departing late September. It inhabits riparian habitats with tall, old, isolated trees for nesting, in proximity to a body of water (Zeiner 1988). During the November 16, 2012 field survey, no purple martins were identified and it was determined that the project site contains habitat suitable for nesting.

Impacts to purple martin would be less than significant with mitigation incorporated. Measures followed are BIO-5 to BIO-6, and BIO-8 to BIO-12.

AVOIDANCE, MINIMIZATION, AND/OR ABATEMENT MEASURES

BIO-6: To ensure compliance with MBTA and CDFW code, vegetation removal and work should be avoided outside the nesting season (defined as Feb 15 – August 15). If this is not possible and vegetation removal or work that could disturb nesting is to occur during the nesting season, a pre-construction survey shall be conducted at least 5 days prior to project activities. The pre-construction survey shall be performed by a qualified biologist, to determine the presence of nesting birds and ensure active nests are not directly or indirectly impacted during construction. The pre-construction survey area will include the limits of the project impact area plus a 300-ft buffer. If disrupting work is planned to begin in an area during the nesting season (February 15 – August 15), all vegetation removal shall be completed within one week of the nesting survey if the survey determines no active nests are present.

BIO-7: For Swainson's Hawk, if vegetation removal or work is to occur during the Swainson's Hawk nesting season (February 15 – July 31), a preconstruction survey shall be performed by the project biologist, in coordination with the CDFW, to determine if Swainson's hawk nests occur on the project site or within ¼ mile of the project site. At the discretion of CDFW, trees may be removed between February 15 and July 31 provided a biologist survey the proposed trees designated to be removed to verify the absence of an active nest. Preconstruction surveys shall be conducted during the nesting season at least 5 days prior to project activities and again 72 hours prior to project activities to

determine if there are any Swainson's hawk nests on the project site and within ¼ mile of the project site. Surveys shall be completed using the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Tech. Advis. Comm., 5/2000). Survey results shall be submitted to CDFW prior to commencement of work. No trees shall be disturbed that contain active bird nests until all eggs have hatched and young birds have fledged.

If active Swainson's hawks nest(s) are present, a biological monitor would be needed to ensure that the project activities are not disturbing nesting Swainson's hawks. If project activities are disturbing a nesting hawk (at any point before fledging of young), it's likely that the project activities would have to stop until the young have fledged. CDFW may require the project to provide $10,000 per construction year to the Swainson's Hawk Technical Advisory Committee (TAC) in each year that an active Swainson's hawk nest is closer than ¼-mile to the active construction site. If a nest is abandoned and nestlings are still alive, the project shall fund the recovery and hacking (controlled release) of the nestlings. If a nest is abandoned and the nestlings do not survive, the project shall develop ¼ acre of riparian forest and grant permanent conservation easements over that riparian forest in a location and in a form acceptable to CDFW. The easements shall be provided no later than 12 months after nest abandonment.

BIO-8: If the nest of a protected bird is found, the perimeter shall be flagged and a qualified biologist will coordinate with USFWS and CDFW to determine an appropriate buffer distance for protection of the nest. The contractor shall stop work in the nesting area until the buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the project biologist and in coordination with wildlife agencies) in the protected area until the biologist has determined that nesting activities are complete.

BIO-9: Temporary staging areas, storage areas, and access roads involved with this Project will take place, to the extent feasible, in the area of direct impact.

BIO-10: Construction activities shall be limited to daylight hours when possible. Night work will only be considered when required to meet schedule or to avoid high water events.

BIO-11: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel. The project biologist shall conduct a pre-construction meeting to ensure that construction crews are informed of the approved limits of disturbance and of the sensitive animals and habitats in the vicinity. The awareness training will be provided to all construction personnel to brief them on the need to avoid effects to biological resources, particularly riparian habitat and special-status wildlife habitat (i.e., elderberry shrubs), and the penalties for not complying with the biological opinion and other regulatory permits. If new construction personnel are added to the project, the contractor will ensure that the new personnel receive the mandatory training before starting work. At a minimum, the training shall include 1) the purpose for resource protection; 2) a description of sensitive species and their habitats; 3) environmentally responsible construction practices; 4) the protocol to resolve conflicts that may arise at any time during the

construction process; and 5) the general provisions of FESA and CESA, the need to adhere to the provisions of FESA and CESA, and the penalties associated with violation of FESA and CESA.

BIO-12: Prior to clearing/grubbing, grading, and/or construction activities within or adjacent to native habitats on the Project site, a qualified biologist shall supervise the installation of temporary construction fencing along the approved limits of disturbance, including construction staging areas and access routes, to prevent additional habitat impacts into adjacent habitats to be avoided. Fencing shall be installed in a manner that does not impact habitats to be avoided.

BIO-13: Native fill will be utilized whenever possible.

2.3.5 Threatened and Endangered Species

REGULATORY SETTING

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 USC Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the USFWS and the National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated Critical Habitat. Critical Habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Wildlife Code, Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The CDFW is the agency responsible for implementing CESA. Section 2081 of the Fish and Wildlife Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Wildlife Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For projects requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Wildlife Code.

AFFECTED ENVIRONMENT

The Natural Environment Study (NES) (2013) included evaluation of threatened and/or endangered species potentially within the BSA. For the NES, literature research was conducted through the CDFW California Natural Diversity Database (CNDDB) (CNDDB 2012), and the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants (CNPS 2012) to identify habitats and special-status species having the

potential to occur within the BSA. USFWS was contacted to help identify habitats and special-status species having the potential to occur within the BSA. An official species list was issued from the USFWS, and a discussion between USFWS and the project biologist took place to identify potential habitats and special-status species to consider. Table B-1 included in Appendix B is a compilation of the currently listed federally threatened or endangered species (USFWS, CDFW, and CNPS databases) that could potentially occur within the BSA.

Field surveys conducted on November 16, 2012 documented existing biological resources, searched for suitable habitat, and determined presence of Federal and State protected species.

Based on the NES findings, field surveys, and review of previous biological studies, eight threatened and endangered species have the potential to occur in the project BSA. Previous biological studies in this area include the Biological Assessment/Essential Fish Habitat Assessment for the Barge Canal Crossing and Village Parkway Extension Project (2006), William G. Stone Navigational Lock Property Transfer (2005), and Biological Assessment for the Valley Elderberry Longhorn Beetle and Delta Smelt for the Barge Canal Crossing and Village Parkway Extension Project (2006) and NES 2013.

The eight threatened and endangered species that have the potential to occur in the BSA are:

- Swainson's hawk (*Bueto swainsoni*)—State Threatened
- White-tailed kite (*Elanus leucurus*)—State Fully Protected
- Valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*)—Federally Threatened
- Delta smelt (*Hypomesus transpacificus*)—Federally Threatened, State Endangered
- Longfin smelt (*Spirinchus thaleichthys*)—State Threatened
- Central Valley steelhead (*Oncorhynchus mykiss*)—Federally Threatened
- Sacramento River Winter-run Chinook salmon (*Oncorhynchus tshmrytscha*)—Federally and State Endangered
- Central Valley Spring-run Chinook salmon—Federally and State Threatened
- North American green sturgeon (*Acipenser medirostris*)—Federally Threatened

The BSA includes potential habitat of these species due to the presence of Barge Canal and riparian vegetation along its banks. Swainson's hawk and white-tailed kite are two bird species typically found in riparian habitats. The project is also located in Critical Habitat for Central Valley steelhead, and Critical Habitat for Delta smelt is located within the BSA. Sacramento River Winter-run Chinook salmon, Central Valley spring-run Chinook salmon, and North American green sturgeon Critical Habitat is outside the BSA. Suitable habitat for VELB is also within the BSA, as twenty-four elderberry shrubs are

found south of South River Road.

ENVIRONMENTAL CONSEQUENCES

In June 10, 2008, USFWS issued a Section 7 formal consultation letter to USACE for the previous South River Road Barge Canal Crossing and Village Parkway Extension Project. The letter addressed impacts to VELB, and Delta smelt and its Critical Habitat. In the letter, USFWS deemed the project appropriate to append to the Service's December 1, 2004, *Formal Programmatic Consultation on the Issuance of Section 10 and 404 Permits for Projects with Relatively Small Effects on the Delta smelt and its Critical Habitat within the Jurisdiction of the Sacramento Fish and Wildlife Office of the U.S. Fish and Wildlife Service, California* (Delta Smelt Programmatic Consultation) (Service file number 1-1-04-F-0345) and to the Service's *Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the [VELB]* (Beetle Programmatic Consultation) (Service file number 1-1-96-F-0066). Informal consultation with NOAA for Central Valley steelhead and Sacramento River winter-run Chinook salmon was initiated but not completed (NOAA letter, reference number 2007/02103). Further discussion on threatened and endangered species follows.

Swainson's Hawk

Swainson's hawk is State-listed as threatened and has a high potential to occur within the BSA. The Swainson's hawk nests throughout the Central Valley in large trees in riparian corridors and in isolated trees in or adjacent to agricultural fields (England et al. 1997). The species has been documented on CNDDB with more than 20 occurrences within a 5 mile radius of the project site. The project site contains suitable habitat for nesting and foraging and the CNDDB shows a specific Swainson's hawk breeding territory approximately 1,200 feet from the project site. The project would affect approximately 1.16 acres of suitable riparian nesting habitat, approximately 0.37 acres of which will be permanently removed to accommodate the bridge structure. Nesting for Swainson's hawk is generally March 1 through July 31. No Swainson's hawks or raptor nests were identified during the November 16, 2012 field survey. Direct impacts to Swainson's hawk would be avoided through measures BIO-5 through BIO-13. Per recommendation from CDFW, an Incidental Take Permit has been applied for.

White-tailed Kite

The White-tailed kite is a fully protected species by CDFW and inhabits valley margins with scattered oaks and river bottomlands in California. For perching and nesting, dense-topped trees are preferred (Zeiner 1988). One white-tailed kite was observed adjacent to the BSA. There is potentially adequate nesting habitat present, no known nests were observed. The project would ensure there are no impacts on white-tailed kite through avoidance measures. Impacts to white-tailed kite would be avoided through measures BIO-5 to BIO-6, and BIO-8 to BIO-13.

Valley Elderberry Longhorn Beetle

Twenty four specimens of blue elderberry (*Sambucus mexicana*) shrubs with a total of 45 stems were identified south of the Barge Canal, south of South River Road within the BSA. While elderberry shrubs are not special-status, they are habitat for the Federally-

threatened valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*).

VELB is Federally-listed as endangered and is closely associated with blue elderberry shrub, an obligate host for beetle larvae. Blue elderberry is considered a typical riparian shrub (Barr 1991) in California that inhabits moist valley oak woodlands associated with riparian corridors (Roberts et al. 1977; Katibah et al. 1984; Warner 1984). Of the 24 shrubs within the BSA, 5 shrubs contained old VELB exit holes. This indicates previous use by VELB.

Impacts to VELB would be less than significant with incorporation of avoidance and mitigation measures. Pertinent mitigation measures outlined in the *Biological Assessment for Delta Smelt (Hypomesus transpacificus), Delta Smelt Critical Habitat, and Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)* (2013) would be implemented for this project, and would include construction worker training, and barrier fencing. No direct impacts would occur on VELB and no measures to compensate for direct impacts are necessary. No elderberry shrubs are within 20 feet of the project footprint. Five elderberry shrubs with 8 stems will be indirectly impacted, because they are within 100 feet of the project footprint. Activities nearest to the elderberry shrubs consist of grading and improvements to South River Road. The Biological Opinion for the South River Road Barge Canal Crossing and Village Parkway Extension Project from 2008 will be amended to reflect the current project's reduced impacts. The VELB avoidance measures are listed as BIO-14. The project may affect, but is not likely to adversely affect VELB.

Delta Smelt

Delta smelt are Federally-listed as threatened and State-listed as endangered. Critical Habitat is designated from the Delta into the Sacramento River. Estuarine rearing habitat for juvenile and adult delta smelt are typically found in the waters of the lower Delta and Suisun Bay. They typically occupy open shallow waters but also occur in the main channel in the region where fresh and brackish water mix.

Delta smelt are not anticipated to utilize the project area due to limited connectivity from the Sacramento River to the Barge Canal during dry seasons, and stagnant waters not habitable for Delta smelt food source (primarily small crustaceans) due to low habitable level of dissolved oxygen available in the waters. Closure of the Stone Locks and sedimentation of the Barge Canal within the project vicinity has led to degraded water quality (much of the water is stagnant). Based on samples collected in November 2012, dissolved oxygen in the Barge Canal range is as low as 4.5 mg/L—levels which are typically too low for Delta smelt. While Delta smelt Critical Habitat is in the project area, the project may affect but is not likely to adversely modify Critical Habitat. There is no longer connectivity between the Pacific Ocean/Delta and Barge Canal from the Deep Water Ship Canal. As a result, the Barge Canal is no longer used for Delta smelt migration.

Although not anticipated, the species has potential to access the project location from the Sacramento River. Due to this potential for access, the project proposes to implement applicable mitigation measures outlined below. These measures would include construction windows to avoid work during fish migration periods as feasible and water

quality measures. These measures are BIO-15 to BIO-19. Informal consultation will be re-initiated on the Pioneer Bluff Bridge project to reflect current project impacts and to revise the mitigation measures. The project may affect, but is not likely to adversely affect Delta smelt. It will not adversely modify Critical Habitat.

Longfin Smelt

Longfin smelt are listed as threatened by CDFW. This species is an anadromous fish found in California's San Francisco Estuary and the Sacramento-San Joaquin delta, which supports the largest longfin smelt population. They spend their adult lives in bays and estuaries and migrate to freshwater for spawning from January to March (CDFW 2009).

Longfin smelt are not anticipated in the project area due to limited connectivity from the Sacramento River to the Barge Canal during dry seasons. With stagnant waters at Barge Canal, there is also no habitat for longfin smelt food sources (primarily small crustaceans) due to low habitable level of dissolved oxygen available in the waters.

While incidental take of longfin smelt is not anticipated, the project proposes to implement avoidance and minimization measures to limit the construction window to avoid smelt migration periods and to include water quality measures. These measures are BIO-15 to BIO-19. The project is not anticipated to incidentally take longfin smelt.

Central Valley Steelhead

Central Valley steelhead is listed federally as threatened. The Lower Sacramento River in the vicinity of the project area has been documented to contain wild populations of steelhead migrating upstream to their natal spawning grounds between August and February (NMFS 2009). Juvenile steelhead in the Sacramento River Basin migrate downstream during most months of the year but peak in spring (March – June), with a second smaller peak in the fall (October-November) (NMFS 2005). This species is known to occur in the Sacramento River and it is presumed present at the Sacramento River on a seasonal basis.

Central Valley steelheads are not anticipated to utilize the project area due to stressful levels of dissolved oxygen available in the waters, limited connectivity from the Sacramento River to the Barge Canal during dry seasons, and no suitable spawning or rearing habitat. While Central Valley steelhead Critical Habitat is within the project area, Central Valley steelhead are not anticipated to enter the project area due to poor habitat conditions. The project may affect, but will not adversely modify Critical Habitat. Although unlikely to occur, potential construction-related direct effects to Central Valley steelhead would include the temporary increase in sedimentation and turbidity and the risks associated with accidental spills of hazardous chemicals and materials into waters. Mitigation measures BIO-15 through BIO-19 would be implemented to avoid or minimize these potential impacts. Informal consultation will be re-initiated on the Pioneer Bluff Bridge project to reflect current project impacts and to revise the mitigation measures. The project may affect, but is not likely to adversely affect Central Valley Steelhead. It will not adversely modify Critical Habitat.

Chinook Salmon-Sacramento River Winter-run

Winter-run Chinook salmon is Federally and State-listed as endangered. Critical Habitat

for winter-run Chinook includes the Sacramento River from Keswick Dam (River Mile [RM] 302) to Chipps Island (RM 0) in the Sacramento-San Joaquin River Delta (Delta) (58 FR 33212), which does not include the Barge Canal or the Sacramento Deep Water Ship Channel. Adult winter-run Chinook salmon immigration (upstream migration) through the Sacramento River Basin occurs from December through July, with peak immigration in March. Winter-run Chinook salmon spawn between late April and mid-August, with peak spawning generally occurring in June (NMFS 2009).

Winter-run Chinook salmon are not anticipated to utilize the project area due to limited connectivity from the Sacramento River to the Barge Canal during dry seasons and no suitable spawning or rearing habitat. The project is located outside designated Critical Habitat for this species and the project area has low habitable level of dissolved oxygen available in the waters. Dissolved oxygen in the Barge Canal is as low as 4.5 mg/L—levels which are low and stressful to salmonids. Chinook salmon function best in waters with high dissolved oxygen content; Chinook are anticipated to exhibit avoidance behavior at the entrance to the Barge Canal prior to entering the project area.

Although not anticipated, the species has potential access from the Sacramento River to the project location. Due to this potential access, the project proposes to implement mitigation measures BIO-15 through BIO-19. Informal consultation will be re-initiated on the Pioneer Bluff Bridge project to reflect current project impacts and to revise the mitigation measures. The project may affect, but is not likely to adversely affect winter-run Chinook salmon. The project is not anticipated to incidentally take winter-run Chinook salmon.

Chinook salmon-Central Valley Spring-run

Spring-run Chinook salmon are Federally and State-listed as threatened. Critical Habitat is designated for spring-run Chinook salmon in the Sacramento River, but the Sacramento Deep Water Ship Channel and Barge Canal is excluded.

Spring-run Chinook salmon enter the Sacramento River from late-March through September with peak abundance of immigrating adults in the Sacramento River Basin from May through June. The primary differences in the habitat requirements between the winter and spring runs are the duration and the time of year that the different life stages of the species utilize the habitat. The project is located outside designated Critical Habitat for spring-run Chinook (NMFS 2005, NMFS 2009).

Spring-run chinook salmon are not anticipated to utilize the project area due to stressful level of dissolved oxygen available in the waters, limited connectivity from the Sacramento River to the Barge Canal during dry seasons, and the project is located outside designated Critical Habitat for this species.

Although not anticipated, the species has potential access from the Sacramento River to the project location. Due to this potential access, the project proposes to implement mitigation measures BIO-15 through BIO-19. Informal consultation will be re-initiated on the Pioneer Bluff Bridge project to reflect current project impacts and to revise the mitigation measures. The project may affect, but is not likely to adversely affect spring-run Chinook salmon. The project is not anticipated to incidentally take spring-run Chinook salmon.

North American Green Sturgeon

Green sturgeon is Federally-listed as threatened. Although anadromous, green sturgeon is primarily a marine dwelling species of estuaries, bays and oceanic waters. Mature green sturgeons spawning is relatively infrequent and believed to occur once every 2 to 5 years, from March to July in cold, clean waters (NMFS 2012).

While not anticipated, the species has potential to access the project location. The species would not spawn or migrate within the Barge Canal. North American green sturgeon are not anticipated to utilize the project area due to stressful level of dissolved oxygen available in the waters, limited connectivity from the Sacramento River to the Barge Canal during dry seasons, and the project is located outside the designated Critical Habitat for this species.

The proposed project may affect, not likely to adversely affect, Swainson's hawk, white-tailed kite, VELB, Delta smelt, Central Valley steelhead, winter and spring-run Chinook salmon species, or green sturgeon. Avoidance, minimization, and mitigation measures BIO-15 through BIO-19 would be implemented.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

BIO-14: Install Construction Barrier Fencing to Protect Beetle Habitat Adjacent to the Construction Zone. The City or its contractor will install orange construction barrier fencing to identify environmentally sensitive areas that are to be avoided. The construction specifications will require that a qualified biologist identify the location of valley foothill riparian and other sensitive biological habitat (i.e., elderberry shrubs) on site and identify areas to avoid during construction. Barrier fencing will be installed a minimum of 20 feet from all elderberry shrubs that have been identified near the project corridor (#1-5). Before construction, the construction contractor will work with the project engineer and a resource specialist to identify the locations for the barrier fencing and will place stakes around the sensitive resources sites to indicate these locations. The protected area will be designated an environmentally sensitive area and clearly identified on the construction specifications. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period. The following paragraph will be included in the construction specifications:

> The contractor's attention is directed to the areas designate "environmentally sensitive areas." These areas are protected, and no entry by the contractor for any purpose will be allowed unless specifically authorized in writing by the project proponent. The contractor will take measures to ensure that contractor's forces do not enter or disturb these areas, including giving written notice to employees and subcontractors.
>
> Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer. The fencing will be commercial-quality woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). The fencing will be tightly strung on posts with

maximum 10-foot spacing.

BIO-15: A barrier, such as a water inflated dam, shall be installed at the opening of the live Barge Canal channel between August 1 and November 30. During dewatering a biologist will be present to monitor and relocate, if necessary, species.

BIO-16: Implement Stormwater Pollution Prevention Plan (SWPPP) Measures to protect water quality. Implement erosion control and Best Management Practices (BMPs). Contract specifications will include the following Best Management Practices (BMPs), where applicable, to reduce erosion during construction.

- Implementation of the project will also require approval of a site-specific SWPPP that would implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques.

- Scheduling. A specific work schedule will be implemented to coordinate the timing of land disturbing activities and the installation of erosion and sedimentation control practices to reduce on-site erosion and off-site sedimentation.

- Preservation of Existing Vegetation. In addition to measures above, existing vegetation shall be protected in place where feasible to provide an effective form of erosion and sediment control, as well as watershed protection, landscape beautification, dust control, pollution control, noise reduction, and shade.

- Mulching. Loose bulk materials shall be applied to the soil surface as a temporary cover to reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff.

- Soil Stabilizers. Stabilizing materials shall be applied to the soil surface to prevent the movement of dust from exposed soil surfaces on construction sites as a result of wind, traffic, and grading activities.

- Slope Roughening/Terracing/Rounding. Roughening and terracing will be implemented to create unevenness on bare soil through the construction of furrows running across a slope, creation of stair steps, or by utilization of construction equipment to track the soil surface. Surface roughening or terracing reduces erosion potential by decreasing runoff velocities, trapping sediment, and increasing infiltration of water into the soil, aiding in the establishment of native vegetative cover from seed.

BIO-17: Develop and implement a Spill Prevention, Control, and Countermeasure Program (SPCCP) for construction activities. The Contractor will develop and implement a SPCCP to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. This would include refueling of equipment away from the waterway. The SPCCP will be completed prior to construction.

BIO-18: Pursuant to Executive Order 13112 and the control of invasive species:

- All landscaping and revegetation shall consist of a biologist approved plant and/or seed mix from native, locally adapted species.

- Prior to arrival at the project site and prior to leaving the project site, construction equipment that may contain invasive plants and/or seeds shall be cleaned to reduce the spreading of noxious weeds.

BIO-19: Implementation of the following mitigation measures will minimize and offset effects to Critical Habitat:

The City shall prepare a riparian restoration plan prior to construction. This plan will include restoration of areas impacted by the proposed Project, and will aim to reestablish a healthy riparian corridor around the Barge Canal.

2.4 CULTURAL RESOURCES

REGULATORY SETTING

CEQA established statutory requirements for establishing the significance of historical resources in PRC Section 21084.1. The CEQA Guidelines (Section 10564.5[c]) also require consideration of potential project impacts to "unique" archaeological sites that do not qualify as historical resources. The statutory requirements for unique archaeological sites that do not qualify as historical resources are established in PRC Section 21083.2. These two PRC sections operate independently to ensure that significant potential effects on historical and archaeological resources are considered as part of a project's environmental analysis. Historical resources, as defined in Section 15064.5 as defined in the CEQA regulations, include 1) cultural resources listed in or eligible for listing in the California Register of Historical Resources; 2) cultural resource included in a local register of historical resources; 3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in one of several historic themes important to California history and development.

Under CEQA, a project may have a significant effect on the environment if the project could result in a substantial adverse change in the significance of a resource, meaning the physical demolition, destruction, relocation, or alteration of the resource would be materially impaired. This would include any action that would demolish or adversely alter the physical characteristics of an historic resource that convey its historic significance and qualify it for inclusion in the CRHR or in a local register or survey that meets the requirements of PRC Section 5020.1(l) and 5024.1(g). PRC Section 5024 also requires state agencies to identify and protect sate-owned resources that meet National Register of Historic Place listing criteria. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocation, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

CEQA and the CEQA Guidelines also recommend provisions be made for the accidental discovery of archaeological sites, historical resources, or Native American human remains

during construction (PRC Section 21083.2(i) CCR Section 15064.5[d and f]).

AFFECTED ENVIRONMENT

An Area of Potential Effects (APE) was outlined to encompass permanent project features, staging areas, and other areas of potential ground disturbance during construction (see Figure 8). A records search was conducted through the California Historical Resources Information System. A sacred lands search and contact list of Native American individuals and organizations was requested from the Native American Heritage Commission on December 3, 2012. Consultation letters were sent to Native American individuals and organizations on December 15, 2012. The records search obtained on December 6, 2012 indicated that no previously recorded archaeological sites are located within a 0.25 mile radius of the project site and one previously recorded historic site is located within the APE. This site, P-57-00564, West Sacramento Wastewater Treatment Plant, was previously evaluated as ineligible for listing on the California Register of Historical Resources (CRHR). Historic topographic maps and additional background research identified one unrecorded historic resource within the APE – the Barge Canal. Archaeological field surveys were conducted on November 20, 2012 and November 29, 2012, for the purpose of identifying and recording archaeological resources. The field survey confirmed that the Barge Canal has been abandoned and no longer retains integrity. Due to this lack of integrity it does not qualify as a historical resource or historic property. No additional archaeological or historic resources were identified within or near the APE.

ENVIRONMENTAL CONSEQUENCES

The project would have no impact on historical resources as defined in §15064.5 or archaeological resources pursuant to §15064.5. Background research and field survey did not identify prehistoric archaeological resources; properties in the APE are also ineligible for listing in the CRHR or lack integrity to qualify as a historical resource or historic property.

With any project requiring ground disturbance, there is always the possibility that unmarked burials may be unearthed during construction. This impact is considered potentially significant. Implementation of Mitigation Measure CR-1 and CR-2 would reduce this impact to a less-than significant level.

The project is located on Quaternary Holocene alluvium (Qha) (California Department of Conservation 2011), which consist of recent sedimentary deposits. Based on the project's location on recent deposits and disturbance from construction of the Barge Canal, there is a low potential for paleontological resources at the project site. No impact is anticipated on paleontological resources.

Similarly, no unique geologic features are at the project site, therefore no impact is anticipated.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

CR-1: In accordance with Section 7052.5 of the Health and Safety Code, construction or excavation shall be stopped in the vicinity of discovered human remains until the

coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC. According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052).

CR-2: Comply with State Laws Relating to Native American Remains. If human remains of Native American Origin are discovered during project construction, it will be necessary to comply with state laws relating to the disposition of Native American burials, which fall under the jurisdiction of the NAHC (Public Resources Code Section 5097). If any human remains are discovered or recognized in any location other than a dedicated cemetery, the project proponent or its contractor shall ensure that there will be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent human remains, until:

1. the Yolo County coroner has been informed and has determined no investigation of the cause of death is required, or

2. if the remains are of Native American origin, the descendents of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98 or the NAHC is unable to identify a descendant or the descendant fails to make a recommendation within 24 hours after being notified by the NAHC.

Based on the project's location relative to the Sacramento River, it is appropriate to monitor excavation during construction of the bridge abutments.

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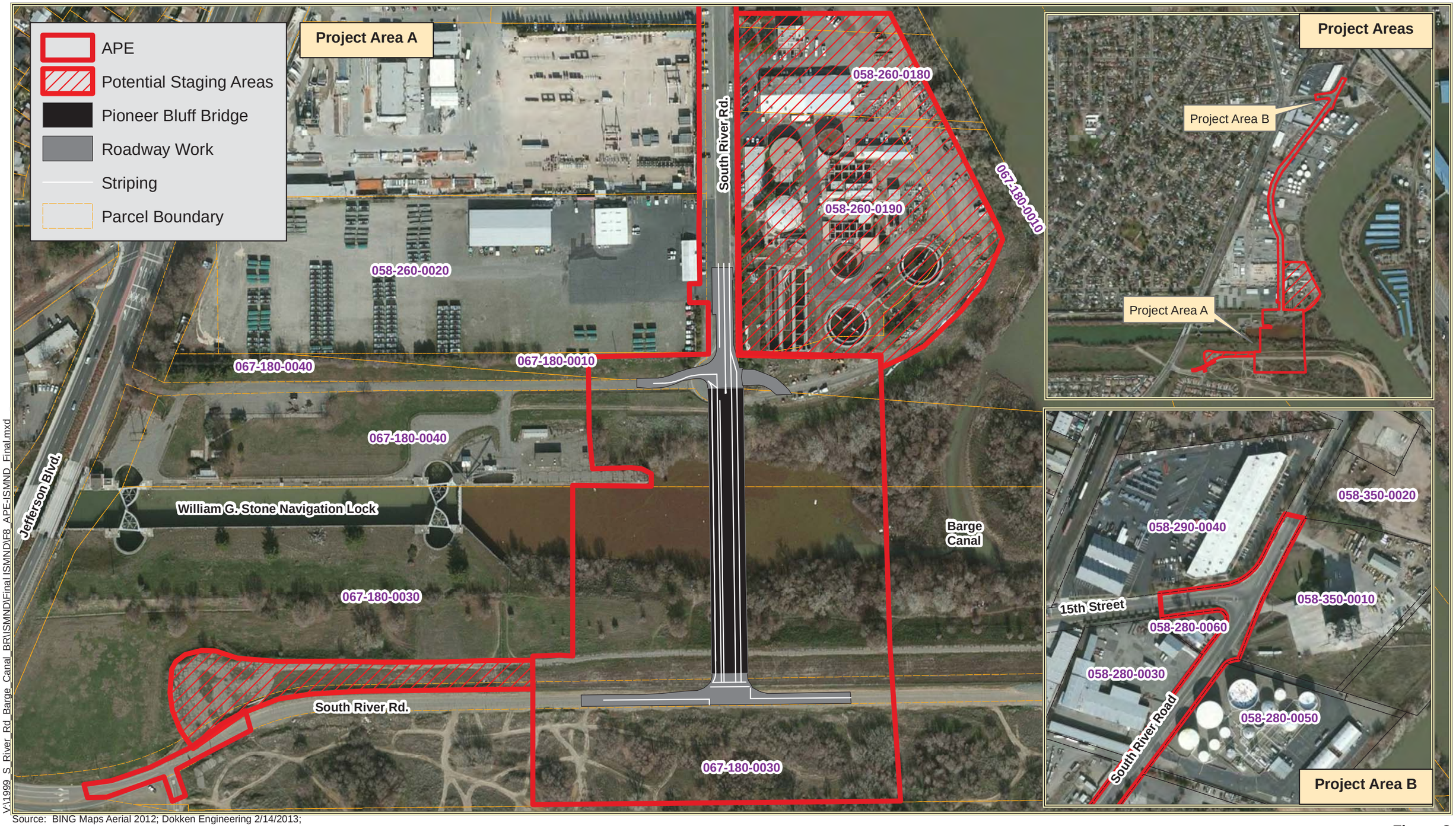

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Source: BING Maps Aerial 2012; Dokken Engineering 2/14/2013;

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Figure 8
Cultural Area of Potential Effects
Pioneer Bluff Bridge Project
West Sacramento, Yolo County, California

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2.5 GEOLOGY AND SOILS

REGULATORY SETTING

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures.

The City of West Sacramento Community Development Department, Engineering Division has published Standard Specifications to provide minimum standards for the design, construction, repair and alteration of streets, roadways, alleys, drainage, sewerage, parks, landscaping, irrigation and water supply facilities (City of West Sacramento 2002). These Standard Specifications specifically include guidance on earthwork and are based on Caltrans 1999 Standard Specifications. Any items which are not included in these Standards shall be designed in accordance with the State Highway Design Manual, State Traffic Manual, Subdivision Ordinance or Zoning Ordinance as hereinafter defined, the General Plan, Master Plans, and any applicable Specific Plan of the City of West Sacramento, generally accepted engineering practice, or as directed by the City Engineer.

AFFECTED ENVIRONMENT

The following information is from the EIR for the South River Road Barge Canal Crossing and Village Parkway Extension Project (City of West Sacramento 2007) and work performed by Blackburn Consulting for the Geotechnical Report (2006).

The project site is on Lang sandy loam (La), a somewhat poorly drained soil on alluvial fans, and Made land (Ma), which consists of randomly mixed material redeposited by the construction of the Deep Water Channel, turning basin, and Stone Locks Groundwater is 12 to 33 feet below ground with elevations from 18 to 0.5 feet.

The project is not located within an Alquist Priolo Earthquake Fault Zone. The nearest seismic sources are the Coast Ranges-Sierran Block Boundary Zone, approximately 24 miles to the west, and the Dunnigan Hills Fault, approximately 23 miles to the northwest.

The potential for liquefaction, which occurs when saturated soils are subjected to ground shaking, was evaluated in the Draft Geotechnical Report (2006). Despite the presence of loose granular soils below the encountered groundwater levels at this site, the potential for seismically induced ground distress (e.g., liquefaction, densification, settlement, lateral spreading, etc.) is believed to be slight at this predominantly flat, low-seismicity site. Overall, it appears this site has an adequate surface layer thickness of unliquefiable soil sufficient to prevent detrimental damage (e.g., sand boils, surface fissuring, liquefaction settlement, etc.) associated with liquefiable soil zones at depth.

Laboratory test results indicate a non-corrosive soils environment for both concrete and steel. All metal pipe alternatives are allowable for these soils (Blackburn Consulting 2006).

The majority of the action area is situated on flat or very gently sloping topography where the potential for slope failure is minimal to low.

ENVIRONMENTAL CONSEQUENCES

The project would not expose people or structures to potential substantial adverse effects, involving rupture of a known fault, strong seismic ground shaking, seismic-related ground failure, or landslides. The project is not on an Alquist Priolo Earthquake Fault Zone requiring special study for fault rupture hazard. Seismic ground shaking is unlikely based on the distance to the nearest sources, Coast Ranges-Sierran Block Boundary Zone which is 24 miles to the west, and Dunnigan Hills Fault, which is 23 miles to the northwest. Seismic-related failure, including liquefaction, is also a less than significant impact because the potential is believed to be slight at this predominantly flat, low-seismicity site. As noted in the Geotechnical Report, it appears this site has an adequate surface layer thickness of un-liquefiable soil sufficient to prevent detrimental damage (e.g., sand boils, surface fissuring, liquefaction etc.) associated with liquefiable soil zones at depth (Blackburn Consulting 2006). The project area is located on a flat area. No impact from landslides would occur with the project. Design and construction in accordance with Caltrans' seismic design criteria will ensure that substantial impacts due to seismic forces and displacements are avoided or minimized to the extent feasible.

Erosion and loss of top soil would be a less than significant impact with mitigation. Grading and earthwork during construction may result in erosion and sedimentation. This impact would be mitigated through implementation of the Stormwater Pollution Prevention Plan (SWPPP) which would incorporate erosion control methods. Measure GEO-1 details this.

The project is not on a geologic unit or soil that is unstable or that would become unstable as a result of the project. On-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse is not anticipated. Additional recommendations from the Draft Geotechnical Report (Blackburn 2006) would also be considered during final design of the project to ensure that this impact is less than significant. No mitigation is required.

In the Draft Geotechnical Report (2006), Blackburn Consulting indicated that "based on field descriptions and laboratory testing, cohesive soils are at least moderately expansive." Blackburn Consulting indicated that they expect these materials (minus organic material, debris, etc.) to be suitable for use as general fill, but not suitable for use as structure backfill or for use as fill behind abutments (i.e., Caltrans "Expansive Soil Exclusion Zone") (Blackburn 2006). These precautions, along with compliance with Caltrans' design criteria, which include specifications for foundation design, would ensure that this impact is less than significant. No additional mitigation is required regarding expansive soils.

The proposed project does not propose septic tanks. As a result, there would be no impacts concerning the soil's adequacy for septic tanks.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

GEO-1: The City and contractor shall implement a SWPPP to include erosion control methods. This SWPPP shall be prepared for the Section 402 permit, *NPDES General Permit for Discharges of Storm Water Associated with Construction Activity*.

2.6 GREENHOUSE GAS EMISSIONS

REGULATORY SETTING

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include CO_2, CH_4, NO_X, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with greenhouse gas emissions and climate change at the state level. AB 1493 requires the CARB to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the EPA. The waiver was denied by the EPA in December 2007 and efforts to overturn the decision had been unsuccessful. See *California v. Environmental Protection Agency*, 9th Cir. Jul. 25, 2008, No. 08-70011. On January 26, 2009, it was announced that EPA would reconsider their decision regarding the denial of California's waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. On June 30, 2009 EPA granted California the waiver. California is expected to enforce its standards for 2009 to 2011 and then look to the federal government to implement equivalent standards for 2012 to 2016. The granting of the waiver will also allow California to implement even stronger standards in the future. The state is expected to start developing new standards for the post-2016 model years later this year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the EPA to regulate GHG as a pollutant under the Clean Air Act (Massachusetts vs. [EPA] et al., 549 U.S. 497

(2007). The court ruled that GHG does fit within the Clean Air Act's definition of a pollutant, and that the EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.

On December 7, 2009, the EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6)--in the atmosphere threaten the public health and welfare of current and future generations.

- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the EPA's proposed greenhouse gas emission standards for light-duty vehicles, which were jointly proposed by EPA and the Department of Transportation's National Highway Safety Administration on September 15, 2009.[1]

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(1) and 15130. To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

As part of its supporting documentation for the Draft *Climate Change Scoping Plan*, CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Figure 9 is a graph from that update that shows the total GHG emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.

[1] http://www.epa.gov/climatechange/endangerment.html

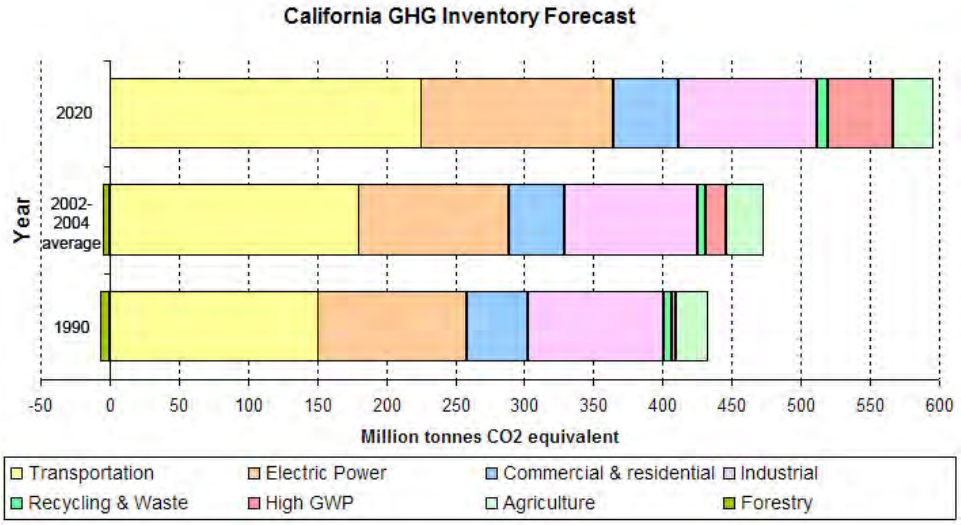


Figure 9. California Greenhouse Gas Inventory

Taken from : http://www.arb.ca.gov/cc/inventory/data/forecast.htm

AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES

GHG emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. As discussed in Section 2.2, Air Quality, construction of the project would be in compliance with applicable air quality rules.

GHG emissions produced during operations are those that result from potentially increased traffic volumes or changes in automobile speeds. The proposed project would not increase the number of automobiles in the traffic system. By providing a new crossing and alternate route, overall traffic flow is expected to improve, and the project is not anticipated to increase CO_2 emissions. Lower speeds, such as those experienced in congested areas, generally result in higher CO_2 emissions rates. No impact to greenhouse gas emissions or climate change would result from operations.

CO_2 emissions from construction of the bridge were estimated and are far below that of the significance threshold of 10,000 metric tons of CO_2/year (used by the Bay Area Air Quality Management District). As shown in Table 6, the project is estimated to emit 346.5 metric tons total for construction of the project. Construction of the project is anticipated to take 9 months.

Table 6. Construction CO_2 Emissions Compared to Threshold of Significance

Greenhouse Gas	Road Construction Emissions Model Estimates	Threshold (metric tons/year)
CO_2	346.5 metric tons total for the project	10,000 metric tons/year
Notes: City of West Sacramento uses the threshold guided by the Bay Area Air Quality Management District, which is a threshold of 10,000 metric tons of CO_2/year. Source: Modeling using the *Roadway Construction Emissions Model* 7.1.2 (Sacramento Metropolitan Air Quality Management District 2012).		

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.7 HAZARDS AND HAZARDOUS MATERIALS

REGULATORY SETTING

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

AFFECTED ENVIRONMENT

The Phase I Initial Site Assessment for the South River Widening and Village Parkway Extension (Blackburn Consulting 2005) and Limited Phase II Environmental Site Assessment for the South River Widening Project (Blackburn Consulting 2006), (Phase I and Phase II studies), provides the bases for much of the following discussion. The Initial Site Assessment and Environmental Site Assessment evaluated the potential for hazardous materials or petroleum hydrocarbons to exist within the study area, and were based on a governmental records search, select agency interviews, aerial photograph and topographic map review, visual site survey, and soil borings.

The Phase I and Phase II studies included a 1-mile radius search on federal, state, and local listings of known hazardous sites and hazardous waste handlers. The radius search identified no mapped sites within 1 mile of the study area. An updated radius search was obtained in December 2012, which confirmed similar results; there are no new listings

within the Pioneer Bluff Bridge project site. As documented in the Phase I and Phase II studies, parcels within the project footprint do not have known contamination except for the Clark Trucking Service property on 2000 South River Road, just north of the Stone Lock. Below is a summary of the parcels affected by the project:

- Parcel 058-260-002, Clark Trucking Service, Inc., 2000 South River Road: Former UST site with a recorded diesel release to soil only, now closed. Files regarding tank removal and contamination are archived at the RWQCB. Phase II Environmental Site Assessment indicated no contamination detected in 11.5 foot depth borings.

- Parcel 067-180-004, Stone Lock: No recorded soil or groundwater contamination other than removal of a 500 gallon generator tank in 1995 for the William G. Stone navigational lock. The site is reported as closed by Yolo County. The Phase II Environmental Site Assessment indicated no contamination detected in 11.5 foot depth boring.

- Parcel 067-180-003: Parcel includes fill for South River Road but no contaminated sources noted.

- Parcel 058-260-019, West Sacramento Wastewater Treatment Plan: Potential Right-of-Way Acquisition Impact—Known soil contamination on site, and/or known groundwater. Phase II study indicated no contamination detected in 11.5 foot depth boring.

The Phase II study concluded that there is a reduced potential for significant petroleum hydrocarbon contaminated soil being encountered within the proposed roadway construction depths, estimated at 10 feet existing grade, or less.

The Phase II study found that aerially deposited lead was detected near the South River Road surface and near surface soils in the vicinity of the US 50/Capitol City Freeway. The Pioneer Bluff Bridge is not in the vicinity of US 50/Capitol City Freeway. Aerially deposited lead for the bridge project is therefore not a concern.

Under the CEQA checklist, consideration of hazardous emissions, handling of hazardous or acutely hazardous materials or substances or waste within ¼ mile of an existing or proposed school, is required. There are no schools within ¼ mile of the project area.

ENVIRONMENTAL CONSEQUENCES

The bridge would not create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials in excess of current conditions in the area and surrounding areas. The bridge does not propose new hazardous waste facilities in the vicinity. While the bridge may be used for traffic to the industrial land uses on South River Road north of Barge Canal, the amount of transport is not anticipated to be significantly in excess of those currently used because South River Road would only be improved at the south intersection with the bridge.

Since the bridge is not a hazardous waste facility, the project would not create a significant hazard to the public or the environment through reasonably forseeable upset

and accident conditions involving the release of hazardous materials into the environment. While construction of the project could potentially result in accidental releases of small quantities of potentially toxic substances (such as diesel fuel or hydraulic fluids), protective measures will be included in construction documents, as is standard.

Operation or construction of the bridge would not result in emitting hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school. The nearest schools are Stonegate Elementary School and Jedediah Smith Elementary School, which are both approximately ½ mile away.

The bridge location is not on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The only known contamination is at the Clark Trucking Service facility on 2000 South River Road. The project is anticipated to include driveway improvements at the Clark Trucking Service facility. As discussed in the Affected Environment section, the Phase II Environmental Site Assessment indicated no contamination detected in 11.5 foot depth borings for this parcel. Bores were taken along South River Road adjacent to the Clark Trucking Service facility and the West Sacramento Wastewater Treatment Plant, and at the Stone Navigation Lock adjacent to the Clark Truck Service parcel.

The project is anticipated to enhance emergency responses or emergency evacuation because it adds a third crossing of Barge Canal. When the bridge is opened, it is anticipated that the roadway would better serve emergency vehicles and local traffic since flooding hazard would be removed.

The project would have less than significant impact on exposing people or structures to a significant risk or loss, injury or death involving wildland fires. Construction activities would result in a slightly elevated risk of fires. The project would implement measure HAZ-1 and HAZ-2 to reduce the potential for fire during construction of the bridge.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

HAZ-1: Require Spark-Generating Construction Equipment be Equipped with Manufacturers' Recommended Spark Arresters: The City shall require contractors to fit any construction equipment that normally includes a spark arrester with an arrester in good working order. Subject equipment includes, but is not limited to, heavy equipment and chainsaws. Implementation of this measure will minimize a source of construction-related fire.

HAZ-2: Before Construction Begins, Clear Materials That Could Serve as Fire Fuel from Areas Slated for Construction Activities: If dry vegetation or other fire fuels exist on or near staging areas, welding areas, or any other area on which equipment will be operated, contractors shall clear the immediate area of fire fuel. To maintain a firebreak and minimize the availability of fire fuels, the City shall require contractors to maintain areas subject to construction activities clear of combustible natural materials to the extent feasible. To avoid conflicts with policies to preserve riparian habitat, areas to be cleared shall be identified with the assistance of a qualified biologist.

2.8 HYDROLOGY AND WATER QUALITY

Section 401 of the Clean Water Act requires water quality certification from the SWRCB or from a RWQCB when the project requires a Clean Water Act Section 404 permit. Section 404 of the Clean Water Act requires a permit from the USACE to discharge dredged or fill material into waters of the U.S.

Along with Clean Water Act Section 401, Clean Water Act Section 402 establishes the NPDES permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

All construction projects over 1 acre require a SWPPP to be prepared and implemented during construction. Construction activities less than 1 acre require a Water Pollution Control Program.

AFFECTED ENVIRONMENT

Much of the information below, pertinent to the proposed Pioneer Bluff Bridge, is from the Village Parkway Extension Project EIR (City of West Sacramento 2007).

Water Quality

The water quality of the Sacramento River near the project is generally good to excellent, with relatively cool water temperatures, low biological oxygen demand (BOD), medium to high dissolved oxygen, and low mineral and nutrient content. The Sacramento River receives agricultural drainage that fluctuates seasonally; contains elevated levels of pesticide, herbicide, and fertilizer residues; and contains increased levels of sediment. Trace metal and synthetic organic compounds, some of which are potentially toxic, are found in sediments and fish tissues throughout the main stem of the river. Sources of these pollutants include historical and current practices, such as abandoned mining sites and industrial and municipal point-source discharges; and various non-point-source discharges, such as urban run-off and agricultural drainage return flows.

All sections of the Sacramento River are listed on the 303(d) list for unknown toxicity while Knights Landing to the Delta is also listed for mercury and diazinon. Mercury is primarily a legacy of gold mining while diazinon, a pesticide, is primarily from agricultural return flows. Urban use of diazinon is expected to be on the decline as the nonagricultural unrestricted use of diazinon has been phased out by the EPA.

Groundwater

The project is located within the Yolo Sub-basin of the Sacramento Valley Groundwater Basin. Throughout the Yolo Sub-basin, groundwater depths are between 20 and 420 feet, and storage capacity is roughly estimated at 6.5 million acre-feet (maf). In the project area, groundwater is generally shallow (between 0 and 10 feet below ground surface) and strongly influenced by water levels in the nearby Deep Water Ship Channel.

Groundwater quality found within the Yolo Subbasin is characterized as a sodium magnesium, calcium magnesium, or magnesium bicarbonate type. The groundwater quality is considered good for both agriculture and municipal uses despite its elevated hardness (California Department of Water Resources 2004). Total dissolved solids range from 107 parts per million (ppm) to 1300 ppm and average 574 ppm based on Title 22 data obtained from public supply water samples (California Department of Water Resources 2004).

Flooding

The new bridge would be constructed within Zone A, the 100-year flood zone, as mapped in the Federal Emergency Management Agency Flood Insurance Rate Maps for Community-Panel Numbers 0607280010B and 0607280005B. Barge Canal is mapped as being in Zone A (see maps in Appendix E).

ENVIRONMENTAL CONSEQUENCES

The project is not anticipated to violate any water quality standards or waste discharge requirements with mitigation incorporated. In the long-term, the new bridge and associated roadway would add impervious surfaces resulting in less natural infiltration. As a result, additional runoff could potentially cause increased erosion. This increase in impervious surfaces and potential runoff would be accommodated for in the design of the project. Drainage design for the project would accommodate for storm water flows following the City of West Sacramento's design standards. In the short-term, construction-related earth disturbing activities would potentially cause soil erosion and sedimentation to local waterways. Such construction activities would involve grading that would require heavy equipment such as earth moving devices. This potential impact would be mitigated for through erosion control methods in the SWPPP and requirements of the NPDES General Construction Permit. This measure is GEO-1 and HYD-1.

The project would have less than significant impact on depletion of groundwater supplies or interference with groundwater recharge. As a transportation facility, the project does not increase the usage of groundwater supplies. New impervious surfaces from the bridge structure would not affect groundwater recharge because it is located over a water channel. The length of new roadway on upland areas, along the south bank of Barge Canal to South River Road is approximately 300 feet. This length of roadway would not be enough to significantly impact the amount of water infiltrating into the ground.

Due to the presence of shallow groundwater in the project area, trenching and excavation associated with the proposed bridge construction, including the bridge support system and the barge canal road, may reach a depth that can expose the ground water table, presenting a direct path for contaminants to enter the groundwater basin. Primary construction-related contaminants that could degrade groundwater in the project area include increased turbidity, oil and grease, and hazardous materials from construction equipment.

Large trucks used to transport construction materials to the site could leak hazardous materials such as oil and gasoline. Improper use of fuels, oils, and other construction-related hazardous materials may also pose a threat to surface water or groundwater quality. Implementation of the Spill Prevention, Control, and Countermeasure Program, discussed in measure BIO-19, would further protect against water quality contamination.

Because of the protective measures incorporated into the project design and required as a condition of construction-related permits, this impact is considered less than significant. No mitigation is required.

The project would result in an increase in impervious surfaces, which would create an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff. Additional runoff can contribute to increased flood potential of natural stream channels, accelerated soil erosion and stream channel scour, and increased transport of pollutants to waterways. Implementation of the NPDES permit and the City's storm water management plan (SWMP) would ensure that post-development discharges are minimized compared to pre-development discharges. These policies will be implemented in accordance with the stormwater BMP recommendations made by the Final Drainage Report for the proposed project (WRECO 2006) as outlined in Mitigation Measure HYD-1. Implementation of mitigation measure HYD-1 will ensure adequate capacity of the proposed drainage system. As a result, erosion and flooding impacts associated with alteration of existing drainage patterns would be less than significant.

The project would not place housing within a 100-year flood hazard area. Only the bridge would be constructed within the 100-year flood zone, Zone A.

The project is designed to be compliant with current USACE standards. Through early coordination, USACE requested the proposed design include additional special design parameters: use of 3:1 slopes on the levee, increase the levee crown to 30' versus the standard 20' crown, and piles within the levee be cast-in-drilled-hole piles, maintain levee maintenance and access throughout the project, and closely coordinate with USACE regarding improvements/changes to the existing levees. By meeting USACE criteria, there would less than significant impact regarding flood hazards and impeding or redirecting flood flows. HYD-3 was included to reflect continued coordination with USACE.

The increased amount of impervious surface created by the proposed project would contribute an incremental amount of additional runoff that may contain hazardous chemicals such as oil and gasoline from associated vehicles. While such chemicals may remain on the road surface during the dry months, the storm season months would result in washing such contaminants into local water bodies. To ensure minimization of the impacts from polluted runoff and to maintain water quality in public facilities, the City has prepared a SWMP in compliance with its municipal storm water NPDES permit. Strategies outlined in the SMWP include structural and non-structural controls for the storage, detention, or treatment for stormwater runoff. Possible structural controls to remove pollutants include detention ponds, vegetative areas, and runoff pretreatment. Non-structural strategies include alternative construction, site design with buffers to protect waterways and appropriate zoning. The SWMP also outlines the need to evaluate the BMPs maintained in the SWPPP. Implementation of the measures in the SWMP would be sufficient to ensure that water quality impacts from project operation are less than significant.

The proposed project would not involve the use of groundwater supplies. The incremental increase in impervious surfaces resulting from the proposed project is not expected to substantially affect groundwater recharge in a manner that would significantly reduce groundwater supplies. Therefore, this impact is considered less than significant. No mitigation is required.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

HYD-1: The storm drain system will be designed to accommodate the project and comply with current standards to

HYD-2: Implement a Spill Prevention, Control, and Countermeasure Program during construction to protect against water quality contamination.

HYD-3: Coordinate with USACE to ensure construction near the levees meet USACE standards.

2.9 LANDUSE AND PLANNING

AFFECTED ENVIRONMENT

The proposed project is within areas zoned WF, RP, and C-W. WF is designated for high density mixed uses which capitalize on the City's river frontage. RP is designated for recreation and parks. The purpose of the C-W Zone is to provide specifically planned, integrated commercial land uses related to the waterfront and to historical restoration where appropriate with public and private recreation facilities and integrated public and private open space. The City's General Plan Circulation Element designates South River Road across the canal as "Future Arterial." South River Road approaching the bridge is designated as "Collector" roadways.

The project site is not located within a Habitat Conservation Plan area.

Recent major development projects in the City are shown in Table 7.

Table 7. Projects in Vicinity

Name	Status	Acreage	Proposed/ Existing Use
U.S. 50/Harbor Boulevard Interchange	Completed	--	Transportation
Harbor/ Industrial Intersection Realignment	Approved	--	Transportation
SacPort Regional Petroleum Terminal	Approved	20	Industrial
Enligna	Approved	15	Industrial
Primafuel	Approved	12.2	Industrial

Name	Status	Acreage	Proposed/ Existing Use
Pan Pacific Cement	Operational	20	Industrial
Cemex	Operational	27	Industrial
Main Drain Pump Station	Completed	--	Public/ Quasi-Public
Seaway International Trade Center	Approved	473	Mixed-Use
Westbridge Plaza	Phase 1 Completed	16.8	Commercial/ Retail
Sacramento River Deep Water Shipping Channel Deepening	Approved	N/A	Maritime
OPDE Solar	Approved	4 sites of approximately 35 acres each	Industrial
Source: City of West Sacramento (2011)			

ENVIRONMENTAL CONSEQUENCES

The project would not divide an established community; north of Barge Canal consists of commercial/industrial land uses, and south of Barge Canal is currently undeveloped. As a new crossing, the project would provide improved north-south connectivity through the City.

The project would not conflict with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigation an environmental effect. As described in the City's General Plan, a new crossing of the Barge Canal is a priority project.

The project would not conflict with habitat conservation plans or natural community conservation plans. There are currently no habitat conservation plans or natural community conservation plans in this area. The Yolo County Habitat Joint Powers Authority (JPA) is currently working on a Yolo Natural Heritage Program Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP); projected adoption for the HCP/NCCP is December 2013 at the earliest (JPA 2012). Also, based on drafts of the HCP/NCCP, the Pioneer Bluff Bridge project would not be a covered activity in the plan. The HCP/NCCP will be a natural community conservation plan under the

California Natural Community Conservation Planning Act.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.10 MINERAL RESOURCES

AFFECTED ENVIRONMENT

There are no known mineral resources are at the project site. The City's General Plan (2009) indicates the project site is located in Mineral Resource Zone 3 (MRZ-3), which consist of the following:

MRZ-3a: Areas containing known mineral occurrences of undetermined mineral resource significance. Further exploration of these areas could result in the reclassification of specific localities as MRZ-2a or MRZ-2b."

MRZ-3b: Areas containing inferred mineral occurrences of undetermined mineral resource significance. Land classified MRZ-3b represents areas in geologic settings that appear to be favorable environments for the occurrence of specific mineral deposits. Further exploration could result in the reclassification of all or part of these areas as MRZ-3a or specific localities as MRZ-2a or MRZ-2b.

As stated in the General Plan, "Lands classified as…MRZ-3 are not affected by state policies pertaining to the maintenance of access to regionally significant mineral deposits under the California Surface Mining and Reclamation Act of 1975."

ENVIRONMENTAL CONSEQUENCE

There are no known mineral resources or locally important resources at the project site. Since the Barge Canal is a highly disturbed area, the disturbance of important mineral resources is not anticipated. As stated in the General Plan, "Lands classified as…MRZ-3 are not affected by state policies pertaining to the maintenance of access to regionally significant mineral deposits under the California Surface Mining and Reclamation Act of 1975."

The project would not result in impacts to mineral resources.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.11 NOISE

REGULATORY SETTING

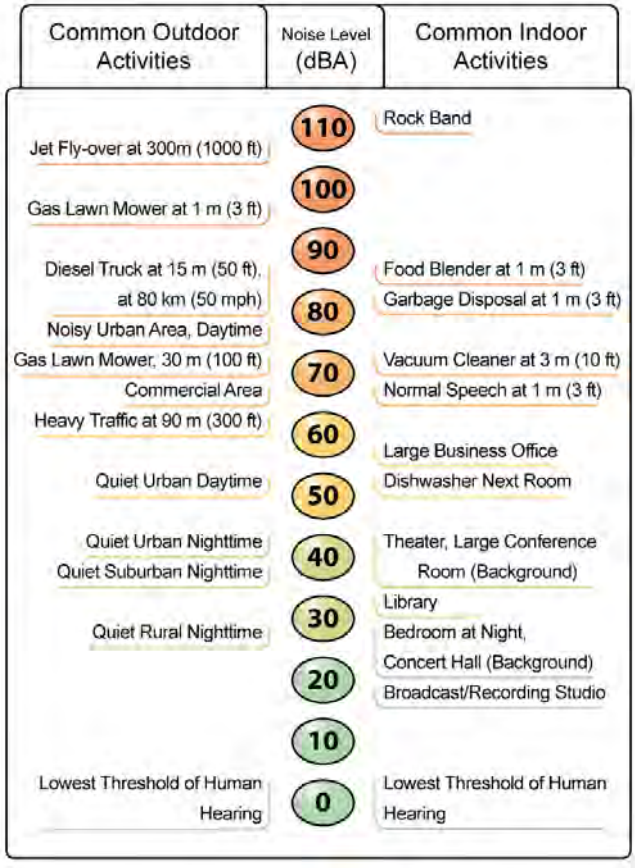
CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

Table 8 identifies real world examples of common noise causing activities and their measurements in A-weighted decibels (dBA).

Table 8. Noise Levels of Common Activities



Local Regulations and Standards

Noise standards in the City of West Sacramento are defined in the General Plan Noise Element and noise guidelines contained in Chapter 17.32 from the City's municipal code. The following is a brief discussion of each as they apply to the project.

City of West Sacramento General Plan Noise Element

The City of West Sacramento has established noise-level performance standards for projects affected by non-transportation sources and transportation sources. Noise is generally characterized as an equivalent continuous sound level (Leq) averaged over time,

day-night average sound level (Ldn), or CNEL (Community Noise Equivalent Level).

For residences exposed to noise from transportation noise sources, the City has established a criterion of 60 dBA Ldn/CNEL for residential land uses. The noise element also states the following criteria may be used as tests of significance for roadway improvement projects.

a. Where existing or projected future traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of residential uses, increase of over 5 dB Ldn due to a roadway improvement project would be considered significant; and

b. Where existing or projected future traffic noise levels range between 60 and 65 dB Ldn at the outdoor activity areas of residential uses, an increase of over 3 dB Ldn due to a roadway improvement project would be considered significant; and

c. Where existing or projected future traffic noise levels are greater than 65 dB Ldn at the outdoor activity areas of residential uses, an increase of over 1.5 Db Ldn increase due to a roadway improvement project would be considered significant.

AFFECTED ENVIRONMENT

The project area includes industrial land uses and vacant parcels. The existing noise environment in the project area is dominated by traffic noise from traffic traveling on Business 80 and traffic on primary roadways in the area such as Jefferson Boulevard. Aircraft departures from Sacramento Executive Airport and other aircraft overflights also affect noise levels in the project area.

In general, noise sensitive land-uses include residences, schools, hospitals, churches, and parks. No sensitive land-uses exist within the project area, with the closest residences being approximately 800 feet away.

The existing noise environment in the project area has been characterized both with sound level measurements taken in the project area and traffic noise modeling as described below.

The noise monitoring was conducted in the residential area adjacent to the project area. Traffic noise from local roads was the dominant noise source observed during attended monitoring. Measured L_{eq} noise levels were 48.1 dBA for measurement site ST-3, which is located in the residential subdivision to the southwest of the project area.

ENVIRONMENTAL CONSEQUENCES

Permanent

The project would have less than significant impact on noise levels in the long-term. Noise modeling results of the South River Road Barge Canal Crossing and Village Parkway Extension Project were reviewed to characterize anticipated noise levels. Results were reviewed for four receptors P-12, P-13, P-14, and P-15 located along Hearst and Randolph Avenue shown in Figure 10. As shown in Table 9 below, future predicted noise levels would be less than significant using the City's criteria. Since existing noise levels are less than 60 Ldn; a significant impact would occur if the change is over 5 dB Ldn. As

shown in the table, the change is 4 dB or less for the potentially affected receptors to the bridge project. This information is considered a conservative estimate, as it assumes a 4-lane bridge in year 2025 and future potential extension south beyond the bridge. The proposed project would only consist of 2 lanes of traffic and will terminate at the existing South River Road.

Table 9 . Predicted Noise Levels*

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Difference (dB)	Significant Impact?
P-12	51	52	56	+4	No
P-13	51	52	57	+4	No
P-14	51	52	56	+2	No
P-15	51	52	56	+3	No
*From Draft Environmental Impact Report for the South River Road Barge Canal Crossing and Village Parkway Extension Project.					

Potential project noise impacts are therefore limited to construction noise. The project would have less than significant impact regarding long-term exposure of persons to or generation of noise levels, groundborne vibration or noise, and ambient noise levels.

Construction

Pile driving for construction of the barge canal crossing would result in groundborne vibration. It is anticipated that vibratory and impact pile driving methods would be used. Since the nearest residence to the proposed location of the channel crossing is about 800 feet away, adverse impacts due to vibration during pile driving events are not anticipated.

Source: BING Maps Hybrid 2012; Dokken Engineering. Created By Z. Liptak, 12-07-12

FIGURE 10
Noise Receptor Locations
Pioneer Bluff Bridge Project
City of West Sacramento, California

0 250 500 750 1,000 Feet

Other construction activities associated with the proposed project may cause a small amount of groundborne vibration. Vibration from these activities would be short-term. Therefore, no adverse vibration effects from construction are expected.

The assessment of potential construction noise levels was based on methodology developed by the Federal Transit Administration (FTA) (Federal Transit Administration 1995). Table 10 summarizes noise levels produced by commonly used construction equipment. Individual types of construction equipment are expected to generate noise levels ranging from 74 to 89 dBA at a distance of 50 feet. The construction noise level at a given receiver depends on the type of construction activity, the noise level generated by that activity, and the distance and shielding between the activity and noise receivers.

Table 10. Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 feet from Source
Sonic Pile Driver	96
Grader	85
Bulldozers	85
Truck	88
Loader	85
Roller	74
Air Compressor	81
Backhoe	80
Pneumatic Tool	85
Paver	89
Concrete Pump	82
Source: Federal Transit Administration, 1995	

Generally, noise levels at construction sites vary from 65 dBA to a maximum of nearly 96 dBA when heavy equipment is used. Highest construction noise levels would be during removal of existing concrete with a mounted impact hammer, a concrete saw, or a jackhammer. A mounted impact hammer, concrete saw, or jackhammer may reach noise levels of approximately 90 dBA at a distance of 50 feet. Construction noise would be intermittent, and noise levels would vary depending on the type of construction activity.

No significant adverse noise impacts from construction are anticipated because construction noise would be short-term and intermittent, and construction would be conducted in accordance with City ordinances as appropriate, as included in minimization measure NOI-1. Construction is anticipated to take 9 months.

AVOIDANCE, MINIMIZATION, AND/OR ABATEMENT MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.12 POPULATION AND HOUSING

REGULATORY SETTING

CEQA also requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…"

AFFECTED ENVIRONMENT

The City's General Plan indicates the project site is zoned for Waterfront and Recreations and Parks. No housing is located at the project site. Residential neighborhoods begin approximately 0.2 mile to the southwest.

ENVIRONMENTAL CONSEQUENCES

The project would have no direct impact on population growth since it does not propose new homes. The bridge would serve existing and planned population growth, and would not induce population growth. The project does not displace existing housing or people.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.13 PUBLIC SERVICES

AFFECTED ENVIRONMENT

Public services serving the project area include the West Sacramento Fire Department, West Sacramento Police Department, public schools, and City parks. Station #45, 2040 Lake Washington Boulevard, approximately 1 mile southwest of the proposed bridge serves the area south of Barge Canal, and Station #41, 132 15th Street, serves the area north of Barge Canal. The nearest public school is Stonegate Elementary School, 2500 La Jolla Street, West Sacramento, approximately 0.5 mile to the south-southwest. Jedediah Smith Elementary School is also approximately 0.5. mi east of the proposed bridge, but it is across the Sacramento River in the City of Sacramento, outside of any potential for effects. The nearest public parks are the Barge Canal Recreational Access, located at South River Road and Jefferson Boulevard, approximately 0.3 mi west of the proposed bridge. Other nearby parks are Sam Combs Park, approximately 0.3 mi west-northwest, and Southport Gateway Park, approximately 0.4 mi southwest of the proposed bridge. While not a designated park, the south bank of Barge Canal in the project footprint is zoned for Recreations and Parks (RP).

ENVIRONMENTAL CONSEQUENCES

The proposed project would improve accessibility to the Southport area of West Sacramento. By implementing the project, service and potential emergency response times may be improved by providing an alternate access across the Barge Canal. Construction of the bridge would not result in a population increase; the project accommodates existing and planned growth. The project would not create an increase in

demand for fire or police services, schools, or recreation facilities.

There is currently no through-traffic at the bridge site and there is little existing traffic on South River Road south of Barge Canal. Response times are not anticipated to be affected during construction. Minor traffic control, as described in measure PS-1/TRA-1, would further minimize effects.

Utility relocations may be required and would occur in consultation with the owners or operators of the affected utilities.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following measure is also found under Section 2.15 of this document:

PS-1/TRA-2: Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a traffic control plan.

2.14 RECREATION

AFFECTED ENVIRONMENT

As stated in the previous section, the nearest public parks are the Barge Canal Recreational Access, Sam Combs Park, and Southport Gateway Park. The south bank of Barge Canal in the project footprint is zoned for "Recreations and Parks" (RP).

ENVIRONMENTAL CONSEQUENCES

The proposed bridge would not 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. The bridge would not provide a closer connection to any of the nearby parks.

Bicycle facilities do not currently exist along South River Road. The bridge and roadway widths are designed to allow for bicycle lanes in the future. The bridge will be striped for bicycle lanes. The proposed project does not include other recreational facilities, nor does it require the construction or expansion of other recreational facilities.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.15 TRANSPORTATION/TRAFFIC

AFFECTED ENVIRONMENT

South River Road is a "Collector" roadway from Stone Boulevard northward and along Barge Canal and the Sacramento River levee. Across the Barge Canal, it is a "Future Arterial" designated in the City's General Plan. The City's General Plan includes the bridge under its major transportation projects, with the following project description: "Construct new four-lane bridge across Barge Canal, east of Jefferson Bridge." While the

bridge would be open to two lanes of traffic upon completion of the project, the bridge structure would be wide enough to allow for 4-lanes. This is also consistent with what is planned in the Sacramento Area Council of Governments 2011 Metropolitan Transportation Improvement Program for South River Road, which is the following larger project, listed in page 128 of the 2011 MTIP: "Reconstruct and widen South River Road to 4 lanes from U.S. 50 on-ramp to Stonegate Boulevard, including a new 4-lane bridge over barge canal."

The traffic Level of Service policy in the General Plan is:

> "To maintain LOS "C" on all streets within the city except at intersections and on roadway segments within one-quarter mile of a freeway interchange or bridge crossing of the Deep Water Ship Channel, barge canal, or Sacramento River, where LOS "D" shall be deemed acceptable.

ENVIRONMENTAL CONSEQUENCES

The project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. This takes 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, pedestrians and bicycle paths, and mass transit. As stated in the affected environment section, the bridge would be open to two lanes of traffic upon completion of the project, and the bridge structure would be wide enough to allow for 4-lanes in the future to be consistent with local and regional plans.

The project would add a new, third crossing over the Barge Canal. Currently only Jefferson Boulevard and Industrial Boulevard cross Barge Canal.

It is anticipated that the project, with mitigation incorporated, would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. A traffic analysis conducted in December 2012 found that the Jefferson Boulevard/Stone Road, Jefferson Boulevard/15th Street, and Jefferson Boulevard/Park Boulevard intersections would experience a drop in average delay with construction of the proposed project. The proposed project would also reduce vehicle delay by 20-30% and reduce queue spillback onto US 50 during the unit train crossing.

The traffic analysis found that the proposed project would increase traffic on South River Road, triggering the need for a traffic signal at opening day. As a result, signalization of 15th Street/South River Road was included into the project and is reflected as mitigation measure TRA-1. Study intersections at South River Road/Linden Road, South River Road/Jefferson Boulevard, Jefferson Boulevard/Stone Boulevard, and Jefferson Boulevard/15th Street are unlikely to degrade to unacceptable levels with the project. Further traffic analysis is being conducted to determine if the South River Road/Marina Greens Drive intersection would need improvements due to an increase in eastbound and westbound traffic.

The project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. The nearest

airport is the Sacramento Executive Airport, which is 5 miles southeast.

Design features would comply with City standards, or as appropriate, would be approved as non-standard features. The project would not increase hazards due to design features or incompatible uses. The project would not substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

The project would have less than significant impact on emergency access. There is currently no through-traffic at the bridge site and there is little existing traffic on South River Road south of Barge Canal. Response times are not anticipated to be affected during construction. In the long-term, it is anticipated that the bridge would better serve emergency vehicles by providing a new crossing over Barge Canal.

There would be no conflicts with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, and performance or safety of such facilities. The bridge structure would be wide enough to accommodate for bicycle lanes and pedestrian facilities for future planned projects.

The project will include bicycle lanes on the bridge. ***SOUTH RIVER ROAD SOUTH OF THE BRIDGE, WITHIN THE PROJECT FOOTPRINT, WILL INCLUDE 6-FOOT SHOULDERS FOR INFORMAL PEDESTRIAN ACCESS.*** The project will maintain the currently existing Class II bicycle lanes at the 15***TH*** Street/South River Road intersection.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following measure is also found under Section 2.13 of this document:

TRA-1: The project shall include signalization of the South River Road/15th Street intersection.

PS-1/TRA-2: Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a traffic control plan.

2.16 UTILITIES AND SERVICE SYSTEMS

AFFECTED ENVIRONMENT

As described in Section 2.13, public services serving the project area include the following: Fire Station #45, Fire Station #41, Stonegate Elementary School, Jedediah Smith Elementary School, Barge Canal Recreational Access, Sam Combs Park, Southport Gateway Park, and the south bank of Barge Canal zoned for "Recreations and Parks" (RP). Water, sewer, electric, and petroleum lines are currently located in the project area. Utilities along South River Road north of Barge Canal include the following: a Kinder Morgan petroleum line, natural gas and electric lines owned by PG&E, overhead poles with utilities owned by PG&E and AT&T, and sewer and water lines owned by the City of West Sacramento.

ENVIRONMENTAL CONSEQUENCES

The proposed project would not result in a population increase. The bridge accommodates existing and planned growth in the area. The project would not create an increase in demand for fire or police services, schools, or recreation facilities. No mitigation is required for effects to public services.

No permanent impacts to public utilities are anticipated. As a transportation project, there would be no exceedances of wastewater treatment requirements and construction of new water or wastewater treatment facilities would not need to be expanded.

As a transportation project, no impacts to wastewater treatment services or water supply would result. The project would not generate substantial solid waste during operation. During construction, solid waste may be generated during construction, however, the amount will not exceed landfill capacities.

The proposed project would comply with federal, state, and local statutes and regulations related to solid waste.

Utilities within the project footprint would be protected in place. Coordination with utility owners would take place during final design of the project.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are proposed.

2.17 MANDATORY FINDINGS OF SIGNIFICANCE

REGULATORY SETTING

The CEQA Checklist includes the following questions under Mandatory Findings of Significance:

Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a 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)?

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

ENVIRONMENTAL CONSEQUENCES

As discussed in Section 2.3, Biological Resources, the project would have less than

significant impact with mitigation implemented. Threatened and endangered fish species are not anticipated to be within the BSA due to poor environmental conditions; measures are proposed to further lessen the potential for impact. With these measures cumulatively considerable impacts are not anticipated.

Further, cultural studies concluded that the project would have no effect on known cultural resources. Standard measures for inadvertent discover would also avoid potential impacts.

The project would not have adverse effects on human beings, either directly or indirectly. The project does not require relocation of housing and impacts to noise and air is anticipated to be less than significant.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Please see measures BIO-1 through BIO-18 and CR-1 and CR-2.

Chapter 3 Comments and Coordination

INTRODUCTION

This chapter summarizes the City's efforts to identify, address and resolve project-related issues through early and continuing coordination.

SCOPING PROCESS

Environmental studies, including biological assessments and biological opinions, for the previous Village Parkway Extension Project provided a basis for scoping potential environmental issues. It was determined that early coordination with USFWS, USACE, NOAA, and CDFW would be beneficial in verifying appropriate measures for potential impacts to threatened and endangered species.

CONSULTATION AND COORDINATION WITH PUBLIC AGENCIES

Coordination with the following agencies has been reinitiated for the Pioneer Bluff Bridge:

U.S. Fish and Wildlife Service

U.S. Army Corps of Engineers

National Oceanic Atmospheric Administration

California Department of Fish and Wildlife

Central Valley Flood Protection Board

Regional Water Quality Control Board

Native American Heritage Commission (NAHC)

PUBLIC PARTICIPATION

The public comment period took place between January 11, 2013 and February 11, 2013. The public comment period for the project provided the opportunity for public comment and participation. The comment period was noticed in the local newspaper, West Sacramento News-Ledger, on January 16, 2013, the regional newspaper, Sacramento Bee, on January 11, 2013, and the Yolo County Clerk on January 11, 2013. The Initial Study/Proposed Mitigated Negative Declaration was made available at the City of West Sacramento City Hall, the Arthur F. Turner Community Library, and an electronic copy was made available online at http://www.cityofwestsacramento.org. During the 30-day CEQA circulation and review period the City received comments on the Initial Study from 11 agencies and individuals. These comments and the response provided by the City are included in the following pages:

Comment 1:

Dirk Benson (comment received via email letter dated January 14, 2013).

From: Dirk Benson [mailto:[redacted]@gmail.com]
Sent: Monday, January 14, 2013 8:20 PM
To: Davidson, Jay
Subject: Pioneer Bluff Bridge

Hello Jay,

I received the public notice this evening about the bridge project and had 1 question. What is the intended future of the Barge Canal? It seems this canal has been abandoned and rather than build a bridge a across it, why not just fill it in and build the road on top?

Thank you,

Dirk Benson

Response 1: The City intends to take advantage of the waterfront setting that the Barge Canal and Sacramento River confluence provides. The Stone Lock District (the area surrounding Barge Canal) is planned for central park facilities, including waterfront facilities such as fishing access, private marinas, or boat ramps. The Stone Lock District is intended for passive green open space, playgrounds, a community center, and other recreational facilities. The Stone Lock District is subject to a public-private joint venture for planning and development. For these reasons, filling in Barge Canal was not considered.

Comment 2:

A.J. Tendick, Sacramento Area Council of Governments (comment received via email letter dated January 15, 2013).

-----Original Message-----
From: A.J. Tendick [mailto:atendick@sacog.org]
Sent: Tuesday, January 15, 2013 5:22 PM
To: Davidson, Jay
Subject: Barge canal bridge

Please include full width bike lanes in the project that will remain after the future 2 lanes are striped.

Response 2: The bridge will include a 12-foot travel lane and 6-foot bike lane on each side of the bridge. Bike lanes will remain even if the future two 12-foot travel lanes are striped (for a total of four through lanes). These bike lanes on the bridge are in addition to a barrier separated 6-foot pedestrian path. South River Road south of the bridge, within the project footprint, will include 6-foot shoulders for informal bicycle and pedestrian use. The ultimate four-lane South River Road corridor is expected to have bike lanes. This project is not currently programmed so design and construction dates are unknown.

Comment 3:

David Paul (comment received via email letter dated January 26, 2013).

From: David Paul [mailto:[redacted]@gmail.com]
Sent: Saturday, January 26, 2013 4:42 PM
To: Davidson, Jay
Subject: Pioneer Bluff Bridge Project

Jay,

I live at [redacted] Road which is in the subdivision near the south end of the proposed bridge. I support the bridge over the barge canal and think it will help improve traffic congestion on Jefferson Blvd.

My potential concern is the increased traffic on South River Road south of the bridge. Other than a planned stop light to be installed at 15th Street and South River Road, it doesn't look like there are other definite planned controlling traffic measures along South River Road south of the bridge.

However, the report does acknowledge on page 70 of the initial study report: "Further traffic analysis is being conducted to determine if the South River Road/Marina Greens Drive intersection would need improvements due to an increase in eastbound and westbound traffic."

It seems reasonable to assume that most of the traffic crossing the bridge would feed out of Marina Greens in morning traffic or onto Marina Greens in afternoon traffic. My biggest concern is with traffic backing up on South River Road trying to make a left turn onto Marina Greens particularly weekday afternoons.

From the bridge, some South River Road traffic no doubt would occur northwest (toward the freeway) or southeast (toward Linden Road). As you know, there are virtually no cross streets on South River Road until Linden Road so I would imagine that most of that traffic would stay on Jefferson.

However, I could imagine that additional traffic could cut through from Marina Greens onto Randolph Road, Hearst Street, Union Square, Sansome Street, etc. The traffic currently through my subdivision is relatively light so I think some additional traffic would be acceptable, but a substantial increase would not be acceptable especially during rush hour. Do you anticipate a significant traffic flow into this subdivision?

Also, with the increased traffic, are there plans to modify/widen the freeway onramp from South River Road?

Thank you for reading my concerns. As I stated, I do support this project but wanted to address some potential traffic issues that could result from the changing traffic flow. I would be happy to discuss this in person and/or attend either the Planning Commission or City Council meeting when this is either discussed or decided upon.

David Paul
916-[redacted]

Response 3:

A) Per your comment, the City looked at queuing on South River Road from westbound vehicles turning left onto Marina Greens Drive in the PM peak hour. Our traffic projections indicate that approximately 80 percent of the traffic on the Pioneer Bluff Bridge during the PM peak hour would be traveling in the southbound direction (i.e., traveling into the Southport area). The westbound left turn movement into Marina Greens Drive, which represents a small percentage of the overall westbound traffic, would be opposed by relatively light off-peak eastbound volumes. This means that sufficient gaps would be available in eastbound traffic to allow the left turn movements to occur with minimal delays. As such, significant queues are not projected for the westbound left turn movement into Marina Greens Drive during the evening commute period. During the AM peak hour, when eastbound volumes on South River Road will be at their peak, the

westbound left movement into Marina Greens Drive are projected to be very small. As noted above, construction of the segment of Village Parkway between South River Road and Stonegate Drive will result in a reduction in the volume of traffic traveling to and from the South River Road bridge via Marina Greens Drive.

Construction of the segment of Village Parkway between South River Road and Stonegate Drive, which is not currently programmed but anticipated, will provide a more direct route to the South River Road bridge for residents who live along Stonegate Drive. Completion of this road segment will shift most of those 10-15 peak hour trips from Marina Greens Drive to Stonegate Drive.

B) No, the City does not anticipate a significant traffic flow into the Randolph Road, Hearst Street, Union Square, Sansome Street subdivision. Since motorists may choose to cut through residential streets to access the proposed project, the City analyzed these streets for potential "cut-through" traffic. The amount of cut-through traffic is expected to be low due to the circuitous roadway network. Table 1 below displays the approximate distance and travel time of two routes. The distance travelled on the cut-through route will generally be shorter, but the travelled speed would be lower than the parallel route on Jefferson Boulevard. This would encourage most motorists to avoid cutting through the residential neighborhoods.

TABLE 1
EVALUATION OF TRAVEL TIMES AND DISTANCES

Origin	Cut-Through Route[1]		Jefferson Blvd Route[2]	
	Distance (mi)	Time (min)	Distance (mi)	Time (min)
Lake Washington Blvd east of Stonegate Dr	1.13	3.39	1.31	2.62 (-29%)
Gateway Dr east of Sansome St	0.65	1.94	0.86	1.72 (-13%)

Note: [1] The cut-through route was measured as Sansome St to Union Sqaure Rd to Geary St to Randolph Rd to Marina Greens Dr. The average cut-through speed was estimated at 20 mph.
[2] The Jefferson Blvd route was measured as the origin to Jefferson Blvd to South River Road. The average speed was estimated at 30 mph.

Travel routes to and from the planned South River Road bridge will vary over time as the transportation network in the Southport area is built out. In the very near term, virtually all of the traffic destined for the bridge from the Southport area will travel along Jefferson Boulevard and access South River Road at the existing Jefferson Boulevard/South River Road traffic signal. A small percentage of traffic destined for the bridge will access South River Road via Marina Greens Drive, from the residential neighborhood located between South River Road and Gateway Drive. It is anticipated that some residents of the neighborhood who currently use Gateway Drive to access Jefferson Boulevard will take a different route through the neighborhood to access the South River Road Bridge via Marina Greens Drive. It is estimated that approximately 10-15 peak hour vehicle trips from the adjacent neighborhood will shift from Gateway Drive to Marina Greens Drive in the near term. We do not anticipate that any vehicles that are currently using Jefferson Boulevard will divert through the neighborhood as a result of the construction of the South

River Road Bridge, given the lack of a direct parallel connection.

C) No, the project does not anticipate including modifications to the South River Road/U.S. 50 Westbound off-ramp and South River Road/U.S. 50 Eastbound on-ramp.

D) The City acknowledges and appreciates your general support of the project and we hope the information in this letter addresses your concerns.

Comment 4:

Kate Kennedy (comment received via email letter dated January 20, 2013).

-----Original Message-----
From: [redacted]@aol.com [mailto:[redacted]@aol.com]
Sent: Sunday, January 20, 2013 10:24 PM
To: Davidson, Jay
Subject: Bridge Proposal - Yes!

Dear Mr. Davidson,
I am a resident of the Southport area of West Sacramento, living in Riva on the River condominiums. I just read the proposed plans for the new bridge that would connect South River Road and wanted to let you know I am in support of it! It sounds like it would help to connect the region I live in with the Bridge District. We would have a biking/running/etc. way to reach the area without needing to go onto Jefferson Blvd. Am I understanding it correctly? I look forward to hearing from you.
Sincerely,

Kate Kennedy

Response 4: Yes, the project would provide an alternate route across Barge Canal and improve access to the Southport area. The project will include improvements to the 15th Street/South River Road intersection and will connect with the east-west running South River Road, just south of Barge Canal. The bridge would include a barrier separated 6-foot pedestrian path and space for bicycle lanes. South River Road south of the bridge, within the project footprint, will include 6-foot shoulders for informal pedestrian access.

Comment 5:

Matt Prink, Level 3 Network Relocations (comment received via email letter dated January 21, 2013).

From: Level 3 Network Relocations [mailto:Level3.NetworkRelocations@Level3.com]
Sent: Monday, January 21, 2013 11:49 AM
To: Davidson, Jay
Subject: Return to Requestor Notice - Pioneer Bluff Bridge Project, CA

Mr. Davidson,

Level 3 has received your letter dated 1/16/13 regarding the project at S River Rd over the Barge Canal ("Project"). In response to your inquiry please find the enclosed drawings indicating the approximate location of the Level 3 telecommunications facilities (the "Facilities"). Note that the locations of Facilities shown on these drawings are only approximate and Level 3 hereby disclaims any responsibility to third parties for the accuracy of this information. Persons working in the area covered by these drawings must contact the statewide Call-Before-You-Dig System to ascertain the location of underground facilities prior to performing any excavation.

After reviewing the information you provided it is uncertain whether the Project will impact the Facilities.

The Facilities have been constructed on private property and/or public right of way with the authorization of the applicable property owner. Prior to any work being performed by or on behalf of Level 3 all costs associated with the adjustment and/or relocation of the Facilities are required to be paid in full to Level 3.

Please review the enclosed information. If it is determined that an adjustment and/or relocation of the Facilities is necessary to accommodate the Project, please contact the undersigned to discuss and reference the file number ***38421 CA*** with any future communications. Any changes or additions to the Project plans or parameters should be submitted to Level 3 for review of potential new impacts to the Level 3 facilities. Unless Level 3 receives information that such adjustment or relocation is necessary it will assume that any potential conflict between the Project and Facilities has been eliminated.

Sincerely,
Matt Prink
Network Relocations – Business Analyst
Level 3 Communications
1025 Eldorado Blvd
Broomfield, CO 80021 (Office 33A-525)
p: 720-888-2639
e: Matthew.Prink@Level3.com

Level(3) www.level3.com

Response 5: As part of utility coordination for the project, the City will continue coordinating with Level 3 Communications regarding its facilities, as needed, and use reference file number 38421. Based on utility coordination to date with Matt Prink, Level 3 Communications utilities exist in the South River Road/15th Street intersection area.

Comment 6:

Jeremy L. Gross, Coates Field Service, Inc. for Chevron (comment letter received January 22, 2013).

COATES FIELD SERVICE, INC.
3021 CITRUS CIRCLE, SUITE 160
WALNUT CREEK, CALIFORNIA 94598

TEL. 925-935-5101 FAX. 925 935-8367

Please reply to:
Jeremy L. Gross
Contract Conflict Inquiry Representative
Chevron Pipe Line Company
2360 Buchanan Rd.
Pittsburg, CA 94565
TEL (925) 753-2003 FAX (925) 0753-2030
jgpf@chevron.com

January 22, 2013

Jay Davidson
1110 West Capitol Avenue, 2nd Floor
West Sacramento, CA

PROPOSED PIONEER BLUFF BRIDGE PROJECT CITY OF WEST SACRAMENTO
CHEVRON'S BAPL M.P. 46.45

Dear Mr. Davidson:

Thank you for giving us the opportunity to express some concerns. We would like to give you a little background on our pipelines and some of the safety requirements we require before allowing any work near our pipelines.

Chevron received your public notice for the proposed Pioneer Bluff Bridge Project.

Chevron operates one (1) active pipeline in the vicinity of the Pioneer Bluff Bridge Project. This 8-inch buried pipeline runs parallel to South River Road to the south before it crosses the deep water channel. This high pressure pipeline transports petroleum products. Extreme caution should be used when excavating, drilling, or grading around this pipeline.

You are being sent an aerial image delineating the approximate location of Chevron Pipe Line Company's BAPL pipeline. Chevron assumes no responsibility for the accuracy of these drawings and they should be used only for the general location of our facilities. Actual depths and alignment can only be determined by field checking and potholing the pipeline. Chevron will provide a Facility Inspector to mark and help locate our pipeline. Your company would be responsible to provide a backhoe and operator and a surveyor if needed.

OKLAHOMA CITY, OK 405-528-5676 CORPORATE OFFICE
ALBANY, NEW YORK 518-438-4499
TAMPA, FLORIDA 813-623-6446
HOUSTON, TEXAS 281-583-7300

We consider your request as very preliminary fact finding. Chevron will require several weeks of lead time to provide any detailed information regarding facilities and right-of-way information. A request for more specific information should be requested through Jeremy Gross (Contract Conflict Inquiry Specialist) at (925) 753-2003, mailing address 2360 Buchanan Rd., Pittsburg, Ca. 94565.

Our pipelines are operated and maintained under Federal Regulations (D.O.T. 195) and State Regulations (California Pipeline Safety Act).

Chevron, Federal, and State regulations require 12-inches (minimum) clearance between petroleum pipeline and other cross-lines that intersect at a 90° angle (perpendicular to each other).
If the intersection angle is less than 90°, the minimum clearance between the two pipelines must be 24-inches or greater.

Chevron recommends that the potholing of the Chevron pipeline be done before construction plans are completed so conflicts between your proposed road reconstruction project and our pipeline can be avoided. Chevron requires that arrangements for potholing of its pipelines be made at least forty-eight (48) hours in advance with Jeremy Gross at (925) 753-2003. Chevron will provide a Facility Inspector to locate the pipelines and assist with the potholing.

Regarding restrictions on development over our pipelines, most of our easements do not restrict paving or landscaping as long as encroachment clearances are maintained. That is, no less than 24-inches of undisturbed clearance between the top of pipe and bottom of the subgrade for paving and grass or shallow rooted plants on the easements. Deep-rooted trees and all structures are prohibited. All excavations within 24-inches of Chevron's facilities must be done by hand tools only. I would also like to add that the use of heavy vibratory equipment is prohibited over our pipelines.

Chevron must review and approve all construction plans that involve right of way encroachments. All work that would affect our pipeline needs to be coordinated with our office at 2360 Buchanan Rd., Pittsburg, Ca. 94565.

Notify Underground Service Alert (USA) at 800-227-2600 at least 48 hours prior to any excavation work. If you have any questions or need additional information, please contact me at (925) 753-2003. Thank you for the advance notice on this project, we look forward to working with you.

Respectfully,

Jeremy Gross
Contract Conflict Inquiry Specialist
For Chevron Pipe Line Company

File: Pioneer Bluff Bridge Project.doc

OKLAHOMA CITY, OK
405-528-5676
CORPORATE OFFICE

ALBANY, NEW YORK
518-438-4499

COATES

TAMPA, FLORIDA
813-623-6446

HOUSTON, TEXAS
281-583-7300

Response 6:

The City has reviewed the aerial you provided showing the approximate location of an active pipeline operated by Chevron. As part of utility coordination for the project with Rand Reynolds, Land Representative, as-builts were also reviewed. No Chevron utilities are within the project area.

Comment 7:

Walt Seifert (comment received via email letter dated February 11, 2013).

From: Walt Seifert [mailto:[redacted]
Sent: Monday, February 11, 2013 12:33 AM
To: Davidson, Jay
Cc: David Shpak; Villegas, Oscar; Christopher Cabaldon
Subject: Pioneer Bluff Bridge Project

Dear Mr. Davidson,

Thanks for the opportunity to comment on this project.

The project description does not mention whether there will be bike lanes on the new bridge. Bike lanes on the bridge are essential as the bridge will cross an existing significant barrier to bicycle travel. The volume of bicycles on the bridge can be expected to be significant and there is considerable potential for future growth in bicycle volume on this key connection.

The description of the changes to the 15th Street/South River Road intersection does not mention whether there will be a bike lane for southbound through cyclists to the left of any possible right turn only lane serving 15th Street. (The initial study drawing does not show a right turn only lane, which seems like it would be a given at this intersection.) Again, considering the volume of cyclists, such a bike lane should be included in the project. The diagram of the intersection in the initial study shows no bike lanes on any portion of the changed intersection. Bike lanes should exist throughout the intersection. A

The cities of Sacramento and West Sacramento are evaluating potential locations for new Sacramento River bridges. The Pioneer Bluff Bridge Project should take into consideration those possible bridge locations and any road and bikeway connections. B

As this bridge will be a more neighborhood-friendly and neighborhood-scale alternative to the Jefferson Blvd. arterial, a design speed of less than 45MPH might be desirable. A lower design speed would make the road more comfortable and safer for use by bicyclists and pedestrians. Since the extension of South River Road ends at perpendicular intersection, a lower design speed would likely be safer for southbound motorists as well who will have to slow or stop for the intersection anyway. C

If there are any existing or potential plans for a bike path along the barge canal, related design issues should be considered in the bridge design. D

The initial study concludes the aesthetic impact of the new bridge will be less than significant. However, the bridge will be a large permanent structure, both blocking views and offering new views. As the surrounding area, including the planned park, is developed, the appearance of the bridge will become even more important. I believe the appearance of the bridge will have a significant aesthetic impact that will affect both bridge users and observers. E

The initial study concludes the air quality impact of the new bridge will be less than significant and that there would be no impact on greenhouse gas emissions. The new bridge would likely encourage more vehicle, more pedestrian and more bicycle trips. It may in fact have a beneficial impact on air quality and greenhouse gas emissions in the long term, but this is not certain. Trip generation should be considered. F

Walt Seifert

Response 7:

A) A bike lane for southbound through cyclists is not proposed, because the project does necessitate a right turn only lane for southbound South River Road traffic. Improvements at the intersection are related to the installation of traffic lights and the intersection is not being widened. The project will maintain the currently existing Class II bicycle lanes at the 15th Street/South River Road intersection.

B) As part of developing this project and design of the bridge, the City has considered the local and regional circulation plans, including potential future bridge locations and bikeway connections.

C) Pioneer Bluff Bridge and the roadway are designed per the City of West Sacramento's standards for "collector" and "arterial." The project design speed was established based on safety and these standards. Posted speed limits will be determined at a later stage.

D) The project bridge and roadway are consistent with planned bicycle facilities, which are Class II lanes over the bridge and on South River Road. The West Sacramento Bicycle, Pedestrian, and Trails Master Plan – Draft, indicates a Class I bike trail along Barge Canal and the Sacramento River in the future. The Class I bike trail is outside the scope of the Pioneer Bluff Bridge project. The Pioneer Bluff Bridge project does not preclude or hinder the construction of a Class I bike trail along Barge Canal and the Sacramento River in the future.

E) Please refer to Measure AES-1 which describes consideration of aesthetics during Final Design. AES-1 states:

> AES-1: During final design, aesthetics will be considered by the City for consistency with local goals and standards.

Future land uses, such as parks as you mentioned, will be considered during Final design. Included below is the CEQA Checklist I. Aesthetics, for guidelines used in evaluating significance.

CEQA Environmental Checklist

City of West Sacramento	N/A	N/A
Dist.-Co.-Rte.	P.M/P.M.	E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

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

The project site does not affect a scenic vista or degrade visual character or quality as it currently is adjacent to industrial facilities and the project site does not contain designated scenic resources. Also, light and glare will be minimized through measure AES-2. AES-2 states:

> AES-2: Selection of lighting fixtures will take into account minimizing glare, while taking into account safety needs.

For these reasons, the City has not changed the “Less Than Significant Impact” finding in the Final IS/MND.

We would like to note that the bridge design now includes a small pedestrian outlook on each side of the bridge. This is anticipated to enhance views of the bridge.

F) “Trip generation” is largely a result of new land uses, such as residential and commercial uses, that draw people to an area. This project does not include such land uses. By providing an alternate route, trips from current and future land uses would be able to use this alternative route and therefore redistribute some traffic in the local circulation system. Due to the redistribution of traffic (and not increasing the number of automobiles in the traffic system) no impacts to greenhouse gas emissions are anticipated.

Comment 8:

Jordan Lang, Sacramento Area Bicycle Advocates (comment letter dated February 11, 2013).

SACRAMENTO AREA BICYCLE ADVOCATES

February 11, 2013

Jay Davidson, P.E.
Project Manager
City of West Sacramento
1110 West Capitol Avenue, 2nd Floor
West Sacramento, CA 95691
jayd@cityofwestsacramento.org

Subject: Initial Study and Mitigated Negative Declaration (ISMND) for the Pioneer Bluff Bridge Project

Dear Mr. Davidson:

Thank you for the opportunity to comment on the ISMND for the Pioneer Bluff Bridge Project.

With construction of the new Pioneer Bluff Bridge, South River Road will become an important north-south route for bicycles across the Barge Canal as an alternative to the Jefferson Boulevard Bridge with its high-volume and high-speed vehicle traffic. The bridge will be an attractive route for bicyclists commuting from residential neighborhoods south of the canal to employment centers in West Sacramento and Sacramento.

We appreciate that the bridge will be wide enough for bicycle lanes and pedestrian pathways in the future. We look forward to future bicycle facilities along South River Road both south and north of the new bridge.

The proposed project will include signalization and restriping of the intersection of South River Road and 15th Street (see Figure 3b in the ISMND). Many bicyclists now use 15th Street to get from Jefferson Boulevard and residential neighborhoods west of Jefferson Boulevard to the new River Walk Trail and Tower Bridge into Sacramento.

A

We request that the restriping of the 15th Street intersection include bicycle lanes through the intersection on both South River Road and 15th Street. These new bicycle lanes should include a left-turn lane for bicyclists from eastbound 15th Street onto northbound South River Road to separate bicyclists from heavy truck traffic in that area. The right-of-way on 15th Street appears to be adequately wide for such a left-turn bicycle lane.

B

We request that Sacramento Area Bicycle Advocates be notified of all future transportation projects in West Sacramento. We represent bicyclists throughout the Sacramento region and have many members who live in West Sacramento.

C

909 12TH STREET, SUITE 116 SACRAMENTO, CA 95814 (916) 444-6600 WWW.SACBIKE.ORG

SABA works to ensure that bicycling is safe, convenient, and desirable for everyday transportation. Bicycling is the healthiest, cleanest, cheapest, quietest, most energy efficient, and least congesting form of transportation.

C (cont'd)

Thank you for considering our comments and requests.

Sincerely,

Jordan Lang
Project Analyst

2

Response 8

A) The City acknowledges your positive response to the proposed facility. The bridge will be striped for bicycle lanes.

B) The City acknowledges the Sacramento Area Bicycle Advocates request for restriping of 15th/South River Road intersection to include bicycle lanes. Based on questions on bicycle lanes, the transportation section of the IS/MND includes the following further detail:

> The project will include bicycle lanes on the bridge. South River Road south of the bridge, within the project footprint, will include 6-foot shoulders for informal pedestrian access. The project will maintain the currently existing Class II bicycle lanes at the 15th Street/South River Road intersection.

C) The City appreciates your involvement in this process. The City will make efforts to include Sacramento Area Bicycle Advocates in future transportation plans.

Comment 9:

Trevor Cleak, Central Valley Regional Water Quality Control Board (comment letter dated February 8, 2013).

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

8 February 2013

Jay Davidson
City of West Sacramento
1110 West Capitol Avenue
West Sacramento, CA 95691

CERTIFIED MAIL
7012 0470 0000 9904 4540

COMMENTS TO REQUEST FOR REVIEW FOR THE DRAFT MITIGATED NEGATIVE DECLARATION, PIONEER BLUFF BRIDGE PROJECT, SCH NO. 2013012030, YOLO COUNTY

Pursuant to the State Clearinghouse's 11 January 2013 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Draft Mitigated Negative Declaration* for the Pioneer Bluff Bridge Project, located in Yolo County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

(Comment 9 cont'd)

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 97-03-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit, or any other federal permit, is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

(Comment 9 cont'd)

Pioneer Bluff Bridge Project - 3 - 8 February 2013
Yolo County

Waste Discharge Requirements

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project will require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

If you have questions regarding these comments, please contact me at (916) 464-4684 or tcleak@waterboards.ca.gov.

for Trevor Cleak
Environmental Scientist

cc: State Clearinghouse Unit, Governor's Office of Planning and Research, Sacramento

Response 9: Thank you for your comment. The permits mentioned in this Central Valley Regional Water Quality Control Board comment letter have been considered. Pursuant to measure BIO-3, Clean Water Act 401 and 404 permits and a Fish and Wildlife Code Section 1602 Streambed Alteration Agreement shall be obtained prior to construction.

Comment 10:

Scott Wilson, California Department of Fish and Wildlife, (comment letter dated February 11, 2013).

State of California – The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
7329 Silverado Trail
Napa, CA 94558
(707) 944-5500
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

February 11, 2013

Mr. Jay Davidson, P.E.
Project Manager
City of West Sacramento
1110 West Capitol Avenue
West Sacramento, CA 95691

Dear Mr. Davidson:

Subject: Pioneer Bluff Bridge Project, Initial Study/Mitigated Negative Declaration, SCH #2013012030, City of West Sacramento, Yolo County

The California Department of Fish and Wildlife (CDFW) has reviewed the Initial Study/Mitigated Negative Declaration (IS/MND) provided for the Pioneer Bluff Bridge Project. The CDFW is providing comments on the proposed MND as a Trustee Agency and Responsible Agency. As Trustee for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of the fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of such species for the benefit and use by the people of California. CDFW is also considered a responsible agency if a project would require a discretionary approval, such as a California Endangered Species Act (CESA) Permit or a Lake and Streambed Alteration Agreement (LSAA).

The City of West Sacramento proposes to construct a bridge that will connect South River Road on the north side of Barge Canal to South River Road on the south side of Barge Canal, on the eastern edge of the City of West Sacramento in Yolo County. The purpose of the bridge would be to provide an additional north-south roadway alternative to avoid heavy north-south congestion on Jefferson Boulevard. Construction is expected to begin in the summer of 2013 and take approximately nine months to complete the project.

Specific Comments

The IS/MND notes on page 26 that the project would result in the permanent impact of approximately 0.35 acres of Valley foothill riparian vegetation and would require the removal of approximately 1.24 acres of natural riparian vegetation. According to page 31 of the IS/MND, "The project footprint includes a total of 322 riparian trees (over 4 inches in diameter), and of these, 36 are heritage trees and/or native oak trees. A majority of the trees may require removal. The project will save as many riparian heritage trees as possible." We recommend the City of West Sacramento consider another crossing alternative for the proposed project, which is closer to Jefferson Avenue where there are fewer trees and riparian vegetation that will be impacted.

A

Conserving California's Wildlife Since 1870

(Comment 10 continued)

On page 26 of the IS/MND, Mitigation Measure BIO-2 requires a revegetation plan to compensate for the loss of riparian vegetation. We request that a revegetation plan be added to Mitigation Measure BIO-2, which includes replacement ratios and submission to CDFW for review and approval prior to any ground disturbing activities associated with the proposed project. B

On page 32 of the IS/MND, Mitigation Measure BIO-4 states that "A tree permit will be obtained from the City of West Sacramento's Tree Administrator to remove Heritage or Landmark trees. Replacement trees will be planted in accordance with conditions of the tree permit." The large trees that would be removed are potential Swainson's hawk nesting trees. Therefore, we request that a tree replacement plan be added to Mitigation Measure BIO-4, which includes replacement ratios and submission to CDFW for review and approval prior any ground disturbing activities associated with the proposed project. C

Page 33 of the IS/MND should include a discussion of Swainson's hawk as it is a bird species that has a high potential to occur within the project area, and there is a mitigation measure associated with potential impacts to Swainson's hawk on page 34 of the IS/MND. In addition, the removal of up to 36 large trees would have an impact on the number of nesting trees in the project area. Please note that the best time for the removal of potential Swainson's hawk nesting trees is July 31 to February 15, and that surveys would need to be completed prior to removal in order to verify the absence of any active nests. D

Page 37 of the IS/MND notes that Swainson's hawk have been documented on the California Natural Diversity Data Base (CNDDB) with more than 20 occurrences within a 5-mile radius of the project site. The CNDDB shows a specific Swainson's hawk breeding territory approximately 1,200 feet from the project site. Page 37 of the IS/MND also notes a high potential for Swainson's hawk to occur in the project area, but that a survey was completed on November 16, 2012, which did not identify any nests on the project site. Nesting season for Swainson's hawk is generally March 1 through July 31. E

On page 34 of the MND, Mitigation Measure BIO-6 requires a focused survey for Swainson's hawk within the project limits of disturbance, including a 500-foot buffer. CDFW requires that a Swainson's hawk survey be completed on the project site and out to ¼-mile radius of the project site. CDFW also recommends that surveys be completed in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee, May 2000). F

Lake and Streambed Alteration Agreement

CDFW will require an LSAA, pursuant to Fish and Game Code Section 1600 et seq., with the City of West Sacramento for the proposed project-related activities within and along the banks of Barge Canal. Notification is required for any activity that will divert or obstruct the G

(Comment 10 continued)

natural flow, change the bed, channel, or bank including associated riparian or wetland/marsh resources, use material from the stream/channel bed, or substantially adversely affect fish and wildlife resources.

Page 30 of the IS/MND includes Mitigation Measure BIO-3 that has language regarding obtaining an LSAA. We would like to note that the City of West Sacramento is currently consulting with CDFW on the preparation of an LSAA for the Pioneer Bluff Bridge Project. Issuance of an LSAA is subject to the California Environmental Quality Act (CEQA). CDFW, as a responsible agency under CEQA, will consider the CEQA document for the project. Therefore, the CEQA document must specify impacts, mitigation measures, and include a mitigation monitoring and reporting program.

California Endangered Species Act

Please be advised that a CESA Permit must be obtained if the project has the potential to result in take of species of plants or animals listed under CESA, either during construction or over the life of the project. Issuance of a CESA Permit is subject to CEQA documentation. If the project will or has the potential to impact CESA listed species, early consultation is encouraged, as significant modification to the project and mitigation measures may be required in order to obtain a CESA Permit. To obtain information about the CESA permit process, please access our website at http://www.dfg.ca.gov/habcon/cesa/.

If you have any questions, please contact Ms. Crystal Spurr, Senior Environmental Scientist, at (209) 948-3777; or Mr. Jim Starr, Environmental Program Manager, at (209) 941-1944.

Sincerely,

for Scott Wilson
Acting Regional Manager
Bay Delta Region

cc: State Clearinghouse

G
(cont'd)

Response 10:

A) Based on recent coordination and feedback from CDFW for the 1602 Streambed Alteration Agreement, impacts to riparian areas at the project site have been minimized to the extent feasible, including the reduction of construction access. Within the CDFW jurisdiction approximately 117 trees will be removed, 19 of which are considered heritage trees.

B) Measure BIO-2 was revised per CDFW's comment. Measure BIO-2 now states:

> BIO-2: The project will create a re-vegetation/tree-replacement plan to compensate for loss of riparian vegetation. The re-vegetation plan will include replacement ratios and submission to CDFW for review and approval prior to any ground disturbing activities associated with the proposed project.

C) Measure BIO-4 was revised per CDFW's comment. Measure BIO-4 now states:

> BIO-4: A tree permit will be obtained from the City of West Sacramento's Tree Administrator to remove heritage or Landmark trees. Replacement trees will be planted in accordance with conditions of the tree permit.
>
> A revegetation plan/tree replacement plan will include replacement ratios and will be submitted to CDFW for review and approval prior to any ground disturbing activities associated with the project.

D) The discussion of Swainson's hawk was included in Section 2.3.5 because it is a State-threatened species.

E) The discussion on Swainson's hawk in Section 2.3.5 was revised to include information provided by CDFW.

F) Please see what is now Measure BIO-7, which is specific to Swainson's hawk. BIO-7 includes CDFW's requirements and recommendations. Measure BIO-7 states:

> BIO-7: For Swainson's Hawk, if vegetation removal or work is to occur during the Swainson's Hawk nesting season (February 15 – July 31), a preconstruction survey shall be performed by the project biologist, in coordination with the CDFW, to determine if Swainson's hawk nests occur on the project site or within ¼ mile of the project site. At the discretion of CDFW, trees may be removed between February 15 and July 31 provided a biologist survey the proposed trees designated to be removed to verify the absence of an active nest. Preconstruction surveys shall be conducted during the nesting season at least 5 days prior to project activities and again 72 hours prior to project activities to determine if there are any Swainson's hawk nests on the project site and within ¼ mile of the project site. Surveys shall be completed using the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Tech. Advis. Comm., 5/2000). Survey results shall be submitted to CDFW prior to commencement of work. No trees shall be disturbed that contain active bird nests until all eggs have hatched and young birds have fledged.

If active Swainson's hawks nest(s) are present, a biological monitor would be needed to ensure that the project activities are not disturbing nesting Swainson's hawks. If project activities are disturbing a nesting hawk (at any point before fledging of young), it's likely that the project activities would have to stop until the young have fledged. CDFW may require the project to provide $10,000 per construction year to the Swainson's Hawk Technical Advisory Committee (TAC) in each year that an active Swainson's hawk nest is closer than ¼-mile to the active construction site. If a nest is abandoned and nestlings are still alive, the project shall fund the recovery and hacking (controlled release) of the nestlings. If a nest is abandoned and the nestlings do not survive, the project shall develop ¼ acre of riparian forest and grant permanent conservation easements over that riparian forest in a location and in a form acceptable to CDFW. The easements shall be provided no later than 12 months after nest abandonment.

G) The IS/MND CEQA document specifies impacts, mitigation measures, and includes a mitigation monitoring and reporting program. To more clearly demonstrate this, Appendix C was revised to state "Mitigation, Monitoring, and Reporting Program" instead of "Mitigation and/or Minimization Summary."

Comment 11:

Joshua Bush (via email received February 11, 2013). Comments provided in PDF.

From: Joshua Bush [mailto:[redacted]@gmail.com]
Sent: Monday, February 11, 2013 5:02 PM
To: Davidson, Jay
Subject: Pioneer Bluff Bridge Project Comments

Hi Jay,

My comments are located in comment bubbles embedded within the attached document. Thank you for the opportunity.

Sincerely,

Joshua Bush

[redacted] St.
West Sacramento CA 95691
916-[redacted]

A) Title Page: A view or perspective of where the bridge would be would be better than the blighted picture chosen.

B) Page ix, Summary of Potential Impacts from Alternatives-Recreation: How will use of the "Honda Hills" area be affected? To my knowledge off road activity there is illegal and it should not be allowed.

C) Page ix, Summary of Potential Impacts from Alternatives - Mandatory Findings of Significance: Timing to avoid impacts to tree nesting birds should also be taken. Proposed summer construction is nesting and brooding season for Swainson's Hawk.

D) Page 1, Chapter 1 – Introduction: Has a study been done to estimate the reduction of traffic on Jefferson? Numbers would be appreciated and substantiate this claim. The congestion reduction in relation to railroad cargo will be minimal at best. It would only help in one direction...

E) Page 1, Chapter 1 - Build Alternative: Why allow for 4-lanes? Unnecessary. The river road is only two lanes. Is this going to change?

F) Page 26, Chapter 2 - BIO-2: Where will this be planted? What is considered near? What is the reveg plan?

G) Page 27, Chapter 2 – Figure 7a: This area has large oaks and although disturbed there is some habitat in area. Need another classification. Does not fit normal definition of disturbed, i.e. buildings.

H) Page 32, Chapter 2 - BIO-4: Where will they be planted? What will be the replacement planting ratio?

I) Page 36, Chapter 2—Affected Environment: Burrowing owl has potential to be in the BSA. It is currently classified as a California SSC. It should be included in the survey.

J) Page B-4, Appendix B—Listed and Proposed Species Potentially Occurring or Known to Occur in the Project Area, Burrowing Owl: There is habitat within the BSA that fits this description. There is a high potential for BUOW to be present. There is disturbed open habitat which your General Habitat Description details.

K) Page B-6, Appendix B—Listed and Proposed Species Potentially Occurring or Known to Occur in the Project Area, American Badger: Badger was found hit at current barge canal crossing on Jefferson Blvd ~5 years ago. Animal picked up by Yolo Animal Control Officer Shala Shores.

L) Page C-4, Appendix C—Mitigation and/or Minimization Summary: Details of re-vegetation needed.

Response 11:

A) Numerous photographs were taken during various site visits and the photograph in the front cover was chosen because it provides a representative context (near the Stone Locks) to where the bridge would be placed. Photographs taken standing at the alignment and along the Barge Canal were typically blocked by trees and provide a narrow perspective.

B) The City assumes this is in reference to the area located south of South River Road, east of Marina Greens Drive. The project limits generally end at South River Road outside this area and the project's goal is not to promote or condone off road activities.

C) Timing of construction and vegetation removal will also consider Swainson's hawk and nesting birds. The project's measures BIO-6 and BIO-7 for nesting birds and Swainson's hawk are below:

> BIO-6: To ensure compliance with MBTA and CDFW code, vegetation removal and work should be avoided outside the nesting season (defined as Feb 15 – August 15). If this is not possible and vegetation removal or work that could disturb nesting is to occur during the nesting season, a pre-construction survey shall be conducted at least 5 days prior to project activities. The pre-construction survey shall be performed by a qualified biologist, to determine the presence of nesting birds and ensure active nests are not directly or indirectly impacted during construction. The pre-construction survey area will include the limits of the project impact area plus a 300-ft buffer. If disrupting work is planned to begin in an area during the nesting season (February 15 – August 15), all vegetation removal shall be completed within one week of the nesting survey if the survey determines no active nests are present.
>
> BIO-7: For Swainson's hawk, if vegetation removal or work is to occur during the Swainson's hawk nesting season (February 15 – July 31), a preconstruction survey shall be performed by the project biologist, in coordination with the CDFW, to

determine if Swainson's hawk nests occur on the project site or within ¼ mile of the project site. At the discretion of CDFW, trees may be removed between February 15 and July 31 provided a biologist survey the proposed trees designated to be removed to verify the absence of an active nest. Preconstruction surveys shall be conducted during the nesting season at least 5 days prior to project activities and again 72 hours prior to project activities to determine if there are any Swainson's hawk nests on the project site and within ¼ mile of the project site. Surveys shall be completed using the Recommended Timing and Methodology for Swainson's hawk Nesting Surveys in California's Central Valley (Swainson's hawk Tech. Advis. Comm., 5/2000). Survey results shall be submitted to CDFW prior to commencement of work. No trees shall be disturbed that contain active bird nests until all eggs have hatched and young birds have fledged.

If active Swainson's hawks nest(s) are present, a biological monitor would be needed to ensure that the project activities are not disturbing nesting Swainson's hawks. If project activities are disturbing a nesting hawk (at any point before fledging of young), it's likely that the project activities would have to stop until the young have fledged. CDFW may require the project to provide $10,000 per construction year to the Swainson's hawk Technical Advisory Committee (TAC) in each year that an active Swainson's hawk nest is closer than ¼-mile to the active construction site. If a nest is abandoned and nestlings are still alive, the project shall fund the recovery and hacking (controlled release) of the nestlings. If a nest is abandoned and the nestlings do not survive, the project shall develop ¼ acre of riparian forest and grant permanent conservation easements over that riparian forest in a location and in a form acceptable to CDFW. The easements shall be provided no later than 12 months after nest abandonment.

D) Yes, studies have been conducted by the traffic specialists Fehr and Peers. According to analysis results at the Jefferson Boulevard/15th Street intersection, the Pioneer Bluff Bridge would reduce vehicle delay by 20-30% and reduce queue spillback during the unit train crossing.

E) South River Road is planned for 4-lanes in the future, per the City's General Plan. The project must be consistent with this future planned widening. As discussed in Section 2.15 Transportation/Traffic, Affected Environment:

South River Road is a "Collector" roadway from Stone Boulevard northward and along Barge Canal and the Sacramento River levee. Across the Barge Canal, it is a "Future Arterial" designated in the City's General Plan. The City's General Plan includes the bridge under its major transportation projects, with the following project description: "Construct new four-lane bridge across Barge Canal, east of Jefferson Bridge." While the bridge would be open to two lanes of traffic upon completion of the project, the bridge structure would be wide enough to allow for 4-lanes. This is also consistent with what is planned in the Sacramento Area Council of Governments 2011 Metropolitan Transportation Improvement Program for South River Road, which is the following larger project, listed in page 128 of the 2011 MTIP: "Reconstruct and widen South River Road to 4 lanes from U.S. 50 on-ramp to Stonegate Boulevard, including a new 4-lane bridge over barge canal."

F) Revegetation locations are being investigated at this time. Off-site locations including those adjacent to the Deep Water Ship Channel may be used. Measure BIO-2 has been revised, as "nearby" locations may not be available due to flood control concerns and

future development plans. The revegetation plan will consist of native tree species naturally found adjacent to the revegetation site. The revegetation plan will contain irrigation, weeding, and monitoring requirements for at least three years. Per Measure BIO-2 and BIO-4, re-vegetation plans will be submitted to the City arborist, planning department, and CDFW for review and approval. The project's measures BIO-2 and BIO-4 are below:

> BIO-2: The project will create a re-vegetation/tree-replacement plan to compensate for loss of riparian vegetation. The re-vegetation plan will include replacement ratios and submission to CDFW for review and approval prior to any ground disturbing activities associated with the proposed project.
>
> BIO-4: A tree permit will be obtained from the City of West Sacramento's Tree Administrator to remove Heritage or Landmark trees. Replacement trees will be planted in accordance with conditions of the tree permit.
>
> A revegetation plan/tree replacement plan will include replacement ratios and will be submitted to CDFW for review and approval prior to any ground disturbing activities associated with the project.

G) The area labeled as "disturbed" was retained because this is a heavily disturbed area due to off road vehicles, old roads, and non-native grasses.

H) Please see the answer to "F". The City is currently coordinating with CDFW to establish replacement planting ratios. At this time, ratios may be 8:1 for 15+ inch trees and 5:1 for 4-15 inch trees. The City also requires a 1:1 replacement ratio for every inch of heritage tree removed.

I) Habitat was determined unsuitable for burrowing owl based on surveys conducted on November 16, 2012 of the entire BSA. Areas were found to be too densely vegetated, heavily disturbed and compacted, and/or lacking potential burrows..

J) The area characterized as disturbed open habitat is compacted and lacks potential burrows or sign of previous inhabitance by burrowing owls.

K) American badgers will often re-use their constructed dens and as their diet is dependent on fossorial rodents, especially ground squirrels and pocket gophers, the species is frequently digging out prey. Surveys of the biological study area (BSA) did not detect any current or historic American badger dens, or burrows created during prey excavation. The reconnaissance surveys determined the BSA contained insufficient habitat to support the species and does not contain an adequate prey base. In addition, undeveloped lands contiguous with the southern limits of the BSA totals approximately 90 acres, an area much smaller than a typical badger home range; the average home range of badgers approximate 330-1,700 acres. Given the lack of burrow sign during surveys, insufficient habitat and prey base, and contiguous acreages outside of the typical home range, the species was presumed absent.

L) Please refer to answers "F" and "H".

Comment 12:

Scott Morgan, Director, State Clearinghouse (letter dated February 14, 2013

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

February 12, 2013

Jay Davidson
City of West Sacramento
1110 W. Capitol Avenue
West Sacramento, CA 95691

Subject: Pioneer Bluff Bridge
SCH#: 2013012030

Dear Jay Davidson:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on February 11, 2013, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2013012030
Project Title Pioneer Bluff Bridge
Lead Agency West Sacramento, City of

Type MND Mitigated Negative Declaration

Description The City of West Sacramento proposes to build a bridge that will connect the existing two-lane South River Road from the South River Road cul-de-sac on the north side of the Barge Canal to South River Road on the south side of the Barge Canal. The bridge will include one 12-foot lane in each direction and one future un-striped 12-foot lane in each direction, a 2-foot raised median, two 4 to 6-foot shoulders, and two 6-foot walkways separated from traffic by a concrete barrier. The project will signalize the intersection of 15th Street and South River Road. The purpose of the Pioneer Bluff Bridge Project is to construct a bridge that connects South River Road across the Barge Canal.

Lead Agency Contact

Name Jay Davidson
Agency City of West Sacramento
Phone (916) 617-4645 **Fax**
email
Address 1110 W. Capitol Avenue
City West Sacramento **State** CA **Zip** 95691

Project Location

County Yolo
City West Sacramento
Region
Lat / Long 38° 33' 40.8" N / 121° 31' 24.3" W
Cross Streets South River Road and Barge Canal
Parcel No. 0671800010
Township 8N **Range** 4E **Section** **Base** MDB&M

Proximity to:

Highways I-5, 50, SR-99, 275
Airports Sacramento Executive
Railways UPRR
Waterways Sacramento River Deep Water Ship Channel
Schools Stonegate ES
Land Use Arterial Roadway, Waterfront (WF), Recreations and Parks (RP)

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Flood Plain/Flooding; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Boating and Waterways; Department of Fish and Wildlife, Region 2; Department of Parks and Recreation; Central Valley Flood Protection Board; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 3 S; Air Resources Board, Transportation Projects; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Native American Heritage Commission; Public Utilities Commission; State Lands Commission

Date Received 01/11/2013 **Start of Review** 01/11/2013 **End of Review** 02/11/2013

Response 12:

This comment letter has been included in the final environmental document. The letter acknowledges that the project has complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. This State Clearinghouse letter refers to an enclosed agency comment letter, which was from the Central Valley Regional Water Quality Control Board, dated February 8, 2013 (see Comment 9).

Chapter 4 List of Preparers

CITY OF WEST SACRAMENTO

Jay Davidson, Project Manager, Public Works Department

DOKKEN ENGINEERING

Project Design, Environmental Document, Biology, Cultural

Rick Liptak, P.E., Project Manager.

Juann Ramos, P.E., Project Engineer.

Namat Hosseinion, Senior Environmental Planner. B.A. and M.A., Anthropology; 14 years environmental planning experience. Contribution: Environmental manager.

Sarah Holm, Associate Environmental Planner. B.A., Biology and B.S., Environmental Science; 6 years environmental planning experience. Contribution: Environmental manager, biological resources.

Cherry Zamora, Associate Environmental Planner. B.A. and M.A., Geography; 8 years environmental planning experience. Contribution: Environmental document preparation.

Angela Scudiere, Environmental Planner/Biologist. B.S. in Biological Sciences (plant emphasis), 3 year environmental planning experience. Contribution: Biological resources.

Carolyn Daman, Environmental Planner/Biologist. B.S. in Zoology; 7 years experience in biological studies.

Amy Dunay, Environmental Planner/Archaeologist. M.A. in Archaeology; 4 years of experience in cultural resources/environmental planning. Contribution: Cultural Resources and Hazardous Waste.

Zach Liptak, Environmental Assistant. B.S in Environmental Studies (in progress); 2 years environmental planning experience. Contribution: Air quality and noise.

Chapter 5 **Distribution List**

Notice of Availability (unless IS hardcopies specified)

Utilities

Comcast
Attn: Tommy Hinsen
Construction Specialist
6505 Tam O'Shanter Drive
Stockton, CA 95210

PG&E Service Planning
Attn: Alvina Sobers
Sr. New Business Rep.
242 North West Street
Woodland, CA 95695

Level 3 Communications
Attn: Matt Prink
Business Analyst
1025 Eldorado Blvd, 33A-525
Broomfield, CO 80021

Reclamation District 900
Attn: Ken Ruzich
1420 Merkley Ave. #4
West Sacramento, CA 95691

Kinder Morgan
Attn: Mark Sabeti, PE
Pipeline Engineer
1100 W. Town and Country Rd
Orange, CA 92868

AT&T
Attn: Astrid Williard
Manager
3675 T Street, Rm 170
Sacramento, CA 95814

X-O Communication
Attn: Steve Leohner
Inside Plant Manager
855 Mission Court
Fremont, CA 94539

X-O Communication
Attn: Chad Auchey
Implementation Engineer III
855 Mission Court
Fremont, CA 94539

City of West Sacramento-
Utilities
Attn: Dan Mount
1110 West Capitol Avenue
West Sacramento, CA 95691

Chevron
Attn: Rand Reynolds
Land Representative
2360 Buchanan Road
Pittsburg, CA 94565

Jon Cannon
MCI
2820 KOVR Drive
West Sacramento, CA 95605

City of West Sacramento-
Utilities
Attn: Mark Mitchel
1110 West Capitol Avenue
West Sacramento, CA 95691

Wave Broadband
1031 Triangle Ct
West Sacramento, CA 95605

Sacramento Regional County
Sanitation District
10060 Goethe Road
Sacramento, CA 95827

Regional Agencies

Sacramento Area Council of
Governments
1415 L Street, Suite 300
Sacramento, CA 95814

Yolo County Transportation
District
350 Industrial Way
Woodland, CA 95776

Yolo County
Planning and Public Works
292 West Beamer Street
Woodland, CA 95696

City of West Sacramento
Police Department
550 Jefferson Boulevard
Broderick, CA 95605

City of West Sacramento Fire
Department
2040 Lake Washington Blvd
West Sacramento, CA 95691

City of West Sacramento
Jay Davidson, P.E.
1110 West Capitol Avenue
West Sacramento, CA 95691
(IS Hardcopy)

Port of West Sacramento
Attn: Mike Luken
1110 West Capitol Avenue
West Sacramento, CA 95691

City of West Sacramento
Attn: Jim Bermudez
1110 West Capitol Avenue
West Sacramento, CA 95691

City of West Sacramento
Attn: Paulina Rosenthal
1110 West Capitol Avenue
West Sacramento, CA 95691

Matt Jones
Yolo-Solano Air Quality
Management District
1947 Galileo Ct., Suite 103
Davis, CA 95618

Interested Parties/Organizations

Kesner Flores
P.O. Box 1047
Wheatland, CA 95692

Cortina Band of Indians
Charlie Wright, Chairperson
P.O. Box 1630
Williams, CA 95987

Cortina Winton Environmental
Protection Agency
P.O. Box 16360
Williams, CA 95987

Yocha Dehe Wintun Nation
Marshall McKay, Chairperson
P.O. Box 18
Brooks, CA 95606

Federal Agencies

National Oceanic and
Atmospheric Administration
National Marine Fisheries
Service
Attn: Dylan Van Dyne
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814-4708

US Army Corps of Engineers
Sacramento District
Attn: Marc Fugler
1325 J Street, Rm 1350
Sacramento, CA 95814

US Fish & Wildlife Service
Attn: Brian Hansen
650 Capitol Mall, 8th Flr
Sacramento, CA 95814

Central Valley Flood Protection
Board
Attn: Nancy Moricz
3310 El Camino Ave, LL40
Sacramento, CA 95821
(IS Hardcopy)

Central Valley Flood Protection
Board
Attn: James Herota
3310 El Camino Avenue,
Room 151
Sacramento, CA 95821

State Agencies

State Clearinghouse
Office of Planning & Research
1400 Tenth Street
P.O.Box 3044
Sacramento, CA 95812-3044
(IS Hardcopies)

California Department of Fish
& Wildlife
Attn: Crystal Spurr
Senior Environmental Scientist
Bay Delta Region
4001 N. Wilson Way
Stockton, CA 95205
(IS Hardcopy)

Caltrans District 3
703 B Street
Marysville, CA

California Transportation
Commission
Attn: Laura Pennebaker
1120 N Street, MS 52
Sacramento, CA 95814
(IS Hardcopy)

California Department of
Transportation
Attn: Dawn Cheser
1120 N. Street
Sacramento, CA 95814
(IS Hardcopy)

California Department of Fish
and Wildlife, Region 3
Attn: Scott Wilson
7329 Silverado Trail
Napa, CA 94558

California Department of Fish and Wildlife, Region 2
Attn: Paul Hofmann
402 S. Merrill Avenue
Willows, CA 95988

California Department of Fish and Wildlife, Water Branch
Attn: Gina Ford
830 S Street
Sacramento, CA 95811

VIA State Clearinghouse:

- Air Resources Board
- California Dept. of Boating and Waterways
- Native American Heritage Commission
- Central Valley RWQCB
- California State Lands Commission
- Department of Toxic Substances Control

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Appendix A CEQA Checklist

Supporting documentation of all CEQA checklist determinations is provided in Chapter 2 of this Initial Study. Documentation of "No Impact" determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or compensation measures is under the appropriate topic headings in Chapter 2.

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CEQA Environmental Checklist

City of West Sacramento	**N/A**	**N/A**
Dist.-Co.-Rte.	P.M/P.M.	E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

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

II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	☐	☐	☒	☐
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIV. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☒	☐
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒
XV. RECREATION:				
a) Would the project 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?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Appendix B Listed and Proposed Species Potentially Occurring or Known to Occur in the Project Area

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Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
Plant Species					
Wooly rose-mallow	*Hibiscus lasiocarpos var. occidentalis*	Fed: CA: CNPS	-- -- 1B.2	A perennial rhizomatous herb inhabiting freshwater wetlands, wet banks, and marshes. Flowers June-September (0-394 feet).	**Presumed absent**: No suitable marsh habitat present in project area; habitat determined unsuitable for wooly rose-mallow.
Northern California Black Walnut	*Juglans hindsii*	Fed: CA: CNPS	-- -- 1B.1	A deciduous tree inhabiting near streams and disturbed slopes in southern Sacramento valley. Flowers April-May (0-1,444 feet).	**Present:** Observed onsite during field survey November 16, 2012 near north side of the canal on the disturbed slope. Habitat evaluated as suitable for Northern California black walnut.
Sanford's arrowhead	*Sagittaria sanfordii*	Fed: CA: CNPS:	-- -- 1B.2	A perennial rhizomatous herb inhabiting freshwater marshes, swamps, ponds and ditches. Flowers May-October (0-2,132 feet).	**Presumed absent:** No suitable marsh habitat present in project area; habitat determined unsuitable for sanford's arrowheard.
Suisun Marsh aster	*Symphotrichum lentum*	Fed: CA: CNPS	-- -- 1B.2	A perennial rhizomatous herb inhabiting wetlands, freshwater marsh, and brackish-marsh communities. Flowers May-November (0-984 feet).	**Presumed absent**: No suitable marsh habitat present in project area; habitat determined unsuitable for suisun marsh aster.
Bearded popcornflower	*Plagiobothrys hystriculus*	Fed: CA: CNPS	-- -- 1B.1	An annual herb inhabiting mesic valley and foothill grassland, vernal pool margins and vernal swales. Flowers April-May (0-899 feet).	**Presumed absent**: No suitable foothill grassland or vernal pools present in project area; habitat determined unsuitable for bearded popcornflower.
Avian Species					
Tricolored blackbird	*Agelaius tricolor*	Fed: CA: DFG:	-- -- SSC	Inhabits Freshwater Marsh, Swamp and Wetland communities that can support large colonies often in the Central Valley area. Requires protected dense nesting	**Presumed absent**: Project area lacks wetland communities that can support colonies with dense nesting habitat; habitat determined unsuitable for tricolored blakbirds.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
				habitat, preferably in emergent wetland vegetation and foraging area with insect prey in close proximity to colony.	
Burrowing owl	*Athene cunicularia*	Fed: CA: DFG:	-- -- SSC	Species inhabits arid, open areas with sparse vegetation cover such as deserts, abandoned agricultural areas, grasslands, and disturbed open habitats. Requires friable soils for burrow construction (Below 5,300 feet).	**Presumed absent:** Project area lacks arid, open, sparse vegetation cover; habitat determined unsuitable for burrowing owls.
Swainson's hawk	*Buteo swainsoni*	Fed: CA: DFG:	-- T --	Inhabits grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, alfalfa or grain fields that support a stable rodent prey base. Breeds march to late August.	**High potential**: Project site contains trees, riparian vegetation and grassland potentially suitable for Swainson's hawk nesting and foraging. Within a 5 mile radius of project, more than 20 CNDDB occurrences documented. No Swainson's hawks or Swainson's hawk nests were observed onsite.
White-tailed kite	*Elanus leucurus*	Fed: CA: DFG:	-- -- FP	Inhabits rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Prefers open grasslands, meadows or marshes for foraging close to isolated, dense-topped trees for nesting and perching. Breeds February- October.	**Present**: Observed foraging over non-native disturbed grasslands outside study area on November 16, 2012 during field survey. Site presents possible nesting and foraging habitat. No nests were observed.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
Purple martin	*Progne subis*	Fed: CA: DFG:	-- -- SSC	Present in California as a summer migrant, arriving in March and departing by late September. Inhabits valley foothill and montane hardwood/hardwood-conifer, coniferous habitats and riparian habitats. Nests in tall, old, isolated trees or snags in open forest or woodland and in proximity to a body of water. Frequently nests within former woodpecker cavities; may nest in human-made structures such as nesting boxes, under bridges and in culverts. Breeds April-August.	**High Potential**: Project site contains riparian habitats, with proximity to water. Nearest CNDDB occurrence within 2 miles north and east of project site.
Bank swallow	*Riparia riparia*	Fed: CA: DFG:	-- T --	A migratory colonial nester inhabiting lowland and riparian habitats west of the desert during spring - fall. Majority of current breeding populations occur along the Sacramento and Feather rivers in the north Central Valley. Requires vertical banks or cliffs with fine textured/sandy soils for nesting (tunnel and burrow excavations). Nests exclusively near streams, rivers, lakes or the ocean. Breeds May-Jul.	**Presumed absent**: Project site lacks vertical banks or cliffs, and sandy soils required for bank swallows; habitat determined unsuitable for bank swallows.
Least Bell's vireo	*Vireo bellii pusillus*	Fed: CA:	E E	Summer resident of southern California inhabiting low	**Presumed absent:** Project site does not contain low/dense vegetation, willow dominating forests

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
		DFG:	--	riparian habitats in the vicinity of water and dry river bottoms. Prefers willows, baccharis, mesquite and other low, dense vegetation as nesting sites (below 2000 feet).	required for nesting for Least bell's vireo. No documentation on CNDDB within 5 miles.
Mammal Species					
American badger	*Taxidea taxus*	Fed: CA: DFG:	-- -- SSC	Prefers treeless, dry, open stages of most shrub and herbaceous habitats with friable soils and a supply of rodent prey. Species also inhabits forest glades and meadows, marshes, brushy areas, hot deserts, and mountain meadows. Species maintains burrows within home ranges estimated between 338-1,700 acres, dependent on seasonal activity. Burrows are frequently re-used, but new burrows may be created nightly. Young are born in March and April within burrows dug in relatively dry, often sandy, soil, usually in areas with sparse over story cover. Species is somewhat tolerant of human activity, but is sensitive to automobile mortality, trapping, and persistent poisons (up to 12,000 feet).	**Presumed absent.** Project site heavily disturbed and not comprised of sufficient prey availability. Surveys conducted in November 2012 observed no specimens or suitable burrows. Habitat was determined unsuitable for American badger.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
Amphibian Species					
California tiger salamander	*Ambystoma californiense*	Fed: CA: DFG:	T T SSC	Inhabits annual grasslands and the grassy understory of Valley-Foothill Hardwood communities. Requires underground refuges, especially ground squirrel burrows and vernal pools or other seasonal water sources for breeding.	**Presumed absent.** Vernal pools and other seasonal waters not present onsite nor the preferred grassy understory of valley-foothill hardwood habitats; habitat unsuitable for California tiger salamander.
California red-legged frog	*Rana draytonii*	Fed: CA: DFG:	T -- SSC	Inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development and must have access to estivation habitat. Occurs from elevations near sea level to 5,200 ft.	**Presumed absent**. Permanent source of deep water and riparian vegetation not present onsite; habitat unsuitable for California red-legged frog.
Reptile Species					
Giant garter snake	*Thamnophis gigas*	Fed: CA: DFG:	T T --	Inhabits marsh, swamp, wetland and riparian scrub habitats. Species requires adequate water during species' active season (early-spring through mid-fall), emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for	**Presumed absent.** Marsh, swamp, wetland vegetation habitats not present onsite; habitat unsuitable for Giant garter snake.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
				escape cover and foraging habitat. Requires grassy banks and openings in waterside vegetation for basking and higher elevation uplands for cover and refuge from flood waters during winter dormant season.	
Invertebrate Species					
Vernal pool fairy shrimp	*Branchinecta lynchi*	Fed: CA: DFG:	T -- --	Endemic to the grasslands of the Central Valley, Central Coast mountains and South Coast Mountains, in astatic rain-filled pools. Inhabits small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools. Species is dependent on seasonal fluctuations.	**Presumed absent:** Vernal sandstone-depression pools and grassy swale, earth slump, or basalt-flow depression pools are not present onsite; habitat unsuitable for vernal pool fairy shrimp.
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	Fed: CA: DFG:	T -- --	Requires elderberry shrubs (*Sambucus* sp.) as host plants. Typically in moist valley oak woodlands associated with riparian corridors in the lower Sacramento River and upper San Joaquin River drainages. Prefers elderberries 2-8 inches in diameter; some preference toward 'stressed' elderberries.	**High:** The site transects the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel) within a riparian corridor. Focused surveys on 3/17/2006 found the presence of requisite elderberry shrubs; updated focused surveys conducted on 11/16/2012 and 11/20/2012 re-confirmed elderberry shrubs in the Biological Study Area have old exit holes. No beetles were observed.
Vernal pool tadpole shrimp	*Lepidurus packardi*	Fed: CA: DFG:	E -- --	Inhabits vernal pools and swales containing clear to highly turbid waters such as pools located in grass	**Presumed absent:** Vernal pools and swales required for vernal pool tadpole shrimp are not present onsite; habitat unsuitable for Vernal pool tadpole shrimp.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
				bottomed swales of unplowed grasslands, old alluvial soils underlain by hardpan, and mud-bottomed pools with highly turbid water.	
Fish Species					
North American green sturgeon	*Acipenser medirostris*	Fed: CA: DFG:	T -- SSC	Most marine sturgeon species. Currently believed to only spawn in the Sacramento River, Rogue River, Klamath and Trinity Rivers (Klamath River basin) to spawn. Known to occupy other river bodies including the lower Feather River; spawning not recorded. Large cobbles preferred for spawning, but may utilize a range of substrates from bedrock to sand. Spawning occurs Mar-Jul.	**Low to Moderate Potential:** The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to the Sacramento River to a narrow, shallow back channel that is often dry. Although not anticipated, the species has potential to access the project location during moderate to high flow events. The species would not spawn or migrate within the Barge Canal. The project is approximately 2 miles south of I Street Bridge the southern limits of Final Critical Habitat for Southern DPS North American green sturgeon.
Sacramento perch	*Archoplites interruptus*	Fed: CA: DFG:	-- -- SSC	Inhabits sloughs, lakes, and slow moving rivers of the Central Valley. Prefers turbid lakes, reservoirs and ponds warmed by summer heat and absent of plants; may occasionally occur in clear water among beds of aquatic vegetation. Species tolerates high temperatures, high salinities, high turbidity, and low water clarity. Young require aquatic and overhanging vegetation for cover. Spawns March-August	**Presumed absent**: Project site lacks slow moving rivers, lakes or ponds; habitat unsuitable for Sacramento perch.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
				in water temperatures between 64-84°F	
Delta smelt	*Hypomesus transpacificus*	Fed: CA: DFG:	T E --	Occurs within the Sacramento-San Joaquin Delta and seasonally within the Suisun Bay, Carquinez Strait and San Pablo Bay. Most often occurs in partially saline waters.	**Low to Moderate Potential:** The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to main stem Sacramento River to a narrow, shallow back channel that is often dry. Although not anticipated, the species has potential to access the project location during moderate to high flow events. The project is within delta smelt Critical Habitat
Longfin smelt	*Spirinchus thaleichthys*	Fed: CA: DFG:	-- T --	Occurs within the San Francisco Bay-Delta. Most often occurring in bays and estuaries until migration to fresh water.	**Low to Moderate Potential**: The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to main stem Sacramento River to a narrow, shallow back channel that is often dry. Although not anticipated, the species has potential to access the project location during moderate to high flow events. The project is within habitat area.
Central Valley steelhead	*Oncorhynchus mykiss*	Fed: CA: DFG:	T -- --	Spawning occurs in small tributaries on coarse gravel beds in riffle areas. Central Valley steelhead are found in the Sacramento River system; the principal remaining wild populations spawn annually in Deer and Mill Creeks in Tehama County, in the lower Yuba River, a small population in the lower Stanislaus River and, though potentially extirpated, from the San Joaquin basin.	**Low to Moderate Potential:** The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to main stem Sacramento River to a narrow, shallow back channel. Although not anticipated, the species has potential to access the project location during moderate to high flow events. Critical Habitat for the California Central Valley steelhead is present within the Biological Study Area. No spawning habitat or migration routes occur within the project area

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
Central Valley spring-run chinook salmon	*Oncorhynchus tshawytscha*	Fed: CA: DFG:	T T --	Spring-run Chinook enter the Sacramento-San Joaquin River system to spawn, requiring larger gravel particle size and more water flow through their redds than other salmonids. Remaining runs occur in Butte, Mill, Deer, Antelope, and Beegum Creeks, tributaries to the Sacramento River. Known to occur in Siskiyou and Trinity counties.	**Low to Moderate Potential:** The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to the Sacramento River to a narrow, shallow back channel that is often dry. Although not anticipated, the species has potential to access the project location during moderate to high flow events. Critical Habitat for the spring-run Chinook is directly adjacent to the BSA within the main stem Sacramento River. No spawning habitat or migration routes occur within the project area.
Winter-run chinook salmon, Sacramento River	*Oncorhynchus tshawytscha*	Fed: CA: DFG:	E E --	Winter-run Chinook are currently restricted within the Sacramento River below Keswick dam; species does not spawn in tributaries. Species requires cold water over gravel beds to spawn.	**Low to Moderate Potential:** The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to the Sacramento River to a narrow, shallow back channel that is often dry. Critical Habitat for the winter-run Chinook is directly adjacent to the BSA within the main stem Sacramento River. No spawning habitat or migration routes occur within the project area.
Sacramento splittail	*Pogonichthys macrolepidotus*	Fed: CA: DFG:	-- -- SSC	Historically inhabited low moving rivers, sloughs, and alkaline lakes of the Central Valley; now restricted to the Delta, Suisun Bay and associated marshes. Species is adapted to fluctuating environments with tolerance to water salinities from 10-18 ppt., low oxygen levels (< 1.0 mg/L) and temperatures of 41-75°F. Spawns late	**Presumed absent:** The site occurs at the Barge Canal (the confluence between the Sacramento River and the Sacramento Deep Water Ship Channel). Canal locks and sedimentation of the Barge Canal has restricted connectivity to the Sacramento River to a narrow, shallow back channel that is often dry. Site lacks low moving rivers, Delta and marshes, spawning habitat or migration routes; habitat unsuitable for Sacramento splittail.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
				February- early July, with a peak in March-April; requires flooded vegetation for spawning activity and protective cover for young.	

Federal Designations (Fed):
(FESA, USFWS)
END: Federally listed, endangered
THR: Federally listed, threatened

State Designations (CA):
(CESA, CDFW)
END: State-listed, endangered
THR: State-listed, threatened

Other Designations

DFG_SSC: DFG Species of Special Concern
SSC: Species of Special Concern

California Native Plant Society (CNPS) Designations:

Note: according to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Wildlife Code. This interpretation is inconsistent with other definitions.

1A: Plants presumed extinct in California.
1B: Plants rare and endangered in California and throughout their range.
2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
3: Plants about which need more information; a review list.
4: Plants of limited distribution; a watch list.

Plants 1B, 2, and 4 extension meanings:
_.1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
_.2 Fairly endangered in California (20-80% occurrences threatened)
_.3 Not very endangered in California (<20% of occurrences threatened or no current threats known)

Potential for Occurrence Criteria:
Present: Species was observed on site during a site visit or focused survey.
High: Habitat (including soils and elevation factors) for the species occurs on site and a known occurrence has been recorded within 5 miles of the site.
Moderate: Moderate quality habitat (including soils and elevation factors) for the species occurs on site and a known occurrence occurs within 5 miles of the site; or suitable habitat strongly associated with the species occurs on site, but no records were found within the database search.
Low: Low quality habitat (including soils and elevation factors) for the species occurs on site.
Presumed Absent: Focused surveys were conducted and the species was not found, or species was found within the database search but habitat (including soils and elevation factors) do not exist on site, or the known geographic range of the species does not include the survey area.

Source: United States Fish and Wildlife Service (2010), California Natural Diversity Data Base (2010), California Native Plant Society Electronic Inventory (CNPS 2010).

Appendix C Mitigation, Monitoring, and Reporting Program

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Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
Aesthetics	AES-1: During final design, aesthetics will be considered by the City for consistency with local goals and standards.	City	Final Design
	AES-2: Selection of lighting fixtures will take into account minimizing glare, while taking into account safety needs.	City	Final Design
Air Quality	AQ-1: The contractor shall comply with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances. AQ-2: The contractor shall control dust by applying either water or dust palliative, or both. AQ-3: The construction contractor shall implement control measures to reduce emissions of NOX, ROG, and PM_{10}. The contractor shall: • Minimize idling time to 5 minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. • To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintaining heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions. • Use electric equipment when feasible. • Properly maintain equipment according to manufacturers' specifications.	Contractor	Construction

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
Biological Resources	BIO-1: Temporary construction staging areas and access roads shall be strategically placed to avoid and/or minimize impacts, when possible. ESA fencing shall be installed in coordination with a biologist in order to minimize the construction footprint to avoid and/or minimize impacts to sensitive habitat areas. BIO-2 The project will create a re-vegetation/tree-replacement plan to compensate for loss of riparian vegetation. The re-vegetation plan will include replacement ratios and submission to CDFW for review and approval prior to any ground disturbing activities associated with the proposed project. BIO-3: Clean Water Act Section 401 and 404 permits and a Fish and Wildlife Code Section 1602 Streambed Alteration Agreement shall be obtained prior to construction. BIO-4: A tree permit will be obtained from the City of West Sacramento's Tree Administrator to remove Heritage or Landmark trees. Replacement trees will be planted in accordance with conditions of the tree permit. A revegetation plan/tree replacement plan will include replacement ratios and submission to CDFW for review and approval prior to any ground disturbing activities associated with the project. BIO-5: Should pre-construction surveys or work associated with construction discover the presence of any sensitive species, habitats would be avoided, as feasible, using Environmentally Sensitive Area (ESA) fencing to clearly define the limits of disturbance. ESA fence shall be installed along the construction limits to prevent unnecessary encroachment into the riparian areas adjacent to the construction site. ESA fencing shall also be placed to	City, Contractor (depending on measure)	Construction and prior to construction (depending on measure)

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	avoid removal of Northern California black walnut trees. BIO-6: To ensure compliance with MBTA and CDFW code, vegetation removal and work should be avoided outside the nesting season (defined as Feb 15 – August 15). If this is not possible and vegetation removal or work that could disturb nesting is to occur during the nesting season, a pre-construction survey shall be conducted at least 5 days prior to project activities. The pre-construction survey shall be performed by a qualified biologist, to determine the presence of nesting birds and ensure active nests are not directly or indirectly impacted during construction. The pre-construction survey area will include the limits of the project impact area plus a 300-ft buffer. If disrupting work is planned to begin in an area during the nesting season (February 15 – August 15), all vegetation removal shall be completed within one week of the nesting survey if the survey determines no active nests are present. BIO-7: For Swainson's Hawk, if vegetation removal or work is to occur during the Swainson's Hawk nesting season (February 15 – July 31), a preconstruction survey shall be performed by the project biologist, in coordination with the CDFW, to determine if Swainson's hawk nests occur on the project site or within ¼ mile of the project site. At the discretion of CDFW, trees may be removed between February 15 and July 31 provided a biologist survey the proposed trees designated to be removed to verify the absence of an active nest. Preconstruction surveys shall be conducted during the nesting season at least 5 days prior to project activities and again 72 hours prior to project activities to determine if there are any Swainson's hawk nests on the project site and within ¼ mile of the project site. Surveys shall be completed using the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	Tech. Advis. Comm., 5/2000). Survey results shall be submitted to CDFW prior to commencement of work. No trees shall be disturbed that contain active bird nests until all eggs have hatched and young birds have fledged. If active Swainson's hawks nest(s) are present, a biological monitor would be needed to ensure that the project activities are not disturbing nesting Swainson's hawks. If project activities are disturbing a nesting hawk (at any point before fledging of young), it's likely that the project activities would have to stop until the young have fledged. CDFW may require the project to provide $10,000 per construction year to the Swainson's Hawk Technical Advisory Committee (TAC) in each year that an active Swainson's hawk nest is closer than ¼-mile to the active construction site. If a nest is abandoned and nestlings are still alive, the project shall fund the recovery and hacking (controlled release) of the nestlings. If a nest is abandoned and the nestlings do not survive, the project shall develop ¼ acre of riparian forest and grant permanent conservation easements over that riparian forest in a location and in a form acceptable to CDFW. The easements shall be provided no later than 12 months after nest abandonment. BIO-8: If the nest of a protected bird is found, the perimeter shall be flagged and a qualified biologist will coordinate with USFWS and CDFW to determine an appropriate buffer distance for protection of the nest. The contractor shall stop work in the nesting area until the buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the project biologist and in coordination with wildlife agencies) in the protected area until the biologist has determined that nesting activities are complete. BIO-9: Temporary staging areas, storage areas, and access roads		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	involved with this Project will take place, to the extent feasible, in the area of direct impact. BIO-10: Construction activities shall be limited to daylight hours when possible. Night work will only be considered when required to meet schedule or to avoid high water events. BIO-11: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel. The project biologist shall conduct a pre-construction meeting to ensure that construction crews are informed of the approved limits of disturbance and of the sensitive animals and habitats in the vicinity. The awareness training will be provided to all construction personnel to brief them on the need to avoid effects to biological resources, particularly riparian habitat and special-status wildlife habitat (i.e., elderberry shrubs), and the penalties for not complying with the biological opinion and other regulatory permits. If new construction personnel are added to the project, the contractor will ensure that the new personnel receive the mandatory training before starting work. At a minimum, the training shall include 1) the purpose for resource protection; 2) a description of sensitive species and their habitats; 3) environmentally responsible construction practices; 4) the protocol to resolve conflicts that may arise at any time during the construction process; and 5) the general provisions of FESA and CESA, the need to adhere to the provisions of FESA and CESA, and the penalties associated with violation of FESA and CESA. BIO-12: Prior to clearing/grubbing, grading, and/or construction activities within or adjacent to native habitats on the Project site, a qualified biologist shall supervise the installation of temporary construction fencing along the approved limits of disturbance, including construction staging areas and access routes, to prevent additional		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	habitat impacts into adjacent habitats to be avoided. Fencing shall be installed in a manner that does not impact habitats to be avoided. BIO-13: Native fill will be utilized whenever possible. BIO-14: Install Construction Barrier Fencing to Protect Beetle Habitat Adjacent to the Construction Zone. The City or its contractor will install orange construction barrier fencing to identify environmentally sensitive areas that are to be avoided. The construction specifications will require that a qualified biologist identify the location of valley foothill riparian and other sensitive biological habitat (i.e., elderberry shrubs) on site and identify areas to avoid during construction. Barrier fencing will be installed a minimum of 20 feet from all elderberry shrubs that have been identified near the project corridor (#1-5). Before construction, the construction contractor will work with the project engineer and a resource specialist to identify the locations for the barrier fencing and will place stakes around the sensitive resources sites to indicate these locations. The protected area will be designated an environmentally sensitive area and clearly identified on the construction specifications. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period. The following paragraph will be included in the construction specifications: The contractor's attention is directed to the areas designate "environmentally sensitive areas." These areas are protected, and no entry by the contractor for any purpose will be allowed unless specifically authorized in writing by the project proponent. The contractor will take measures to ensure that contractor's forces o not enter or disturb these areas, including giving written notice to		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	employees and subcontractors. Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer. The fencing will be commercial-quality woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). The fencing will be tightly strung on posts with maximum 10-foot spacing. BIO-15: A barrier, such as a water inflated dam, shall be installed at the opening of the live Barge Canal channel between August 1 and November 30. During dewatering a biologist will be present to monitor and relocate, if necessary, species. BIO-16: Implement Stormwater Pollution Prevention Plan (SWPPP) Measures to protect water quality. Implement erosion control and Best Management Practices (BMPs). Contract specifications will include the following Best Management Practices (BMPs), where applicable, to reduce erosion during construction. • Implementation of the project will also require approval of a site-specific SWPPP that would implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques. • Scheduling. A specific work schedule will be implemented to coordinate the timing of land disturbing activities and the installation of erosion and sedimentation control practices to reduce on-		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	site erosion and off-site sedimentation. • Preservation of Existing Vegetation. In addition to measures above, existing vegetation shall be protected in place where feasible to provide an effective form of erosion and sediment control, as well as watershed protection, landscape beautification, dust control, pollution control, noise reduction, and shade. • Mulching. Loose bulk materials shall be applied to the soil surface as a temporary cover to reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff. • Soil Stabilizers. Stabilizing materials shall be applied to the soil surface to prevent the movement of dust from exposed soil surfaces on construction sites as a result of wind, traffic, and grading activities. • Slope Roughening/Terracing/Rounding. Roughening and terracing will be implemented to create unevenness on bare soil through the construction of furrows running across a slope, creation of stair steps, or by utilization of construction equipment to track the soil surface. Surface roughening or terracing reduces erosion potential by decreasing runoff velocities, trapping sediment, and increasing infiltration of water into the soil, aiding in the establishment of native vegetative cover from seed. BIO-17: Develop and implement a Spill Prevention, Control, and Countermeasure Program (SPCCP) for construction activities. The Contractor will develop and implement a		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	SPCCP to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. This would include refueling of equipment away from the waterway The SPCCP will be completed prior to construction. BIO-18: Pursuant to Executive Order 13112 and the control of invasive species: • All landscaping and revegetation shall consist of a biologist approved plant and/or seed mix from native, locally adapted species. • Prior to arrival at the project site and prior to leaving the project site, construction equipment that may contain invasive plants and/or seeds shall be cleaned to reduce the spreading of noxious weeds. BIO-19: Implementation of the following mitigation measures will minimize and offset effects to Critical Habitat: The City shall prepare a riparian restoration plan prior to construction. This plan will include restoration of areas impacted by the proposed Project, and will aim to reestablish a healthy riparian corridor around the Barge Canal.		
Greenhouse Gases	N/A		
Cultural Resources	CR-1: In accordance with Section 7052.5 of the Health and Safety Code, construction or excavation shall be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be	City, Contractor	Construction

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	Native American, the coroner must contact the NAHC. According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). CR-2: Comply with State Laws Relating to Native American Remains. If human remains of Native American Origin are discovered during project construction, it will be necessary to comply with state laws relating to the disposition of Native American burials, which fall under the jurisdiction of the NAHC (Public Resources Code Section 5097). If any human remains are discovered or recognized in any location other than a dedicated cemetery, the project proponent or its contractor shall ensure that there will be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent human remains, until: 1. the Yolo County coroner has been informed and has determined no investigation of the cause of death is required, or 2. if the remains are of Native American origin, the descendents of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98 or the NAHC is unable to identify a descendant or the descendant fails to make a recommendation within 24 hours after being notified by the NAHC. Based on the project's location relative to the Sacramento River, it is appropriate to monitor excavation during construction of the		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	bridge abutments.		
Geology and Soils	GEO-1: The City and contractor shall implement a SWPPP to include erosion control methods. This SWPPP shall be prepared for the Section 402 permit, NPDES General Permit for Discharges of Storm Water Associated with Construction Activity.	City, Contractor	Prior to construction
Hazards and Hazardous Materials	HAZ-1: Require Spark-Generating Construction Equipment be Equipped with Manufacturers' Recommended Spark Arresters: The City shall require contractors to fit any construction equipment that normally includes a spark arrester with an arrester in good working order. Subject equipment includes, but is not limited to, heavy equipment and chainsaws. Implementation of this measure will minimize a source of construction-related fire. HAZ-2: Before Construction Begins, Clear Materials That Could Serve as Fire Fuel from Areas Slated for Construction Activities: If dry vegetation or other fire fuels exist on or near staging areas, welding areas, or any other area on which equipment will be operated, contractors shall clear the immediate area of fire fuel. To maintain a firebreak and minimize the availability of fire fuels, the City shall require contractors to maintain areas subject to construction activities clear of combustible natural materials to the extent feasible. To avoid conflicts with policies to preserve riparian habitat, areas to be cleared shall be identified with the assistance of a qualified biologist.	City, Contractor	
Hydrology and Water Quality	HYD-1: The storm drain system will be designed to accommodate the project and comply with current standards. HYD-2: Implement a Spill Prevention, Control, and Countermeasure Program during construction to protect	City, Contractor	Final Design, Construction

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	against water quality contamination. HYD-3: Coordinate with USACE to ensure construction near the levees meet USACE standards.		
Landuse and Planning	N/A		
Mineral Resources	N/A		
Noise	N/A		
Population and Housing	N/A		
Public Services	PS-1/TRA-2: Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a traffic control plan.	City, Contractor	Construction
Recreation	N/A		
Transportation and Traffic	TRA-1: The project shall include signalization of the South River Road/15th Street intersection. PS-1/TRA-2: Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a traffic control plan.	City	Final Design, Construction
Mandatory Findings of Significance	Please see measures BIO-1 through BIO-24 and CR-1 and CR-2.		

Appendix D Agency Consultation

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
81420-2008-F-1510-1

JUN 10 2008

Mr. William H. Guthrie
Senior Project Manager, Delta Office
Regulatory Branch
U.S. Army Corps of Engineers
1325 J Street, Room 1480
Sacramento, California 95814-2922

Subject: Section 7 Formal Consultation on the South River Road Barge Canal Crossing and Village Parkway Extension Project (Corps file number 200500887), West Sacramento, Yolo County, California

Dear Mr. Guthrie:

This is in response to the U.S. Army Corps of Engineers' (Corps) March 27, 2007, letter requesting consultation with the U.S. Fish and Wildlife Service (Service) on the South River Road Barge Canal Crossing and Village Parkway Extension Project, located along the Sacramento River Deep Water Ship Channel in West Sacramento, Yolo County, California. Your letter was received in our office on March 30, 2007. The Service has reviewed the biological information describing the effects of the proposed project on the federally threatened valley elderberry beetle (*Desmocerus californicus dimorphus*) (beetle) and delta smelt (*Hypomesus transpacificus)* and its critical habitat. The Service has deemed the project appropriate to append to the Service's December 1, 2004, *Formal Programmatic Consultation on the Issuance of Section 10 and 404 Permits for Projects with Relatively Small Effects on the Delta Smelt (Hypomesus transpacificus) and its Critical Habitat within the Jurisdiction of the Sacramento Fish and Wildlife Office of the U.S. Fish and Wildlife Service, California* (Delta Smelt Programmatic Consultation) (Service file number 1-1-04-F-0345) and to the Service's *Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle* (Beetle Programmatic Consultation) (Service file number 1-1-96-F-0066). This response is in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S. C. 1531 *et seq.*).

The findings and recommendations in this formal consultation are based on (1) the March 27, 2007, letter requesting consultation, (2) the May, 2006, biological assessment prepared by Jones and Stokes, (3) the February 2007, *Draft Environmental Impact Report for the South River Road*

Barge Canal Crossing and Village Parkway Extension Project prepared by Jones and Stokes, (4) additional information provided via email by Dokken Engineering, and (5) additional information available to the Service.

Project Description

The City of West Sacramento's (City) Department of Community Development proposes to reconstruct the existing two-lane South River Road from the Yolo Barge Canal to the Capital City Freeway off-ramp, located on the eastern edge of the City within Yolo County. The project area and vicinity is bounded by the north by U.S. Highway 50/Capital City Freeway interchange at South River Road/Riske Lane, on the east by the Sacramento River, on the south by the Village Parkway/Stonegate Drive intersection, and on the west by Jefferson Boulevard. The Port of Sacramento is located northwest of the proposed project area. The project would improve the existing South River Road, provide a crossing for the barge canal, and extend Village Parkway from Stonegate Road to the bridge across property being transferred to the City by the Corps.

South River Road

The typical cross section for the South River Road includes two 12-foot lanes in each direction, a 14-foot raised landscaped median/left-turn pocket, two 6-foot bike lanes, a 8-foot parking/landscaping area, curb and gutter, and two 10-foot sidewalks. South River Road will ultimately encompass a 110-foot right-of-way corridor.

Barge Canal Bridge

A 3-span bridge would be constructed over the barge canal. Eight octagonal columns will support the bridge on footings placed below the river bottom. The bridge will have enhanced lighting, an enhanced exterior concrete rail, and be designed to accommodate the Promenade Bike Trail. Bridge schematics show the bridge to be approximately 465 feet in length and 85 feet in width.

Village Parkway Extension

The typical cross section for the Village Parkway Extension includes two 12-foot lanes in each direction, a 16-foot raised landscaped median/left-turn pocket, two 6-foot bike lanes, curb and gutter in each direction, and two 6-foot sidewalks set back from the curb by 5-foot landscaping strips. The overall right-of-way is a basic 98-foot width plus the embankment footprints and an access provision of 10 feet at the toe of the embankment.

Construction Access, Equipment, and Staging Areas

Most staging would occur within the 110-foot-wide project corridor. If additional staging areas are required during construction, they will be located within developed or previously disturbed areas that do not support sensitive biological resources (i.e., riparian woodlands, seasonal wetlands, elderberry shrubs). Two potential staging areas are being considered, with one on each

side of the barge canal. The southern staging area could be located south of the barge canal, immediately east of Jefferson Boulevard. The northern staging area could be on a piece of the City's decommissioned wastewater treatment plant pending timing and plant decommissioning.

Access to these staging areas is paved. Access to the southern staging area is available on the south from Village Parkway and from Jefferson Boulevard to the west.

Roadway construction will use normal heavy construction earthmoving equipment. Bridge construction equipment will include cranes, pile drivers, drill rigs, falsework, excavators, and concrete pumps. To construct the bridge, a working platform will be constructed in the barge canal and used for drilling the shaft foundations for the bridge. The platform could also be used as a construction bridge across the barge canal and for the support of falsework for the bridge superstructure.

Conservation and Minimization Measures

1. *Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel.* Before the start of construction activities, including grading, a qualified biologist will conduct mandatory contractor/worker awareness training for construction personnel. The awareness training will be provided to all construction personnel to brief them on the need to avoid effects to biological resources, particularly riparian habitat and special-status wildlife habitat (i.e., elderberry shrubs), and the penalties for not complying with the biological opinion and other regulatory permits. If new construction personnel are added to the project, the contractor will ensure that the new personnel receive the mandatory training before starting work.

2. *Install Construction Barrier Fencing to Protect Beetle Habitat Adjacent to the Construction Zone.* The City or its contractor will install orange construction barrier fencing to identify environmentally sensitive areas that are to be avoided. The construction specifications will require that a qualified biologist identify the location of riparian woodland, seasonal wetlands, and other sensitive biological habitat (i.e., elderberry shrubs) on site and identify areas to avoid during construction. Barrier fencing will be installed a minimum of 20 feet from all elderberry shrubs that have been identified near the project corridor (#2, 3, 4, and 5).

   Before construction, the construction contractor will work with the project engineer and a resource specialist to identify the locations for the barrier fencing and will place stakes around the sensitive resources sites to indicate these locations. The protected area will be designated an environmentally sensitive area and clearly identified on the construction specifications. The fencing will be installed before construction activities are initiated and will be maintained throughout the construction period. The following paragraph will be included in the construction specifications:

   > The contractor's attention is directed to the areas designate "environmentally sensitive areas." These areas are protected, and no entry by the contractor for any

purpose will be allowed unless specifically authorized in writing by the project proponent. The contractor will take measures to ensure that contractor's forces do not enter or disturb these areas, including giving written notice to employees and subcontractors.

Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer. The fencing will be commercial-quality woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). The fencing will be tightly strung on posts with a maximum 10-foot spacing.

3. *Transplant Elderberry Shrubs that Occur within the Project Corridor and will be Directly Affected by Roadway Construction.* The City shall ensure that any elderberry shrub that will be directly affected (removed) by construction activities is transplanted to a Service-approved conservation area or mitigation bank. The closest Service-approved mitigation site is the Wildlands, Inc. River Ranch Conservation Bank in Yolo County.

As currently designed, the proposed project would require transplantation of one elderberry shrub within the project corridor. The elderberry shrub will be transplanted when it is dormant (after it loses its leaves) in the period starting approximately in November and ending in the first 2 weeks of February. A qualified specialist familiar with elderberry shrub transplantation procedures will supervise the transplanting. The location of the conservation area transplantation site will be approved by the Service before removal of the elderberry shrub.

The transplanting procedure entails the following steps: (1) the affected shrub will be cut back 3–6 feet above the ground or up to 50% of its height, whichever is greater; (2) the shrub will be removed using suitable equipment, taking as much of the root system as possible, wrapping the root ball in burlap and securing it with wire, and dampening the burlap with water to keep the roots wet; (3) the shrub will be replanted immediately at the mitigation site in holes of adequate size with the root ball planted so that its top is level with the existing ground. The soil will be compacted around the roots. The planting area must be at least 1,800 square feet; and (4) the shrub will have its own water retention basin measuring 3 feet in diameter with a continuous berm measuring approximately 8 inches wide at the base and 6 inches high. The soil around the shrubs will be saturated with water. The shrubs should be monitored and watered accordingly.

4. *Compensate for Direct Effects on Valley Elderberry Longhorn Beetle Habitat.* The City will compensate for direct impacts (i.e., transplanting of one elderberry shrub) on all elderberry stems measuring 1 inch or more at ground level. Compensation will include replacement plantings of elderberry seedlings or cuttings and associated native plantings in a Service-approved conservation area or mitigation bank, at a ratio between 1:1 and 8:1 (ratio of new plantings to affected stems), depending on the diameter of the stem at

ground level, the presence or absence of exit holes, and whether the shrub is located in riparian habitat.

5. *Implement Stormwater Pollution Prevention Plan (SWPPP) Measures to Protect Water Quality*. Implement erosion control and Best Management Practices (BMPs). Development and implement a Spill Prevention, Control, and Countermeasure Program for construction activities.

6. *Develop and Implement a Spill Prevention, Control, and Countermeasure Program (SPCCP) for Construction Activities*. The Contractor will develop and implement a SPCCP to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. The SPCCP will be completed prior to construction.

7. *Employ Measures to Minimize Noise Impacts on Special-Status Fish Species*. Potential injury and mortality associated with pile driving will be avoided or minimized by: (1) in-channel construction, including riverbank and channel-bed construction below the Ordinary High Water Mark , will be limited to the summer low-precipitation period to reduce the likelihood of adverse effects on adult fish spawning and migration; (2) pile-driving activities will be limited to the summer low-flow period, decreasing the distance the sound waves travel; (3) the number and size of piles will be limited to the minimum necessary to meet the engineering and design requirements of the project; (4) vibratory hammers will be used whenever feasible; and (5) the smallest pile driver and minimum force necessary to complete the work will be used.

Evaluations under Programmatic Consultations

Valley Elderberry Longhorn Beetle

This letter is an agreement by the Service to append the proposed project to the, Beetle Programmatic Consultation. The project applicant has proposed to plant elderberry seedlings and associated native riparian species in accordance with the Service's 1999 Conservation Guidelines (Table 1).

Table 1: Proposed compensation ratios for the valley elderberry longhorn beetle for the proposed Project.

Location	Stems (maximum diameter at ground level)	Exit Holes	# of Stems	Elderberry Seedling Ratio	# Elderberry Seedlings required	Associated Native Ratio	# Associated Natives required
Non-Riparian	1-3 inches	No	25	1:1	25	1:1	25
Non-Riparian	3-5 inches	No	11	2:1	22	1:1	22
Non-Riparian	>5 inches	Yes	6	6:1	36	2:1	72
Total			**42**		**83**		**119**

Therefore, prior to any ground disturbing activities associated with the proposed project, the project applicant shall fulfill the conservation measures mentioned above in the *Conservation and Minimization Measures* including the purchasing of credits sufficient to plant 83 elderberry shrub seedlings and 119 associated riparian native species at a Service-approved valley elderberry longhorn beetle conservation bank.

Delta Smelt

This letter is an agreement by the Service to append the proposed project to the Delta Smelt Programmatic Consultation. Minimization of effects for projects appended to the Programmatic Consultation involves the implementation of the reasonable and prudent measures described in the Programmatic consultation. The Service is tracking losses of habitat permitted under the Programmatic Consultation in each county under the jurisdiction of the Sacramento Fish and Wildlife Office. The Service will evaluate the effectiveness of the Delta Smelt Programmatic Consultation to ensure that continued implementation will not result in unacceptable effects to the ecosystem upon which the listed species depends.

The Barge Canal Bridge will cover approximately 0.64 acre of shallow water habitat (SWH). SWH is defined as all waters between Mean High Water and 9.84 feet below Mean Lower Low Water mark. These waters are within the photic zone and are highly productive. A shadow zone is the shadow created by a structure placed over or in the waterways of the Delta within the SWH zone. This causes a loss of productivity, thinning, and loss of aquatic vegetation and prevention of its growth.

Minimization of Adverse Effects

Adverse effects will be minimized by the time of year that the work will take place. By performing in-water work during the approved work window for delta smelt August 1 through November 30, effects will be minimized. Purchasing credits from the Delta Smelt Conservation Fund will ensure no net loss of SWH.

Terms and Conditions

To be exempt from the prohibitions of section 9 of the Endangered Species Act for the delta smelt, the Corps must ensure that the permittee complies with the following terms and conditions, which implements the reasonable and prudent measures described in the Delta Smelt programmatic biological opinion:

1. Consistent with the programmatic opinion, the applicant shall deposit $76,800.00 (1.92 acres [3:1 ratio] worth of conservation credits) into the Delta Smelt Conservation Fund. A copy of the Conservation Fund receipt must be provided to the Corps and the Service prior to construction.

2. The applicant will also perform all construction activities during the appropriate work window, between August 1 and November 30 of any given year, thus minimizing effects to smelt.

3. To minimize the effects on delta smelt caused by the mobilization of bottom material that may contain toxins, the use of silt trapping devices shall be employed during all in-water work, where appropriate.

4. To minimize the effects on delta smelt resulting from the permanent loss of spawning and refugial habitat due to actions listed in the Description of the Proposed Action section of the programmatic biological opinion, the Corps shall avoid areas having emersed or submersed plants to the maximum extent possible.

5. The Corps shall ensure that the permittee complies with the Reporting Requirements in the Delta Smelt Programmatic Consultation.

This concludes formal consultation on the South River Road Barge Canal Crossing and Village Parkway Extension Project. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action.

If you have any questions regarding this opinion on the South River Road Barge Canal Crossing and Village Parkway Extension Project, please contact Kim Squires or Ryan Olah, at (916) 414-6625.

Sincerely,

Chris Nagano
Deputy Assistant Field Supervisor

cc
Jay Davidson, City of West Sacramento, West Sacramento, California
Michael Vondergeest, Jones and Stokes, Sacramento, California

Appendix E Resource Maps

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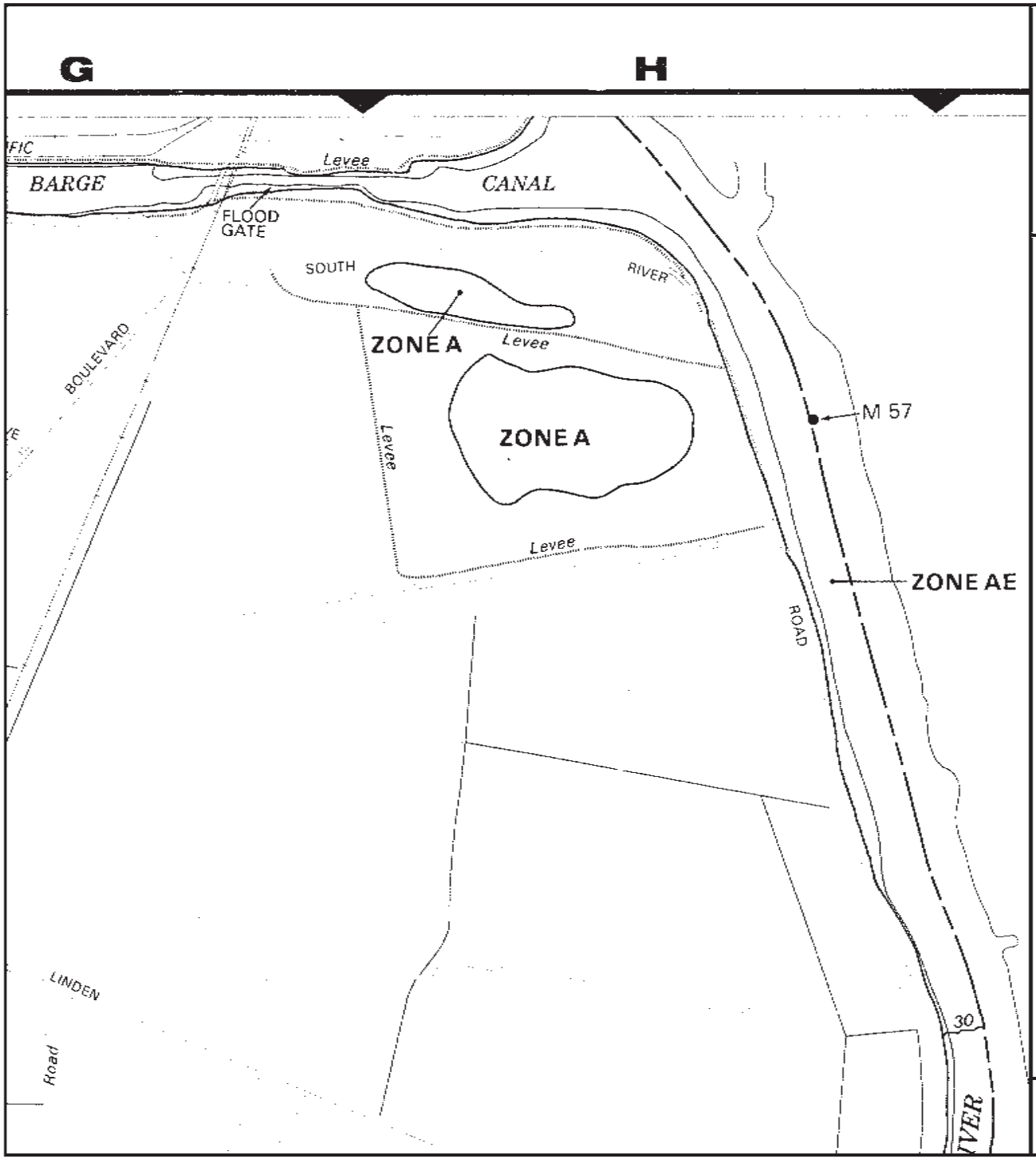


APPROXIMATE SCALE IN FEET

1000 0 1000

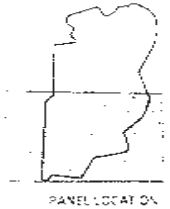
NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CITY OF
WEST
SACRAMENTO,
CALIFORNIA
YOLO COUNTY

PANEL 10 OF 10
(SEE MAP INDEX FOR PANELS NOT PRINTED)

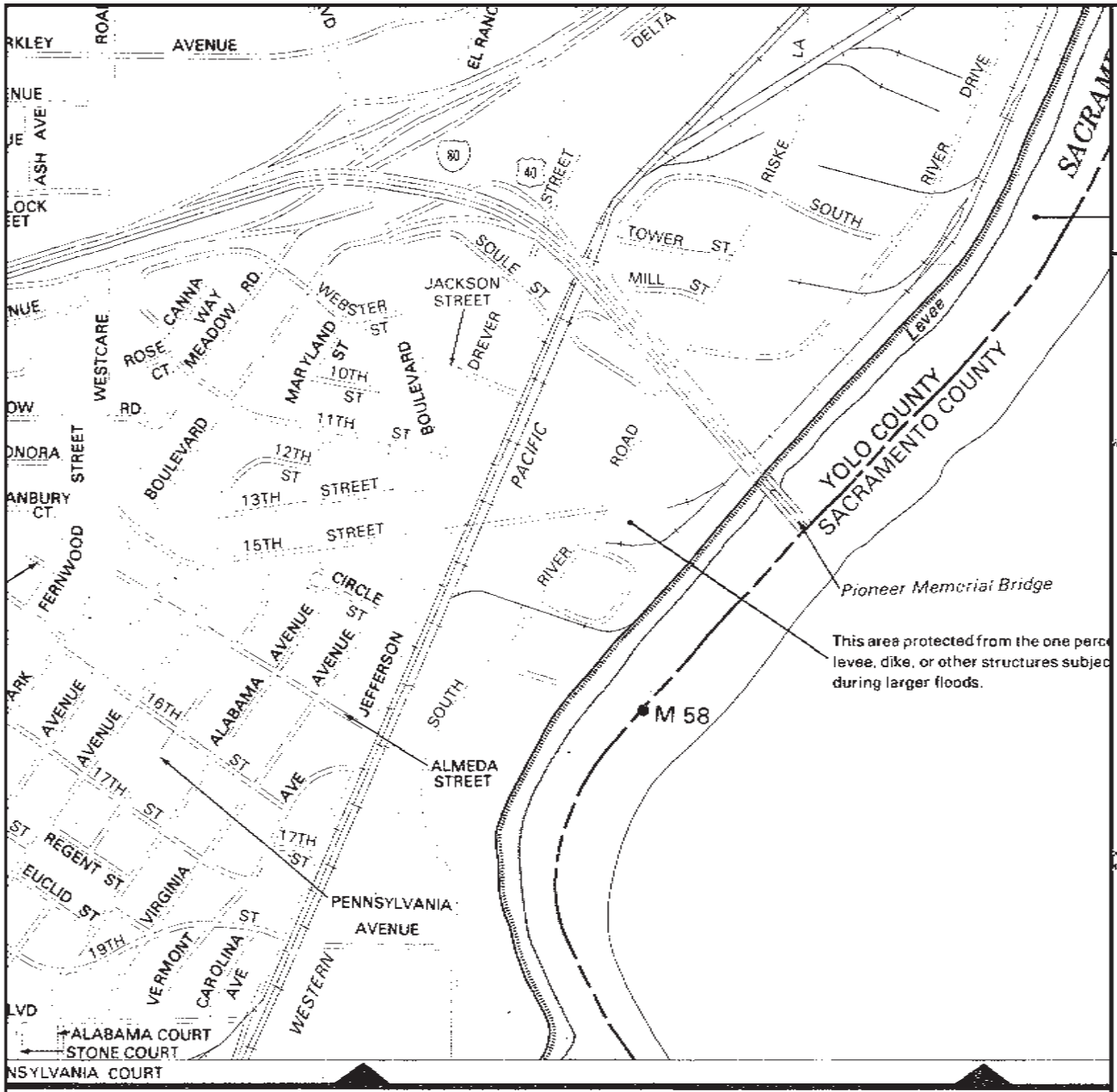


PANEL LOCATION

COMMUNITY-PANEL NUMBER
060728 0010 B

MAP REVISED:
JANUARY 19, 1995

Federal Emergency Management Agency



APPROXIMATE SCALE IN FEET

1000 0 1000

NATIONAL FLOOD INSURANCE PROGRAM

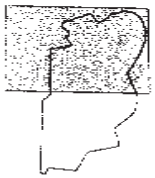
FIRM

FLOOD INSURANCE RATE MAP

CITY OF
WEST
SACRAMENTO,
CALIFORNIA
YOLO COUNTY

PANEL 5 OF 10

(SEE MAP INDEX FOR PANELS NOT PRINTED)



PANEL LOCATION

COMMUNITY-PANEL NUMBER
060728 0005 B

MAP REVISED:
JANUARY 19, 1995

Federal Emergency Management Agency

U.S. Fish and Wildlife Service
National Wetlands Inventory

Pioneer Bluff Bridge Project

Dec 20, 2012

Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Riparian

- Herbaceous
- Forested/Shrub

User Remarks:

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Appendix F MTIP and MTP listings

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SACOG ID **YOL19223** | Yol | Lead Agency **City of West Sacramento Dept of Public Works**

Project TItle

Sacramento River Deep Water Ship Channel Deepening

EA Number:n/a | Last Revised 13-00 | Completion Year **2017**

Project Description

Dredge remainder of 35 miles of 43 mile ship channel an additional 5' to 35' in depth. This 15% increase in channel depth will allow larger ships and thus will increase allowable ship capacity by 40% (from 25,000 tons to 35,000 tons). Ship channel boundaries are from Collinsville (just above Suisun Bay) up to West Sacramento.

Federal Project
Regionally Significant

Total Cost **$157,464,000**

Fed FY	Revenue Source	Engineering	Right of Way	Construction	Total Revenue
<13		$13,546,000			$13,546,000
2013	Local Agency Funds		$46,285,000	$14,408,000	$60,693,000
2013	Other Fed - Energy and Water Dvlp Appro Act			$73,225,000	$73,225,000
2013	State Bond - Trade Corridor Program			$10,000,000	$10,000,000
		$13,546,000	**$46,285,000**	**$97,633,000**	**$157,464,000**

SACOG ID **YOL15180** | Yol | Lead Agency **City of West Sacramento Dept of Public Works**

Project TItle

South River Rd.

EA Number:n/a | Last Revised 13-00 | Completion Year **2017**

Project Description

Reconstruct and widen South River Road to 4 lanes from US50 on-ramp to Stonegate Boulevard, including a new 4-lane bridge over barge canal.

Other

Total Cost **$26,750,000**

Fed FY	Revenue Source	Engineering	Right of Way	Construction	Total Revenue
<13		$1,000,000			$1,000,000
2013	Local - Developer - Transportation Improvement Fee	$2,000,000			$2,000,000
2014	Local - Developer - Transportation Improvement Fee		$4,000,000		$4,000,000
2015	Local - Developer - Transportation Improvement Fee		$3,000,000		$3,000,000
2016	Local - Developer - Transportation Improvement Fee			$5,000,000	$5,000,000
>16				$11,750,000	$11,750,000
		$3,000,000	**$7,000,000**	**$16,750,000**	**$26,750,000**

Final Metropolitan Transportation Plan / Sustainable Communities Strategy Project List

/1/ Project Analysis projects are anticipated to begin early stages of development including project design, preliminary engineering, environmental clearance, and ROW acquisition by 2035. These projects remain eligible to seek federal and state funding, but under the financial constraint requirements for projecting revenues, the construction phase is not covered. If/when additional revenues for these projects become available, these projects will require future amendments to the MTP/SCS to reflect full construction costs.

COUNTY	LEAD AGENCY	TITLE	PROJECT DESCRIPTION	TOTAL COST (2010 DOLLARS)	TOTAL COST (YEAR OF EXPENDITURE DOLLARS)	MTP/SCS Status
Yolo	City of West Sacramento Dept of Public Works	Industrial Boulevard Widening	In West Sacramento, Industrial Boulevard from the Palamidessi Bridge at the Barge Canal to Harbor Boulevard: widen from 4 to 6 lanes.	*MTIP Project: Year of Expenditure Costs Only*	$ 16,440,000	**Project complete by 2035**
Yolo	City of West Sacramento Dept of Public Works	Lake Washington Blvd.	Lake Washington Blvd.: Widen the Palamidessi Bridge over the barge canal from 4 to 6 lanes.	*MTIP Project: Year of Expenditure Costs Only*	$ 10,100,000	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	Lake Washington Blvd.	Widen Lake Washington Blvd. from 2 to 6 lanes from Jefferson Blvd. to the new Palamidessi Bridge at the barge canal.	$ 4,000,000	$ 4,994,327	**Project complete by 2035**
Yolo	City of West Sacramento Dept of Public Works	Port of West Sacramento Entrance	This project includes the construction of a new port entrance, including the installation of a new rail crossing near Beacon and Industrial Boulevards. This project will increase the efficiency and safety of travel to, from and within the Port, and is required prior to the construction of a new area project. This project will improve transportation operations, and is likely to lead to significant positive economic benefits.	$ 2,400,000	$ 3,285,328	**Project complete by 2035**
Yolo	City of West Sacramento Dept of Public Works	Port Wharf & Pier Rehab	Replacement and upgrade of 3000' of wharf fendering to accommodate larger vessels calling at Port	$ 5,000,000	$ 5,217,310	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	Rail relocation & reconfiguration study	Service Plan: Study rail relocation and reconfiguration through West Sacramento. The intent of the study will be to seek implementing a proposed solution and leveraging public and private funding for implementation.	$ 1,000,000	$ 1,022,000	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	Road Rehab	Rehabilitate various roads in West Sacramento.	*MTIP Project: Year of Expenditure Costs Only*	$ 481,203	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	Road Rehab Stimulus	Sacramento Avenue, Jefferson Boulevard, F Street and various location: Rehabilitate with overlays and slurry seal.	*MTIP Project: Year of Expenditure Costs Only*	$ 3,230,000	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	Sacramento River Deep Water Ship Channel Deepening	Dredging remainder of 35 miles of 43 mile ship channel an additional 5' to 35' in depth. This 15% increase in channel depth will allow larger ships and thus will increase allowable ship capacity by 40% (from 25,000 tons to 35.000 tons). Ship channel boundaries are from Collinsville (just above Suisun Bay) up to West Sacramento.	*MTIP Project: Year of Expenditure Costs Only*	$ 70,000,000	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	South River Rd.	Reconstruct and widen South River Road to 4 lanes from US50 on-ramp to Stonegate Boulevard, including a new 4-lane bridge over barge canal.	*MTIP Project: Year of Expenditure Costs Only*	$ 26,750,000	**Project complete by 2020**
Yolo	City of West Sacramento Dept of Public Works	Tower Bridge Gateway Modification (East Phase)	In West Sacramento, Tower Bridge Gateway (former State Route 275) from Tower Bridge to the UPRR underpass: reconfigure road from a controlled access expressway to an arterial roadway with signalized at-grade intersections at 3rd and 5th Streets.	*MTIP Project: Year of Expenditure Costs Only*	$ 13,889,000	**Project complete by 2020**

Appendix C Mitigation, Monitoring, and Reporting Program

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
Aesthetics	AES-1: During final design, aesthetics will be considered by the City for consistency with local goals and standards.	City	Final Design
	AES-2: Selection of lighting fixtures will take into account minimizing glare, while taking into account safety needs.	City	Final Design
Air Quality	AQ-1: The contractor shall comply with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances. AQ-2: The contractor shall control dust by applying either water or dust palliative, or both. AQ-3: The construction contractor shall implement control measures to reduce emissions of NOX, ROG, and PM_{10}. The contractor shall: • Minimize idling time to 5 minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. • To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintaining heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions. • Use electric equipment when feasible. • Properly maintain equipment according to manufacturers' specifications.	Contractor	Construction

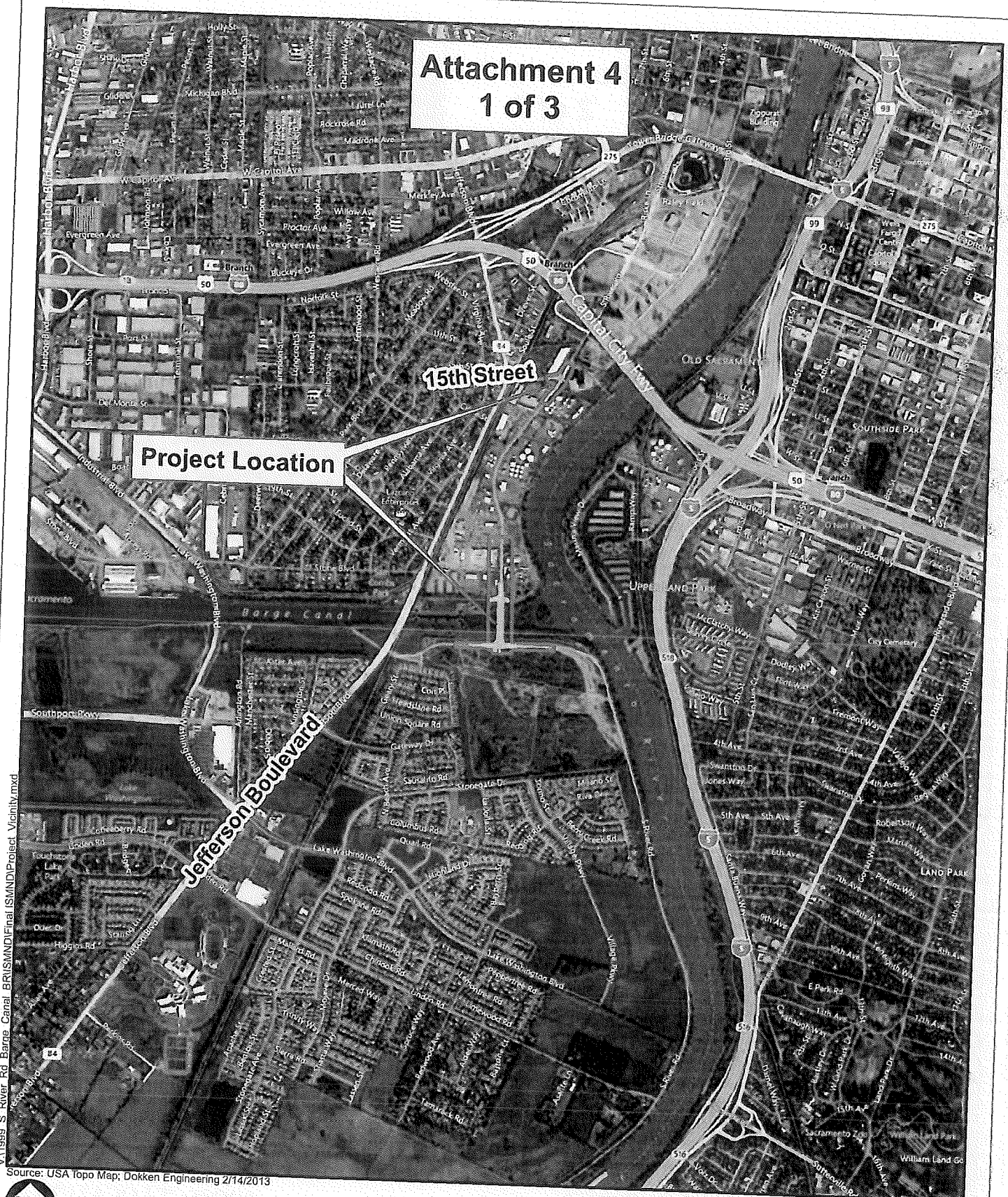
Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	avoid removal of Northern California black walnut trees. BIO-6: To ensure compliance with MBTA and CDFW code, vegetation removal and work should be avoided outside the nesting season (defined as Feb 15 – August 15). If this is not possible and vegetation removal or work that could disturb nesting is to occur during the nesting season, a pre-construction survey shall be conducted at least 5 days prior to project activities. The pre-construction survey shall be performed by a qualified biologist, to determine the presence of nesting birds and ensure active nests are not directly or indirectly impacted during construction. The pre-construction survey area will include the limits of the project impact area plus a 300-ft buffer. If disrupting work is planned to begin in an area during the nesting season (February 15 – August 15), all vegetation removal shall be completed within one week of the nesting survey if the survey determines no active nests are present. BIO-7: For Swainson's Hawk, if vegetation removal or work is to occur during the Swainson's Hawk nesting season (February 15 – July 31), a preconstruction survey shall be performed by the project biologist, in coordination with the CDFW, to determine if Swainson's hawk nests occur on the project site or within ¼ mile of the project site. At the discretion of CDFW, trees may be removed between February 15 and July 31 provided a biologist survey the proposed trees designated to be removed to verify the absence of an active nest. Preconstruction surveys shall be conducted during the nesting season at least 5 days prior to project activities and again 72 hours prior to project activities to determine if there are any Swainson's hawk nests on the project site and within ¼ mile of the project site. Surveys shall be completed using the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	involved with this Project will take place, to the extent feasible, in the area of direct impact. BIO-10: Construction activities shall be limited to daylight hours when possible. Night work will only be considered when required to meet schedule or to avoid high water events. BIO-11: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel. The project biologist shall conduct a pre-construction meeting to ensure that construction crews are informed of the approved limits of disturbance and of the sensitive animals and habitats in the vicinity. The awareness training will be provided to all construction personnel to brief them on the need to avoid effects to biological resources, particularly riparian habitat and special-status wildlife habitat (i.e., elderberry shrubs), and the penalties for not complying with the biological opinion and other regulatory permits. If new construction personnel are added to the project, the contractor will ensure that the new personnel receive the mandatory training before starting work. At a minimum, the training shall include 1) the purpose for resource protection; 2) a description of sensitive species and their habitats; 3) environmentally responsible construction practices; 4) the protocol to resolve conflicts that may arise at any time during the construction process; and 5) the general provisions of FESA and CESA, the need to adhere to the provisions of FESA and CESA, and the penalties associated with violation of FESA and CESA. BIO-12: Prior to clearing/grubbing, grading, and/or construction activities within or adjacent to native habitats on the Project site, a qualified biologist shall supervise the installation of temporary construction fencing along the approved limits of disturbance, including construction staging areas and access routes, to prevent additional		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	employees and subcontractors. Temporary fences around the environmentally sensitive areas will be installed as the first order of work. Temporary fences will be furnished, constructed, maintained, and removed as shown on the plans, as specified in the special provisions, and as directed by the project engineer. The fencing will be commercial-quality woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). The fencing will be tightly strung on posts with maximum 10-foot spacing. BIO-15: A barrier, such as a water inflated dam, shall be installed at the opening of the live Barge Canal channel between August 1 and November 30. During dewatering a biologist will be present to monitor and relocate, if necessary, species. BIO-16: Implement Stormwater Pollution Prevention Plan (SWPPP) Measures to protect water quality. Implement erosion control and Best Management Practices (BMPs). Contract specifications will include the following Best Management Practices (BMPs), where applicable, to reduce erosion during construction. • Implementation of the project will also require approval of a site-specific SWPPP that would implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques. • Scheduling. A specific work schedule will be implemented to coordinate the timing of land disturbing activities and the installation of erosion and sedimentation control practices to reduce on-		

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	SPCCP to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. This would include refueling of equipment away from the waterway The SPCCP will be completed prior to construction. BIO-18: Pursuant to Executive Order 13112 and the control of invasive species: • All landscaping and revegetation shall consist of a biologist approved plant and/or seed mix from native, locally adapted species. • Prior to arrival at the project site and prior to leaving the project site, construction equipment that may contain invasive plants and/or seeds shall be cleaned to reduce the spreading of noxious weeds. BIO-19: Implementation of the following mitigation measures will minimize and offset effects to Critical Habitat: The City shall prepare a riparian restoration plan prior to construction. This plan will include restoration of areas impacted by the proposed Project, and will aim to reestablish a healthy riparian corridor around the Barge Canal.		
Greenhouse Gases	N/A		
Cultural Resources	CR-1: In accordance with Section 7052.5 of the Health and Safety Code, construction or excavation shall be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be	City, Contractor	Construction

Resource	Avoidance, Minimization, or Mitigation Measure	Responsible Party	Implementation During:
	bridge abutments.		
Geology and Soils	GEO-1: The City and contractor shall implement a SWPPP to include erosion control methods. This SWPPP shall be prepared for the Section 402 permit, NPDES General Permit for Discharges of Storm Water Associated with Construction Activity.	City, Contractor	Prior to construction
Hazards and Hazardous Materials	HAZ-1: Require Spark-Generating Construction Equipment be Equipped with Manufacturers' Recommended Spark Arresters: The City shall require contractors to fit any construction equipment that normally includes a spark arrester with an arrester in good working order. Subject equipment includes, but is not limited to, heavy equipment and chainsaws. Implementation of this measure will minimize a source of construction-related fire. HAZ-2: Before Construction Begins, Clear Materials That Could Serve as Fire Fuel from Areas Slated for Construction Activities: If dry vegetation or other fire fuels exist on or near staging areas, welding areas, or any other area on which equipment will be operated, contractors shall clear the immediate area of fire fuel. To maintain a firebreak and minimize the availability of fire fuels, the City shall require contractors to maintain areas subject to construction activities clear of combustible natural materials to the extent feasible. To avoid conflicts with policies to preserve riparian habitat, areas to be cleared shall be identified with the assistance of a qualified biologist.	City, Contractor	
Hydrology and Water Quality	HYD-1: The storm drain system will be designed to accommodate the project and comply with current standards. HYD-2: Implement a Spill Prevention, Control, and Countermeasure Program during construction to protect	City, Contractor	Final Design, Construction



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PROJECT VICINITY

Pioneer Bluff Bridge Project
City of West Sacramento, California

PROJECT LOCATION 2

Pioneer Bluff Bridge Project

City of West Sacramento, California

RESOLUTION 13-14

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF WEST SACRAMENTO CERTIFYING THE MITIGATED NEGATIVE DECLARATION AND APPROVAL OF THE MITIGATION, MONITORING, AND REPORTING PLAN FOR THE PIONEER BLUFF BRIDGE PROJECT

WHEREAS, on February 20, 2013, the City of West Sacramento City Council approved the Pioneer Bluff Bridge Project (the "Project") that connects to South River Road on both sides of the Barge Canal and signalization at the intersection at 15th Street and South River Road;

WHEREAS, the City has prepared a Mitigated Negative Declaration in accordance with the California Environmental Quality Act, CEQA Guidelines, and all other applicable laws and regulations;

WHEREAS, an Initial Study with proposed Mitigated Negative Declaration (IS/MND) for the project was made available by the City for public review beginning January 11, 2013, through February 11, 2013; and

WHEREAS, on February 20, 2013, the City, acting as the lead agency under CEQA, certified and adopted the Mitigated Negative Declaration and Mitigation, Monitoring, and Reporting Plan for the Pioneer Bluff Bridge Project.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of West Sacramento hereby:

1. Certifies that it has reviewed and considered the proposed Mitigated Negative Declaration for the Project and certifies the proposed Mitigated Negative Declaration, and that the Mitigated Negative Declaration reflects the independent judgment of the City as lead agency under CEQA; and

2. Adopts the Mitigation, Monitoring, and Reporting Plan for the Project.

PASSED AND ADOPTED by the City Council of the City of West Sacramento this 20th day of February, 2013, by the following vote:

AYES: Johannessen, Kristoff, Villegas
NOES: None
ABSENT: Ledesma, Cabaldon

Christopher L. Cabaldon, Mayor

ATTEST:

Kryss Rankin, City Clerk

FILED
YOLO COUNTY CLERK/RECORDER
FEB 22 2013
LINDA SMITH

Notice of Determination

TO:
☒ Office of Planning and Research
For U.S. Mail:
P.O. Box 3044
Sacramento, CA 95812-3044

Street Address:
1400 Tenth Street
Sacramento, CA 95814

☒ County Clerk:
Yolo County Clerk-Recorder
625 Court Street, #B01
Woodland, CA 95695

FROM:
City of West Sacramento
1110 West Capitol Avenue
West Sacramento, CA 95691
Contact: Jay Davidson, PE
Phone: 916-617-4645

Local Agency (if different from above):
_____
Address: _____
Contact: _____ Phone: _____

SUBJECT: ***Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.***

State Clearinghouse Number: 2013012030

Project Title: Pioneer Bluff Bridge

Project Location: City of West Sacramento

Project Description: The City of West Sacramento proposes to build a bridge that will connect the existing two-lane South River Road from the South River Road cul-de-sac on the north side of the Barge Canal to South River Road on the south side of the Barge Canal. The bridge will include one 12-foot lane in each direction and one future un-striped 12-foot lane in each direction, a 2-foot raised median, shoulders, and two 6-foot walkways separated from traffic by a concrete barrier. The project will signalize the intersection of 15th Street and South River Road. The purpose of the Pioneer Bluff Bridge Project is to construct a bridge that connects South River Road across the Barge Canal.

This is to advise that the City of West Sacramento, has approved the above described project on February 20, 2013 and has made the following determinations regarding the above described project:

1. The project [☐ will ☒ will not] have a significant effect on the environment.
2. ☐ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☒ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
6. Findings [☐ were ☒ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the Negative Declaration, is available to the General Public at: City of West Sacramento, 1110 West Capitol Avenue, 2nd Floor, West Sacramento, CA 95691.

Signature: Jay Davidson

Title: Senior Civil Engineer

Date: 2/21/13

Date Received for filing at OPR: RECEIVED
FEB 22 2013
STATE CLEARING HOUSE

Authority cited: Section 21083, Public Resources Code.
Reference: Sections 21000-21174, Public Resources Code.

Revised 2005

POSTED FEB 22 2013 TO _____

N013-10