

Initial Study
Proposed Mitigated Negative Declaration
for the Proposed
Green Island Road Reconstruction and Widening Project

August 2019

Lead Agency:

City of American Canyon

4381 Broadway Street

American Canyon, CA 94503



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Acronyms and Abbreviations

AB	Assembly Bill
ADA	American with Disabilities Act
ALUCP	Airport Land Use Compatibility Plan
APE	Area of Potential Effect
ASC	Anthropological Studies Center
BAAQMD	Bay Area Air Quality Management District
BASMAA	Bay Area Stormwater Management Agencies Association
BMP	Best management practices
CAL FIRE	California Department of Forestry and Fire Protection
Cal-OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CIP	Capital improvement program
CMP	Congestion Management Plan
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide equivalent
dBA A-	Weighted Sound Level
EECAP	Energy Efficiency Climate Action Plan
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
GRID	Green Island Industrial District
IS	Initial Study
L _{max}	maximum noise level
LID	low impact design
LOS	Level of Service
MLD	Most Likely Descendant

MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MT	metric tons
MRZ	Mineral Resource Zone
NAHC	Native American Heritage Commission
NCTPA	Napa County Transportation and Planning Agency
NOx	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NVTA	Napa Valley Transportation Authority
PM	particulate matter
PM10	Particle matter less than 10 micrometers in diameter
PM2.5	Particle matter less than 2.5 micrometers in diameter
PPV	peak particle velocity
PRC	Public Resources Code
RCNM	Roadway Construction Noise Model
ROG	Reactive Organic Gasses
ROW	Right of Way
SFBAAB	San Francisco Bay Area Air Basin
SR	State Route
SS/RW	sanitary sewer and recycled water
SWPPP	stormwater pollution prevention plan
TACs	Toxic air contaminants
USGS	U.S. Geological Survey

1 INTRODUCTION

Regulatory Guidance

This document is an initial study with supporting environmental studies, which provide justification for a Mitigated Negative Declaration pursuant to the California Environmental Quality Act (CEQA). The Proposed Mitigated Negative Declaration has been prepared in accordance with the CEQA, Public Resources Code Section 21000 et seq., and the State CEQA Guidelines 14 California Code Regulations Section 15000 et seq.

An initial study is conducted by a lead agency to determine if a project may have a significant effect on the environment. In accordance with the CEQA Guidelines Section 15063, an Environmental Impact Report (EIR) must be prepared if an initial study indicates that the proposed project under review may have a potentially significant impact on the environment. A Negative Declaration may be prepared instead, if the lead agency prepares a written statement describing the reasons why the proposed project would not have a significant effect on the environment, and therefore, why it does not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a Negative Declaration shall be prepared for a project subject to CEQA when either:

- a) The initial study shows there is no substantial evidence, in light of the whole record before the agency, that the proposed project may have a significant effect on the environment, or
- b) The initial study identifies potentially significant effects, but:
 - (1) Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur and;
 - (2) There is no substantial evidence, in light of the whole record before the agency, that the proposed project as revised may have a significant effect on the environment.

1.1 Purpose of the Initial Study

This initial study has been prepared consistent with CEQA Guidelines Section 15063, to determine if the Green Island Road Reconstruction and Widening Project as proposed may have a significant effect upon the environment. Based upon the findings contained within this report, the Initial Study will be used in support of the preparation of a mitigated negative declaration.

1 PROJECT INFORMATION

Project Title:	Green Island Road Reconstruction and Widening Project
Lead Agency Name & Address	City of American Canyon 4381 Broadway Street American Canyon, CA 94503
Contact Person	Ron Ranada, Senior Civil Engineer
Project Location:	Green Island Road in the City of American Canyon is located west of Highway 29. The road widening project site along Green Island Road is approximately 1.2 miles in length. Most of the properties along Green Island Road have been recently developed into shipping and storage warehouses, and other commercial properties; however, there are a few remaining ranchettes along this road.
General Plan Designation	Industrial
Zoning	General Industrial (GI)
Description of Project	The City of American Canyon is proposing to reconstruct and widen Green Island Road to facilitate trucking commerce to and from Highway 29 which has increased over the years due to the addition of commercial warehouses along this formerly rural road. The limits of the road widening project extend up to approximately 40 feet north of the existing edge of Green Island Road into privately owned properties. In order to accommodate the road reconstruction and widening the City will relocate underground existing overhead utilities currently present along the road or on the adjacent private property lands that become incorporated into the new road. A multi-modal transportation system including a bike path is also proposed to be added along the northern side of Green Island Road as

part of this project.

A component of the project will include rehabilitation of roadways that adjoin Green Island Road. These roadways are Mezzetta Court, Jim Oswalt Way, Hanna Drive and portions of Commerce Boulevard.

Surrounding Land Uses and Setting

A wide variety of industrial land uses occur along the project area that manufacture, distribute, store or sell food, lumber, landscaping materials, building products, and wine. On the north side of the road there are areas of undeveloped non-native annual grassland that is used for cattle grazing. The Schellville branch of the California Northern Railroad bisects the project site, and the Napa branch of the California Northern Railroad defines the eastern boundary of the project limits.

1.1 Introduction

The Green Island Road Reconstruction and Widening Project (Project) is subject to the requirements of the California Environmental Quality Act (CEQA). The City of American Canyon (City) is the CEQA Lead Agency. The purpose of this Initial Study is:

- To provide a basis for deciding whether to prepare an Environmental Impact Report, a Mitigated Negative Declaration, or a Negative Declaration;
- To disclose potential project environmental impacts; and
- To inform the CEQA Lead Agency, responsible agencies, trustee agencies, and the public regarding the potential environmental impacts of the project. After environmental impacts are identified, to present feasible mitigation measures where applicable.

This Initial Study has been prepared to satisfy the requirements of CEQA (Public Resources Code, Div. 13, Secs 21000-21177) and the CEQA Guidelines (California Code of Regulations, Title 14, Sec 15000-15387).

1.2 Project Objectives

The project involves the reconstruction and widening of 1.86 miles of deteriorated roads that serve the Green Island Industrial District (GRID). This includes Green Island Road, Jim Oswalt Way, Mezzetta Court, Hanna Drive and portions of Commerce Boulevard.

The purpose of the project is to increase the structural capacity of the roadways to meet the area's uses, including implementation of a multi-modal transportation system.

1.3 Project Location and Setting

The proposed project is located on the north side of the City of American Canyon (see Figures 1, 2 and 3). The City of American Canyon is located in southern Napa County, approximately 35 miles northeast of San Francisco. The project area is located within the city limits of American Canyon in an area that serves as an industrial hub for the area.

The project area is located south of the Napa County Airport Industrial Area in the Green Island Industrial Area. Two active freight rail lines bisect the project area, and the Napa River is located approximately two miles west of the project site. The project area has an elevation ranging from approximately 20 to 50 feet above mean sea level. To the north and south of the project site is the GRID which contains both light and heavy manufacturing, in addition to warehouses. Four residences are located adjacent to the project.

The GRID is home to several distribution centers and businesses that have global impact. These businesses include Coca-Cola, North America, Mezzetta Specialty Food, Wallaby Yogurt, and Sutter Home Winery. Road improvements would retain businesses which have threatened to leave, and attract new businesses to the GRID. The City estimates that 130 jobs will be lost if improvements are not undertaken.

1.4 Project Description

This US Department of Commerce Economic Development Administration (EDA) funded project involves improvements to the Green Island Road in the City of American Canyon (City), Napa County, California. The project is adjacent to the GRID and is located off Highway 29 which is a major route for trucks carrying agricultural products. American Canyon is near Highway 80, a major north-south truck route in the San Francisco Bay Area.

It is anticipated that the Full-Depth Reclamation (FDR) method will be used to reconstruct the existing roadways. Reclaimed Asphalt Pavement (RAP) may also be mixed with asphalt emulsion to be used for new asphalt which will be overlain with a top layer of asphalt concrete.

The project also includes widening 0.80 miles of Green Island Road from two lanes to three lanes. The center lane would be used as a turning lane and the other two lanes would be widened. Improvements would include road surface paving, curb installation, and stormwater drainage wells. Additionally, existing overhead utilities would be located underground.



County: Napa
Map Preparation Date: July 1, 2019

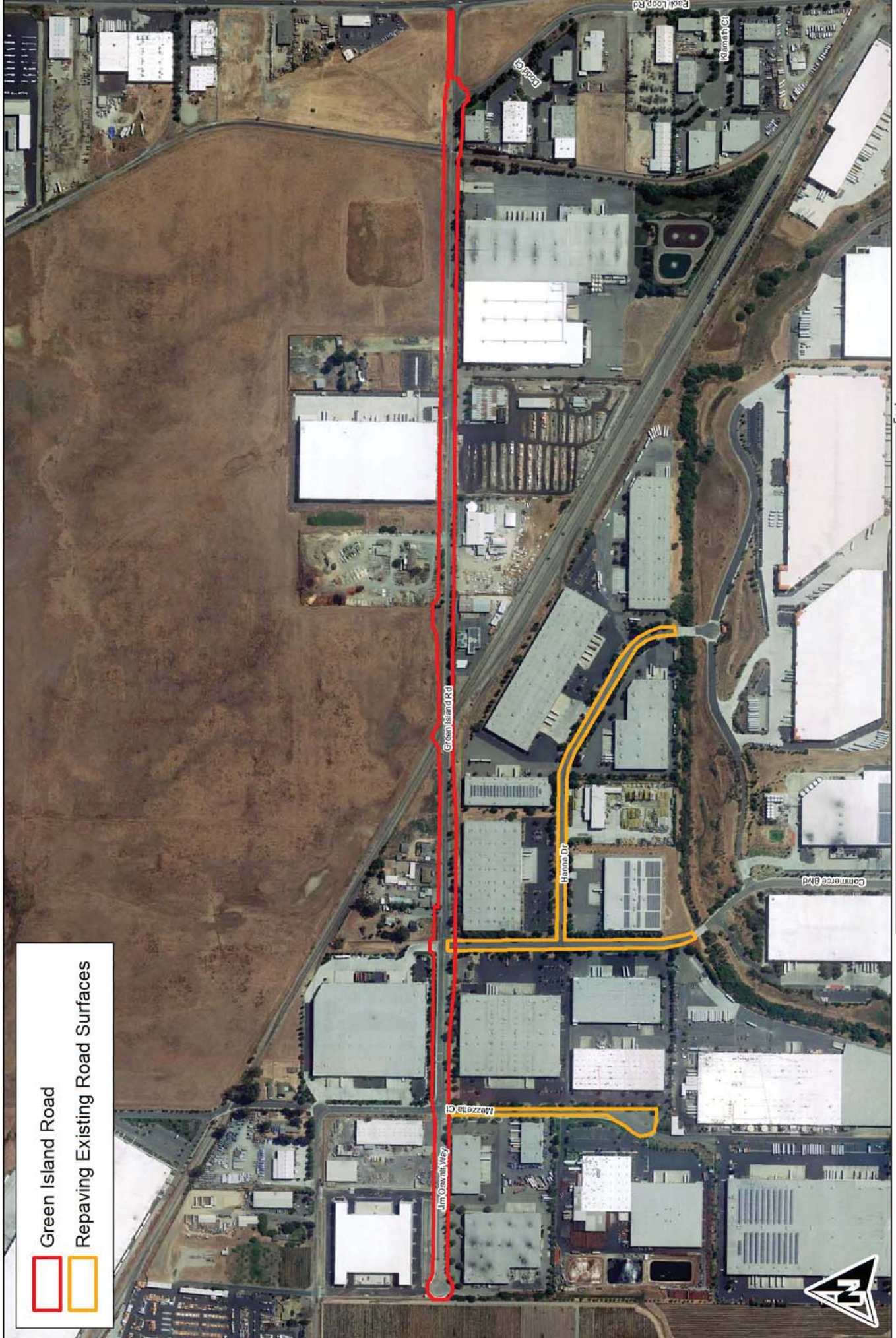


Green Island Road
Repaving Existing Road Surfaces

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Figure 2. Local Map of the
Green Island Road Reconstruction and Widening Project Site
American Canyon, California

Section: 14, 13; T4N R4W
7.5-Minute Cuttings Wharf South quadrangle
Aerial Photograph Source: ESRI
Map Preparation Date: July 1, 2019



- Green Island Road
- Repaving Existing Road Surfaces

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Figure 3. Aerial Photograph of the
Green Island Road Reconstruction and Widening Project Site
American Canyon, California

This would require trenching, utility boxes, and conduit installation. The widening of the roadway will require the acquisition of right of ways from a number of properties along Green Island Road.

Key aspects of the project include the following:

- Adding a two-way left turn center lane on Green Island Road
- Providing the shared use Napa Valley Vine Trail bicycle/pedestrian path along the north side of Green Island Road
- Installing curb, gutter, and sidewalks at several locations along the roadway corridor.
- Improving the structural section on the internal roads within existing curb and gutter
- Reconstructing and improving two at-grade railroad crossings
- Relocating existing overhead utilities to a new underground joint trench
- Installation of LED street lighting.

Utilities

The proposed project will require the relocation of overhead electric and telecommunication facilities and the possible relocation of underground natural gas facilities. Relocation of all utility infrastructure will be coordinated with the responsible utility provider to mitigate and minimize service disruptions to utility customers.

The proposed project will include the undergrounding of several overhead joint use poles into a common joint trench utilizing California Public Utilities Commission Rule 20A and Rule 20B process. The new underground joint trench will include power, underground telephone, underground telecommunications, and underground street lighting. The City has developed primary plans and the locations of the joint trench and utility vaults will be coordinated with the proposed project.

Implementation of the proposed project also includes the installation of LED street lighting along Green Island Road.

Railroad Crossing

California Northern Railroad (a subsidiary of Genesee & Wyoming Railroad) operates two at-grade rail crossings on Green Island Road within the project limits under license from Union Pacific Railroad. The City of American Canyon is working with the railroad companies and the California Public Utilities Commission to reconstruct the crossings in order to accommodate the Project's improvements pursuant to current safety standards.

Construction Approach and Staging Areas

Overall, project construction activities are anticipated to last 24 to 30 months. A majority of the work would occur during the summer/early fall months, though work may be undertaken as weather conditions allow. Normal construction work days will be Monday through Friday between the hours of 7 a.m. and 7 p.m. Weekend and night work will also be considered on an as-needed basis. Construction staging areas will be located within the City's roadway right-of-way, predominantly along the northern boundary of the roadway.

It is anticipated that excavators, dozers, cranes, pavers, dump trucks, concrete trucks, and concrete pumps may be required to construct the proposed project.

Table 1: Proposed Construction Equipment

Construction Equipment	Construction Purpose
Asphalt Concrete Paver	Paving roadways
Backhoe	Soil manipulation and drainage work
Bobcat	Fill distribution
Bulldozer/Loader	Earthwork construction, clearing and grubbing
Crane	Placement of bridge precast girders, placing of forms, and rebar
Dump Truck	Fill material delivery/surplus removal
Excavator	Soil manipulation
Front-end Loader	Dirt or gravel manipulation
Grader	Ground leveling
Haul Truck	Earthwork construction; clearing and grubbing
Paver	Roadway paving
Roller	Earthwork and compacting

Scraper	Earthwork construction; clearing and grubbing
Truck with Seed Sprayer	Erosion control and landscaping
Water Truck	Earthwork construction; clearing and grubbing

To minimize construction-related impacts to surrounding land uses, a number of best management practices will be implemented during the construction phase of the proposed project. For example, where ground disturbing or grading activities are necessary, fugitive dust will be minimized by onsite watering. Standard Best Management Practices (BMPs) will also be undertaken as part of the project to ensure erosion control, with a Stormwater Pollution Prevention Plan (SWPPP) to be prepared and implemented by the construction contractor to achieve this purpose.

1.5 Required Permits or Approvals

The City will approve the construction drawings, prepare bid documents, and manage construction of the proposed project and will also prepare and certify the initial study/mitigated negative declaration (IS/MND) as the lead agency. Several additional agencies would also be involved in the consideration of portions of the project. Federal, state and local approvals that may be required for the project include the following:

- U.S. Army Corps of Engineers: The project would require a Section 404 Permit under the Clean Water Act for filling of wetlands or other waters of the U.S.
- San Francisco Bay Regional Water Quality Control Board: The project would require a 401 Water Quality Certification under the Clean Water Act for filling of wetlands or other waters of the U.S. or waters of the State.
- State Water Resources Control Board: The project would require a General Construction Permit for disturbance of one or more acres of soil.
- California Public Utilities Commission: Rail crossing improvements will require CPUC approval.
- The Project will require review by the American Canyon Fire Protection District, a subsidiary special district of the City.

1.6 Environmental Protection Actions Incorporated into the Project

The following actions are included as part of the project to reduce or avoid potential adverse effects that could result from construction or operation of the project. Additional mitigation measures are presented in the following analysis sections in Chapter 3. Environmental Protection Actions are included in the Mitigation, Monitoring, and Reporting Program prepared for the project (provided as a separate document).

1.6.1 Environmental Protection Action 1 – Geotechnical Design

As part of the project design process, the City of American Canyon has engaged a California-registered Geotechnical Engineer to conduct a design-level geotechnical study for the project. The City will design the project to comply with the site-specific recommendations made in the project's geotechnical report. This will include design in accordance with the seismic and foundation design criteria, as well as site preparation and grading recommendations included in the report. The geotechnical recommendations will be incorporated into the final plans and specifications for the project, and will be implemented during construction.

1.6.2 Environmental Protection Action 2 Traffic Control Plan

Traffic controls will be implemented during construction, although minimal traffic restrictions are anticipated. The project contractor will prepare a traffic control plan that must be approved by the City.

1.6.3 Landscaping Plan

A landscaping plan for the Project will be developed and ultimately approved by the City. The landscaping plan will be developed in conformance with the Department of Water Resources' *Model Water Efficient Landscape Ordinance (MWELO)*, which the City has adopted.

Environmental Factors Potentially Affected

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

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

2 ENVIRONMENTAL IMPACTS

2.1 Aesthetics

Except as provide in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Discussion

a) Have a substantial adverse effect on a scenic vista? (No impact)

The project site and vicinity contain an existing roadway with adjacent flat undeveloped land and industrial facilities. None of the surrounding land uses are considered visually sensitive land uses. Neither the City of American Canyon nor the Napa County General Plan identifies the project site as a scenic vista or scenic resource. The project site does not contain any scenic vistas or features associated with scenic vistas (e.g., ridgelines, peaks, overlooks). Development of the project would not obstruct views of scenic resources, as the project site is flat and not in the sight-line of any scenic resources. Finally, the project site is not visible to the nearest major roadway. Therefore, no impact would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (No impact)

The nearest state highway to the project is State Route 29 (SR-29), located 0.1 miles to the east of the project site. This highway is classified as an eligible State Scenic Highway, but is not

officially designated as a Scenic Highway. Because SR-29 is not designated as a state Scenic Highway, and views of the improved roadway and new bicycle trail would be very limited from SR-29, no impact would occur.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? (No Impact)

The proposed project is in an area zoned for industrial uses and is characterized as an urbanized area. The project would not change the existing land use patterns of the area and is consistent with applicable zoning and other regulations governing scenic quality. Therefore, project implementation would result in no impact.

d) Create a new source of light or glare? (Less than significant)

Anticipated construction work hours would be 7:00 a.m. to 7:00 p.m., Monday through Friday; however, the City may need to complete portions of the project during nighttime hours, assumed to be from 7:00 p.m. to 7:00 a.m. Staging areas would not have nighttime security lighting that would be used continuously. Lighting would be used only when workers need access at night. Temporary lighting would be needed for completion of nighttime work. Therefore, the impact of nighttime lighting on adjacent properties would be less than significant. Post construction, during operation, street lights would be used at night to increase safety. Street lights would be directed toward the roadway and would not create a source of glare or light trespass to nearby properties. Therefore, project operations would result in a less than significant impact.

2.2 Agricultural and Forestry 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, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	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				X

Agency, to non-agricultural use?				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
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))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?				X

Discussion

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? (No impact)

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? (No impact)

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))? (No impact)

d) Result in the loss of forest land or conversion of forest land to non-forest use? (No impact)

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? (No impact)

Response to a)-e). According to the Farmland Mapping and Monitoring Program map for Napa County (CDC 2016), the project would not occur in areas designated as Prime Farmland, Unique Farmland, or Farmland of Statewide importance. In addition, the project is not located on land designated by the California Department of Conservation as being under a Williamson Act contract (CDC 2015), or on land designated for agricultural, forestland, or timberland (American Canyon 2016b). Neither construction nor operation of the project would conflict with regulations for agricultural use, forest land, result in the loss of forest land, or result in the conversion of farm or forest land. No impact to agriculture or forest resources would occur.

2.3 Air Quality

Where available, the Significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plans				X
b) 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		X		
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?		X		

Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan? (No impact)

The Bay Area Air Quality Management District (BAAQMD) 2017 Clean Air Plan, Spare the Air-Cool the Climate (2017 Plan) is the most recently adopted regional air quality plan that pertains to the project (BAAQMD 2017a). The 2017 Plan focuses on two closely-related goals: protecting public health and protecting the climate. The 2017 Plan is a multi-pollutant air quality plan addressing four categories of air pollutants:

- Ground-level ozone and the key ozone precursor pollutants (reactive organic gases and oxides of nitrogen), as required by State law;

- Particulate matter (PM), primarily PM_{2.5}, as well as the precursors to secondary PM_{2.5};
- Toxic air contaminants; and
- Greenhouse gases

The 2017 Plan includes 85 control measures in nine economic sectors: 1) stationary sources; 2) transportation (mobile) sources; 3) energy; 4) buildings; 5) agriculture; 6) natural and working lands; 7) waste management; 8) water; and 9) super-GHG pollutants. The project would not prevent the BAAQMD from implementing these actions, and none directly apply to the project. Therefore, implementation of the project would not conflict with or obstruct the 2017 Plan. As a result, no impact would occur.

b) 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. (Less than significant with mitigation)

Potential violations of an air quality standard (State or federal standards) include the potential to emit substantial amounts of fugitive dust (PM₁₀/PM_{2.5}) during earth-disturbing construction activities, and CO emissions during Project operation. Operational CO hotspots (localized violations of the State or federal CO standard) are related to increases in on-road vehicle congestion. These potential impacts are localized in nature, occurring near the emissions source. Each impact topic is discussed separately below. Construction Fugitive Dust (PM₁₀/PM_{2.5})

The BAAQMD has identified fugitive dust from construction activities as a source of localized PM₁₀/PM_{2.5}. If uncontrolled, these emissions could lead to both health and nuisance impacts. Construction of the project is anticipated to begin in late 2019 and require approximately twenty-four to thirty months to complete. Construction activities associated with development activities contemplated by the project would include site preparation (removal of vegetation), grading, paving, and open trenching. Generally, the most substantial air pollutant emissions would be dust generated from site grading. Construction activities would also temporarily create emissions of equipment exhaust and other air contaminants. The project's potential impacts from equipment exhaust are assessed separately in discussion c), below.

BAAQMD does not recommend a numerical threshold for fugitive, dust-related particulate matter emissions. Instead, BAAQMD bases the determination of significance for fugitive dust on a consideration of the control measures to be implemented. If all appropriate emissions control measures recommended by BAAQMD are implemented for a project, then fugitive dust emissions during construction are not considered significant.

The project may result in a significant generation of localized fugitive dust during construction. Mitigation Measure AIR-1 requires implementing the appropriate emissions control measures recommended by BAAQMD and would reduce the project's impact to less-than-significant impact.

Operational CO Hotspot

CO emissions are of concern when congested intersections with a large volume of traffic have the potential to have high localized concentrations of CO. BAAQMD recommends a screening analysis to determine if a project has the potential to contribute to a CO hotspot. The screening criteria identify when site-specific CO dispersion modeling is necessary. The proposed project would result in a less-than-significant impact to air quality for CO if all of the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans; or
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; or
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Section 3.17, Transportation and Traffic, a) evaluates the project's potential for conflict with an applicable congestion management program. As identified in the analysis, the project would not conflict with an approved congestion management program. As discussed in Section 3.17, the project would not directly result in new daily vehicle trips on local roadways, so the project would not contribute additional trips to any existing intersections. Therefore, the project does not have the potential to significantly contribute to an existing or projected violation of the CO standard on local roadways. The project would generate a less than significant impact for operational CO hotspots.

Mitigation Measure AIR-1: Implement BAAQMD Basic Construction Measures

The City shall implement the following Bay Area Air Quality Management District (BAAQMD) recommended Basic Construction Measures:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas and unpaved access roads) shall be watered two times per day;
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered;
- All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping shall be prohibited;
- All vehicle speeds on unpaved areas shall be limited to 15 miles per hour;
- All paving shall be completed as soon as possible after trenching work is finished;
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points;
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation;
- A publicly visible sign shall be posted providing the name and telephone number of the individual designated with the construction contractor as the site superintendent for reporting of dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

The project would not generate a localized exceedance of the PM10 standard from project construction after the implementation of Mitigation Measure AIR-1, and would have a less than significant impact for a localized exceedance of the CO standard from project operation. Therefore, the project would not substantially contribute to an existing or projected localized air quality violation. Impacts would be less than significant with mitigation.

c) Expose sensitive receptors to substantial pollutant concentrations? (Less than significant)

This impact analysis addresses whether the project would expose sensitive receptors to operational related toxic air contaminants (TACs). TACs are measured for their increased cancer risk and noncancer risk on sensitive receptors. Sensitive receptors are defined by the BAAQMD as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of

receptors include residences, schools and school yards, parks and play grounds, daycare centers, nursing homes, and medical facilities.

The nearest location of sensitive receptors (existing residences) are located at 834, 850, and 874 Green Island Road on the north side of Green Island Road. The project would not result in the construction of a new sensitive land use.. Development of the project would result in minor road realignments to the south thereby increasing the distance between the vehicles and the existing residences. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations after the project is completed. The project would result in a less than significant impact.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? (Less than significant with mitigation)

According to California standards, the San Francisco Bay Area Air Basin (Air Basin) is currently designated as a non-attainment area for suspended particulate matter (PM_{2.5} and PM₁₀) and ozone (BAAQMD 2016). Under national standards, the Air Basin is currently designated as non-attainment for 8-hour ozone precursors, and non-attainment for PM_{2.5}. The San Francisco Bay Area Air Basin is in attainment (or unclassified) for all other air pollutants (BAAQMD 2017b).

By its nature, air pollution is largely a cumulative impact, in that individual projects are rarely sufficient in size to result in non-attainment of ambient air quality standards. Instead, a project's individual emissions may contribute to cumulative adverse air quality impacts. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions (BAAQMD 2017a).

Construction

Construction activities are anticipated to take approximately twenty-four to thirty months to complete. Project construction would also result in regional air pollutant and precursor emissions from equipment exhaust and worker trips to the Project site. The types of air pollutants generated by construction activities are typically the ozone precursors nitrogen oxides (NO_x) and reactive organic gases (ROG), and particulate matter from both equipment exhaust and earth disturbance (fugitive dust). The project's potential impacts from fugitive dust (PM₁₀/PM_{2.5}) are assessed separately in discussion b), above. Construction-related air pollutant emissions were estimated for the project using the Sacramento Metropolitan Air Quality Management District's Roadway

Construction Emissions Model (RoadMod) (version 8.1.0), which estimates emissions from development of roads and linear projects using the California Air Resources Board's most current emission factors. RoadMod emissions output is provided in Appendix B. The results were then compared to the BAAQMD thresholds of significance for criteria pollutants. As shown in 2 (Construction Air Emissions Associated with Project), the estimated construction-related emissions are less than the thresholds of significance adopted by the BAAQMD for all pollutants except NO_x (71.81 lb/day). Therefore, the impact from construction related emissions would be potentially significant.

Table 2: Construction Air Emissions Associated with the Project

	Pollutant			
Parameter	ROG	NO_x	PM₁₀	PM_{2.5}
Total Tons	1.14	11.89	5.07	1.46
Total lb	2,280	23,780	10,140	2,920
Average Daily Construction Exhaust Emissions (lb/day)	6.71	71.81	23.45	7.27
BAAQMD Thresholds (lb/day)	54	54	82	54

Operation

Following construction, the project would not result in cumulatively considerable long-term operational emissions of regional non-attainment criteria air pollutants, because it would generate nominal operational activity associated with routine roadway maintenance activities for the roadway, utilities, bioretention areas and storm drains, lights, and trail. The project would not increase the population or bring new, permanent employees to the project area, and is not a traffic-generating land use. Therefore, project-generated operational emissions would not violate or contribute substantially to an existing or projected air quality violation. This impact would be less than significant.

Mitigation Measure AIR-2: Use Cleaner Construction Equipment

The City shall require that all diesel-powered off-road equipment of 200 horsepower or greater shall, at a minimum, meet California Air Resources Board's Tier 4 emissions standards for off-road compression-ignition engines.

Implementation of Mitigation Measure AIR-2 would reduce construction-generated NOX emissions. After implementation of this mitigation measure, average daily NOX emissions would be reduced to 7.68 lbs/ per day, which is below the BAAQMD significance threshold. The project's construction-generated air pollutant impact is less than significant with mitigation.

Implementation of the project would not result in any new or modified major sources of odor. The project is not one of the common types of facilities known to produce odors (i.e., landfill, coffee roaster, wastewater treatment facility, etc.). Minor odors from paving and the use of equipment during construction activities would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. In addition, operation of the project would not result in locating sensitive receptors near an existing odor source. Thus, project implementation would not create objectionable odors affecting a substantial number of people.

2.4 Biological Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Will the project or its related activities result in:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or in other local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community in other local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.				X
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife			X	

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Will the project or its related activities result in:				
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				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or their approved local, regional, or state habitat conservation plan.				X

Discussion

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? (Less than significant with mitigation)

A Biological Resource Analysis for the project was prepared by Monk & Associates, and is provide as Appendix C. A review of the plant and animal habitats along the proposed project alignment was conducted to determine the potential for any special-status vegetation communities, plants, or animal species to occur within the proposed project area (Monk & Associates 2019). Information on special-status plant species was compiled through a review of the literature and database searches. Database searches for known occurrences of special-status species focused on a three mile radius around the proposed project area. The following sources were reviewed to determine which special-status plant and wildlife species have been documented in the vicinity of the project site:

- California Natural Diversity Database, RareFind 5 application (CNDDDB) (CDFW 2019)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2001)

Appendix C contains the results of the literature and database review, and special-status species records tables.

A Biological Resource Analysis report was completed on July 1, 2019 (Monk & Associates 2019). Habitats within the project alignment consist of ruderal herbaceous, potential seasonal

wetlands and urban. A wetland delineation of the project area was conducted on May 11, 2017 and August 3, 2017 (Monk & Associates 2017). M&A conducted a tree survey within the limits of the project site on August 3, 2017. M&A assessed the health and vigor of each tree, installed a tree tag on each tree, and measured the diameter at breast height (DBH) of each tree. A survey for special-status plants was conducted March through July 2016 on the one undeveloped parcel in the project area known as the Giovannoni Property. These surveys were appropriately timed to cover the blooming period of special-status plants known for the region. Based on the results of the survey at the Giovannoni Property and the lack of habitat throughout the remainder of the project site, there is no potential for special-status plant species to be impacted by the proposed project.

Formal protocol surveys for vernal pool fairy shrimp (*Branchinecta lynchi*) were conducted on the Giovannoni Property with negative findings. Following the United States Fish and Wildlife's (USFWS) survey protocol (USFWS 2015), and as approved by the USFWS on August 18, 2016, one season of dry season sampling was conducted in the summer of 2016. One season of wet season surveys was conducted in the winter of 2016-2017. Wet season surveys commenced in November 2016 and were completed by the end of February 2017. Based on the results of the survey at the Giovannoni Property and the lack of habitat throughout the remainder of the project site, there no potential for vernal pool fairy shrimp to be impacted by the proposed project.

Special-status Plant Species

No special-status plants have been mapped on or adjacent the project site. However, according to the CNPS' Inventory and the California Department of Fish and Wildlife's (CDFW) CNDDDB, a total of 14 special-status plant species are known to occur in the project site region (within 3 miles of the project site). No rare or listed plant species are expected to occur within the road widening project site. The limits of the project extend 40 feet north of the existing road shoulder into adjacent properties. This narrow strip of land is excessively disturbed, and is dominated by ruderal vegetation. Furthermore, Monk & Associates conducted monthly surveys in 2016 on the Giovannoni property that is located immediately to the north of the project site and is the largest area of undeveloped land north of the existing road; no special-status plants were identified on the Giovannoni property during the March through July 2016 surveys. Based on these survey results it can be concluded that there is no expectation that special-status plant species are present or would be impacted by the proposed project.

Special-status Wildlife Species

The project site does not have stream channels or drainages to support fish; hence there would be no impacts to federally listed fish. No special-status animal records have ever been mapped on or

adjacent to the project site. However, a total of 16 special-status animal species are known to occur in the region of the project site. None of these 16 species are expected to occur on the project site. However, because of the sensitivity of four (4) of the special-status animal species known to occur in the area, they are discussed in further detail below. These species are vernal pool fairy shrimp (*Branchinecta lynchi*), California red-legged frog (*Rana draytonii*), northern harrier (*Circus cyaneus*), and Swainson's hawk (*Buteo swainsonii*).

Vernal Pool Fairy Shrimp

Vernal pool fairy shrimp was designated as threatened in its entire range on September 19, 1994 (Federal Register 59:48136-48153). Critical habitat for this species was designated on August 6, 2003. The project site is located outside of designated critical habitat. The closest known designated critical habitat is 0.70-mile to the northwest.

The project site does not provide potentially suitable habitat for the vernal pool fairy shrimp. Furthermore, Monk & Associates conducted USFWS-approved wet and dry season surveys for vernal pool fairy shrimp on the adjacent Giovannoni property with negative findings. As such, Monk & Associates concludes that the project would not result in impacts to the vernal pool fairy shrimp or any other federally listed fairy shrimp species. Consequently, there is no expectation that vernal pool fairy shrimp would be impacted by the proposed project. No mitigation is warranted for this species.

California Red-legged Frog

The California red-legged frog was federally listed as threatened on May 23, 1996 (Federal Register 61: 25813-25833) and as such is protected pursuant to the Federal Endangered Species Act. On March 16, 2010 the USFWS issued the final designation for California red-legged frog Critical Habitat (USFWS 2010). The 2010 Critical Habitat maps (Federal Register dated March 17, 2010 (Volume 75, Number 51:12815-12864) show that the project site is located approximately 1.3 miles west of Critical Habitat Unit SOL-3. The California red-legged frog is also a state "species of special concern."

The closest known record for the California red-legged frog is a 2008 sighting approximately 0.5-mile east of the project site in North Slough (CNDDDB Occurrence No. 1062). This location is on the east side of Highway 29 and is not hydrologically connected to the project site. There are no California red-legged frog records on the west side of Highway 29. There is no perennial water or long-term inundation that occurs on or adjacent to the project site. The seasonal wetlands onsite are too shallow and seasonally inundated to provide habitat for this large native frog species. Thus, it is improbable that the California red-legged frog would occur on the

project site. Pursuant to CEQA, the proposed project would have no significant impacts on California red-legged frogs. No mitigation is warranted for this species.

Northern Harrier

The northern harrier is a state species of special concern. This raptor is also protected under California Fish and Game Code §3503.5 that protects nesting raptors and their eggs/young. The northern harrier is also protected from direct take under the Migratory Bird Treaty Act (50 CFR 10.13). Northern harriers build grass-lined nests on the ground within dense, low-lying vegetation in a variety of habitats, though they are typically found nesting in grassland or marsh habitats. They usually nest on level to near level ground. This species is particularly vulnerable to ground predators such as coyotes (*Canis latrans*), red fox (*Vulpes vulpes*), and various snake species. Ground nesting birds in general are also subject to disturbance by agricultural practices. Northern harriers likely forage over the project site; however, it would not likely nest in the narrow strips of land along Green Island Road. Pursuant to CEQA, the proposed project would have no significant impacts on northern harriers. No mitigation is warranted for this species.

Swainson's Hawk

The Swainson's hawk is a state listed threatened species afforded protection pursuant to the California Endangered Species Act. While it has no special federal status, it is protected from direct take under the Federal Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-711). Swainson's hawks, their nests, eggs, and young are also protected under California Fish and Game Code (§3503, §3503.5, §3513, and §3800). Finally, pursuant to CEQA, this hawk would be considered "rare" and impacts to its nest sites would be regarded as significant.

The closest known Swainson's hawk record to the project site is approximately 2.4 miles north (CNDDB Occurrence No. 1717). There is no nesting habitat within the linear project site; however, eucalyptus trees that are located approximately 150 feet north of the project site provide potential nesting habitat. Using California Department of Fish and Wildlife's Swainson's hawk survey guidelines (CDFG 2000), Monk and Associates biologist, Mr. Jesse Reeb, conducted a formal nesting survey for Swainson's hawks in all potential habitats within a mile of the project site. No Swainson's hawks or evidence of any raptor nesting was observed within a zone of influence of the project site during the Swainson's hawk nesting surveys conducted in 2016 and 2017. However, because the Swainson's hawk is a mobile species and could nest within a zone of influence of the proposed project, preconstruction surveys are necessary to ensure that the project will not impact this hawk.

If Swainson's hawks are found to be nesting near the project site, implementation of the proposed project could be viewed by the CDFW as a project that could impact nesting Swainson's hawks. Nest site disturbance which results in: (1) nest abandonment; (2) loss of young; (3) reduced health and vigor of eggs and/or nestlings (resulting in reduced survival rates); and (4) may ultimately result in the take (killing) of nestling or fledgling Swainson's hawks incidental to otherwise lawful activities, would be considered a "take" by the CDFW. The taking of Swainson's hawks in this manner can be viewed by the CDFW as a violation of Section 2080 of the California Fish and Game Code. This interpretation of take has been judicially affirmed by the landmark appellate court decision pertaining to CESA (Department v. ACID, 8 CA App. 4, 41554) (CDFW 1994). Therefore, Mitigation Measure BIO-1 is required.

Migratory Bird Treaty Act

All raptors (birds of prey) and native song birds and wading birds are protected pursuant to the Migratory Bird Treaty Act (MBTA). The Swainson's hawk (discussed above) and various other tree nesting raptors (birds of prey) could nest in trees immediately adjacent to the project site and may be disturbed by grading activities or other earth work associated with the road construction project. No nesting raptors have been identified on the project site; however, no specific surveys for nesting raptors have been conducted. Additionally, raptors are highly mobile species and their nest locations may change from year to year. As such, in the absence of survey results, it must be concluded that impacts to nesting raptors from the proposed project. In accordance with the Migratory Bird Treaty Act, as long as there is no direct mortality of species protected pursuant to this Act caused by development of the site, there should be no constraints to site development. To comply with the Migratory Bird Treaty Act, all active nest sites would have to be avoided while such birds were nesting. Upon completion of nesting, the project could commence as otherwise planned. In order to avoid potential impacts to raptors and species protected by the MBTA, Mitigation Measure BIO-2 is required.

Mitigation Measure BIO-1: Nesting Swainson's Hawk

The CDFW has prepared guidelines for conducting surveys for Swainson's hawk entitled: *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (CDFW 2000). These survey recommendations were developed by the Swainson's Hawk Technical Advisory Committee (TAC) to maximize the potential for locating nesting Swainson's hawks, and thus reduce the potential for nest failures as a result of project activities and/or disturbances. To meet the CDFW's recommendations for mitigation and protection of Swainson's hawks, surveys shall be conducted for a half-mile radius around all project activities and shall be completed for at least two survey periods immediately prior to a project's initiation. The guidelines provide specific recommendations regarding the number of

surveys based on when the project is scheduled to begin and the time of year the surveys are conducted.

If Swainson's hawks are found to be nesting within 1,000 feet of the project site, the necessity of acquiring a Fish and Game Section 2081 management authorization shall be determined via consultation with the CDFW. Impacts to the nesting Swainson's hawks shall not be allowed. Accordingly, nest protection buffers shall be established that are a minimum of 300 feet from the nest site. The nest site buffer shall be established in consultation with the CDFW or as required in any Fish and Game Section 2081 management authorization issued to the project by the CDFW. The nest protection buffer shall be maintained until the Swainson's hawk nesting attempt is completed as determined by a qualified raptor biologist. Once the nesting cycle is complete no further action is warranted for this raptor species unless CDFW has issued a Fish and Game Section 2081 management authorization that requires additional mitigation. Any mitigation required by a 2081 management authorization shall also become a condition of project approval.

With the implementation of Mitigation Measure BIO-1, potential impacts to Nesting Swainson's hawk would be reduced to a less-than-significant level

Mitigation Measure BIO-2: Nesting Raptors, Birds and Migratory Birds

A nesting survey shall be conducted within 15 days prior to vegetation clearing earth moving or the commencement of construction work if this work would occur between February 1st and August 31st.

The raptor nesting surveys should include examination of all trees within 300 feet of the entire project site. If nesting raptors are identified during the surveys within 300 feet of the project site, a 300-foot radius around the nest tree should be fenced with orange construction fencing. If the nest tree is located off the project site, then the buffer should be demarcated as per above, where the buffer occurs on the project site. The size of the buffer may be altered if a qualified raptor biologist conducts behavioral observations and determines the nesting raptors are well acclimated to disturbance. If this occurs, the raptor biologist should prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting raptors. No construction or earth-moving activity should occur within the established buffer until it is determined by a qualified raptor biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by July 15th. This date may be earlier or later, and would have to be determined by a qualified raptor biologist. If a qualified biologist is not hired to watch the nesting raptors then the buffers should

be maintained in place through the month of August and work within the buffer can commence September 1st.

If the nesting survey identifies a large stick nest or other type of raptor nest that is inactive at the time of the survey, but that was evidently used in the previous year (as evidenced by condition of the nest and possibly presence of whitewash and/or feathers/down on the nest), a protection buffer (as described above) should be established around the potential nesting tree if it is within 300 feet of the project site. This buffer should remain until a second follow-up nesting survey can be conducted to determine the status of the nest and eliminate the possibility that the nest is utilized by a late-spring nesting raptor (for example, Cooper's hawk). This second survey should commence even if construction has commenced. If during the follow-up late season nesting survey a nesting raptor is identified utilizing the nest, the protection buffer should remain until it is determined by a qualified raptor biologist that the young have fledged and have attained sufficient flight skills to avoid project construction zones. If the nest remains inactive, the protection buffer can be removed and construction and earth moving activities can proceed unrestrained.

For nesting birds and migratory birds, if any birds are found nesting on the project site or within a zone of influence of the project site a 75-foot nest protection buffer shall be established around the nest(s). The buffer shall be staked with orange construction fencing. If special-status birds, such as tricolored blackbird (*Agelaius tricolor*) are found nesting or within a zone of influence of the project site a 300-foot protection buffer shall be established around the nesting site(s). In addition, if this buffer cannot be maintained until the special-status nesting birds complete their nesting cycle, consultation with the CDFW shall be required. No construction or earth-moving activity shall occur within any nest protection buffer until it is determined by a qualified biologist that the nesting cycle is complete and any young that fledge have attained sufficient flight skills to avoid being impacted by the proposed project. For passerines this typically occurs by July 31st. This date may be earlier or later and would have to be determined by a qualified ornithologist.

With the implementation of Mitigation Measure BIO-2, potential impacts to Nesting Raptors and Migratory Birds (Excluding Swainson's hawk) would be reduced to a less-than-significant level

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? (No impact)

There are no streams or drainages on the project site. No riparian habitat or other sensitive natural communities occur along the project alignment (Monk & Associates). The project would

be located within an area that is characterized by ruderal herbaceous, potential seasonal wetlands and urban habitats. Due to heavily modified conditions in the project site, very few native taxa remain. Therefore, no impact would result to any riparian habitat or other sensitive natural community from implementing the project.

c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (Less than significant with mitigation)

Waters of the U.S. and waters of the State occur within the project site. The proposed project has been designed to reduce the total impacts to Corps and RWQCB jurisdictional waters to the maximum extent practicable. Construction of the proposed project would result in impacts to approximately 0.123 acre of waters of the U.S. and 0.055 acres of waters of the State on the project site. This impact to waters of the U.S./State must be mitigated to a less than significant level pursuant to CEQA.

Mitigation Measure BIO-4 Waters of the U.S./State

The applicant must obtain a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers in advance of impacts to waters of the United States. The proposed project would likely qualify to use NWP 14 (Linear Transportation Projects), since the total impacts to waters of the U.S. are well below the one-half acre threshold for linear transportation projects, and NWP 14 does not have a limitation for total linear footage of impacts. In addition, the applicant must obtain a Clean Water Act Section 401 permit from the Regional Water Quality Control Board for all waters that meet the Corps criteria of jurisdictional waters. In addition, the RWQCB must permit impacts to isolated waters that are outside of Clean Water Act jurisdiction. The RWQCB regulates impacts to isolated waters pursuant to the Porter- Cologne Water Quality Control Act and authorizes such impacts via issuance of Waste Discharge Requirements (WDRs). Water Quality Certification and WDRs (as determined necessary by the RWQCB) must be obtained in advance of any impacts to waters of the State.

The applicant is proposing to mitigate impacts to 0.178-acre of jurisdictional waters of the U.S./State via creation and preservation of 0.36-acre of seasonal wetlands within a suitable offsite wetland habitat preserve. Typically, the Corps and RWQCB require that impacted seasonal wetlands be replaced at a 2:1 replacement to impacts ratio, but this ratio can be dependent upon Mitigation Ratio Guidance provided by the Corps or RWQCB at the time of permit issuance.

If there are no suitable offsite areas to create and preserve waters of the United State/States, the purchase of mitigation credits from a Corps/RWQCB approved mitigation bank would also fully compensate for the project's impacts to waters of the U.S./State. Any wetland compensation mitigation that is different than prescribed herein that is required by the Corps and/or RWQCB shall also become conditions of project approval enforceable by the City.

Implementation of these mitigation measures would reduce impacts to waters of the U.S./State to a level regarded as less than significant pursuant to CEQA.

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? (Less than significant)

Wildlife corridors are linear and/or regional habitats that provide connectivity to other natural vegetation communities within a landscape fractured by urbanization and other development. Wildlife corridors have several functions: 1) they provide avenues along which wide-ranging animals can travel, migrate, and breed, allowing genetic interchange to occur; 2) populations can move in response to environmental changes and natural disasters; and 3) individuals can recolonize habitats from which populations have been locally extirpated (Beier and Loe 1992). All three of these functions can be met if both regional and local wildlife corridors are accessible to wildlife. Regional wildlife corridors provide foraging, breeding, and retreat areas for migrating, dispersing, immigrating, and emigrating wildlife populations. Local wildlife corridors provide access routes to food, cover, and water resources typically within restricted habitats available for use by resident wildlife species with restricted home ranges. Migrant birds that usually are adapted to higher levels of disturbance may also temporarily perch or feed in these restricted habitats.

No regionally significant wildlife population is known to have any migration corridor in the City of American Canyon, and thus, no regionally significant wildlife corridor would be disrupted by construction of the project. There would be a less than significant effect on the movement of migratory wildlife from the construction of the project.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (No impact)

There are many trees located within the project site. Species include a variety of oak species, redwood, cottonwood, mulberry and various ornamentals. Approximately 59 (the exact number to be determined) trees will be removed by the proposed project.

Pursuant to Environmental Commitment 1.6.3, the landscaping plan for the Project will be developed in conformance with the Department of Water Resources' *Model Water Efficient Landscape Ordinance (MWELO)*, which the City has adopted. The landscaping plan will ultimately be approved by the City. With the implementation of environmental commitment 1.6.3 the potential impact on tree preservation policies or ordinances will be maintained at a less than significant level.

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? (No impact)

There are no adopted habitat conservation plans or natural community conservation plans that apply to the area in which the proposed project exists. Therefore, no impact would occur.

2.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to California Code of Regulations, Section 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CA Code of Regulations, §15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

Discussion

The CEQA Guidelines define a historical resource as: (1) a resource listed in the California Register of Historical Resources; (2) a resource included in a local register of historical resources, as defined in the California Public Resources Code (PRC) Section 5020.1(k), or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial

evidence in light of the whole record. A Cultural Resource Assessment of the project was prepared by the Brunzell Historical in May 2016. The study is provided as Appendix D.

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? (No impact)

This impact analysis focuses on built historic resources. The project is not located within a formal or informal historic district. A Cultural Resource Assessment of the project was prepared by Brunzell Historical in May 2016 and found one historic-period farmstead within the Area of Potential Effect (APE). The historic-period farmstead is not eligible for listing on the National Register of Historic Places and no historic properties will be affected by the proposed project as determined by the State Historic Preservation Office. Therefore, the project will have no impact to historical resources as defined by the CEQA Guidelines.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (Less than significant with mitigation)

No formally recorded archaeological sites have been documented within or immediately adjacent to the project alignment (Brunzell Historical 2016). One prehistoric resources had been identified, but not formally recorded. This area of archaeological sensitivity was originally depicted by archaeologists based on surface evidence of prehistoric land use in the form of waste flakes and tools manufactured from obsidian and chert. Subsequent pedestrian surveys and test excavations failed to yield any evidence of an archaeological site at the plotted location.

Due to poor visibility within non-paved portions of the project site, the existence of hidden archaeological resources on the surface or buried resources cannot be entirely ruled out. The potential exists to encounter as-of-yet unknown archaeological materials along the alignment during project-related construction activities. If such resources were to represent “unique archaeological resources” as defined by CEQA, a substantial adverse change to these resources would be a significant impact.

Mitigation Measure CR-1: Protect Archaeological Resources during Construction Activities

In the event that any subsurface archaeological features or deposits, including locally darkened soil (midden), that could conceal cultural deposits, are discovered during construction-related earth-moving activities, all ground-disturbing activity in the vicinity of the resources shall be halted and a qualified professional archaeologist shall be retained to assess the significance of the find. If the find is determined to qualify as an historical resource or a unique archaeological

resource as defined by CEQA, the archaeologist shall develop appropriate actions to protect the integrity of the resource and ensure that no additional resources are affected. Such actions could include but would not necessarily be limited to preservation in place, archival research, subsurface testing, or excavation and data recovery.

Implementation of Mitigation Measure CR-1 would reduce significant impacts to less-than-significant levels by protecting, preserving, or recovering any significant archeological resources, including historical resources, affected by project construction.

**c) Disturb any human remains, including those interred outside of formal cemeteries?
(Less than significant with mitigation)**

While there is no indication of human remains within the project area, the possibility of encountering archaeological resources that contain human remains cannot be discounted. Therefore, the impact related to the potential disturbance or damage of previously undiscovered human remains, if present, is considered potentially significant.

Mitigation Measure CR-2: Protect Human Remains if Encountered During Construction

The City of American Canyon shall immediately notify the Napa County Coroner should human remains, associated grave goods, or items of cultural patrimony be encountered during construction, and the following procedures shall be followed as required by Public Resources Code § 5097.9 and Health and Safety Code § 7050.5. In the event of the coroner's determination that the human remains are Native American, notification of the Native American Heritage Commission, which would appoint a Most Likely Descendant (MLD). A qualified archaeologist, the City of American Canyon and the MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated or unassociated funerary objects. The agreement would take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, and final disposition of the human remains and associated or unassociated funerary objects.

Mitigation Measure CR-2 would reduce the impact of construction activities on previously unknown human remains to a less-than-significant level by addressing discovery of unanticipated remains, associated grave goods, or items of cultural patrimony consistent with appropriate laws and requirements.

2.6 Energy

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?				X
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

Discussion

**a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?
(No impact)**

The project involves the reconstruction of 1.86 miles of damaged roads that serve the GRID. This includes Green Island Road, Jim Oswalt Way, Mezzetta Court, Hanna Drive and portions of Commerce Boulevard. The proposed approach to reconstruct involves the use of a construction method known as Full-Depth Reclamation, which uses the existing roadway material in the reconstruction of the roadway. In addition, Reclaimed Asphalt Pavement (RAP) may be mixed with asphalt emulsion to be used for new asphalt which will be overlain with a top layer of asphalt concrete. The project will be constructed in full compliance with all applicable BAAQMD regulations. Upon completion of the proposed project, no additional energy use or expenditure will be required, therefore this is considered no impact.

**b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?
(No impact)**

Upon completion of the proposed project there will be no on-going need for energy use and no conflict with state or local plans for renewable energy or efficiency, therefore this is considered no impact.

2.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause 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				X
ii. Strong seismic ground shaking?			X	
iii. Seismic-related ground failure/liquefaction?			X	
iv. Landslides?				X
b) Substantial soil erosion or the loss of topsoil?			X	
c) Located on a geologic unit or soil that is unstable, or would become unstable as a result of the project, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
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?			X	
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?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Discussion

As described in Section 1.6, “Environmental Protection Actions Incorporated into the Project,”

the project would be designed and constructed in conformance with a project-specific geotechnical report.

a, 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. (No impact)

The Alquist-Priolo Act (Public Resources Code Sections 2621–2630) was passed in 1972 to mitigate the hazard of surface faulting to structures designed for human occupancy. The purpose of the Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The project does not include structures designed for human occupancy. Additionally, the proposed alignment does not cross an Alquist-Priolo fault mapped by the California Geological Survey. No impact would occur.

a.ii) Strong seismic ground shaking? (Less than significant)

The project would be subject to ground shaking during earthquakes on the West Napa fault and other active regional faults. The estimated peak ground acceleration along the fault would be 0.49g. Damage that would be expected from ground acceleration at this level includes potential damage to structures and improvements such as a road and underground utilities. The most significant adverse impact associated with strong seismic shaking is potential damage to structures and improvements. However improvements would be designed in accordance with the most recent edition of the California Building Code. Therefore, the project's seismic hazard impacts would be less than significant.

a.iii) Seismic Related Liquefaction (Less than significant)

A geotechnical investigation performed for the adjacent Delvin Road extension project, revealed that under the maximum credible earthquake on the West Napa Fault and ground shaking of 0.50 g, less than 1 inch settlement would be anticipated in the project area. Settlement at the surface level is of 1 inch or less could be easily repaired using industry standard milling and asphalt overlay levelling techniques (Miller Pacific Engineering Group 2016). Notwithstanding the Napa Earthquake of 2014, there are no areas impacted that cannot be subject to feasible mitigation. Therefore, the project's liquefaction related impacts would be less than significant.

a, iv) Landslides? (No impact)

The project is located on essentially level land and would not be located within an area of mapped potential landslides (USGS 1988). No landslide related impact would occur.

b) Result in substantial soil erosion or the loss of topsoil? (Less than significant)

Areas to be disturbed during construction are on approximately level ground resulting in the potential for soil erosion to be extremely low. The greatest erosion risk is anticipated to be stormwater discharge during project construction due to removal or disturbance of established vegetation. However, compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction (Construction General Permit) is required, which includes best management practices to prevent soil erosion. Compliance with the NPDES permit requirements would ensure that potential impacts from soil erosion or loss of topsoil during construction would be less than significant. Following construction, the project would not result in soil erosion or loss of topsoil, as disturbed areas would consist of paved hardscape with stormwater bio retention channels, and landscaping. Therefore, no operational impact would occur.

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? (Less than significant)

Soils located in the region of the project site were found to be primarily clayey alluvial deposits which are not susceptible to ground settlement (Miller Pacific Engineering Group 2016). Lateral spreading is not anticipated to be a significant impact as the project site and surrounding area are essentially level and do not provide the slope or free face that would be required for soils to move along a horizontal axis. Therefore, the project's impacts relative to unstable soils would be less than significant.

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? (Less than significant)

Studies of regional geology indicate near surface soils in the area of the project consist of moderately to potentially highly expansive soils. Expansive soils are capable of causing volume changes that can damage lightly loaded foundations similar to that of the proposed project.

As described in Section 1.6, "Environmental Protection Actions Incorporated into the Project," the project would be designed and constructed in conformance with the project-specific geotechnical report. This would include design in accordance with recommendations for ground

improvement and the use of lime treatment to stabilize the soil. Therefore, the project's impacts relative to expansive soils would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? (No impact)

No septic systems or wastewater disposal systems are proposed. No impact would occur.

The project site and surrounding areas rest on Pliocene to recent Holocene unconsolidated and semi-consolidated alluvium and terrace deposits. A Paleontological Records Search was conducted in September 2016 for the adjacent Delvin Road extension project, and found that no vertebrate or plant fossils have been recovered within 10 miles of the project site.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Less than significant with mitigation)

Project excavations are likely to encounter a variety of Holocene-age alluvial fan and stream terrace deposits and surface soils. The deepest excavations anticipated for construction of the project would be associated with installation of utilities. Utilities are expected to be at depths less than six feet below ground surface. Because subsurface excavations for the project could extend deeper than artificial fills and previously disturbed soils, the impact to a unique paleontological resource is considered potentially significant.

Mitigation Measure GS-1: Protect Paleontological Resources during Construction Activities

Any excavations exceeding five feet in depth shall be monitored on a full-time basis by a qualified paleontological monitor until at least 50 percent of the grading or excavation is completed. If excavations are five feet in depth or less, paleontological monitoring is not required. After 50 percent of the grading or excavation is complete, if it can be demonstrated that the level of monitoring should be reduced, the Principal Paleontologist may amend the monitoring and mitigation schedule. Ground disturbing activity that does not exceed five feet in depth in young alluvium would not require paleontological monitoring. In the event that any vertebrate fossils are encountered during construction, all ground disturbing activities within 50 feet of the find shall be temporarily halted, and a qualified paleontologist shall be notified to document the discovery as needed, to evaluate the potential resource, and to assess the nature and significance of the find. Based on the scientific value or uniqueness of the find, the paleontologist may record the find and allow work to continue, or recommend salvage and

recovery of the material, if it is determined that the find cannot be avoided. The paleontologist shall make recommendations for any necessary treatment that is consistent with currently accepted scientific practices. Any fossils collected from the area shall then be deposited in an accredited and permanent scientific institution where they will be properly curated and preserved.

Mitigation Measure GS-1 would reduce the impact of construction activities on potentially unknown paleontological resources to a less-than-significant level by addressing discovery of unanticipated buried resources and preserving and/or recording those resources consistent with appropriate laws and requirements.

2.8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?				X

Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (Less than significant)

Project construction activities would result in a temporary increase in greenhouse gas emissions, primarily in the form of carbon dioxide from exhaust emissions associated with haul trucks, construction worker commute vehicles, and construction equipment. There is currently no applicable federal, State, or local standard or significance threshold pertaining to construction related greenhouse gas emissions, and the BAAQMD CEQA Guidelines do not include screening criteria or significance thresholds for construction-related greenhouse gas emissions. However, the BAAQMD does recommend that lead agencies quantify and disclose construction-related greenhouse gas emissions. Therefore, the project's construction emissions were quantified, annualized over an assumed operational lifespan, and added to operational greenhouse gas emissions in order to determine the project's potential impact.

The BAAQMD CEQA Guidelines contain the following operational significance thresholds for greenhouse gas emissions:

- Compliance with a Qualified Greenhouse Gas Reduction Strategy; or
- 1,100 metric tons of carbon dioxide equivalent (MT CO₂e) per year; or
- 4.6 MT CO₂e per service population (residents plus employees) per year.

The BAAQMD has also established a significance threshold of 10,000 metric tons per year for operation-related greenhouse gas emissions from stationary sources.

Following construction, the project would not result in a new stationary source of greenhouse gas emissions. The project would not increase the population or bring new, permanent employees to the project area. Project operation would not result in new daily vehicle trips. Therefore, the project would not result in an increase in operational greenhouse emissions. The project would generate nominal operational activity associated with routine maintenance activities. Project operations and maintenance trips are estimated to be less than one trip per day on average.

Greenhouse gas emissions were estimated for project construction using the SMAQMD Road Construction Emissions Model, version 8.1.0. The emissions modeling output is available in Appendix B. As shown in Table 3, project construction is estimated to generate approximately 649 MT CO₂e. When annualized over an assumed 30-year project lifespan, project construction would generate approximately 21 MT CO₂e per year. As shown in the table, the project's annual emissions are estimated to be less than the BAAQMD's threshold of significance. Therefore, greenhouse gas impacts from the project would be less than significant.

Table 3: Construction Greenhouse Gas Emissions

	Emissions (MT CO₂e)
Total Construction Emissions (2018)	640
Annualized over 30 Years	21
BAAQMD Threshold of Significance	1,100
Does the project exceed threshold?	No

Notes: MT CO₂e – metric tons of carbon dioxide equivalent

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (No impact)

The City of American Canyon adopted an Energy Efficiency Climate Action Plan (EECAP) in 2012. The City's EECAP identifies policies that will achieve a reduction target of 15 percent below baseline (2005) by year 2020. The EECAP provides strategies and associated measures to decrease community-wide energy use and energy-related GHG emissions, and increase renewable energy generation. The EECAP also contains strategies and measures for municipal operations. CEQA Guidelines Section 15183.5, Tiering and Streamlining the Analysis of GHG Emissions, was added as part of the CEQA Guideline amendments that became effective in 2010. CEQA Guidelines Section 15183.5 describes the criteria needed in a GHG reduction plan that would allow for the tiering and streamlining of CEQA analysis for development projects. A plan for the reduction of GHG emissions must contain the following six components to be qualified for tiering CEQA documents:

1. Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
2. Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
3. Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;
4. Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
5. Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels;
6. Be adopted in a public process following environmental review.

As stated within the EECAP, the document fulfills criteria 1 through 5 for energy-related greenhouse gases. However, the EECAP does not fulfill the sixth criteria, nor does it address non-energy community greenhouse gas sources or emissions. Therefore, the EECAP does not meet the CEQA Guidelines for a GHG reduction plan as identified in Guidelines Section 15183.5. Because the EECAP is not a qualified plan, the project will not be evaluated relative to conflict with it. Instead, California's AB 32 emission reduction goals and the California Air

Resources Board's adopted Climate Change Scoping Plan are used to determine the project's consistency with adopted greenhouse gas plans and policies.

The Climate Change Scoping Plan released by the California Air Resources Board provided strategies for meeting the near-term 2020 greenhouse gas emission reduction goals in Assembly Bill (AB) 32. The First Update to the Climate Change Scoping Plan (Updated Scoping Plan) provides recommendations for establishing a mid-term emissions limit that aligns with the long-term (2050) goals of Executive Order S-3-05, which includes reducing greenhouse gas emissions to 80 percent below 1990 levels. The recommendations cover energy, transportation, agriculture, water, waste management, natural and working lands, short-lived climate pollutants, green building, and cap-and-trade sectors, and are to be implemented by a variety of State agencies. The Updated Scoping Plan contains state-level regulations and policies that will be implemented by various public agencies. The recommended next steps in the Updated Scoping Plan are broad policy and regulatory initiatives that will be implemented at the State level and do not relate to the construction and operation of smaller individual infrastructure projects such as the project. The project would not conflict with this statewide policy document. No impact would occur.

2.9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
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?				X
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 or excessive noise for people residing or working in the project area?			X	
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structure, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X

Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Less than significant)

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? (Less than significant)

Response to a)-b) Construction activities would involve the use of hazardous materials, such as fuels, lubricants, paints and solvents. These materials are commonly used during construction, are not acutely hazardous and would be used in small quantities. Regular transport of such materials to and from the project alignment during construction could result in an incremental increase in the potential for accidents. However, numerous laws and regulations ensure the safe transportation, use, storage and disposal of hazardous materials. For example, Caltrans and the California Highway Patrol regulate the transportation of hazardous materials and wastes, including container types and packaging requirements, as well as licensing and training for truck operators, chemical handlers, and hazardous waste haulers.

Worker safety regulations cover hazards related to the prevention of exposure to hazardous materials and a release to the environment from hazardous materials use. The California Division of Occupational Safety and Health (Cal-OSHA) also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees. Because contractors would be required to comply with existing and future hazardous materials laws and regulations covering the transport, use and disposal of hazardous materials, the impacts related to hazardous materials used during project construction would be less than significant.

The project alignment is not located in an area mapped as likely to contain naturally occurring asbestos (USGS 2011). Therefore, naturally occurring asbestos is not anticipated to be encountered during construction activities.

Following construction, operation of the project would not result in the need for new hazardous materials that would need to be transported, used, or disposed. No operational impact would occur.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?(No impact)

No schools are located within 0.25 miles of the project site. The closest school to the project site is Napa Junction Elementary School, located 0.7 miles southeast of the site. No impact would occur.

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? (No impact)

The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List." A search of the Cortese List, Geotracker website and EnviroStor website was completed to determine if any known hazardous waste sites have been recorded on or adjacent to the project alignment. The project alignment is not listed on or immediately adjacent to any of the Cortese List database sites. Therefore, no significant hazard to the public or the environment would occur as a result of the project causing exposure to known hazardous materials. No impact would occur.

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, or excessive noise for people residing or working in the project area? (Less than significant)

The project area is located approximately 1 mile south of the Napa County Airport and is included within the Napa County Airport Land Use Compatibility Plan (ALUCP) planning area. Specifically, the project is located within ALUCP Zone D, which is described in the ALUCP as "Common Traffic Pattern". Zone D includes areas that are routinely overflown by aircraft. (Napa County Airport Land Use Commission 1999).

Project construction would require the presence of workers within the ALUCP Zone D; however, the temporary nature of the work and the low risk of airport traffic creating a physical or auditory hazard make this hazard less than significant.

The project would not result in an increase in population or employment that would expose residents or workers to airport-related safety hazards. Therefore, project operations would result in no impact.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (No impact)

The City of American Canyon has not designated specific roadways as evacuation routes (American Canyon 2017). The City's Emergency Operations Plan provides for the "identification of safe evacuation routes" in the event of an incident, accident, dam failure, and other situations that warrant temporary or long-term evacuation of areas under the City's jurisdiction (American Canyon 2017). Construction activities would not physically interfere with an adopted emergency response plan or emergency evacuation plan. Similarly, operation of the project would not impair or interfere with an emergency response plan or emergency evacuation plan. No impact would occur.

g) Expose people or structures, either directly or indirectly, 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? (No impact)

According to Napa County Wildland Fire Background Report, the project site is located within a Non-Very High Fire Severity Zone (Napa County 2014). Following construction, the project would not result in an increase in population or employment that would expose residents or workers to wildfire hazards. Therefore, no impact would occur.

2.10 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?				X
i. Result in substantial erosion or siltation on- or off-site?				X
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site;				X
iii. 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; or			X	
iv. Impede or redirect flood flows?				X
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X

Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?? (Less than significant)

Water quality standards and objectives are achieved primarily through the establishment of NPDES permits, the City's existing Municipal Separate Storm Sewer Systems (MS4) permit and

waste discharge requirements. As identified in the project description, the project would be subject to NPDES Construction General Permit requirements. If groundwater is discharged into the sanitary sewer system from construction dewatering activities, the groundwater would go to the American Canyon Water Reclamation Facility. The American Canyon Water Reclamation Facility is subject to the National Pollutant Discharge Elimination System (NPDES) Order No. R2-2017-0008, which sets receiving water limitations and waste discharge requirements for the facility and its collection system.

The Construction General Permit applies to public and private construction projects that include one or more acres of soil disturbance. Construction of the project would disturb more than one acre of land and has the potential to degrade water quality as a result of erosion caused by earthmoving activities during construction or the accidental release of hazardous construction chemicals. Exposed soil from stockpiles, excavated areas, and other areas where ground cover would be removed could be transported elsewhere by wind or water. If not properly managed, this could increase sediment loads in receiving water bodies, thereby adversely affecting water quality. As identified in the project description, the Construction General Permit includes best management practices to prevent soil erosion, and development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). Compliance with the General Construction Permit would prevent substantial degradation of water quality or a violation of any water quality standards from project construction.

Construction of the project may also require temporary groundwater dewatering. Often, groundwater generated during dewatering activities is relatively clean, but contains elevated levels of sediment and turbidity. As identified in the project description, groundwater would typically be pumped to Baker tanks (or other similar type of settling tank). Following the settling process provided by a tank, the groundwater would typically be pumped to a bag and cartridge filter system (or similar system) before being discharged to the sanitary sewer system subject to City approval or other permitted location. Groundwater, if discharged into the sanitary sewer system, would go to the American Canyon Water Reclamation Facility. The American Canyon Water Reclamation Facility is subject to the NPDES Order No. R2-2017-0008, which sets receiving water limitation and waste discharge requirements for the facility and its collection system.

Post-construction stormwater controls to satisfy requirements of the NPDES Program are permitted under the Phase II MS4 Permit (Order No. 2013- 0001 DWQ, effective July 1, 2013). Facilities must be designed to evapotranspire, infiltrate, harvest/use, and bio treat stormwater.

Project compliance with the City's MS4 Permit, General Construction Permit and NPDES Order No. R2-2017-0008 would prevent substantial degradation of surface and ground water quality or a violation of any water quality standards. The project would result in a less-than-significant impact.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?? (Less than significant)

A records search of the California Department of Water Resources found that historic groundwater data at the Napa County Airport has ranged from a height of 4 to 10 feet below grade over the last 5 years. Due to the potential for encountering shallow groundwater, construction of the project could require temporary groundwater dewatering to create reasonably dry work areas. Dewatering methods will vary along the planned alignment to account for varying groundwater levels and excavation depths, however, all dewatering and subsequent discharge activities will be conducted in accordance with the NPDES Order No. R2-2017-0008 issued by the State Water Resources Control Board.

Following construction, the project would not utilize groundwater and would not result in an increase in population or employment that would indirectly increase groundwater demand. Therefore, the project would not create a deficit in aquifer volume or a lowering of water levels or interfere with groundwater recharge. No operational impact would occur.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial erosion or siltation on- or off-site? (No impact)

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site; (No impact)

iii) 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; or (Less than significant)

iv) Impede or redirect flood flows? (No impact)

Response c)i)-c)iv) The project would create new impervious surfaces on existing undeveloped areas. However, since stormwater control measures incorporated into the project's design include

Low Impact Development (LID) measures that are consistent with the Bay Area Stormwater Management Agencies Association (BASMAA) Post-Construction Manual, the project would not result in substantial erosion or siltation or substantially altered drainage patterns. LID design has been included in order to closely mimic pre-project site hydrology and to protect water quality. Runoff from the roadway would be directed into bio-retention swales which would allow stormwater to percolate into the local groundwater aquifer. The bio-retention basins have a design capacity intended to properly handle project runoff during an 85th percentile storm event. Under extreme storm conditions (greater than 85th percentile storm) stormwater exceeding the capacity of native soil absorbance would be conveyed through existing stormwater infrastructure within the project alignment. This is considered a less than significant impact.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? (No impact)

The Federal Emergency Management Agency (FEMA) issues Flood Insurance Rate Maps identifying land areas that are subject to flooding. According to local Flood Insurance Rate Maps, the project alignment is not located within a known flood hazard area (FEMA 2016). In addition, the project is not located within an area anticipated to be inundated as a result of the failure of a levee or dam (Napa 2008). No impact would occur.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (No impact)

As described in the subsections above the proposed project will implement LID measures, the General Construction Permit and NPDES orders. The proposed project does not include groundwater extraction and therefore there will be no impact.

2.11 Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any Land Use Plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

Discussion

a) Physically divide an established community? (No impact)

The project would involve widening and structural improvements to an existing road alignment. The road will provide for better access, safety and circulation patterns in an existing area designated for industrial land uses. There are three existing residences along the project alignment that will remain. The project would not divide any of established community. No impact would occur.

b) Cause a significant environmental impact due to a conflict with any Land Use Plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? (Less than significant impact)

The proposed Green Island Road Widening Project is identified in the adopted City of American Canyon's 2014 General Plan Circulation Element Update (American Canyon 2014a). The General Plan identifies future improvements to Green Island Road as a 4 lane facility and the Traffic Impact Fee Program (American Canyon 2015) identifies the Green Island Road as a 2 lane with a center turning lane. The proposed bicycle and pedestrian facilities are consistent with the General Plan and the American Canyon Bicycle Plan (American Canyon 2012). The proposed 2 lane facility with a center turn lane would result in fewer environmental impacts than a 4 lane facility. The proposed 2 lane with center turn lane project would not preclude future development of the roadway into a 4 lane facility as envisioned in the General Plan. Any differences between the proposed facilities in the General Plan, the Traffic Impact Fee Program and the proposed project are considered less than significant.

2.12 Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site on a local general plan, specific plan or other land use plan?				X

Discussion

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? (No impact)

The proposed project is not located in an area designated as a Mineral Resource Zone (MRZ) by the Surface Mining and Reclamation Act, i.e., areas where there is a high likelihood of significant mineral deposits (CDC 1987 and CDC 2013). Therefore, the project would not result in the loss of known mineral resources of value to the region or state. No impact would occur.

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? (No impact)

The Napa County General Plan does not identify any MRZ resource areas on or in the vicinity of the project sites. Therefore, the proposed project would have no effect on the availability of known, locally important mineral resources, and no impact would occur.

2.13 Noise

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?		X		
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan, would the project expose people residing or working in the Study Area to excessive noise levels?			X	

Discussion**a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies? (Less than significant with mitigation)**

The land uses nearest to the project are industrial, residential and open space. Existing industrial buildings and land uses are located throughout the project vicinity. There are four residential land uses along Green Island Road. The closest residence is approximately 55 feet from the edge of the existing roadway. The proposed project will realign Green Island Road to the south and away from the residences by approximately 5 feet. American Canyon General Plan policies limit non-emergency construction activities adjacent to existing noise-sensitive uses to daylight hours between 6:30 a.m. and 8:00 p.m.

Chapter 8.12.080(B)(2) of the American Canyon Municipal Code provides that operating tools or equipment used in construction that causes a noise disturbance across a residential or commercial real property line between the hours of 7:00 pm to 7:00 am is prohibited. As provided in the Municipal Code, construction activities shall be conducted in such a manner that the maximum noise levels at affected properties will not exceed those listed in

Table 4: Noise Limits for Construction Activities

Timeframe	Land Use		
	Residential	Commercial	Industrial
Daily: 7 am to 7 pm	75 dBA	80 dBA	85dBA
Daily 7 pm to 7 am	60 dBA	65 dBA	70 dBA

Notes: dBA = A-Weighted Sound Level decibels

The residences which are considered noise sensitive land uses are non-conforming residences located on land zoned for General Industrial use along Green Island Road. Nighttime construction, if required, could interfere with sleep at residences.

Table 5 Summarizes the maximum instantaneous noise levels expected from proposed construction equipment that may be used during the project construction.

Table 5: Construction Equipment Noise Levels

Construction Equipment	Noise Level (dBA Lmax at 50 feet)
Air Compressor	78
Tractor	84
Backhoe	78
Front end Loader	79
Excavator	81
Generator	81
Graders	85
Paver	77
Plate Compactor	83
Pumps	81

Roller	80
Scraper	84
Signal Boards	73
Tractors/Loaders/Backhoes	84
Tractor trailer (20 yard)	77
Truck	74

Source: FHWA 2006

Construction-phase noise generation would occur for grading, drainage and utilities installation, and paving. Both construction phases are estimated to generate more than 85 dBA Lmax at 25 feet, which is the approximate distance to the nearest existing industrial land use. This would be a potentially significant impact.

Following construction, no portions of the Municipal Code or General Plan apply to the operation of the project relative to noise. Thus, no operational impact would occur.

Mitigation Measure NOI-1. Reduce Construction Noise Levels

The City and its contractor shall ensure that noise levels during construction do not exceed the following performance standards:

- An exterior noise level of 75 dBA at existing residential uses between 7:00 a.m and 7:00 p.m.
- An exterior noise level of 60 dBA at existing residential uses between 7:00 p.m and 7 a.m.
- An exterior noise level of 85 dBA at existing industrial uses between 7:00 a.m and 7:00 p.m.
- An exterior noise level of 70 dBA at existing industrial uses between 7:00 p.m and 7 a.m.

Prior to start of construction, a Noise Mitigation Plan shall be prepared that contains, at a minimum, the following components:

- Quantified noise analysis using the Roadway Construction Noise Model (RCNM) or comparable model or methodology at the discretion of the City, Specific noise-control measures to be employed. Noise attenuating measures may include:

- Mufflers, intake mufflers, intake silencers, ducts, engine enclosures, acoustically attenuating shields or shrouds, sound blankets.
- Activity controls that limit the number of noise-generating equipment in-use in proximity to the existing industrial land use.
- Maintain the equipment properly to minimize extraneous noise due to squeaking or rubbing machinery parts, damaged mufflers, or misfiring engines.
- Locate equipment at the work area to maximize the distance to noise sensitive receptors, and to take advantage of any shielding that may be provided by other on-site equipment.
- Schedule work and deliveries to minimize noise-generating activities during nighttime hours at work sites (e.g., no deliveries or non-essential work).
- Utilize a temporary noise barrier placed as close to the receptor (e.g., along the industrial property line) or to the work site (e.g., as close as 15 to 20 feet from the loudest generating activity area) as possible.
- Identification of parties responsible for implementation of the noise-attenuation measures.
- A designated project liaison shall be responsible for responding to noise complaints during the construction phases. The name and phone number of the liaison shall be conspicuously posted at construction areas and on all advanced notifications. This person shall take steps to resolve complaints, including periodic noise monitoring, if necessary. Results of noise monitoring shall be presented at regular project meetings with the contractor. The liaison shall coordinate with the contractor to modify any construction activities that generate noise levels above the levels identified in the performance standards listed in this measure.
- A reporting program to document complaints received, actions taken to resolve problems, and effectiveness of these actions.
- A notification program that shall:
 - Provide advance notice to nearby residents prior to starting work at each work site, with information regarding anticipated schedule, hours of operation and a project contact person.
 - Provide a minimum 24-hour advance notice to residents and business owners within 50 feet of nighttime work.

With implementation of Mitigation Measure NOI-1, construction would not significantly impact existing industrial uses, because noise levels would be reduced or the construction schedule would be amended such that activities would not result in noise that exceeds the performance standards.

b) Generation of excessive ground borne vibration or ground borne noise levels? (Less than significant)

The City does not have established vibration thresholds of significance; therefore, this analysis uses the California Department of Transportation (Caltrans) recommended vibration limits. Caltrans recommends a vibration limit of 0.5 inches/second, peak particle velocity (in/sec PPV) for buildings structurally sound and designed to modern engineering standards, 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and a conservative limit of 0.08 in/sec PPV for ancient buildings or buildings that are documented to be structurally weakened (Caltrans 2013). This analysis assumes that proposed construction areas would not be in the vicinity of fragile structures, but older structures may exist near the project. Therefore, based on Caltrans guidance, this analysis establishes 0.3 in/sec PPV as the significance threshold for construction vibration to avoid damage to buildings from vibration sources. Vibratory rollers are typically identified as the construction equipment with the highest level of resulting vibration with a PPV rating of 0.210 at a distance of 25 feet. The project may use vibratory rollers.

The highest vibration levels during construction of the project would be associated with the potential use of a vibratory roller during roadway construction. A worst case vibration level of 0.210 in/sec PPV at 25 feet was assumed for this analysis. Vibration levels are highest close to the source and then attenuate with increasing distance at the rate of $(D_{ref}/D)^{1.3}$, where D is the distance from the source in feet and D_{ref} is the reference distance of 25 feet. At a distance of 40 feet (the distance from the project to the closest building), vibration levels associated with the use of a vibratory roller would be approximately 0.11 in/sec PPV. The estimated worst case vibration levels would not exceed the 0.3 in/sec Caltrans PPV threshold. Therefore, the impact of construction related vibration on nearby persons or buildings would be less than significant.

During operation, no groundborne vibration would occur, and the project would not result in exposure of persons to or generation of excessive groundborne vibration levels. No operational impact would occur.

c) For a project located within the vicinity of a private airstrip or an airport land use plan, would the project expose people residing or working in the Study Area to excessive noise levels? (Less than significant)

There are no private airstrips in the project vicinity. Therefore, there would be no exposure of project construction workers to aviation safety hazards. Following construction, the project would not result in an increase in population or employment that would expose residents or workers safety hazards related to private airstrips. Therefore, no impact would occur.

The project area is located approximately 1 mile south of the Napa County Airport and is included within the Napa County Airport Land Use Compatibility Plan (ALUCP) planning area. Specifically, the project is located within ALUCP Zone D, which is described in the ALUCP as “Common Traffic Pattern”. Zone D includes areas that are routinely overflowed by aircraft. (Napa County Airport Land Use Commission 1999).

Project construction would require the presence of workers within the ALUCP Zone D; however, the temporary nature of the work and the low risk of airport traffic creating a physical or auditory hazard make this hazard less than significant.

2.14 Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned 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)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Discussion

a) Induce substantial unplanned 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)? (No impact)

The project does not include the construction of new homes or businesses in the area. The project would widen and rehabilitate existing roadway infrastructure. The project would not indirectly induce unplanned population growth because it would not extend infrastructure into new areas not already served by the City, and would not increase the overall capacity of the sewer system or other public utilities. Therefore, no impact to population growth would occur.

b) Displace substantial numbers of existing people or housing or people, necessitating the construction of replacement housing elsewhere? (No impact)

The project is located in an area that is designated Industrial by the City of American Canyon General Plan. No homes or people would be displaced as a result of project construction or operation, and no replacement housing would be needed. Therefore, no impact would occur.

2.15 Public Services

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:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?				X
b) Police protection?				X
c) Schools?				X
d) Parks?				X
e) Other public facilities?				X

Discussion

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 public services?

a) Fire Protection (No impact)

b) Police Protection (No impact)

c) Schools (No impact)

d) Parks (No impact)

e) Other Public Facilities (No impact)

As discussed in Section 3.14, Population and Housing, implementation of the project would not induce population growth and, therefore, would not require expanded fire or police protection facilities to maintain acceptable service ratios, response times, or other performance objectives.

The project would also not result in a direct or indirect increase in the City's student population, and therefore, no new or expanded schools would be required.

The project would not result in the increased use of existing parks and other public facilities as it would not induce population growth. The project would also not require the expansion of recreational facilities to maintain acceptable service ratios in parks, and would not require the expansion of other public facilities. No impact on public services would occur.

2.16 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				X
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?				X

Discussion

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? (No impact)

The project would not increase employees or population in the surrounding community, so the use of existing neighborhood and regional parks or other recreational facilities would not change as a result of the project. The project would not result in the physical deterioration of public recreational facilities. No impact would occur.

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? (Less than significant impact)

The proposed project includes the development of bicycle facilities intended to promote the use of bicycle use as a mode of transportation. These improvements could be considered recreational facilities, however they would not have an adverse physical effect on the environment, therefore this is considered a less than significant impact.

2.17 Transportation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 Subdivision (b)?				X
c) Substantially increase hazards due to geometric design features (e.g. Sharp curves or dangerous intersection) or incompatible uses (e.g. farm equipment)?				X
d) Result in inadequate emergency access?			X	

Discussion

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? (Less than significant impact)

The City's General Plan identifies future improvements to Green Island Road as a 4 lane facility and the Traffic Impact Fee Program (American Canyon 2015) identifies the Green Island Road as a 2 lane with a center turning lane. The proposed bicycle and pedestrian facilities are consistent with the General Plan and the American Canyon Bicycle Plan (American Canyon 2012). The proposed 2 lane facility with a center turn lane would result in fewer environmental impacts than a 4 lane facility. The proposed 2 lane with center turn lane project would not preclude future development of the roadway into a 4 lane facility as envisioned in the General Plan. Any differences between the proposed facilities in the General Plan, the Traffic Impact Fee Program and the proposed project are considered less than significant.

Green Island Road currently does not provide pedestrian or bicycle facilities, however upon completion it would. The proposed bicycle and pedestrian facilities would be designed in accordance with the Highway Design Manual's Bicycle Transportation Design chapter or equivalent such as the National Association of City Transportation Official's Urban Street Design Guide. Therefore, the project would not create the potential for conflicts between construction vehicles and cars, bicyclists, or pedestrians sharing roadways; confusion or

frustration of drivers related to construction activities and detours; and confusion of bicyclists and pedestrians due to temporary alterations in bicycle and pedestrian access and circulation.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 Subdivision (b)? (No impact)

Section 15064.3 subdivision (b) establishes criteria for analyzing transportation impacts resulting from the implementation of a project. For transportation projects that reduce, or have no impact on, vehicle miles traveled are considered to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. The proposed project will not contribute to vehicle miles traveled and will not promote additional roadway capacity over existing conditions; therefore this is considered no impact.

c) Substantially increase hazards due to geometric design features (e.g. Sharp curves or dangerous intersection) or incompatible uses (e.g. farm equipment)? (No impact)

Green Island Road is being designed to City standards for a 2-lane industrial collector with a center turn lane. The remaining roads that are part of the project are to be reconstructed as well within the existing curb-to-curb limits. The project would not create sharp curves, changes to speed limits on existing roads, or other features that would prevent safe access through the area. The intersections that are being reconfigured as part of the project will be designed to City standards and would not present a hazard to transportation; therefore, a less-than-significant impact would occur.

d) Result in inadequate emergency access? (Less than significant)

The project would not result in a reduction in travel lanes or local-access-only road closures. Traffic controls will be implemented during construction. Therefore, the project would not result in delays for emergency response vehicles or temporarily block access to driveways. Therefore, the impact of construction activities on emergency access to adjacent properties would be less than significant.

The project would increase connectivity in the project vicinity which would improve emergency access and response times. The operational impact on emergency access would be less than significant.

2.18 Tribal Cultural Resources

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

Discussion

Cause a substantial adverse change in the significance of a tribal cultural resource, defined in public Resources Code section 21074 as either a site, feature place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) listed or eligible for listing in the California Register of the Historical Resources, or in a local register of historical resources as defined Public Resources Code section 5020.1(k); or,

b) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe. (Less than significant with mitigation)

Response a)-b) CEQA requires lead agencies to determine if a proposed project would have a significant effect on tribal cultural resources. The CEQA Guidelines define tribal cultural resources as: (1) a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American Tribe that is listed or eligible for listing on the California Register of Historical Resources, or on a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or (2) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant according to the historical register criteria in Public Resources Code Section 5024.1(c), and considering the significance of the resource to a California Native American tribe. No tribes have requested the City of American Canyon provide notices of projects under AB52. A records search of the Native American Heritage Commission (NAHC) Sacred Lands File was conducted in February 2016. The Sonoma State University Anthropological Studies Center provided a list of the California Native American tribes culturally affiliated with the project area. BCR Consulting, LLC distributed letters to Native American Tribes on the list, in support of Section 106 consultation, in writing on March 18th, 2016. The Yocha Dehe Wintun Nation provided a comment letter on April 20th, 2016. The letter states that the tribe had reviewed the project and concluded that it is within the aboriginal territories of the Yocha Dehe Wintun Nation. The letter requests the City initiate consultation with the Yocha Dehe Wintun Nation Cultural Resources Manager.

The potential exists to encounter as-of-yet unknown tribal cultural resources during project-related construction activities. If such tribal cultural resources were to qualify as a historical resource as defined by CEQA, a substantial adverse change to these resources would be a significant impact.

Implementation of Mitigation Measure TCR-1 would reduce significant impacts to less-than significant levels by protecting, preserving, or recovering any significant tribal cultural resources affected by project construction.

Mitigation Measure TCR-1: Protect Tribal Cultural Resources during Construction Activities

In the event that any subsurface tribal cultural resources or deposits, including locally darkened soil (midden), that could conceal tribal cultural deposits, are discovered during construction-related earth-moving activities, all ground-disturbing activity in the vicinity of the resources shall be halted and a qualified professional archaeologist shall be retained to evaluate the find and the appropriate tribal representative(s) shall be notified. If the find is determined to constitute a tribal cultural resource per Public Resource Code Section 21074, the archaeologist shall develop appropriate mitigation to protect the integrity of the resource and ensure that no additional

resources are affected. Mitigation could include but would not necessarily be limited to avoidance, preservation in place, archival research, subsurface testing, or excavation and data recovery.

2.19 Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment facilities or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) 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?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment facilities or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? (Less than significant)

The project would not alter wastewater requirements or result in an increase in the generation of wastewater aside from groundwater generated during any potential dewatering operations that may occur as a result of trenching for underground utilities. Similarly, the project would not result in an increased demand for water and no expanded water treatment facilities are required. Stormwater drainage and utilities (telecommunications, natural gas, electric) would be

reconfigured, updated and placed underground within the project site. The proposed utility undergrounding would take place primarily within the existing roadway corridor which is highly disturbed and would not cause a significant environmental effect. Therefore, the project would not require or result in the construction of other facilities or expansion of existing facilities outside of those included and analyzed in this document. A less-than-significant impact would occur.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? (Less than significant)

During construction, City of American Canyon water supplies could potentially be used for dust control activities. Construction-related water demands would be short-term and small in volume and would be sufficiently served by existing entitlements. Following full construction, the project may use water for landscaping irrigation. However, the City has adopted the Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), which reduces water consumption from new landscaping. The City treats wastewater and produces reclaimed water. Reclaimed water is required for construction activities and a reclaimed water distribution network exists in the Project area and is available for landscape irrigation purposes. Therefore, irrigation use for landscaping would not result in a substantial increased demand for water. Therefore, no new entitlements or facilities would be required. A less than significant impact would occur.

c) 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? (Less than significant)

As described above under item "a," the project would not result in an operational increase in the generation of wastewater. The project may discharge groundwater to the American Canyon Water Reclamation Facility as a result of construction-period dewatering. The discharge of groundwater to the Water Reclamation Facility would be temporary in nature and would not substantially alter existing wastewater characteristics or result in the need for additional capacity at the Water Reclamation Facility. The project would not impair the ability of the American Canyon Water Reclamation Facility to continue serving existing commitments. A less than significant impact would occur.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (Less than significant)

The project would not result in an operational increase in the generation of waste. Construction techniques will employ the use of the Cold Central Plant Recycled construction method which will be used to remove the asphalt and create a new layer of Class 2 aggregate base. Reclaimed Asphalt Pavement (RAP) will be mixed with asphalt emulsion to be used for new asphalt which will be overlain with a top layer of asphalt concrete. The proposed project would results in construction wastes which would generally include pavement and concrete at the tie-ins to driveways and property frontages, and soil to be excavated during grading and utilities installation. The project would be required to comply with applicable federal, state, and local statutes regarding solid waste. The project would not impair the attainment of solid waste reduction goals. A less than significant impact would occur.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (Less than significant)

The City of American Canyon does not have a construction and demolition diversion ordinance. Construction waste with no practical reuse or that cannot be salvaged or recycled would be disposed of at a local landfill, such as the Potrero Hills Landfill in Solano County or the Redwood Sanitary Landfill in Marin County. Any excavated soil found to contain unacceptable levels of hazardous contaminants would be hauled to a licensed disposal site.

The nearest landfill is the Potrero Hill Landfill, which has remaining capacity of approximately 83.1 million cubic yards (CalRecycle 2017). Therefore, solid waste generated by project construction is expected to be a small percentage of the remaining capacity of the Potrero Hill Landfill. Following construction, project operation would not generate additional solid waste. Therefore, no operational impact would occur. Because construction waste disposal needs would be sufficiently accommodated by existing landfills, the impact would be less than significant.

2.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

a) Substantially impair an adopted emergency response plan or emergency evacuation plan? (No impact)

The proposed project is within the area covered by the County of Napa Emergency Operation Plan. There are no specifics in the Emergency Operation Plan that identify the project site as an evacuation route. Due to the nature of the proposed project, roadway reconstruction and widening, and its location in an industrialized area, there will be no impact to the adopted emergency response plan or emergency evacuation plan.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The proposed project is not within or near a State Responsibility Area of lands classified as very high fire hazards severity zones, therefore there is no impact.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The proposed project is not within or near a State Responsibility Area of lands classified as very high fire hazards severity zones, therefore there is no impact.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? (No impact)

The proposed project is not within or near a State Responsibility Area of lands classified as very high fire hazards severity zones, therefore there is no impact.

2.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Mandatory Findings of Significance				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?		X		
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)?		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

Discussion

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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? (Less than significant with mitigation)

As evaluated in this IS/MND, the project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory after implementation of mitigation.

Environmental protection actions are in place (see Section 1.6, Environmental Protection Actions Incorporated into the project, of this IS/MND) to reduce impacts related to geologic hazards. Additionally, mitigation measures are listed herein to reduce impacts related to air quality, biological resources, cultural resources, and noise. With implementation of the required mitigation measures, impacts would be less than significant.

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)? (Less than significant with mitigation)

Cumulative impacts are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time

The cumulative impact analysis in this IS/MND uses the list approach. A search was undertaken to identify other reasonably foreseeable projects in the vicinity of the proposed project area that may have overlapping or cumulative impacts with the proposed project. Projects identified and considered for cumulative impacts include:

- Approved Napa Logistics Park Phase II project located north of the project site.
- Delvin Road and Vine Trail Extension project located north of the project site.

As summarized in Section 3 of this IS/MND, the project would not result in impacts on agriculture and forest resources, land use and planning, mineral resources, population and housing, public services, and recreation. Therefore, implementation of the project would not contribute to any related cumulative impact on these resources.

The distance between and location of the proposed project site and the identified cumulative projects would present the potential for cumulative impacts in the project area related to construction lighting, noise and vibration, as the nearest potential sensitive receptor that would be subject to lighting, noise, and vibration from the projects are residences within 0.25 mile east of the Delvin Road and Vine Trail Extension project and the proposed Green Island Road project.

The approved improvements to the Napa Logistics Park Phase II and the Delvin Road and Vine Trail Extension projects would require work that could be located within waters of the United States/State. As described in Section 3.4, Biological Resources, the proposed project will also include work within waters of the United States/State. However, both the proposed project and the approved adjacent projects (Napa Logistics Park Phase II and the Delvin Road and Vine Trail Extension) apply mitigation that reduces their individual project-level impacts to less than significant. Both adjacent projects require mitigation that either creates and preserves seasonal wetland habitat within a preserve area, or restores features of equal or greater value, or purchases credits at an agency-approved mitigation bank in the region at a minimum 2:1 ratio, or as determined by the permits from regulatory agencies. Therefore, the proposed project and the adjacent projects would not result in a cumulatively significant impact to waters of the United States/State.

The project would not, itself, generate new on-road trips. Therefore, the project will not result in a cumulatively considerable increase in traffic for the project area. As stated in Section 3.3, the air quality thresholds of significance are cumulative in nature. The project would result in a less than significant air quality impact after implementation of mitigation; therefore, no additional cumulative impact analysis is warranted.

Based on the analysis above, the project impacts summarized in Section 3 of this IS/MND would not add appreciably to any existing or foreseeable future significant cumulative impact, such as light or glare, species endangerment, historical resources, hazardous materials, noise, vibration, or traffic. Implementation of the project would not contribute to any related cumulative impact. Incremental impacts, if any, would be very small, and the cumulative impact would be less than significant with the inclusion of mitigation measures

c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly? (Less than significant with mitigation)

As discussed in the analysis above and in Section 3 of this IS/MND, the project would not have environmental effects that would cause substantial adverse direct or indirect effects on human beings after the inclusion of mitigation measures.

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Appendix A Site Plans

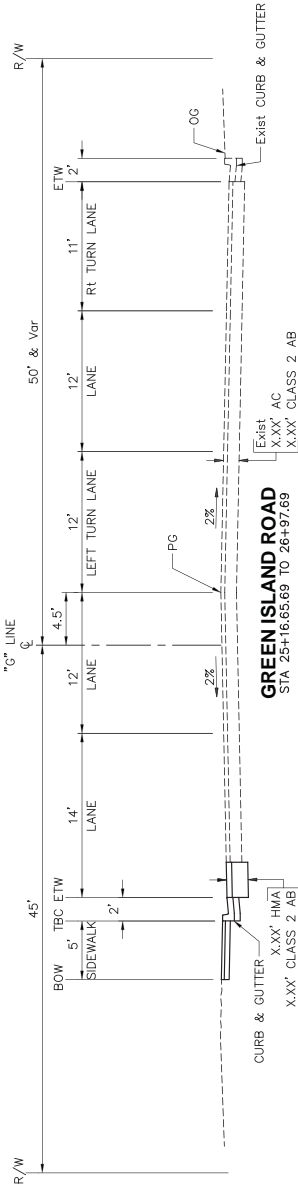
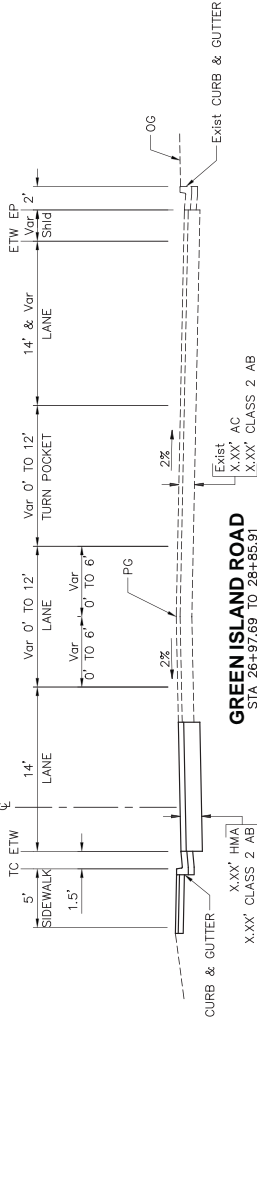
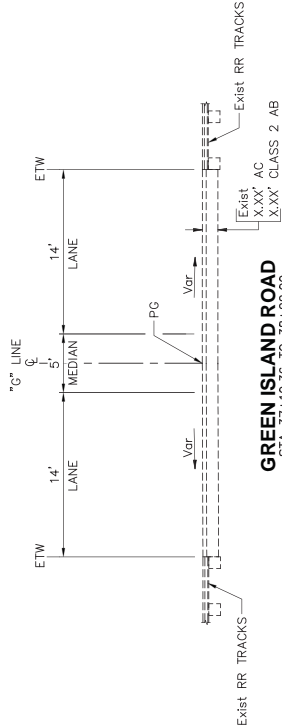
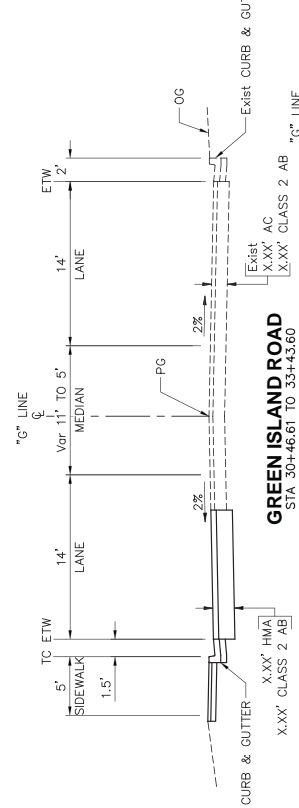
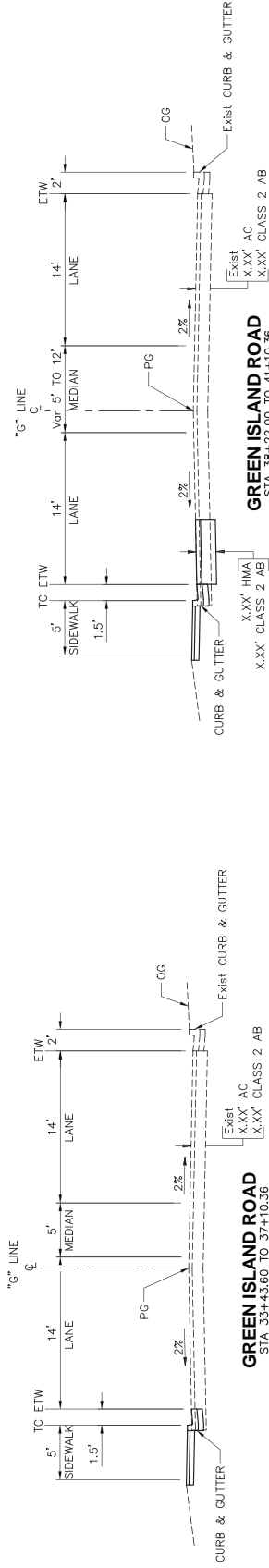
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TBC	TOP BACK OF CURB
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PUE	PUBLIC UTILITY EASEMENT
MVP	MAINTENANCE VEHICLE PULLOUT



NOTES:

1. DIMENSIONS OF THE STRUCTURAL SECTION ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.



1. DIMENSIONS OF THE STRUCTURAL SECTION ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.



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CHECKED BY:	JPJ
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DRAWING NO.
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4 OF 23 SHEETS

DRAWING NO.	A48-100
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PROJECT NO. A48 100

SCALE: 1" = 20'

CHECKED BY: _____ IP: _____

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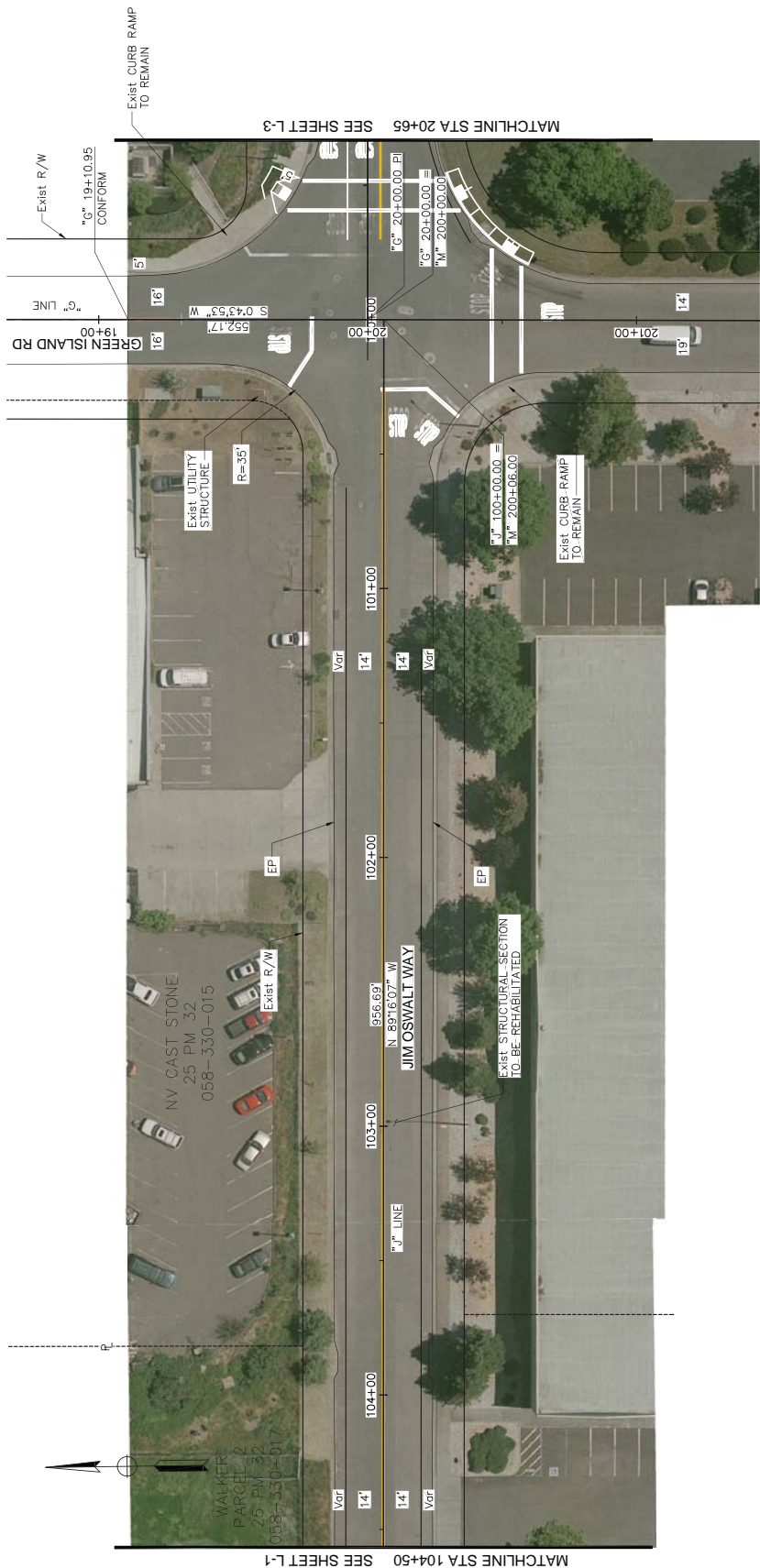
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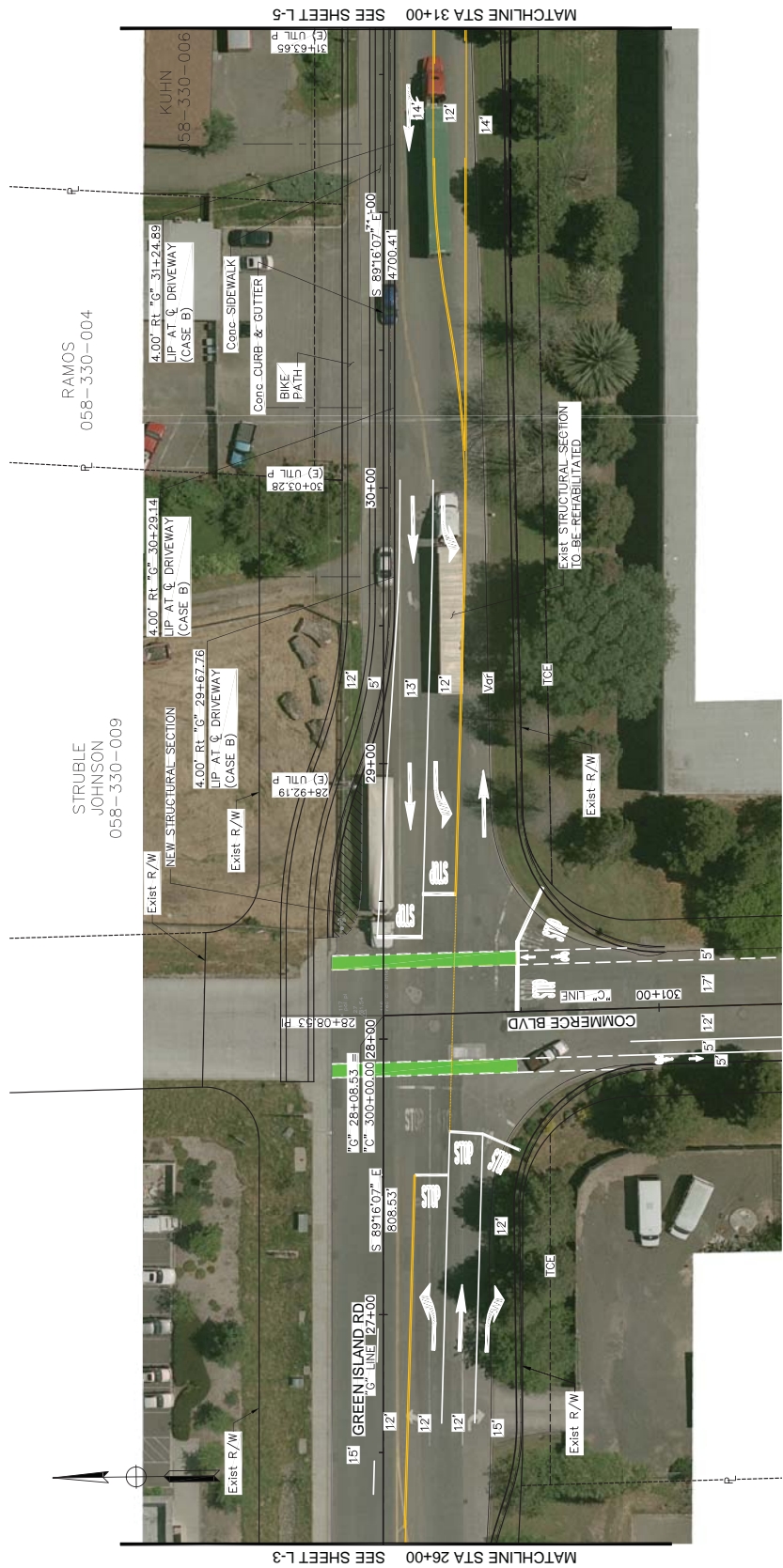
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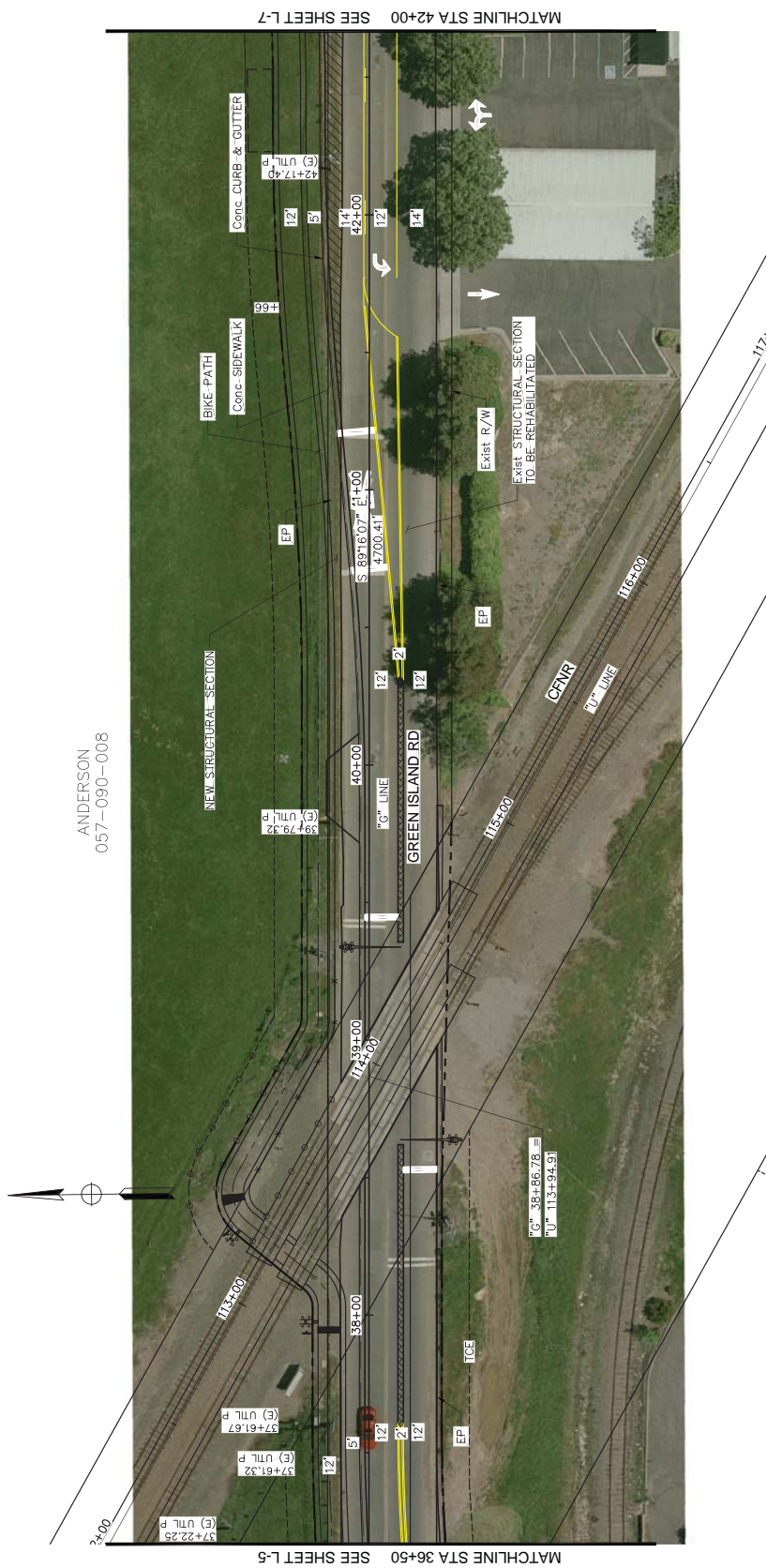
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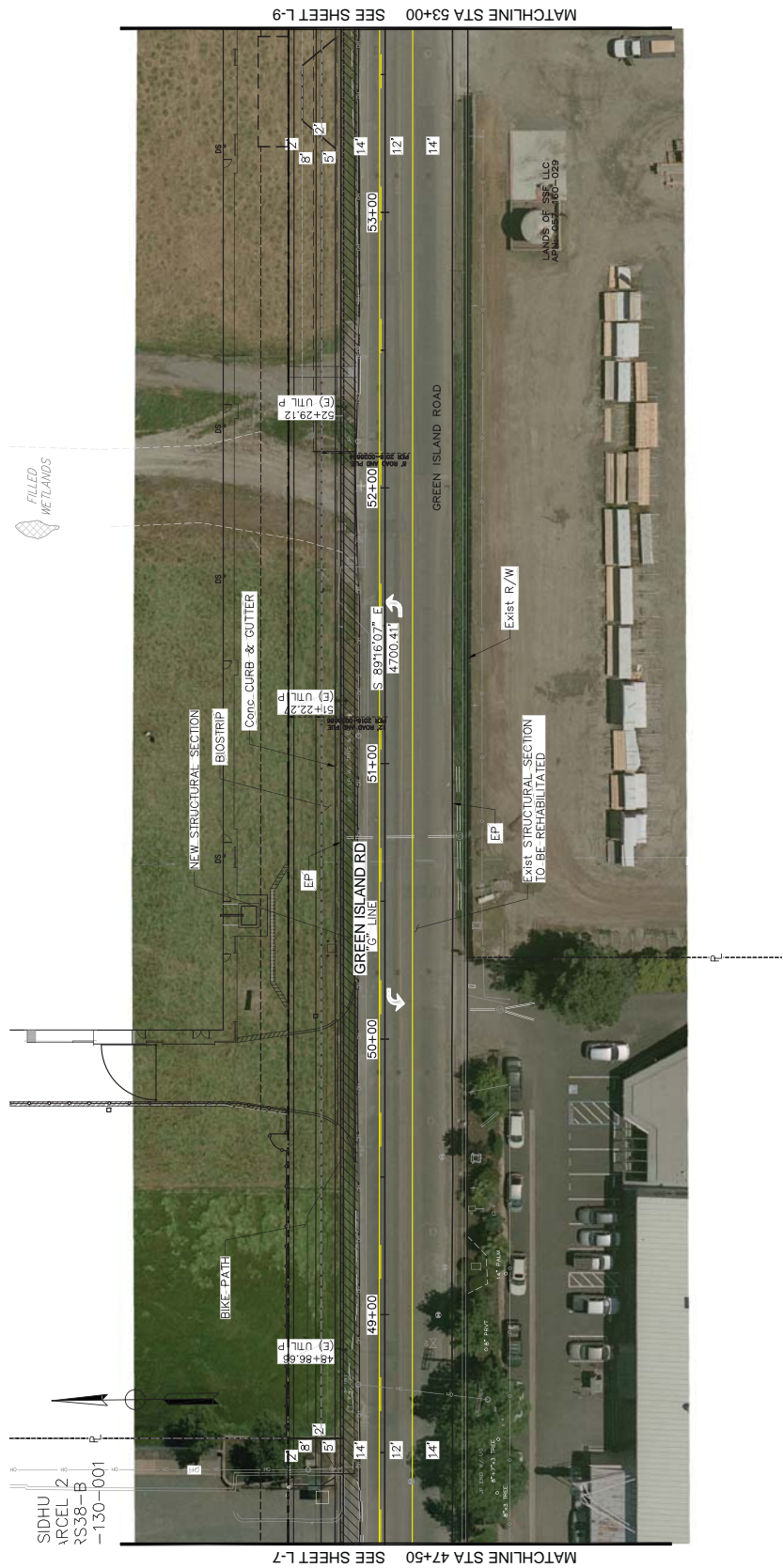
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13 OF 23 SHEETS



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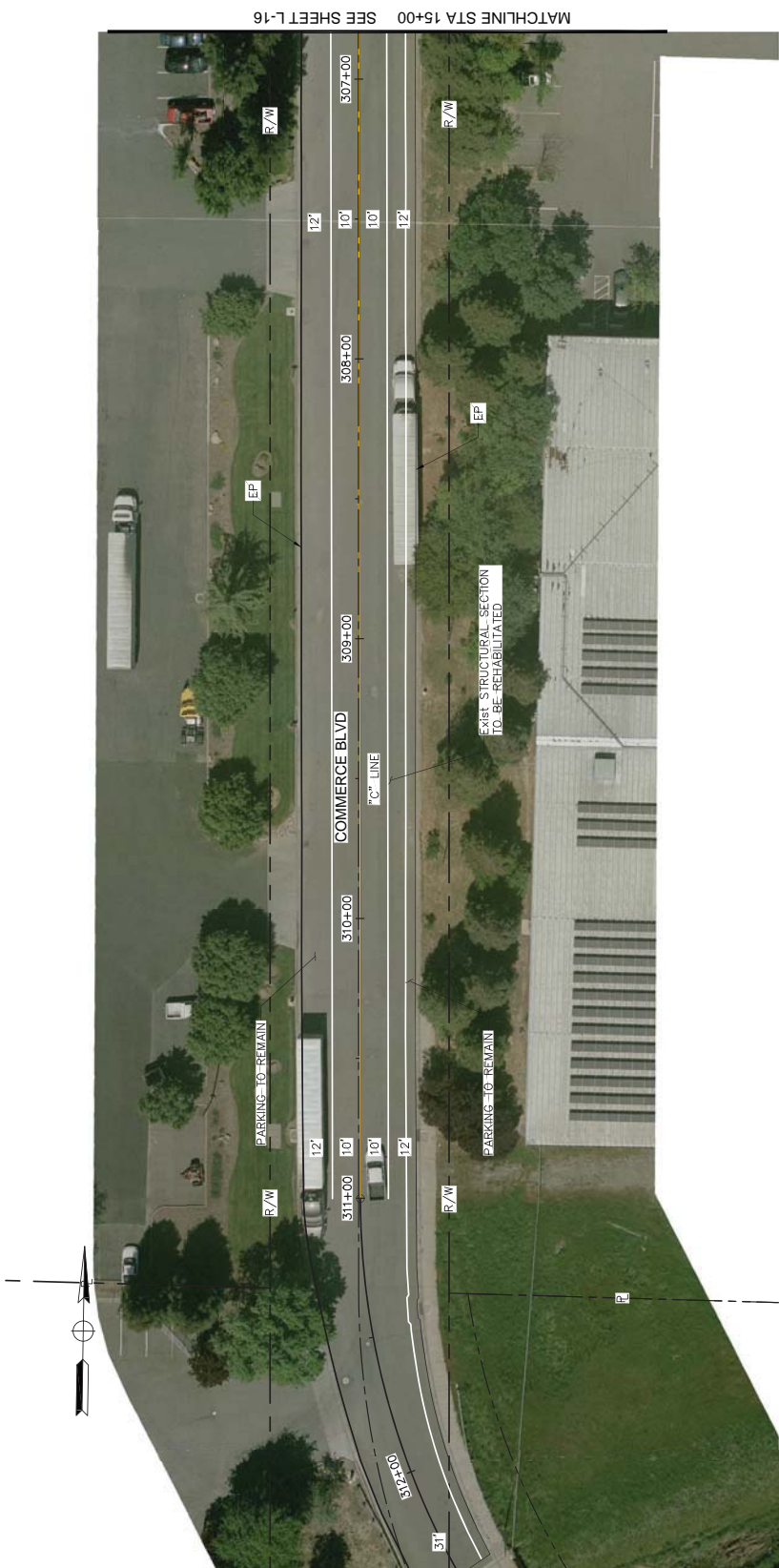
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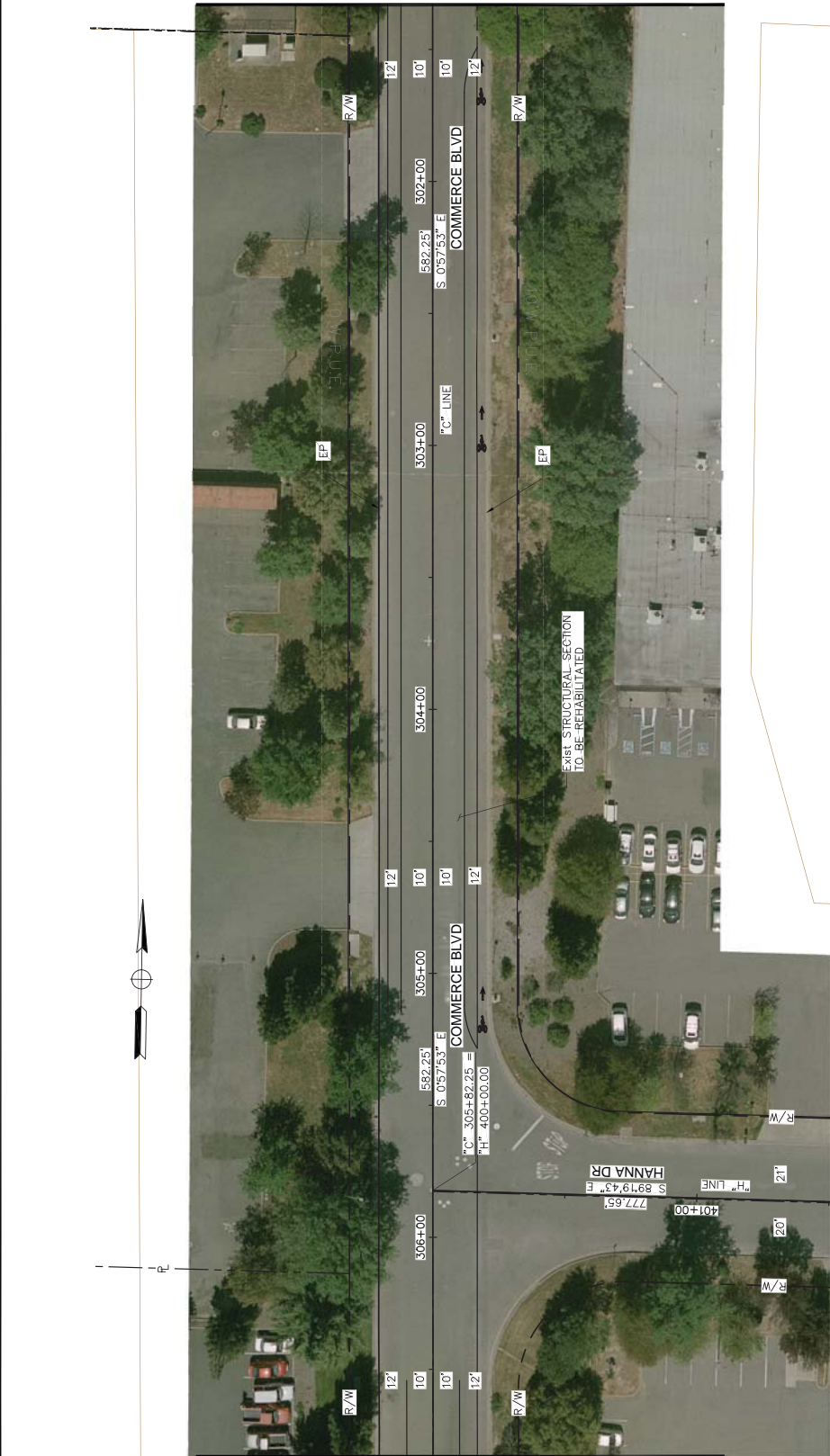
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Appendix B Roadway Construction Emissions Model Emissions Output

Road Construction Emissions Model, Version 8.1.0

Daily Emission Estimates for -> Green Island Road Widening Merged														
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Total PM2.5 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	0.72	14.73	3.12	20.20	4.31	20.00	0.20	4.16	0.15	0.03	2,745.16	0.60	0.04	2,771.78
Grading/Excavation	3.01	59.66	7.68	20.49	4.54	20.00	0.49	4.16	0.38	0.11	10,188.14	2.86	0.11	10,291.92
Drainage/Utilities/Sub-Grade	1.89	35.24	5.32	20.35	4.43	20.00	0.35	4.16	0.27	0.06	6,199.00	1.19	0.07	6,249.16
Paving	0.89	20.61	3.45	0.24	0.00	0.00	0.17	0.76	0.17	0.04	3,374.56	0.76	0.04	3,406.88
Maximum (pounds/day)	3.01	59.66	7.68	20.49	4.54	20.00	0.49	4.16	0.38	0.11	10,188.14	2.86	0.11	10,291.92
Total (tons/construction project)	0.53	10.76	1.52	4.59	1.01	4.49	0.10	0.08	0.08	0.02	1,854.76	0.46	0.02	1,872.34
Notes:														
2020														
Project Start Year ->														
24														
Project Length (months) ->														
12														
Total Project Area (acres) ->														
2														
Maximum Area Disturbed/Day (acres) ->														
Water Truck Used? ->														
Yes														
Total Material Imported/Exported Volume (yd³/day)														
Daily VMT (miles/day)														
Soil Asphalt Soil Hauling Asphalt Hauling Worker Commute Water Truck														
Grubbing/Land Clearing 40 40 60 60 320 40														
Grading/Excavation 40 40 60 60 920 40														
Drainage/Utilities/Sub-Grade 40 40 60 60 680 40														
Paving 40 40 60 60 520 40														
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.														
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.														
CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.														
Total Emission Estimates by Phase for -> Green Island Road Widening Merged														
Project Phases (Tons for all except CO2e, Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Total PM2.5 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.02	0.39	0.08	0.53	0.11	0.53	0.01	0.00	0.00	0.00	72.47	0.02	0.00	66.38
Grading/Excavation	0.32	6.30	0.81	2.16	0.05	2.11	0.05	0.04	0.04	0.01	1,075.87	0.30	0.01	985.96
Drainage/Utilities/Sub-Grade	0.16	3.26	0.49	1.88	0.03	1.85	0.03	0.02	0.02	0.01	572.79	0.11	0.01	523.83
Paving	0.04	0.82	0.14	0.01	0.01	0.00	0.01	0.00	0.01	0.00	133.63	0.03	0.00	122.39
Maximum (tons/phase)	0.32	6.30	0.81	2.16	0.05	2.11	0.05	0.04	0.04	0.01	1,075.87	0.30	0.01	985.96
Total (tons/construction project)	0.53	10.76	1.52	4.59	1.01	4.49	0.10	0.08	0.08	0.02	1,854.76	0.46	0.02	1,898.57
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.														
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.														
CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.														
The CO2e emissions are reported as metric tons per phase.														

Appendix C Biological Resource Analysis

**BIOLOGICAL RESOURCES ANALYSIS
GREEN ISLAND ROAD RECONSTRUCTION AND WIDENING PROJECT
CITY OF AMERICAN CANYON, CALIFORNIA**

July 1, 2019

Prepared for

City of American Canyon
4381 Broadway Suite 201
American Canyon, California 94503
Attention: Mr. Ronald Ranada

Prepared by

Monk & Associates, Inc.
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City of American Canyon, California

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1. INTRODUCTION

Monk & Associates, Inc. (M&A) has prepared this *Biological Resources Analysis* for the proposed road widening improvements to existing Green Island Road and rehabilitation of the existing pavement structure of Green Island Road, Jim Oswalt Way, Mezzetta Court, Commerce Boulevard, and Hanna Drive all located within the City of American Canyon, California (Figures 1 and 2). The portion of Green Island Road that will be widened and existing pavement areas on Green Island Road, Jim Oswalt Way, Mezzetta Court, Commerce Boulevard, and Hanna Drive that are to be rehabilitated are hereinafter referred to as the Project Site. The purpose of our analysis is to provide a description of existing biological resources on the project site and to identify potentially significant impacts that could occur to sensitive biological resources from the proposed Green Island Road Widening Project (the project).

Biological resources include common plant and animal species, and special-status plants and animals as designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), National Marine Fisheries Service (NMFS), and other resource organizations including the California Native Plant Society. Biological resources also include waters of the United States and State, as regulated by the U.S. Army Corps of Engineers (Corps), California Regional Water Quality Control Board (RWQCB), and CDFW. It is important to note that our analysis includes an assessment of the potential for impacts to regulated waters and includes a formal delineation of “waters of the U.S.” that is pending submittal to the Corps, the regulatory agency that defines waters of the U.S.

This *Biological Resources Analysis* provides a regulatory review of environmental regulations that have applicability to the proposed project. Finally, this analysis also provides mitigation measures for “potentially significant” and “significant” impacts that could occur to biological resources from the implementation of the project. Whenever possible, upon implementation, the prescribed mitigation measures would reduce impacts to levels considered less than significant pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code §§ 21000 et seq.; 14 Cal. Code Regs. §§ 15000 et seq). Accordingly, this report is suitable for review and inclusion in any review being conducted by the City of American Canyon for the proposed project pursuant to the CEQA.

2. PROPERTY LOCATION AND SETTING

The project site is located in the City of American Canyon, west of Highway 29. The road widening portion of the project along Green Island Road is approximately 0.8 miles in length. Most of the properties along Green Island Road have been recently developed into shipping and storage warehouses, and other commercial properties; however, there are a few remaining ranchettes along this road. Figure 3 provides an aerial photograph of the limits of the project site.

3. PROPOSED PROJECT

The City of American Canyon is proposing to widen Green Island Road, including rehabilitation of the existing pavement area, to facilitate trucking commerce to and from Highway 29 which has increased over the years due to the addition of commercial warehouses along this formerly

rural road. The limits of the Green Island Road widening portion of the project extend approximately 35 feet north of the existing unimproved edge of Green Island Road into privately owned properties. In order to accommodate the road widening the City will relocate underground all overhead utility lines currently present along the road or on the adjacent private property lands that become incorporated into the new road. A bike path is also proposed to be added along the northern side of Green Island Road as part of this project. In addition to improvements to Green Island Road, the City of American Canyon proposes to rehabilitate the existing pavement areas of Jim Oswalt Way, Mezzetta Court, Commerce Boulevard, and Hanna Drive.

4. ANALYSIS METHODS

Prior to preparing this *Biological Resources Analysis*, M&A researched the most recent version of CDFW's Natural Diversity Database, RareFind 5 application (CNDDDB 2019) for records of special-status plant and animal species (that is, threatened, endangered, rare) known to occur in the region of the project site. M&A also searched the 2019 electronic version of the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Plants of California* (CNPS 2001) for records of special-status plants known in the region of the project site. All special-status species records were compiled into tables. M&A examined all known record locations for special-status species to determine if special-status species could occur on the project site or within an area of affect.

On May 11, 2017, M&A biologists, Ms. Hope Kingma and Mr. Devin Jokerst, visited the project site to examine potential Corps regulated areas along the north side of Green Island Road. M&A used the Corps' 1987 *Wetlands Delineation Manual* (Corps 1987) in conjunction with the regional supplement for the Arid West Region (Corps 2008) to conduct this wetland delineation. On August 3, 2017, M&A conducted an additional delineation along the south side of Green Island Road to examine all areas within the limits of the project site. A jurisdictional determination request and Draft Aquatic Resources Delineation Maps (Sheets 1-5) were prepared and is pending submittal to the Corps.

M&A conducted a tree survey within the limits of the project site on August 3, 2017. M&A assessed the health and vigor of each tree, installed a tree tag on each tree, and measured the diameter at breast height (DBH) of each tree. DBH is measured using a diameter tape wrapped around the tree at 1.3 meters above the ground. All trees along the project site are shown on Exhibits A-C. The information collected via the tree survey is being utilized to support the project design and construction plans, to identify necessary tree removals and, as necessary, will be used to inform mitigation measures to address potential impacts associated with the removal of trees (e.g. potential impacts to nesting birds, etc.).

The results of our literature research and field surveys are provided in the sections below.

5. RESULTS OF RESEARCH AND PROJECT SITE ANALYSES

5.1 Soils

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS 2017), Web Soil Survey Map of Napa County, California mapped two soil series on the project site: Clear Lake Clay, drained and Haire Loam, 2 to 9 percent slopes (Figure 4).

5.1.1 CLEAR LAKE CLAY, DRAINED (116)

Clear Lake soils are nearly level, poorly-drained soils, existing on old alluvial fans, in basins, and in swales of level drainageways. These soils formed in alluvium derived from sandstone and shale or other mixed rock sources. The plant cover consists of annual grasses and forbs and scattered oaks. Runoff is slow or very slow, with little hazard of erosion. The upper few inches of this soil commonly becomes strongly granular upon drying. This soil is mainly used for pasture. Some areas in the northern part of Napa Valley are used for vineyards. *Clear Lake Clay, drained, is classified as a hydric soil* by the NRCS (2017). The majority of the project site is mapped as Clear Lake Clay soils.

5.1.2 HAIRE LOAM, 2 TO 9 PERCENT SLOPES (146)

The Haire Soil series consists of moderately well-drained soils that occur on nearly level to moderately steep hills, on old terraces, and alluvial fans. Slope ranges from 0 to 30 percent, and elevation ranges from 20 to 300 feet. These soils formed from alluvium derived from sedimentary rock. The vegetation in uncultivated areas consists of annual grasses and forbs. Permeability is very slow, and the hazard of erosion is slight. Haire soils are mainly used for dryland and irrigated pasture, but some areas are used for vineyards and rangeland. *Haire loam, 2 to 9 percent slopes is classified as a hydric soil* by the NRCS (2017).

5.2 Project Site Topography and Hydrology

The Project Site is located between the hills of the Newell Preserve and the tidal marshlands along the Napa River. While the project site is relatively flat, there is a gradual slope from the project site's eastern boundary (approximately 58 feet above sea-level) to the project site's western boundary (22 feet above sea-level). The roadside ditches along the northern shoulder of Green Island Road convey surface sheet flows draining from the impervious surfaces along Green Island Road. These potential Corps jurisdictional "other waters" drain into the existing stormdrain system along Green Island Road. Proposed rehabilitation of Jim Oswalt Way, Mezzetta Court, Commerce Boulevard, and Hanna Drive will not modify existing stormwater drainage that enters the City's storm drain system.

5.3 Plant Communities and Associated Wildlife Habitats

Green Island Road widening will affect heretofore undeveloped surfaces that support ruderal and in some areas wetland habitats. Trees would likely be impacted by proposed widening. These affected habitats are analyzed in detail below. In contrast, Jim Oswalt Way, Mezzetta Court, Commerce Boulevard, and Hanna Drive are fully developed areas. Rehabilitating these existing heavily used streets will not result in biological impacts, or in impacts to trees, and thus the

effects of rehabilitating these streets is not analyzed at the same level of detail as the widening of Green Island Road.

A complete list of plant species observed on the project site is presented in Table 1. Nomenclature used for plant names follows *The Jepson Manual* Second Edition (Baldwin 2012) and changes made to this manual as published on the Jepson Interchange Project website (<http://ucjeps.berkeley.edu/interchange/index.html>). Table 2 is a list of wildlife species observed on the project site. Nomenclature for wildlife follows CDFW's *Complete List of Amphibian, Reptile, Bird, and Mammal Species in California* (2016) and any changes made to species nomenclature as published in scientific journals since the publication of CDFW's list.

5.3.1 RUDERAL HERBACEOUS HABITAT

The vegetation along Green Island Road can be described as ruderal herbaceous. Ruderal (weedy) communities are assemblages of non-native plants that thrive in waste areas, roadsides and other sites that have been disturbed by human activity. Ruderal communities are typically found in hardpacked soils of roadsides, parking lots, industrial areas and construction sites. Ruderal vegetation is adapted to high levels of disturbance and persists almost indefinitely in areas with continuous disturbance.

The ruderal herbaceous vegetation along Green Island Road is dominated by non-native grass species which include slender wild oat (*Avena barbata*), Italian ryegrass (*Festuca perennis*), foxtail chess (*Bromus madritensis* ssp. *madritensis*), and hare barley (*Hordeum murinum* ssp. *leporinum*). Dominant non-native forbs (broad-leaved plants) found in the project site include cut-leaf geranium (*Geranium dissectum*), bristly ox-tongue (*Helminthotheca echioides*), bind weed (*Convolvulus arvensis*), and curly dock (*Rumex crispus*).

Ruderal habitats typically provide suitable environments for common animals that are adapted to living in association with humans. Common wildlife species observed using this ruderal community included raccoon (*Procyon lotor*), Botta's pocket gopher (*Thomomys bottae*), Eurasian collared-dove (*Streptopelia decaocto*), mourning dove (*Zenaida macroura*), western scrub jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), Brewer's blackbird (*Euphagus cyanocephalus*), house finch (*Haemorhous mexicanus*), and house sparrow (*Passer domesticus*).

5.3.2 POTENTIAL SEASONAL WETLANDS

Potential seasonal wetlands are mapped alongside Green Island Road. These wetlands typically support wetland plant species including spiny buttercup (*Ranunculus muricatus*), rabbit's foot grass (*Polypogon monspiliensis*), bristly ox-tongue, hyssop loosestrife (*Lythrum hyssopifolia*), and Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*). Sub-dominant native hydrophytic species included California coyote-thistle (*Eryngium aristulatum* var. *aristulatum*), wavy-stemmed popcorn flower (*Plagiobothrys undulatus*), water plantain (*Alisma triviale*), and creeping spikerush (*Eleocharis macrostachya*).

Seasonal wetlands provide wildlife with a seasonal water source that allows animals to drink and forage in the water during the winter and spring months and sometimes into the early summer. Amphibians will lay their eggs in seasonal wetland habitats and complete much of their life cycle in the wetlands. Invertebrates such as mayflies (Ephemeroptera), damselflies (Odonata), and predaceous diving beetles (Dytiscidae) are commonly associated with inundated seasonal wetland habitats and complete their life cycle in the wetlands. Wildlife species associated with these wetlands include Sierran tree frog (*Pseudacris sierra*), raccoon, black phoebe (*Sayornis nigricans*), cliff swallow (*Petrochelidon pyrrhonota*), and western meadowlark (*Sturnella neglecta*).

5.4 Wildlife Corridors

Wildlife corridors are linear and/or regional habitats that provide connectivity to other natural vegetation communities within a landscape fractured by urbanization and other development. Wildlife corridors have several functions: 1) they provide avenues along which wide-ranging animals can travel, migrate, and breed, allowing genetic interchange to occur; 2) populations can move in response to environmental changes and natural disasters; and 3) individuals can recolonize habitats from which populations have been locally extirpated (Beier and Loe 1992). All three of these functions can be met if both regional and local wildlife corridors are accessible to wildlife. Regional wildlife corridors provide foraging, breeding, and retreat areas for migrating, dispersing, immigrating, and emigrating wildlife populations. Local wildlife corridors provide access routes to food, cover, and water resources typically within restricted habitats available for use by resident wildlife species with restricted home ranges. Migrant birds that usually are adapted to higher levels of disturbance may also temporarily perch or feed in these restricted habitats.

The Green Island Road widening portion of the project site is approximately 0.8 miles in length and the limits of the road widening project extend approximately 35 feet north of the existing edge of Green Island Road. This existing road is a heavily trafficked route that does not provide a movement corridor for wildlife. Similarly, Jim Oswalt Way, Mezzetta Court, Commerce Boulevard, and Hanna Drive that would be rehabilitated, are fully developed areas with adjacent commercial businesses. No potential wildlife movement corridors would be affected by rehabilitating these streets. Consequently, there would be no impacts to regional or local wildlife corridors from implementation of the proposed project.

6. SPECIAL-STATUS SPECIES DEFINITION

6.1 Definitions

For purposes of this analysis, special-status species are plants and animals that are legally protected under the California and Federal Endangered Species Acts (CESA and FESA, respectively) or other regulations, and species that are considered rare by the scientific community (for example, the CNPS). Special-status species are defined as:

- plants and animals that are listed or proposed for listing as threatened or endangered under the CESA (Fish and Game Code §2050 *et seq.*; 14 CCR §670.1 *et seq.*) or the

FESA (50 CFR 17.12 for plants; 50 CFR 17.11 for animals; various notices in the Federal Register [FR] for proposed species);

- plants and animals that are candidates for possible future listing as threatened or endangered under the FESA (50 CFR 17; FR Vol. 64, No. 205, pages 57533-57547, October 25, 1999); and under the CESA (California Fish and Game Code §2068);
- plants and animals that meet the definition of endangered, rare, or threatened under the CEQA (14 CCR §15380) that may include species not found on either CESA or FESA lists;
- Plants occurring on Ranks 1A, 1B, 2A, 2B, 3, and 4 of CNPS' electronic *Inventory* (CNPS 2001). The CDFW recognizes that Ranks 1A, 1B, 2A and 2B of the CNPS inventory contain plants that, in the majority of cases, would qualify for State listing, and CDFW requests their inclusion in Environmental Impact Reports (EIRs). Plants occurring on CNPS Ranks 3 and 4 are "plants about which more information is necessary," and "plants of limited distribution," respectively (CNPS 2001). Such plants may be included as special-status species on a case by case basis due to local significance or recent biological information (more on CNPS Rank species below);
- migratory nongame birds of management concern listed by USFWS (Migratory Nongame Birds of Management Concern in the United States: The list 1995; Office of Migratory Bird Management; Washington D.C.; Sept. 1995);
- animals that are designated as "species of special concern" by CDFW (2016);
- Animal species that are "fully protected" in California (Fish and Game Codes 3511, 4700, 5050, and 5515).
- Bat Species that are designated on the Western Bat Working Group's (WBWG) Regional Bat Species Priority Matrix as: "RED OR HIGH." This priority is justified by the WBWG as follows: "Based on available information on distribution, status, ecology, and known threats, this designation should result in these bat species being considered the highest priority for funding, planning, and conservation actions. Information about status and threats to most species could result in effective conservation actions being implemented should a commitment to management exist. These species are imperiled or are at high risk of imperilment."

In the paragraphs below, we provide further definitions of legal status as they pertain to the special-status species discussed in this report or in the attached tables.

Federal Endangered or Threatened Species. A species listed as Endangered or Threatened under the FESA is protected from unauthorized "take" (that is, harass, harm, pursue, hunt, shoot, trap) of that species. If it is necessary to take a federally-listed Endangered or Threatened species as

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part of an otherwise lawful activity, it would be necessary to receive permission from the USFWS prior to initiating the take.

State Threatened Species. A species listed as Threatened under the CESA (§2050 of California Fish and Game Code) is protected from unauthorized “take” (that is, harass, pursue, hunt, shoot, trap) of that species. If it is necessary to “take” a state-listed Threatened species as part of an otherwise lawful activity, it would be necessary to receive permission from CDFW prior to initiating the “take.”

California Species of Special Concern. These are species in which their California breeding populations are seriously declining and extirpation from all or a portion of their range is possible. This designation affords no legally mandated protection; however, pursuant to the CEQA Guidelines (14 CCR §15380), some species of special concern could be considered “rare.” Pursuant to its rarity status, any unmitigated impacts to rare species could be considered a “significant effect on the environment” (§15382). Thus, species of special concern must be considered in any project that will, or is currently, undergoing CEQA review, and/or that must obtain an environmental permit(s) from a public agency.

CNPS Rank Species. The CNPS maintains an “Inventory” of special-status plant species. This inventory has four lists of plants with varying rarity. These lists are: Rank 1, Rank 2, Rank 3, and Rank 4. Although plants on these lists have no formal legal protection (unless they are also state or federally-listed species), CDFW requests the inclusion of Rank 1 species in environmental documents. In addition, other state and local agencies may request the inclusion of species on other lists as well. The Rank 1 and 2 species are defined below:

- Rank 1A: Presumed extinct in California;
- Rank 1B: Rare, threatened, or endangered in California and elsewhere;
- Rank 2A: Plants presumed extirpated in California, but more common elsewhere;
- Rank 2B: Rare, threatened, or endangered in California, but more common elsewhere.

All of the plants constituting Rank 1B meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (CESA) of the Fish and Game Code and are eligible for state listing (CNPS 2001). Rank 2 species are rare in California, but more common elsewhere. Ranks 3 and 4 contain species about which there is some concern and are reviewed by CDFW and maintained on “watch lists.”

Additionally, in 2006 CNPS updated their lists to include “threat code extensions” for each list. For example, Rank 1B species would now be categorized as Rank 1B.1, Rank 1B.2, or Rank 1B.3. These threat codes are defined as follows:

- .1 is considered “seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)”;
- .2 is “fairly endangered in California (20-80% of occurrences threatened)”;
- .3 is “not very endangered in California (less than 20% of occurrences threatened or no current threats known).”

Under the CEQA review process only CNPS Rank 1 and 2 species are considered since these are the only CNPS species that meet CEQA's definition of "rare" or "endangered." Impacts to Rank 3 and 4 species are not regarded as significant pursuant to CEQA.

Fully Protected Birds. Fully protected birds, such as the white-tailed kite and golden eagle, are protected under California Fish and Game Code (§3511). Fully protected birds may not be "taken" or possessed (i.e., kept in captivity) at any time.

6.2 Potential Special-Status Plants on the Project Site

Figure 5 provides a graphical illustration of the known records for special-status species within 3 miles of the project site and helps readers visually understand the number of sensitive species that occur in the vicinity of the project site. No special-status plants have been mapped on or adjacent the project site. However, according to the CNPS' *Inventory* and CDFW's CNDDDB, a total of 14 special-status plant species are known to occur in the project site region (Table 3). No rare or listed plant species are expected to occur within the road widening project site. The limits of the project extend 35 feet north of the existing road shoulder into adjacent properties. This narrow strip of land is excessively disturbed and is dominated by ruderal vegetation.

Furthermore, M&A conducted monthly surveys in 2016 on the Giovannoni property that is located immediately to the north of the project site and is the largest area of undeveloped land north of the existing road; no special-status plants were identified on the Giovannoni property during the March through July 2016 surveys. Since the Giovannoni property is the only remaining natural, undisturbed habitat located in the vicinity of the project site, based on these survey results it can be concluded that *there is no expectation that special-status plant species are present or would be impacted by the proposed project.*

6.3 Potential Special-Status Animals in the Project Site

Figure 5 provides a graphical illustration of the known records for special-status species within 3 miles of the project site and helps readers visually understand the number of sensitive species that occur in the vicinity of the project site. No special-status animal records have ever been mapped on or adjacent to the project site. However, a total of 16 special-status animal species are known to occur in the region of the project site (Table 4). *None of these 16 species are expected to occur on the project site.* However, because of the sensitivity of four (4) of the special-status animal species known to occur in the area we further discuss these species below. These species are vernal pool fairy shrimp (*Branchinecta lynchi*), California red-legged frog (*Rana draytonii*), northern harrier (*Circus cyaneus*), and Swainson's hawk (*Buteo swainsonii*).

6.3.1 VERNAL POOL FAIRY SHRIMP

Vernal pool fairy shrimp was designated as threatened in its entire range on September 19, 1994 (Federal Register 59:48136-48153). Critical habitat for this species was designated on August 6, 2003. The closest CNDDDB record for vernal pool fairy shrimp and the closest designated critical habitat of this vernal pool species is approximately 0.70 miles to the northwest of the project site (Figures 5 and 6).

The vernal pool fairy shrimp is a small aquatic crustacean that ranges in size from ½-inch to one inch long. Fairy shrimp feed on algae, bacteria, protozoa, rotifers and bits of detritus. The vernal

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pool fairy shrimp occupies a variety of different vernal pool habitats, from small, clear, sandstone rock pools to large, turbid, alkaline, grassland valley floor pools. It tends to occur in smaller pools (less than 0.05-acre) that are most commonly found in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands. It has also been collected in large vernal pools (e.g., 25 acres). Vernal pool fairy shrimp have been collected from early December to early May (USFWS 1994).

The female drops eggs to the pool bottom or the eggs remain in the brood sac until the mother dies and sinks. When the pool dries out, so do the eggs (known as cysts when dry). They remain in the dry pool bed until rains and other environmental stimuli hatch them. Cysts can withstand heat, cold and prolonged desiccation. When the pools refill, some, but not all, of the cysts may hatch. The cyst bank in the soil may contain cysts from several years of breeding. Average time to maturity is only forty-one days. In warmer pools, it can be as little as eighteen (Eriksen and Belk 1999).

The vernal pool fairy shrimp is widespread but not abundant. Known populations extend from Shasta County through most of the length of the Central Valley to Tulare County. Along the central coast, they range from northern Solano County to Pinnacles National Monument in San Benito County. Four additional, disjunct populations exist in Southern California. The ephemeral wetlands that support this network of populations are remnants of what was formerly a pristine vernal pool ecosystem, which has been converted to primarily agricultural and urban uses.

The project site does not provide potentially suitable habitat for the vernal pool fairy shrimp. Furthermore, M&A conducted USFWS-approved wet and dry season surveys for vernal pool fairy shrimp on the adjacent Giovannoni property with negative findings. As such, M&A concludes that the project would not result in impacts to the vernal pool fairy shrimp or any other federally-listed fairy shrimp species. **Consequently, there is no expectation that vernal pool fairy shrimp would be impacted by the proposed project.** No mitigation is warranted for this species.

6.3.2 CALIFORNIA RED-LEGGED FROG

The California red-legged frog was federally-listed as threatened on May 23, 1996 (Federal Register 61: 25813-25833) and as such is protected pursuant to the FESA. On March 16, 2010 the USFWS issued the final designation for California red-legged frog Critical Habitat (USFWS 2010). The 2010 Critical Habitat maps (Federal Register dated March 17, 2010 (Volume 75, Number 51:12815-12864) show that the project site is located approximately 1.3 miles west of Critical Habitat Unit SOL-3 (Figure 6). The California red-legged frog is also a state “species of special concern.”

California “species of special concern” are species in which their California breeding populations are seriously declining and extirpation from all or a portion of their range is possible. This title affords no legally mandated protection for this species; however, pursuant to CEQA (14 CCR §15380), any project related impacts to this species would be regarded as significant.

California red-legged frogs are typically found in slow-flowing portions of perennial streams, and in intermittent streams, and hillside seeps that maintain pool environments or saturated soils

throughout the summer months. Riparian vegetation such as willows (*Salix* sp.) and emergent vegetation such as cattails are preferred red-legged frog habitats, though not necessary for this species to be present. This frog is also found in human-made ponds. Populations of the California red-legged frog will be reduced in size or eliminated from ponds supporting non-native species such as bullfrogs (*Lithobates catesbeiana*), Centrarchid fish species (such as sunfish, blue gill, or largemouth bass), and signal and red swamp crayfish (*Pacifastacus leniusculus* and *Procambarus clarkii*, respectively), all known California red-legged frog predators.

The closest known record for the California red-legged frog is a 2008 sighting approximately 0.5-mile east of the project site in North Slough (CNDDDB Occurrence No. 1062). This location is on the east side of Highway 29 and is not hydrologically connected to the project site. There are no California red-legged frog records on the west side of Highway 29. There is no perennial water or long-term inundation that occurs on or adjacent to the project site. The seasonal wetlands onsite are too shallow and seasonally inundated to provide habitat for this large native frog species which requires water most months of the year. Thus, it is improbable that the California red-legged frog would occur on the project site. **Pursuant to CEQA, the proposed project would have no significant impacts on California red-legged frogs.** No mitigation is warranted for this species.

6.3.3 NORTHERN HARRIER

The northern harrier is a state species of special concern. This raptor is also protected under California Fish and Game Code §3503.5 that protects nesting raptors and their eggs/young. The northern harrier is also protected from direct take under the Migratory Bird Treaty Act (50 CFR 10.13). Northern harriers build grass-lined nests on the ground within dense, low-lying vegetation in a variety of habitats, though they are typically found nesting in grassland or marsh habitats. They usually nest on level to near level ground. This species is particularly vulnerable to ground predators such as coyotes (*Canis latrans*), red fox (*Vulpes vulpes*), and various snake species. Ground nesting birds in general are also subject to disturbance by agricultural practices. Northern harriers likely forage over the project site; however, it would not likely nest in the narrow strips of land along Green Island Road. **Pursuant to CEQA, the proposed project would have no significant impacts on northern harriers.** No mitigation is warranted for this species.

6.3.4 SWAINSON'S HAWK

The Swainson's hawk is a state-listed threatened species afforded protection pursuant to the CESA. While it has no special federal status, it is protected from direct take under the Federal Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-711). Swainson's hawks, their nests, eggs, and young are also protected under California Fish and Game Code (§3503, §3503.5, §3513, and §3800). Finally, pursuant to CEQA, this hawk would be considered "rare" and impacts to its nest sites would be regarded as significant.

The Swainson's hawk is generally a summer visitor to California. In the fall months, most Swainson's hawks migrate to South America before returning to the United States to breed once again in the late spring. There is a small population of Swainson's hawks that remain resident in California year-round. The nesting population of Swainson's hawks in California was reduced considerably over historical nesting populations by the time it was afforded protections pursuant

to the CESA in 1984. Since that time, the nesting population of Swainson's hawk has significantly recovered in California, as have other raptor species that were previously protected both as state and federally-listed species. Both the peregrine falcon (*Falco peregrinus* ssp. *anatum*) and the bald eagle (*Haliaeetus leucocephalus*) were similarly listed species under both the CESA and FESA but have both been delisted owing to population recovery. The Swainson's hawk nesting population also likely has greatly recovered; however, owing to the absence of a thorough population census in California since the species was listed by the CDFW, it remains protected pursuant to the CESA.

The Swainson's hawk inhabits open to semi-open areas at low to middle elevations in valleys, dry meadows, foothills, and level uplands (Kochert 1986). It nests almost exclusively in trees and will nest in almost any tree species that is at least 10 feet tall (Schmutz et. al. 1984). Nests are constructed in isolated trees that are dead or alive along drainages and in wetlands, or in windbreaks in fields and around farmsteads (Palmer 1988). Swainson's hawks occasionally nest in shrubs, on telephone poles, and on the ground. In the Central Valley of California, the majority of Swainson's hawk nests and territories are associated with riparian systems and nests are commonly found in cottonwoods and oaks (Schlorff et. al. 1984). They have also been documented nesting in eucalyptus (*Eucalyptus* spp.), black walnut (*Juglans hindsii*), black locust (*Robinia pseudoacacia*), almond (*Prunus dulcis*), Osage orange (*Maclura pomifera*), Arizona cypress (*Cupressus arizonica*), and pine (*Pinus* spp.) (CNDDDB records).

Foraging habitats include alfalfa fields, fallow fields, beet, tomato, and other low-growing row or field crops, dry-land and irrigated pasture, and rice land when not flooded (CDFG 1994). The Swainson's hawk generally forages in open habitats with short vegetation containing small mammals, reptiles, birds, and insects. Its primary prey in the Central Valley is California meadow vole (*Microtus californicus*). Agricultural areas are often preferred over more natural grassland habitats due to larger prey populations. In addition, agricultural practices (planting, maintenance, harvesting, disking) allow for access to prey, and very likely increases foraging success of Swainson's hawks when farm equipment flushes prey during harvesting (observed many times by G. Monk). During the nesting season, Swainson's hawks usually forage within two miles of their nests. Swainson's hawk does not require habitats that contain many perches because it most often searches for prey aerially; therefore, it can occupy habitats with few or no perches except the nest tree (James 1992).

The closest known Swainson's hawk record to the project site is approximately 2.4 miles north (CNDDDB Occurrence No. 1717). There is no nesting habitat within the linear project site; however, eucalyptus trees that are located approximately 150 feet north of the project site provide potential nesting habitat. Using CDFW's Swainson's hawk survey guidelines (CDFG 2000), M&A biologist, Mr. Jesse Reeb, conducted a formal nesting survey for Swainson's hawks in all potential habitats within one mile of the project site. No Swainson's hawks or evidence of any raptor nesting was observed within a zone of influence of the project site during the Swainson's hawk nesting surveys conducted in 2016 and 2017. **However, because the Swainson's hawk is a mobile species and could nest within a zone of influence of the proposed project, preconstruction surveys are necessary to ensure that the project will not impact this hawk.** See the Impacts and Mitigations section for details.

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7. REGULATORY FRAMEWORK FOR NATIVE WILDLIFE, FISH, AND PLANTS

This section provides a discussion of those laws and regulations that are in place to protect native wildlife, fish, and plants. Under each law we discuss its relevance to the proposed project.

7.1 Federal Endangered Species Act

The FESA forms the basis for the federal protection of threatened or endangered plants, insects, fish and wildlife. FESA contains four main elements, they are as follows:

Section 4 (16 USCA §1533): Species listing, Critical Habitat Designation, and Recovery Planning: outlines the procedure for listing endangered plants and wildlife.

Section 7 (§1536): Federal Consultation Requirement: imposes limits on the actions of federal agencies that might impact listed species.

Section 9 (§1538): Prohibition on Take: prohibits the "taking" of a listed species by anyone, including private individuals, and State and local agencies.

Section 10: Exceptions to the Take Prohibition: non-federal agencies can obtain an incidental take permit through approval of a Habitat Conservation Plan (HCP).

In the case of salt water fish and other marine organisms, the requirements of FESA are enforced by NMFS. The USFWS enforces all other cases. Below, Sections 9, 7, and 10 of FESA are discussed since they are the sections most relevant to the proposed project.

Section 9 of FESA as amended, prohibits the "take" of any fish or wildlife species listed under FESA as endangered. Under Federal regulation, "take" of fish or wildlife species listed as threatened is also prohibited unless otherwise specifically authorized by regulation. "Take," as defined by FESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." "Harm" includes not only the direct taking of a species itself, but the destruction or modification of the species' habitat resulting in the potential injury of the species. As such, "harm" is further defined to mean "an act which actually kills or injures wildlife; such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR 17.3). A December 2001 decision by the 9th Circuit Court of Appeals (Arizona Cattle Growers' Association, Jeff Menges, vs. the U.S. Fish and Wildlife Service and Bureau of Land Management, and the Southwest Center for Biological Diversity) ruled that the USFWS must show that a threatened or endangered species is present on a project site and that it would be taken by the project activities. According to this ruling, the USFWS can no longer require mitigation based on the probability that the species could use the site. Rather they must show that it is "reasonably certain to occur."

Section 9 applies to any person, corporation, federal agency, or any local or State agency. If "take" of a listed species (other than a plant species) is necessary to complete an otherwise lawful activity, this triggers the need to obtain an "incidental take permit" either through a Section 7 Consultation as discussed further below (for federal actions or private actions that are permitted

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or funded by a federal agency such as the Corps), or through Section 10 of FESA which requires preparation of an HCP (for state and local agencies, or individuals, and projects without a federal “nexus”; for example, projects that do not need a Corps permit).

Section 7(a)(2) of the Act requires that each federal agency consult with the USFWS to ensure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of critical habitat for listed species. Critical habitat designations mean: (1) specific areas within a geographic region currently occupied by a listed species, on which are found those physical or biological features that are essential to the conservation of a listed species and that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by a listed species that are determined essential for the conservation of the species.

The Section 7 consultation process only applies to actions taken by federal agencies that are considering authorizing discretionary projects. Section 7 is by and between the NMFS and/or the USFWS and the federal agency contemplating a discretionary approval (that is, the federal “action agency,” for example, the Corps or the Federal Highway Administration). Private parties, cities, counties, etc. (i.e., applicants) may participate in the Section 7 consultation *at the discretion of the federal agencies conducting the Section 7 consultation*. The Section 7 consultation process is triggered by a determination of the “action agency” – that is, the federal agency that is carrying out, funding, or approving a project - that the project “may affect” a listed species or critical habitat. If an action is likely to adversely affect a listed species or designated critical habitat, formal consultation between the nexus agency and the USFWS/NMFS is required. As part of the formal consultation, the USFWS/NMFS may resolve any issues informally with the nexus agency or may prepare a formal Biological Opinion assessing whether the proposed action would be likely to result in “jeopardy” to a listed species or if it could adversely modify designated critical habitat. If the USFWS/NMFS prepares a Biological Opinion, it will contain either a “jeopardy” or “non-jeopardy” decision. If the USFWS/NMFS concludes that a proposed project would result in adverse modification of critical habitat or would jeopardize the continued existence of a federally-listed species (that is, it will issue a jeopardy decision), the nexus federal agency would be most unlikely to authorize its discretionary permit. If the USFWS/NMFS prepares a “non-jeopardy” Biological Opinion, the nexus federal agency may authorize the discretionary permit making all conditions of the Biological Opinion conditions of its discretionary permit. A non-jeopardy Biological Opinion constitutes an “incidental take” permit that allows applicants to “take” federally-listed species while otherwise carrying out legally sanctioned projects.

For non-federal entities, for example private parties, cities, and counties that are proposing a project that might result in incidental take, Section 10 provides the mechanism for obtaining that take authorization. Under Section 10 of FESA, for the applicant to obtain an “incidental take permit,” the applicant is required to submit a “conservation plan” to the USFWS or NMFS that specifies the impacts that are likely to result to federally-listed species, and the measures the applicant will undertake to minimize and mitigate such impacts, and the funding that will be available to implement those steps. Conservation plans under FESA have come to be known as HCPs for short. The terms incidental take permit, Section 10 permit, and Section 10(a)(1)(B)

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permit are used interchangeably by the USFWS. Section 10(a)(2)(B) of FESA provides statutory criteria that must be satisfied before an incidental take permit can be issued.

7.1.1 RESPONSIBLE AGENCY

FESA gives regulatory authority to the USFWS for federally-listed terrestrial species and non-anadromous fish. The NMFS has regulatory authority over federally-listed marine mammals and anadromous fish.

7.1.2 APPLICABILITY TO THE PROPOSED PROJECT

The project site does not have stream channels or drainages to support fish; hence, there would be no impacts to federally-listed fish. There is no expectation that federally-listed plants would occur within the project site boundaries. Furthermore, focused surveys for special-status plants have been conducted on the adjacent Giovannoni project site (which extends onto this project site) and no federally-listed plant species were identified; thus, there would be no project-related impacts to federally-listed plants (or any other special-status plant).

USFWS approved wet and dry season protocol surveys for federally-listed fairy shrimp species have been conducted on the adjacent Giovannoni project site and none were identified. There are no other federally-listed species issues relating to the project site. No impacts to federally listed species are expected from implementation of the proposed project. The project will have no significant effects on FESA-listed species.

7.2 Federal Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (16 U.S.C. §§ 703-712, July 3, 1918, as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986 and 1989) makes it unlawful to “take” (kill, harm, harass, shoot, etc.) any migratory bird listed in Title 50 of the Code of Federal Regulations, Section 10.13, including their nests, eggs, or young. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, wading birds, seabirds, and passerine birds (such as warblers, flycatchers, swallows, etc.).

Executive Order 13186 for conservation of migratory birds (January 11, 2001) requires that any project with federal involvement address impacts of federal actions on migratory birds. The order is designed to assist federal agencies in their efforts to comply with the Migratory Bird Treaty Act and does not constitute any legal authorization to take migratory birds. The order also requires federal agencies to work with the USFWS to develop a memorandum of understanding (MOU). Protocols developed under the MOU must promote the conservation of migratory bird populations through the following means:

- avoid and minimize, to the extent practicable, adverse impacts on migratory bird resources when conducting agency actions;
- restore and enhance habitat of migratory birds, as practicable; and prevent or abate the pollution or detrimental alteration of the environment for the benefit of migratory birds, as practicable.

7.2.1 APPLICABILITY TO THE PROPOSED PROJECT

All raptors (birds of prey) and native song birds and wading birds are protected pursuant to the Migratory Bird Treaty Act. The Swainson's hawk and various other tree nesting raptors (birds of prey) could nest in trees immediately adjacent to the project site and may be disturbed by grading activities or other earth work associated with the road construction project. In accordance with the Migratory Bird Treaty Act, as long as there is no direct mortality of species protected pursuant to this Act caused by development of the site, there should be no constraints to site development. To comply with the Migratory Bird Treaty Act, all active nest sites would have to be avoided while such birds were nesting. Upon completion of nesting, the project could commence as otherwise planned. Please review specific requirements for avoidance of nest sites for potentially occurring species in the Impacts and Mitigation section below.

7.3 California Endangered Species Act

7.3.1 SECTION 2081 OF THE CALIFORNIA ENDANGERED SPECIES ACT

In 1984, the state legislated the CESA (Fish and Game Code §2050). The basic policy of CESA is to conserve and enhance endangered species and their habitats. State agencies will not approve private or public projects under their jurisdiction that would impact threatened or endangered species if reasonable and prudent alternatives are available. Because CESA does not have a provision for "harm" (see discussion of FESA, above), CDFW considerations pursuant to CESA are limited to those actions that would result in the direct take of a listed species.

If CDFW determines that a proposed project could impact a state-listed threatened or endangered species, CDFW will provide recommendations for "reasonable and prudent" project alternatives. The CEQA lead agency can only approve a project if these alternatives are implemented, unless it finds that the project's benefits clearly outweigh the costs, reasonable mitigation measures are adopted, there has been no "irreversible or irretrievable" commitment of resources made in the interim, and the resulting project would not result in the extinction of the species. In addition, if there would be impacts to threatened or endangered species, the lead agency typically requires project applicants to demonstrate that they have acquired "incidental take" permits from CDFW and/or USFWS (if it is a federally-listed species) prior to allowing/permitting impacts to such species.

If proposed projects would result in impacts to a state-listed species, an "incidental take" permit pursuant to §2081 of the Fish and Game Code would be necessary (versus a Federal incidental take permit for federally-listed species). CDFW will issue an incidental take permit only if:

- 1) The authorized take is incidental to an otherwise lawful activity;
- 2) the impacts of the authorized take are minimized and fully mitigated;
- 3) measures required to minimize and fully mitigate the impacts of the authorized take:
 - a) are roughly proportional in extent to the impact of the taking on the species;
 - b) maintain the project applicant's objectives to the greatest extent possible; and,
 - c) capable of successful implementation; and,
- 4) adequate funding is provided to implement the required minimization and mitigation measures and to monitor compliance with, and the effectiveness of, the measures.

If an applicant is preparing an HCP as part of the federal 10(a) permit process, the HCP might be incorporated into the §2081 permit if it meets the substantive criteria of §2081(b). To ensure that an HCP meets the mitigation and monitoring standards in Section 2081(b), an applicant should involve CDFW staff in development of the HCP. If a final Biological Opinion (federal action) has been issued for the project pursuant to Section 7 of the FESA, it might also be incorporated into the §2081 permit if it meets the standards of §2081(b).

No §2081 permit may authorize the take of a species for which the Legislature has imposed strict prohibitions on all forms of “take.” These species are listed in several statutes that identify “fully protected” species and “specified birds.” *See* Fish and Game Code §§ 3505, 3511, 4700, 5050, 5515, and 5517. If a project is planned in an area where a “fully protected” species or a “specified bird” occurs, an applicant must design the project to avoid all take.

Fish and Game Code §2080.1 allows an applicant who has obtained a “non-jeopardy” federal Biological Opinion pursuant to Section 7 of the FESA, or who has received a federal 10(a) permit (federal incidental take permit) pursuant to the FESA, to submit the federal opinion or permit to CDFW for a determination as to whether the federal document is “consistent” with CESA. If after 30 days CDFW determines that the federal incidental take permit is consistent with state law, and that all state-listed species under consideration have been considered in the federal Biological Opinion, then no further permit or consultation is required under CESA for the project. However, if CDFW determines that the federal opinion or permit is not consistent with CESA, or that there are state-listed species that were not considered in the federal Biological Opinion, then the applicant must apply for a state CESA permit under Section 2081(b). Section 2081(b) is of no use if an affected species is state-listed, but not federally-listed.

State and federal incidental take permits are issued on a discretionary basis and are typically only authorized if applicants are able to demonstrate that impacts to the listed species in question are unavoidable and can be mitigated to an extent that the reviewing agency can conclude that the proposed impacts would not jeopardize the continued existence of the listed species under review. Typically, if there would be impacts to a listed species, mitigation that includes habitat avoidance, preservation, and creation of endangered species habitat is necessary to demonstrate that projects would not threaten the continued existence of a species. In addition, management endowment fees are usually collected as part of the agreement for the incidental take permit(s). The endowment is used to manage any lands set-aside to protect listed species, and for biological mitigation monitoring of these lands over (typically) a five-year period.

7.3.2 APPLICABILITY TO THE PROPOSED PROJECT

M&A biologists have conducted numerous surveys on the project site and the adjacent properties. During these multiple surveys, which spanned many months, no state-listed plant species were identified onsite. Thus, no impacts to state-listed plant species protected pursuant to the CESA will occur from the proposed project (Tables 3).

Swainson’s hawk is a state-listed threatened species. The closest known Swainson’s hawk record to the project site is approximately 2.4 miles north (CNDDDB Occurrence No. 1717). There is no nesting habitat within the linear project site; however, eucalyptus trees that are located approximately 150 feet north of the project site provide potential nesting habitat. Using CDFW’s

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Swainson's hawk survey guidelines (CDFG 2000), M&A biologist, Mr. Reeb, conducted a formal nesting survey for Swainson's hawks including all potential habitats within one mile of the project site. No Swainson's hawks or evidence of any raptor nesting was observed within a zone of influence of the project site during the Swainson's hawk nesting surveys conducted in 2016 and 2017. However, because the Swainson's hawk is a mobile species and could nest within a zone of influence of the proposed project, preconstruction surveys are necessary to ensure that the project will not impact this hawk. See the Impacts and Mitigation section for details. There are no other state-listed animal species of concern on this project site.

7.4 California Fish and Game Code § 3503, 3503.5, 3511, and 3513

California Fish and Game Code §3503, 3503.5, 3511, and 3513 prohibit the "take, possession, or destruction of birds, their nests or eggs." Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered "take." Such a take would also violate federal law protecting migratory birds (Migratory Bird Treaty Act).

All raptors (that is, hawks, eagles, owls) their nests, eggs, and young are protected under California Fish and Game Code (§3503.5). Additionally, "fully protected" birds, such as the white-tailed kite (*Elanus leucurus*) and golden eagle (*Aquila chrysaetos*), are protected under California Fish and Game Code (§3511). "Fully protected" birds may not be taken or possessed (that is, kept in captivity) at any time.

7.4.1 APPLICABILITY TO THE PROPOSED PROJECT

Raptors that may nest nearby and that could be impacted by the project include Swainson's hawk, red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and various owl species. Preconstruction surveys would have to be conducted for these species to ensure that there is no direct take of these birds or any other birds (song birds, wading birds) including their eggs, or young. Any active nests that were found during preconstruction surveys would have to be avoided by the project. Suitable non-disturbance buffers would have to be established around nest sites until the nesting cycle is complete. More specifics on the size of buffers are provided below in the Impacts and Mitigation section.

7.5 City of American Canyon General Plan

The City of American Canyon General Plan was adopted on November 3, 1994. It sets forth the following goals, objectives, and policies relevant to biological resources on the project site:

Goal 8: Protect and preserve the significant habitats, plants and wildlife that exist in the City and its Planning Area.

Objective 8.1: Maintain data and information regarding areas of significant biological value within the Planning Area to facilitate resource conservation and the appropriate management of development.

Policy 8.1.1: Acquire and maintain the most current information available regarding the status and location of sensitive biological elements (species and natural communities) within the City and, as appropriate, within the Sphere of Influence and Urban Limit Line.

Policy 8.1.4: Regularly monitor and review developments proposed within the City's Planning Area to assess their impacts on local biological resources and to recommend appropriate mitigation measures that the developer and/or government agency can implement.

Objective 8.2: Balance the preservation of natural habitat areas, including coastal saltmarsh, mixed hardwood forest, oak savannah, and wetland and riparian habitats, with new development in the City.

Policy 8.2.1: Land use applications for developments located within sensitive habitats, including coastal saltmarsh, mixed hardwood forest, oak savannah, and riparian habitats (see Figure 8-1 in the General Plan), or with areas potentially occupied by vernal pools (see Figure 8-2 in the General Plan) shall be accompanied by sufficient technical background data to enable an adequate assessment of the potential for impacts on these resources, and possible measures to reduce any identifiable impacts. In addition to examining Figure 8-1 in the General Plan for information on these sensitive habitats, an on-site assessment shall be conducted by a City approved qualified biologist to determine if sensitive habitats exist on-site. In instances where the potential for significant impacts exists, the applicant must submit a Biological Assessment Report prepared by a qualified professional.

Objective 8.3: Protect natural drainages and riparian corridors within the American Canyon Planning Area.

Policy 8.3.1: Review proposed developments in wetlands and riparian habitats to evaluate their conformance with the following policies and standards:

- a. The development plan shall fully consider the nature of existing biological resources and all reasonable measures shall be taken to avoid significant impacts, including retention of sufficient natural open space and undeveloped buffer zones.
- b. Development shall be designed and sited to preserve watercourses, riparian habitat, vernal pools, and wetlands in their natural condition, unless these actions result in an unfeasible project, in which case habitat shall be replaced in accord with subsection "g" (below).
- c. Where riparian corridors are retained, they shall be protected by an adequate buffer with a minimum 100-foot protection zone from the edge of the tree, shrub, or herb canopy (see policy 8.3.2).
- d. Development shall incorporate habitat linkages (wildlife corridors) to adjacent open spaces, where appropriate and feasible.
- e. Development shall incorporate fences, walls, vegetative cover, or other measures to adequately buffer habitat areas, linkages or corridors from built environment.
- f. Roads and utilities shall be located and designed such that conflicts with biological resources, habitat areas, linkages or corridors are avoided where feasible.
- g. Future development shall utilize appropriate open space or conservation easements in order to protect sensitive species or their habitats.

- h. Future development shall mitigate unavoidable adverse impacts to waters of the United States, wetlands and riparian habitats (pursuant to the Federal Clean Water Act and the California Fish and Game Code, Section 1600 et seq.) by replacement on an in-kind basis. Furthermore, replacement shall be based on a ratio determined by the California Department of Fish and Game and/or Army Corps of Engineers in order to account for the potentially diminished habitat values of replacement habitat. Such replacement should occur on the original development site, whenever possible. Alternatively, replacement can be effected, subject to state and federal regulatory approval, by creation or restoration of replacement habitats elsewhere (offsite but preferably within the City's Planning Area), protected in perpetuity by provision for an appropriate conservation easement or dedication.

Policy 8.3.6: Preserve and integrate the City's natural drainages in new development, as opposed to their channelization or undergrounding, emphasizing opportunities for the development of pedestrian paths and greenbelts along their lengths throughout the City.

Objective 8.4: Protect local vernal pools as well as the habitats of endangered species living within American Canyon's Planning Area.

Policy 8.4.1: Require that development plans incorporate all reasonable mitigation measures to avoid significantly impacting vernal pools for projects located within American Canyon's Planning Area.

Policy 8.4.3: Encourage activities that improve the biological value and integrity of the City's natural resources through vegetation restoration, control of alien plants and animals, and landscape buffering.

7.5.1 APPLICABILITY TO THE PROPOSED PROJECT

Consistent with General Plan Policies 8.1.1 and 8.1.4, this report represents a detailed assessment of the biological resources present on the project site and proposed impacts to these resources associated with development of the site. Proposed mitigation measures are detailed below in the project Impacts and Mitigation Measures section.

Consistent with General Plan Policy 8.2.1, the project site has been evaluated for presence of sensitive biological resources. This report represents the Biological Assessment Report documenting findings from M&A's biological studies, and presents the current habitats and species present on the project site.

Consistent with Policies 8.3.1.a, 8.3.1.h, and 8.4.3, the applicant is proposing to mitigate the project's proposed impacts to seasonal wetlands by creating wetlands and preserving these wetlands offsite at a nearby wetlands preserve. Mitigation would be at a 2:1 replacement to impacts ratio, or two times as much wetland would be created as impacted to compensate for wetland impacts. If offsite mitigation turns out to be infeasible, mitigation at the 2:1 replacement to impacts ratio may be met by purchasing wetland mitigation credits from a Corps and RWQCB

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approved conservation bank. Any imposed conditions from regulatory permits issued that allow impacts to wetlands from the RWQCB or the Corps would also become conditions that must be met by the project to comply with the CEQA. If these regulatory agencies allow lower mitigation ratios through purchase of mitigation credits, the Corps/RWQCB approved ratios shall become the CEQA required mitigation ratios.

8. REGULATORY REQUIREMENTS PERTAINING TO WATERS OF THE UNITED STATES AND STATE

This section presents an overview of the criteria used by the Corps, the RWQCB, the State Water Resources Control Board (SWRCB), and the CDFW to determine those areas within a project area that would be subject to their regulation.

8.1 U.S. Army Corps of Engineers Jurisdiction and General Permitting

8.1.1 SECTION 404 OF THE CLEAN WATER ACT

Congress enacted the Clean Water Act (CWA) “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters” (33 U.S.C. §1251(a)). Pursuant to Section 404 of the CWA (33 U.S.C. 1344), the Corps regulates the disposal of dredged or fill material into “waters of the United States” (33 CFR Parts 328 through 330). This requires project applicants to obtain authorization from the Corps prior to discharging dredged or fill materials into any water of the U.S.

In the Federal Register “waters of the United States” are defined as, “...all interstate waters including interstate wetlands...intrastate lakes, rivers, streams (including intermittent streams), wetlands, [and] natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce...” (33 CFR Section 328.3).

Limits of Corps’ jurisdiction:

(a) Territorial Seas. The limit of jurisdiction in the territorial seas is measured from the baseline in a seaward direction a distance of three nautical miles. (See 33 CFR 329.12)

(b) Tidal Waters of the United States. The landward limits of jurisdiction in tidal waters:

- (1) Extends to the high tide line, or
- (2) When adjacent non-tidal waters of the United States are present, the jurisdiction extends to the limits identified in paragraph (c) of this section.

(c) Non-Tidal Waters of the United States. The limits of jurisdiction in non-tidal waters:

- (1) In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high-water mark (OHWM), or
- (2) When adjacent wetlands are present, the jurisdiction extends beyond the OHWM to the limit of the adjacent wetlands.
- (3) When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.

Section 404 jurisdiction in "other waters" such as lakes, ponds, and streams, extends to the upward limit of the OHWM or the upward extent of any adjacent wetland. The OHWM on a non-tidal water is:

- the "line on shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR Section 328.3[e]).

Wetlands are defined as: "...those areas that are inundated or saturated by surface or ground water at a frequency and duration to support a prevalence of vegetation adapted for life in saturated soil conditions" (33 CFR Section 328.8 [b]). Wetlands usually must possess hydrophytic vegetation (i.e., plants adapted to inundated or saturated conditions), wetland hydrology (e.g., topographic low areas, exposed water tables, stream channels), and hydric soils (i.e., soils that are periodically or permanently saturated, inundated or flooded) to be regulated by the Corps pursuant to Section 404 of the CWA.

8.1.1.1 Clean Water Rule 2015

In 2015, the Environmental Protection Agency (EPA) and the Corps published the Clean Water Rule: Definition of "Waters of the United States"; Final Rule which defines the scope of waters protected under the CWA. This Final Rule was published in light of the statute, science, Supreme Court decisions in *U.S. v. Riverside Bayview Homes*, *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC)*, and *Rapanos v. United States (Rapanos)*, and the agencies' experience and technical expertise. The Clean Water Rule (Rule) reflects consideration of the extensive public comments received on the proposed rule. The Rule was stayed in federal court shortly after it was adopted in 2015. In August 2018, the stay was lifted, and the Rule became effective once again and remains in effect today. The Rule ensures protection for the nation's public health and aquatic resources and increases CWA program predictability and consistency by clarifying the scope of "waters of the United States" protected under the CWA.

The Rule only protects waters that have been historically covered by the CWA. A tributary, or upstream water, must show physical features of flowing water – a bed, bank, and OHWM – to warrant protection. The Rule provides protection for headwaters that have these features and have a significant connection to downstream waters. Adjacent waters are defined by three qualifying circumstances established by the Rule. These can include wetlands, ponds, impoundments, and lakes which can impact the chemical, biological or physical integrity of neighboring waters. All existing exclusions from longstanding agency practices are officially established for the first time. Waters used in normal agricultural, ranching, or silvicultural activities, as well as certain defined ditches, prior converted cropland, and waste treatment systems continue to be excluded from CWA protection.

8.1.1.2 Permitting Corps Jurisdictional Areas

To remain in compliance with Section 404 of the CWA, project proponents and property owners (applicants) are required to be permitted by the Corps prior to discharging or otherwise impacting waters of the U.S. In many cases, the Corps must visit a proposed project area (to conduct a “jurisdictional determination”) to confirm the extent of area falling under their jurisdiction prior to authorizing any permit for that project area. Typically, at the time the jurisdictional determination is conducted, applicants (or their representative) will discuss the appropriate permit application that would be filed with the Corps for permitting the proposed impact(s) to “waters of the United States.”

Pursuant to Section 404, the Corps normally provides two alternatives for permitting impacts to the type of waters of the U.S. found in the project area. The first alternative would be to use Nationwide Permit(s) (NWP). The second alternative is to apply to the Corps for an Individual Permit (33 CFR Section 235.5(2)(b)). The application process for Individual Permits is extensive and includes public interest review procedures (i.e., public notice and receipt of public comments) and must contain an “alternatives analysis” that is prepared pursuant to Section 404(b) of the CWA (33 U.S.C. 1344(b)). The alternatives analysis is also typically reviewed by the federal EPA and thus brings another resource agency into the permitting framework. Both the Corps and EPA take the initial viewpoint that there are practical alternatives to the proposed project if there would be impacts to waters of the U.S., and the proposed permitted action is not a water dependent project (e.g., a pier or a dredging project). Alternative analyses therefore must provide convincing reasons that the proposed permitted impacts are unavoidable. Individual Permits may be available for use in the event that discharges into regulated waters fail to meet conditions of NWP(s).

NWPs are a type of general permit administered by the Corps and issued on a nationwide basis that authorize minor activities that affect Corps regulated waters. Under NWP, if certain conditions are met, the specified activities can take place without the need for an individual or regional permit from the Corps (33 CFR, Section 235.5[c][2]). In order to use NWP(s), a project must meet 27 general nationwide permit conditions, and all specific conditions pertaining to the NWP being used (as presented at 33 CFR Section 330, Appendices A and C). It is also important to note that pursuant to 33 CFR Section 330.4(e), there may be special regional conditions or modifications to NWPs that could have relevance to individual proposed projects. Finally, pursuant to 33 CFR Section 330.6(a), Nationwide permittees may, and in some cases must, request from the Corps confirmation that an activity complies with the terms and conditions of the NWP intended for use (i.e., must receive “verification” from the Corps).

Prior to finalizing design plans, the applicant needs to be aware that the Corps maintains a policy of “no net loss” of wetlands (waters of the U.S.) from project area development. Therefore, it is incumbent upon applicants that propose to impact Corps regulated areas to submit a mitigation plan that demonstrates that impacted regulated areas would be recreated (i.e., impacts would be mitigated). Typically, the Corps requires mitigation to be “in-kind” (i.e., seasonal wetlands would be filled, mitigation would include seasonal wetland mitigation), and at a minimum of a 1:1 replacement ratio (i.e., one acre or fraction thereof recreated for each acre or fraction thereof lost). Often a 2:1 replacement ratio is required if the Permittee is responsible for the mitigation.

In some cases, the Corps allows “out-of-kind” mitigation if the compensation site has greater value than the impacted site. Finally, there are many Corps approved wetland mitigation banks where wetland mitigation credits can be purchased by applicants to meet mitigation compensation requirements. Mitigation banks have defined service areas and the Corps may only allow their use when a project would have minimal impacts to wetlands.

8.1.2 APPLICABILITY TO THE PROPOSED PROJECT

On May 11, 2017, M&A biologists, Ms. Kingma and Mr. Jokerst, visited the project site to examine potential Corps regulated areas. M&A used the Corps’ 1987 Wetlands Delineation Manual (Corps 1987) in conjunction with the Regional Supplement for the Arid West Region (Corps 2008) to conduct this wetland delineation. A jurisdictional determination request and Draft Aquatic Resources Delineation Maps (Sheets 1-5) were prepared in compliance with the Corps’ 2016 Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (Corps 2016).

Based on the draft Aquatic Resources Delineation Maps (Sheets 1-5, Attachment A), most of the potential wetlands and “other waters” within the project site have hydrologic connectivity to the Napa River via the storm drain system in Green Island Road. The Napa River is a traditional navigable water. Consequently, these potential seasonal wetlands and “other waters” identified within the project site would most likely be subject to Corps jurisdiction. In addition, the previously Corps-verified Jurisdictional Seasonal Wetland 1 (SW1) (Corps File No. 2007-400829N) located on the 450 Green Island Road extends into the road widening project site. Similarly, the previously Corps-verified jurisdictional Wetlands 27 and 33 (W27 and W33) (Corps File No. 2016-00309N) on the Giovannoni property also extend into the road widening project site (Sheet 4). The total area of previously verified jurisdictional wetlands within the road widening project site is 3,914 square feet (0.09-acre).

There are also some seasonal wetlands that are regarded as “isolated” since those wetlands do not have hydrologic connectivity to waters of the U.S./State. The potential wetland east/adjacent to 450 Green Island Road is mapped as an “isolated” seasonal wetland because it does not have hydrologic connectivity to any waters of the U.S. (Sheet 4). In addition, on the Giovannoni property, the previously Corps-verified “Isolated” Wetland 10 (IW10) (Corps File No. 2016-00309N) extends into the road widening project site (Sheet 5). The total area of previously verified isolated wetlands within the road widening project site is 962 square feet (0.022-acre). Isolated wetlands do not fall under the Corps’ jurisdiction but would be regulated by the RWQCB (see discussion in Section 8.2).

Sheets 2-5 indicate all areas on the project site that may be regulated as “waters of the U.S.” by the Corps. The total area of new potential wetlands mapped on the site is 0.018-acre and new potential linear wetlands is 0.002-acre. The total acreage of new potential “other waters” within the project site is 0.013-acre. M&A acknowledges that only the Corps can determine the actual acreage of “waters of the U.S.” pursuant to Section 404 of the Clean Water Act. In summary, if the Corps exerts their jurisdiction over all non-isolated water features mapped by M&A on the project site (this includes previously verified and newly delineated features), there is a total of 0.123-acre of waters of the U.S. on the project site.

Green Island Road widening will affect heretofore undeveloped surfaces that support ruderal and in some areas wetland habitats. In contrast Jim Oswalt Way, Mezzetta Court, Commerce Boulevard, and Hanna Drive are fully developed areas. Rehabilitation of these existing heavily used streets will not result in impacts to waters of the U.S. or State. It is assumed that all the features mapped along the northern shoulder of Green Island Road will be impacted by the proposed project since there is no alternative alignment to this road widening project. Thus, a total of 0.123-acre of waters of the U.S. will likely be impacted by the proposed project alongside Green Island Road. Prior to impacting jurisdictional waters of the U.S., the applicant must apply for authorization from the Corps. The proposed project would appear to qualify to use NWP 14 (Linear Transportation Projects) since the total impacts to waters of the U.S. are well below the 0.5-acre threshold and the project appears to meet all other conditions for use of this NWP. In addition, the project will impact 0.055-acre of “isolated” wetlands not subject to Corps jurisdiction (but subject to the RWQCB’s jurisdiction, see below).

The applicant is proposing to mitigate the project’s proposed impacts to waters of the U.S. by creating wetlands and preserving those wetlands at a nearby offsite wetlands preserve. Mitigation would be at a 2:1 replacement to impacts ratio, or two times as much wetland would be created as impacted to compensate for wetland impacts. If offsite mitigation turns out to be infeasible, the wetland mitigation requirement may be met by purchasing wetland mitigation credits from a Corps and RWQCB approved conservation bank. See the Impacts and Mitigations section for details.

8.2 California Regional Water Quality Control Board (RWQCB)

8.2.1 SECTION 401 OF THE CLEAN WATER ACT

The SWRCB and RWQCB regulate activities in “waters of the State” (which includes wetlands) through Section 401 of the CWA. While the Corps administers a permitting program that authorizes impacts to waters of the U.S., including wetlands and other waters, any Corps permit authorized for a proposed project would be inoperative unless it is a NWP that has been certified for use in California by the SWRCB, or if the RWQCB has issued a project specific certification of water quality. Certification of NWPs requires a finding by the SWRCB that the activities permitted by the NWP will not violate water quality standards individually or cumulatively over the term of the permit (the term is typically for five years). Certification must be consistent with the requirements of the federal CWA, the CEQA, the CESA, and the SWRCB’s mandate to protect beneficial uses of waters of the State. Any denied (i.e., not certified) NWPs, and all Individual Corps permits, would require a project specific RWQCB certification of water quality. Where a project will result in dredge or fill of non-federal waters of the State, the RWQCB will authorize those fills through waste discharge requirements issued under the Porter Cologne Water Quality Control Act.

On April 2, 2019, the SWRCB adopted a state-level definition of “wetlands,” which definition is broader than the federal definition in that unvegetated areas may be considered a wetland water of the State. As a part of the same policy, the Water Board adopted permit procedures and standards governing the discharge of dredged or fill material into wetlands and other waters of the State. The policy includes, among other things, requirements for analyses to identify the least environmentally damaging practicable alternative (LEDPA) and compensatory mitigation standards including a

minimum 1:1 ratio for wetlands and streams, and full functional replacement of all waters on top of this minimum where applicable. The policy, which will govern both Section 401 certifications and WDRs, is scheduled to become effective nine months following the completion of review by the California Office of Administrative Law.

8.2.2 APPLICABILITY TO THE PROPOSED PROJECT

Any Section 404 permit authorized by the Corps for the project would be inoperative without also obtaining authorization from the RWQCB pursuant to Section 401 of the Clean Water Act (i.e., without obtaining a Clean Water Act Certification of Water Quality). Since the RWQCB does not have a formal method for technically defining what constitutes waters of the State, M&A expects that the RWQCB should remain consistent with the Corps' determination.

Any impacts to waters of the State would have to be mitigated to the satisfaction of the RWQCB prior to the time this resource agency would issue a permit for impacts to such features. The RWQCB requirements for issuance of a "401 Permit" typically parallel the Corps requirements for permitting impacts to Corps regulated areas pursuant to Section 404 of the Clean Water Act. Please refer to the Corps Applicability Section above for likely mitigation requirements for impacts to RWQCB regulated wetlands. Also, please refer to the applicability section of the Porter-Cologne Water Quality Control Act below for other applicable actions that may be imposed on the project by the RWQCB prior to the time any certification of water quality is authorized for the project. Please note that any isolated wetlands or other waters that are determined to be on the project site that are not regulated by the Corps pursuant to the SWANCC decision, would still be regulated by the RWQCB pursuant to the Porter-Cologne Water Quality Control Act and impacts to such features would also be required to be mitigated per RWQCB policies (see below). Impacts to waters of the State must be mitigated at a minimum 1:1 ratio or as otherwise determined by the RWQCB at the time a permit issued for the proposed project.

8.2.3 PORTER-COLOGNE WATER QUALITY CONTROL ACT

The uncontrolled discharge of pollutants into impaired water bodies is considered particularly detrimental. According to the EPA, sediment is one of the most widespread pollutants contaminating U.S. rivers and streams. Sediment runoff from construction sites is 10 to 20 times greater than from agricultural lands and 1,000 to 2,000 times greater than from forest lands (EPA 2005). Consequently, the discharge of storm water from large construction sites is regulated by the RWQCB under the federal CWA and California's Porter-Cologne Water Quality Control Act.

The Porter-Cologne Water Quality Control Act, Water Code § 13260, requires that "any person discharging waste, or proposing to discharge waste, that could affect the waters of the State to file a report of discharge" with the RWQCB through an application for waste discharge (Water Code Section 13260(a)(1)). The term "waters of the State" is defined as any surface water or groundwater, including saline waters, within the boundaries of the State (Water Code § 13050(e)). It should be noted that pursuant to the Porter-Cologne Water Quality Control Act, the RWQCB also regulates "isolated wetlands," or those wetlands considered to be outside of the Corps' jurisdiction pursuant to the SWANCC decision (see Corps Section above).

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The RWQCB generally considers filling in waters of the State to constitute “pollution.” Pollution is defined as an alteration of the quality of the waters of the State by waste that unreasonably affects its beneficial uses (Water Code §13050(1)). The RWQCB litmus test for determining if a project should be regulated pursuant to the Porter-Cologne Water Quality Control Act is if the action could result in any “threat” to water quality.

The RWQCB requires complete pre- and post-development Best Management Practices Plan (BMPs) of any portion of the project site that is developed. This means that a water quality treatment plan for the pre- and post-developed project site must be prepared and implemented. Preconstruction requirements must be consistent with the requirements of the National Pollutant Discharge Elimination System (NPDES). That is, a *Storm Water Pollution Prevention Plan* (SWPPP) must be developed prior to the time that a site is graded (see NPDES section below). In addition, a post construction BMPs plan, or a Storm Water Management Plan (SWMP) must be developed and incorporated into any site development plan.

8.2.4 APPLICABILITY TO THE PROPOSED PROJECT

The RWQCB has jurisdiction over both waters of the U.S./State (those waters with hydrologic connectivity to navigable waters- and thus, that are regulated pursuant to the Clean Water Act) and waters of the State (regulated via the CWA and the Porter-Cologne Water Quality Control Act). There is 0.055-acre of “isolated wetlands” not subject to Clean Water Act regulation shown on the wetland delineation maps (Sheets 1-5) alongside Green Island Road. While the Corps does not regulate impacts to isolated waters, the RWQCB has jurisdiction over isolated waters (waters include wetlands) pursuant to the Porter-Cologne Water Quality Control Act. Accordingly, prior authorization from the RWQCB would be required prior to filling waters of the U.S./State (i.e., those waters subject to Clean Water Act jurisdiction) and waters of the State (which include isolated waters that are outside of the Corps’ Clean Water Act jurisdiction). Additionally, since any “threat” to water quality can conceivably be regulated pursuant to the Porter-Cologne Water Quality Control Act, care will be required when constructing the proposed project to be sure that adequate pre-and post-construction BMPs are incorporated into the project implementation plans.

It should also be noted that prior to issuance of any permit from the RWQCB this agency will require submittal of a Notice of Determination from the City of American Canyon indicating that the proposed project has completed a review conducted pursuant to CEQA. The pertinent sections of the CEQA document (typically the biology section) are often submitted to the RWQCB for review prior to the time this agency will issue a permit for a proposed project.

9. STATE WATER RESOURCES CONTROL BOARD (SWRCB)/RWQCB – STORM WATER MANAGEMENT

9.1 Construction General Permit

While federal CWA NPDES regulations allow two permitting options for construction related storm water discharges (individual permits and General Permits), the SWRCB has elected to adopt only one statewide Construction General Permit at this time that will apply to all storm water discharges associated with construction activity, except from those on Tribal Lands, in the

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Lake Tahoe Hydrologic Unit, and those performed by the California Department of Transportation (CalTrans).

The Construction General Permit requires all dischargers where construction activity disturbs greater than one acre of land or those sites less than one acre that are part of a common plan of development or sale that disturbs more than one acre of land surface to:

1. Develop and implement a SWPPP which specifies BMPs that will prevent all construction pollutants from contacting storm water with the intent of keeping all products of erosion from moving off site into receiving waters.
2. Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation. Achieve quantitatively-defined (i.e., numeric) pollutant-specific discharge standards, and conduct much more rigorous monitoring based on the project's projected risk level.
3. Perform inspections of all BMPs.

This Construction General Permit is implemented and enforced by the nine RWQCBs. It is also enforceable through citizens' suits and represents a dramatic shift in the State Water Board's approach to regulating new and redevelopment sites, imposing new affirmative duties and fixed standards on builders and developers.

Types of Construction Activity Covered by the Construction General Permit

- clearing,
- grading,
- disturbances to the ground such as stockpiling, or excavation that results in soil disturbances of at least one acre or more of total land area.

Construction activity that results in soil disturbances to a smaller area would still be subject to this General Permit if the construction activity is part of a larger common plan of development that encompasses greater than one acre of soil disturbance, or if there is significant water quality impairment resulting from the activity.

Construction activity does not include:

- routine maintenance to maintain original line and grade,
- hydraulic capacity, or original purpose of the facility,
- nor does it include emergency construction activities required to protect public health and safety.

The Construction General Permit includes several "post-construction" requirements. These requirements entail that site designs provide no net increase in overall site runoff and match pre-project hydrology by maintaining runoff volume and drainage concentrations. To achieve the required results where impervious surfaces such as roofs and paved surfaces are being increased,

developers must implement non-structural off-setting BMPs, such as landform grading, site design BMPs, and distributed structural BMPs (bioretention cells, rain gardens, and rain cisterns). This “runoff reduction” approach is essentially a State Water Board-imposed regulatory requirement to implement Low Impact Development (“LID”) design features. Volume that cannot be addressed using non-structural BMPs must be captured in structural BMPs that are approved by the RWQCB.

Improving the quality of site runoff is necessary to improve water quality in impaired and threatened streams, rivers, and lakes (that is, water bodies on the EPA’s 303(d) list). The RWQCB prioritizes the water bodies on the 303(d) list according to potential impacts to beneficial uses. Beneficial uses can include a wide range of uses, such as nautical navigation; wildlife habitat; fish spawning and migration; commercial fishing, including shellfish harvesting; recreation, including swimming, surfing, fishing, boating, beachcombing, and more; water supply for domestic consumption or industrial processes; and groundwater recharge, among other uses. The State is required to develop action plans and establish Total Maximum Daily Loads (TMDLs) to improve water quality within these impaired water bodies. The TMDL is the quantity of a pollutant that can be safely assimilated by a water body without violating the applicable water quality standards.

Pursuant to the CWA, the RWQCB regulates construction discharges under the NPDES. The project sponsor of construction or other activities that disturb more than one acre of land must obtain coverage under NPDES Construction General Permit Order 2009-0009-DWQ, administered by the RWQCB¹.

9.1.1 APPLICABILITY TO THE PROPOSED PROJECT

To obtain coverage under the SWRCB administered Construction General Permit, the applicant (typically through its civil engineer) must electronically file a number of permit-related compliance documents (Permit Registration Documents (PRDs), including a Notice of Intent (NOI), a risk assessment, site map, signed certification, SWPPP, Notice of Termination (NOT), NAL exceedance reports, and other site-specific PRDs that may be required. The PRDs must be prepared by a Qualified SWPPP Practitioner (QSP) or Qualified SWPPP Developer (QSD) and filed by a Legally Responsible Person (LRP) on the RWQCB’s Storm Water Multi-Application Report Tracking System (SMARTS). (QSDs are typically civil engineers, professional hydrologists, engineering geologists, or landscape architects.) Once filed, these documents become immediately available to the public for review and comment. At a minimum, the SWPPP shall identify BMPs for implementation during project construction that are in accordance with the applicable guidance and procedures contained in the California Storm Water Quality Association’s *California Stormwater Best Management Practices Handbook* (2015).

¹ CGP Order 2009-0009-DWQ remains in effect, but has been amended by CGP Order 2009-0014-DWQ, effective February 14, 2011, and CGP Order 2009-0016-DWQ, effective July 17, 2012. The first amendment merely provided additional clarification to Order 2009-0009-DWQ, while Order 2009-0016-DWQ eliminated numeric effluent limits on pH and turbidity (except in the case of active treatment systems), in response to a legal challenge to the original order.

9.2 RWQCB Municipal Storm Water Permitting Programs

The federal Clean Water Act (CWA) was amended in 1987 to address urban stormwater runoff pollution of the nation's waters. In 1990, the U.S. Environmental Protection Agency (USEPA) promulgated rules establishing Phase 1 of the National Pollutant Discharge Elimination System (NPDES) stormwater program. The Phase 1 program for Municipal Separate Storm Sewer System (MS4s) requires operators that serve populations of 100,000 or greater to implement a stormwater management program to control polluted discharges from these MS4s. While Phase 1 of the municipal stormwater program has focused on large urban areas, Phase 2 of the municipal stormwater program was promulgated by the USEPA for smaller urban areas including non-traditional Small MS4s, which are governmental facilities such as military bases, public campuses, and prison and hospital complexes.

MS4 permits require the discharger (or dischargers that are permitted by the MS4 permittees) to develop and implement a Storm Water Management Plan/Program (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). MEP is the performance standard specified in Section 402(p) of the Clean Water Act. The management programs specify what best management practices (BMPs) will be used to address certain program areas. The program areas include public education and outreach; illicit discharge detection and elimination; construction and post-construction; and good housekeeping for municipal operations. In general, medium and large municipalities are required to conduct chemical monitoring, though small municipalities are not.

9.2.1 NPDES C.3 REQUIREMENTS

The NPDES C.3 requirements went into effect for any project (public or private) that is "deemed complete" by the City or County (Lead Agency) on or after February 15, 2005, and which will result in the creation or replacement (other than normal maintenance) of at least 10,000 square feet of impervious surface area (roofs, streets, patios, parking lots, etc. Provision C.3 requires the onsite treatment of stormwater prior to its discharge into downstream receiving waters. Note that these requirements are in addition to the existing NPDES requirements for erosion and sedimentation controls during project construction that are typically addressed through acquisition of coverage under the SWRCB administered Construction General Permit. The C.3 requirements are typically required to be implemented by MS4 permittees (and their constituencies).

Projects subject to Provision C3 must include the capture and onsite treatment of all stormwater from the site prior to its discharge, including rainwater falling on building rooftops. Project applicants are required to implement appropriate source control and site design measures and to design and implement stormwater treatment measures in order to reduce the discharge of stormwater pollutants to the *maximum extent practicable*. While the Clean Water Act does not define "maximum extent practicable," the Stormwater Quality Management Plans required as a condition of the municipal NPDES permits identify control measures (known as Best Management Plans, or BMPs) and, where applicable, performance standards, to establish the level of effort required to satisfy the maximum extent practicable criterion. It is ultimately up to the professional judgment of the reviewing municipal staff in the individual jurisdictions to determine whether a project's proposed stormwater controls will satisfy the maximum extent

practicable criterion. However, there are numeric criteria used to ensure that treatment BMPs have been adequately sized to accommodate and treat a site's stormwater. The C3 requirements are quite extensive, and their complete explanation is not provided here. However, the following are minimums that should be understood and adhered to:

- The applicant must provide a detailed and realistic site design *and impervious surface area calculations*. This site design *and calculations* will be used by the Lead Agency (County or City) to determine/*verify* the amount of impervious surface area that is being created or replaced. It should include all proposed buildings, roads, walkways, parking lots, landscape areas, etc., that are being created or redeveloped. If large (greater than 10,000 square feet) lots are being created an effort will need to be made to determine the total impervious surface area that could be created on that parcel. For example, if only a portion of the lot is shown as a “building envelope” then the lead agency will need to consider that a driveway will have to be constructed to access the envelope and that the envelope will then be developed as shown. If the C.3 thresholds are met (creation/redevelopment of 10,000 square feet of impervious surface area), a Stormwater Control Plan (SWCP) (if required by the Lead Agency, or whatever steps for compliance with Provision C3 are required locally) must accompany the application.
- If a SWCP is required by the Lead Agency for the project it must be stamped by a Licensed Civil Engineer, Architect, or Landscape Architect.

9.2.2 APPLICABILITY TO THE PROPOSED PROJECT

The City of American Canyon (the applicant) is an MS-4 permittee under the NPDES (see next section of this report). Accordingly, water quality compliance typically would fall to the City for implementation and compliance. However, as this project will likely require a Clean Water Act Section 401 permit, the RWQCB when considering issuance of the 401 permit, will require submittal of a SWMP that demonstrates that the constructed project will treat and hydromodify storm water falling on impervious surfaces.

9.3 California Department of Fish and Wildlife Protections

9.3.1 SECTION 1602 OF CALIFORNIA FISH AND GAME CODE

Pursuant to Section 1602 of the California Fish and Game Code: “An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, unless all of the following occur:

- (1) CDFW receives written notification regarding the activity in the manner prescribed by CDFW. The notification shall include, but is not limited to, all of the following:
 - (A) A detailed description of the project's location and a map.
 - (B) The name, if any, of the river, stream, or lake affected.
 - (C) A detailed project description, including, but not limited to, construction plans and drawings, if applicable.

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- (D) A copy of any document prepared pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.
- (E) A copy of any other applicable local, state, or federal permit or agreement already issued.
- (F) Any other information required by CDFW” (Fish & Game Code 2014).

Please see Section 1602 of the current California Fish and Game Code for further details.

Please also note that while not stated in the regulations above, CDFW typically considers its jurisdiction to include riparian vegetation (that is, the trees and bushes growing along the stream). Thus, any proposed activity in a natural stream channel that would substantially adversely affect an existing fish and/or wildlife resource, including its riparian vegetation, would require entering into a Streambed Alteration Agreement (SBAA) with CDFW prior to commencing with work in the stream. However, prior to authorizing such permits, CDFW typically reviews an analysis of the expected biological impacts, any proposed mitigation plans that would be implemented to offset biological impacts and engineering and erosion control plans.

9.3.2 APPLICABILITY TO THE PROPOSED PROJECT

There are no drainages, tributaries, or any other areas within the project site that support a bed, bank, or channel and that would be regulated by the CDFW pursuant to Section 1602 of the California Fish and Game Code.

10. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REGULATIONS

A CEQA lead agency must determine if a proposed activity constitutes a project requiring further review pursuant to the CEQA. Pursuant to CEQA, a lead agency would have to determine if there could be significant adverse impacts to the environment from a proposed project. Typically, if within the city limits, the city would be the CEQA lead agency. If a discretionary permit (i.e., conditional use permit) would be required for a project (e.g. an occupancy permit must be issued), the lead agency typically must determine if there could be significant environmental impacts. This is usually accomplished by an “Initial Study.” If there could be significant environmental impacts, the lead agency must determine an appropriate level of environmental review prior to approving and/or otherwise permitting the impacts. In some cases, there are “Categorical Exemptions” that apply to the proposed activity; thus, the activity is exempt from CEQA. The Categorical Exemptions are provided in CEQA. There are also Statutory Exemptions in CEQA that must be investigated for any proposed project. If the project is not exempt from CEQA, the lowest level of review typically reserved for projects with no significant effects on the environment would be for the lead agency to prepare a “Mitigated Negative Declaration” (MND). If a proposed project would have only minimal impacts that can be mitigated to a level of no significance pursuant to the CEQA, then an MND is typically prepared by the lead agency. Finally, those projects that may have significant effects on the environment, or that have impacts that can’t be mitigated to a level considered less than significant pursuant to the CEQA, typically must be reviewed via an EIR. All CEQA review documents are subject to public circulation, and comment periods.

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Section 15380 of CEQA defines “endangered” species as those whose survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors. “Rare” species are defined by CEQA as those who are in such low numbers that they could become endangered if their environment worsens; or the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered “threatened” as that term is used in FESA. The CEQA Guidelines also state that a project will normally have a significant effect on the environment if it will “substantially affect a rare or endangered species of animal or plant or the habitat of the species.” The significance of impacts to a species under CEQA, therefore, must be based on analyzing actual rarity and threat of extinction to that species despite its legal status or lack thereof.

10.1.1 APPLICABILITY TO THE PROPOSED PROJECT

This report has been prepared as a Biology Section that is suitable for incorporation by the CEQA lead agency (the City of American Canyon) into the biology section of a CEQA review document such as an MND or EIR. This document addresses potential impacts to species that would be defined as endangered or rare pursuant to Section 15380 of the CEQA.

11. IMPACTS ANALYSIS

Below the criteria used in assessing impacts to Biological Resources is presented.

11.1 Significance Criteria

A significant impact is determined using CEQA and CEQA Guidelines. Pursuant to CEQA §21068, a significant effect on the environment means a substantial, or potentially substantial, adverse change in the environment. Pursuant to CEQA Guideline §15382, a significant effect on the environment is further defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. Other Federal, State, and local agencies’ considerations and regulations are also used in the evaluation of significance of proposed actions.

Direct and indirect adverse impacts to biological resources are classified as “significant,” “potentially significant,” or “less than significant.” Biological resources are broken down into four categories: vegetation, wildlife, threatened and endangered species, and regulated “waters of the United States” and/or stream channels.

11.1.1 THRESHOLDS OF SIGNIFICANCE

11.1.1.1 Plants, Wildlife, Waters

In accordance with Appendix G (Environmental Checklist Form) of the CEQA Guidelines, implementing the project would have a significant biological impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

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- 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 CDFW or USFWS.
- Have a substantial adverse effect on federally protected “wetlands” as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 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.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state HCP.

11.1.1.2 Waters of the United States and State.

Pursuant to Section 404 of the CWA (33 U.S.C. 1344), the Corps regulates the discharge of dredged or fill material into waters of the U.S., which includes wetlands, as discussed in the bulleted item above, and also includes “other waters” (stream channels, rivers) (33 CFR Parts 328 through 330). Substantial impacts to Corps regulated areas on a project site would be considered a significant adverse impact. Similarly, pursuant to Section 401 of the CWA, and to the Porter-Cologne Water Quality Control Act, the RWQCB regulates impacts to waters of the State. Thus, substantial impacts to RWQCB regulated areas on a project site would also be considered a significant adverse impact.

11.1.1.3 Stream Channels

Pursuant to Section 1602 of the California Fish and Game Code, CDFW regulates activities that divert, obstruct, or alter stream flow, or substantially modify the bed, channel, or bank of a stream which CDFW typically considers including riparian vegetation. Any proposed activity that would result in substantial modifications to a natural stream channel would be considered a significant adverse impact.

12. IMPACT ASSESSMENT AND PROPOSED MITIGATION

The Green Island Road widening will affect heretofore undeveloped surfaces that support ruderal and in some areas wetland habitats. These impacts associated with affected habitats along Green Island Road are addressed in detail below. In contrast, Jim Oswalt Way, Mezzetta Court, Commerce Boulevard, and Hanna Drive are fully developed areas. Rehabilitation of these existing heavily used streets will not result in biological impacts, or in impacts to trees, and thus it is concluded that there will be no biological impacts to sensitive resources from this rehabilitation.

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Below we address potential impacts to sensitive biological resources including trees, waters of the United States and/or State and nesting birds, including the state listed threatened Swainson's hawk. Each significant or potentially significant impact statement is followed with a mitigation prescription that when implemented would reduce impacts to the greatest extent possible. This impact analysis is based on engineering exhibits M&A received from the City of American Canyon.

12.1 Impact BIO-1. Proposed project could have a potentially significant impact on nesting Swainson's hawk (Potentially Significant)

The Swainson's hawk is a state listed threatened species. While the Swainson's hawk has no special federal status, it is protected from direct take under the Federal Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-711). Swainson's hawks, their active nests, eggs, and young are also protected under California Fish and Game Code (§3503, §3503.5, §3513, and §3800). The closest known Swainson's hawk record to the project site is approximately 2.4 miles north (CNDDDB Occurrence No. 1717). There is no nesting habitat within the linear project site, however, the eucalyptus trees that are located approximately 150 feet north of the project site provide potential nesting habitat and preconstruction surveys would be necessary. If Swainson's hawks are found to be nesting near the project site, implementation of the proposed project could be viewed by the CDFW as a project that could impact nesting Swainson's hawks. Nest site disturbance which results in: (1) nest abandonment; (2) loss of young; (3) reduced health and vigor of eggs and/or nestlings (resulting in reduced survival rates); and (4) may ultimately result in the take (killing) of nestling or fledgling Swainson's hawks incidental to otherwise lawful activities, would be considered a "take" by the CDFW. The taking of Swainson's hawks in this manner can be viewed by the CDFW as a violation of Section 2080 of the California Fish and Game Code. This interpretation of take has been judicially affirmed by the landmark appellate court decision pertaining to CESA (Department v. ACID, 8 CA App. 4, 41554) (CDFW 1994).

Typically, the CDFW requires that any impact to a Swainson's hawk nest be permitted through a Fish and Game Section 2081 management authorization. If an active nest is found on or adjacent to the project site within the area of influence of the project site (which is generally considered to be within 1,000 feet of the project site) "to avoid potential violation of Fish and Game Code 2080 (i.e., killing of listed species), project-related disturbance at active Swainson's hawk nesting sites should be reduced or eliminated during critical phases of the nesting cycle (March 1- September 15 annually)" (CDFW 2000). If disturbance would occur, a Fish and Game Section 2081 management authorization would be required. Thus, preconstruction nesting surveys are warranted to ensure that the proposed project will not impact this hawk species. This impact could be mitigated to a less than significant level pursuant to CEQA.

12.2 Mitigation Measure BIO-1: Swainson's Hawk

The CDFW has prepared guidelines for conducting surveys for Swainson's hawk entitled: *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (CDFW 2000). These survey recommendations were developed by the Swainson's Hawk Technical Advisory Committee (TAC) to maximize the potential for locating nesting Swainson's hawks, and thus reduce the potential for nest failures as a result of project activities and/or disturbances. To meet the CDFW's recommendations for mitigation and

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protection of Swainson's hawks, surveys shall be conducted for a half-mile radius around all project activities and shall be completed for at least two survey periods immediately prior to a project's initiation. The guidelines provide specific recommendations regarding the number of surveys based on when the project is scheduled to begin and the time of year the surveys are conducted.

If Swainson's hawks are found to be nesting within 1,000 feet of the project site, the necessity of acquiring a Fish and Game Section 2081 management authorization shall be determined via consultation with the CDFW. Impacts to the nesting Swainson's hawks shall not be allowed. Accordingly, nest protection buffers shall be established that are a minimum of 300 feet from the nest site. If any nest is located within 1,000 feet of the project site, but that is not within the project limits, the 300-foot buffer shall only be established over the portion of the buffer that intersects the project limits. The nest site buffer shall be established in consultation with the CDFW or as required in any Fish and Game Section 2081 management authorization issued to the project by the CDFW. The nest protection buffer shall be maintained until the Swainson's hawk nesting attempt is completed as determined by a qualified raptor biologist. Once the nesting cycle is complete, no further action is warranted for this raptor species unless CDFW has issued a Fish and Game Section 2081 management authorization that requires additional mitigation. Any mitigation required by a 2081 management authorization shall also become a condition of project approval.

Implementation of these mitigation measures would reduce impacts to nesting Swainson's hawks to a level regarded as less than significant pursuant to the CEQA.

12.3 Impact BIO-2. Proposed project could have a potentially significant impact on Tree Nesting Raptors (excluding Swainson's hawk which is discussed separately) (Potentially Significant)

Raptor (birds of prey) nests are protected pursuant to California Fish and Game Code (Sections 3503, 3503.5, 3513) and the Federal Migratory Bird Treaty Act. Suitable nesting habitat for white-tailed kite, red-shouldered hawk, red-tailed hawk and various owl species occurs near the project site. Potential impacts to these species from the proposed project include disturbance to nesting birds, and possibly death of adults and/or young. No nesting raptors have been identified on the project site; however, no specific surveys for nesting raptors have been conducted. Additionally, raptors are highly mobile species and their nest locations may change from year to year. As such, in the absence of survey results, it must be concluded that impacts to nesting raptors from the proposed project would be potentially significant pursuant to CEQA. This impact could be mitigated to a level considered less than significant.

12.4 Mitigation Measure BIO-2: Tree Nesting Raptors

In order to avoid impacts to nesting raptors, nesting surveys should be conducted prior to commencing with construction work if this work would commence between February 1st and August 31st. The raptor nesting surveys should include examination of all trees within 300 feet of the entire project site.

If nesting raptors are identified during the surveys within 300 feet of the project site, a 300-foot radius around the nest tree should be fenced with orange construction fencing. If the nest tree is

located off the project site, then the buffer should be demarcated as per above, where the buffer intersects the project site. *The size of the buffer may be altered if a qualified raptor biologist conducts behavioral observations and determines the nesting raptors are well acclimated to disturbance.* If this occurs, the raptor biologist should prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting raptors. No construction or earth-moving activity should occur within the established buffer until it is determined by a qualified raptor biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by July 15th. This date may be earlier or later, and would have to be determined by a qualified raptor biologist. If a qualified biologist is not hired to watch the nesting raptors then the buffers should be maintained in place through the month of August and work within the buffer can commence September 1st.

Any established nest protection buffer shall not be disturbed until follow-up nesting surveys are conducted and confirm that the nesting cycle is completed. In lieu of confirmation that the nesting cycle is complete, buffers may be removed on September 1. After buffers are removed, no further consideration is warranted for the inactive nest site(s) through February 1st. At this time, nesting surveys shall be completed once again if the proposed project would extend into the next nesting season.

This mitigation measure would reduce impacts to tree nesting raptors (with the exception of the Swainson's hawk) to a level considered less than significant.

12.5 Impact BIO-3. Proposed project could have a potentially significant impact on Other Nesting Birds (Potentially Significant)

Nesting birds could be impacted by the proposed project. Birds and their nests are protected under California Fish and Game Code (Sections 3503, 3503.5, 3513), and the Migratory Bird Treaty Act. The ruderal herbaceous vegetation along the north side of Green Island Road is adjacent to a large wetland complex on the Giovannoni property that supports wading birds, shorebirds and waterfowl. Hence, the ruderal herbaceous vegetation along the north side of the road provides suitable nesting habitat for ground nesting birds. In addition, the trees along the road provide suitable nesting habitat for other common bird species. Birds are highly mobile species and their nest locations may change from year to year. In the absence of preconstruction nesting surveys, *the proposed project may have a potentially significant impact on ground nesting birds.* This impact could be mitigated to a less than significant level.

12.6 Mitigation Measure BIO-3: Other Nesting Birds

A nesting survey shall be conducted 15 days prior to earth moving or the commencement of construction work if this work would occur between February 1 and September 1 (the nesting season). If any birds are found nesting on the project site or within a zone of influence of the project site a 75-foot nest protection buffer shall be established around the nest(s). The buffer shall be staked with orange construction fencing. If special-status birds, such as tricolored blackbird (*Agelaius tricolor*) are found nesting or within a zone of influence of the project site a 300-foot protection buffer shall be established around the nesting site(s). If nesting birds are located within the zone of influence, but that are not within the project limits, the portions of the buffer(s) that intersect the project limits shall clearly be delineated as protected areas via the

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placement of orange construction fencing. No construction or earth-moving activity shall occur within any nest protection buffer until the following conditions are met. The protective fencing shall remain in place until a qualified biologist determines that the nesting birds have completed their nesting cycle(s). If a qualified biologist does not make such a determination, then the buffers shall remain in place until September 1st. After buffers are removed, no further consideration is warranted for the inactive nest site(s) through February 1st. At this time, nesting surveys shall be completed once again if the proposed project would extend into the next nesting season.

Implementation of these mitigation measures would reduce the project's impact to nesting birds to a level regarded as less than significant pursuant to CEQA.

12.7 Impact BIO-4. Proposed project will have a significant impact on Waters of the United States/ State (Significant)

The proposed project has been designed to reduce the total impacts to Corps and RWQCB jurisdictional waters to the maximum extent practicable. For example, the construction staging area has been relocated to the road rights-of-way to avoid impacting, even temporarily, additional natural area that may support waters of the United States/State. Yet under the proposed design there would still be minor impacts to waters of the United States/State. The proposed project will impact approximately 0.123 acre of waters of the U.S. In addition, the project will impact 0.055 acre of "isolated" wetlands subject to RWQCB jurisdiction. This impact or any minor impacts to waters of the U.S./State could be mitigated to a less than significant level pursuant to CEQA.

12.8 Mitigation Measure BIO-4: Waters of the United States/State

The applicant must obtain a Clean Water Act Section 404 permit (i.e., authorization from the Corps to use NWP 14) from the U.S. Army Corps of Engineers in advance of impacts to waters of the United States. The proposed project appears to qualify to use NWP 14 (Linear Transportation Projects) since the total impacts to waters of the U.S. are well below the ½ acre threshold for use of this NWP and the project otherwise appears to meet all other conditions for use of NWP 14. In addition, the applicant must obtain a Clean Water Act Section 401 permit (i.e., "Water Quality Certification") from the RWQCB for impacts to all Clean Water Act regulated waters (i.e., those waters also subject to the Corps' Section 404 jurisdiction). In addition, the RWQCB must permit impacts to isolated waters that are outside of Clean Water Act jurisdiction. The RWQCB regulates impacts to isolated waters pursuant to the Porter- Cologne Water Quality Control Act and authorizes such impacts via issuance of Waste Discharge Requirements (WDRs). Water Quality Certification and issuance of WDRs are typically included in a single permitting loop with the RWQCB. Water Quality Certification and WDRs (as determined necessary by the RWQCB) must be obtained in advance of any impacts to waters of the State.

The Corps and the RWQCB require mitigation compensation as a condition of issuing permits to projects that fill/impact waters of the U.S./State. The applicant is proposing to mitigate impacts to 0.178-acre of jurisdictional waters of the U.S./State via creation and preservation of 0.36-acre of seasonal wetlands within a suitable offsite wetland habitat preserve. Typically, the Corps and

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RWQCB require that impacted seasonal wetlands be replaced at a 2:1 replacement to impacts ratio, but this ratio can be dependent upon Mitigation Ratio Guidance provided by the Corps or RWQCB at the time of permit issuance.

If there are no suitable offsite areas to create and preserve waters of the United State/States, the purchase of mitigation credits from a Corps/RWQCB approved mitigation bank would also fully compensate for the project's impacts to waters of the U.S./State. Any wetland compensation mitigation that is different than prescribed herein that is required by the Corps and/or RWQCB shall also become conditions of project approval enforceable by the City.

Implementation of these mitigation measures would reduce impacts to waters of the U.S./State to a level regarded as less than significant pursuant to CEQA.

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12864



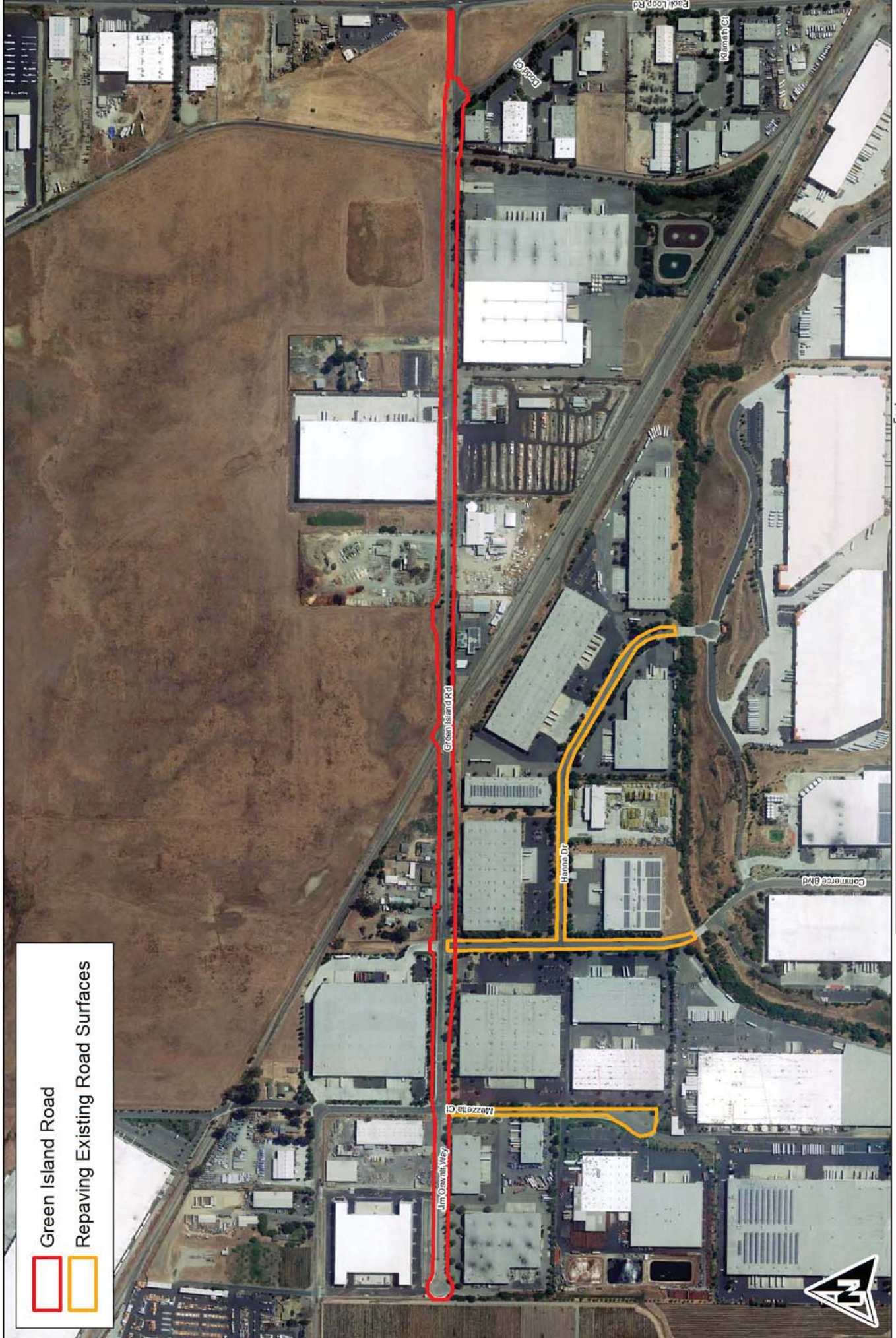
County: Napa
Map Preparation Date: July 1, 2019



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Figure 2. Local Map of the
Green Island Road Reconstruction and Widening Project Site
American Canyon, California

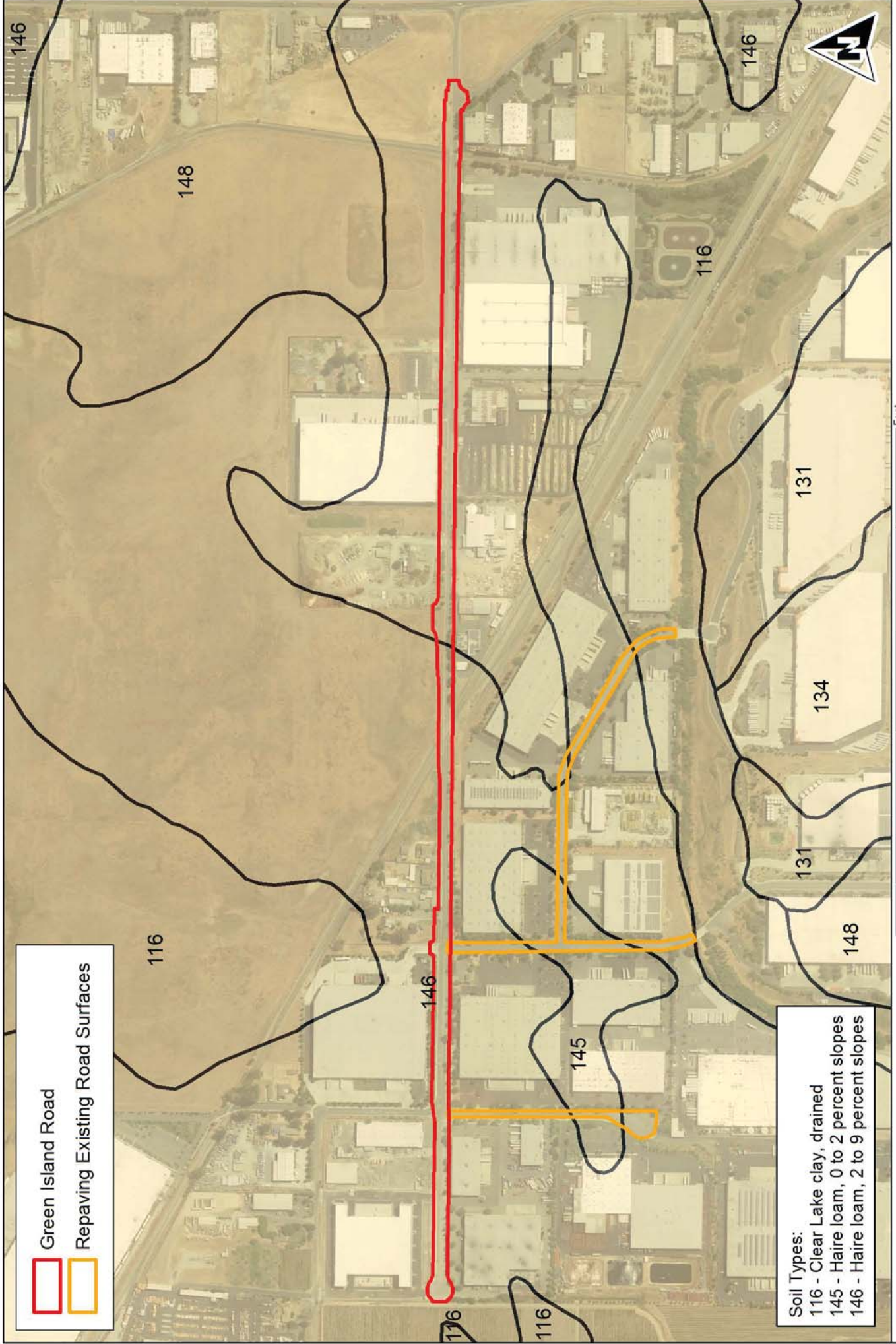
Section: 14, 13; T4N R4W
7.5-Minute Cuttings Wharf South quadrangle
Aerial Photograph Source: ESRI
Map Preparation Date: July 1, 2019



- Green Island Road
- Repaving Existing Road Surfaces

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Figure 3. Aerial Photograph of the
Green Island Road Reconstruction and Widening Project Site
American Canyon, California



- Green Island Road
- Repaving Existing Road Surfaces

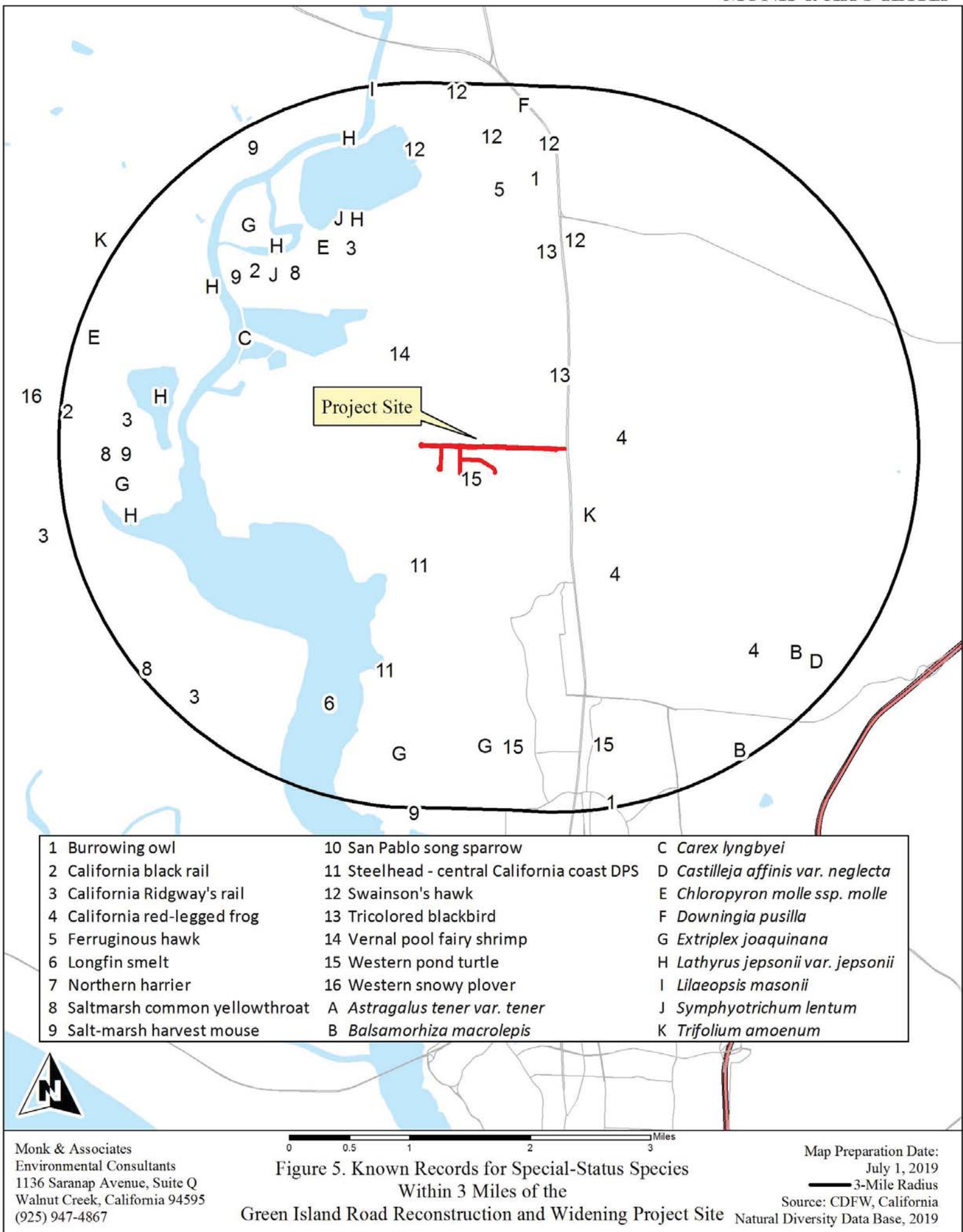
Soil Types:
 116 - Clear Lake clay, drained
 145 - Haire loam, 0 to 2 percent slopes
 146 - Haire loam, 2 to 9 percent slopes

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Figure 4. Soil Types of the
 Green Island Road Reconstruction and Widening Project Site
 American Canyon, California



Aerial Photograph Source: Google Earth
 Soils Data Source:
<http://soildatamart.nrcs.usda.gov>
 Map Preparation Date: July 1, 2019



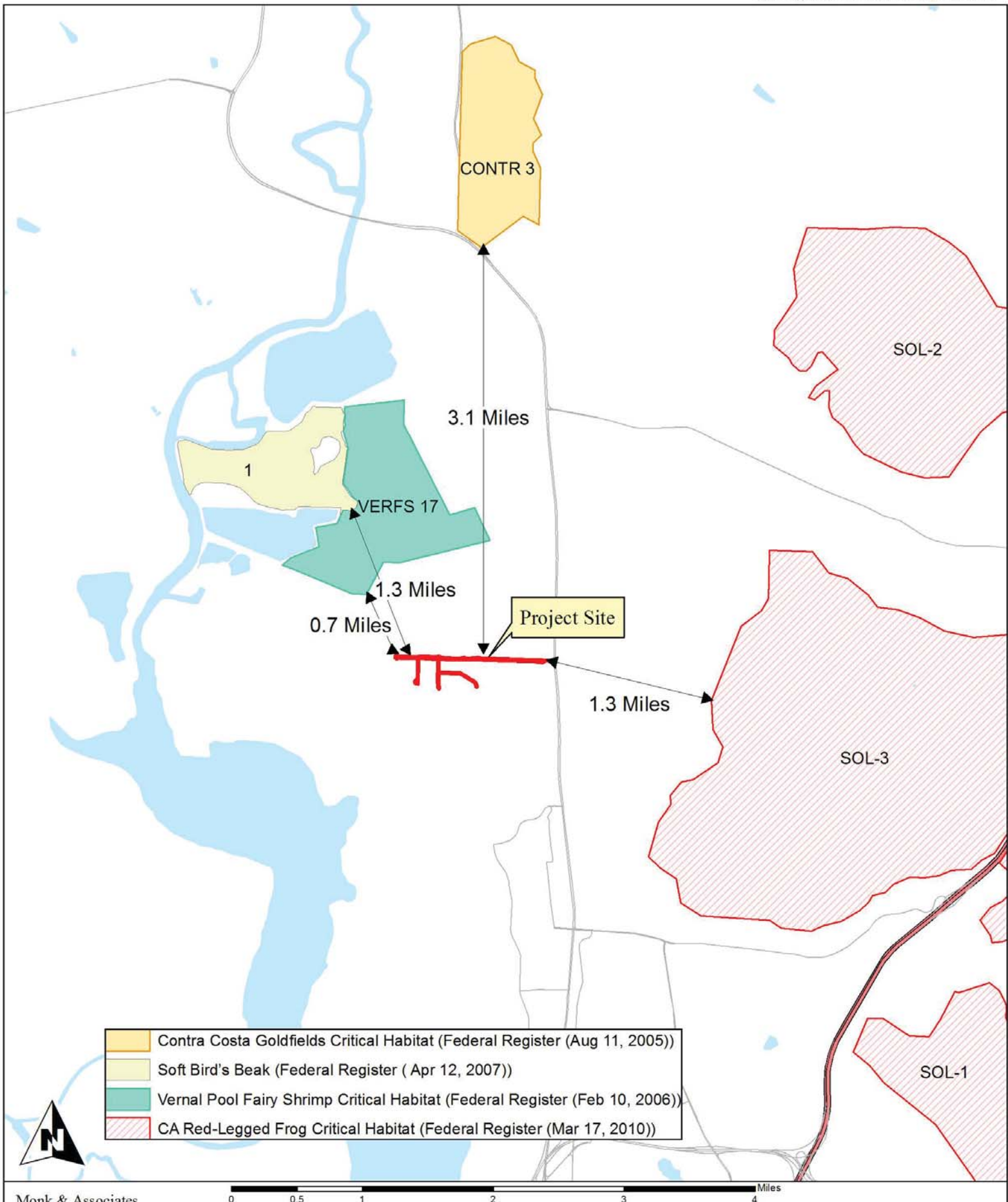


Table 1

Plant Species Observed on the Green Island Road Reconstruction and Widening Project Site

Angiosperms - Dicots

Apiaceae

* <i>Ammi majus</i>	Greater ammi
<i>Eryngium aristulatum</i> var. <i>aristulatum</i>	California coyote-thistle
* <i>Foeniculum vulgare</i>	Sweet fennel

Asteraceae

* <i>Carduus pycnocephalus</i> subsp. <i>pycnocephalus</i>	Italian thistle
* <i>Helminthotheca echioides</i>	Bristly ox-tongue
<i>Hemizonia congesta</i> subsp. <i>luzulifolia</i>	White hayfield tarweed
* <i>Matricaria discoidea</i>	Pineapple-weed

Boraginaceae

<i>Plagiobothrys undulatus</i>	Wavy-stemmed popcornflower
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Brassicaceae

* <i>Brassica nigra</i>	Black mustard
* <i>Raphanus sativus</i>	Wild radish

Chenopodiaceae

* <i>Atriplex prostrata</i>	Hastate orache
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Convolvulaceae

* <i>Convolvulus arvensis</i>	Bindweed
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Fabaceae

* <i>Medicago polymorpha</i>	California burclover
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Geraniaceae

* <i>Geranium dissectum</i>	Cut-leaf geranium
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Lythraceae

* <i>Lythrum hyssopifolia</i>	Hyssop loosestrife
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Malvaceae

* <i>Malva parviflora</i>	Cheeseweed
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Myrsinaceae

* <i>Lysimachia arvensis</i>	Scarlet pimpernel
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Plantaginaceae

* <i>Plantago lanceolata</i>	English plantain
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Polygonaceae

* <i>Rumex conglomeratus</i>	Green dock
* <i>Rumex crispus</i>	Curly dock

Ranunculaceae

* <i>Ranunculus muricatus</i>	Spiny-fruit buttercup
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Rosaceae

* <i>Rubus armeniacus</i>	Himalayan blackberry
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Table 1**Plant Species Observed on the Green Island Road Widening Project Site****Angiosperms -Monocots****Alismataceae**

<i>Alisma triviale</i>	Water plantain
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Cyperaceae

<i>Eleocharis macrostachya</i>	Creeping spikerush
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Poaceae

* <i>Avena barbata</i>	Slender wild oat
* <i>Bromus hordeaceus</i>	Soft chess
* <i>Bromus madritensis subsp. madritensis</i>	Foxtail chess
<i>Distichlis spicata</i>	Saltgrass
* <i>Elymus caput-medusae</i>	Medusahead
<i>Festuca idahoensis</i>	Idaho fescue
* <i>Festuca perennis</i>	Italian ryegrass
* <i>Hordeum marinum subsp. gussoneanum</i>	Mediterranean barley
* <i>Hordeum murinum subsp. leporinum</i>	Hare barley
* <i>Phalaris aquatica</i>	Harding grass
* <i>Polypogon monspeliensis</i>	Annual beard grass

Table 2**Wildlife Species Observed on the Green Island Road Reconstruction and Widening Project Site**

Amphibians	
Sierran treefrog	<i>Pseudacris sierra</i>
Birds	
Turkey vulture	<i>Cathartes aura</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
American kestrel	<i>Falco sparverius</i>
Eurasian collared-dove	<i>Streptopelia decaocto</i>
Mourning dove	<i>Zenaida macroura</i>
Black phoebe	<i>Sayornis nigricans</i>
Western scrub jay	<i>Aphelocoma californica</i>
American crow	<i>Corvus brachyrhynchos</i>
Tree swallow	<i>Tachycineta bicolor</i>
Cliff swallow	<i>Petrochelidon pyrrhonota</i>
Barn swallow	<i>Hirundo rustica</i>
Bushtit	<i>Psaltiriparus minimus</i>
Western bluebird	<i>Sialia mexicana</i>
Northern mockingbird	<i>Mimus polyglottos</i>
European starling	<i>Sturnus vulgaris</i>
California towhee	<i>Pipilo crissalis</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Western meadowlark	<i>Sturnella neglecta</i>
Brewer's blackbird	<i>Euphagus cyanocephalus</i>
House finch	<i>Haemorhous mexicanus</i>
Lesser goldfinch	<i>Spinus psaltria</i>
House sparrow	<i>Passer domesticus</i>
Mammals	
Botta's pocket gopher	<i>Thomomys bottae</i>
Raccoon	<i>Procyon lotor</i>
Feral cat	<i>Felis catus</i>

Table 3

Special-Status Plant Species Known to Occur in the Vicinity of the Green Island Road Reconstruction and Widening Project Site

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
Apiaceae					
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	Fed: - State: CR CNPS: Rank 1B.1	April-October	Marshes and swamps (brackish or freshwater); riparian scrub.	Closest record located 2.6 miles northwest of the project site (Occurrence No. 10)	None. No suitable habitat along road shoulder. Highly disturbed.
Asteraceae					
<i>Balsamorhiza macrolepis</i> Big-scale balsam-root	Fed: - State: - CNPS: Rank 1B.2	March-June	Cismontane woodland; chaparral; valley and foothill grassland; [sometimes serpentine]. 90 - 1555 meters	Closest record located 2.3 miles southeast of the project site (Occurrence No. 7)	None. No suitable habitat along road shoulder. Highly disturbed.
<i>Lasthenia conjugens</i> Contra Costa goldfields	Fed: FE State: - CNPS: Rank 1B.1	March-June	Valley and foothill grassland (mesic); vernal pools.	CNPS one quad: Cuttings Wharf 3812223	None. No suitable habitat along road shoulder. Highly disturbed.
<i>Symphyotrichum lentum</i> Suisun Marsh aster	Fed: - State: - CNPS: Rank 1B.2	August-November	Marshes and swamps (brackish and fresh water)	Closest record located 1.4 miles northwest of the project site (Occurrence No. 128)	None. No suitable habitat along road shoulder. Highly disturbed.
Campanulaceae					
<i>Downingia pusilla</i> Dwarf downingia	Fed: - State: - CNPS: Rank 2.2	March-May	Valley and foothill grassland (mesic); vernal pools.	Closest record located 2.6 miles north of the project site (Occurrence No. 108)	None. No suitable habitat along road shoulder. Highly disturbed.
<i>Legenere limosa</i> Legenere	Fed: - State: - CNPS: Rank 1B.1	April-June	Vernal pools.	CNPS one quad: Cuttings Wharf 3812223	None. No suitable habitat along road shoulder. Highly disturbed.

Table 3
Special-Status Plant Species Known to Occur in the Vicinity of the Green Island Road Widening Project Site

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
Chenopodiaceae					
<i>Extriplex joaquinana</i> San Joaquin spearscale	Fed: - State: - CNPS: Rank 1B.2	April-October	Chenopod scrub; meadows; valley and foothill grassland; [alkaline].	Closest record located 2.2 miles south of the project site (Occurrence No. 58)	None. No suitable habitat along road shoulder. Highly disturbed.
Cyperaceae					
<i>Carex lyngbyei</i> Lyngbye's sedge	Fed: - State: - CNPS: Rank 2	May-August	Marshes or swamps (brackish or freshwater)	Closest record located 1.6 miles northwest of the project site (Occurrence No. 28)	None. No suitable habitat along road shoulder. Highly disturbed.
Fabaceae					
<i>Astragalus tener</i> Alkali milkvetch	Fed: - State: - CNPS: Rank 1B.2	March-June	Playas; mesic grasslands (adobe clay), vernal pools (alkaline).	Closest record located 2.3 miles south of the project site (Occurrence No. 50)	None. No suitable habitat along road shoulder. Highly disturbed.
<i>Lathyrus jepsonii jepsonii</i> Delta tulle pea	Fed: - State: - CNPS: Rank 1B.2	May-September	Marshes and swamps (freshwater and brackish).	Closest record located 1.8 miles west of the project site (Occurrence No. 13)	None. No suitable habitat along road shoulder. Highly disturbed.
<i>Trifolium amoenum</i> Showy Indian clover	Fed: FE State: - CNPS: Rank 1B.1	April-June	Valley and foothill grassland (sometimes serpentine)	Closest record located 0.4 miles southeast of the project site (Occurrence No. 23)	None. No suitable habitat along road shoulder. Highly disturbed.
<i>Trifolium hydrophilum</i> Saline clover	Fed: - State: - CNPS: Rank 1B.2	April-June	Marshes and swamps; valley and foothill grassland (mesic, alkaline); vernal pools. 0-300 m.	CNPS one quad: Cuttings Wharf 3812223	None. No suitable habitat along road shoulder. Highly disturbed.

Table 3
Special-Status Plant Species Known to Occur in the Vicinity of the Green Island Road Widening Project Site

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
Orobanchaceae					
<i>Castilleja affinis neglecta</i> Tiburon paintbrush	Fed: FE State: CT CNPS: Rank 1B.2	April-June	Valley and foothill grassland [serpentine]	Closest record located 2.3 miles southeast of the project site (Occurrence No. 5)	None. No suitable habitat along road shoulder. Highly disturbed.
<i>Chloropyron molle molle</i> Soft salty bird's-beak	Fed: FE State: CR CNPS: Rank 1B.2	July-September	Marshes and swamps (coastal salt).	Closest record located 1.3 miles northwest of the project site (Occurrence No. 3)	None. No suitable habitat along road shoulder. Highly disturbed.

***Status**

Federal:
FE - Federal Endangered
FT - Federal Threatened
FPE - Federal Proposed Endangered
FPT - Federal Proposed Threatened
FC - Federal Candidate

State:
CE - California Endangered
CT - California Threatened
CR - California Rare
CC - California Candidate
CSC - California Species of Special Concern

CNPS:
Rank 1A - Presumed extinct in California
Rank 1B - Plants rare, threatened, or endangered in California and elsewhere
Rank 1B.1 - Seriously endangered in California (over 80% occurrences threatened/
high degree and immediacy of threat)
Rank 1B.2 - Fairly endangered in California (20-80% occurrences threatened)
Rank 1B.3 - Not very endangered in California (<20% of occurrences threatened or no
current threats known)

CNPS Continued:

Rank 2 - Plants rare, threatened, or endangered in California, but more common
elsewhere
Rank 2A - Extirpated in California, common elsewhere
Rank 2B.1 - Seriously endangered in California, but more common elsewhere
Rank 2B.2 - Fairly endangered in California, but more common elsewhere
Rank 2B.3 - Not very endangered in California, but more common elsewhere
Rank 3 - Plants about which we need more information (Review List)
Rank 3.1 - Plants about which we need more information (Review List)
Seriously endangered in California
Rank 3.2 - Plants about which we need more information (Review List)
Fairly endangered in California
Rank 4 - Plants of limited distribution - a watch list

Table 4

Special-Status Animal Species Known to Occur in the Vicinity of the Green Island Road Reconstruction and Widening Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Invertebrates				
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	Fed: FT State: - Other:	Endemic to the grasslands of the Central Valley, central coast mountains, and south coast mountains. Inhabit static rain-filled/vernal pools, small, clear water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression	Closest record located 0.7 miles north of the project site (Occurrence No. 232)	None. Seasonal wetlands within road do not provide suitable habitat.
Fish				
Steelhead - Central California Coast DPS <i>Oncorhynchus mykiss irideus</i>	Fed: FT State: - Other:	From Russian River south to Soquel Creek, and to Pajaro River. Also found in San Francisco & San Pablo Bay Basins. Spawn in clear, cool, well oxygenated streams greater than 18 cm deep.	Closest record located 0.9 miles south of the project site (Occurrence No. 4) in North Slough (tributary to Napa River)	None. No rivers or streams.
Longfin smelt <i>Spirinichus thaleichthys</i>	Fed: -- State: CT Other:	Endemic to the Sacramento-San Joaquin River system. Inhabits open waters in the Delta and Suisun Bay. After spawning, larvae are carried downstream to brackish nursery areas.	Closest record located 1.5 miles west of the project site (Occurrence No. 26) in Napa River	None. No rivers or streams.
Amphibians				
California red-legged frog <i>Rana draytonii</i>	Fed: FT State: CSC Other:	Occurs in lowlands and foothills in deeper pools and streams, usually with emergent wetland vegetation. Requires 11-20 weeks of permanent water for larval development.	Closest record located 0.5 miles east of the project site (Occurrence No. 1062)	None. No suitable breeding/aquatic habitat and no migration habitat along road.

Table 4
Special-Status Animal Species Known to Occur in the Vicinity of the Green Island Road Widening Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Reptiles				
Western pond turtle <i>Actinemys marmorata marmorata</i>	Fed: - State: CSC Other:	Inhabits ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs suitable basking sites and upland habitat for egg laying. Occurs in the Central Valley and Contra Costa County.	Closest record located 0.2 miles south of the project site (Occurrence No. 552)	None. No suitable aquatic habitat.
Birds				
Northern harrier <i>Circus cyaneus</i>	Fed: - State: CSC Other:	Nests on the ground or in shrubby vegetation typically in grasslands, fallow farm lands, near freshwater and salt water marshes.	Closest record located 2.4 miles west of the project site (Occurrence No. 29)	None. Unlikely to nest along road shoulder.
Swainson's hawk <i>Buteo swainsoni</i>	Fed: - State: CT Other:	Migratory and resident raptor that breeds in open areas with scattered trees. Prefers riparian and sparse oak woodland habitats for nesting. Requires nearby grasslands, grain fields, or alfalfa for foraging.	Closest record located 2.4 miles north of the project site (Occurrence No. 1717)	None. Unlikely to nest near project site. Preconstruction survey will be conducted.
Ferruginous hawk <i>Buteo regalis</i>	Fed: -- State: WL Other:	Winter migrant to California where they prefer grasslands, cultivated fields and arid areas with an abundance of prey species, such as pocket gophers, black-tailed hares, and cottontails.	Closest record located 1.2 miles north of the project site (Occurrence No. 28)	None. Does not nest in California.
California black rail <i>Laterallus jamaicensis coturniculus</i>	Fed: -- State: CT Other:	Inhabits salt marshes bordering larger bays. Prefers tidal salt marshes of pickleweed.	Closest record located 1.2 miles northwest of the project site (Occurrence No. 31)	None. No marsh habitat in project area.

Table 4
Special-Status Animal Species Known to Occur in the Vicinity of the Green Island Road Widening Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
California Ridgway's rail <i>Rallus obsoletus obsoletus</i>	Fed: FE State: CE Other:	Inhabits salt water and brackish marshes with tidal sloughs in San Francisco Bay. Prefers dense pickleweed for cover, but forages for invertebrates along mud-bottomed sloughs.	Closest record located 1.2 miles northwest of the project site (Occurrence No. 16)	None. No marsh habitat in project area.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	Fed: FT State: CSC Other:	Prefers sandy beaches, salt pond levees, and shores of large alkali lakes. Requires sandy, gravelly, or friable soil for nesting.	Closest record located 2.8 miles west of the project site (Occurrence No. 121)	None. No nesting habitat in project area.
Western burrowing owl <i>Athene cunicularia hypugaea</i>	Fed: -- State: CSC Other:	Found in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Closest record located 2.2 miles north of the project site (Occurrence No. 935)	None. Unlikely to nest along road shoulder.
Salt marsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	Fed: - State: CSC Other:	Resident of freshwater and salt water marshes in the San Francisco Bay region. Requires thick, continuous cover for foraging and tall grasses, tules, or willows for nesting.	Closest record located 1.2 miles northwest of the project site (Occurrence No. 37)	None. No nesting habitat in project area.
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	Fed: -- State: CSC Other:	More properly known as Samuels Song Sparrow. Resident of salt marshes along the north side of San Francisco and San Pablo Bays. Inhabits tidal sloughs in the California marshes; nests in grindelia bordering slough channels.	Closest record located 2.0 miles northwest of the project site (Occurrence No. 16)	None. No nesting habitat in project area.
Tricolored blackbird <i>Agelaius tricolor</i>	Fed: - State: CC Other: CSC	Colonial nester in dense cattails, tules, brambles or other dense vegetation. Requires open water, dense vegetation, and open grassy areas for foraging.	Closest record located 0.6 miles north of the project site (Occurrence No. 243)	None. No nesting habitat in project area.

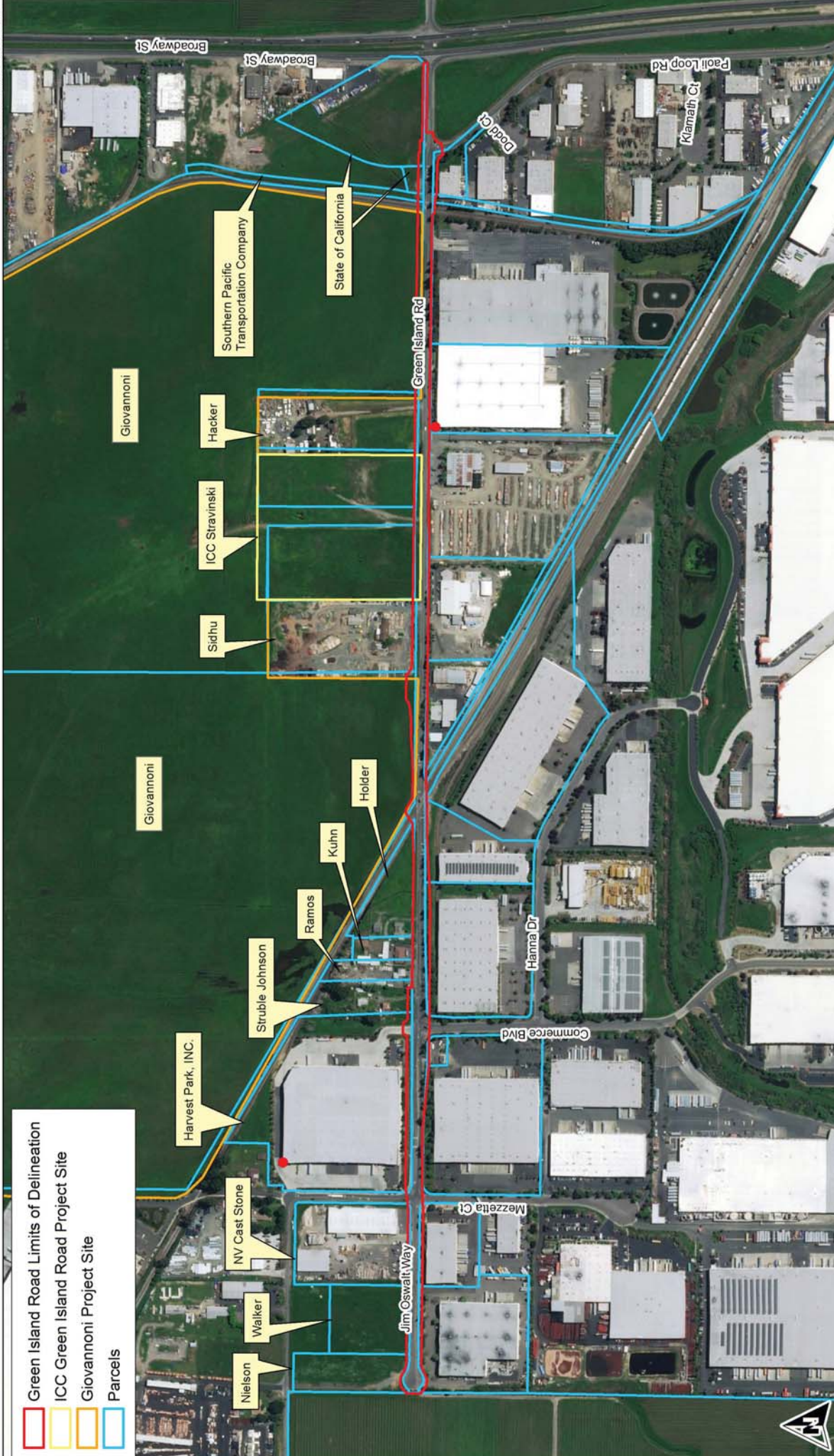
Table 4
Special-Status Animal Species Known to Occur in the Vicinity of the Green Island Road Widening Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Mammals				
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	Fed: FE State: CE Other:	Inhabits saline marshes in the San Francisco Estuary. Prefers pickleweed marshes. Requires higher areas for escaping high water.	Closest record located 1.2 miles northwest of the project site (Occurrence No. 48)	None. No marsh habitat in project area.
*Status				
Federal: FE - Federal Endangered FT - Federal Threatened FPE - Federal Proposed Endangered FPT - Federal Proposed Threatened FC - Federal Candidate FPD - Federally Proposed for delisting				
State: CE - California Endangered CT - California Threatened CR - California Rare CC - California Candidate CSC - California Species of Special Concern FP - Fully Protected WL - Watch List. Not protected pursuant to CEQA				

Table A: Tree Survey Data– Green Island Road Reconstruction and Widening Project Site

Tag Number	Tree Species	# of Stems	DBH (inches)	Health (0-5)
3919	Unknown	4	8.7, 6.5, 4.0, 4.5	3
3920	Pyrus calleryana	11	3.0, (3) 2.0, 1.5, (5) 1.0, 0.5	4
3921	Sequoia sempervirens	1	22.3	4
3922	Sequoia sempervirens	1	21.7	4
3923	Sequoia sempervirens	1	33.6	4
3924	Sequoia sempervirens	1	16.7	4
3925	Sequoia sempervirens	1	27.0	4
3926	Sequoia sempervirens	1	34.3	4
3927	Sequoia sempervirens	1	33.2	4
3928	Sequoia sempervirens	1	17.6	3
3929	Sequoia sempervirens	1	28.0	4
3930	Sequoia sempervirens	1	30.0	4
3931	Sequoia sempervirens	1	7.7	4
3932	Sequoia sempervirens	1	23.2	4
3933	Sequoia sempervirens	1	21.0	4
3934	Sequoia sempervirens	1	21.0	4
3935	Sequoia sempervirens	1	31.0	4
3936	Sequoia sempervirens	1	30.0	4
3937	Sequoia sempervirens	1	24.0	3
3938	Sequoia sempervirens	1	18.0	3
3939	Quercus agrifolia agrifolia	6	1.5, (2) 3.0,6.0,4.0,2.0	4
3940	Quercus agrifolia agrifolia	5	4.0, (2) 3.0, 2.0, 1.0	4
3941	Quercus agrifolia agrifolia	1	15.0	5
3942	Quercus agrifolia agrifolia	2	10.0, 5.0	5
3943	Quercus agrifolia agrifolia	8	6.0,3.0,(4) 4.0, 2.0, 1.0	5
3944	Quercus agrifolia agrifolia	6	4.0, 4.5, 7.0, (3) 2.0	5
3945	Quercus agrifolia agrifolia	4	5.9, 6.0, 4.0, 2.0	4
3946	Quercus agrifolia agrifolia	6	6.8, 6.7, 4.0, (3) 1.0	4
3947	Quercus kelloggii	1	7.9	4
3948	Quercus agrifolia agrifolia	16	(2) 4.0, 3.5, 3.0, (3) 2.0, 1.5, (8) 1.0	4
3949	Quercus agrifolia agrifolia	1	11.5	5
3950	Quercus kelloggii	1	10.5	4
3951	Quercus agrifolia agrifolia	7	3.5,3.0,2.0,1.0,1.0,1.0,2.0	5
3952	Quercus agrifolia agrifolia	3	6.3, 11.0, 10.0	5
3953	Pyrus calleryana	1	10.2	4
3954	Quercus agrifolia agrifolia	1	5.4	5
3955	Populus fremontii fremontii	2	20.1, 5.6	4
3956	Populus fremontii fremontii	1	22.0	4
3957	Quercus chrysolepis	1	11.2	4
3958	Sequoia sempervirens	1	20.4	1

Tag Number	Tree Species	# of Stems	DBH (inches)	Health (0-5)
3959	Sequoia sempervirens	1	17.4	0
3960	Sequoia sempervirens	1	13.5	2
3961	Sequoia sempervirens	1	20.5	2
3962	Sequoia sempervirens	1	17.1	3
3963	Sequoia sempervirens	1	22.4	0
3964	Sequoia sempervirens	1	26.0	0
3965	Sequoia sempervirens	1	24.7	0
3966	Sequoia sempervirens	1	24.4	0
3967	Sequoia sempervirens	1	16.2	0
3968	Sequoia sempervirens	1	21.7	4
3969	Sequoia sempervirens	1	18.5	1
3970	Sequoia sempervirens	1	18.3	2
3971	Prunas Sp.	1	19	0
3972	Sequoia sempervirens	1	18.7	4
3973	Sequoia sempervirens	1	20.1	4
3974	Sequoia sempervirens	1	19.7	4
3975	Befula nigra	1	15.1	0
3976	Sequoia sempervirens	1	20.0	4
3977	Prunas Sp.	1	11.2	0
3978	Sequoia sempervirens	1	20.0	4
3979	Sequoia sempervirens	1	19.5	4
3980	Sequoia sempervirens	1	22.0	4
3981	Unknown	1	9.0	0
3982	Prunas Sp.	1	20.3	0
3983	Phoenix canariensis	1	41.2	4
3984	Sequoia sempervirens	1	21.4	4
3985	Prunas Sp.	1	22.0	0
3986	Prunas Sp.	1	24.0	0
3987	Sequoia sempervirens	1	21.2	4
3988	Sequoia sempervirens	1	16.3	4
3989	Sequoia sempervirens	1	12.3	4
3990	Quercus lobata	1	25.1	4
3991	Sequoia sempervirens	1	11.0	3
3992	Sequoia sempervirens	1	21.0	2
3993	Sequoia sempervirens	1	23.0	1
3994	Sequoia sempervirens	1	29.0	5
3995	Sequoia sempervirens	1	26.0	3
3996	Sequoia sempervirens	1	28.0	5
3997	Sequoia sempervirens	1	23.5	5
3998	Sequoia sempervirens	1	24.5	5
3999	Morus alba	3	11.5, 4.0, 3.5	5
4000	Morus alba	1	8.25	4
XXXX	Fraxinus oxycarpa	1	3.3	3





Sheet 1 - Sheet 5: Aquatic Resources Totals

- Data Points
- Potential Wetlands (771 Sq. Ft., 0.018 Acre)
- Potential "Isolated" Wetland (1,442 Sq. Ft. 0.033)
- Potential Other Waters (509 Lin. Ft., 581 Sq. Ft., 0.013 Acre)
- Potential Linear Wetlands (54 Lin. Ft., 108 Sq. Ft., 0.002 Acre)
- Offsite Isolated Wetland (to be protected) (1,061 Sq. Ft., 0.024 Acre)

Note: that while M&A maps areas it finds to be potential waters of the United States, only the Corps can issue a jurisdictional determination confirming its determination of the location and extent of such waters on the site.

Giovannoni Property
Corps File No. 2016-00309N

Wetland #	Sq. Ft.	Acres	Other Waters #	Length (Ft.)	Sq. Ft.	Acres	Linear Wetlands #	Length (Ft.)	Sq. Ft.	Acres
W 1	247	0.006	OW 1	61	0.001		LW 1	47	94	0.002
W 2	119	0.003	OW 2	5	0.0001		LW 2	7	14	0.0003
W 3	55	0.001	OW 3	41	0.002					
W 4	181	0.004	OW 4	69	0.002		Isolated Wetlands #			
W 5	112	0.003	OW 5	14	0.001		IW 1	741	0.017	
W 6	57	0.001	OW 6	319	0.007		IW 2	198	0.005	
							IW 3	503	0.012	

450 Green Island Road
Corps. File No. 2007-400829N

Sheet 5

Sheet 4

Sheet 3

Sheet 2

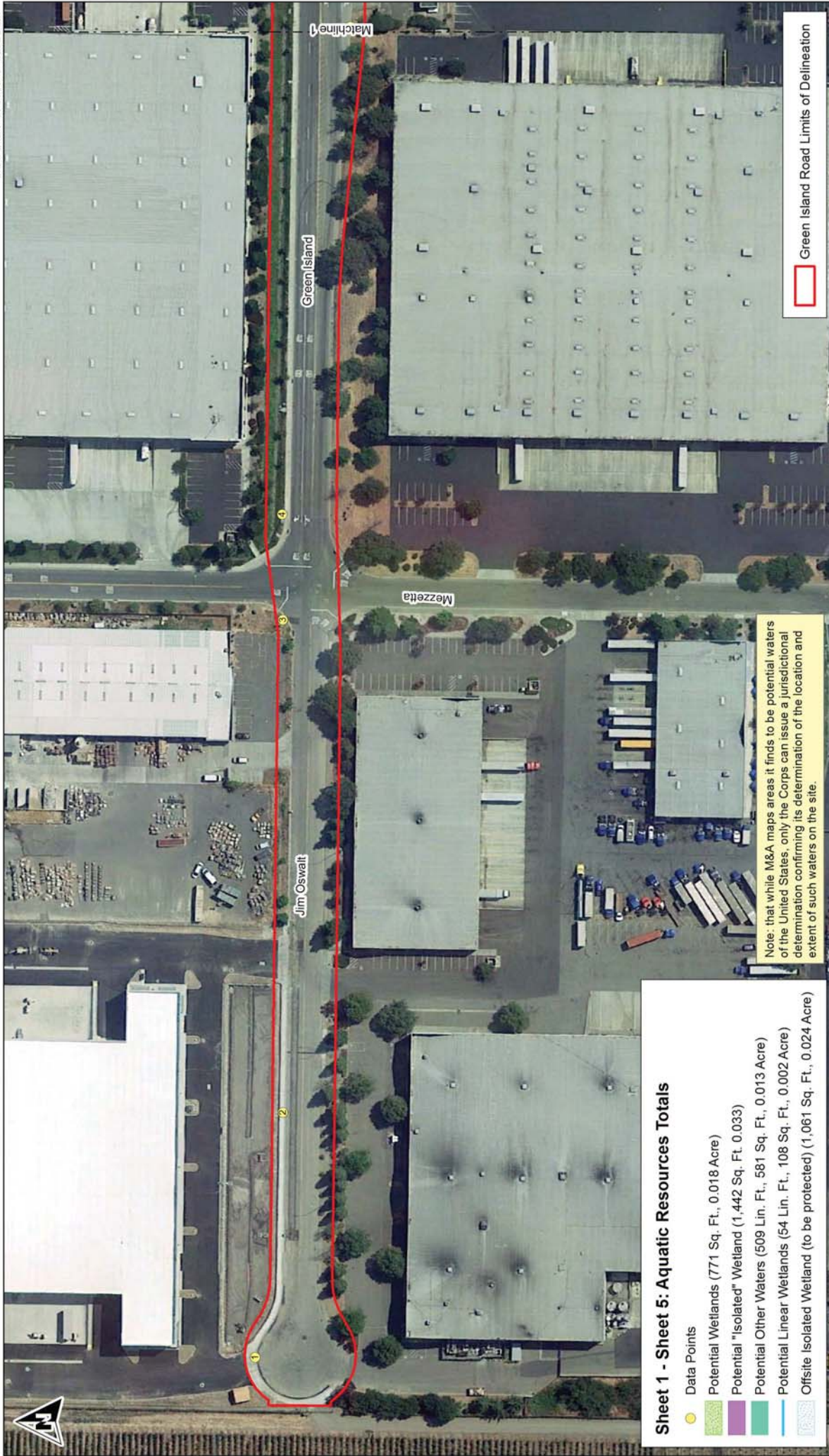
- Green Island Road Limits of Delineation
- ICC Green Island Road Project Site
- Giovannoni Project Site

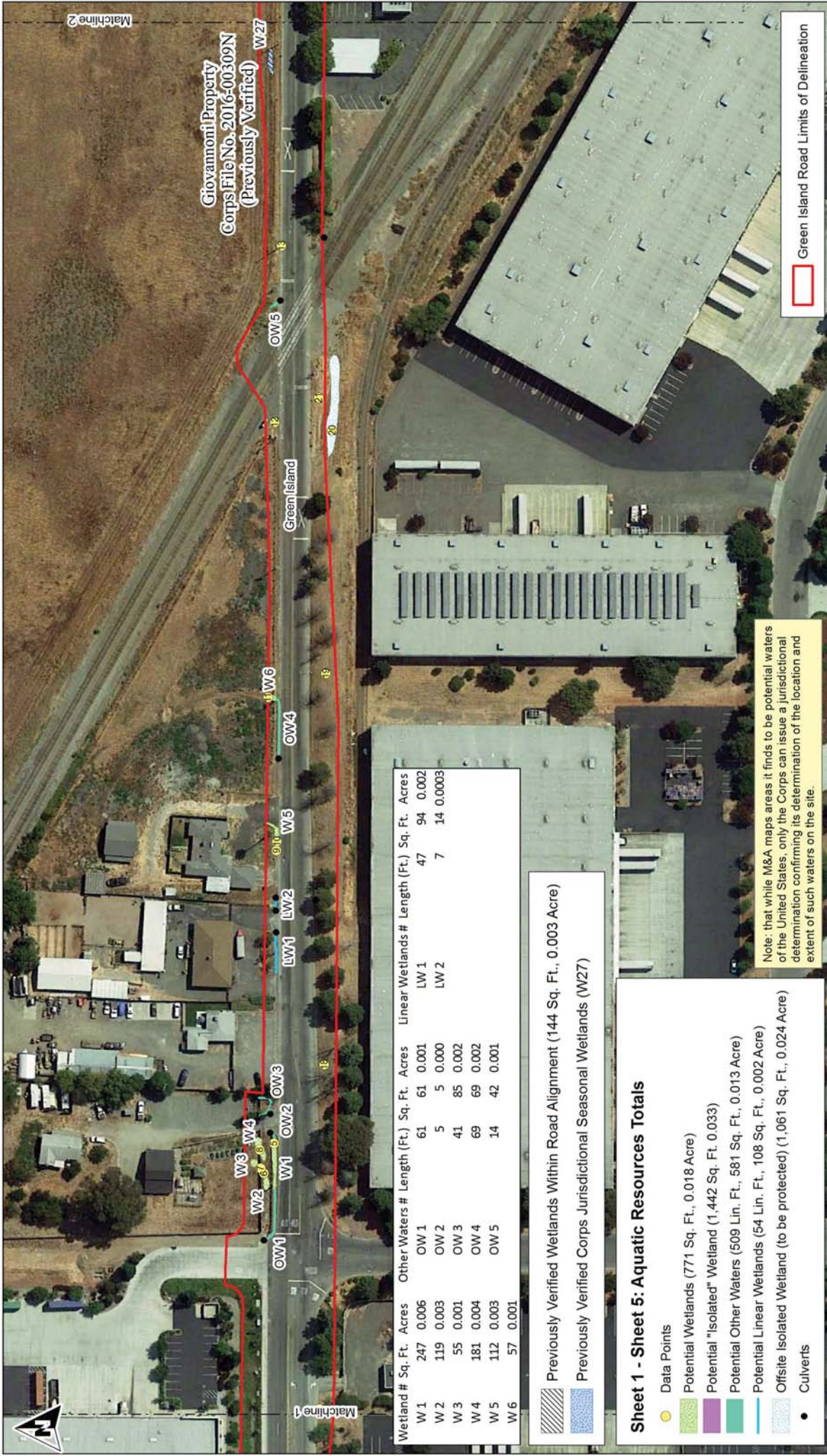


Sheet 1 of 5: Overview: Draft Aquatic Resources Map
for the Green Island Road Reconstruction and Widening Project Site
American Canyon, California

Monk & Associates
Environmental Consultants
1136 Saranap Avenue, Suite Q
Walnut Creek, California 94595
(925) 947-4867

Aerial Photograph Source: Google Earth
Map Preparation Date: July 1, 2019





Giovanoni Property
Corps File No. 2016-00309N
(Previously Verified)

Green Island Road Limits of Delineation

Wetland #	Sq. Ft.	Acres	Other Waters #	Length (Ft.)	Sq. Ft.	Acres	Linear Wetlands #	Length (Ft.)	Sq. Ft.	Acres
W1	247	0.006	OW 1	61	0.001		LW 1	47	94	0.002
W2	119	0.003	OW 2	5	0.000		LW 2	7	14	0.0003
W3	55	0.001	OW 3	41	85	0.002				
W4	181	0.004	OW 4	69	69	0.002				
W5	112	0.003	OW 5	14	42	0.001				
W6	57	0.001								

- Previously Verified Wetlands Within Road Alignment (144 Sq. Ft., 0.003 Acre)
- Previously Verified Corps Jurisdictional Seasonal Wetlands (W27)

Sheet 1 - Sheet 5: Aquatic Resources Totals

- Data Points
- Potential Wetlands (771 Sq. Ft., 0.018 Acre)
- Potential "Isolated" Wetland (1,442 Sq. Ft., 0.033)
- Potential Other Waters (509 Lin. Ft., 581 Sq. Ft., 0.013 Acre)
- Potential Linear Wetlands (54 Lin. Ft., 108 Sq. Ft., 0.002 Acre)
- Offsite Isolated Wetland (to be protected) (1,061 Sq. Ft., 0.024 Acre)
- Culverts

Note: that while M&A maps areas it finds to be potential waters of the United States, only the Corps can issue a jurisdictional determination confirming its determination of the location and extent of such waters on the site.



Scale: 1 inch = 100 feet
Aerial Photograph Source: Google Earth
Map Preparation Date: July 1, 2019

Sheet 4 of 5. Draft Aquatic Resources Map
for the Green Island Road Reconstruction and Widening Project Site
American Canyon, California

Sheet 1 - Sheet 5: Aquatic Resources Totals

- Data Points
- Potential Wetlands (771 Sq. Ft., 0.018 Acre)
- Potential "Isolated" Wetland (1,442 Sq. Ft. 0.033)
- Potential Other Waters (509 Lin. Ft., 581 Sq. Ft., 0.013 Acre)
- Potential Linear Wetlands (54 Lin. Ft., 108 Sq. Ft., 0.002 Acre)
- Offsite Isolated Wetland (to be protected) (1,061 Sq. Ft., 0.024 Acre)

- Previously Verified Wetlands Within Road Alignment (3,770 Sq. Ft., 0.087 Acre)
- Previously Verified Corps Jurisdictional Seasonal Wetlands (W 33, SW 1)
- Previously Verified Corps Jurisdictional Other Waters (39 Lin. Ft., 39 Sq. Ft., 0.0001 Acre) (GLOW1)

Other Waters #	Length (Ft.)	Sq. Ft. Acres	Isolated Wetlands #	Sq. Ft. Acres
OW 6	319	319 0.007	IW1	741 0.017

Note: that while M&A maps areas it finds to be potential waters of the United States, only the Corps can issue a jurisdictional determination confirming its determination of the location and extent of such waters on the site.





Exhibit A. Tree Survey
Green Island Road Reconstruction and Widening Project Site
American Canyon, California



Exhibit B. Tree Survey
Green Island Road Reconstruction and Widening Project Site
American Canyon, California

Tree Status

- ▲ Trees Outside Project Limits (23)
- ▲ Trees Within Project Limits (59)



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Exhibit C. Tree Survey
Green Island Road Reconstruction and Widening Project Site
American Canyon, California

Appendix D Cultural Resource Assessment

CULTURAL RESOURCES ASSESSMENT
Green Island Industrial District Roads Project
City of American Canyon, Napa County, California

Prepared for:

Jason Holley
City of American Canyon
4381 Broadway Street, Suite 201
American Canyon, California 94503

Prepared by:

Kara Brunzell, M.A. and David Brunzell, M.A., RPA
Brunzell Historical
1613 B Street
Napa, California 94559
Project No. HIL1401

National Archaeological Data Base (NADB) Information:

Type of Study: Intensive Survey

Resources Recorded: Lea Ranch Farmstead

Keywords: Historic-Period Buildings, Farmstead, Suscol

USGS Quadrangle: 7.5-minute *Cuttings Wharf, California* (1981)



BRUNZELL
HISTORICAL

May 17, 2016

MANAGEMENT SUMMARY

Brunzell Historical is under contract to the City of American Canyon to complete a Cultural Resources Assessment of the proposed Green Island Industrial District (GRID) Roads Project (project or undertaking) in the City of American Canyon, Napa County, California. The Area of Potential Effect (APE) or project site includes damaged portions of Green Island Road, Jim Oswalt Way, Mazzetta Court, Commerce Boulevard, and Hanna Drive, which will be reconditioned under the current project. A cultural resources records search, additional research, and intensive-level pedestrian field survey were conducted in partial fulfillment of Section 106 of the National Historic Preservation Act (NHPA) and pursuant to the California Environmental Quality Act (CEQA).

The records search revealed that 16 previous cultural resources studies have taken place, and two cultural resources (one historic-period and one prehistoric) have been recorded within one mile of the APE and project site. Of the 16 previous studies, one has assessed the APE/project site, and one location defined as “archaeologically sensitive” (an area designated 2S-22437) has been previously identified within its boundaries. This area of archaeological sensitivity was originally depicted by archaeologists based on surface evidence of prehistoric land use in the form of waste flakes and tools manufactured from obsidian and chert. Subsequent pedestrian surveys and test excavations failed to yield any evidence of an archaeological site at the plotted location. No Department of Park and Recreation 523 site forms were ever completed for this area.

During the field survey, Brunzell Historical field staff identified one historic-period farmstead within the APE. The property lacks historic or architectural significance and does not meet the criteria for listing on the National Register of Historic Places (NRHP), or on the California Register of Historical Resources. Field staff did not identify the previously noted area of archaeological sensitivity within the APE boundaries. Sediments present have been highly disturbed by industrial and municipal developments to depths beyond which cultural resources are likely, and are not likely to retain any archaeological sensitivity. The resources located within the APE are not recommended “historic properties” under Section 106 of the NHPA and are not recommended “historical resources” under CEQA. As a result, Brunzell Historical recommends a finding of no historic properties affected under Section 106 of the NHPA and no impacts to historical resources under CEQA. Although findings of no historic properties affected/no historical resources impacted are recommended based on the results, it is possible that ground disturbances associated with the current undertaking/project could reveal the presence of cultural resources not observed on the surface during the current study. If previously undocumented cultural resources are identified during earthmoving activities, a qualified archaeologist shall be contacted to assess the nature and significance of the find, diverting construction excavation if necessary.

If human remains are encountered during the undertaking, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will

determine/notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of NAHC notification.

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INTRODUCTION

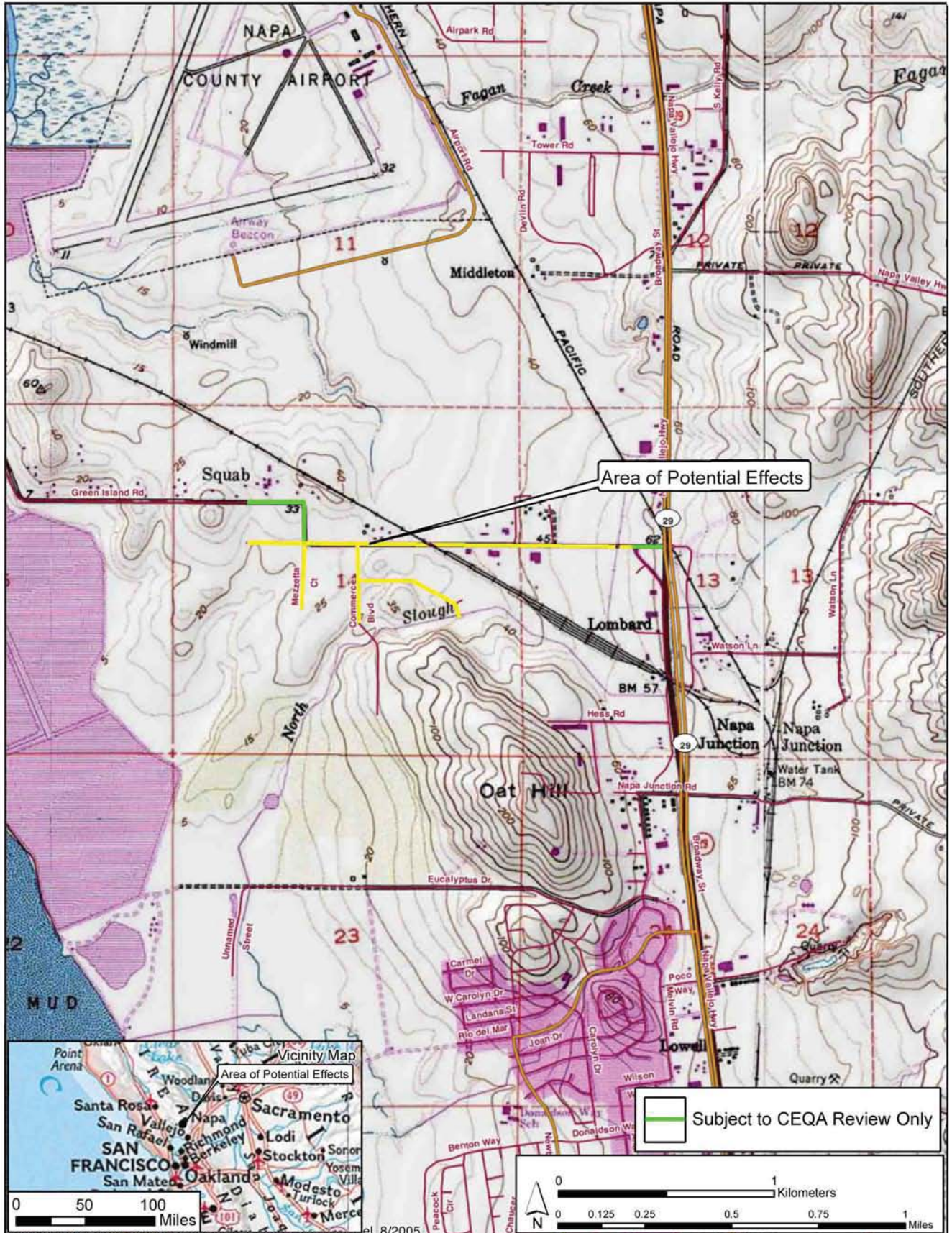
Brunzell Historical is under contract to the City of American Canyon to complete a Cultural Resources Assessment of the proposed Green Island Industrial District (GRID) Roads Project (project or undertaking) in the City of American Canyon, Napa County, California. The current study is being completed pursuant to Section 106 of the National Historic Preservation Act (NHPA) and pursuant to the California Environmental Quality Act (CEQA). The Area of Potential Effect (APE) occupies approximately 1.86 linear miles to the west of State Route 29. The APE includes damaged portions of Green Island Road, Jim Oswalt Way, Mazzetta Court, Commerce Boulevard, and Hanna Drive, which will be reconditioned under the current project. The project site that is subject to CEQA review comprises the APE described above, in addition to northern and western linear portions of Green Island Road (depicted as West Book End Limits) and an eastern linear portion of Green Island Road (depicted as East Book End Limits). The East and West Book End Limits occupy approximately 0.25 miles, and are not subject to review under Section 106 of the NHPA. The cumulative project site subject to CEQA review occupies approximately 2.11 linear miles.

A cultural resources records search, additional research, and intensive-level pedestrian field survey were conducted in partial fulfillment of Section 106 of the NHPA and CEQA. The APE and project site are located in Sections 13 and 14 of Township 4 North, Range 4 West, Mt. Diablo Baseline and Meridian. The APE and project site are both depicted on the United States Geological Survey (USGS) *Cuttings Wharf, California* (1981) 7.5-minute topographic quadrangle (Figure 1). A construction exhibit also depicts the limits of the APE and the project site limits (Appendix C).

NATURAL SETTING

The elevation of the APE ranges from approximately 18 to 55 feet above mean sea level (AMSL). It has been subject to severe disturbances related to grading for existing modern industrial and municipal developments and roads. The eastern half of the APE is covered with late Pleistocene to Holocene fan deposits (Qf), including sand, gravel, silt and clay that are moderately to poorly sorted and moderately to poorly bedded. The western half contains early to middle Pleistocene fan or terrace deposits (Qoa), including moderately to deeply dissected alluvial deposits capped by alfisols, ultisols, or soils containing a silica or calcic hardpan (see Bezore et al. 2002). The current study has not yielded any evidence that local sediments have produced raw materials used in prehistoric tool manufacture within one mile of the APE. Local rainfall ranges from 5 to 15 inches annually (Jaeger and Smith 1971:36-37) and runoff is channelized from east to west via the North Slough (USGS 1981).

In spite of industrial and municipal development and landscaping, some of the native vegetation communities remains locally intact. Signature native and non-native species associated with this habitat are summarized below in Table B (see also Williams et al. 2009:67-68, 109, 111, 375-382). For prehistoric use of many of the local native species see Lightfoot and Parrish 2009.



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Green Island Industrial District Roads Project
Area of Potential Effects

Figure 1

City of American Canyon

From USGS Quad: *Cuttings Wharf, California* (1981)

Table A. Local Vegetation Communities

Habitat	Plant Species	Animal Species
Conifer Forest	Baker Cypress, Bishop Pine, Cuyamaca Cypress, Gowen Cypress, Knobcone Pine, McNab Cypress, Monterey Cypress, Monterey Pine, Torrey Pine, Santa Cruz Cypress, Sargent Cypress, Tecate Cypress, Yaden's Piperia, Manzanita, Salal, Scrub Oak, Monterey Clover, Milkweed	Black-tailed Deer, California Ground Squirrel, Deer Mouse, Meadow Vole, Raccoon, Western Gray Squirrel, Woodrat, Bushtit, Pine Siskin, Pygmy Nuthatch, Red Crossbill, Red-Tailed Hawk, Sage Sparrow, Stellar's Jay.
Coastal Prairie/Annual Grassland	Blue bunchgrass, California Oatgrass, Bent Grass, Needlegrass, Tufted Hairgrass, Blue-eyed Grass, Butter-and-Eggs, California Buttercup, California Poppy, Chckerbloom, Douglas Iris, Goldfield, Indian Paintbrush, Plantago, Santa Cruz Tarplant, Seaside Daisy, Sonoma Spineflower, Coyotebrush, Ferns, Various Introduced Annual and Perennial Grasses.	California Vole, Deer Mouse, Pocket Gopher, Roosevelt Elk, Shrew, Tule Elk, Western Harvest Mouse, American Kestrel, Burrowing Owl, California Quail, Grasshopper Sparrow, Northern Harrier, Peregrine Falcon, Red-Tailed Hawk, White-Crowned Sparrow.
Coastal Oak Woodland	Black Oak, Blue Oak, Buckeye, California Bay, Canyon Live Oak, Coast Live Oak, Engelmann Oak, Interior Live Oak, Oregon Oak, Valley Oak, Coffeeberry, Toyon, Blue Dicks	Mule deer, Western Grey Squirrel, Deer Mouse, Wood Rat, Northern Flicker, Scrub Jay, Ash-throated Flycatcher, Western Kingbird, White-breasted Nuthatch.

CULTURAL SETTING

Prehistory

Similar to most of western North America, human groups commenced regional settlement between 9,000-11,500 years before present. Humans proliferated globally during this era due to gradual environmental warming that marked the close of the last ice age. Changes in settlement patterns and subsistence focus are widely cited as adaptations to the new conditions and have been organized into a number of chronological frameworks for the region (see Moratto 1984; Heizer 1978; and others).

Ethnography

The APE is situated within the traditional boundaries of the Patwin people. The Patwin name was suggested by 19th century academics as a convenient moniker for contiguous groups that bore a linguistic resemblance but could be distinguished from other local Wintuans. Later analyses have indicated that the Patwin were distinct as the Southern Wintuan, compared to the Central (Nomlaki) and Northern (Wintu) Wintuan groups. The Patwin occupied a variety of physiographic regions, which were locally seasonal due to flooding in winter and desiccation in summer. Like many local tribes, the Patwin subsisted by hunting, fishing, and gathering of available edible plants, of which the acorn represented the primary staple. Villages maintained individual rights to particular resource procurement areas, under the administration of a village chief. Four types of permanent structures were typical in a Patwin village and included a dwelling, ceremonial dance house, a sweathouse or

sudatory, and a menstrual hut. They were elliptical or circular semi-subterranean structures (Johnson 1978: 350-360).

History

Spanish/Mexican Period. Non-native occupation of the Napa-Sonoma area commenced in 1823 when Father Jose Altimira led a Mexican expedition into Sonoma County in search of a mission site. After examining several areas, including Napa and Petaluma, Altimira chose the present-day City of Sonoma as the site for the mission, based on climate and abundant natural resources. The Mexican government, in addition to converting Indians to Catholicism, needed an outpost in Sonoma County to deter Russian expansion in the area (Lynch 1997:7). At the height of its prosperity in 1834, the Mexican government secularized the entire mission system. The government orders stated that the Missions themselves should become regular parish churches, while the Ranchos surrounding them were to be split up into subsistence plots for the Indian neophytes (Lynch 1997:10).

During this era Americans and Europeans began trickling into Alta California. Many American men who wished to settle permanently married into families of the Mexican elite in order to become Mexican citizens and legal landowners. Agriculture in the region was focused on cattle-grazing during this period. Meanwhile, more belligerent Americans, such as rogue U.S. Army officer John C. Fremont, were agitating for a speedy American takeover of California (Lynch 1997:25). Sonoma was the site of the Bear Flag Revolt, which played a role in California's transfer from Mexican to American government. In 1846 a rag-tag band of American citizens set out to provoke a war with Mexico, and "captured" the sleepy outpost of Sonoma without a fight. The group imprisoned General Vallejo and held him in Sutter's Fort during the summer of 1846. The Bear Flag that the conspirators raised to proclaim an independent California flew for less than a month before being replaced by the Stars and Stripes when the United States took control (Parmelee 1972:16; Bancroft 1886:110; Lynch 1997:39).

American Period. The American Period, 1848–Present, began with the Treaty of Guadalupe Hidalgo. The City of Napa was founded in 1847 and by 1848 the town contained a general store, grist mill, and saloon. A transitional period of military rule followed, but California's prospects of statehood were cemented after the Gold Rush in 1849 brought tens of thousands of American citizens to California. By 1850 steamships were navigating the Napa River and Napa County was established as one of the original California Counties. American farmers in Napa and Sonoma first focused on grain production before shifting to fruit-growing. The climate and soil were ideal for grapes and wineries proliferated in the Napa and Sonoma areas. Phylloxera decimated the wine business late in the nineteenth century, but by the turn of the century the pest had been contained (Lynch 1997:186).

Historic Context of American Canyon. The southern portion of Napa County was the home of Patwin people, who had a permanent town named Suscol along the Napa River before the arrival of Europeans. In 1843, General Mariano Vallejo received Rancho Suscol from the Mexican government. The 84,000-acre rancho stretched from the vicinity of Suscol all the way south to the sites of Vallejo and Benicia. After California was admitted to the United States in 1850, increasing numbers of Americans began settling in Napa County in order to farm. Early agricultural activities in Napa Valley focused on cattle-grazing and grain production, but beginning in the early 1850s William and Simpson Thompson began planting orchards near Suscol. An American town by the same name sprang up in

the vicinity to take advantage of proximity to both the river and the main county road in order to ship agricultural products. A railroad arrived in southern Napa County when Gold Rush entrepreneur Sam Brannan orchestrated the construction of the Napa Valley Railroad from Vallejo to Calistoga. When the line was completed in 1866, the village of Adelante near Suscol changed its name to Napa Junction. (Palmer 1881, Gardner 1977).

Southern Pacific/Union Pacific Railroad

In 1887, the Santa Rosa and Carquinez Railroad was completed. The 36-mile line started at Napa Junction (just southeast of the project area across Highway 29) and travelled through Sonoma Valley to Glen Ellen and Santa Rosa. It was a branch of the Southern Pacific Railroad (successor to the Central Pacific Railroad, the first transcontinental line). The Santa Rosa branch crossed Green Island Road about $\frac{3}{4}$ mile west of its intersection with the highway. As river travel declined and new branch lines were routed through Napa Junction, it began to eclipse Suscol in importance. By the time the Santa Rosa Branch was completed, Napa Junction also had a railroad line to Suisun. The Santa Rosa branch provided an important link between Napa and Sonoma Counties during the nineteenth century. In 1901, the Union Pacific purchased a controlling share in the Southern Pacific. After 1920, automobiles became increasingly popular and railroads declined in importance, and eventually the Santa Rosa branch fell into disuse (Lewis 1889, Weber 1998).

Twentieth Century American Canyon

Early settlers had been farmers, but access to transportation attracted businesses, and a cement plant opened in 1900. Shortly after the turn of the century, an electric interurban line connected Calistoga with San Francisco via Vallejo, adding passenger trains to the freight lines already routed through Napa Junction. Despite its status as a transportation hub, the area grew only gradually, and Napa Junction never incorporated as a town. World War II brought an influx of workers to Mare Island to the south, and developers began subdividing the Napa Junction area in the 1940s. Residents began discussing local government in the 1950s, but early attempts to form a city failed. Although the area remained primarily rural for many decades, during the second half of the twentieth century many residential tracts were completed and businesses formed along the highway. American Canyon was finally incorporated in 1992. The origin of the city's name is somewhat obscure, but according to some sources it dates from California's Mexican era when a handful of Americans had settled in the vicinity. In 2016, American Canyon has a warehouse district on its northern edge with commercial and residential areas to the south (Atkinson 1991).

PERSONNEL

Kara Brunzell, M.A., acted as the Project Manager and Principal Investigator for the current study. Ms. Brunzell also completed additional research through various archives and repositories, and compiled the Department of Parks and Recreation (DPR) 523 forms and technical report. Brunzell Historical Principal Archeologist David Brunzell, M.A., RPA completed the cultural resources records search, and completed the archaeological portion of the field survey with assistance from Brunzell Historical Staff Archaeologist Norman Barajas.

RESEARCH DESIGN

This work was completed pursuant to Section 106 of the NHPA and to CEQA. The pedestrian cultural resources survey was intended to locate and document previously recorded or new cultural resources, including archaeological sites, features, isolates, and historic-period buildings, that exceed 45 years in age within defined APE and project site boundaries. The APE and project site were examined using 15 meter transect intervals, where accessible.

This study is intended to determine whether cultural resources are located within APE and project site boundaries, whether any cultural resources are significant pursuant to the above-referenced regulations and standards, and to develop specific mitigation measures that will address potential impacts to existing or potential historic properties. Tasks pursued to achieve that end include:

- Cultural resources records search to review any studies conducted and the resulting cultural resources recorded within a one-mile radius of the APE and project site
- Additional research through various local and regional resources
- Systematic pedestrian survey of the APE and project site
- Evaluation of NRHP eligibility for any cultural resources discovered
- Completion of DPR 523 forms for any discovered cultural resources
- Sacred Lands File search through the Native American Heritage Commission, and communications with recommended tribes and individuals (Appendix D).

METHODS

Research

Records Search. On October 15, 2015 (prior to the field survey) a records search was conducted at the NWIC (Northwest Information Center). This archival research reviewed the status of all recorded historic and prehistoric cultural resources, and survey and excavation reports completed within one mile of the APE and project site. Additional resources reviewed included the NRHP, the California Register of Historical Resources (CRHR), and documents and inventories published by the California Office of Historic Preservation. These include the lists of California Historical Landmarks, California Points of Historical Interest, Listing of National Register of Historic Places (NRHP) Properties, and the Inventory of Historic Structures.

Additional Research. Brunzell Historical performed additional research through records of the General Land Office Maintained by the Bureau of Land Management, the Napa County Library, the Napa County Assessor, and through various Internet resources.

Field Survey

An intensive-level cultural resources field survey of the APE and project site (excluding the Book End portions) was conducted on October 16, 2015. Field survey of the East Book End and West Book End portions of the project site was conducted on April 23, 2016. The survey was conducted by walking parallel transects spaced approximately 15 meters apart across 100 percent of the APE and project site, where accessible. Cultural Resources were recorded on DPR 523 forms. Ground visibility

averaged approximately 50 percent within non-paved portions of the APE and project site. Digital photographs were taken at various points within the APE and project site. These included overviews as well as detail photographs of all cultural resources. Cultural resources were recorded per the California OHP *Instructions for Recording Historical Resources* in the field using:

- Detailed note taking for entry on DPR Forms (see Appendix A)
- Hand-held Garmin Global Positioning systems for mapping purposes
- Digital photography of all cultural resources (see Appendix A) and APE and project site overviews (Appendix B).

RESULTS

Research

Records Search. Data from the NWIC revealed that 16 previous cultural resources studies have taken place, and two cultural resources (one historic-period and one prehistoric) have been recorded within one mile of the APE and project site. Of the 16 previous studies, one has assessed the APE and project site, and one location defined as “archaeologically sensitive” (an area designated 2S-22437) has been previously identified within its boundaries. This area of archaeological sensitivity was originally depicted by archaeologists due to surface evidence of prehistoric land use in the form of waste flakes and tools manufactured from obsidian and chert. Subsequent pedestrian surveys and test excavations failed to yield evidence of an archaeological site at the plotted location (see Origer 1988). No Department of Park and Recreation 523 site forms were ever completed for this area, and it does not require further study. The records search results are summarized as follows:

Table B. Cultural Resources and Reports Within One Mile of the APE

USGS 7.5 Minute Quadrangle	Cultural Resources Within One Mile of the APE	Studies Within One Mile of the APE
<i>Cuttings Wharf, California</i> (1981)	P-28-1439, 2S-22437*	S-153, 304, 326, 589, 1200, 2372, 9908, 12439, 21260, 22817, 33061, 34252, 34253, 35015, 43823*, 1078062

*Partially within APE.

Additional Research. Additional research was performed to provide the following context for the property containing the historic-period Lea Ranch at 876 Green Island Road, within the APE and project site boundaries. Physical characteristics including architectural descriptions are provided in the following Field Survey Results section.

Lea Ranch Property at 876 Green Island Road. During the late nineteenth century, when the Napa Junction area was devoted to agriculture, the parcel was part of a large farm owned by Manuel Freitas. The Freitas family owned 300 acres west of the highway, which they lived on and farmed. Manuel was born in Portugal about 1848. His wife Mary, a native of Ireland, was six years younger. In 1898, Freitas sold the 17 acres at the southwest corner of the parcel (between Green Island Road and the Santa Rosa branch of the Southern Pacific Railroad) to John W. Lea (Buckman 1915; U.S. Census 1910).

The first house on the property and the present barn are likely to have been constructed by the Lea family around the turn of the century. Although Napa County Assessor's records indicate that the present house was constructed c1929, USGS maps show a house in the vicinity by 1916. It is not known whether it was demolished and rebuilt or remodeled in the 1920s. John Ward Lea was a California native born in 1869. He married a woman named Eva about 1895, when she was only about 15 years old. Their son Leonard was an infant when the family purchased the ranch from Freitas. A second son, Earl, was born in 1899 shortly after the Leas moved to the property. In 1900, the family was living on the Lea Ranch. The barn's form suggests that the Leas kept livestock, and they also appear to have shipped hay from the property via the adjacent rail line. Three more children were born to the Leas by 1906, but the couple went through an acrimonious divorce in 1907, and John took Eva to court for preventing him from seeing his children. He was apparently a successful farmer, as he is referred to as "well to do" in the newspaper. By 1910, John was boarding with his brother-in-law and continued to farm in Napa, while Eva resided in Oakland with the five children and her younger brother. By 1920, Eva was remarried to an Oakland bookkeeper. John Lea had also remarried and moved to Mendocino, where he continued to farm (Napa County Recorder ND, Buckman 1915, San Francisco Call 1907, U.S. Census Records 1910 and 1920).

The Leas sold the property to Edwin and Ada Corman in 1915. The Cormans were both born in Missouri about 1884. The couple married about 1909, and had four children. In 1910, Edwin and Ada lived with his father Franklin Pierce on another farm in the Napa Junction area. Kenneth, Dorothy, Evelyn, and Ada were born in 1910, 1913, 1914, and 1918. By 1915, Edwin was a Mare Island ironworker. The family appears to have lived on the ranch in the 1920s and 1930s. The property was a poultry farm, which Ada operated while Edwin worked at Mare Island. According to the Napa County Assessor, the house on the parcel was constructed c1929, so it is likely to have been built or remodeled by the Corman family. Edwin's aunt Anna Carey lived with the family in 1930. At this point the two older Corman children, Kenneth and Dorothy, had moved out. Ada Corman sold the 17-acre ranch to William and Lena Souza in 1935. The Corman family, however, continued to occupy the house for years. In 1940, Ada was living there with her son Kenneth, a Mare Island mechanic, and his wife Naoma (Naomi), who worked in a fruit-packing shed. Before getting the job at Mare Island, Kenneth had worked for Basalt Rock Company and been an attendant at the Napa Asylum. Kenneth Corman died in 1940 at the age of 30. There is no information regarding whether the property was still a working farm in the 1940s. When Ada died in 1953, she was still living on the property (Napa County Recorder ND, U.S. Census 1920 and 1930, Napa Valley Register 1931).

Until the middle of the twentieth century, the old Lea Ranch was one of only three inhabited farmsteads along Green Island Road. USGS maps show a community named "Squab" along the railroad tracks northwest of the parcel, but research has not revealed any information about the place. There is no evidence of an actual town in the vicinity, so it is likely to have been a planned speculative real estate venture that never materialized.

The Souzas were farmers but do not appear to ever have lived on the property. The property descriptions become difficult to decipher in the 1940s, but the Souzas appear to have deeded the 1.8-acre section at the middle of the Lea Ranch (where the current house and barn are located) to George and Genevieve Bottari in 1948. Bottari was a Planner at Mare Island, and the couple lived in Vallejo. The property changed hands rapidly over the next few years before Lester and Margaret Struble

acquired it in 1954. The Struble family also acquired the 15.5-acre portion of the Lea Ranch to the east.

The Strubles had begun acquiring rural property along Green Island Road in the early 1950s. Lester Struble was born in 1900 in Minnesota. His wife Margaret, also a Minnesota native, was two years younger. Lester Struble served in the U.S. Marine Corps during World War I. Margaret Starkey attended the University of Minnesota in the early 1920s. The couple married about 1925. Their children Thomas, Eva, and Richard were born between 1927 and 1930. Struble worked as an architectural draftsman for the government from 1929 – 1935, designing for the lighthouse service. From 1935 – 1940, Lester Struble was a Lighthouse Keeper working for the US Coast Guard in Port Washington, Wisconsin. From 1941 until his retirement in the 1960s, Lester Struble was an architect at the Mare Island Navy Yard. Margaret Struble was a housewife and volunteer for the Red Cross and local hospitals for many years. The Strubles had moved onto the ranch by 1956, when Lester was still working at Mare Island. At this point, children Thomas and Eva had moved out, but Richard, who was in his mid-twenties, also moved to Green Island Road. He lived there with his parents until at least 1965. Thomas Struble moved to Woodland, while Eva and Richard both stayed in the Napa area. Richard Struble was a PG & E lineman. During the 1960s, more houses and rural businesses were constructed, both on the eastern portion of the Lea Ranch and in the neighborhood. Margaret Struble died in 1991. Richard Struble also died in the 1990s. By 1993, a few warehouses had been built south and west of the old Lea Ranch. Around 2000, several more warehouses were constructed south and west of the parcel. Lester lived until the age of 101, dying in 2002. About 2006, the warehouse just west of the subject parcel (on the western portion of the Lea Ranch) was constructed, apparently by Struble's heirs (U.S. Census 1930, Napa Valley Register 1991 and 2002).

Field Survey

During the field survey Kara Brunzell, David Brunzell, and Norman Barajas carefully inspected the APE and project site and identified the historic-period constituents noted during the additional research. These are described below. Architectural descriptions are included for all of the historic-period buildings and structures noted on the property. DPR 523 Forms are included for each of these historic-period resources in Appendix A. No other cultural resources (including prehistoric archaeological resources) were discovered during the field survey.

Lea Ranch. The rural-residential parcel is located on the north side of Green Island Road at its intersection with Commerce Boulevard, roughly one mile west of Highway 29. The parcel, which backs up to railroad tracks, is one of the few remaining farmsteads in a neighborhood that is characterized by large warehouses and construction-related businesses. Most of the property is enclosed by a wooden rail fence, and there is a paved drive at its western edge that leads to a barn and house. There are a handful of mature trees near the house and barn, but most of the property is dry grass or bare dirt, and lacks landscaping.

The house is set back about 200 feet from the road near the center of the parcel. It is one story with an L-shaped plan. Its massing, plan, and primary materials are that of a Minimal Traditional style house, a simple style of dwelling that was popular in the United States from about 1935 to 1950. Its gable-and-wing plan, low-pitched roof with shallow eave overhang, and simple wood detailing at the

gable ends are Minimal Traditional features. Other elements of the house, including fixed multi-light wood windows and large louvered vents at gable ends appear to be salvaged from an older building. The house is topped with composition shingle and clad in asbestos shingle. It rests on a concrete foundation. Windows on the southern section of the house are vinyl and aluminum, and appear to have been installed at different times over the decades. The primary entrance is on the east elevation, which is dominated by a flat-roofed enclosed porch. It is constructed of vinyl windows and corrugated plastic. The west elevation (which features the projecting wing) has a large concrete masonry unit chimney. There is a small wood deck at the intersection of the wing and primary volume of the house that is topped with a pergola and has wrought-iron handrails. It does not have an entryway.

The barn is between the house and the road, set back about 150 feet. It is front-gabled, with shed-roofed volumes on either side of a center gable. The western volume's roof is slightly lower than the primary roof, while the eastern slope of the roof is a continuous plane. The roof is topped with a combination of standing seam and corrugated metal, much of which is rusted or has fallen away. The center volume of the barn is clad in horizontal drop siding, while the wings are clad in a combination of vertical and horizontal flush boards of varying widths. There is a hay door below a louvered vent on the south gable end. The south elevation also has small entryways without doors. The north gable end has a louvered vent with a fixed multi-light wood sash window below it. The north elevation has a large top-mounted sliding door across its center section, with a smaller top-mounted sliding door in the western section.

There are at least two small outbuildings in the northwestern section of the parcel. Both appear to be prefabricated metal structures. There is a windmill southeast of the barn that appears to date from the historic period, between the driveway and the eastern parcel boundary. There are also numerous vehicles stored on the property including trailers, trucks, farm equipment, and train cars.

SIGNIFICANCE EVALUATIONS

During the field survey, one historic-period farmstead, the Lea Ranch, was identified. NHPA Section 106 and CEQA call for the evaluation and recordation of historic-period and archaeological resources. Properties eligible for listing in the NRHP and subject to review under Section 106 of the NHPA are those meeting the criteria for listing in the NRHP, and are designated "historic properties". Resources considered significant under CEQA are those meeting the criteria for listing in the CRHR, and are designated "historical resources".

Significance Criteria

National Register of Historic Places. In conjunction with the following NRHP criteria, sites must be assessed for integrity of location, design, setting, materials, workmanship, feeling, and association. A site may be considered eligible to the NRHP if it retains sufficient integrity of the elements listed above and it:

- (a) is associated with events that have made a significant contribution to the broad patterns of our history;
- (b) is associated with the lives of persons significant in our past;

- (c) embodies the distinctive characteristics of a type, period, or method of construction, represents the work of a master, possesses high artistic values, or represents a significant or distinguishable entity whose components may lack individual distinction;
- (d) yields, or may be likely to yield, information important to the prehistory or history of the area/region.

California Register of Historical Resources. The California Register criteria are based on National Register criteria. For a property to be eligible for inclusion on the California Register, one or more of the following criteria must be met:

1. It is associated with the events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S.;
2. It is associated with the lives of persons important to local, California, or U.S. history;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of a master, possesses high artistic values; and/or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to meeting one or more of the above criteria, the California Register requires that sufficient time has passed since a resource's period of significance to "obtain a scholarly perspective on the events or individuals associated with the resources." (CCR 4852 [d][2]). The California Register also requires that a resource possess integrity. This is defined as the ability for the resource to convey its significance through seven aspects: location, setting, design, materials, workmanship, feeling, and association.

Evaluation

The NRHP requires that a significance criterion from A-D be met for a resource to be eligible. The CRHR requires that a significance criterion from 1-4 be met for a resource to be eligible. Local historic register requirements are based on the state and national standards.

Criterion A/1: 876 Green Island Road is not associated with events that have made a significant contribution to the broad patterns of local, regional, or national history. Although it was generally associated with early twentieth-century farming in American Canyon, its historical significance does not rise to the level required for historic eligibility. Therefore the building is not eligible to the NRHP under Criterion A or for the CRHR under Criterion 1.

Criterion B/2: 876 Green Island Road is not associated with persons important to our history. Therefore it does not possess the significance required for eligibility on the NRHP under Criterion B, or for the CRHR under Criterion 2.

Criterion C/3: The house and barn at 876 Green Island Road are common examples of their types and lack architectural or design distinction. In addition, both buildings lack integrity due to numerous alterations that have been performed over the years. Therefore the property does not possess the

significance required for eligibility on the NRHP under Criterion C, or for the CRHR under Criterion 3.

Criterion D/4: In rare instances, buildings themselves can serve as sources of important information about historic construction materials or technologies. 876 Green Island Road does not appear to be a principal source of important information in this regard.

The property lacks the significance required for NRHP eligibility under Criteria A–D. Therefore it does not constitute a historic property for the purposes of Section 106 of the NHPA. It also lacks significance required for CRHR eligibility under Criterion 1–4, and as a result does not constitute a historical resource (i.e. is not significant) under CEQA.

RECOMMENDATIONS

The resources located within the APE/project site are not recommended “historic properties” and Brunzell Historical recommends a finding of no historic properties affected under Section 106 of the NHPA. The resources are also not recommended historical resources, and Brunzell Historical recommends a finding of no impacts to historical resources under CEQA. Although a finding of no historic properties affected/no impacts to historical resources is recommended based on the results, it is possible that ground disturbances associated with the current undertaking could reveal the presence of cultural resources not observed on the surface during the current study. If previously undocumented cultural resources are identified during earthmoving activities, a qualified archaeologist shall be contacted to assess the nature and significance of the find, diverting construction excavation if necessary.

If human remains are encountered during the undertaking, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine/notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of NAHC notification.

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APPENDIX A

DEPARTMENT OF PARKS AND RECREATION 523 FORMS

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APPENDIX B

PHOTOGRAPHS



Photo 1: Green Island Road Overview, Eastern Portion of APE (View West)



Photo 2: Green Island Road at Commerce Boulevard (View SW)



Photo 3: Hanna and Commerce Overview (View East)



Photo 4: Western Terminus of APE (View West)



Photo 5: East Bookend Overview (View West)



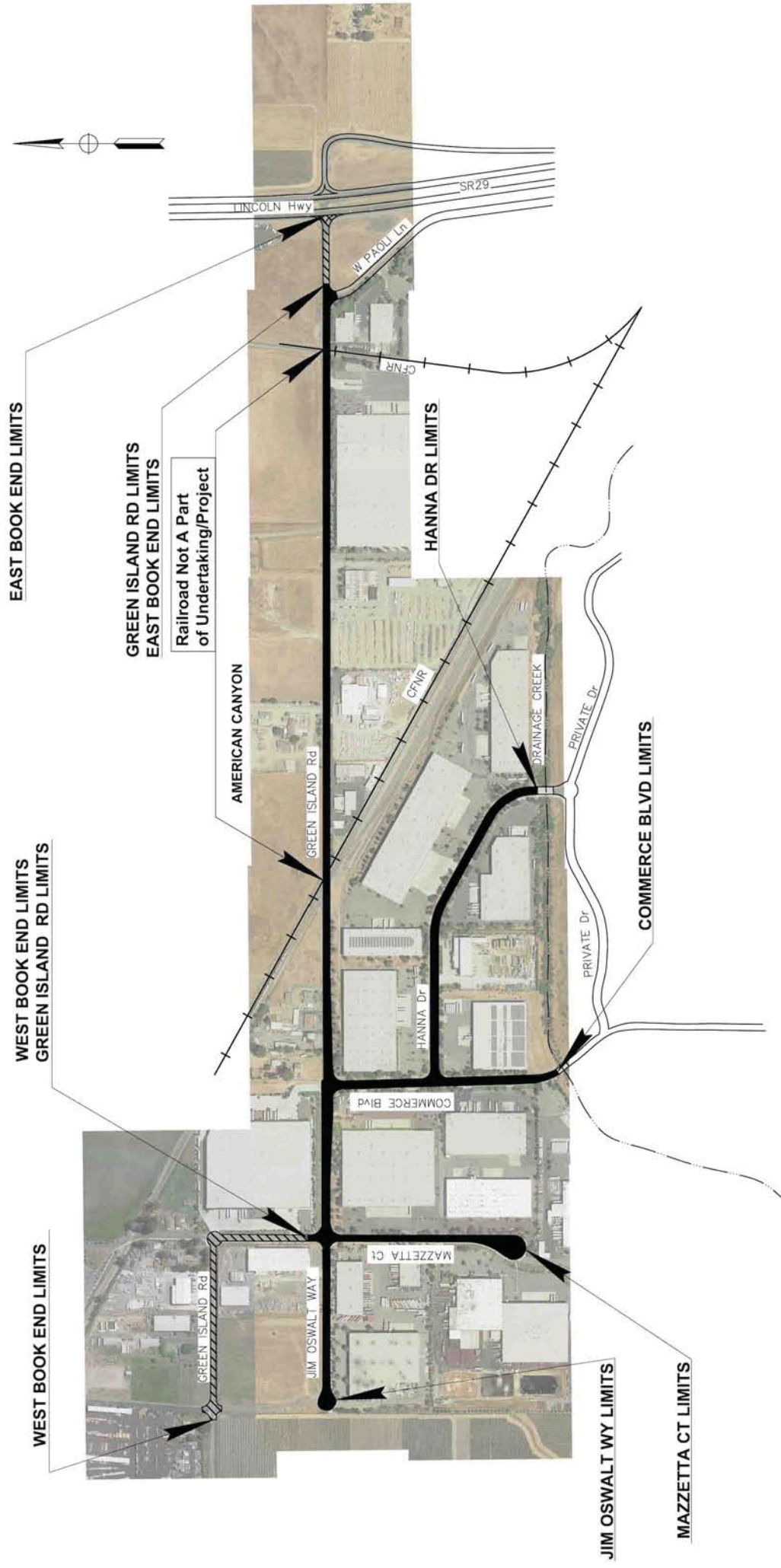
Photo 6: West Bookend Overview (View West)

APPENDIX C

CONSTRUCTION EXHIBIT

LEGEND:

- EDA FUNDED LIMITS
- BOOK END LIMITS



APPENDIX D

NATIVE AMERICAN CONSULTATION

NATIVE AMERICAN HERITAGE COMMISSION

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



February 27, 2015

Liz Range-Pendell
Blais & Associates

707-647-4519 Email: lrange-pendell@blaisassoc.com

Re: Green Island Industrial District (GRID), Napa County. 2 pages

Dear Ms. Range-Pendell,

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3712.

Sincerely,

Katy Sanchez
Associate Government Program Analyst

**Native American Contacts
Napa County
February 27, 2015**

Yocha Dehe Wintun Nation
Leland Kinter, Chairperson
P.O. Box 18
Brooks , CA 95606
lkinter@yochadehe-nsn.gov
(530) 796-3400

Wintun (Patwin)

(530) 796-2143 Fax

Cortina Band of Indians
Charlie Wright, Chairperson
P.O. Box 1630
Williams , CA 95987
(530) 473-3274 Office

Wintun / Patwin

(530) 473-3301 Fax

Kesner Flores
P.O. Box 1047
Wheatland , CA 95692
calnagpra@hotmail.com
(925) 586-8919

Wintun / Patwin

Yocha Dehe Wintun Nation
Native Cultural Renewal Committee
P.O. Box 18
Brooks , CA 95606
(530) 979-6346
(530) 796-3400 - office
(530) 796-2143 Fax

Wintun (Patwin)

Yocha Dehe Wintun Nation
Cynthia Clarke, Native Cultural Renewal Committee
P.O. Box 18
Brooks , CA 95606
(530) 796-3400 Office

Wintun (Patwin)

(530) 796-2143 Fax

This list is current only as of the date of this document.

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

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed Green Island Industrial District (GRID) Roads Project, Napa County.

Native American Consultation Summary, Green Island Industrial District Roads Project, American Canyon, Napa County, California.
 Native American Heritage Commission replied on February 27, 2016. Results of Sacred Land File Search did not indicate presence of Native American cultural resources, and recommended that the below groups/individuals be contacted.

Groups Contacted	Letter/Email Date	Response from Tribes
Leland Kitner, Chairperson Yocha Dehe Wintun Nation	Letter: 3/18/16 Email: 3/18/16	5/2/16: Received letter from James Kinter requesting a project timeline, detailed project information, and the latest cultural study (letter attached).
Cynthia Clarke, Native Cultural Renewal Committee Yocha Dehe Wintun Nation	Letter: 3/18/16 Email: N/A	None
Charlie Wright, Chairperson Cortina Band of Indians	Letter: 3/18/16 Email: N/A	None
Kesner Flores	Letter: 3/18/16 Email: 3/18/16	None
Native Cultural Renewal Committee Yocha Dehe Wintun Nation	Letter: 3/18/16 Email: N/A	None



February 22, 2016

Yocha Dehe Wintun Nation
Leland Kinter, Chairperson
P.O. Box 18
Brooks, California 95606

Subject: Section 106 Native American Consultation for the Green Island Industrial District Roads Project, American Canyon, Napa County, California

Dear Mr. Chairperson:

This is an invitation to consult on a proposed development project at locations with which you have tribal cultural affiliation. The purpose of the consultation is to ensure the protection of Native American cultural resources on which the proposed undertaking may have an impact. In the tribal consultation process, early consultation is encouraged to provide for full and reasonable public input from Native American entities as consulting parties, on potential effect of the project, and to avoid costly delays. Further, we understand that much of the content of the consultation will be confidential and will include, but not be limited to, the relationship of project details to Native American Cultural Historic Properties such as burial sites, known or unknown, architectural features and artifacts, ceremonial sites, sacred shrines, and cultural landscapes. The proposed project would involve reconditioning of 1.86 miles of damaged roads that service the Green Island Industrial District (GRID). The Project includes the full reconstruction of the existing pavement on Green Island Road, including widening on the north side of the street to include a turning lane. The project will recondition Jim Oswald Way, Mezzetta Court, Hanna Drive, and portions of Commerce Boulevard. The project will likely include the addition of sidewalks along Green Island Road. Additionally, the project will include trenching, placing boxes and laying conduit for new utilities, and an 18-inch Class V RCP storm drain. It is located in Sections 13 and 14 of Township 4 North, Range 4 West, Mt. Diablo Baseline and Meridian, and is depicted on the *Cuttings Wharf* (1981), *California* 7.5-minute USGS topographic quadrangles, (see attached map).

If you know of any cultural resources in the vicinity that may be of religious and/or cultural significance to your community or if you would like more information, please contact me at 909-525-7078 or david.brunzell@yahoo.com. Correspondence can also be sent to BCR Consulting LLC, Attn: David Brunzell, 1420 Guadalajara Place, Claremont, California 91711. I request a response by March 25, 2016. If you require more time, please let me know. Thank you for your involvement in this process.

Sincerely,

BCR Consulting LLC

David Brunzell, M.A./RPA
Principal Investigator/Archaeologist

Attachment: USGS Map



Received 5.2.16

YOCHA DEHE
CULTURAL RESOURCES

April 20, 2016

David Brunzell
BCR Consulting LLC
1420 Guadalajara Place
Claremont, CA 91711

RE: GRID Roads Project

Dear Mr. Brunzell:

Thank you for your project notification letter dated March 18, 2016 regarding cultural information on or near the proposed GRID Roads Project, American Canyon, Napa County, CA. We appreciate your effort to contact us and wish to respond.

The Cultural Resources Department has reviewed the project and concluded that it is within the aboriginal territories of the Yocha Dehe Wintun Nation. Therefore, we have a cultural interest and authority in the proposed project area. We wish to initiate consultation with BCR Consulting LLC and the project lead agency.

Please provide our Cultural Resources Department with a project timeline, detailed project information and the latest cultural study for the proposed project. As the project progresses, if any new information or cultural items are found, we do have a process to protect such important and sacred artifacts. Upon such a finding, please contact the following individual:

Mr. James Sarmento
Cultural Resources Manager
Yocha Dehe Wintun Nation
Office: (530) 723-0452, Email: jsarmento@yochadehe-nsn.gov

Please refer to identification number YD - 07092015-01 in any correspondences concerning this project.

Thank you for providing us with project information and the opportunity to comment. Please contact Mr. Sarmento at your earliest convenience to coordinate a date and time for the consultation meeting.

Sincerely,

James Kinter
Tribal Secretary
Tribal Historic Preservation Officer

Yocha Dehe Wintun Nation

PO Box 18 Brooks, California 95606 p) 530.796.3400 f) 530.796.2143 www.yochadehe.org



February 22, 2016

Yocha Dehe Wintun Nation
Cynthia Clarke
Native Cultural Renewal Committee
P.O. Box 18
Brooks, California 95606

Subject: Section 106 Native American Consultation for the Green Island Industrial District Roads Project, American Canyon, Napa County, California

Dear Cynthia:

This is an invitation to consult on a proposed development project at locations with which you have tribal cultural affiliation. The purpose of the consultation is to ensure the protection of Native American cultural resources on which the proposed undertaking may have an impact. In the tribal consultation process, early consultation is encouraged to provide for full and reasonable public input from Native American entities as consulting parties, on potential effect of the project, and to avoid costly delays. Further, we understand that much of the content of the consultation will be confidential and will include, but not be limited to, the relationship of project details to Native American Cultural Historic Properties such as burial sites, known or unknown, architectural features and artifacts, ceremonial sites, sacred shrines, and cultural landscapes. The proposed project would involve reconditioning of 1.86 miles of damaged roads that service the Green Island Industrial District (GRID). The Project includes the full reconstruction of the existing pavement on Green Island Road, including widening on the north side of the street to include a turning lane. The project will recondition Jim Oswald Way, Mezzetta Court, Hanna Drive, and portions of Commerce Boulevard. The project will likely include the addition of sidewalks along Green Island Road. Additionally, the project will include trenching, placing boxes and laying conduit for new utilities, and an 18-inch Class V RCP storm drain. It is located in Sections 13 and 14 of Township 4 North, Range 4 West, Mt. Diablo Baseline and Meridian, and is depicted on the *Cuttings Wharf* (1981), *California* 7.5-minute USGS topographic quadrangles, (see attached map).

If you know of any cultural resources in the vicinity that may be of religious and/or cultural significance to your community or if you would like more information, please contact me at 909-525-7078 or david.brunzell@yahoo.com. Correspondence can also be sent to BCR Consulting LLC, Attn: David Brunzell, 1420 Guadalajara Place, Claremont, California 91711. I request a response by March 25, 2016. If you require more time, please let me know. Thank you for your involvement in this process.

Sincerely,

BCR Consulting LLC

David Brunzell, M.A./RPA
Principal Investigator/Archaeologist



February 22, 2016

Cortina Band of Indians
Charlie Wright
P.O. Box 1630
Williams, California 95987

Subject: Section 106 Native American Consultation for the Green Island Industrial District Roads Project, American Canyon, Napa County, California

Dear Charlie:

This is an invitation to consult on a proposed development project at locations with which you have tribal cultural affiliation. The purpose of the consultation is to ensure the protection of Native American cultural resources on which the proposed undertaking may have an impact. In the tribal consultation process, early consultation is encouraged to provide for full and reasonable public input from Native American entities as consulting parties, on potential effect of the project, and to avoid costly delays. Further, we understand that much of the content of the consultation will be confidential and will include, but not be limited to, the relationship of project details to Native American Cultural Historic Properties such as burial sites, known or unknown, architectural features and artifacts, ceremonial sites, sacred shrines, and cultural landscapes. The proposed project would involve reconditioning of 1.86 miles of damaged roads that service the Green Island Industrial District (GRID). The Project includes the full reconstruction of the existing pavement on Green Island Road, including widening on the north side of the street to include a turning lane. The project will recondition Jim Oswald Way, Mezzetta Court, Hanna Drive, and portions of Commerce Boulevard. The project will likely include the addition of sidewalks along Green Island Road. Additionally, the project will include trenching, placing boxes and laying conduit for new utilities, and an 18-inch Class V RCP storm drain. It is located in Sections 13 and 14 of Township 4 North, Range 4 West, Mt. Diablo Baseline and Meridian, and is depicted on the *Cuttings Wharf* (1981), *California* 7.5-minute USGS topographic quadrangles, (see attached map).

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Sincerely,

BCR Consulting LLC

David Brunzell, M.A./RPA
Principal Investigator/Archaeologist

Attachment: USGS Map



February 22, 2016

Kesner Flores
P.O. Box 1047
Wheatland, California 95692

Subject: Section 106 Native American Consultation for the Green Island Industrial District Roads Project, American Canyon, Napa County, California

Dear Kesner:

This is an invitation to consult on a proposed development project at locations with which you have tribal cultural affiliation. The purpose of the consultation is to ensure the protection of Native American cultural resources on which the proposed undertaking may have an impact. In the tribal consultation process, early consultation is encouraged to provide for full and reasonable public input from Native American entities as consulting parties, on potential effect of the project, and to avoid costly delays. Further, we understand that much of the content of the consultation will be confidential and will include, but not be limited to, the relationship of project details to Native American Cultural Historic Properties such as burial sites, known or unknown, architectural features and artifacts, ceremonial sites, sacred shrines, and cultural landscapes. The proposed project would involve reconditioning of 1.86 miles of damaged roads that service the Green Island Industrial District (GRID). The Project includes the full reconstruction of the existing pavement on Green Island Road, including widening on the north side of the street to include a turning lane. The project will recondition Jim Oswald Way, Mezzetta Court, Hanna Drive, and portions of Commerce Boulevard. The project will likely include the addition of sidewalks along Green Island Road. Additionally, the project will include trenching, placing boxes and laying conduit for new utilities, and an 18-inch Class V RCP storm drain. It is located in Sections 13 and 14 of Township 4 North, Range 4 West, Mt. Diablo Baseline and Meridian, and is depicted on the *Cuttings Wharf* (1981), *California* 7.5-minute USGS topographic quadrangles, (see attached map).

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Sincerely,

BCR Consulting LLC

David Brunzell, M.A./RPA
Principal Investigator/Archaeologist

Attachment: USGS Map



February 22, 2016

Yocha Dehe Wintun Nation
Native Cultural Renewal Committee
P.O. Box 18
Brooks, California 95606

Subject: Section 106 Native American Consultation for the Green Island Industrial District Roads Project, American Canyon, Napa County, California

Dear Native Cultural Renewal Committee:

This is an invitation to consult on a proposed development project at locations with which you have tribal cultural affiliation. The purpose of the consultation is to ensure the protection of Native American cultural resources on which the proposed undertaking may have an impact. In the tribal consultation process, early consultation is encouraged to provide for full and reasonable public input from Native American entities as consulting parties, on potential effect of the project, and to avoid costly delays. Further, we understand that much of the content of the consultation will be confidential and will include, but not be limited to, the relationship of project details to Native American Cultural Historic Properties such as burial sites, known or unknown, architectural features and artifacts, ceremonial sites, sacred shrines, and cultural landscapes. The proposed project would involve reconditioning of 1.86 miles of damaged roads that service the Green Island Industrial District (GRID). The Project includes the full reconstruction of the existing pavement on Green Island Road, including widening on the north side of the street to include a turning lane. The project will recondition Jim Oswald Way, Mezzetta Court, Hanna Drive, and portions of Commerce Boulevard. The project will likely include the addition of sidewalks along Green Island Road. Additionally, the project will include trenching, placing boxes and laying conduit for new utilities, and an 18-inch Class V RCP storm drain. It is located in Sections 13 and 14 of Township 4 North, Range 4 West, Mt. Diablo Baseline and Meridian, and is depicted on the *Cuttings Wharf* (1981), *California* 7.5-minute USGS topographic quadrangles, (see attached map).

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Sincerely,

BCR Consulting LLC

David Brunzell, M.A./RPA
Principal Investigator/Archaeologist

Attachment: USGS Map

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Street and Apt. No., or PO Box No. P.O. Box 1047
City, State, ZIP+4® Wheatland, CA 95692

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