# Draft Environmental Impact Report

## Old Arcata Road Rehabilitation & Pedestrian/Bikeway Improvements

City of Arcata

August 09, 2021

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# Acronym List

| | |
|---|---|
| AASHTO | American Association of State Highway and Transportation Officials |
| AB | Assembly Bill |
| ADA | Americans with Disabilities Act |
| ADI | Area of Direct Impact |
| ADL | Aerially Deposited Lead |
| ADT | Average Daily Traffic |
| AES | Aesthetics |
| AG | Agriculture and Forest Resources |
| ALUCP | Airport Land Use Compatibility Plan |
| AOI | Area of Interest |
| APE | Area of Potential Effect |
| APN | Assessor Parcel Numbers |
| AQ | Air Quality |
| ARB | Air Resources Board |
| As | Arsenic, dissolved |
| ASCE | American Society of Civil Engineers |
| AST | Above-ground Storage Tank |
| ATCM | Air Resource Board's Air Toxic Control Measures |
| BGEPA | Bald and Golden Eagle Protection Act |
| BIA | Biologically Important Area |
| BIO | Biological Resources |
| BLM | Bureau of Land Management |
| BMP | Best Management Practice |
| BOD | Biochemical Oxygen Demand |
| BSA | Biological Study Area |
| CAA | Clean Air Act |
| CAAQS | California Ambient Air Quality Standards |
| CalEEMod | California Emissions Estimator Model |
| CAL FIRE | California Department of Forestry and Fire Protection |
| Cal-OSHA | California Division of Occupational Safety and Health |
| Caltrans | California Department of Transportation |
| CA MUTCD | California Manual on Uniform Traffic Control Devices |
| CARB | California Air Resources Board |
| CBC | California Building Code |
| CCC | California Coastal Commission |
| CCR | California Code of Regulations |
| CDFW | California Department of Fish and Wildlife |
| CDP | Coastal Development Permit |
| CEC | California Energy Commission |
| CEQ | Council on Environmental Quality |
| CEQA | California Environmental Quality Act |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| CESA | California Endangered Species Act |
| CFCPA | California Farmland Conservancy Program Act |
| CFGC | California Department of Fish and Game Code |
| CFR | Code of Federal Regulations |
| CGP | Construction General Permit |
| CGS | California Geological Survey |
| $CH_4$ | methane |
| CHP | California Highway Patrol |
| CIP | Capital Improvement Plan |

| | |
|---|---|
| CIWMA | California Integrated Waste Management Act |
| CNDDB | California Natural Diversity Database |
| CNEL | Community Noise Equivalent Level |
| CNPPA | California Native Plant Protection Act |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | carbon-dioxide-equivalent |
| COC | Constituents of Concern |
| ColWMP | Countywide Integrated Waste Management Plan |
| COPC | Contaminants of Potential Concern |
| CPUC | California Public Utilities Commission |
| Cr VI | Hexavalent Chromium, dissolved |
| CR | Cultural Resources |
| CRC | California Redwood Company |
| CUP | Central Utility Plant |
| CFC | Chlorofluorocarbon |
| CGP | Construction General Permit |
| CNEL | Community Noise Equivalent Level |
| CUPA | Certified Unified Program Agency |
| CWA | Clean Water Act |
| CWPP | Community Wildfire Protection Plan |
| CWTP | County-Wide Transportation Plan |
| CZMA | Coastal Zone Management Act |
| DAL | Dial-A-Lift |
| DAR | Dial-A-Ride |
| dBA | Decibels |
| DDT | Dichlorodiphenyltrichloroethane |
| DOC | Department of Conservation |
| DOI | Department of the Interior |
| DOT | Department of Transportation |
| DPS | Distinct Population Segment |
| DTSC | Department of Toxic Substances Control |
| DWR | Department of Water Resources |
| EAP | Energy Action Plan |
| EDR | Environmental Data Resources |
| EEZ | U.S. Exclusive Economic Zone |
| EFH | Essential Fish Habitat |
| EIR | Environmental Impact Report |
| ENP | Eastern North Pacific |
| EOC | Emergency Operations Center |
| EOP | Emergency Operations Plan |
| EPA | Environmental Protection Agency |
| EPI | Evergreen Pulp Inc. |
| EQ Zapp | California Earthquake Hazard Zones |
| ESHA | Environmentally Sensitive Habitat Area |
| ESL | Environmental Screening Level |
| ESU | Evolutionarily Significant Unit |
| FEMA | Federal Emergency Management Agency |
| FESA | Federal endangered Species Act |
| FGC | California Fish and Game Code |
| FHSZ | Fire Hazard Severity Zone |
| FHWA | Federal Highway Administration |
| FMMP | Farmland Mapping and Monitoring Program |
| FR | Federal Register |
| FSC | Fire Safe Councils |
| FTC | Freshwater Tissue Company |
| GDRC | Green Diamond Resource Company |

| | |
|---|---|
| GEATM | Greater Eureka Area Travel Model |
| GEO | Geology and Soils |
| GHG | Greenhouse Gas Emissions |
| GP | Georgia Pacific LLC |
| GPM | Gallons per Minute |
| GWP | Global Warming Potential |
| $H_2O$ | water or water vapor |
| HAZ | Hazards and Hazardous Materials |
| HBAP | Humboldt Bay Area Plan |
| HBDA | Humboldt Bay Development Association, Inc. |
| HBHRCD | Humboldt Bay Harbor, Recreation, and Conservation District |
| HBMWD | Humboldt Bay Municipal Water District |
| HCAOG | Humboldt County Association of Governments |
| HCDEH | Humboldt County Division of Environmental Health |
| HCFC | Hydrochlorofluorocarbon |
| HCTDM | Humboldt County Traffic Demand Model |
| HFC | Hydrofluorocarbon |
| HSC | Health and Safety Code |
| HWMA | Humboldt Waste Management Authority |
| HWQ | Hydrology and Water Quality |
| IEPR | Integrated Energy Policy Report |
| IGP | Industrial General Permit |
| IPaC | Information for Planning and Consultation |
| ISA | Initial Site Assessment |
| ISMND | Initial Study/Mitigated Negative Declaration |
| ITE | Institute of Transportation Engineers |
| kV | Kilovolt |
| LCFS | Low Carbon Fuel Standard |
| LCP | Local Coastal Program/Plan |
| Ldn | Day/Night Average Sound Level |
| Leq | Equivalent Continuous Sound Level |
| LID | Low Impact Development |
| LOP | Local Oversight Program |
| LOS | Level of Service |
| LP | Louisiana-Pacific Corporation |
| LRA | Local Responsibility Area |
| LU | Land Use and Planning |
| LUST | Leaking Underground Storage Tank |
| MBTA | Migratory Bird Treaty Act |
| MC | Coastal Dependent Industrial |
| MC/A | Coastal Dependent Industrial with Archaeological Overlay Zoning Destination |
| MCT | Maximum Considered Tsunami |
| $mg/m^3$ | milligrams per cubic meter |
| MG | Million-Gallon |
| MGD | Million Gallons per Day |
| MMRP | Mitigation Monitoring and Reporting Program |
| MMT | Million Metric Tons |
| Mn | Manganese, dissolved |
| MOE | Measures of Effectiveness |
| MOU | Memorandum of Understanding |
| Mph | Miles Per Hour |
| MR | Mineral Resources |
| MRR | Mandatory Reporting Regulation |
| MS4 | Municipal Separate Storm Sewer System |
| MSA | Magnuson-Stevens Fishery Conservation and Management Act |
| MSL | Mean Sea Level |
| MTCO2e | Metric Tons of Carbon Dioxide Equivalent |

| | |
|---|---|
| MUTCD | Manual on Uniform Traffic Control Devices |
| MW | Megawatt |
| $N_2O$ | nitrous oxide |
| NAAQS | National Ambient Air Quality Standards |
| NACTO | National Association of City Transportation Officials |
| NAHC | Native American Heritage Commission |
| NCHRP | National Cooperative Highway Research Program |
| NCRWQCB | North Coast Regional Water Quality Control Board |
| NCUAQMD | North Coast Unified Air Quality Management District |
| ND | non-detect |
| NES | Natural Environment Study |
| NESHAP | National Emissions Standard for Hazardous Air Pollutants |
| NFIP | National Flood Insurance Program |
| NFPA | National Fire Protection Agency |
| NH4 | Ammonium Nitrogen |
| NHPA | National Historic Preservation Act |
| Ni | Nickel, dissolved |
| NMFS | National Marine Fisheries Service |
| NOAA | National Oceanic and Atmostpheric Administration |
| NOI | Noise |
| NOI | Notice of Intent |
| $NO^2$ | Nitrogen Dioxide |
| NOX | Nitric Oxide |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | National Resource Conservation Service |
| NRHP | National Register of Historic Places |
| NSR | New Source Review |
| OCP | Organochlorine Pesticide |
| OES | Office of Emergency Services |
| OPR | Office of Planning and Research |
| OSHA | Occupational Safety and Health Act |
| P | Phosphorus |
| PCB | Polychlorinated Biphenyl |
| PCI | Pavement Condition Index |
| PCFG | Pacific Coast Feeding Group |
| PCSD | Peninsula Community Services District |
| PFC | Perfluorocarbon |
| PFMC | Pacific Fishery Management Council |
| PG&E | Pacific Gas and Electric Company |
| PJD | Preliminary Jurisdictional Determination |
| PM | particulate matter |
| POP | Population and Housing |
| ppm | parts per million |
| PPV | Peak Particle Velocity |
| PRC | Public Resources Code |
| PS | Public Services |
| PSB | Project Study Boundary |
| PSD | Prevention of Signification Deterioration |
| PSR | Project Study Report |
| psu | Practical Salinity Units |
| PTHA | Probabilistic Site-Specific Tsunami Hazard Analysis |
| PUC | Public Utilities Commission |
| RAS | Recirculating Aquaculture System |
| REC | Recreation |
| RMP | Restoration and Monitoring Plan |
| RMS | Root Mean Square |
| RMT II | Redwood Maine Terminal II |

| | |
|---|---|
| ROG | Reactive Organic Gases |
| RRFB | Rectangular Rapid-Flashing Beacons |
| RTPA | Regional Transportation Planning Agency |
| RV | Recreational Vehicle |
| RWQCB | Regional Water Quality Control Boards |
| SARA | Superfund Amendments and Reauthorization Act |
| SB | Senate Bill |
| $SF_6$ | sulfur hexafluoride |
| SLC | State Lands Commission |
| $SO_2$ | sulfur dioxide |
| SOP | Standard Operating Procedure |
| SPCC | Spill, Prevention, Control and Countermeasure |
| SPG | Samoa Pacific Group |
| SRA | State Responsibility Area |
| SSC | Species of Special Concern |
| STIP | State Transportation Improvement Program |
| SWDS | Solid Waste Disposal Site |
| SWPPP | Stormwater Pollution Prevention Program |
| SWRCB | California State Water Resources Control Board |
| TAC | Toxic Air Contaminant |
| TCR | Tribal Cultural Resources |
| TDS | Total dissolved Solids |
| TPHO | Tribal Historic Preservation Officer |
| TMDL | Total Maximum Daily Load |
| TN | Total Nitrogen |
| TR | Transportation |
| TSS | Total Suspended Solids |
| TVERS | Tsunami Vertical Evacuation Refuge Structure |
| $\mu g/m^3$ | micrograms per cubic meter |
| US | United States |
| USACE | United States Army Corp of Engineers |
| USC | United States Code |
| USEPA | United States Environmental Protection Agency |
| USFS | United states Forest Service |
| USGS | United States Geological Survey |
| UST | Underground Storage Tanks |
| UTL | Utilities and Service Systems |
| UV-C | Ultraviolet |
| Uw | Universal Waste |
| VdB | Velocity decibels |
| VHFHSZ | Very High Fire Hazard Severity Zones |
| VMT | Vehicle Miles Traveled |
| VROOM | Variety in Rural Options of Mobility |
| WDF | Wildfire |
| WMU | Waste Management Unit |
| WNP | Western North Pacific |
| WQO | Water Quality Objective |
| WTP | Water Treatment Plant |
| WUI | Wildland Urban Interface |

# 1. Introduction and Summary

## 1.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires that discretionary decisions by public agencies be subject to environmental review. CEQA requires an Environmental Impact Report (EIR) to be prepared when it can be determined that substantial evidence supports a fair argument that significant environmental impacts may result from a project. The purpose of an EIR is to identify the significant effects of the project on the environment, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided (Public Resources Code [PRC] 13, Section 21002.1[a]). Each public agency is required to mitigate or avoid the significant effects on the environment of projects it approves or carries out whenever feasible. The environmental effects of a project that must be addressed include the significant effects of the project, growth-inducing effects of the project, and significant cumulative effects.

The purpose of an EIR is not to recommend either approval or denial of a project. Rather, CEQA requires decision-makers to balance the benefits of a project against its unavoidable environmental effects in deciding whether to carry out a project. The Lead Agency will consider the analysis in the Draft EIR, comments received on the Draft EIR, and responses to those comments before making a final decision. If significant environmental effects are identified, the Lead Agency must adopt “Findings” indicating whether feasible mitigation measures or alternatives exist that can avoid or reduce those effects. If environmental impacts are identified as significant and unavoidable after proposed mitigation, the Lead Agency may still approve the project if it determines that the social, economic, or other benefits outweigh the unavoidable impacts. The Lead Agency would then be required to prepare a “Statement of Overriding Considerations” that discusses the specific reasons for approving a project, based on information in the Draft EIR, comments received on the Draft EIR, and other information in the administrative record.

This Draft EIR has been prepared by City of Arcata for the proposed Old Arcata Road Rehabilitation & Pedestrian/Bikeway Improvements Project (Project) pursuant to CEQA (PRC Section 21000 et seq.) and the CEQA Guidelines (Title 14 California Code of Regulations [CCR] Section 15000 et seq.).

## 1.2 Type of Environmental Impact Report

This Draft EIR is a Project EIR, as opposed to a Program EIR, pursuant to CEQA Guidelines Section 15161. A Project EIR is the most common type of EIR, examining the environmental impacts of a specific project. This type of EIR focuses on the changes in the environment that would result from the construction, development, and operation of a specific project.

## 1.3 Intended Uses of the EIR

The purpose of an EIR is to provide a clear understanding of the environmental impacts associated with the construction and operation of a project that is proposed by a public agency or private interest. EIRs are prepared to meet the requirements of CEQA when a proposed project may have a potential “significant” impact on the physical environment. An EIR is defined by the CEQA Guidelines as “… a detailed statement prepared to describe and analyze significant environmental effects of a project and discuss ways to mitigate or avoid the effects” (Title 14 CCR Section 15362). An EIR must include a description of the physical environmental conditions in the vicinity of a project, as they exist at the time the Notice of Preparation (NOP) is published, from both a local and regional perspective. This environmental setting normally constitutes the baseline physical

conditions by which the Lead Agency determines whether an impact is significant. The EIR is used by decision-makers, Responsible and Trustee Agencies, and the public to understand and evaluate project proposals and assist in making decisions on project approvals and required permits.

EIRs are prepared under the direction of a Lead Agency. The Lead Agency is the decision-making body that would ultimately certify the adequacy of the EIR and approve the implementation of a project. The Lead Agency for the proposed Project is the City of Arcata (City).

In addition to the Lead Agency, other Responsible and Trustee Agencies may use this document in approving permits or providing recommendations for the Project. For this Project, these agencies and permits may include:

– City of Arcata Coastal Development Permit
– Humboldt County Coastal Development Permit
– Humboldt County Grading Permit
– Humboldt County Encroachment Permit

## 1.4 Public Scoping Process

On May 14, 2021, the City of Arcata issued an NOP for the Project. The NOP was issued in accordance with the CEQA Guidelines (Title 14 CCR Section 15082) with the intent of informing agencies and interested parties that an EIR would be prepared for the Project. A copy of the NOP can be found in Appendix A. The NOP was circulated between May 14, 2021, and June 21, 2021. An agency scoping meeting for the Project was held on-site at the City's pump station near the intersection of Old Arcata Road and Jacoby Creek Road. A public scoping meeting was held at the D Street Neighborhood Center on July 1, 2021. Comments provided in response to the NOP and during the public scoping meeting have been summarized by the City in Appendix B1 (Public Scoping Memo). Agency comments are included as Appendix B2 (Agency Scoping Comments). Additional comments received after the completion of the Final Initial Study/Mitigated Negative Declaration (ISMND; see Section 1.8 – Areas of Controversy and Key Issues to be Resolved) at the previous public hearing for the Project on May 19, 2021 and July 30, 2021 are included in their entirety in Appendix B3 (Public Scoping Comments).

## 1.5 Effects Found Not to be Significant

To provide more meaningful public disclosure, reduce the time and cost required to prepare an EIR, and focus on potentially significant effects on the environment of a proposed project, Lead Agencies can focus the discussion in the EIR on those potential effects of a project which the Lead Agency has determined are or may be significant. Lead agencies may limit discussion on other effects to a brief explanation as to why those effects are not potentially significant (PRC Section 21002.1 (e); CEQA Guidelines Sections 15128 and 15143). Effects related to Agricultural and Forest Resources, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, and Recreation were found not to be significant. These resource categories are further discussed in Chapter 5 of this EIR. Information used to determine which impacts would be potentially significant was derived from a review of the Project in the preparation and public review of the Initial Study, field work, feedback from agency consultation and input, and comments received on the NOP.

## 1.6 Availability of the Draft EIR and Public Comment Period

The Draft EIR will be circulated for 45 days, from August 9, 2021 to September 27, 2021, to allow interested individuals and public agencies to review and comment on the document. Document files will be made available upon request at Arcata City Hall, 736 F Street, Arcata, California and online at https://www.cityofarcata.org/720/Old-Arcata-Road-Design-Project.

Comments may be submitted in writing via the United States Postal Service or via email. Written comments on the Draft EIR will be accepted by September 27,2021 until 5:00 pm. Public agencies, interested organizations and individuals are encouraged to submit comments on the Draft EIR for consideration by the City. All written comments should be addressed to:

David Loya, Community Development Director
City of Arcata,
736 F Street
Arcata, CA 95521
707-825-5955
comdev@cityofarcata.org

To facilitate understanding of the comments, please provide a separate sentence or paragraph for each comment and note the page and Chapter/Section of the Draft EIR to which the comment is directed. This approach to commenting will help the City provide a clear and meaningful response to each comment.

A public hearing is scheduled for purposes of receiving public comments on the Draft EIR before the Planning Commission on or after October 12, 2021. The Final EIR will be reviewed by the City Council for consideration on or after November 2, 2021. At the end of the public review period, written responses will be prepared for all substantive comments received on the Draft EIR during the circulation period. The comments and responses will then be included in the Final EIR and will be considered by the City Council prior to making a decision on the Project.

# 1.7 Organization of this Environmental Impact Report

This Draft EIR is organized into Chapters, as identified and briefly described below. Chapters are further divided into Sections (e.g., Section 3.1, Aesthetics).

**Chapter 1** **Introduction and Summary.** Chapter 1 describes the purpose and organization of the Draft EIR, context, and terminology used in the Draft EIR. This Chapter also identifies the key issues to be resolved in the Draft EIR and summarizes the environmental impacts and mitigation measures to reduce or eliminate those impacts.

**Chapter 2** **Project Description.** Chapter 2 describes the Project, including the Project objectives, location and setting, background, overall concept and proposed activities, and anticipated permits and approvals.

**Chapter 3** **Environmental Setting, Impacts and Mitigation Measures.** For each environmental resource area (broken out into sections), Chapter 3 describes the existing environmental and regulatory setting, discusses the environmental impacts associated with the Project, identifies feasible mitigation measures to reduce or eliminate those impacts, and provides conclusions on significance.

**Chapter 4** **Alternatives Description and Analysis.** Chapter 4 describes the alternatives to the Project that are being considered to mitigate the Project's environmental impacts while meeting the Project's objectives. This Chapter also identifies the Environmentally Suitable Alternative.

**Chapter 5** **Other CEQA Required Sections.** Chapter 5 describes the unavoidable significant impacts, growth-inducing, and irreversible impacts of the Project.

**Chapter 6** **List of Preparers.** Chapter 6 identifies the Draft EIR authors and consultants who provided analysis in support of the Draft EIR's conclusions.

**Appendices** **Appendices A-E.** contain various key technical reports and publications that have been summarized or otherwise used for preparation of the Draft EIR.

## 1.8 Areas of Controversy and Key Issues to be Resolved

Section 15123 of the CEQA Guidelines requires an EIR to identify areas of controversy known to the Lead Agency, including issues raised by agencies and the public. The following provides a brief summary of the comments and issues identified during the scoping process for the EIR. Comments received on the NOP are included and summarized in Appendix B of this document.

An ISMND was previously prepared for the Project and publicly circulated. The ISMND was circulated between January 20, 2021 and February 22, 2021. The City received 39 comment letters and voicemails from agencies, organizations, and individuals. A Final ISMND and Response to Comments was then prepared and is posted on the City's website https://www.cityofarcata.org/720/Old-Arcata-Road-Design-Project in April 2021. The Response to Comments and Final ISMND are included as Appendix E.

Comments received on the ISMND included statements germane to CEQA as well as concerns regarding issues not considered to be environmental issues under CEQA, such as proposed changes to existing parking, potential changes to private landscaping and trees, requests for additional community engagement, and statements for or against the Project or specific elements thereof. Comments indicative of areas of controversy on environmental issues germane to CEQA included:

– Requests for an EIR and alternatives analysis, given statements in opposition to the proposed roundabout specifically, as well as concerns related to unanalyzed potential impacts to historic resources;
– Concerns related to how the Project would affect existing drainage issues within and near the Project Area;
– Concerns related to construction and operational noise, including potential noise related impacts that could affect the Mistwood School at the intersection of Jacoby Creek Road and Old Arcata Road; and
– Disagreement with the ISMND's findings pursuant to impacts to historic resources and Bayside's potential standing as a historic district.

## 1.9 Summary of Impacts and Mitigation Measures

Table 1-1 identifies, by resource category, the significant Project impacts, proposed mitigation measures, and post-mitigation significance. Additional information about the impacts and mitigation measures can be found in Chapter 3 of this Draft EIR, as referenced for each resource category.

*Table 1-1 Summary of Impacts and Mitigation Measures*

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| Aesthetics | | | |
| Impact AES-1: Would the Project have a substantial adverse effect on a scenic vista? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact AES-2: Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | No Impact | No mitigation proposed | Not Applicable |
| Impact AES-3: In a non-urbanized area, would the Project 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 a publicly accessible vantage point). | Potentially Significant | **AES-1: Minimize Temporary Visual Impacts**<br>The City shall avoid or substantially lessen visual impacts by reducing construction disturbance. Measures shall include:<br>– The size of construction zones and staging areas shall be the minimum operable size. The location of such zones shall be adjusted to minimize visual impacts associated with construction vehicles, equipment and Project-specific activity.<br>– To the extent feasible, alignments and locations of facilities shall be adjusted to avoid visually sensitive features and conditions that would result in major landform alteration or mature landscape removal.<br>– The City shall restore or revegetate staging areas disturbed by construction activities, including restoring pre-Project topographic features and reseeding with species comparable to those removed or disturbed during construction. | Less than Significant with Mitigation |
| Impact AES-4: Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact AES-C-1: Would the Project contribute to a cumulatively significant impact to visual resources? | Less than Significant | No mitigation proposed | Not Applicable |
| Air Quality | | | |
| Impact AQ-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan? | Less than Significant | No mitigation proposed | Not Applicable |

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| Impact AQ-2: Would the Project 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 | No mitigation proposed | Not Applicable |
| Impact AQ-3: Would the Project expose sensitive receptors to substantial pollutant concentrations? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact AQ-4: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact AQ-C-1: Would the Project contribute to a cumulatively significant impact to air quality? | Less than Significant | No mitigation proposed | Not Applicable |
| Biological Resources | | | |
| Impact BIO-1: Would the Project have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW, USFWS or NMFS? | Potentially Significant | **BIO-1: Avoidance and Minimization Measures for Red-Legged Frogs**<br>Although Northern Red-legged Frog breeding is not documented in the Project Area, measures for this species are included because individual frogs may disperse for considerable distances and could enter construction areas. Mitigation Measure BIO-1 is proposed to minimize potential impacts to Northern Red-legged Frogs:<br>1. The City shall retain a qualified biologist to perform a pre-construction survey for the Northern Red-legged Frog within 24 hours prior to commencement of ground disturbance within 50 feet of suitable Northern Red-legged Frog habitat. Suitable habitat would be determined by the City's qualified biologist. The biologist would relocate any specimens that occur within the work-impact zone to nearby suitable habitat.<br>2. In the event that a Northern Red-legged Frog is observed in an active construction zone, the contractor shall halt construction activities in the area and the frog shall be moved to a safe location in similar habitat outside of the construction zone. | Less than Significant with Mitigation |
| Impact BIO-2: Would the Project 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? | No Impact | No mitigation proposed | Not Applicable |

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| Impact BIO-3: Would the Project 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? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact BIO-4: Would the Project 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? | Potentially Significant | **BIO-4: Remove Vegetation Outside of Nesting Bird Season**<br>The City would attempt to remove trees and other vegetation that could potentially contain nesting birds outside the bird nesting season (August 31st and February 1st).<br>**BIO-5: Conduct Nest Survey and Establish Buffers**<br>If vegetation removal or ground disturbance cannot be confined to work outside of the nesting season, a qualified ornithologist shall conduct pre-construction surveys within the vicinity of the Project Area, to check for nesting activity of native birds and to evaluate the site for presence of raptors and special-status bird species. The ornithologist shall conduct a minimum of one day pre-construction survey within the seven day period prior to vegetation removal and ground-disturbing activities. If ground disturbance and vegetation removal work lapses for seven days or longer during the breeding season, a qualified biologist shall conduct a supplemental avian pre-construction survey before Project work is reinitiated.<br>If active nests are detected within the construction footprint or within the construction buffer established by the Project biologist, the biologist shall flag a buffer around each nest. Construction activities shall avoid nest sites until the biologist determines that the young have fledged or nesting activity has ceased. If nests are documented outside of the construction (disturbance) footprint, but within construction buffer, nest buffers would be implemented as needed. In general, the buffer size for common species would be determined on a case-by-case basis in consultation with the California Department of Fish and Wildlife (CDFW). Buffer sizes would take into account factors such as (1) roadway and other ambient noise levels, (2) distance from the nest to the roadway and distance from the nest to the active construction area, (3) noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity;(4) distance and amount of vegetation or other screening between the construction site and the nest; and (5) sensitivity of individual nesting species and behaviors of the nesting birds.<br>If active nests are detected during the survey, the qualified ornithologist shall monitor all nests at least once per week to determine whether birds are being disturbed. Activities that might, in the opinion of the qualified ornithologist, disturb nesting activities (e.g., excessive noise), shall be prohibited within the buffer zone until such a determination is made. If signs of disturbance or distress are observed, the qualified ornithologist shall immediately implement | Less than Significant with Mitigation |

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| | | adaptive measures to reduce disturbance. These measures may include, but are not limited to, increasing buffer size, halting disruptive construction activities in the vicinity of the nest until fledging is confirmed, placement of visual screens or sound dampening structures between the nest and construction activity, queuing trucks to distribute idling noise, locating vehicle access points and loading away from noise-sensitive receptors, reducing the number of noisy construction activities occurring simultaneously, and/or reorienting and/or relocating construction equipment to minimize noise at noise-sensitive receptors. | |
| Impact BIO-5: Would the Project conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact BIO-6: Would the Project 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 | No mitigation proposed | Not Applicable |
| Impact BIO-C-1: Would the Project contribute to a cumulatively significant impact to biological resources? | Less than Significant | No mitigation proposed | Not Applicable |
| Cultural Resources | | | |
| Impact CR-1: Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact CR-2: Would the Project cause a substantial adverse change in the significance of a archaeological resource pursuant to Section 15064.5? | Potentially Significant | **CR-1: Develop and Implement an MOU with Consulting Tribes**<br>The City shall develop an MOU with consulting tribes to that would include:<br>– When and where tribal and archaeological monitors would be needed<br>– Potential Preconstruction guided investigation needs that would occur prior to construction<br>– Inadvertent discovery protocols and plans<br>The MOU shall be developed prior to construction and implemented throughout the duration of Project construction. | Less than Significant with Mitigation |
| Impact CR-3: Would the Project disturb any human remains, including those interred outside of formal cemeteries? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact CR-C-1: Would the Project contribute to a cumulatively significant impact to cultural resources? | No Impact | No mitigation proposed | Not Applicable |

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| Energy Resources | | | |
| Impact ER-1: Would the Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact ER-2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | No Impact | No mitigation proposed | Not Applicable |
| Impact ER-C-1: Would the Project contribute to a cumulatively significant impact to energy resources? | Less than Significant | No mitigation proposed | Not Applicable |
| Geology and Soils | | | |
| Impact GEO-1: Would the Project directly or indirectly cause potential substantial adverse effects including the risk of loss, injury, or death involving 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 | No mitigation proposed | Not Applicable |
| Impact GEO-2: Would the Project directly or indirectly cause potential substantial adverse effects including the risk of loss, injury, or death involving strong seismic ground shaking? | No Impact | No mitigation proposed | Not Applicable |
| Impact GEO-3: Would the Project directly or indirectly cause potential substantial adverse effects including the risk of loss, injury, or death involving liquefaction, landslides, or otherwise unstable soils? | No Impact | No mitigation proposed | Not Applicable |
| Impact GEO-4: Would the Project result in substantial soil erosion or the loss of topsoil? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact GEO-5: Would the Project 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 mitigation proposed | Not Applicable |

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| Impact GEO-6: Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | Potentially Significant | **GEO-1: Inadvertent Discovery of Paleontological Resources**<br>If potential or paleontological resources are encountered during Project subsurface construction activities or geotechnical testing, all work within 50 feet of the find shall be stopped, and a qualified archaeologist funded by the City and approved by the City shall be contacted to evaluate the find, determine its significance, and identify any required mitigation. The applicant shall be responsible for implementing the mitigation prior to construction activities being re-started at the discovery site. | Less than Significant with Mitigation |
| Impact GEO-C-1: Would the Project contribute to a cumulatively significant impact to geology and soils? | No Impact | No mitigation proposed | Not Applicable |
| Greenhouse Gas Emissions | | | |
| Impact GHG-1: Would the Project generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact GHG-2: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact GHG-C-1: Would the Project contribute to a cumulatively significant impact relative to GHG emissions? | No Impact | No mitigation proposed | Not Applicable |
| Hazards and Hazardous Materials | | | |
| Impact HAZ-1: Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact HAZ-2: Would the Project 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 | No mitigation proposed | Not Applicable |
| Impact HAZ-3: Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | Less than Significant | No mitigation proposed | Not Applicable |

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| Impact HAZ-4: Would the Project 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? | Potentially Significant | **HAZ-1: Evaluate and Manage Potential Contamination from "Roger's Garage"**<br>Historical records of previous borings would be reviewed (if available) to mitigate duplicate boring efforts. If existing data is insufficient to evaluate potential contamination of soils to be excavated with the Project Area, additional pre-construction borings would occur. If sampled soil is found to be impacted by ADL, petroleum hydrocarbons, or other regulated contaminants, a Construction Soil Groundwater Monitoring Plan (SGMP) would be prepared prior to any construction activities. During construction, the SGMP would be implemented.<br>**HAZ-2: Evaluate and Managed Aerially Deposited Lead**<br>In areas of ground disturbance, pre-construction soil borings shall characterize lead concentrations in soil and groundwater in anticipation of construction activities. Once the areas of ground disturbance and potential dewatering are confirmed, a Preliminary Site Investigation (PSI) workplan shall identify location and number of borings necessary for pre-characterization and depth for sample collection. Historic soil boring information (if available) shall be reviewed to further define boring locations and mitigate duplicative borings.<br>Laboratory analytical results of soil samples collected from the borings shall be utilized to ascertain whether health and safety concerns are present for construction workers and determine the potential for ADL impacted groundwater, and soil and/or groundwater handling and disposal options. Proposed soil borings and/or grab groundwater sample locations shall be determined following identification of the areas and depths of soil excavation and dewatering activities. If pre-construction TTLC soil characterization sampling indicates that concentrations of lead are elevated above 1,000 ppm, or if STLC analytical results are greater than 5 mg/l, then such data may indicate potential ADL impacts to groundwater.<br>If construction activities include dewatering, and if laboratory analysis of pre-construction soil borings indicate elevated total and STLC concentrations of 1,000 ppm and 5 mg/L, respectively, then pre-construction groundwater characterization shall occur. If lead impacted soil or groundwater is identified during pre-construction characterization, then a SGMP shall be developed to identify protocols that should be utilized to proactively manage potentially impacted soil and groundwater within the Project alignment and reduce exposure to site workers.<br>If pre-construction characterization indicates ADL impacts above STLC levels to soil and/or groundwater, site workers involved in excavation activities be trained in accordance with the Hazardous Waste Operations and Emergency Response (HAZWOPER) certification (Occupational Safety and Health Administration [OSHA] 1910.120). | Less than Significant with Mitigation |

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| Impact HAZ-5: 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? | No Impact | No mitigation proposed | Not Applicable |
| Impact HAZ-6: Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | No Impact | No mitigation proposed | Not Applicable |
| Impact HAZ-7: Would the Project expose people or structures to a significant risk of loss, injury, or death involving wildland fires? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact HAZ-C-1: Would the Project result in a cumulatively significant impact from increased exposure of the public or environment to hazards or hazardous substances? | Less than Significant | No mitigation proposed | Not Applicable |
| Hydrology and Water Quality | | | |
| Impact HWQ-1: Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? | Potentially Significant | **HWQ-1: Water Quality Control Measures During Excavation**<br>In instances where excavation occurs within the vicinity of stream channels, flowing ditches, or wetted waters of the U.S. or State, erosion and sediment control measures shall be implemented. These measures shall include installation and maintenance of silt-fence along channel banks or wetted waters as specified in Project designs, and development of erosion control plans to prevent inadvertent sediment delivery. | Less than Significant with Mitigation |
| Impact HWQ-2: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin? | No Impact | No mitigation proposed | Not Applicable |
| Impact HWQ-3: Would the Project 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? | No Impact | No mitigation proposed | Not Applicable |

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| Impact HWQ-4: Would the Project substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | No Impact | No mitigation proposed | Not Applicable |
| Impact HWQ-5: Would the Project 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? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact HWQ-6: Would the Project 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? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact HWQ-7: Would the Project impeded or redirect flood flows? | No Impact | No mitigation proposed | Not Applicable |
| Impact HWQ-8: Would the Project cause an increase in flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact HWQ-9: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | No Impact | No mitigation proposed | Not Applicable |
| Impact HWQ-C1: Would the Project contribute to a cumulatively significant impact to hydrology and water quality? | Less than Significant | No mitigation proposed | Not Applicable |
| Noise | | | |
| Impact NOI-1: Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | Less than Significant | No mitigation proposed | Not Applicable |

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| Impact NOI-2: Would the Project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | Less than Significant | No mitigation proposed | Not Applicable |
| Impact NOI-3: For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project Area to excessive noise levels? | No Impact | No mitigation proposed | Not Applicable |
| Impact NOI-C-1: Would the Project contribute to a cumulatively significant impact from noise? | Less than Significant | No mitigation proposed | Not Applicable |
| Transportation | | | |
| Impact TR-1: Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? | Less than significant | No mitigation proposed | Not Applicable |
| Impact TR-2: Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | Less than significant | No mitigation proposed | Not Applicable |
| Impact TR-3: Would the Project substantially increase hazards due to geometric design features e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | No Impact | No mitigation proposed | Not Applicable |
| Impact TR-4: Would the Project result in inadequate emergency access? | Potentially Significant | **TR-1: Maintain Emergency Access and Notify Emergency Responders**<br>The City shall require contractors to provide adequate emergency access to all properties along the corridor during the construction process. At locations where the access to a nearby property is temporarily blocked, the contractor shall be required to have ready the means necessary to accommodate access by emergency vehicles to such properties, such as plating over excavations. As construction progresses, emergency providers shall be notified in advance of the timing, location, and duration of construction activities and the locations and durations of any temporary lane closures. | Less than Significant with Mitigation |
| Impact TR-C-1: Would the Project contribute to cumulatively significant impact related to transportation? | No impact | No mitigation proposed | Not Applicable |

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| Tribal Cultural Resources | | | |
| Impact TCR-1: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historic Resources, or in a local register of historic resources as defined in Public Resources Code section 5020.1(k)? | Potentially Significant | **CR-1: Develop and Implement an MOU with Consulting Tribes** *See Impact CR-2 for full text.* | Less than Significant with Mitigation |
| Impact TCR-2: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to the criteria set forth in subdivision (c) of the Public Resources Code section 5024.1? In applying the criteria set forth in subdivision (c) of the Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe. | Potentially Significant | **CR-1: Develop and Implement an MOU with Consulting Tribes** *See Impact CR-2 for full text.* | Less than Significant with Mitigation |
| Impact TCR-C-1: Would the Project contribute to cumulatively significant impact related to Tribal Cultural Resources? | Less than Significant | No mitigation proposed | Not Applicable |
| Utilities and Service Systems | | | |
| Impact UTL-1: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | No Impact | No mitigation proposed | Not Applicable |
| Impact UTL-2: Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years? | No Impact | No mitigation proposed | Not Applicable |

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| Impact UTL-3: Would the Project 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? | No Impact | No mitigation proposed | Not Applicable |
| Impact UTL-4: Would the Project 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 | No mitigation proposed | Not Applicable |
| Impact UTL-5: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | No Impact | No mitigation proposed | Not Applicable |
| Impact UTL-C-1: Would the Project contribute to cumulatively significant impact related to utilities and service systems? | No impact | No mitigation proposed | Not Applicable |
| Wildfire | | | |
| Impact WDF-1: Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan? | No Impact | No mitigation proposed | Not Applicable |
| Impact WDF-2: Would the Project, 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? | Less than significant | No mitigation proposed | Not Applicable |
| Impact WDF-3: Would the Project 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? | Less than significant | No mitigation proposed | Not Applicable |

| Impact | Project Significance | Mitigation Measure | After-Mitigation Significance |
|---|---|---|---|
| Impact WDF-4: Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides as a result of runoff, post-fire slop instability, or drainage changes? | Less than significant | No mitigation proposed | Not Applicable |
| Impact WDF-C-1: Would the Project contribute to a cumulatively significant impact related to wildfire risk? | Less than significant | No mitigation proposed | Not Applicable |

## 1.10 References

None.

# 2. Project Description

The Old Arcata Road Rehabilitation & Pedestrian/Bikeway Improvements Project (Project) would improve motorized and non-motorized transportation and user safety in Bayside, California (Figure 2-1). The Project would repave Old Arcata Road, include bike lanes on both sides of the roadway alignment, and improve and extend an existing shared use walkway along the west side of Old Arcata Road from approximately 600 feet south of the Buttermilk Road Roundabout and extending south to approximately 300 feet beyond the Jacoby Creek Road intersection. The total Project length is approximately one mile.

## 2.1 Project Background

In 2016, City Staff identified the need to address the lack of adequate bicycle and pedestrian facilities along Old Arcata Road within city limits (SHN and Omni Means 2017). The need for improvements was later substantiated during a City-led community design charrette process, which included the identification of deficiencies and potential improvements of the roadway. The results of the community design charrette led to the development of a Project Study Report (PSR) (City of Arcata 2017), and City Council selection of a preferred alternative in November 2017. In 2018 the City secured partial funding for Project development and construction through State Transportation Improvement Program (STIP).

The City first prepared an Initial Study/Proposed Mitigated Negative Declaration (ISMND) to comply with CEQA's environmental analysis and disclosure requirements. The ISMND was circulated between January 20, 2021, and February 22, 2021. The ISMND identified the likely environmental consequences associated with the Project, and recommended mitigation measures to reduce potentially significant impacts. See Appendix E for the Final ISMND and Response to Comments.

The Notice of Completion and ISMND were filed with the Office of Planning and Research State Clearinghouse on January 15, 2021, and the ISMND was made available for public review on January 20, 2021. The Notice of Intent was submitted to the Humboldt County Clerk-Recorder January 19, 2021 and was published in the Mad River Union on January 20, 2021. The review period ended at 5:00 pm on February 22, 2021. The document was made available for review at the City of Arcata website at https://www.cityofarcata.org/720/Old-Arcata-Road-Design-Project. The ISMND was distributed to local, State, and federal responsible and trustee agencies, and a notice of availability was distributed to regional tribal governments.

Written and voicemail comments were received from 39 individuals, agencies, or organizations. As described in Section 1.8 – Areas of Controversy and Key Issues to be Resolved, comments included statements for and against the Project, including the proposed roundabout at the intersection of Jacoby Creek Road and Old Arcata Road. Given the fair argument raised regarding disagreement with the ISMND's findings specific to potential impacts to historic resources and Bayside's potential standing as a historic district despite the ISMND's finding of no significant impacts to historical or other resources, the City decided to prepare an EIR for the Project.

## 2.2 Purpose and Need

The purpose of the Project is to improve connectivity and safety on an existing roadway for non-motorized and motorized travelers in Bayside, California and increase the use of active modes of transportation. The Project is intended and designed to serve current City population. The Project was initially developed during a community-driven design charrette process for preliminary design concepts (SHN and Omni Means 2017). Project benefits include heightened driver awareness, particularly at the intersection of Jacoby Creek and Old Arcata Roads, and filling the gap for non-motorized travel between the Jacoby Creek School and Jacoby Creek Road. The Project would also reconstruct or rehabilitate the existing roadway pavement in order to extend its useful life.

Many of the existing walkways, driveways and curb ramps within the Project corridor are non-compliant with current accessibility codes and standards and create a barrier to pedestrian mobility. In addition, there is a lack of pedestrian facilities and connectivity between Hyland Street and Jacoby Creek Road, and a lack of pedestrian facilities on Hyland Street (sidewalks).

The existing roadway pavement (travel lanes and bike lanes) is extremely deteriorated and considered to be in "poor" condition with an average pavement condition index (PCI) of 61.6 (NCE 2017). Old Arcata Road is the primary backbone for the Bayside (southern Arcata) transportation network and pavement failure would result in significant social and economic impacts to the community, including residents and businesses. Old Arcata Road acts as an alternative route and oversized load route for Highway 101, provides access to important facilities such as the Sunnybrae Middle School, Jacoby Creek Elementary School, and the Bayside Post Office, provides access to unincorporated areas, and may serve as a future Humboldt Transit Authority bus route for public transportation.

The 2016 Caltrans EIR for the Eureka-Arcata Route 101 Corridor Improvement Project evaluated Level of Service for the Jacoby Creek Road and Old Arcata Road intersection for both 2013 and 2041. Level of Service is a standard to measure operating level (e.g., wait time for turning and maneuverability) and does not evaluate other safety conditions, such as speed, collisions, or pedestrian safety and access. While the 2013 Level of Service meets current standards, the 2041 Level of Service, especially for turning left onto Old Arcata Road from Jacoby Creek, was found to be very poor (Level of Service C for AM Peak Hours and Level of Service F for PM Peak Hours). Additionally, the Caltrans EIR noted that in 2008, a roundabout was installed at Indianola Cutoff and Old Arcata Road, which effectively and substantially reduced traffic speeds in the vicinity of this intersection (Caltrans 2016).

## 2.3 Goals and Objectives

The goal of the Project is to link critical activity centers within the Bayside community, including schools, neighborhood facilities, and residential areas. The Project seeks to accommodate the expected volume and diversity of users, which includes a range of ages, experience levels, speeds, trip purposes, and mobility modes. The Project includes the following objectives:

- Rehabilitate and reconstruct the roadway pavement, and improve traffic striping and signage
- Improve intersection safety at the intersection of Old Arcata and Jacoby Creek Roads, as well as other intersections within the Project corridor
- Extend pedestrian connectivity from Jacoby Creek Road intersection to Buttermilk Road intersection, and provide for safer routes to schools for students and families
- Increase multimodal transit use by improving bicycle and pedestrian facilities via shared use pathways, re-striped bicycle lanes, improved and extended sidewalks, and enhanced cross walks
- Decrease speed, calm traffic, improve traffic operations, and increase safety at the intersection of Jacoby Creek and Old Arcata Road, an area identified by the Bayside community as unsafe particularly for pedestrians and bicyclists due to speeding vehicles and an uncontrolled intersection
- Create a "gateway" at the southern entrance to Arcata
- Improve subsurface storm drainage infrastructure and accommodate additional City underground utility improvements as needed (water and sewer)
- Maintain consistency with City policies in the Transportation Element of the General Plan and the Bicycle and Pedestrian Master Plan for alternative transportation, and recommendations provided by the Transportation Safety Committee
- Improve traffic operations and pedestrian safety at Hyland Street near Jacoby Creek School
- Implement a project that does not require permanent right of way acquisitions
- Minimize potential environmental impacts to the extent feasible, particularly in the Coastal Zone
- Apply accepted traffic engineering standards to guide selected roadway and safety improvements

## 2.4 Project Location

The Project is primarily located within the limits of the City of Arcata (Figure 2-1). The proposed roundabout and other roadway improvements at the Jacoby Creek Road intersection, along with its eastern and southern approaches (on Jacoby Creek Road, and Old Arcata Road, respectively) are located within the jurisdiction of Humboldt County. The Coastal Zone boundary is located on the eastern edge of Old Arcata Road (Figure 2-2). The primary permitting jurisdiction resides with the Local Coastal Programs of both the City of Arcata and Humboldt County for their respective portions of the Project. Work would generally occur within the existing City of Arcata or Humboldt County right of ways. Necessary permissions will be received for any work outside existing right of ways.

The Project corridor along Old Arcata Road and Hyland Street is primarily bound by private residences, including medium-high density residential, rural residential, and low density residential housing. The Jacoby Creek Elementary School and Mistwood Education Center are located along the Project corridor, as are small businesses (zoned Commercial Mixed), a U.S. Post Office, and the Bayside Community Hall. The area between Highway 101 and Old Arcata Road includes Agricultural-Exclusive properties within the City of Arcata, in the Gannon Slough and Jacoby Creek bottomlands. Several small Public-Facility parcels are located adjacent to the Project corridor, including community gardens.

## 2.5 Project Components

The Project includes intersection and pedestrian safety improvements along Old Arcata Road. As described in more detail below, the Project includes road resurfacing, a paved walkway, sidewalks and curb ramps, crosswalks, speed humps, lighting, signage, a retaining wall, and stormwater drainage and infrastructure improvements. New pavement would extend into residential and commercial driveways along Old Arcata Road to ensure smooth transition between existing and new pavement elevations. Construction of a new sidewalk along approximately 375 feet of Hyland Street is also included in the Project. Particular constraints within the Project alignment may warrant adjustments to the standards to address site specific issues. Refer to Figure 2-3 through Figure 2-6 for an overview of key Project components. Briefly, the Project includes the following components:

- Repaving along Old Arcata Road and Adjacent Bike Lanes
- New and Replacement Pedestrian Walkways
- Crosswalks and Speed Humps
- Improvements Near Jacoby Creek Elementary School
- Jacoby Creek Road Roundabout
- Landscaping
- Lighting
- Utility Improvements

The Project would terminate approximately 300 feet south of the proposed Jacoby Creek Roundabout along Old Arcata Road. The Jacoby Creek Road pavement improvements would terminate approximately 400 feet east of the proposed roundabout. Drainage improvements on Jacoby Creek Road would terminate approximately 650 feet east of the roundabout.

The Project is being designed in accordance with the American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets, 7th Edition (2018). In addition, the Project would be designed in accordance to other specific applicable standards, including the California Manual on Uniform Traffic Control Devices (MUTCD; CA MUTCD 202`); the 2010 Americans with Disabilities Act (ADA) Standards for Accessible Design; the 2019 California Building Code and portions of the Caltrans Highway Design Manual, 7th Edition (2020). The design for the proposed roundabout geometrics, including bike ramps, follows the National Cooperative Highway Research Program (NCHRP) design standards (FHWA 2010). Design standards applied to proposed Pedestrian-Actuated Rectangular Rapid-Flashing Beacons (RRFB) follows the

MUTCD Interim Approval for Optional Use of Pedestrian-Actuated Rectangular Rapid-Flashing Beacons at Uncontrolled Marked Crosswalks (IA-21).

As part of the Project design process, the City would conduct a design-level geotechnical and pavement investigation for the Project. The City will finalize 100% designs in accordance with the recommendations made in the Project's geotechnical and pavement investigation report.

### 2.5.1 Repaving Along Old Arcata Road and Adjacent Bike Lanes

Old Arcata Road would be repaved between the approximately 600 feet south of the Buttermilk Road to the proposed new roundabout at the Jacoby Creek Road intersection. Repaving would extend approximately 300 feet beyond the new roundabout along both Jacoby Creek Road and Old Arcata Road. The existing roadway width, alignment, and footprint would generally remain the same between the Buttermilk Road Roundabout and Hyland Street, including 10-foot wide travel lanes and adjacent five-foot wide bikes lanes. A left hand turn lane for northbound traffic is proposed at the Jacoby Creek School parking lot at the Hyland Street intersection. South of Hyland Street, the existing roadway alignment would be shifted east up to five feet to accommodate a new six-foot wide walkway, described below.

The existing asphalt roadway would be rehabilitated by overlaying the existing surface and/or grinding-out and replacing the existing surface. Excavation would not extend into the native subgrade, except in isolated areas where deeper excavations may be required to remediate poor soil/subgrade conditions.

Portions of most existing driveways, including the Bayside Post Office driveway, would also be repaved throughout the Project Area.

### 2.5.2 Striping, Signage and Vehicle Control

The repaved Old Arcata Road and Jacoby Creek Road segments would include required striping and signage in order to comply with California Manual on Uniform Traffic Control Devices (MUTCD) requirements.

### 2.5.3 New and Replacement Pedestrian Walkways

The existing walkway between the Buttermilk Road Roundabout and Hyland Street would be replaced to a width of approximately six feet.

South of Hyland Street, the existing roadway alignment would be shifted east up to five feet to accommodate a new six feet wide walkway. The six feet wide walkway would be separated from the roadway by a five feet wide vegetated strip that would also be designed to convey stormwater where practical. Areas of new asphalt roadway would be constructed over 12 to 16 inches of base material and a similar depth of excavation.

### 2.5.4 Crosswalks and Speed Humps

Existing cross walks and speed humps would be upgraded coincident with repaving. New speed humps would be located north of the Hyland Street intersection and south of Jacoby Creek School to improve safety and provide vehicular speed control. A raised crosswalk in front of Jacoby Creek School at the Hyland Street intersection would remain. Crosswalks would also be integrated into the new Jacoby Creek Road Roundabout, discussed below. All crosswalks across Old Arcata Road and Jacoby Creek Road are proposed to include user activated warning lights (e.g., LED enhanced signs or rectangular rapid-flashing beacons[RRFB]).

### 2.5.5 Improvements Near Jacoby Creek Elementary School

In front of Jacoby Creek School, a new six feet wide sidewalk is proposed on the west side of the road in addition to a left hand turn lane for northbound Old Arcata Road. The on-street diagonal parking would be eliminated to accommodate the sidewalk and turn lane. Some minor modifications to the school parking lot are also proposed,

including replacing a portion of the raised landscape island with paved parking stalls. Construction of a new sidewalk along approximately 375 feet of Hyland Street is also included in the Project. Where necessary, curb ramps and gutters would be integrated into the sidewalk design. A new retaining wall would be constructed near the Jacoby Creek Road roundabout.

New concrete for the retaining wall, sidewalks, and walkways will be colorized to improve visual connectivity to maintain consistency with the existing rural setting of the community. Stamped and colored concrete will be applied to roadway dividing medians. The retaining wall near the Jacoby Creek intersection would be approximately one foot above the road grade. Depending on the final design grade, a fence (approximately four feet tall) would be attached to the top of the retaining wall for edge protection. The fence would be transparent, most likely coated black chain link. A fence of similar style would also be installed on the opposite side of Old Arcata Road in front of the City pump station. The retaining wall and fencing would not impede views within or adjacent to the Project corridor or otherwise diminish the visual character of the vicinity.

The five paved diagonal parking spaces on Old Arcata Road in front of Jacoby Creek Elementary School would be eliminated in order to accommodate the proposed improvements.

### 2.5.6 Jacoby Creek Road Roundabout

A new roundabout is proposed for the intersection at Jacoby Creek Road and Old Arcata Road to improve traffic flow and user safety. Crosswalks, signage, lighting, and paved walkways would be integrated into the roundabout. A new retaining wall would extend along the west side of Old Arcata Road adjacent to the roundabout. The total length of the wall would be 200 feet. Modifications and repaving of the roadway that serves the Bayside Post Office may also be required.

The roundabout would be configured to be within existing City and County right of way with no permanent encroachments onto private property (easements may be required for temporary construction, but the Project has been designed to avoid all permanent acquisition of private property). Excavation to accommodate the roundabout and roadway approaches is expected to be approximately two to four feet, although some isolated deeper excavations may be required to remediate poor soil/subgrade conditions.

Concrete improvements associated with the roundabout, including the roundabout apron, sidewalk, and walkways would include integral color to darken the concrete and provide a weathered look, designed to blend into the existing community aesthetic and character and avoiding a stark visual alteration. If desired by community members, sculptural pieces may also be installed in the roundabout center, in coordination with the City and other stakeholders.

### 2.5.7 Landscaping

Trees removed during construction will be replaced in other nearby locations. Tree removal would be limited to one or two locations near the roundabout at the intersection of Jacoby Creek Road and Old Arcata Road. Tree removal would not occur on any private property. All tree plantings associated with the Project will include appropriate tree species designed to blend into surrounding mature vegetation.

The center of the roundabout will be mounded to a height of approximately three to five feet above grade and landscaped with appropriate vegetation species. Plantings would be consistent with other City roundabouts and public right of ways. The City anticipates using grasses and/or other drought tolerant species. All new plantings would be designed to maximize connectivity with existing landscaping and mature trees.

### 2.5.8 Lighting

The Project would include streetlight installation in conjunction with the new Jacoby Creek Road roundabout. Lighting would be designed to protect wildlife and nighttime views, including views of the night sky. The Project will be designed to be consistent with the City's design guidelines, Section 9.30.070 (Outdoor Lighting) of the Arcata Land Use Code, and the recommendations of the International Dark-Sky Association, which includes

standards for fixtures, shielding, wattage, placement, height, and illumination levels. To comply with these requirements, lighting for the Project will be the minimum lumens necessary, directed downward, shielded, and pedestrian level when feasible. This will ensure lighting is contained within the site and does not cause significant lighting and glare impacts for surrounding land uses and sensitive habitat areas.

### 2.5.9 Utility Improvements

Utility improvements would include storm drain, sanitary sewer, and water infrastructure improvements. The Project includes improvements to the underground storm drain infrastructure that extends along the length of planned improvements in discrete locations. Improvements include new and upgraded storm drain catch basins, storm drain piping, and storm drain junction boxes. Excavation and trenching depths for storm drain systems will be approximately four feet to six feet max. Work would also include the installation of shallow swales to convey stormwater runoff.

Existing sanitary sewer laterals may be replaced with new cleanouts placed at the edge of the right of way. Depth of excavation/trenching for sewer lateral replaced would be approximately three feet (six feet max).

Water service connections may be updated, along with resetting and/or installation of water meters within City/Public right of way.

## 2.6 Project Construction

Construction of the Project would involve construction staging, establishing site access, hauling, dewatering, and traffic control. A Temporary Traffic Control Plan would be developed by the contractor and approved by the City prior to Project implementation to ensure flow of traffic along the Project corridor.

Following construction, the contractor would demobilize and remove equipment, supplies, and construction wastes. The disturbed areas along the Project alignment would be restored to pre-construction conditions or stabilized with a combination of grass seed (broadcast or hydroseed), straw mulch, rolled erosion control fabric, rock, and other plantings/vegetation. Construction would primarily include trimming and/or removal of trees and vegetation, excavation and grading, concrete and asphalt paving, replacement of sanitary sewer laterals, and trenching and excavation to install new sanitary sewer laterals and storm drainage systems (inlets, pipes, and/or culverts). Construction would also include installation of new lighting, new and upgraded crosswalks and speed bumps, a retaining wall, and signage along the Project alignment. All construction activities would be accompanied by both temporary erosion and sediment control best management practices (BMPs) typically applied to all City projects.

It is not anticipated that any temporary utility extensions, such as electric power or water, would be required for construction.

### 2.6.1 Construction Time, Duration, and Hours

Construction would begin as soon as late 2022, extending into 2023. Construction is anticipated to occur over a six to eight month construction window. If feasible, vegetation clearing would occur during the non-bird nesting season, between August 31st and February 1st. Work near wetlands would only occur during the dry season between May and October. Compliance with the requirements contained in the Arcata General Plan Noise Element (Policies N-5d and N-5e) and the Arcata Land Use Code (Section 9.30.050[D][2]), will minimize potential noise impacts from short-term construction activities. These requirements place limitations on the days and hours of construction activities to allow construction schedules to take advantage of the weather and normal daylight hours, and to ensure that nearby residents as well as nonresidential activities are not disturbed by the early morning or late night activities. Hours of construction would be limited to 8:00 a.m. to 7:00 p.m. on Monday through Friday and from 9:00 a.m. to 7:00 p.m. on Saturdays. Heavy-equipment related construction activities are not allowed on Sundays. Construction on Sunday or legal and county holidays is not currently anticipated except

for emergencies or with prior approval from the City of Arcata. All stationary and construction equipment are required to be maintained in good working order and fitted with factory approved muffler systems.

### 2.6.2 Construction Equipment

A variety of construction equipment would be used to build the Project. This would include, but not necessarily be limited to, excavators, backhoes, front end loaders, scrapers, graders, concrete saws, jackhammers, chainsaws, rollers, asphalt pavers, compactors, air compressors, generators, and pneumatic tools. A variety of trucks including concrete mixers, haul trucks, and water trucks would also be required. Site preparation, including demolition, clearing and grading of the Project site as necessary would require the removal and off-haul of materials. This would include, but not necessarily be limited to, vegetation, concrete, asphalt and fill, and certain existing utilities that would be removed and replaced.

### 2.6.3 Construction Staging Areas

Construction staging areas would be identified during the design phase of work and are expected to occur within the Project footprint, or within paved, graveled or designated, previously disturbed areas. For impact analysis purposes, two staging areas were preliminarily identified—one at the southern end of the Project corridor and the other at the northern end of the Project corridor. Spoils or construction materials would be stored on site within previously designated staging areas only. Excess spoils would ultimately be hauled off-site for disposal and reuse by the contractor.

### 2.6.4 Construction Dewatering

If needed, temporary groundwater dewatering would be conducted to provide a dry work area. Dewatering would involve pumping water out of a trench or excavation. Groundwater would typically be pumped to Baker tanks (or other similar type of settling tank) or into a dewatering bag. Following the settling process provided by a tank or filter, the water would be used for dust control and compaction. Discharge water from Baker tanks would not be discharged into wetlands or any water bodies.

## 2.7 Operation and Maintenance

Following construction, general operation and maintenance activities associated with the proposed Project would be limited to typical roadway maintenance, including annual inspections, trash/debris removal, vegetation management, repaving, and painting.

## 2.8 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 Analysis. Environmental protection actions and mitigation measures, together, would be included in a Mitigation Monitoring Program at the time that the Project is considered for approval.

### 2.8.1 Environmental Protection Action 1 – Stormwater Pollution Prevention Plan (SWPPP)

The Project will seek coverage under State Water Resources Control Board (Water Board) Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities. The City will submit permit registration documents (notice of intent, risk assessment,

site maps, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and certifications) to the Water Board. The SWPPP will address pollutant sources, best management practices, and other requirements specified in the Order. The SWPPP will include erosion and sediment control measures, and dust control practices to prevent wind erosion, sediment tracking, and dust generation by construction equipment. A Qualified SWPPP Practitioner will oversee implementation of the Project SWPPP, including visual inspections, sampling and analysis, and ensuring overall compliance.

# 2.9 Required Agency Approvals

The following permits and approvals are likely to be required prior to construction. Given wetland impacts would be avoided, permits from the North Coast Regional Water Quality Control Board and the U.S. Army Corps of Engineers (USACE) would not be required.

- CEQA compliance
- NEPA compliance
- City of Arcata Coastal Development Permit
- Humboldt County Coastal Development Permit
- Humboldt County Grading Permit
- Humboldt County Encroachment Permit

# 2.10 AB 52 Consultation

The 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 PRC 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 PRC Section 5024.1(c), and considering the significance of the resource to a California Native American tribe.

The City had previously engaged with tribal representative through the AB 52 process during the ISMND prepared for the Project. Coordination with the tribes remains active and ongoing. To complete AB 52 required for this EIR, the City again sent notification letters to the Wiyot Tribe, Blue Lake Rancheria, and Bear River Rancheria on June 11, 2021. The three tribes responded, noting tribal cultural resourced had not been identified in the Area of Potential Effect at this time and that the EIR need not address AB 52 specifically. In their responses, the tribes recommended a tribal monitor be present during archaeological testing and data recovery in locations known to be sensitive. This request has been integrated into the Project (see Section 3.4 – Cultural Resources, Mitigation Measure CR-1). The City sent the three tribes an AB 52 closure letter on July 27, 2021.

## 2.10.1 Project Site Assessment and Special Studies

Table 2-1 below depicts studies completed, study topic and study author for the proposed Project. Given Caltrans has funding and National Environmental Policy Act (NEPA) responsibilities for the Project, all reports included in Table 2-1 have also been reviewed and approved by Caltrans.

*Table 2-1 Project Site Special Studies Summary*

| Name of Study | Topic of Study | Study Author |
|---|---|---|
| Preliminary Environmental Study | Environmental Analysis Required for the Project | GHD |
| Historic Properties Survey Report for the Old Arcata Road Improvements Project | Historic and Archeological Resources | Pacific Legacy, William Rich and Associates, and JRP Historical Consulting |
| Archaeology Survey Report for the Old Arcata Road Improvements Project | Archaeological Resources | Pacific Legacy and William Rich and Associates |
| Historic Resources Evaluation Report for the Old Arcata Road Improvements Project | Historic Resources | JRP Historical Consulting |
| Old Arcata Road Historic Resources Report | Historic Resources | JRP Historical Consulting |
| Post-Review Discovery and Monitoring Plan for the Old Arcata Road Improvements Project | Archaeological Resources | Pacific Legacy |
| Environmentally Sensitive Area Action Plan for Cultural Resources for the Old Arcata Road Improvements Project | Archaeological Resources | Pacific Legacy |
| Phased Identification and Evaluation Plan for the Old Arcata Road Improvements Project | Archaeological Resources | Pacific Legacy |
| Final Special Status Plant Survey and ESHA Evaluation for the Old Arcata Road Improvement Project | Special Status Plants and Environmentally Sensitive Habitat Areas (ESHA) | GHD |
| Old Arcata Road Wetland Delineation Report | Wetlands | GHD |
| Natural Environment Study – Old Arcata Road Rehabilitation & Pedestrian/Bikeway Improvements | Natural Resources | Northstar Environmental |
| Initial Site Assessment – Old Arcata Road Improvements Project | Hazards | GHD |
| Visual Resources Technical Memorandum for the Old Arcata Road Improvement Project | Visual Resources/Aesthetics | GHD |
| Vertical Area of Potential Effect (APE) – Old Arcata Road Improvement Project | Design | GHD |

# 2.11 References

American Association of State Highway and Transportation Officials (AASHTO). 2018. A Policy on Geometric Design of Highways and Streets, 7th Edition.

California Building Standards Commission. 2020. 2019 California Building Code, Title 24, Part 2, Volume 1 of 2.

Caltrans. 2016. Eureka-Arcata Route 101 Corridor Improvement Project, Humboldt County, California. Environmental Impact Report/Statement, Volume I of IV, State Clearinghouse Number 200109035.

Caltrans. 2021. California Manual on Uniform Traffic Control Devices (CA MUTCD) 2014 Edition Revision 6, March 30, 2021.

City of Arcata. 2017. Project Study Report (PSR) Old Arcata Road Rehabilitation & Pedestrian/Bikeway Improvements. Arcata, California.

Department of Justice. 2010. 2010 ADA Standards for Accessible Design.

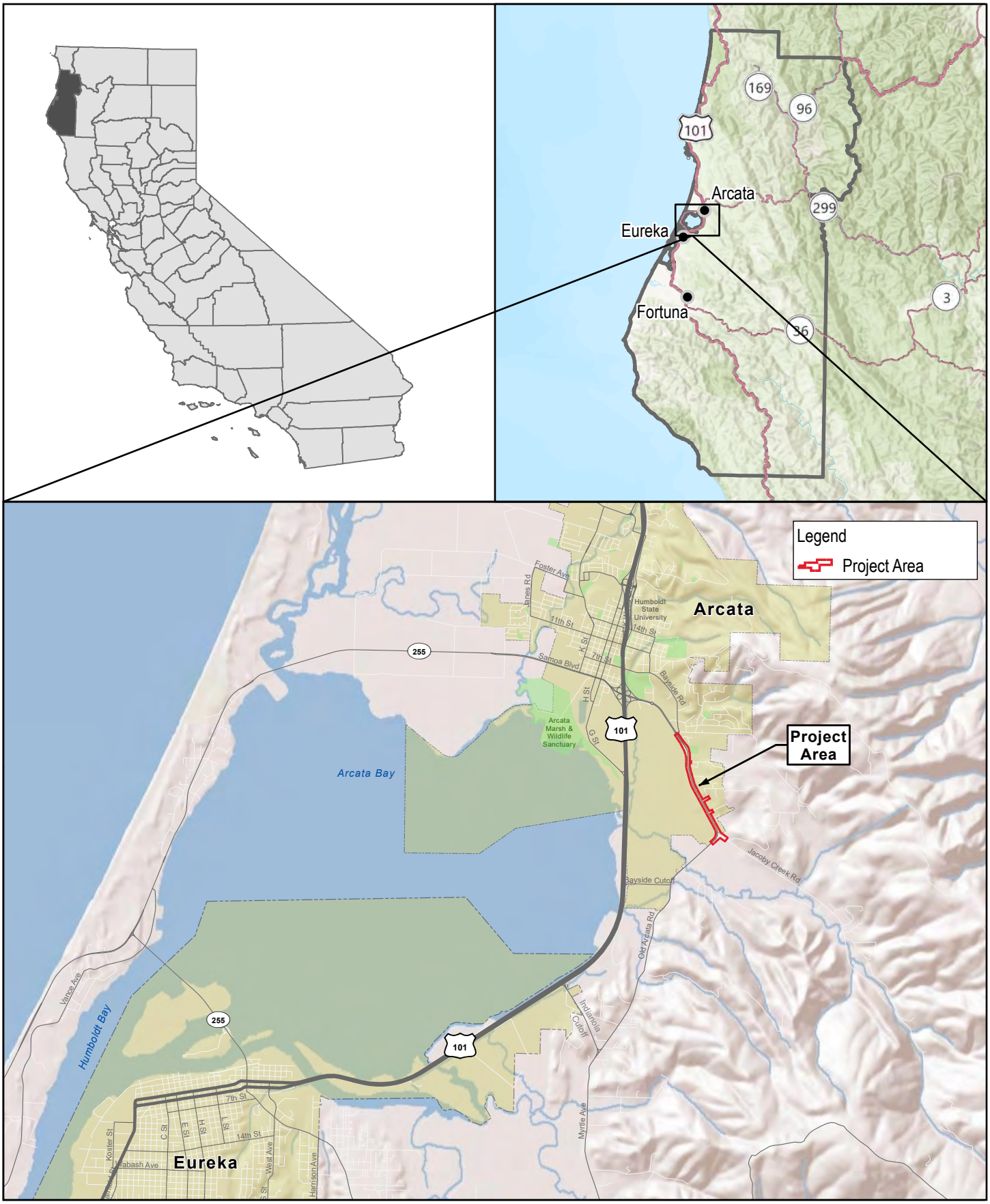
Federal Highway Administration (FHWA). 2018. MUTCD Interim Approval for Optional Use of Pedestrian-Actuated Rectangular Rapid-Flashing Beacons at Uncontrolled Marked Crosswalks (IA-21).

Federal Highway Administration (FHWA). 2010. NCHRP Report 672, Roundabouts: An Informational Guide.

NCE. 2017. City of Arcata Pavement Management Update (2016-17) Final Report October 2017. Prepared for the City of Arcata.

SHN Engineers and Geologists (SHN) and Omni Means Engineering Solutions. 2017. Community Charrette for Design Success: Design Charrette and Preliminary Concept Designs Old Arcata Road Improvements Project.

USACE, 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). U.S. Army Corps of Engineers.

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**City of Arcata**
**Old Arcata Road Improvements**

Project No. **11159130**
Revision No. **-**
Date **6/11/2021**

## Vicinity Map

# FIGURE 2-1

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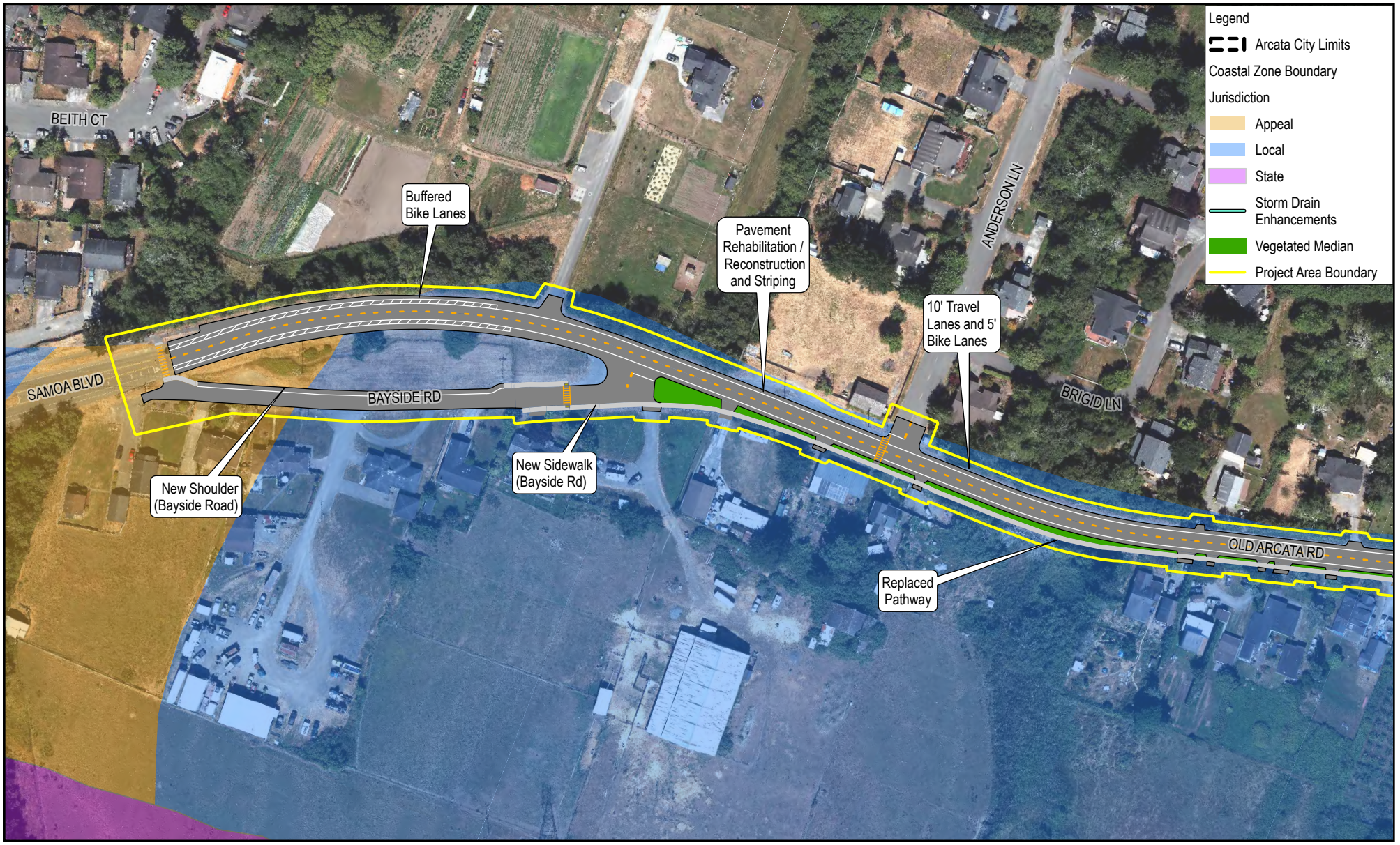


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**City of Arcata**
**Old Arcata Road Improvements**

Project No. **11159130**
Revision No. **-**
Date **7/26/2021**

## Project Components

# FIGURE 2-2

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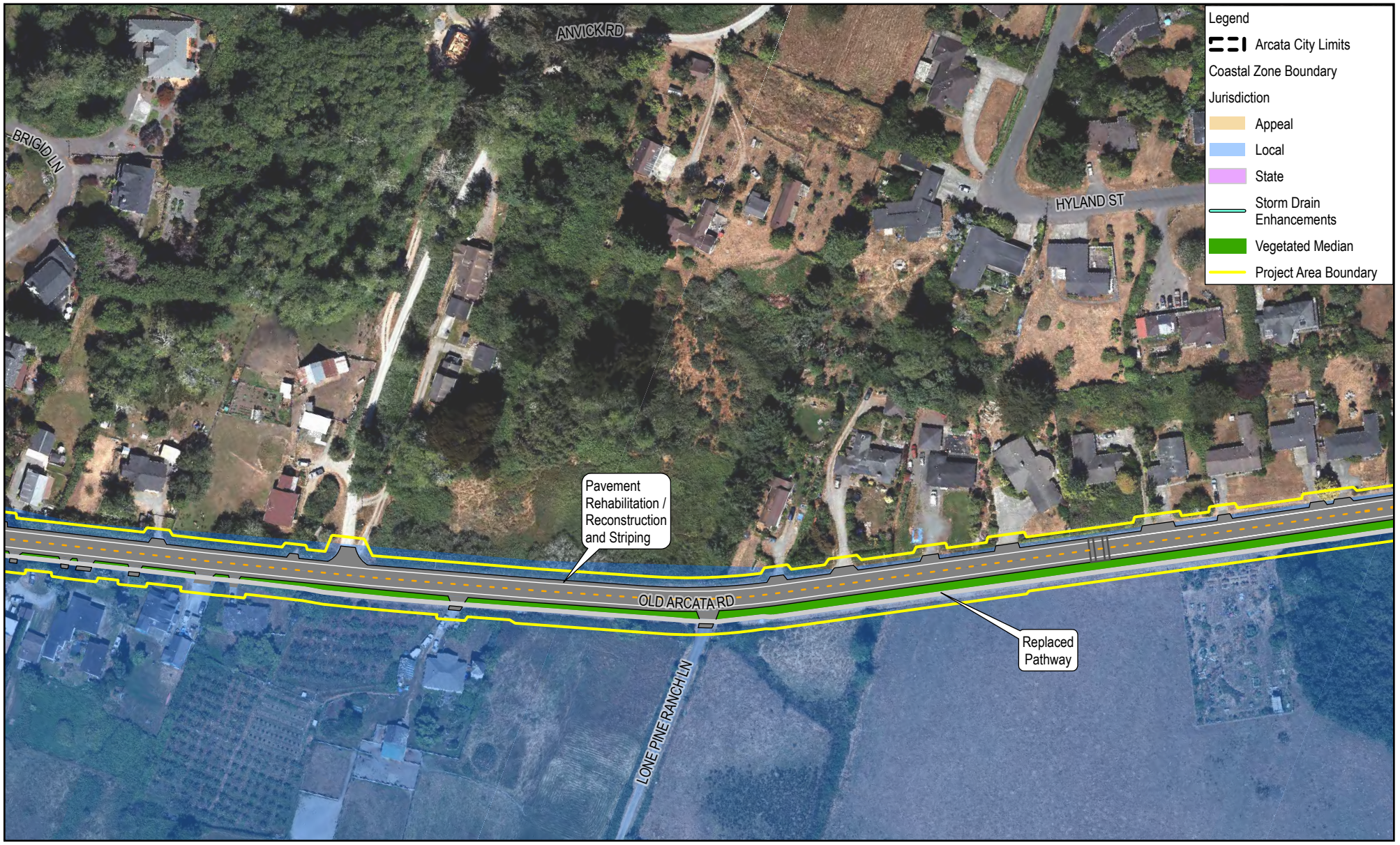


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**City of Arcata**
**Old Arcata Road Improvements**

Project No. **11159130**
Revision No. **-**
Date **7/26/2021**

## Project Components

# FIGURE 2-3

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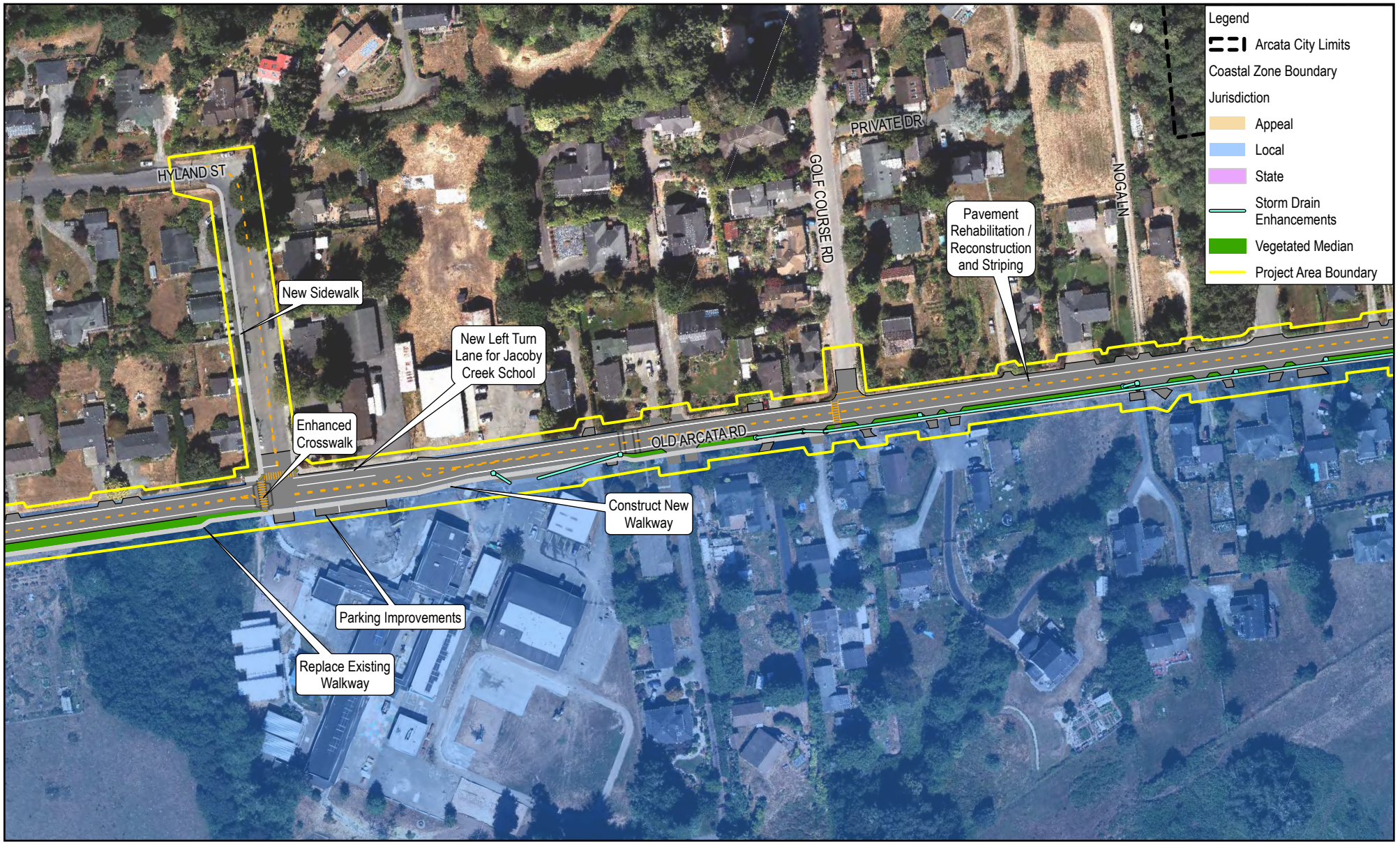


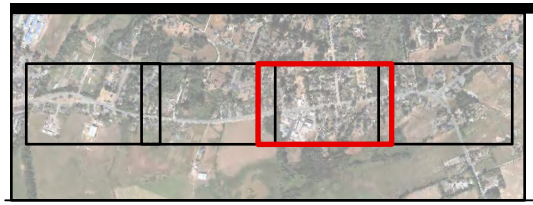

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**City of Arcata**
**Old Arcata Road Improvements**

Project No. **11159130**
Revision No. **-**
Date **7/26/2021**

## Project Components

# FIGURE 2-4

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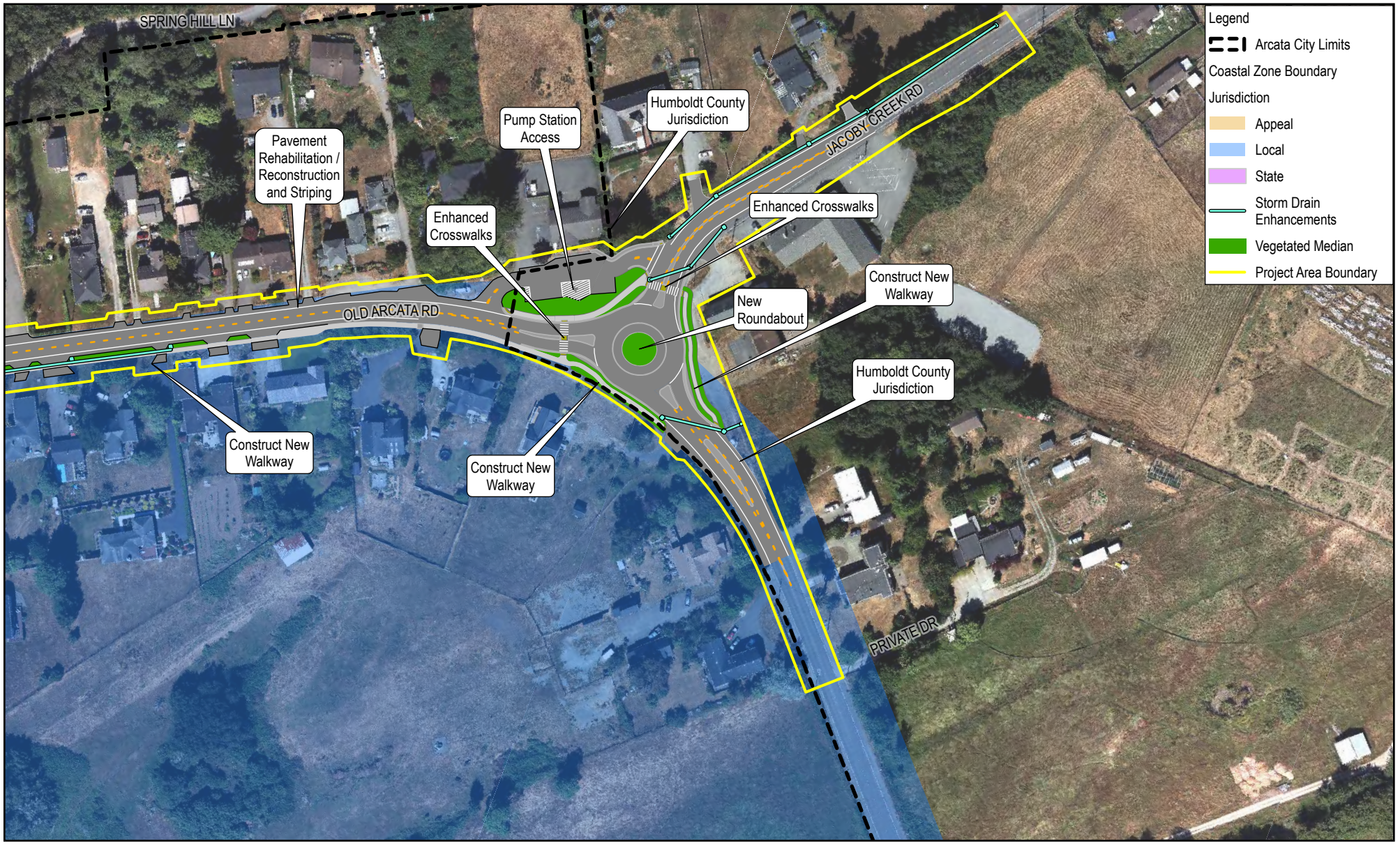


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**City of Arcata**
**Old Arcata Road Improvements**

Project No. **11159130**
Revision No. **-**
Date **7/26/2021**

## Project Components

# FIGURE 2-5

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# 3. Environmental Setting, Impacts, and Mitigation Measures

## Scope of Analysis

This Draft EIR analyzes the potential effects of the Project on the environment under the applicable environmental resource categories listed in the CEQA Initial Study Checklist (Appendix G of the 2021 CEQA Guidelines).

Each environmental resource area potentially impacted by the Project is addressed in the following sections numbered as follows:

- 3.1 Aesthetics
- 3.2 Air Quality
- 3.3 Biological Resources
- 3.4 Cultural Resources
- 3.5 Energy
- 3.6 Geology and Soils
- 3.7 Greenhouse Gas Emissions
- 3.8 Hazards and Hazardous Materials
- 3.9 Hydrology and Water Quality
- 3.10 Noise
- 3.11 Transportation
- 3.12 Tribal Cultural Resources
- 3.13 Utilities and Service Systems
- 3.14 Wildfire

Each section of Chapter 3 contains the following elements:

### Study Area

This subsection identifies the study area used to describe the environmental setting and complete the impact analysis (i.e., the geographic scope of the analysis used to consider direct and indirect impacts). For example, in Section 3.3 (Biological Resources), a Biological Study Area was identified to cover the extent of the proposed Project footprint plus a buffer zone around the perimeter of the Project. Similarly, Section 3.4 (Cultural Resources) establishes an Area of Potential Effect (APE) for analyzing potential impacts to historic and cultural resources; the formal APEs for historic and cultural resources are similar but differ in some locations to capture relevant known or potential resources.

### Setting

This subsection presents a description of the existing physical environmental conditions within the study area for the specific resource area evaluated (see above). The setting describes existing conditions at an appropriate level of detail to understand the impact analysis and provides a baseline by which to compare the potential impacts of the proposed Project.

### Regulatory Framework

This subsection provides a brief discussion of applicable federal, state, and local regulations and policies that are relevant to the resource category. The Project is primarily located within the limits of the City of Arcata, with a small area located in the jurisdiction of Humboldt County at the southern end of the Project corridor. The proposed roundabout at the Jacoby Creek Road intersection, along with its eastern and southern approaches (on Jacoby Creek Road, and Old Arcata Road, respectively) are located within the jurisdiction of Humboldt County.

The Coastal Zone boundary is located on the eastern edge of Old Arcata Road. The primary permitting jurisdiction resides with the Local Coastal Programs of both the City of Arcata and Humboldt County for their respective portions of the Project. Work would occur within the existing City of Arcata or Humboldt County right of ways.

Therefore, regulatory requirements for the City of Arcata, Humboldt County, and other agencies (as applicable) are described in this subsection along with applicable federal and state regulations and policies.

## Evaluation Criteria and Significance Thresholds

This subsection provides the significance thresholds for evaluation of environmental impacts. The significance thresholds are based on the 2021 CEQA Guidelines Appendix G.

## Methodology

The methodology subsection discusses the approach to the impact analysis.

## Impacts and Mitigation Measures

This subsection evaluates the potential for the Project to significantly affect the physical environment described in the setting for each respective resource category. Potential impacts are identified and characterized, and where feasible, mitigation measures are identified to avoid or reduce significant impacts to a less-than-significant level.

## Impacts

As described above, significance thresholds for each environmental resource category are presented in each section of Chapter 3. For the impact analyses, the following categories are used to identify impact significance:

**No Impact**. This determination is made if a resource is absent or if a resource exists within the Project area, but there is no potential that the Project could affect the resource.

**Less-than-Significant Impact**. This determination applies if there is a potential for some limited impact on a resource, but the impact is not significant under the significance threshold.

**Less-than-Significant Impact after Mitigation Incorporated**. This determination applies if there is the potential for a substantial adverse effect in accordance with the significance threshold, but mitigation is available to reduce the impact to a less-than-significant level.

**Significant and Unavoidable Impact**. This determination applies to impacts that are significant, even after mitigation has been included to reduce the impact. Under this determination, no additional feasible mitigation is available to reduce the impact to a less-than-significant level.

## Mitigation Measures

Environmental impacts are numbered in this Draft EIR using the section number followed by sequentially numbered impacts. Mitigation measures are numbered sequentially, and do not necessarily correspond to the impact numbers.

## Cumulative Impacts

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.

Cumulative impacts are discussed in each environmental resource section following the description of the Project-level impacts and mitigation measures. The cumulative impact analysis is based on the same setting, regulatory framework, and significance thresholds presented in each resource category section. Additional mitigation measures are identified if the analysis determines that the Project's contribution to an adverse cumulative impact would be cumulatively considerable and, therefore, significant.

## Approach to Cumulative Impact Analysis

Two approaches to cumulative impact analysis are discussed in CEQA Guidelines Section 15130(b). The first approach is a list of past, present, and probable future projects producing related or cumulative impacts. The second approach is a summary of projections contained in an adopted local, regional or state-wide plan, such as a general plan or related planning document, or in an adopted or certified environmental document, which describes or evaluates conditions contributing to cumulative effects.

For this Draft EIR, the cumulative impact analysis utilizes the list approach. In addition, the analysis of cumulative impacts uses relevant planning documents, where they provide an appropriate evaluation.

To identify projects to be considered for cumulative impacts, outreach was conducted to the following agencies and organizations:

– City of Arcata
– Humboldt County Planning and Building Department
– Humboldt County Planning and Building Department Cannabis Unit
– Humboldt County Department of Public Works
– Jacoby Creek School

Table 3-1 summarizes relevant projects used in the cumulative impacts analysis for each environmental resource topic. The City of Arcata and the Humboldt County Cannabis Unit responded, indicating they were not aware of any applicable projects. Humboldt County Public Works responded and identified the VERO Fiber Networks Project. The Humboldt County Planning and Building Department did not identify any pertinent projects within or near the County's jurisdiction.

The Jacoby Creek Land Trust is initiating a watershed planning study that would ultimately include watershed rehabilitation and/or enhancement projects at undetermined locations in the future, dates TBD. The watershed planning study will cover the lower reach of Jacoby Creek from the Brockwood Bridge downstream to the estuary. Jacoby Creek is located approximately 0.4 miles south of the intersection of Jacoby Creek Road and Old Arcata Road and outside of the Project Area.

Jacoby Creek School responded, noting plans to replace approximately six existing classrooms and construct approximately two additional classrooms. All planned improvements to the school would occur at the back of the campus, away from Old Arcata Road, and would not include any two-story buildings.

# List of Relevant Projects

Table 3-1 provides a list of past, present, and reasonably foreseeable future projects within and near the Project Area, including a brief description of the projects and their anticipated construction schedules (if known). Single-family homes and other similar small-scale uses were not included because of their negligible cumulative effects.

*Table 3-1 Projects Considered for Cumulative Impacts*

| Project Name, Agency/Organization, and Jurisdiction | Project Description | Estimated Construction Schedule | Project Location |
|---|---|---|---|
| Jacoby Creek Water Sustainability and Anadromous Fish Habitat Study<br>*Jacoby Creek Land Trust in County jurisdiction* | Watershed planning study led by the Jacoby Creek Land Trust, which would include designs for discrete enhancement activities along the stream corridor. | 2026 or later | Jacoby Creek, south of the Project Area, at unknown locations in the lower watershed. |
| VERO Fiber Networks Eureka/Arcata Fiber Project<br>*VERO in both City and County jurisdiction* | Installation of four 1.25-inch conduits through subsurface horizontal borings along Old Arcata Road. | 2021 | Within the Project Area along the margin of Old Arcata Road. |
| Jacoby Creek School classroom improvements<br>*Jacoby Creek School in City jurisdiction* | Replace existing classrooms and construct new classrooms near the western portion of the campus. | TBD and no sooner than 2026, pending funding | Jacoby Creek School is located adjacent to the Project corridor. |

# References

None.

# 3.1 Aesthetics

This section evaluates the potential impacts related to aesthetics and visual resources during construction and operation of the Project. To provide the basis for this evaluation, the Setting section describes the existing scenic resources and visual character for the Project Area, and the Regulatory Framework section describes the regulatory background that applies to the Project. The Impact Analysis section establishes the thresholds of significance, evaluates aesthetic and visual impacts, and identifies the significance of impacts. Where appropriate, mitigation measures are presented to reduce impacts to less than significant levels.

## 3.1.1 Study Area

The study area for aesthetic resources includes the Project Area and the adjacent viewshed along Old Arcata Road, through the community of Bayside.

## 3.1.2 Setting

### Regional Visual Character

Humboldt County is a densely forested mountainous and rural county with about 110 miles (177 km) of coastline (more than any other county in the state), situated along the Pacific coast in Northern California's rugged Coast Mountain Ranges. Humboldt County contains picturesque scenery and is well known for its endemic redwood trees, and foggy coastal climate. The rural character of the county is defined by the topography and the views afforded as a result of those natural landforms. With nearly 1,500,000 acres of combined public and private forest in production, Humboldt County alone produces twenty percent of total volume and thirty percent of the total value of all forest products produced in California. Humboldt County contains over forty percent of all remaining old growth coast redwood forests, the vast majority of which is protected or strictly conserved within national, state, and local forests and parks. Numerous large watersheds containing scenic rivers and tributary streams are located in Humboldt County, which provide habitat for wildlife, recreation, and drinking water. Humboldt County also contains sweeping vistas of oak woodlands and meadows which are largely utilized for ranching of cattle, goats and sheep, which supports the local meat and cheese industry. Humboldt County's varied and extensive Pacific Ocean coastline allows for a wide range of scenic vistas from Highway 101 and from beaches, state parks and Coastal Access points.

According to the California Scenic Highway Mapping System, there are no designated state scenic highways in the Project vicinity. Highways 101 and 299 are listed as "Eligible State Scenic Highways-Not Officially Designated" (Caltrans 2021). Arcata is situated at the western gateway to the Trinity Scenic Byway (on Highway 299), which is a designated National Forest Scenic Byway, and parallels the beautiful "wild and scenic" Trinity River. It is also at the southern gateway of the proposed Tri-State Scenic Byway (on Highway 101).

Two routes are locally designated as coastal, and non-coastal, scenic highways in the Arcata General Plan (Policy D-3a). These identified routes comprise the entirety, and the southern extent (including the intersection with Jacoby Creek Road), of the Project Area, respectively. These include the following:

– Old Arcata Road, from Bayside Cutoff to Crescent Drive (coastal scenic highway designation)
– Jacoby Creek Road (non-coastal scenic highway designation)

### Visual Character of the Project Area

The Project is located in a rural residential area of Arcata, California known as Bayside and includes a main north/south thoroughfare (Old Arcata Road) throughout the entirety of the neighborhood. Old Arcata Road has existed for more than a century and historically served to provide a north-south travel route between Eureka and Arcata prior to the construction of Highway 101. The northern component of the Project Area contains an apartment complex and intermittently placed houses to the west of the subject roadway and a vegetated visual

barrier with houses and a community farm also present to the east. The middle component of the Project Area contains agricultural land to the west and residences to the east of Old Arcata Road. The southern portion of the Project Area is the densest in residential population and contains the Jacoby Creek School and residences to the west, and commercial businesses and residences to the east of Old Arcata Road. Scenic views of the Kneeland Hills to the south and Humboldt Bay to the west are intermittently visible (not protected viewsheds).

### Visual Character of the Surrounding Area

The surrounding area contains the Kneeland hills to the south which is predominantly comprised of redwood forest and limited residential development, and the City of Arcata to the north. Within the City of Arcata, there is a combination of natural, rural, and urban aesthetic settings. Prominent natural area visual features of the Arcata Planning Area include the Arcata Bay, the Arcata Community Forest, and the Lanphere Dunes Preserve. The area west of the Project Area contains flat agricultural lands and tidally influenced wetlands. Humboldt Bay lies approximately 0.75 miles further west and is visible from almost all sections of the Project Area. The area between Humboldt Bay and Old Arcata Road was historically tidally influenced but was largely converted to agricultural uplands in the early/mid 1900s in conjunction with the construction of Highway 101. The southern extent of the Project Area is within the Jacoby Creek floodplain and is generally flat. In general, the visual character of the Project Area is that it is a rural residential corridor located on flat lands at the edge of the Humboldt Bay alluvial fan and Jacoby Creek historic floodplain.

### Project Area

The Project Area is located in a residential area of Arcata, California, specifically within the community of Bayside. Old Arcata Road is in a dilapidated condition yet serves as the major thoroughfare through Bayside. Bayside retains a rural aesthetic due to neighborhood characteristics such as the low-density development patterns, limited sidewalks and streetlights, and low 25 mile per hour (mph) speed limit, 15 mph speed limit (in the vicinity of Jacoby Creek School), a small commercial area, adjacent open space and views of Humboldt Bay. Speed humps and crosswalk signage are visible near Jacoby Creek School.

From the northern extent of the Project Area to Jacoby Creek School (located approximately 0.75 miles south of the northern extent of the Project Area boundary), intermittent scenic views west of Old Arcata Road are accessible. The views include an agricultural viewshed comprised of large pastures, some of which contain wetlands that attract migratory birds, with Highway 101 and Humboldt Bay in the background. Humboldt Bay is visible from the northern extent of Hyland Street; however, scenic views to the west are not generally accessible throughout the southern portion of the Project Area due to the placement of structures, which act as a visual barrier. Views of the Kneeland hills are visible when driving south throughout the majority of the Project Area. Sidewalks intermittently exist on both sides of Old Arcata Road in the northern portion of the Project Area, which are often utilized by community members, particularly in the vicinity of Jacoby Creek School. Further south, sidewalk exists only along the western side of the road for approximately 0.46 miles, ending at the Jacoby Creek School. No sidewalks exist in the southern portion of the Project Area.

Jacoby Creek School and the Mistwood Education Center are located adjacent to the Project Area. A small commercial area exists at the corner of Hyland Street and Old Arcata Road, which includes a café, gym and juice company. Existing street lights are located at the Jacoby Creek Road intersection.

## 3.1.3 Regulatory Framework

### Federal

There are no federal regulations that apply to the proposed Project related to visual resources.

## State

### *California Scenic Highway Program*

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. No State-designated scenic highways or scenic highway view sheds are located in the Project vicinity. Highways 101 and 299 are both Eligible State Scenic Highways though not officially designated (Caltrans 2021).

### *California Coastal Act*

A portion of the northern extent of the Project Area is located within the "Appeal" jurisdiction, which is regulated by the California Coastal Act, which is therefore included in this section. The California Coastal Act was enacted by the State Legislature in 1976 and is the primary law that governs the decisions of the California Coastal Commission. The California Coastal Act outlines, among other things, standards for development within the Coastal Zone. The Project Area is located within the Coastal Zone, predominantly within the "Local" jurisdiction, which is guided by the City of Arcata's Local Coastal Program (described below).

*Section 30251*

*(Scenic and Visual Qualities) under Article 6 (Development) of the California Coastal Act, states, "the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas."*

## Regional and Local

Most of the Project Area is within the City of Arcata, except for the southern extent which is within Humboldt County jurisdiction. A small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and City's Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone. This section also includes Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *City of Arcata General Plan*

The City of Arcata General Plan addresses aesthetic resources and community design in their Design Element. The General Plan design policies intend to protect and enhance the community character of Arcata by maintaining the Plaza as the focal point; requiring new building designs to harmonize with the existing surrounding character; preserving natural landscape elements; and beautifying existing structures and areas. A goal of the General Plan is to preserve Arcata's small-town, human-scale atmosphere by maintaining the small scale of buildings and diversity of uses and building types. The following policies from the Arcata General Plan are applicable to the proposed Project.

*D-1: Overall Community Design Character*

*Maintain a community with diversity and quality in the built environment; with small-scale structures that are harmonious with their neighborhood context; and with a sharp physical and visual distinction between the urban area and the surrounding open space lands.*

*Applicable sub-policies:*

- *D-1c (Promote Quality and Diversity of Design Compatible with Neighborhood Context),*
- *D-1d (Preserve Natural Landforms and Landscape Features),*
- *D-1f (Create Buffers Between Incompatible Land Uses),*
- *D-1g (Provide for Bicycles, Pedestrians, and Transit in Design), and*
- *D-1i (Renewable Green Building).*

*D-3: Scenic Routes, Resources, and Landscape Features*

*Identify and protect scenic routes, resources and landscape features. Retain natural features, coastal scenic resources, and scenic vistas as important aesthetic components of the built environment and visual and associative links to nature. Minimize impairment and obstructions of scenic views to the minimum necessary to allow reasonable development.*

*Applicable sub-policies:*

- *D-3a: Designation of coastal scenic highways – The following coastal scenic highways (within the Project Area) are hereby designated:*
  - *Old Arcata Road, from Bayside Cutoff to Crescent Drive*
- *D-3b: Designation of non-coastal scenic highways – The following non-coastal scenic highways (within the Project Area) are hereby designated:*
  - *Jacoby Creek Road*
- *D-3c: Design policy for projects affecting scenic highways – The following standards shall apply to any development which affects scenic highways:*
  - *Billboards or other off-premises signs are prohibited.*
- *D-3d: Scenic entryways – The appearance of the following additional entryways should be enhanced with appropriate landscaping and entry signs or structures:*
  - *Old Arcata Road from Bayside Cutoff to Jacoby Creek Road*
- *D-3h: Farmlands and open countryside – Views of farmlands and open countryside, in the Arcata Bottom, along the State Route 101 south of Samoa Boulevard, north of Giuntoli Lane, and along State Route 255 west of the city, should be protected. New development should be sited and designed to minimize any impairment of such views.*

*D-7: Landscape Design*

*Promote landscape designs which are appropriate for the climate zone and the specific site conditions, integrate harmoniously with the scale and architecture of buildings on the site, improve the overall aesthetic appearance of the city and its neighborhoods, and serve to protect the general safety and welfare.*

*Applicable sub-policies:*

- *D-7a: Landscape plans required – A landscape plan drawn to scale shall be required for all new development subject to discretionary review by the City. The plan shall identify existing and proposed trees, shrubs, groundcovers, and other landscape elements. Native species are encouraged for all new landscaping.*
- *D-7d: Site design criteria – Landscaping shall be an integral part of site development, connecting site design elements, enhancing the site identify, and creating a pleasing appearance. Landscape designs shall conform to the following criteria:*
  - *Existing natural site vegetation should be incorporated, to the extent appropriate.*

- *Coverage by impervious surfaces should be minimized in order to reduce runoff.*
- *Cut and fill slopes shall be landscaped for erosion prevention.*
- *Landscaping should include trees adjacent to the public street right of way, where appropriate.*
- *Consideration should be given to native plant species and those non-invasive exotics which have demonstrated adaptability to local climate.*
- *Where a development borders a major street, railroad, or different land-use type, a landscape buffer shall be provided to create a visual screen, promote privacy, and to shield the development from any adverse external effects, and to shield neighboring properties from any adverse effects of the development. The buffer may include fencing, berms, plantings, or a combination thereof. The appearance of fences from public streets should be softened with plant materials.*
- *The design for a particular site should harmonize with the surrounding landscape, including the landscape design of adjacent lots.*
- *Site design should incorporate safety features such as maintaining visibility and providing security lighting.*

- *D7-f: Maintenance of required landscaping – All required landscape plantings shall be properly maintained to assure survival; any non-surviving plants shall be replaced.*

*OS-1: Overall Open Space System*

*Designate, maintain, and enhance the quality, and increase the amount of permanently protected open space in the Arcata Planning Area, including: natural resource areas; resource production areas; outdoor recreation areas; and areas subject to health and safety hazards. These areas are to be protected, linked together in a network wherever practical for accessibility, managed for resourced production and maintained for enjoyment by City residents and visitors.*

*Applicable sub-policies:*

- *OS-1a: Designation of open space lands with native biotic resources and ecosystems – The native biotic resources of the forested western slopes of Fickle Hill, river and creek riparian zones, the Arcata and Aldergrove Marshes, and Arcata Bay tidelands and sloughs are unique ecosystems that have important habitat values in addition to their other open space values. These areas as designated on Map OS-a shall be protected as open space for their resource values.*
- *OS-1f: Designation of lands with scenic, aesthetic, historic, and cultural value – The City has scenic routes, including State Route 101 and Samoa Boulevard; vistas, including the forested slopes of Fickle Hill and the Arcata Bottoms, and areas of historic and cultural value, such as the Plaza. The open and natural characteristics of these areas shall be maintained. Policies for retaining scenic vistas and landscape features are included in the Community Design Element of the General Plan.*

***Arcata Local Coastal Plan***

The goals and policies within the City of Arcata Local Coastal Program regulate aesthetics include the following:

*K-1. The City shall identify the following areas as Coastal Scenic Areas:*

- *Arcata Bay tideland and water areas;*
- *All land designated as Natural Resources Protection on the Land Use Map;*
- *All land between Highway 101 and Old Arcata Road Designated Agriculture Exclusive on the Land Use Map; and*
- *All land on the western Arcata plain designated Agriculture Exclusive on the Land Use Map*

*K-5. The City shall designate the following routes as Scenic Routes and shall establish guidelines to retain their scenic features:*

- *Old Arcata Road from 7th Street Overcrossing to Crescent Drive:*

***Humboldt County General Plan***

The Project Site is not located in an area of mapped scenic resources as defined by the Humboldt County General Plan, Chapter 10 – Conservation and Open Space, Section 10.7 Scenic Resources. The goals and policies within the Humboldt County General Plan that regulate aesthetics include the following:

*CO-G1. Conservation of Open Spaces*

*Open spaces that distinguish and showcase the county's natural environment, including working resource lands while not impacting the ability to provide livelihoods, profitable economic returns and ecological values.*

*UL-P5.* Community *Identity*

*Preserve community features that residents value and create development that compliments or adds to community identity and character.*

*UL-P11. Natural Amenities*

*Encourage the incorporation of natural amenities (e.g., landmark trees and rock outcroppings) into new project designs.*

*UL-P18. Landscaping*

*All new residential and commercial projects shall use landscaping to enhance the appearance of neighborhoods, control erosion, conserve water, improve air quality and improve pedestrian and vehicular safety.*

*SR-G1. Conservation of Scenic Resources*

*Protect high-value scenic forest, agriculture, river and coastal areas that contribute to the enjoyment of Humboldt County's beauty and abundant natural resources.*

The following standard from the Humboldt County General Plan serves as a threshold of significance for analysis in this Section:

*SR-S4. Light and Glare*

*New outdoor lighting shall be compatible with the existing setting. Exterior lighting fixtures and street standards (both for residential and commercial areas) shall be fully shielded and designed and installed to minimize off-site lighting and direct light within the property boundaries.*

*IS-S9. Street Lighting*

*Where development is required to install streetlights, they shall be designed to block upward transmission of light, avoid light trespass, and achieve design illumination in prescribed areas with limited scatter.*

*SR-IM5. Lighting Design Guidelines*

*Require new development and projects that would make significant parking lot improvements or add new exterior lighting to submit a lighting plan consistent with these guidelines. Lighting design guidelines should address:*

*A. Intensity – Acceptable standards shall be defined for various land uses and development types specifying the maximum allowable total lumens per acre.*

*B. Directional Control – Standards shall be developed to minimize the upward transmission and intensity of light at various distances from its source through the use of full-cutoff lighting, downward casting, shielding, visors etc.*

*C. Signage – Standards with respect to illuminated signs shall be developed that prohibit or limit the size, spacing, design, upward transmission of light, and hours of operation. In addition, signs should be white or light colored lettering on dark backgrounds.*

*D. Night Lighting – Hours of operation for various uses shall be specified in order to prohibit all night lighting except when warranted for public safety reasons. On demand lighting shall be encouraged.*

***Humboldt Bay Area Plan – Local Coastal Plan***

As defined in the Humboldt Bay Area Plan, the Project Site is not located in an area defined as a Coastal Scenic Area or a Coastal View Area. Applicable policies from the Humboldt Bay Area Plan are cited below.

*3.40 Visual Resource Protection*

**** 30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

**** 30253. New development shall:*

*(5) Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.*

*3.40 Visual Resource Protection, Section B.1.a. (1) and (2) Development Policies*

*1. Physical Scale and Visual Compatibility*

*No development shall be approved that is not compatible with the physical scale of development as designated in the Area Plan and zoning for the subject parcel; and the following criteria shall be determinative in establishing the compatibility of the proposed development:*

*a. For proposed development that is not the principle permitted use, or that is outside an urban limit and for other than detached residential, agricultural uses, or forestry activities regulated by CDF, that the proposed development compatible with the principle permitted use, and, in addition is either:*

*(1) No greater in height or bulk than is permitted for the principle use, and is otherwise compatible with the styles and visible material so existing development or land forms in the immediate neighborhood, where such development is visible from the nearest public road.*

*(2) Where the project cannot feasibly conform to paragraph 1, and no other more feasible location exists, that the exterior design, and landscaping be subject to a public hearing, and shall be approved only when:*

*(a) There is no less environmentally damaging feasible alternative location.*

*(b) The proposed exterior design, and landscaping are sufficient to assure compatibility with the physical scale established by surrounding development.*

## 3.1.4 Evaluation Criteria and Significance Thresholds

The Project would cause a significant impact related to aesthetics resources, as defined by the CEQA Guidelines (Appendix G), if it would:

– Have a substantial adverse effect on a scenic vista;
– Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
– Substantially degrade the existing visual character or quality of the site and its surroundings or if located in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality; or
– Create a new source of substantial light or glare which would adversely affect day or night-time views in the area.

## 3.1.5 Methodology

The visual impact analysis evaluates the physical changes that would occur within the study area as a result of the Project. Impact analysis in this section is based upon a visual resource evaluation conducted for the Project (GHD 2020). The visual resource evaluation documented potential and anticipated visual changes associated with the project. Visual changes and associated effects were demonstrated by identifying visual resources in the Project Area and analyzing the amount of change that would occur as a result of the Project.

## 3.1.6 Impacts and Mitigation Measures

**Impact AES-a: Would the Project have a substantial adverse effect on a scenic vista?**

The proposed Project includes investments in road infrastructure for both motorized and non-motorized traffic that have not historically been utilized for Old Arcata Road, including the Project corridor. Contemporary infrastructure improvements along the Project corridor have not previously been possible. As a result, as road use has grown, and both vehicle and non-vehicular traffic increased on the road, investments in road infrastructure have not been made. This dilapidated road is lacking critical safety infrastructure. For example, currently sidewalks are limited in the area, paving is deteriorated, travel lanes are not well segregated, and bike lanes are non-existent. The Project corridor looks much as it has for the last several decades.

The Project would change the look and feel of the road, including its aesthetic quality. However, the visual change would have a minor impact on the overall rural aesthetic of the area, and would have no physical effect on any protected view sheds or other aesthetic protected resources. The road, the new paving, the safer segregated walkways, and the roundabout would not affect the sweeping views of Arcata Bay, the forested foothills, or the historic character of the area. These features, which contribute to the rural character of the Project corridor and surrounding vicinity, would not be affected by the project. The minimal changes related to the road improvements would have an insignificant effect on the environment.

The visual resource evaluation concluded that Project elements are low in elevation (at or near the ground elevation) and would not significantly obstruct or alter existing visual resources along the Project corridor (GHD 2020).

The proposed road cross-section maintains a rural road aesthetic while providing safety improvements to better manage current and foreseeable levels of pedestrian and bicycle traffic along the road. Implementation of the Project would not block or alter the existing views or the “character defining features” along the Project corridor. The existing viewscape would not be impeded or altered by structures or other project elements. The planned retaining wall near the Jacoby Creek intersection would be approximately one foot above road grade. Depending on the final design grades, a fence (approximately four feet tall) would be attached to the top of the retaining wall. The fence would be transparent (most likely vinyl coated black chain link). A fence of similar style would also be installed on the opposite side of Old Arcata Road in front of the City pump station. The retaining wall and fencing

would not impede views within or adjacent to the project corridor or otherwise diminish the visual character of the vicinity.

New concrete for the retaining wall and other improvements throughout the project corridor including the roundabout apron, sidewalk, and walkways would include integral color to darken the concrete and provide a “weathered look” designed to blend into the existing community aesthetic and avoid a stark visual contrast. Stamped and colored concrete would be applied to roadway-dividing medians and the roundabout truck apron that would surround the inner landscaped focal point.

Trees removed during construction would be replaced in other nearby locations. All tree plantings associated with the project would be appropriate tree species designed to blend into mature vegetation surrounding the Project (GHD 2020). Trees removed during construction would be replaced in other nearby locations. Tree removal would be limited to one or two locations near the roundabout at the intersection of Jacoby Creek Road and Old Arcata Road (Image 3.1-1 – Trees Planned for Removal within the Public Right of Way). Tree removal would not occur on any private property. All tree plantings associated with the Project would include appropriate tree species designed to blend into surrounding mature vegetation.


***Image 3.1-1 Trees Planned for Removal within the Public Right of Way. Image Adapted from Google Earth Street View.***

The Project would improve deteriorated elements of the visual streetscape and encourage non-motorized transportation by providing dedicated space for bicycle and pedestrian travel. The existing rural residential character would not be altered by the Project. Jacoby Creek Elementary School, roadside community gardens, small businesses, and distant views of bottom lands and coastal mountain forest hillsides would remain unimpeded. Allowable traffic speeds and traffic volumes would not increase as a result of the project. Tall or larger structures that could impede the viewshed of the Project corridor or otherwise result in a significant visual change are not included in the Project. Significant vegetation and tree removal would not occur. Residences, businesses, and structures adjacent to the project corridor would not be altered (GHD 2020).

Construction-related visual effects, including raw earth work and the presence of heavy machinery, would be temporary and short-term. The impact would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** **L**ess than significant

**Impact AES-b:** **Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

Old Arcata Road is not a designated or eligible state scenic highway. No impact would occur.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact AES-c:** **In non-urbanized areas, would the Project substantially degrade the existing visual character or quality of public view 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?**

Temporary visual impacts related to construction include the removal of roadside vegetation, presence of heavy machinery, materials stockpiling and storage, and construction-related safety signage and safety dividers.

The Project would not block or alter the existing views or the rural character of the Project corridor. The existing viewscape would not be impeded or altered by structures or other Project elements. Views of the Project corridor would be relatively limited as the project consists mostly of narrow paved surfaces with few vertical features, such as resurfaced roadway, and re-striped lanes and crosswalks. Although some vegetation would be removed to accommodate Project improvements, the remaining existing vegetation and proposed wetland plantings, stormwater buffer strips, and a vegetated roundabout center would soften visual changes. As discussed for Impact AES-a, new concrete for sidewalk and walkways would include integral color to darken the concrete and provide a “weathered look” designed to blend into the existing community aesthetic and avoid a stark visual contrast. The Visual Resources Study found that neighbors and users of the road would not be negatively impacted by the views of the proposed Project, based on the design choices incorporated into the roadway rehabilitation design (GHD 2020).

Operational visual changes would include upgrades to safety and directional signage and the addition of a new roundabout at the Jacoby Creek Road intersection, and a new left turn lane at Jacoby Creek Elementary School. The roundabout’s center island would be revegetated, which would soften the visual effect of the hardscaped feature. Plantings would be consistent with other City roundabouts and public right of ways, including grasses and/or other drought tolerant species. All new plantings would be designed to maximize connectivity with existing landscaping and mature trees. The proposed roundabout includes the smallest feasible footprint. As discussed in Section 4- Alternatives Description and Analysis, smaller roundabout footprints were initially analyzed and determined infeasible due to resulting permanent encroachments onto private property (see Section 4.2.2 – Rejected Alternative B (Intersection) Mini Roundabout Footprint).

The Project would be compatible with the existing visual character of the proposed Project alignment and its surroundings and would not introduce any elements that would degrade existing visual character or quality. Construction activities along the Project corridor and at off-site staging areas would result in short-term temporary changes in the visual character of the Project Area during and immediately following construction. The Project may have a beneficial effect on the overall visual quality of the Project corridor, including new asphalt pavement, sidewalks, pathways, speed humps, and curbs. These specific features, along with the overall improvements along Old Arcata Road, including repaved bicycle lanes, are anticipated to improve the overall visual quality of the roadway. With the incorporation of Mitigation Measure AES-1, the impact would be less than significant.

## Mitigation

**Mitigation Measure AES-1: Minimize Temporary Visual Impacts**

The City shall avoid or substantially lessen visual impacts by reducing construction disturbance. Measures shall include:

- The size of construction zones and staging areas shall be the minimum operable size. The location of such zones shall be adjusted to minimize visual impacts associated with construction vehicles, equipment, and Project-specific activity.
- To the extent feasible, alignments and locations of facilities shall be adjusted to avoid visually sensitive features and conditions that would result in major landform alteration or mature landscape removal.
- The City shall restore or revegetate staging areas disturbed by construction activities, including restoring pre-Project topographic features and reseeding with species comparable to those removed or disturbed during construction.

Mitigation Measure AES-1 would reduce the Project impact on visual character to a less-than-significant level by minimizing and restoring areas disturbed during construction.

**Level of Significance:** Less than significant after mitigation

**Impact AES-d: Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

New lighting is proposed in four locations at the proposed roundabout at the intersection of Old Arcata Road and Jacoby Creek Road.

New “rapid flash” lighting is proposed at the following intersections/crossings in the Project Area:

– At the northern end of the Project Area, at Bayside Road;
– In front of Jacoby Creek School at Hyland Street; and
– Two locations at the proposed roundabout at the intersection of Old Arcata Road and Jacoby Creek Road.

Proposed street lighting at the roundabout could change the night-time visual resources by providing additional street lights in the area. Lighting would be designed to meet City standards, which limit maximum wattage/lumens and require shielding to protect wildlife and nighttime views, including views of the night sky. Specific dark sky compliant design elements that would be applied to Project lighting include: fixture types, cut off angles, shields, lamp arm extensions, and pole heights. Specific design preferences include directing light downward and away from other properties, avoiding brightly illuminated vertical surfaces where feasible, such as walls and lamp poles, and directing lighting away from sensitive habitat areas. With the implementation of these design strategies, the potential effect of project operation on day and nighttime views would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

# 3.1.7 Cumulative Impacts

**Impact AES-C-1: Would the Project contribute to a cumulatively significant impact to visual resources?**

Projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust’s watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber Project, and future Jacoby Creek School classroom improvements.

- The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows under a County bridge on Old Arcata Road. Future enhancement project locations within the lower watershed have not yet been identified and may or may not be located within proximity to Old Arcata Road. Any such enhancements to the stream corridor would include riparian revegetation and would not result in a permanent visual impact. The year of planned enhancements also remains speculative, and, if implemented, would occur after implementation of the Project.
- The VERO Eureka/Arcata Fiber optic Project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. The fiber cable would be located subsurface, parallel to Old Arcata Road and within the City and County right of ways. While construction may result in temporary short-term visual impacts, no permanent aboveground visual change or impacts would result.
- Planned classroom improvements to the Jacoby Creek School would be located at the western end of the campus, away from Old Arcata Road and behind existing structures facing Old Arcata Road. Improvements would not include any two-story structures. Classroom improvements would not be visible from Old Arcata Road and thus would not result in a potentially cumulative impact.

Given that the Project would not result in any significant visual impacts, and that the three projects considered in Table 3-1 would not permanently affect visual resources in the Project Area or vice versa, the potential for cumulative visual impacts within the study area would remain less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.1.8 References

GHD. 2020. Visual Resource Technical Memorandum for the Old Arcata Road Project. Prepared for the City of Arcata.

# 3.2 Air Quality

This section evaluates potential impacts related to air quality during construction and operation of the Project. To provide the basis for this evaluation, the Setting section describes the air basin setting. The Regulatory Framework section describes the regulatory background that applies to the Project. The Impact Analysis section establishes the thresholds of significance, evaluates potential air quality impacts, and identifies the significance of impacts.

## 3.2.1 Study Area

The study area for air quality impacts includes the Project Area and the North Coast Air Basin.

## 3.2.2 Setting

### North Coast Air Basin

The Project Area is located in Humboldt County in the North Coast Air Basin, which is comprised of Del Norte, Humboldt, Mendocino, and Trinity Counties, as well as the northern and western portion of Sonoma County. The Project Area is located within the North Coast Unified Air Quality Management District (NCUAQMD).

### Climate

The local climates, or sub-climates, within the North Coast Air Basin are affected by elevation and proximity to the Pacific Ocean. Humboldt County contains sub-climates that are created by local topography and proximity to the ocean. The study area is located proximal to the Pacific Ocean (Humboldt Bay) and is influenced by coastal fog throughout the year. Precipitation within the County is seasonal, with 90 percent of the annual precipitation occurring between October and April. During the winter, moderate temperatures, frequent fog, and moderate to heavy precipitation cause inversions, which impact air quality. Inversions are created when warm air traps cool air near the ground surface and hinders vertical dispersion. Humboldt County commonly experiences two types of inversions, vertical and horizontal, that affect the vertical depth of the atmosphere through which pollutants can be mixed. Vertical air movement is important in spreading pollutants through a thicker layer of air. Horizontal movement is important in spreading pollutants over a wider area. Upward dispersion of pollutants is hindered wherever the atmosphere is stable; that is, where warm air overlies cooler air below (Humboldt County 2017).

### Sensitive Receptors

Sensitive receptors are people who are particularly susceptible to the adverse effects of air pollution. The California Air Resources Board (CARB) has identified the following people most likely to be affected by air pollution: children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. Sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, hospitals, and medical clinics.

The Project Area is located in a developed rural residential area. Sensitive receptors immediately adjacent to the Project Area include residences, Sunny Brae Middle School, Jacoby Creek Elementary School, Mistwood Education Center, community gardens, and small businesses. Portions of the Jacoby Creek School (approximately half of the structures within the campus) are within the Project Area boundary. Therefore, numerous sensitive receptors are within and adjacent to the Project Area boundary.

### Existing Air Quality – Criteria Air Pollutants

The CARB and the U.S. Environmental Protection Agency (EPA) currently focus on the following criteria air pollutants as indicators of ambient air quality: ozone, carbon monoxide (CO); nitrogen dioxide, sulfur dioxide; lead, and particulate matter (PM). Table 3.2-1 summarizes state and federal ambient air quality standards. The

Project region is in attainment for lead, sulfur dioxide, and nitrogen dioxide; therefore, those pollutants are not further discussed. The following section discusses the remaining criteria pollutants - PM, ozone, and CO - for which PM and ozone are of greatest concern in the region (NCUAQMD 2019).

***Table 3.2-1 Relevant California and National Ambient Air Quality Standards and Attainment Status***

| Pollutant | Averaging Time | California Standards | | National Standards | |
|---|---|---|---|---|---|
| | | Standard | Humboldt County Status | Standard | Humboldt County Status |
| Ozone | 8-hour | 0.070 ppm (137 µg/m$^3$) | Attainment | 0.075 ppm (147µg/m$^3$) | Unclassified/ Attainment |
| | 1-hour | 0.09 ppm (180 µg/m$^3$) | Attainment | None | NA |
| Carbon Monoxide | 1-hour | 20 ppm (23 mg/m$^3$) | Attainment | 35 ppm (40 mg/m$^3$) | Unclassified/ Attainment |
| | 8-hour | 9.0 ppm (10 mg/m$^3$) | Attainment | 9 ppm (10 mg/m$^3$) | |
| Nitrogen Dioxide | 1-hour | 0.18 ppm (339 µg/m$^3$) | Attainment | 0.100 ppm (188 µg/m$^3$) | Unclassified/ Attainment |
| | Annual | 0.030 ppm (57 µg/m$^3$) | Status not reported | 0.053 ppm (100 µg/m$^3$) | |
| Sulfur Dioxide | 1-hour | 0.25 ppm (655 µg/m$^3$) | Attainment | 0.075 ppm (196 µg/m$^3$) | Unclassified |
| | 24-hour | 0.04 ppm (105 µg/m$^3$) | Attainment | 0.14 ppm (365 µg/m$^3$) | |
| | Annual | None | NA | 0.03 ppm (56 µg/m$^3$) | |
| Respirable Particulate Matter ($PM_{10}$) | 24-hour | 50 µg/m$^3$ | Nonattainment | 150 µg/m$^3$ | Unclassified |
| | Annual | 20 µg/m$^3$ | Attainment | None | |
| Fine Particulate Matter ($PM_{2.5}$) | 24-hour | None | NA | 35 µg/m$^3$ | Unclassified/ Attainment |
| | Annual | 12 µg/m3 | Attainment | 12 µg/m3 | |

Sources: CARB 2016. CARB 2018. NCUAQMD 2019.

Notes:
ppm = parts per million
mg/m$^3$ = milligrams per cubic meter
µg/m$^3$ = micrograms per cubic meter

### *Particulate Matter*

Particulate matter is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. Particles 10 microns or less in diameter are defined as respirable particulate matter or $PM_{10}$. Fine particles are 2.5 microns or less in diameter ($PM_{2.5}$) and, while also respirable, can contribute significantly to regional haze and reduction of visibility. Inhalable particulates come from smoke, dust, aerosols, and metallic oxides. Although particulates are found naturally in the air, most particulate matter found in the study area is emitted either directly or indirectly by motor vehicles, agricultural activities, and wind erosion of disturbed areas. Most $PM_{2.5}$ is comprised of combustion products such as smoke. Extended exposure to PM can increase the risk of chronic respiratory disease (BAAQMD 2017).

### *Ozone*

Ground-level ozone is the principal component of smog. Ozone is not directly emitted into the atmosphere, but instead forms through a photochemical reaction of reactive organic gases (ROG) and nitrogen oxides (NOx), which are known as ozone precursors. Ozone levels are highest from late spring through autumn when precursor emissions are high and meteorological conditions are warm and stagnant. Motor vehicles create the majority of ROG and $NO_X$ emissions in California. Exposure to levels of ozone above current ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung function. Ozone exposure is also associated with symptoms such as coughing, chest tightness, shortness of breath, and the worsening of asthma symptoms (BAAQMD 2017). The greatest risk for harmful health effects belongs to outdoor workers, athletes, children, and others who spend greater amounts of time outdoors during periods of high ozone levels, typically during the summer.

### *Carbon Monoxide*

Carbon Monoxide is a non-reactive pollutant that is toxic, invisible, and odorless. It is formed by the incomplete combustion of fuels. The largest sources of CO emissions are motor vehicles, wood stoves, and fireplaces. Carbon Monoxide is directly emitted to the atmosphere, where levels are strongly influenced by meteorological factors such as wind speed and atmospheric stability. The health threat from elevated ambient levels of CO is most serious for those who suffer from heart disease, like angina, clogged arteries, or congestive heart failure; however, high levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

### *Nitrogen Dioxide*

Nitrogen Dioxide ($NO_2$) is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of $NO_2$ are combustion devices, such as boilers, gas turbines, and reciprocating internal-combustion engines (mobile as well as stationary). Combustion devices emit primarily nitric oxide (NO), which reacts with oxygen in the atmosphere to form $NO_2$ (USEPA 2018). The combined emissions of NO and $NO_2$ are referred to as $NO_X$, which is reported as equivalent $NO_2$. Since $NO_2$ is formed and depleted by reactions associated with photochemical smog (ozone), the $NO_2$ concentration in a particular geographical area may not be representative of the local $NO_X$ emission sources.

Inhalation is the most common form of exposure to $NO_2$, with the principal site of toxicity being the lower respiratory tract. The severity of adverse health effects depends primarily on the concentration of $NO_2$ inhaled rather than the duration of exposure. An individual may experience a variety of acute symptoms, including coughing, difficulty with breathing, vomiting, headache, and eye irritation, during or shortly after exposure. After approximately 4 to 12 hours of exposure, an individual may experience chemical pneumonitis or pulmonary edema, with breathing abnormalities, cough, cyanosis, chest pain, and rapid heartbeat. Severe, symptomatic $NO_2$ intoxication after acute exposure has been linked on occasion with prolonged respiratory impairment, including symptoms such as chronic bronchitis and decreased lung function.

### *Sulfur Dioxide*

Sulfur dioxide is a colorless gas with a strong odor. It can damage materials through acid deposition. Sulfur dioxide ($SO_2$) is produced by stationary sources like coal and oil combustion, steel mills, refineries, and pulp and paper mills. The major adverse health effects associated with $SO_2$ exposure relate to the upper respiratory tract. $SO_2$ is a respiratory irritant, with constriction of the bronchioles occurring with inhalation of $SO_2$ at 5 ppm or more. On contact with the moist mucous membranes, $SO_2$ produces sulfurous acid, which is a direct irritant. Concentration rather than duration of the exposure is the most important determinant of respiratory effects. Exposure to high $SO_2$ concentrations may result in edema of the lungs or glottis and respiratory paralysis (USEPA 2018).

***Lead***

Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions historically have been mobile and industrial sources. Due to the phase-out of leaded gasoline, as discussed below, metal processing currently is the primary source of lead emissions. The highest levels of lead in the atmosphere generally are found near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers.

Twenty years ago, mobile sources (e.g., motor vehicles using leaded fuel) were the main contributor to ambient lead concentrations in the air. In the early 1970s, the EPA established national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995 (USEPA 2018).

Due to the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Transportation sources, primarily airplanes, now contribute to only 13 percent of lead emissions. A recent National Health and Nutrition Examination Survey reported a 78 percent decrease in the levels of lead in people's blood between 1976 and 1991. This dramatic decline can be attributed to the move from leaded to unleaded gasoline (USEPA 2018).

Similarly, lead emissions and ambient lead concentrations have decreased dramatically in California over the past 25 years. The phase-out of lead in gasoline began during the 1970s, and subsequent CARB regulations have eliminated virtually all lead from gasoline now sold in California. All areas of the state currently are designated as attainment for state lead standard (EPA does not designate areas for the national lead standard). Although the ambient lead standards are no longer violated, lead emissions from stationary sources still pose "hot spot" problems in some areas. Therefore, CARB has identified lead as a Toxic Air Contaminant (TAC).

### Toxic Air Contaminants

TACs are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer or serious illness) and include, but are not limited to, the criteria air pollutants listed in Table 3.2-1. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway).

According to the CARB, diesel exhaust is a complex mixture of gases, vapors, and fine particles. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the state's Proposition 65 or under the federal Hazardous Air Pollutants programs. California has adopted a comprehensive diesel risk reduction program, and recently adopted new regulations requiring the retrofit and/or replacement of construction equipment, on-highway diesel trucks, and diesel buses in order to lower $PM_{2.5}$ emissions and reduce statewide cancer risk from diesel exhaust (see Section 3.2.3 below).

## 3.2.3 Regulatory Framework

The federal Clean Air Act of 1977 (CAA) governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act.

Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level. The identification, regulation, and monitoring of TACs is relatively new compared to that for criteria air pollutants that have established ambient air quality standards. Specifically, TACs are regulated or evaluated on the basis of risk to human health rather than comparison to an ambient air quality standard or emission-based threshold.

## Federal

The EPA is responsible for enforcing the federal CAA and for establishing the National Ambient Air Quality Standards (NAAQS). The NAAQS are required under the CAA and subsequent amendments.

## State

In California, the CARB, which is part of the California Environmental Protection Agency, is responsible for meeting the state requirements of the federal CAA, administering the California Clean Air Act, and establishing the California Ambient Air Quality Standards (CAAQS). The California Clean Air Act, as amended in 1992, requires all air districts in the state to endeavor to achieve and maintain the CAAQS. The CARB regulates mobile air pollution sources, such as motor vehicles. It is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level.

### *California Coastal Act*

The following policies of the California Coastal Act regulate air quality.

> *Section 30253. New Development shall:*
>
> *Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control board as to each particular development.*

## Regional and Local

The entire Project Area is subject to and regulated by the NCUAQMD. Most of the Project Area is within the City of Arcata, except for the southern extent which is within Humboldt County jurisdiction. A small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and City's Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone. This section also includes Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *North Coast Unified Air Quality Management District*

The NCUAQMD, one of 35 air districts in California, has jurisdiction over Humboldt, Del Norte, and Trinity counties. The NCUAQMD's primary responsibility is for controlling air pollution from stationary sources and maintaining healthful air quality throughout the tri-county jurisdiction. The NCUAQMD has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits, impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. The NCUAQMD monitors air quality; enforces local, state and federal air quality regulations for counties within its jurisdiction; inventories and assesses the health risks of TACs; and adopts rules that limit pollution.

Humboldt County is listed as "attainment" or "unclassified" for all the federal and state ambient air quality standards except for the state 24-hour particulate ($PM_{10}$) standard (Table 3.2-1). The NCUAQMD has not formally adopted significance thresholds that would apply to the proposed Project. For construction emissions, the NCUAQMD has indicated that emissions are not considered regionally significant for projects whose construction would be of relatively short duration (i.e., lasting less than one year). For project construction that lasts more than one year or that involves above average construction intensity in volume of equipment or area disturbed, construction emissions may be compared to stationary source thresholds (NCUAQMD 2015).

Construction activities are subject to Rule 104 (Prohibitions) Section D (Fugitive Dust Emission), which requires reasonable precautions be taken to prevent PM from becoming airborne. These precautions include but are not

limited to 1) covering open bodied trucks when used for transporting materials likely to give rise to airborne dust; and 2) the use of water during the grading of roads or the clearing of land.

Prescribed burning activities are also subject to Regulation II – Open Burning and require a Non-Standard Burn Permit. Depending on the type of burn project, the NCUAQMD may also require a Smoke Management Plan. Burn day status (i.e., days when prescribed burning is allowed) are determined by the CARB on a daily basis. Inversion layer and wind direction are included among the factors used in determining burn day status.

Finally, Rule 110 - New Source Review (NSR) And Prevention of Significant Deterioration establishes the pre-construction review requirements for new and modified stationary sources of air pollution. This Project does not include any new stationary sources; therefore, Rule 110 would not apply.

### *City of Arcata General Plan*

The City of Arcata General Plan addresses air quality in its Air Quality Element. The City's Air Quality Element has specific goals and related policies that address reducing stationary and mobile sources of air pollutants. The policies within the City of Arcata General Plan that regulate air quality include the following:

*AQ-2: Mobile Sources of Air Pollutants*

*Improve air quality by reducing emissions from transportation sources, particularly motor vehicles, and other mobile sources. Reduce vehicle miles of travel and encourage shifts to alternative modes of travel.*

*Applicable sub-policies:*

***AQ-2a**: Implement land use measures to reduce vehicle trips, miles traveled, and air pollutant emissions – Implement or encourage the land use and development measures which reduce motor vehicle travel as outlined in the transportation element. These measures are also effective in reducing mobile sources of air pollutants.*

***AQ-2b:** Implement transportation measures to reduce vehicle trips, miles traveled, and air pollutant emissions – Implement or encourage the following measures to reduce vehicle miles traveled and provide alternatives to the single occupant motor vehicle, as outlined in the Transportation Element.*

*(1) Provide as direct and safe a travel route as possible for all travel modes.*

*(2) Implement and support public education programs explaining the negative impacts of single occupant vehicle use, and encourage the development of employer-based measures to reduce employee automobile travel.*

*AQ-2c: Reduce or minimize the creation of "hot spots" or localized places of concentrated automobile emissions – Implement or encourage the following measures to reduce hot spots, which occur where groups of vehicles are required to idle (e.g., at congested intersections, driveways, and drive-through facilities)*

*(1) Minimize the delay and congestion at unsignalized and signalized intersections to reduce emissions from idling vehicles. Attempt to achieve this through reducing automobile travel, minor capacity improvements, or fine-tuning of intersection operations. Discourage major capacity improvements at intersections, minimize new signalized intersections, or any other improvement which discourages walking, bicycling, or transit use.*

*(2) Minimize or restrict land uses with drive-through facilities located in areas of concentrated traffic or near congested intersections.*

*(3) Construction of projects with large parking lots or high volume driveways shall identify traffic impacts and provide evidence that project design will optimize internal circulation and minimize delay. Ensure that mitigation measures balance the needs of automobiles, pedestrians, bicyclists, and transit riders.*

***AQ-2d:*** *Design Arcata's highest traveled arterials to minimize stopping – Recognize that automobiles are most efficient and less polluting at constant, moderate speeds between 25 and 35 miles per hour. Minimize idling delay, excessive congestion, and excessive speeds with the following measures:*

*(1) Eliminate traffic bottlenecks with traffic flow improvements (such as re-allocating turning lanes, or converting all-way stop control to roundabouts or two-way stop control), without impacting the safety of pedestrians, bicyclists, or transit facilities.*

*(2) Review access plans for commercial driveways to ensure designs minimize idling vehicles and concentrations of traffic. For larger projects, require multiple driveways rather than single driveways and consider turn restrictions where delays to existing driveways could be significant.*

***AQ-2e****: Recognize that poor air quality is caused by the combination of high pollutant emissions and meteorological conditions which do not allow for dispersal of pollutants – The City shall coordinate a joint effort with the NCUAQMD to minimize the impact of high pollutant incidents and notify the public about meteorological conditions that contribute to poor air quality. The joint effort shall include employing the following measures:*

*(1) Require traffic and construction site dust control measures at construction projects. Require measures which reduce emissions from construction activity and maximize efficiency of traffic flow during inversion conditions.*

***AQ-2f:*** *Enforce air quality control measures and monitoring at construction sites – Construction emissions shall be controlled because, although they are temporary in nature, they can often be the greatest air quality impact of a project. Require the following control measures for construction activities when necessary:*

*(1) Water all active construction areas twice per day and use erosion control measures to prevent water runoff containing silt and debris from entering the storm drain system.*

*(2) Cover trucks hauling soil, sand and other loose material.*

*(3) Pave, water, or apply non-toxic soil stabilizers on unpaved access roads and parking areas.*

*(4) Sweep paved access roads and parking areas daily.*

*(5) Sweep streets daily if visible material is carried onto adjacent public streets.*

*For larger construction sites (four acres or greater) require the following measures when necessary in addition to those above:*

*(1) Hydroseed or apply non-toxic soil stabilizers to inactive construction areas.*

*(2) Enclose, cover, water, or apply non-toxic soil binders to open materials stockpiles.*

*(3) Limit traffic speeds to 15 mph on unpaved access roads.*

*(4) Install erosion control measures to prevent silt runoff onto public roadways.*

*(5) Replant vegetation in disturbed areas within 30 days after project completion.*

*For construction sites near sensitive receptors, require the following measures when necessary, in addition to those above:*

*(1) Install wheel washers for exiting trucks, or wash all equipment leaving site.*

*(2) Install wind breaks, or plant trees/vegetation at windward sides of construction areas, or avoid removing existing vegetation which acts as a windbreak.*

*(3) Suspend excavation and grading activity when winds exceed 25 mph.*

*(4) Limit area subject to excavation, grading, and other construction activities at any one time.*

***City of Arcata Local Coastal Program***

There are no applicable policies in the City of Arcata Local Coastal Program that address air quality.

***Humboldt County General Plan***

The goals and policies within the Humboldt County General Plan that regulate air quality include the following:

*AQ-1. Improved Air Quality*

Air quality that meets state and federal ambient air quality standards.

*AQ-2. Particulate Emissions*

*Successful attainment of CAAQS for PM.*

*AQ-G3. Other Criteria Pollutants*

*Maintain attainment of CAAQS for ozone and other criteria pollutants which may be subject to tightening standards.*

*AQ-P2. Reduce Localized Concentrated Air Pollution*

*Reduce or minimize the creation of hot spots or localized places of concentrated automobile emissions.*

*AQ-P4. Construction and Grading Dust Control*

*Dust control practices on construction and grading sites shall achieve compliance with NCUAQMD fugitive dust emission standards.*

*AQ-P5. Air Quality Impacts from New Development*

*During environmental review of discretionary permits, reduce emissions of air pollutants from new commercial and industrial development by requiring feasible mitigation measures to achieve the standards of the NCAQMD.*

*AQ-P7. Interagency Coordination*

*Coordinate with the NCUAQMD early in the permit review process to identify expected regulatory outcomes and minimize delays for projects involving:*

*A. CEQA environmental review;*

*B. Building demolition projects that may involve removal of asbestos-containing material subject to National Emission Standards for Hazardous Air Pollutants; and*

*C. Grading and mining operations subject to State Airborne Toxic Control Measures for naturally occurring asbestos. Rely on the air quality standards, permitting processes, and enforcement capacity of the NCUAQMD to define thresholds of significance and set adequate mitigations under CEQA to the maximum extent allowable.*

*AQ-P17. Preservation and Replacement of On-site Trees*

*Projects requiring discretionary review should preserve large trees, where possible, and mitigate for carbon storage losses attributable to significant removal of trees.*

***Humboldt Bay Area Plan – Local Coastal Plan***

There are no applicable policies in the Humboldt Bay Area Plan that address air quality from transportation projects.

## 3.2.4 Evaluation Criteria and Significance Thresholds

For the purpose of this Draft EIR, the evaluation criteria and significance thresholds summarized below are used to determine if the Project would have a significant effect related to air quality. The Project would cause a significant impact related to air quality, as defined by the CEQA Guidelines (Appendix G), if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- 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;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The NCUAQMD does not have established CEQA significance criteria to determine the significance of impacts that would result from projects such as the proposed Project; however, the NCUAQMD does have criteria pollutant significance thresholds for new or modified stationary source projects proposed within the NCUAQMD's jurisdiction. NCUAQMD has indicated that it is appropriate for lead agencies to compare proposed construction emissions that last more than one year to its stationary source significance thresholds, which are:

- NOx – 40 tons per year
- ROG – 40 tons per year
- PM10 – 15 tons per year
- CO – 100 tons per year.

If an individual project's emission of a particular criteria pollutant is within the thresholds outlined above, the project's effects concerning that pollutant are considered to be less-than significant. Impacts related to construction dust are considered significant if dust is allowed to leave the site (NCUAQMD 2015).

## 3.2.5 Methodology

Project operation would not increase traffic above existing conditions, which constitutes the Project's environmental baseline, and would encourage pedestrian and bicycle usage, which do not contribute to air quality impacts, Accordingly, project operation would not adversely affect air quality. The following air quality analysis therefore focses exclusively on potential construction impacts of the proposed roadway improvements.

The California Emissions Estimator Model (CalEEMod) version 2016.3.2 was used to estimate air pollutant emissions from Project construction (Appendix C). Construction of the Project is expected to begin in late spring and require approximately six to eight months to complete. Detailed construction equipment activity was estimated based on Project construction components. Construction-related fugitive dust emissions are discussed qualitatively.

## 3.2.6 Impacts and Mitigation Measures

**Impact AQ-a: Would the Project conflict with or obstruct implementation of the applicable air quality plan?**

### Construction

This impact relates to consistency with an adopted attainment plan, and generation of a localized criteria pollutant impact. A potential localized impact would be an exceedances of State or federal standards for particulate matter ($PM_{10}$) emissions. $PM_{10}$ is of concern during construction because of the potential to emit fugitive dust during earth-disturbing activities.

The NCUAQMD is responsible for monitoring and enforcing local, state, and federal air quality standards. The U.S. Environmental Protection Agency (EPA) sets the National Ambient Air Quality Standards for the following six 'criteria' air pollutants: ozone, particulate matter ($PM_{10}$ and $PM_{2.5}$), nitrogen dioxide, carbon monoxide, lead, and sulfur dioxide. The California Air Resources Board (ARB) administers the California Ambient Air Quality Standards, which include the six criteria pollutants listed above as well as visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride.

Humboldt County is designated 'attainment' for all National Ambient Air Quality Standards. With regard to the California Ambient Air Quality Standards, Humboldt County is designated attainment for all pollutants except $PM_{10}$. Humboldt County is designated as "non-attainment" for the state's $PM_{10}$ standard. To address non-attainment for $PM_{10}$, the NCUAQMD adopted a Particulate Matter Attainment Plan in 1995. This plan presents available information about the nature and causes of $PM_{10}$ standard exceedances and identifies cost-effective control measures to reduce $PM_{10}$ emissions to levels necessary to meet California Ambient Air Quality Standards.

$PM_{10}$ refers to inhalable particulate matter with an aerodynamic diameter of less than 10 microns. $PM_{10}$ includes emission of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. $PM_{10}$ emissions include smoke from wood stoves, construction dust, open burning of vegetation, and airborne salts and other particulate matter naturally generated by ocean surf. Because, in part, of the large number of wood stoves in Humboldt County and because of the generally heavy surf and high winds common to this area, Humboldt County has exceeded the state standard for $PM_{10}$ emissions. Therefore, any use or activity that generates airborne particulate matter may be of concern to the NCUAQMD. The proposed Project would create $PM_{10}$ emissions in part through vehicles coming and going to the Project site and the construction/renovation/demolition associated with the Project.

Pursuant to Air Quality Regulation 1, Chapter IV, Rule 430 – Fugitive Dust Emissions, the handling, transporting, or open storage of materials in such a manner, which allows or may allow unnecessary amounts of particulate matter to become airborne, shall not be permitted. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to: (1) covering open bodied trucks when used for transporting materials likely to give rise to airborne dust; and (2) the use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land. The proposed Project includes grading and construction activities.

As described in Environmental Protection Action 1 (see Section 2.8.1), the Project would be required to prepare and adhere to a SWPPP prior to construction, to ensure compliance under the required Construction General Permit administered by the North Coast Regional Water Quality Control Board. The SWPPP would include dust control measures, as a matter of standard protocol. Dust control measures in the SWPPP would reduce potential fugitive dust emission and particulate matter impacts, providing consistency with Quality Regulation 1, Rule 104 (D), Fugitive Dust Emissions. Dust control measures in the SWPPP would specifically include requirements that the City and its contractor:

- Water all active construction areas regularly to limit dust; control erosion and prevent water runoff containing silt and debris from entering the storm drain system.
- Cover trucks hauling soil, sand, and other loose material.
- Sweep paved streets, access roads and parking areas daily if visible material is carried onto adjacent public streets.

Any potential construction related impact would be less than significant.

Given operation of the Project would not increase traffic above existing conditions and would encourage pedestrian and bicycle usage, which would contribute to improved air quality conditions, operational conflicts with applicable air quality policies and regulations would not result.

**Mitigation Measures:** No mitigation is necessary.

**Level of Significance:** Less than significant

**Impact AQ-b: Would the Project result in a cumulatively considerable net increase in any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?**

This impact is related to regional criteria pollutant impacts. As identified in Impact Section 3.3 (a) above, Humboldt County is designated nonattainment for the State's $PM_{10}$ standard. Humboldt County is designated attainment for all other state and federal standards.

For construction emissions, the NCUAQMD has indicated that emissions are not considered regionally significant for projects whose construction would be relatively short in duration, lasting less than one year. For Project construction lasting more than one year or that involves above average construction intensity in volume of equipment or area disturbed, construction emissions may be compared to the stationary source thresholds (NCUAQMD 2019).

The NCUAQMD does not have established CEQA significance criteria to determine the significance of impacts that would result from projects such as the proposed Project; however, the NCUAQMD does have criteria pollutant significance thresholds for new or modified stationary source projects proposed within the NCUAQMD's jurisdiction. NCUAQMD has indicated that it is appropriate for lead agencies to compare proposed construction emissions that last more than one year to its stationary source significance thresholds, which are:

- Nitrogen oxides – 40 tons per year
- Reactive organic gases – 40 tons per year
- PM10 – 15 tons per year
- Carbon monoxide – 100 tons per year

If an individual Project's emission of a particular criteria pollutant is within the thresholds outlined above, the Project's effects concerning that pollutant are considered to be less than significant.

The California Emissions Estimator Model (CalEEMod) version 2016.3.2 was used to estimate air pollutant emissions from Project construction (Appendix C). Construction of the Project is expected to begin in late spring and require approximately six to eight months to complete. Detailed construction equipment activity was estimated based on Project construction components.

Table 3.3-1 summarizes construction-related emissions. As shown in Table 3.3-1, the Project's construction emissions would not exceed the NCUAQMD's stationary sources emission thresholds. Therefore, the Project's construction emissions are considered to have a less than significant impact.

***Table 3-2 Construction Regional Pollutant Emissions***

| Parameter | Emissions (tons per year) | | | |
|---|---|---|---|---|
| | ROG | $NO_x$ | CO | $PM_{10}$ |
| Project Construction | 0.06 | 0.54 | 0.63 | 0.3 |
| NCUAQMD Stationary Source Thresholds | 40 | 40 | 100 | 15 |
| *Significant Impact? (Yes/No)* | *No* | *No* | *No* | *No* |

Following construction, the Project would not include any stationary sources of air emissions, traffic capacity enhancements, or any increase in levels of traffic over existing conditions. The proposed roadway improvements will likely increase non-emitting bicycle and pedestrian roadway, which may decrease vehicle trips and associated emissions. Vehicle trips associated with operation and maintenance of the road would include annual inspections, repaving, painting, and repairs as needed. Operation and maintenance of the Project would generate less than one traffic trip per week on average. However, larger repairs to the road or sidewalk facilities may take several weeks to complete depending on the extent of damage and other circumstances. The Project would not result in substantial long-term operational emissions of criteria air pollutants. Therefore, Project-generated operational emissions would not result in a cumulatively considerable net increase of any criteria pollutant for

which the region is in non-attainment. The Project's contribution to a cumulative impact would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact AQ-c: Would the Project expose sensitive receptors to substantial pollutant concentrations?**

Activities occurring near sensitive receptors should receive a higher level of preventative planning. Sensitive receptors include school-aged children (schools, daycare, playgrounds), the elderly (retirement community, nursing homes), the infirm (medical facilities/offices), and those who exercise outdoors regularly (public and private exercise facilities, parks). Sensitive receptors immediately adjacent to the Project corridor include residences, Sunny Brae Middle School, Jacoby Creek Elementary School, Mistwood Education Center, community gardens, and small businesses.

Idling times for trucks and equipment would be limited to five minutes, as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR], which also ensures construction equipment is maintained in accordance with manufacturer's specifications.

The Project would require more than one staging area due to its linear nature. The southern potential staging area would be located approximately 1,700 feet or greater from sensitive receptors at the Jacoby Creek Elementary School and adjacent community garden and businesses and adjacent to sensitive receptors at Mistwood School. The northern potential staging area would be located approximately 400 feet from a community garden and 700 feet or greater from sensitive receptors at Sunny Brae Middle School. Project construction activities would largely be linear in nature and would not include intensive or prolonged construction equipment use in any one location.

Project construction activities are not expected to occur for a substantial amount of time. Due to the relatively short length of the construction period, the distance from the majority of construction activities, and the implementation of fugitive dust control measures, the Project would not result in the exposure of sensitive receptors to substantial pollutant concentrations. Therefore, the construction-related impact would be less than significant.

Following construction, the Project would not include any stationary sources of air emissions or new mobile source emissions that would result in substantial long-term operational emissions of criteria air pollutants. In fact, Project operation could potentially reduce Vehicle Miles Traveled and therefore emissions. Therefore, Project operation would not expose nearby sensitive receptors to substantial levels of pollutants. The operational impact would be less than significant.

**Mitigation Measures:** No mitigation is necessary.

**Level of Significance:** Less than significant

**Impact AQ-d: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

The Project would not create odors that could reasonably be considered objectionable by the general public because no aspect of Project construction is anticipated to create objectionable odors except for limited exhaust fumes from gas powered equipment. Therefore, impacts would be less than significant.

**Mitigation Measures:** No mitigation is necessary.

**Level of Significance:** Less than significant

## 3.2.7 Cumulative Impacts

**Impact AQ-C-1: Would the Project contribute to a cumulatively significant impact to Air Quality?**

Projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust's watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber Project, and future Jacoby Creek School classroom improvements.

- The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows under a County bridge on Old Arcata Road. Future enhancement project locations within the lower watershed have not yet been identified and may or may not be located within proximity to Old Arcata Road. Any such enhancements to the stream corridor would most likely be limited to the regulated in-water work window (mid-June through October) and thus short-term in duration. Operational air quality impacts would not result. The timing of planned enhancements also remains speculative, and, if implemented, would occur after implementation of the Project. The combined projects would not result in a cumulative impact to air quality.
- The VERO Eureka/Arcata Fiber optic project would be located subsurface, parallel to Old Arcata Road and within the City and County right-of-ways. The VERO project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. Some portions of the VERO project along Old Arcata Road have already been completed and are short-term in duration. Given the low-intensity construction methods and associated low level air emissions, significant air quality impacts would likely not result from the VERO project; thus, a cumulative air quality impact would not result.
- Planned classroom improvements to the Jacoby Creek School would be located at the western end of the campus, away from Old Arcata Road and behind existing structures facing Old Arcata Road. Improvements would not include any two-story structures. Construction related air emissions from the planned improvements would be short-term in duration and consistent with low level construction intensity. The improvements would be unlikely to exceed regulated air quality thresholds. Any potential cumulative air quality impact would be less than significant.

Given that the Project would not result in any significant air quality impact, and that the three projects considered in Table 3-1 would not result in a likelihood for significant air quality impacts in or near the Project Area, the potential for cumulative air quality impacts within the study area would not result.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.2.8 References

Bay Area Air Quality Management District (BAAQMD). 2017. *California Environmental Quality Act Air Quality Guidelines.*

California Air Resources Board (CARB). 2016*. Ambient Air Quality Standards*. Available at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf Accessed on January 26, 2020.

California Air Resources Board (CARB). 2018. *Area Designations Maps / State and National*. Available at: http://www.arb.ca.gov/desig/adm/adm.htm. Accessed on January 26, 2020.

City of Arcata. 2008. *Arcata General Plan and Local Coastal Land Use Plan*. Amended October.

Humboldt County. 2014. *Humboldt Bay Area Plan, of the Humboldt County Local Coastal Program*. December. Available at: https://humboldtgov.org/DocumentCenter/View/50844/Humboldt-Bay-Area-Local-Coastal-Plan

Humboldt County. 2017. *General Plan. Chapter 15 – Air Quality Element*. Adopted October 23.

North Coast Unified Air Quality Management District (NCUAQMD). 2019. *Air Quality Planning & CEQA*. Available at: http://www.ncuaqmd.org/index.php?page=aqplanning.ceqa

Public Resources Code Division 20. 2021. *California Coastal Act*. Available at: https://www.coastal.ca.gov/coastact.pdf

# 3.3 Biological Resources

This section evaluates potential impacts related to biological resources during construction and operation of the Project. To provide the basis for this evaluation, the Setting section describes the biological setting. The Regulatory Framework section describes the regulatory background that applies to the Project. The Impact Analysis section establishes the thresholds of significance, evaluates potential impacts to biological resources, and identifies the significance of impacts.

## 3.3.1 Study Area

The biological study area (BSA) for biological resources includes the footprint of the Project Area, as well as a five to 10-foot buffer around the perimeter of the Project Area. An additional 600-foot buffer was applied to the north end of proposed Project improvements to accommodate any potential design changes. Given the entire Project would take place within the public right of way along the established roadway corridor, larger-scale biological impacts beyond the established BSA would not occur. The BSA is shown in Figure 2 of the Natural Environment Study (NES) prepared for the Project by Northstar Environmental (2019), included as Appendix D.

## 3.3.2 Setting

### Existing Habitat Conditions

The BSA, running approximately north by northwest from Bayside to Arcata, is located on the median between two distinct geographic regions. West of the site are the Bayside Bottoms mud flats and Gannon Slough, low profile wetland features supporting drainage to Humboldt Bay and possessing numerous standing waters. East of the site is Fickle Hill, characterized by low elevation foothills drained by numerous creeks. The most prominent creeks near the site are Beith Creek (approximately 50 feet north of the BSA), North Jacoby Creek (located in the BSA, culverted under Old Arcata Road near Spring Hill Lane), and Grotzman Creek (located north and west of the BSA). The elevation within the BSA ranges from approximately 20 to 55 feet above mean sea level. Annual precipitation averages 41-53 inches and mean annual temperature ranges from 52-55 degrees Fahrenheit.

The BSA lies entirely on the Hookton-Tablebluff soils complex, which is comprised of largely undifferentiated alluvial and aeolian sediment forming loams and silty clay-loams in the top 5 feet of soil. Specific groundwater depths are currently unknown at the Project location, but National Resource Conservation Service (NRCS) estimates range from 10 to 40 inches below ground surface. Topography slopes from 2 to 9 percent grade. The soils range from poorly to moderately well-drained and possess a moderately low water transmissivity value (0.20 – 0.60 inches per hour). Field surveys performed by GHD in 2018 also indicated the presence of naturally occurring gravels in varying frequencies, and larger quantities of gravel placed by humans in drainage ditches.

### Habitat Types

The Project Area is within the Redwood – Douglas Fir vegetation community (ICE 1997 cited in Northstar Environmental 2019) with Old Arcata Road the dominant feature throughout the BSA. The botanical survey conducted by GHD identified individual redwood trees adjacent to Old Arcata Road but determined they did not constitute a forest community and are not considered Environmentally Sensitive Habitat Areas (ESHA). The majority of the BSA includes paved roadway. No special concern habitats or natural communities exist within the BSA.

### Aquatic Resources

The BSA consists of two types of identified U.S. Army Corp of Engineers (USACE) jurisdictional wetlands that were classified using Cowardin nomenclature from *Classification of Wetlands and Deepwater Habitats of the United States* (Federal Geographic Data Committee 2013 cited in GHD 2021) - Palustrine Emergent Persistent Wetlands and Palustrine Broad-leaved Deciduous Scrub-Shrub Wetlands. The USACE issued a Preliminary Jurisdictional Determination (PJD) on March 28, 2019. BSA also contains one-parameter wetlands meeting

Coastal Commission requirements based only on wetland (facultative wetland plants [FAC] or wetter) vegetation (lack of hydric soils and wetlands hydrology). These wetlands were mapped based on dominant native vegetation as one-parameter willow series. The one-parameter willow series was mapped to the willow canopy dripline. Areas where the canopy extends over pavement were also mapped. No two-parameter wetlands were identified. A 2021 wetland delineation update focused on a small wetland located near the intersection of Old Arcata Road and Jacoby Creek Road (GHD 2021). The 2021 wetland delineation update concluded that the evaluated area did not meet three-parameter wetland criteria, and an updated PJD was submitted to the USACE for review (GHD 2021). The USACE concurred and issued a revised jurisdictional determination (USACE 2021).

The Palustrine Emergent Persistent Wetland and the Palustrine Scrub-Shrub, Broad leaved Deciduous Wetlands occurred primarily within roadside ditches along the northeast side of Old Arcata Road. The Palustrine Emergent Persistent Wetland consisted primarily of an herbaceous layer and the Palustrine Scrub-Shrub, Broad leaved Deciduous Wetlands consisted of tree, shrub, and herbaceous vegetation layers. Willow species (*Salix* spp.) were the dominant trees in the shrub-scrub wetlands often occurring with Himalayan blackberry (*Rubus armeniacus*) and California blackberry (*Rubus ursinus*) in the shrub layer. Hydrophytic vegetation was dominant within all wetland areas.

## Sensitive Natural Communities

No sensitive vegetation alliances, including riparian, were identified within the BSA based on CDFW's Hierarchical List of Natural Communities (California Department of Fish and Wildlife [CDFW] 2018b cited in Northstar Environmental 2019). Communities noted in the CDFW Hierarchical List of Natural Communities with a 1,2, or 3 are considered sensitive. Some individual redwood trees (*Sequoia sempervirens*) occur within the BSA. On the northern end of the BSA near the Buttermilk Lane roundabout, there are a few young redwood trees that appear to have been planted. North of Jacoby Creek Elementary School, between a fence line and the sidewalk, there are two mature redwood trees and a small (<5 feet. tall) sapling located between the two larger trees. The Sequoia sempervirens Forest Alliance has a Global listing of G3 and State Ranking of S3 (CDFW 2018b cited in Northstar Environmental 2019). None of the redwood trees within the BSA are connected to a forest and therefore they do not constitute a Forest Alliance. Redwood trees are not considered special-status plant species as individuals and are not considered ESHA.

## Special-Status Plant Species and ESHA

On June 18 and July 31, 2018, the BSA was surveyed in an effort to identify if federal, state and/or California Native Plant Society (CNPS) listed plant species are present. No special status species were observed during the protocol level surveys in 2018. Vegetation mapping to screen for Environmentally Sensitive Habitat Areas (ESHA) occurred on August 31, 2018 and September 20, 2018. Within the assessment area, three sensitive plant communities have a documented potential to exist according to the California Natural Diversity Database (CNDDB) - upland Douglas-fir forest, northern coastal salt marsh, and northern foredune grassland. None of these communities were observed within the BSA. See Table 3.3-1 - Potential for Special Status Plants to Occur within the Study Area, for a summary of special status plants evaluated in the NES.

## Wildlife and Avian Resources

The USFWS Information for Planning and Consultation (IPaC) website was consulted for a list of federally listed species and critical habitat that might be present within the proposed Project Area and the BSA. Additionally, the CNDDB list of Federally and State-listed species was reviewed for species that may potentially occur in the BSA. Surveys indicated there were no special-status species or their potential habitats within the BSA. The Project Area contains habitat suitable for nesting migratory birds. Species with the potential to be affected by Project activities are those that nest in the vegetation and trees adjacent to Old Arcata Road. See Table 3.3-1 for a summary of special status avian species evaluated in the NES. While aquatic habitat is not present in the BSA, potential habitat exists for the Northern Red-legged Frog (*Rana aurora*) adjacent to the BSA. No additional special-status wildlife species or their habitats were identified within the BSA. See Table 3.3-1 for a summary of special status wildlife evaluated in the NES.

*Table 3.3-1 Potential for Special-status Species to Occur within the Study Area*

| Species | Status[1] | Habitat Requirements[2] | Potential to Occur On-site |
|---|---|---|---|
| **Mammals** | | | |
| Fisher (*Pekania pennanti)* | USFWS Proposed Threatened, CA Threatened, CDFW Species of Special Concern | Late-successional coniferous or mixed forests. Key habitat components include relatively large diameter trees, high canopy closure, large trees (hardwood and conifer) with cavities, and large down wood. | Low Potential. Suitable habitat is absent from the BSA. |
| Sonoma Tree Vole (*Arborimus pomo)* | CDFW Species of Special Concern | Nests high in the canopy in wet, old-growth forests. | Low Potential. Suitable habitat is absent from BSA. |
| Townsend's Big-eared Bat (*Corynorhinus townsendii)* | CDFW Species of Special Concern | Uses caves, mines, and isolated buildings (e.g., barns) for day and night roosting, maternity roosting, and hibernacula. Occasionally uses hollow trees and bridges for day or night roosting. | Moderate Potential. Habitat is generally absent in the BSA; however, habitat is adjacent to the BSA and a potential to occur does exist. |
| **Birds** | | | |
| Northern Spotted Owl (*Strix occidentalis caurina)* | Threatened | Inhabit older forested habitats required for nesting, roosting, and foraging. Specifically require multi-layered, multi-species canopy with moderate to high canopy closure. | Low Potential. Habitat is absent from the BSA. |
| Western Snowy Plover (*Charadrius nivosus nivosus)* | Threatened | Breeds on coastal beaches. Generally breeding occurs above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. | Low Potential. Habitat is absent from the BSA. |
| Yellow-billed Cuckoo (*Coccyzus americanus)* | Threatened | Breeds mostly in dense deciduous stands, including forest edges, tall thickets, dense second growth, overgrown orchards, and scrubby oak woods. Often found in willow groves around marshes. | Low Potential. Habitat is absent from the BSA. |
| White-tailed Kite (*Elanus leucurus)* | CDFW Fully Protected | Common in savannas, open woodlands, marshes, desert grasslands, partially cleared lands, and cultivated fields. | Moderate Potential. Habitat is generally absent in the BSA; however, habitat is adjacent to the BSA and a potential to occur does exist. |
| Mountain Plover (*Charadrius montanus)* | CDFW Species of Special Concern | Breeds on open plains at moderate elevations. Winters in short-grass plains and fields, plowed fields, and sandy deserts. Usually not found near bodies of water or even wet soil. | Low Potential. Habitat is absent from the BSA. |
| American Peregrine Falcon (*Falco peregrinus anatum)* | CDFW Fully Protected | Breeds in open landscapes with cliffs (or skyscrapers) for nest sites. | Low Potential. Habitat is absent from the BSA. |

| Species | Status[1] | Habitat Requirements[2] | Potential to Occur On-site |
|---|---|---|---|
| Bryant's Savannah Sparrow (*Passerculus sandwichensis alaudinus)* | CDFW Species of Special Concern | Inhabit grasslands with few trees, including meadows, pastures, grassy roadsides, sedge wetlands, and cultivated fields planted with cover crops like alfalfa. Near oceans, they also inhabit tidal saltmarshes and estuaries. | Low Potential. Suitable habitat is absent from the BSA. |
| California Brown Pelican (*Pelecanus occidentalis californicus)* | CDFW Fully Protected | Nest in colonies on offshore islands free from predators. Roost communally in areas that are near adequate food supplies, have a physical barrier from predators, and provide protection from wind or high surf. | Low Potential. Habitat is absent from the BSA. |
| Yellow Rail (*Coturnicops noveboracensis)* | CDFW Species of Special Concern | Breeding birds typically inhabit fresh and brackish-water marshes, preferring the higher (drier) margins. | Low Potential. Habitat is absent from the BSA and the Project Area is outside of the Yellow Rail's known range. |
| **Fish** | | | |
| Tidewater Goby (*Eucyclogobius newberryi)* | USFWS Endangered, CDFW Species of Special Concern | Inhabits lagoons formed by streams running into the sea. | No Potential. Suitable aquatic habitat is absent from the BSA. |
| Green Sturgeon (*Acipenser medirostris)* | USFWS Threatened, CDFW Species of Special Concern | Found in riverine, estuarine, and marine habitats along the west coast of North America, spending substantial portions of their lives in marine waters. | No Potential. Suitable aquatic habitat is absent from the BSA. |
| Longfin Smelt (*Spirinchus thaleichthys)* | USFWS Candidate, CA Threatened | Found in bays, estuaries, and nearshore coastal areas, and migrate into freshwater rivers to spawn. | No Potential. Suitable aquatic habitat is absent from the BSA. |
| Eulachon (*Thaleichthys pacificus)* | USFWS Threatened | Found near the bottom of the continental shelf, usually at depths of 20-200m. Spawning occurs within tidal influence of river mouth. | No Potential. Suitable aquatic habitat is absent from the BSA. |
| Coho Salmon (*Oncorhynchus kisutch)* | USFWS Threatened, CA Threatened | Spawning occurs in small streams with stable gravel substrates. The remainder of the life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean. | No Potential. Suitable aquatic habitat is absent from the BSA. |
| Steelhead Trout (*Oncorhynchus mykiss irideus)* | USFWS Threatened | Spawn in fast-flowing, gravel-bottomed, well-oxygenated rivers and streams. | No Potential. Suitable aquatic habitat is absent from the BSA. |

| Species | Status[1] | Habitat Requirements[2] | Potential to Occur On-site |
|---|---|---|---|
| Chinook Salmon (*Oncorhynchus tshawytscha)* | USFWS Threatened | Juveniles may spend 3 months to 2 years in freshwater before migrating to estuarine areas and then into the ocean to feed and mature. They prefer streams that are deeper and larger than those used by other Pacific salmon species. | No Potential. Suitable aquatic habitat is absent from the BSA. |
| Coastal Cutthroat Trout (*Oncorhynchus clarkii clarkii)* | CDFW Species of Special Concern | Inhabit a large range along the Pacific coast. They prefer estuaries, lagoons, and small, low-gradient coastal streams. | No Potential. Suitable aquatic habitat is absent from the BSA. |
| Pacific Lamprey (*Entosphenus tridentatus)* | CDFW Species of Special Concern | Typically found in stream and river reaches that have relatively stable flow conditions. Spawning occurs in medium-sized rivers and smaller tributary streams. | No Potential. Suitable aquatic habitat is absent from the BSA. |
| **Reptiles** | | | |
| Western Pond Turtle (*Emys marmorata)* | CDFW Species of Special Concern | Inhabits calm and quiet ponds, marshes, and pools. | Low Potential. Habitat is absent from the BSA. |
| **Amphibians** | | | |
| Pacific Tailed Frog (*Ascaphus truei)* | CDFW Species of Special Concern | Inhabits cold, fast-moving streams with cobblestone bottoms. | Low Potential. Habitat is absent from the BSA. |
| Foothill Yellow-legged Frog (*Rana boylii)* | CA Threatened, CDFW Species of Special Concern | Typically inhabits rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. | Low Potential. Habitat is absent from the BSA. |
| Northern Red-legged Frog (*Rana aurora)* | CDFW Species of Special Concern | Typically found in woods adjacent to streams. Found in humid forests, woodlands, grasslands, and streamsides with plant cover. Breeding habitat is in permanent water sources (lakes, ponds, streams, etc.). | Moderate Potential. Habitat is generally absent in the BSA; however, habitat is adjacent to the BSA and a potential to occur does exist. |
| Southern Torrent Salamander (*Rhyacotriton variegatus)* | CDFW Species of Special Concern | Found in shallow, cold, clear, well-shaded streams, waterfalls and seepages, particularly those running through talus and under rocks all year, in mature old-growth forests. | Low Potential. Habitat is absent from the BSA. |
| **Plants** | | | |
| Western lily (*Lilium occidentale)* | USFWS Endangered, CA Endangered | Grows at the edges of sphagnum bogs and in forest or thicket openings along the margins of ephemeral ponds and small channels. It also grows in coastal prairie and scrub near the ocean where fog is common. | Low Potential. Habitat is absent from the BSA. |

| Species | Status[1] | Habitat Requirements[2] | Potential to Occur On-site |
|---|---|---|---|

**1) Key to status codes:**

FE = Federal Endangered
FT = Federal Threatened
FC = Federal Candidate
FD = Federal Delisted
PT = Proposed Threatened
BCC = USFWS Birds of Conservation Concern
SE = State Endangered
SC = State Candidate
SD = State Delisted
SNR= State Not Ranked
ST = State Threatened
MMPA Protection = Marine Mammal Protection Act Protection
SR = State Rare
SSC = CDFW Species of Special Concern
CFP = CDFW Fully Protected Animal
CWL = CDFW Watch List
CDFW Special Animal List State Ranking:
S1: Critically Imperiled
S2: Imperiled
S3: Vulnerable
S4: Apparently Secure
S5: Secure

SR = State Rare
SSC = CDFW Species of Special Concern
CFP = CDFW Fully Protected Animal
CWL = CDFW Watch List
BCC = USFWS Birds of Conservation Concern
1A = CRPR List 1A: Plants presumed extinct in California
1B = CRPR List 1B: Plants rare, threatened or endangered in California and elsewhere
2 = CRPR List 2: Plants rare, threatened, or endangered in California, but more common elsewhere
3 = CRPR List 3: Plants about which more information is needed (a review list)
4 = CRPR List 4: Plants of limited distribution (a watch list)
WBWG = Western Bat Working Group

WBWG: Western Bat Working Group (independent group composed of agencies, organizations and individuals interested in bat research, management and conservation).
WBWG High Priority: represents species considered highest priority for funding, planning, and conservation actions. These species are imperiled or at high risk of imperilment.
WBWG Medium Priority: indicates a level of concern that should warrant closer evaluation, more research, and conservation actions of both the species and possible threats (including lack of meaningful information).
WBWG Low Priority: indicates that most of the existing data support stable populations of the species, and that the potential for major changes in status in the near future is considered unlikely.
AFS = American Fisheries Society; EN = Endangered, TH = Threatened, VU = Vulnerable

**Potential to Occur:**

No Potential Habitat on and adjacent to the Project Area is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

Low Potential Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the Project Area is unsuitable or of very poor quality. The species is not likely to be found in the Project Area.

Moderate Potential Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the Project Area is unsuitable. The species has a moderate probability of being found in the Project Area.

High Potential All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the Project Area is highly suitable. The species has a high probability of being found in the Project Area.

Table compiled from CDFW California Natural Diversity Database (CNDDB), U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) Species List, and the National Marine Fisheries Service (NMFS) West Coast Fisheries Database Electronic Inventory searches of the Arcata South, Arcata North, Blue Lake, Korbel, Iaqua Buttes, McWhinney Creek, Fields Landing, Eureka and Tyee City USGS 7.5 Minute Quadrangles (CDFW 2018, CNPS 2018, NMFS 2018, USFWS 2018). Potential to occur is determined based on habitat availability and nearest known documented records.

## 3.3.3 Regulatory Framework

Many sensitive biological resources in California, including species, habitats, and aquatic resources, are protected and/or regulated by federal, state, and local laws and policies. Those applicable to the Project are summarized below.

### Federal

#### *Clean Water Act, Section 404*

The Clean Water Act (CWA; 1977, as amended) establishes the basic structure for regulating discharges of pollutants into Waters of the U.S. It gives the U.S. Environmental Protection Agency (EPA) the authority to implement pollution control programs, including setting wastewater standards for industry and water quality standards for contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, without a permit under its provisions.

Proposed discharges of dredged or fill material into Waters of the U.S. require USACE authorization under Section 404 of the CWA [33 U.S.C. 1344]. Regulations implementing CWA Section 404 define “Waters of the U.S.” to include intrastate waters (such as, lakes, rivers, streams, wetlands, and natural ponds) that the use, degradation, or destruction of could affect interstate or foreign commerce. Wetlands are defined for regulatory purposes as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 Code of Federal Regulations [CFR] 328.3; 40 CFR 230.3). Projects are reviewed by USACE under standard (i.e., individual) or general (i.e., nationwide, programmatic, or regional) permits. The type of permit process used to consider a project is determined by the USACE and based on project parameters.

#### *Clean Water Act, Section 401*

In California, the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs) review projects for compliance with State and Federal water quality standards under Section 401 of the Clean Water Act. In Humboldt County, the North Coast RWQCB (NCRWQCB) is responsible for certifying that a federally permitted project meets state water quality objectives (§401 CWA, and Title 23 CCR 3830, et seq.) before the permit is issued. Activities in areas that are outside of the jurisdiction of the USACE (e.g., isolated wetlands, vernal pools, or stream banks above the ordinary high water mark) are regulated by the nine RWQCBs, under the authority of the Porter-Cologne Act, and may require the issuance of either individual or general waste discharge requirements (WDR) (see below).As described in Section 2.8.1 – Environmental Protection Action 1 – Stormwater Pollution Prevention Plan (SWPPP), the City would submit permit registration documents (notice of intent, risk assessment, site maps, SWPPP, annual fee, and certifications) to the Water Board. The SWPPP would address pollutant sources, best management practices, and other requirements specified in the Order. The SWPPP would include erosion and sediment control measures, and dust control practices to prevent wind erosion, sediment tracking, and dust generation by construction equipment. A Qualified SWPPP Practitioner would oversee implementation of the Project SWPPP, including visual inspections, sampling and analysis, and ensuring overall compliance.

#### *Executive Order 11990*

Executive Order 11990 (1977) furthers the protection of wetlands through avoidance of long and short-term adverse impacts associated with the destruction or modification of wetlands where practicable. The order requires all federal agencies managing federal lands, sponsoring federal projects, or funding state or local projects to assess the effects of their actions on wetlands. The agencies are required to follow avoidance, mitigation, and preservation procedures. The Presidential Wetland Policy of 1993 and subsequent reaffirmation of the policy in 1995 supports protection and restoration of wetlands, while advocating for increased fairness of federal regulatory programs.

### *Executive Order 13112, Invasive Species*

Executive Order 13112 was issued in 1999 to enhance federal coordination and response to the complex and accelerating problem of invasive species. It provides policy direction to promote coordinated efforts of federal, state, and local agencies in monitoring, detecting, preventing, evaluating, managing, and controlling the spread of invasive species and increasing the effectiveness of scientific research and public outreach affecting the spread and impacts of invasive species.

### *Federal Endangered Species Act*

The Endangered Species Act (ESA) of 1973 (16 USC 1531 *et seq*.) establishes a national policy that all federal departments and agencies provide for the conservation of threatened and endangered species and their habitats. The Secretary of the Interior and the Secretary of Commerce are designated in the ESA as responsible for: (1) maintaining a list of species likely to become endangered within the foreseeable future throughout all or a significant portion of its range (threatened) and that are currently in danger of extinction throughout all or a significant portion of its range (endangered); (2) carrying out programs for the conservation of these species; and (3) rendering opinions regarding the impact of proposed federal actions on listed species. The ESA also outlines what constitutes unlawful taking, importation, sale, and possession of listed species and specifies civil and criminal penalties for unlawful activities.

Pursuant to the requirements of the ESA, an agency reviewing a project within its jurisdiction must determine whether any Federally listed or proposed species may be present in the project region, and whether the proposed project would result in "take" of such species. The ESA prohibits "take" of a single threatened and endangered fish or wildlife species except under certain circumstances and only with authorization from USFWS or NOAA Fisheries through a permit under Section 7 (for federal entities or federal actions) or 10(a) (for non-federal entities) of the Act. "Take" under the ESA includes activities such as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS regulations define harm to include "significant habitat modification or degradation." On June 29, 1995, a U.S. Supreme Court ruling further defined harm to include habitat modification "…where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering." Of note, federally listed plants are not protected from take, although it is illegal to collect or maliciously harm them on Federal land.

In addition, an agency reviewing a project is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under the ESA or result in the destruction or adverse modification of critical habitat for such species (16 USC 1536[3][4]). Critical Habitat is defined by the ESA as a specific geographic area containing features essential for the conservation of an endangered or threatened species. Under Section 7 of the ESA, critical habitat should be evaluated if designated for Federally listed species that may be present in the project vicinity and/or potentially impacted by the project.

### *Coastal Zone Management Act*

The Coastal Zone Management Act (CZMA) was passed in 1972 and established a national policy and national program for the management, beneficial use, protection, and development of land and water resources of the nation's coastal zones. The voluntary national program was meant to encourage coastal states to develop and implement coastal zone management plans. The California Coastal Act (CCA) (further described below) is the foundation of the California Coastal Management Program which is California's coastal zone management plan. The CZMA requires that federal development activities and development requiring federal permits or funding affecting land or water areas or resources within the coastal zone are consistent with the provisions of the act and approved coastal zone management plans. In California, outside of San Francisco Bay, the California Coastal Management Program is implemented and enforced by the California Coastal Commission (CCC).

### *Migratory Bird Treaty Act*

The Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711) as amended established federal responsibilities for the protection of nearly all species of birds, their eggs, and nests. A migratory bird is defined as any species

or family of birds that live, reproduce, or migrate within or across international borders at some point during their annual life cycle. The MBTA prohibits the take, possession, buying, selling, purchasing, or bartering of any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Only exotic species such as Rock Pigeons (*Columba livia*), House Sparrows (*Passer domesticus*), and European Starlings (*Sturnus vulgaris*) are exempt from protection.

#### *Bald and Golden Eagle Protection Act*

The Bald and Golden Eagle Protection Act (BGEPA) was originally enacted in 1940 in order to protect the national emblem of the United States, the Bald Eagle. At that time, the Bald Eagle was experiencing significant population pressures from hunting, egg collection, and habitat loss (Buehler 2000). This act was expanded in 1962 to include protections for the Golden Eagle (*Aquila chrysaetos*), which was also experiencing precipitous population declines due to habitat loss, hunting, and electrocution from power lines (Kochert et al. 2002).

The current federal statute as amended (16 U.S.C. 668-668d) includes criminal penalties for anyone, including individuals, associations, partnerships, and corporations who “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or in any manner any bald eagle commonly known as the American eagle or any golden eagle, alive or dead, or any part, nest, or egg thereof” without a permit (16 U.S.C. § 668a).

A BGEPA take permit may be required if a proposed activity is near an active or inactive eagle nest, roosting site, or foraging site. This is particularly true if the project is near breeding habitat (as opposed to wintering habitat or migratory stop-over sites). The act applies to all activities that may impact eagles, including projects without a federal nexus. If there is a possibility that the project could “non-purposefully take” eagles (unavoidable take associated with, but not the purpose of an activity) the USFWS may issue a programmatic take permit. In this case, the permit would be subject to conditions or mitigation measures to minimize impacts. Post-construction monitoring and annual reports may also be required (50 CFR 22.26).

### State

#### *California Environmental Quality Act*

Rare or endangered plant or wildlife species are defined in the CEQA Guidelines Section 15380. Endangered means that survival and reproduction in the wild are in immediate jeopardy. Rare means that a species is either presently threatened with extinction or that it is likely to become endangered within the foreseeable future. A species of animal or plant shall be presumed to be rare or endangered if it is listed in 14 California Administrative Code (CAC) 670.2 or 670.5, or 50 CFR 17.11 or 17.12 pursuant to the ESA as threatened or endangered.

#### *California Coastal Act*

The CCA (California Public Resources Code [PRC] Sections 30000 et seq) was enacted by the State Legislature in 1976 to provide long-term protection of California’s 1,100-mile (1,770 kilometers) coastline for the benefit of current and future generations. CCA policies constitute the standards used by the CCC in its coastal development permit decisions and for the review of local coastal programs (LCPs) prepared by local governments and submitted to the CCC for approval. These policies are also used by the CCC to review federal activities that affect the coastal zone (see Coastal Zone Management Act above). Among other things, the policies require:

– Protection and expansion of public access to the shoreline;
– Protection, enhancement and restoration of environmentally sensitive habitats;
– Protection of productive agricultural lands, commercial fisheries and archaeological resources; and
– Protection of the scenic beauty of coastal landscapes and seascapes;

The CCA defines an “environmentally sensitive habitat area” (ESHA) as an “area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and

which could be easily disturbed or degraded by human activities and developments" (Section 30107.5). Three important elements define an ESHA:

1. A geographic area can be designated ESHA because of the presence of individual species of plants or animals or because of the presence of a particular habitat;
2. In order for an area to be designated as ESHA, the species or habitat must be either rare or it must be especially valuable; and,
3. The area must be easily disturbed or degraded by human activities.

Section 30240 states in part that:

– ESHA shall be protected against significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.
– Development in areas adjacent to ESHA and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas and shall be compatible with the continuance of those habitat and recreation areas.

While there is not a specific list of habitats considered to be ESHA for the state or county, the CCC through the CCA and counties or municipalities through LCPs are the jurisdictional agencies that exert authority in identifying and protecting ESHA during project review and permitting. In order for the CCC to determine if areas are to be classified as ESHA's, they often refer to CDFW's list of statewide Sensitive Natural Communities. Sensitive Natural Communities are defined by CNDDB as those with a State ranking of 1, 2 or 3 (S1, S2, or S3). The CCC generally considers Sensitive Natural Communities to be ESHAs. Thus, the Sensitive Natural Communities discussed in Impact BIO-2 would also likely be considered ESHA under the CCA.

Additional Coastal Act policies relevant to the proposed Project include:

*Section 30231*

*The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained, and where feasible, restored through, among other means, minimizing adverse effects of wastewater discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

*Section 30233*

*(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*

*(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*

*(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*

*(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland; provided, however, that in no event shall the size of the wetland area used for such boating facility, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, be greater than 25 percent of the total wetland area to be restored.*

(4) *In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities.*

(5) *Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*

(6) *Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*

(7) *Restoration purposes.*

(8) *Nature study, aquaculture, or similar resource-dependent activities.*

*Section 30607.1*

*Where any dike and fill development is permitted in wetlands in conformity with this division, mitigation measures shall include, at a minimum, either acquisition of equivalent areas of equal or greater biological productivity or opening up equivalent areas to tidal action; provided, however, that if no appropriate restoration site is available, an in-lieu fee sufficient to provide an area of equivalent productive value or surface areas shall be dedicated to an appropriate public agency, or such replacement site shall be dedicated to an appropriate public agency, or such replacement site shall be purchased before the dike or fill development may proceed. Such mitigation measure shall not be required for temporary or short-term fill or diking: provided, that a bond or other evidence of financial responsibility is provided to assure that restoration will be accomplished in the shortest feasible time.*

### *Porter-Cologne Water Quality Control Act*

The Porter-Cologne Water Quality Control Act (Porter Cologne) was passed in 1969 and assigns overall authority for water rights and water quality protection to the SWRCB and directs the nine RWQCBs to develop and enforce water quality standards within their boundaries. Through Porter-Cologne, the RWQCBs are responsible for regulating any activity, including waste discharges, that would, or that have the potential to, impair the beneficial uses of water bodies.

The SWRCB utilizes WDRs to regulate activities that may affect waters of the state or that may discharge water in a diffuse matter. As described above, any federally sponsored or permitted activity that may result in a discharge to a water body must be certified under CWA Section 401 that the proposed activity would comply with state water quality standards. In practice, a CWA Section 401 Water Quality Certification incorporates a “General Waste Discharge Requirement for Dredge and Fill Discharges”, so a project specific WDR is not typically required. A WDR is, however, required when a CWA Section 401 Water Quality Certification is not, or if the project is particularly complex.

In the Project Area, the NCRWQCB regulates construction in Waters of the U.S. and Waters of the State, including activities in wetlands, under both the CWA and Porter Cologne (California Water Code, Division 7).

### *Executive Order W-59-93, State Wetland Conservation Policy*

The California Wetlands Conservation Policy (Executive Order W-59-93) establishes a primary objective to “ensure no overall net loss…of wetlands acreage and values in California.” The RWQCBs implement this policy and the Basin Plan Wetland Fill Policy, both of which require mitigation for wetland impacts.

### *California Endangered Species Act*

The California Endangered Species Act (CESA) includes provisions for the protection and management of species listed by the State of California as endangered, threatened, or designated as candidates for such listing (California Fish and Game Code (FGC) Sections 2050 through 2085). The CESA generally parallels the main provisions of the ESA and is administered by CDFW, which maintains a list of state threatened and endangered species as well as candidate species. The CESA requires consultation “to ensure that any action authorized by a state lead agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of the species”

(Section 2053). California plants and animals declared to be endangered or threatened are listed in 14 California Code of Regulations (CCR) 670.2 and 14 CCR 670.5, respectively. The State prohibits the incidental take of species listed pursuant to CESA or candidate species unless that take is permitted by CDFW. Under CESA, "take" is defined as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." It does not include protection of habitat unless alteration or removal of habitat would result in direct "take" (as defined above) of an individual animal.

### *California Fish and Game Code (FGC) - Birds of Prey and Native Nesting Birds*

Section 3503 of the FGC prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 specifically prohibits the take, possession, or destruction of any birds in the orders Falconiformes (hawks and eagles) or Strigiformes (owls) and their eggs or nests. These provisions, along with the federal MBTA, essentially serve to protect nesting native birds. Non-native species, including the European Starling, Rock Dove, and House Sparrow, are not afforded protection under the MBTA or FGC.

### *California FGC - Fully Protected Species*

The CDFW enforces the FGC, which provides protection for "fully protected birds" (Section 3511), "fully protected mammals" (Section 4700), "fully protected reptiles and amphibians" (Section 5050), and "fully protected fish" (Section 5515). As fully protected species, the CDFW cannot authorize any project or action that would result in "take" of these species even with an incidental take permit.

### *Species of Special Concern*

The CDFW maintains a list of Species of Special Concern. A Species of Special Concern is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

– is extirpated from the State or, in the case of birds, is extirpated in its primary season or breeding role;
– is listed as Federally-, but not State-, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed;
– is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; or
– has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

Species of Special Concern are species that are declining in California, and if current population and habitat trends continue could warrant listing pursuant to CESA or the ESA. Species of Special Concern receive consideration under CEQA.

### *Native Plant Protection Act*

The CDFW administers the California Native Plant Protection Act (CNPPA) (Sections 1900–1913 of the FGC). These sections allow the California Fish and Game Commission to designate rare and endangered plant species and to notify landowners of the presence of such species. Section 1907 of the FGC allows the Commission to regulate the "taking, possession, propagation, transportation, exportation, importation, or sale of any endangered or rare native plants." Section 1908 further directs that "[n]o person shall import into this state, or take, possess, or sell within this state, except as incident to the possession or sale of the real property on which the plant is growing, any native plant, or any part or product thereof, that the Commission determines to be an endangered native plant or rare native plant."

### *Sensitive Natural Communities*

The Manual of California Vegetation Online, describes California vegetation types, also known as "natural communities," and categorizes them into a hierarchical structure of alliances and associations. CDFW's CNDDB

evaluates the rarity and threats to these natural communities and ranks them into set categories, known as a state ranking. Alliances and associations with a CNDDB State ("S") ranking of S1 through S3 are defined as Sensitive Natural Communities and impacts to them should be assessed during CEQA project review. State ranking includes the following:

- S1 = Critically Imperiled – Critically imperiled in the state because of extreme rarity (often five or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
- S2 = Imperiled – Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
- S3 = Vulnerable – Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
- S4 = Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S5 = Secure – Common, widespread, and abundant in the state.

### *California Invasive Plant Council*

The California Invasive Plant Council (Cal-IPC) keeps an inventory categorizing plants that threaten California's natural areas. The inventory includes invasive plants that currently cause environmental damage or economic harm in California as well as a "Watch List" of plants that are a high risk of becoming invasive in the future. The inventory represents the best available knowledge of invasive plant experts in California. Categorization is based on an assessment of ecological impacts, conducted with transparent science-based criteria and expert review. The inventory has no regulatory authority, rather is intended to be utilized as a management resource. The categorization or ratings of Cal-IPC plants are in accordance with the following:

- **High** – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically. European beachgrass and dense-flowered cordgrass are Cal-IPC rated as High.
- **Moderate** – These species have substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- **Limited** – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.
- **Alert** – An Alert is listed on species with High or Moderate impacts that have limited distribution in California but may have the potential to spread much further.
- **Watch** – These species have been assessed as posing a high risk of becoming invasive in the future in California.

### *Public Trust Lands*

The State Lands Commission (SLC) has jurisdiction and management authority over all public trust lands, including ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the common law Public Trust Doctrine which requires they be managed for the benefit of the public consistent with the provisions of Public trust (e.g., commerce, navigation, fisheries, recreation). Review by the SLC and issuance of a new, or amendment of an existing surface lease may be required for a project under SLC

jurisdiction. No lands within the Project Area are under the jurisdiction of the SLC, and therefore no lease or permit from the SLC is warranted.

## Regional and Local

Most of the Project Area is within the City of Arcata, except for the southern extent which is within Humboldt County jurisdiction. A small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and City's Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone. This section also includes Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *City of Arcata General Plan*

The City of Arcata General Plan contains guidelines for biological resources within the Open Space Element, and Resource Conservation and Management Element. The following policies from the Arcata General Plan are applicable to the City-jurisdictional portion of the proposed Project.

*OS-1: Overall Open Space System*

*Designate, maintain, and enhance the quality, and increase the amount of permanently protected open space in the Arcata Planning Area, including natural resource areas; resource production areas; outdoor recreation areas; and areas subject to health and safety hazards. These areas are to be protected, linked together in a network wherever practical for accessibility, managed for resource production and maintained for enjoyment by City residents and visitors.*

*Applicable sub-policies:*

- ***OS-1d**: Linkages between open space areas – Policy OS-1 – Linkage of open space lands, especially along biological corridors and greenways, is important for animal migration, nonmotorized vehicle transportation, and community recreation, and shall be encouraged. Trails along levees or adjacent to railroad tracks and street rights-of-way can serve as links to parks, open space, and natural areas. Easements shall also be considered as a lower cost alternative to preserving links between open space.*
- ***OS-1e**: Appropriate uses and development limitations within open space lands – Policy OS-1 – Certain open space areas contain wetlands and other critical habitat and must be preserved in a natural condition and enhanced. Other areas can accommodate managed activities such as mining and timber harvesting, subject to sustainable yield policies RC-6 and RC-8 in the Resource Conservation & Management Element, while other areas shall be designated for interpretive and recreational use. Each designated open space area of the City shall be evaluated by the appropriate City advisory board (e.g., Creeks & Wetlands Committee) to determine the resources present, the acceptable level of use, and appropriate preservation. The management of, and development in, open space areas are subject to applicable policies of the Resource Conservation and Management and Land Use Elements.*

*OS-2: Natural Resources Protection & Enhancement*

*Designate, maintain, and enhance natural resource areas, including sensitive habitat areas, necessary to sustain plant and animal life and native biological diversity.*

*Applicable sub-policies:*

- ***OS-2b**: Development limitations and management for maintenance of biotic resources and diversity, including aquatic resources and sensitive habitats – Policy OS-2 – Creeks, marshes, and wetlands are significant components of Arcata's natural open space system. The City shall restore and maintain this system for the benefit of residents, visitors, fish, and wildlife.*

*The Arcata Bay and tidelands represent an important natural edge and open space feature of the City. Buildings, landform alterations, or access routes in this area shall be of a design and scale that preservers open space and natural characteristics and maintains public views to the Bay.*

*Local creeks which flow openly through the developed portion of the community shall have biological corridors and greenways established and shall be maintained as visual assets to any developments which adjoin them. The natural features of the Mad River corridor, Arcata's creeks and adjacent areas, marshes, and other wetland areas, shall be retained.*

*Unique vegetation and wildlife areas shall remain in a natural condition. Such areas include sand dunes and backdune woodlands, eel grass area, salt marshes, and special habitats (tern and osprey nesting areas, cormorant rookery, harbor seal area and egret roost). The policies of this element shall also call for protection for habitat of species that become threatened in the future.*

*RC-1: Natural Biological Diversity/Ecosystem Function*

*Set an overarching policy that emphasizes the overall value of biological diversity and the fact that all natural resources are optimized when they function as part of a healthy ecosystem.*

*Applicable sub-policies:*

- ***RC-1a:** Maintain biological and ecological integrity – Policy RC-1 – Maintaining ecological balance, system function, biological integrity, and natural diversity is the primary focus of the Resource Conservation and Management Element. Protecting ecological functions of natural habitats, and natural drainage and infiltration processes, will enhance natural ecosystems in the Planning Area. Ecological system functions elements and processes are maintained through the following measures:*

  1. *The structure and composition of ecological systems within the City shall contain the same native plant and animal species, in the same relative abundances and proportions, which are found in the least-disturbed natural ecosystems in the Planning Area.*

  2. *The ecological functions performed by ecological systems in the City shall resemble the functions of the least-disturbed natural ecosystems in the Planning Area.*

  3. *Ecological systems and natural processes are not disrupted by exotic organisms to a significant degree.*

  4. *Ecological systems and natural processes are not to be disrupted by land use activities to a significant degree (e.g., a culvert or other drainage device that blocks fish passage).*

  *An "adaptive management" approach shall be utilized to maintain ecological and biological integrity, including monitoring the status of ecological systems in the City and adjusting City implementation of this Plan, in order to more closely approximate the conditions provided in the Planning Area's least-disturbed natural ecosystems.*

- ***RC-1b:** Non-native plant and animal species – Policy RC-1 – Some non-native species, such as pampas grass (Cortaderia jubata), Himalaya berry (Rubus discolor), Scotch broom (Cytisus scoparius), blue gum eucalyptus (Eucalyptus globulus), English ivy (Hedera helix), English holly (Ilex aquifolium), and cotoneaster (Cotoneaster franchetii), are invasive exotics that can and do displace native species. The presence of these non-native species reduces the area's natural diversity, biological integrity and aesthetics. Only native species, or species demonstrated to be non-invasive, shall be used in public landscapes and are to be strongly encouraged in private landscapes. The City shall provide public information that explains why invasive species are a problem. The City shall also maintain a program that recommends effective but non-toxic eradication measures, and eradicates non-native species on public lands where they are displacing native species.*

- ***RC-1c:** Habitat value protection – Policy RC-1 – Environmentally sensitive habitat areas (ESHA) shall be protected against any significant disruption of their habitat values, and only uses dependent on and compatible with maintaining those resources shall be allowed within ESHAs. Proposed development in*

*areas adjacent to ESHAs shall be sited and designed to prevent impacts which would significantly degrade such areas, and must be compatible with the continuance of such habitat areas.*

- ***RC-1d:*** *Sensitive habitat definition – Policy RC-1 – The City declares the following to be ESHAs within the Planning Area:*

  1. *Rivers, creeks, sloughs, and associated riparian habitats: Mad River; Jacoby Creek; Beith Creek; Grotzman Creek; Campbell Creek; Jolly Giant Creek; Janes Creek; Gannon Slough; Butcher Slough; and McDaniel Slough.*

  2. *Wetlands, estuaries, and associated riparian habitats: Arcata Bay; Mad River Slough; Liscom Slough; Butcher Slough; the Aldergrove marshes and ponds; and the Arcata Marsh and Wildlife Sanctuary.*

  3. *Other unique habitat areas: waterbird rookeries; shorebird concentration sites; habitat for all rare, threatened, or endangered species on federal or state lists; and vegetated dunes.*

  4. *Public Trust lands such as grazed or farmed wetlands (i.e., diked/reclaimed former tidelands).*

- ***RC-1e:*** *Threshold of City review for sensitive habitat effects – Policy RC-1 – Development on parcels designated Natural Resource [NR] on the Land Use Plan Map, or within 250 feet of such a designation, or development potentially affecting a sensitive habitat area, shall be required to be in conformance with applicable habitat protection policies of this Element. All proposed development plans, including grading and drainage plans, submitted as part of a planning entitlement application for these areas, shall show the precise locations of all sensitive habitat areas on the site plan.*

- ***RC-1f****: Sensitive habitat buffer requirement – Policy RC-1 – A setback separating all permitted development from adjacent sensitive habitat areas shall be required. The purpose of such setbacks shall be to prevent any degradation of the ecological functions provided by the habitat area as a result of the development. The following shall apply to such setbacks:*

  1. *The minimum width of setbacks for streams and wetlands shall be as provided in policies RC-2 and RC-3, respectively.*

  2. *The minimum width of all other habitat setbacks shall be 100 feet, unless the designated setback would eliminate all reasonable use of the property.*

  3. *A definition and map of sensitive habitat will be maintained by the City.*

*<u>RC-3: Wetlands Management</u>*

*To protect existing wetlands areas and their functional capacities and values, maintain a standard of "no net loss" in area and value, restore degraded wetland areas, enhance wetlands functions, and create additional wetland areas to replace historical losses.*

*Applicable sub-policies:*

- ***RC-3a:*** *Requirement for wetland delineation and study – Policy RC-3 – All proposed development applications shall include a site plan that shows the precise location of any wetlands that exist on the subject property. Any application for development on a parcel where wetlands may be present shall include a wetland reconnaissance or delineation report as follows:*

  1. *The reconnaissance or wetlands delineation and report shall be based upon field investigations and shall be prepared by a professional or technical expert qualified in wetlands biology or plant ecology.*

  2. *For purposes of this plan, wetlands shall include coastal zone lands where one or more of the following three characteristics are present or non-coastal zoned lands where two or more of the following three characteristics are present:*

a. *Source of water (surface or subsurface) which is present for sufficient periods to promote hydric soils formation or growth of hydrophytic plant species;*

b. *Hydric soils; or*

c. *Hydrophytic plants.*

1. *Where a reconnaissance indicates the probable existence of wetlands, marsh reeds detailed wetland delineation shall be required, including a map with the best available contour information showing where each of the three factors are present and the precise boundaries of any areas which are determined to be wetlands.*

2. *If wetlands or any size are found to exist on the property, an analysis of the potential functional or habitat value of the wetland shall be provided.*

- ***RC-3b:*** *Filling of wetlands – Policy RC-3 – The following shall apply:*

1. *Filling of wetlands shall be prohibited in the Coastal Zone, unless it can be demonstrated that:*

a. *the wetland restrictions, if imposed, would render a parcel, not subject to the Public Trust, unusable for any use permitted by the land use plan;*

b. *there is no feasible, environmentally superior alternative to wetland fill for development of a permitted use; and*

c. *the fill is the least amount necessary to allow development of permitted uses.*

1. *Filling of wetlands outside the Coastal Zone may be permitted only when the following has been demonstrated by the project proponent:*

a. *the fill is the least amount necessary to allow a reasonable and harmonious configuration of development on the parcel;*

b. *the wetlands proposed to be filled are small and isolated, and have limited functional value when compared to larger, contiguous wetland areas.*

2. *Filling of wetlands shall only be authorized if appropriate mitigation, resulting in "no net loss" in area and value of wetlands, is provided. Mitigation may consist of creating and maintaining a new wetland of equal or greater functional capacity and value than the wetland proposed to be filled, restoration of previously degraded wetlands, or enhancement of existing wetland areas.*

- ***RC-3c:*** *Designation of Environmental Buffer Areas (EBA) – Policy RC-3 – An EBA shall be established to separate all permitted development from adjacent existing wetlands which are to be preserved in a natural state and new wetland areas which are created as a mitigation. The EBA's purpose is to remain in a natural state in order to protect wetland ecosystems and their associated habitat areas from destruction or degradation. The extent of the EBA shall be established based upon analyses and recommendations contained in a site-specific wetland delineation study, but shall include the wetland area and a setback area which shall generally range from a 50 foot minimum to a 100 foot maximum. Specific findings, based on evidence provided for City review, shall be required for setbacks less than 100 feet.*

- ***RC-3d:*** *Allowable uses and activities in Environmental Buffer Areas – Policy RC-3 – The following compatible land uses and activities may be permitted in EBAs, subject to all other policies in this Element, including those requiring avoidance of impacts and other mitigation requirements*

1. *Resource restoration or enhancement projects*

2. *Farming consistent with policy RC-3I*

3. *Outdoor recreation activities, such as bird watching, hiking, boating, horseback riding, and similar activities*

4. *Education, scientific research, and use of nature trails*
5. *Drainage ditches when compatible with wetland function*
6. *Minor modifications of existing, serviceable structures*
7. *Fencing to prevent livestock from degrading wetlands and riparian vegetation*

*Any use, construction, grading or removal of vegetation which is not listed above shall be prohibited.*

- ***RC-3h:** Designation of wetland protection zones – Policy RC-3 – The Wetland and Stream Protection Combining (WSP) Zone shall be applied to wetlands, wetland setbacks, wetland buffer areas and modified wetland buffer areas, as defined in the City's Land Use Code, at the time of development review and approval.*

  *A wetlands map, maintained by the City, will show the general location of wetlands, riparian corridors, and uplands within the City limits and urban services zone. All development within or adjacent to the areas identified on the map as wetlands or riparian corridors shall comply with City Wetlands Development Standards and shall include the following:*

  1. *A wetland delineation*
  2. *A mitigation plan for impacted areas*
  3. *Setback areas from delineated wetlands*
  4. *Easements for onsite delineated wetlands*
  5. *Permitted and protected uses/activities within delineated wetland areas*
  6. *Fencing to prevent livestock from degrading wetlands and riparian vegetation*

  *A Wetlands Buffer Area shall be required to protect the areas shown as wetlands on the Wetlands Map. All development within the buffer areas shall comply with the Wetlands Buffer Area Development Standards of the Coastal Land Use and Development Guide.*

- ***RC-3j:** Minimum mitigation requirements for wetland impacts – Policy RC-3 – Diking or filling of a wetland that is otherwise in accordance with the policies of this General Plan, shall, at a minimum, require the following mitigation measures, monitoring program, and funding.*

  1. *A detailed restoration plan, monitoring program, and funding source for each site shall be required as part of the project application. The restoration plan shall include provisions for restoration to equal or greater wetland biological productivity. The monitoring program shall include reporting requirements that document mitigation success. Dedication of the land to a public agency, purchase, or other stewardship method which permanently restricts the use of the site to habitat and open space purposes, shall be required. The site shall be dedicated, purchased, or other stewardship agreed upon, and mitigation funding shall be provided, prior to any permitted diking or filling.*
  2. *Areas adequate to maintain functional capacity shall be opened to tidal action, or other sources of surface water shall be provided. This provision shall apply to diked or filled areas which themselves are not environmentally sensitive habitat areas, but would become so if, as part of a restoration program, they are opened to tidal action or provided with other sources of surface water. All of the provisions for restoration, purchase (if necessary), and dedication described under part 1 shall apply to any program or activity performed pursuant to this policy.*
  3. *Mitigation shall, to the maximum extent feasible, be of the same type as the wetland to be filled (e.g., freshwater marsh for freshwater marsh, saltwater marsh for saltwater marsh, etc.).*

4. *Where no suitable private or public restoration or enhancement sites are available, or where a wetlands mitigation bank in Arcata's Planning Area has been established that provides suitable replacement area, an in-lieu fee may be required to be paid. The fees shall be paid to an appropriate public agency for use in the restoration or enhancement of an area of equivalent productive value or surface area, or to the entity managing the wetlands mitigation bank.*

- ***RC-3k**: Wetland functional capacity maintenance requirement – Policy RC-3 – Diking, filling, or dredging of a wetland or estuary shall maintain or enhance the functional capacity of these resources. Functional capacity means the ability of the wetland or estuary to be physically and biologically self-sustaining and to maintain natural species diversity. In order to establish that the functional capacity is being maintained, all of the following must be demonstrated:*

  1. *Presently-occurring plant and animal populations in the ecosystem will not be altered in a manner that would impair the long-term stability of the ecosystem (i.e., natural species diversity, abundance and composition are essentially unchanged as the result of the project).*

  2. *A species that is rare or endangered will not be significantly adversely affected.*

  3. *Consumptive (e.g., fishing aquaculture and hunting) or non-consumptive (e.g., water quality and research opportunity) values of the wetland or estuary ecosystem will not be significantly reduced.*

***City of Arcata – Local Coastal Plan***

The policies within the City of Arcata's Local Coastal Plan that regulate biological resources include Coastal Act policies Section 30607.1, 30121, 30231, 30233 which are listed above and referenced here.

*Section 30607.1*

*Where any dike and fill development is permitted in wetlands in conformity with this division, mitigation measures shall include, at a minimum, either acquisition of equivalent areas of equal or greater biological productivity or opening up equivalent areas to tidal action; provided, however, that if no appropriate restoration site is available, an in-lieu fee sufficient to provide an area of equivalent productive value or surface areas shall be dedicated to an appropriate public agency, or such replacement site shall be dedicated to an appropriate public agency, or such replacement site shall be purchased before the dike or fill development may proceed. Such mitigation measure shall not be required for temporary or short-term fill or diking: provided, that a bond or other evidence of financial responsibility is provided to assure that restoration will be accomplished in the shortest feasible time.*

*Section 30121*

*"Wetland" means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.*

*Section 30231*

*The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained, and where feasible, restored through, among other means, minimizing adverse effects of wastewater discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

*Section 30233*

*(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less*

*environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*

*(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*

*(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*

*(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland; provided, however, that in no event shall the size of the wetland area used for such boating facility, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, be greater than 25 percent of the total wetland area to be restored.*

*(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities.*

*(5) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*

*(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*

*(7) Restoration purposes.*

*(8) Nature study, aquaculture, or similar resource-dependent activities.*

***Humboldt County General Plan***

The goals and policies within the Humboldt County General Plan that regulate biological resources within the County-jurisdictional portion of the Project Area, outside of the Coastal Zone, include the following:

*BR-G1. Threatened and Endangered Species*

*Sufficient recovery of threatened and endangered species to support de-listing.*

*BR-G2. Sensitive and Critical Habitat*

*A mapped inventory of sensitive and critical habitat where biological resource protection policies apply.*

*BR-G3. Benefits of Biological Resources*

*Fish and wildlife habitats protected on a sustainable basis to generate long-term public, economic, and environmental benefits.*

*BR-P1. Compatible Land Uses*

*Area containing sensitive habitats shall be planned and zoned for uses compatible with the long-term sustainability of the habitat. Discretionary land uses and building activity in proximity to sensitive habitats shall be conditioned or otherwise permitted to prevent significant degradation of sensitive habitat, to the extent feasible consistent with California Department of Fish and Wildlife guidelines or recovery strategies.*

*BR-P2. Critical Habitat*

*Discretionary projects which use federal permits or federal funds on private lands that have the potential to impact critical habitat shall be conditioned to avoid significant habitat modification or destruction consistent with federally adopted Habitat Recovery Plans or interim recovery strategies.*

*BR-P7. Wetland Identification*

*The presence of wetlands in the vicinity of a proposed project shall be determined during the review process for discretionary projects and for ministerial building and grading permit applications, when the proposed building development activity involves new construction or expansion of existing structures or grading activities. Wetland delineation by a qualified professional shall be required when wetland characterization and limits cannot be easily inventoried and identified by site inspection.*

*BR-P8. Wetlands Banking*

*The County supports the development of a wetlands banking system that minimizes potential conversion of prime agriculture lands to wetlands.*

*BR-P10. Invasive Plant Species*

*The County shall cooperate with public and private efforts to manage and control noxious and exotic invasive plant species. The County shall recommend measures to minimize the introduction of noxious and exotic invasive plant species in landscaping, grading and major vegetation clearing activities.*

*BR-P11. Biological Resource Maps*

*Biological resource maps shall be consulted during the ministerial and discretionary permit review process in order to identify habitat concerns and to guide mitigation for discretionary projects that will reduce biological resource impacts to below levels of significance, consistent with CEQA.*

*BR-P12. Agency Review*

*The County shall request the California Department of Fish and Wildlife, as well as other appropriate trustee agencies and organizations, to review plans for development within Sensitive Habitat, including Streamside Management Areas. The County shall request NOAA Fisheries or U.S. Fish and Wildlife Service to review plans for development within critical habitat if the project includes federal permits or federal funding. Recommended mitigation measures to reduce impacts below levels of significance shall be considered during project approval, consistent with CEQA.*

***Humboldt Bay Area Plan – Local Coastal Plan***

The goals and policies within the Humboldt Bay Area Plan that regulate biological resources within the County-jurisdictional portion of the Coastal Zone within Project Area include the following:

*3.30 Natural Resources Protection Policies and Standards – ESHA – 30240*

*(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.*

*(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.*

*3.30 Natural Resources Protection Policies and Standards – Diking, Filling, or Dredging of Open Coastal Waters, Wetlands, and Estuaries – 30233*

*(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*

*1. New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*

2. *Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*

3. *In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland; provided, however, that in no event shall the size of the wetland area used for such boating facility, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, be greater than 25 percent of the total wetland area to be restored.*

4. *In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities.*

5. *Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*

6. *Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*

7. *Restoration purposes.*

8. *Nature study, aquaculture, or similar resource-dependent activities.*

*3.30 Natural Resources Protection Policies and Standards – Coastal Streams, Riparian Vegetation and Marine Resources*

*Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Use of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

*3.30 Natural Resources Protection Policies and Standards - Coastal Streams, Riparian Vegetation and Marine Resources Section – 30231*

*The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

*3.30 Natural Resources Protection Policies and Standards – Wetland Buffer –Section 6(d)*

*Outside an urban limit line, the setback shall be between 100 and 200 feet, depending upon the size and sensitivity of the wetland, drainage boundaries, vegetation, adjacent uses, and the potential impacts of the project on the wet habitat values. The precise width of the setback shall be sufficient to prevent significant effects to the wetland.*

*3.30 Natural Resources Protection Policies and Standards – Development within Wetland Buffer –Section 6(f)*

*All new development within the wetland buffer shall include the following mitigation measures:*

*(1) Not more than 25% of the lot surface shall be effectively impervious.*

*(2) The release rate of storm runoff to adjacent wetlands shall not exceed the natural rate of storm runoff for a 50 year storm of 10 minute duration.*

*(3) Stormwater outfalls, culverts, gutters, and the like shall be dissipated.*

*(4) Septic systems or alternative waste disposal systems must meet standards of the Humboldt-Del Norte Health Department and the Regional Water Quality Control Board.*

*(5) Areas disturbed during construction, grading, etc., within 100 feet of the mean high water line, shall be restored to original contours and sufficiently and promptly replanted with vegetation naturally occurring in the immediate area.*

*(6) Development and construction shall minimize cut and fill operations and erosion and sedimentation potentials through construction of temporary and permanent sediment basins, sediment basins, seeding or planting bare soil, diversion of runoff away from graded areas and areas heavily used during construction, and, when feasible, avoidance of grading during the rainy season (November through April).*

## 3.3.4 Evaluation Criteria and Significance Thresholds

For the purpose of this Draft EIR, the evaluation criteria and significance thresholds summarized below are used to determine whether the Project would have a significant effect related to biological resources, as defined by the CEQA Guidelines (Appendix G), 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 CDFW, USFWS or NMFS;
– Have a substantial adverse effect on any riparian habitat or other Sensitive Natural Community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
– 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;
– 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; or
– Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

## 3.3.5 Methodology

The evaluation of potential impacts to biological resources is based on results from the NES completed for the Project, which includes by appendix a wetland delineation, rare plant evaluation, and ESHA evaluation (Northstar Environmental 2019; Appendix D – Natural Environment Study). Biological resources were evaluated with respect to the established BSA, which covers the extent of the proposed impact area plus a buffer zone of five to ten feet around the perimeter. The BSA was also extended north to include the existing roundabout at Buttermilk Lane.

A wetland delineation update completed on June 23, 2021 focused on a small area near the intersection of Old Arcata Road and Jacoby Creek Road where a small wetland had been delineated in 2018, located outside the Coastal Zone. The area is commonly used for parking and is highly impacted by ongoing roadside use. The updated 2021 delineation concluded the evaluated area did not meet three-parameter wetland criteria, and an updated Preliminary Jurisdictional Determination (PJD) and the updated GHD (2021) report was submitted to the USACE for review. The USACE concurred and issued a jurisdictional determination (USACE 2021).

## 3.3.6 Impacts and Mitigation Measures

### Impact Analysis

**Impact BIO-a:** **Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? (Less than Significant with Mitigation)**

The NES reviewed special status species with the potential to occur in or near the BSA based upon online and hard copy resources, agency database requests, and agency consultation. The USFWS Information for Planning and Consultation (IPaC) website was consulted for a list of federally-listed species and critical habitat that might be present. Additionally, the CNDDB list of Federally and State-listed species was reviewed for species that may potentially occur in the area. Surveys indicated there were no listed plant species or their potential habitats within the BSA.

### Special-status Amphibian Species

While aquatic habitat is not present in the BSA, potential habitat exists for the Northern Red-legged Frog *(Rana aurora)* adjacent to the BSA. Therefore, there is a potential for impact to Northern Red-legged Frogs if they are present within the BSA during construction activities. Impacts to Northern Red-legged Frogs could potentially occur to egg masses or tadpoles within wetted areas, or to adults out of water, on land, post breeding. Impacts to egg masses or tadpoles are unlikely due to the limited amount of standing water. Potential direct effects to adults may include harassment, injury, and mortality due to equipment and vehicle traffic and construction-related ground disturbance in wetland areas. These direct effects could occur in freshwater areas (e.g. ditches ponding water along the roadside) located within the proposed BSA or in adjacent terrestrial habitat with herbaceous vegetation. The species may be indirectly affected if construction activities result in degradation of adjacent or nearby aquatic habitat and water quality due to erosion and sedimentation, accidental fuel leaks, and spills leaving the Project site. Construction may unavoidably span the breeding season, which can commence as early as November when Northern Red-legged Frogs begin to congregate at breeding sites. While peak breeding is typically in January and February, breeding can extend as late as March. Mitigation Measure BIO-1 would be implemented to reduce this potentially significant impact to Northern Red-legged Frogs to be less than significant.

### Mitigation Measures

**Mitigation Measure BIO-1: Avoidance and Minimization Measures for Red-Legged Frogs**

Although Northern Red-legged Frog breeding is not documented in the Project Area, measures for this species are included because individual frogs may disperse for considerable distances and could enter construction areas. Mitigation Measure BIO-1 is proposed to minimize potential impacts to Northern Red-legged Frogs:

- The City shall retain a qualified biologist to perform a pre-construction survey for the Northern Red-legged Frog within 24 hours prior to commencement of ground disturbance within 50 feet of suitable Northern Red-legged Frog habitat. Suitable habitat would be determined by the City's qualified biologist. The biologist would relocate any specimens that occur within the work-impact zone to nearby suitable habitat.
- In the event that a Northern Red-legged Frog is observed in an active construction zone, the contractor shall halt construction activities in the area and the frog shall be moved to a safe location in similar habitat outside of the construction zone.

Mitigation Measure BIO-1 requires avoidance and minimization of direct and indirect impacts to Northern Red-Legged Frogs during construction, thereby reducing any potential impacts to Northern Red-legged Frogs to a less-than-significant level.

**Level of Significance:** Less than significant after mitigation

## Special-status Plant Species and ESHA

On June 18 and July 31, 2018 the BSA was surveyed in an effort to identify if federal, state and/or CNPS listed plant species were present. No special status species were observed during the protocol level surveys in 2018 within the BSA (GHD 2018). Vegetation mapping to screen for ESHA occurred on August 31, 2018 and September 20, 2018. Within the assessment area, three sensitive plant communities have a documented potential to exist according to the CNDDB, including upland Douglas-fir forest, northern coastal salt marsh, and northern foredune grassland (CDFW 2018a cited in Northstar Environmental 2019). None of these communities were observed within the BSA. Palustrine emergent persistent wetlands, palustrine broad-leaved deciduous scrub-shrub wetlands, and one-parameter wetlands occur within the BSA. The one-parameter wetlands meet the Coastal Commission requirements based on dominance of wetland (FAC or wetter) vegetation, in this case willows (*Salix* spp.) but would not be impacted by the Project. Given special-status plants were not documented in the Project Area and one-parameter wetlands that could be considered ESHA would not be disturbed, no impact would result.

## Special-status Fish Species

Beith Creek crosses under Old Arcata Road in a culvert south of the Buttermilk Lane roundabout within the BSA, approximately 50 feet north of the Project. The culvert and surrounding waters would be excluded from Project activities. Standard BMPs for erosion control would be implemented to ensure Beith Creek is unaffected by construction activities near the northern end of the Project, closest to the tributary. Special-status fish species in the unnamed tributary would not be impacted. The North Fork of Jacoby Creek Road is culverted under Old Arcata Road near Spring Hill Lane. The culvert would not be modified or extended, and in-water work would not occur. Thus, any aquatic species in Jacoby Creek would not be affected. Additionally, Mitigation Measure HWQ-1 (see Section 3.9 – Hydrology and Water Quality) requires installation of erosion control (e.g., silt fences) where excavation is to occur within the vicinity of stream channels to prevent inadvertent delivery of sediments. With the incorporation of Mitigation Measure HWQ-1, any potential impact would be less than significant.

## Special-status Wildlife Species

No special status animal species were identified within the BSA (Northstar Environmental 2019). The USFWS IPaC website was consulted for a list of federally-listed species and critical habitat that might be present within the proposed Project and the BSA (USFWS 2019). No impact to special status wildlife would result.

## Passerines and Raptors

The USFWS IPaC website was consulted for a list of federally-listed species and critical habitat that might be present within the proposed Project and the BSA (USFWS 2019 cited in Northstar Environmental 2019). While the Northern Spotted Owl *(Strix occidentalis caurina)* does occur in the region, its habitat is absent from the BSA. No special status passerines and raptors were identified within the BSA (Northstar Environmental 2019). Thus, any potential impact to passerines and raptors would be less than significant. Please also see Mitigation Measure BIO-4 and Mitigation Measure BIO-5, below, for additional Project requirements for pre-construction nesting bird surveys and vegetation removal outside the nesting bird season.

## Bats

No special status bats were identified within the BSA (Northstar Environmental 2019). The USFWS IPaC website was consulted for a list of federally-listed species and critical habitat that might be present within the proposed

Project and the BSA (USFWS 2019 cited in Northstar Environmental 2019). Given no special status species were occur in the BSA, and the BSA is limited to a developed transportation corridor, the potential impact is less than significant.

**Mitigation Measures:** Mitigation Measure BIO-1 and Mitigation Measure HWQ-1

**Level of Significance:** Less than significant with mitigation

**Impact BIO-b: Would the Project 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)**

No sensitive vegetation alliances, including riparian, were identified within the BSA based on CDFW's Hierarchical List of Natural Communities. Some individual redwood trees (*Sequoia sempervirens*) occur within the BSA. On the northern end of the BSA near the Buttermilk Lane roundabout, there are a few young redwood trees that appear to have been planted. North of Jacoby Creek Elementary School, between a fence line and the sidewalk, there are two mature redwood trees and a small (<5 feet. tall) sapling located between the two larger trees. The Sequoia sempervirens Forest Alliance has a Global listing of G3 and State Ranking of S3 (CDFW 2018b cited in Northstar Environmental 2019). None of the redwood trees within the BSA are connected to a forest and therefore they do not constitute a Forest Alliance. Redwood trees are not considered special-status plant species as individuals and are not considered ESHA. No impact would result.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact BIO-c: Would the Project 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?**

The BSA consists of two types of identified U.S. Army Corp of Engineers (USACE) jurisdictional wetlands that were classified using Cowardin nomenclature from *Classification of Wetlands and Deepwater Habitats of the United States* (Federal Geographic Data Committee 2013 cited in GHD 2021), Palustrine Emergent Persistent Wetlands and Palustrine Broad-leaved Deciduous Scrub-Shrub Wetlands. The BSA also contains one-parameter wetlands meeting Coastal Commission requirements based only on wetland (FAC or wetter) vegetation (lack of hydric soils and wetlands hydrology). These wetlands were mapped based on dominant native vegetation as one-parameter willow series. The one-parameter willow series was mapped to the willow canopy dripline. Areas where the canopy extends over pavement were also mapped. No two-parameter wetlands were identified. The Palustrine Emergent Persistent Wetland and the Palustrine Scrub-Shrub, Broad leaved Deciduous Wetlands occurred primarily within roadside ditches along the northeast side of Old Arcata Road. The Palustrine Emergent Persistent Wetland consisted primarily of an herbaceous layer and the Palustrine Scrub-Shrub, Broad leaved Deciduous Wetlands consisted of tree, shrub, and herbaceous vegetation layers. Willow species (*Salix* spp.) were the dominant trees in the shrub-scrub wetlands often occurring with Himalayan blackberry (*Rubus armeniacus*) and California blackberry (*Rubus ursinus*) in the shrub layer. Hydrophytic vegetation was dominant within all wetland areas. Figures 2:1-5 of Appendix B –Natural Environment Report shows the results of the original 2018 wetland delineation.

A 2021 wetland delineation update focused on a small area near the intersection of Old Arcata Road and Jacoby Creek Road where a small wetland (0.002 acres of Palustrine Emergent) had been delineated in 2018. The area is commonly used for informal parking and is highly impacted by ongoing roadside use. The 2021 delineation included two pits to collect soil data. No obligate vegetation was observed. Observed plant species were facultative and/or invasive and non-native to California. Soils did not meet USACE/NRCS 2018 Hydric Soils Indicator Guide criteria. The updated 2021 delineation concluded the evaluated area did not meet three-

parameter wetland criteria, and an updated wetlands report and Preliminary Jurisdictional Determination (PJD) was submitted to the USACE for review. The USACE concurred and issued a jurisdictional determination (USACE 2021).

Reflective of the 2021 wetland delineation update, approximately 0.16 acres of three-parameter Palustrine Emergent Persistent Wetlands, 0.24 acres of three-parameter Palustrine Broad-leaved Deciduous Scrub-Shrub Wetlands, and 0.08 acres of one-parameter Willow Series were identified within the BSA (not including the area where the willow canopy dripline extended over pavement). These wetlands were entirely omitted from the construction boundary to avoid potential impacts. Wetland impacts would not occur.

In addition, the Project would adhere to Environmental Protection Action 1 to prepare a SWPPP prior to construction and required by the North Coast Regional Water Quality Control Board (see Section 2.8.1 – Environmental Protection Action 1 Stormwater Pollution Prevention Plan). Measures to protect water quality, Waters, and wetlands within or near the Project footprint specifically would include:

– Within 10 days of completion of construction in those areas where subsequent ground disturbance would not occur for 10 calendar days or more, disturbed areas shall be temporarily stabilized to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, appropriate BMPs would be installed upon completion of the day's activities to control erosion and prevent sediment laden stormwater from leaving the construction area.
– Suitable perimeter control BMPs, such as silt fences, or straw wattles shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These BMPs shall be installed prior to any clearing or grading activities.
– Spoil and stockpile sites shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, swales shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion.
– Sediment control measures shall be in place prior to the onset of the rainy season and would be monitored and maintained in good working condition until disturbed areas have been revegetated.
– A site-specific spill prevention plan shall be implemented for potentially hazardous materials. The plan shall include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms shall be constructed to prevent spilled materials from reaching surface water features.
– Equipment and hazardous materials shall be stored 50 feet away from surface water features. Fueling of equipment shall take place greater than 75 feet from any surface water feature.

Given delineated one- and three-parameters would not be impacted during construction and Environmental Protection 1 would be implemented, any potential impact would be less than significant.

**Level of Significance:** Less than significant

**Impact BIO-d: Would the Project 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?**

As stated above, Beith Creek or any other aquatic habitats would not be affected and are located outside the bounds of construction. Thus, migratory fish species are also not present in the BSA. The Project Area may contain habitat suitable for nesting migratory birds. Species with the potential to be affected by Project activities are those that nest in the vegetation and trees adjacent to Old Arcata Road. In order to avoid potential direct impacts to nesting birds, tree and vegetation removal would occur outside of the established nesting bird window, as directed in Mitigation Measure BIO-4. If tree and vegetation removal must occur within the established nesting bird window, a qualified biologist would conduct nest surveys and establish buffers. Indirect impacts to nesting birds may include construction-related noise, which would be considered by the qualified biologist when

establishing buffer distances under Mitigation Measure BIO-5. The impact would be less than significant with the incorporation of Mitigation Measures BIO-4 and BIO-5.

## Mitigation

The following Mitigation Measures shall be implemented to avoid or minimize the potential for Project-related impacts on migratory birds that have no other special-status:

**Mitigation Measure BIO-2: Remove Vegetation Outside of Nesting Bird Season**

The City would attempt to remove trees and other vegetation that could potentially contain nesting birds outside the bird nesting season (August 31st and February 1st).

**Mitigation Measure BIO-3: Conduct Nest Survey and Establish Buffers**

If vegetation removal or ground disturbance cannot be confined to work outside of the nesting season, a qualified ornithologist shall conduct pre-construction surveys within the vicinity of the Project Area, to check for nesting activity of native birds and to evaluate the site for presence of raptors and special-status bird species. The ornithologist shall conduct a minimum of one day pre-construction survey within the 7-day period prior to vegetation removal and ground-disturbing activities. If ground disturbance and vegetation removal work lapses for seven days or longer during the breeding season, a qualified biologist shall conduct a supplemental avian pre-construction survey before project work is reinitiated.

If active nests are detected within the construction footprint or within the construction buffer established by the Project biologist, the biologist shall flag a buffer around each nest. Construction activities shall avoid nest sites until the biologist determines that the young have fledged or nesting activity has ceased. If nests are documented outside of the construction (disturbance) footprint, but within the construction buffer, nest buffers would be implemented as needed. In general, the buffer size for common species would be determined on a case-by-case basis in consultation with the California Department of Fish and Wildlife (CDFW). Buffer sizes would take into account factors such as: (1) roadway and other ambient noise levels; (2) distance from the nest to the roadway and distance from the nest to the active construction area; (3) noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity; (4) distance and amount of vegetation or other screening between the construction site and the nest; and (5) sensitivity of individual nesting species and behaviors of the nesting birds.

If active nests are detected during the survey, the qualified ornithologist shall monitor all nests at least once per week to determine whether birds are being disturbed. Activities that might, in the opinion of the qualified ornithologist, disturb nesting activities (e.g., excessive noise), shall be prohibited within the buffer zone until such a determination is made. If signs of disturbance or distress are observed, the qualified ornithologist shall immediately implement adaptive measures to reduce disturbance. These measures may include, but are not limited to, increasing buffer size, halting disruptive construction activities in the vicinity of the nest until fledging is confirmed, placement of visual screens or sound dampening structures between the nest and construction activity, queuing trucks to distribute idling noise, locating vehicle access points and loading away from noise-sensitive receptors, reducing the number of noisy construction activities occurring simultaneously, and/or reorienting and/or relocating construction equipment to minimize noise at noise-sensitive receptors.

Mitigation Measures BIO-3 requires avoidance and minimization to avoid potential impacts to migratory birds by removing vegetation outside of the nesting season. If the nesting season cannot be avoided, Mitigation Measure BIO-3 further avoids potential impacts by requiring surveys for nesting birds by a qualified biologist and the establishment of buffers. With the implementation of Mitigation Measures BIO-2 and BIO-3, the potential impact to migratory birds would be less than significant.

**Level of Significance:** Less than significant after mitigation.

**Impact BIO-e: Would the Project conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance?**

It is anticipated that less than five single trees greater than 16 inches in diameter may need to be removed, entirely within the public right of way. The trees were not mapped as a Sensitive Natural Community (Northstar Environmental 2019). Single trees are located in the jurisdiction of Humboldt County. A group of 30 or more trees with diameters less than 10 inches would not be removed. See Image 3.1-1 for an overview of the trees that would need to be removed.

## City of Arcata

The City of Arcata General Plan's Resource Management and Conservation Element establishes policies to protect biological resources within City Limits including protected streams and wetlands (City of Arcata 2008). Applicable policies include:

– RC-1 Natural Biological Diversity/Ecosystem Function;
– RC-3 Wetlands Management; and
– Coastal Land Use Element, Policy IV-3 Wetlands and Wetlands Buffer Area.

The Project would not conflict with policies RC-1 and RC-3. In addition, City would be required to obtain a City Tree Removal Permit for all trees greater than 16 inch diameter at breast height (DBH). The Tree Removal Permit requires a staff biologist review the trees to be removed for potential nesting birds prior to removal.

Wetlands in the vicinity of the Project Area were mapped in the Project's wetland delineation report in 2018, with an updated delineation occurring in 2021(GHD 2021). The Project would not physically impact wetlands. No wetlands would be filled as a result of this Project. The Project follows the coastal wetlands development standards of the Coastal Land Use and Development Guide. The wetland buffer for this Project is set at the default maximum of 100 feet in the absence of a project-specific reduced buffer determination prepared by a qualified professional. There are identified wetlands and wetland creek protection zones within the identified environmental buffer area of 100 feet. However, the "minor modification of existing, serviceable structures" is an allowed use/activity in an identified Environmental Buffer Area per §1-0228 (d) and 1-0228.5.(b) (1) of the Coastal Land Use and Development Guide. The 2021 wetland delineation update (GHD 2021) affirmed the Project would not significantly impact existing state or federally protected wetlands through direct removal, filling, hydrological interruption, or by other means. Based on these facts, the City determined the Project as proposed does not conflict with Policy IV-3 of the Coastal Land Use Element of the City's LCP.

## Humboldt County

The Open Space and Conservation Element of the Humboldt County General Plan (2017b) summarizes policies germane to the protection of biological resources. Applicable policies include:

– BR-P1: Wetland Identification,
– BR-S10: Development Standards for Wetlands, and
– BR-S11: Wetlands Defined.

Policy BR-S10 established that development standards for wetlands shall be consistent with the standards for Streamside Management Areas (SMA). The SMA width for applied to wetlands is designated as 50 feet for seasonal wetlands and 150 feet for perennial wetlands. The setback begins at the edge of the delineated wetland. Humboldt County does regulate tree removal for trees larger than 12 inches in diameter that are in residential zones through a Special Permit. A Special Permit would be sought for any qualifying single tree within the jurisdiction of the County to be removed.

Given the Project would obtain permits from the USACE and NCWQCB to ensure compliance with Sections 401 and 404 of the CWA to evaluate any potential impacts to wetlands as described in Mitigation Measures BIO-2 and BIO-3, ensure adherence to the City policies RC-1 and RC-3, obtain a Tree Removal Permit from the City of

Arcata and Humboldt County as needed based on DBH, and comply with the biological resource policies included in Humboldt County's Open Space and Conservation Element, the potential impact would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact BIO-f: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

There are no adopted Habitat Conservation, Community Conservation, or approval local, regional, or state habitat conservation plans that apply to the Project Area. There would be no impact.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

## 3.3.7 Cumulative Impacts

**Impact BIO-C-1: Would the Project contribute to a cumulatively significant impact to biological resources?**

Projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust's watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber Project, and future Jacoby Creek School classroom improvements.

- The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows under a County bridge on Old Arcata Road. Future enhancement project locations within the lower watershed have not yet been identified and may or may not be located within proximity to Old Arcata Road. Any such enhancements to the stream corridor would most likely be limited to the regulated in-water work window (mid-June through October) and thus short-term in duration. Given any enhancements to Jacoby Creek would result in a long-term environmental benefit and restoration of the stream corridor, any potential impact would be specific to construction and minimized with standard Clean Water Act, California Endangered Species Act, and Endangered Species Act permitting conditions, along with the requirements of the California Fish and Game code pursuant to streambed alteration. A cumulative biological impact would not result.
- The VERO Eureka/Arcata Fiber optic project would be located subsurface, parallel to Old Arcata Road and within the City and County rights-of-way. The VERO project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. Some portions of the VERO project along Old Arcata Road have already been completed outside of the nesting bird window and are short-term in duration. Given the low-intensity construction methods, significant impacts to biological resources would likely not result from the VERO project. Potential cumulative impacts related to biological resources would be less than significant.
- Planned classroom improvements to the Jacoby Creek School would be located at the western end of the campus, away from Old Arcata Road and behind existing structures facing Old Arcata Road. Construction related to the planned improvements would be short-term in duration and consistent with low level construction intensity. Classroom improvements and new construction would occur on the developed school campus, which does not include moderate or high-quality habitat or any streams. Any potential cumulative biological impact would be less than significant.

Given that the Project would not result in any significant biological impacts, and that the three projects considered in Table 3-1 would not result in a likelihood for significant biological impacts in or near the Project Area, the potential for cumulative biological resources impacts within the study area would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.3.8 References

GHD. 2021. *Old Arcata Road Improvement Project Wetland Delineation Rev. 2.* Prepared for Submission to the U.S. Army Corps of Engineers.

GHD. 2018. *Special Status Plant Survey and ESHA Evaluation for Old Arcata Road Improvement Project*.

Northstar Environmental. 2019. *Natural Environment Study for the Old Arcata Road Improvements Project*. Prepared for GHD and the City of Arcata. Lake Forest, CA.

U.S. Army Corps of Engineers. 2021. *Jurisdictional Determination for Old Arcata Road Improvements Project*.

# 3.4 Cultural Resources

This section evaluates potential impacts on historic and cultural resources from construction and operation of the Project.

## 3.4.1 Study Area

The Study Area for the Project, also referred to as the Area of Potential Effects (APE), includes the area that may be directly and indirectly affected by the Project along Old Arcata Road and Jacoby Creek Road. The APE encompasses the Project's area of direct impact (ADI; i.e., the horizontal and vertical limits of proposed ground disturbing activities associated with the Project), the full extent of three archaeological sites that extend into or are proximate to the Project ADI, and the area around the proposed new roundabout at Old Arcata Road and Jacoby Creek Road, including six adjacent parcels that could experience a visual impact. The vertical APE varies by Project activity and ranges in depth from one to eight feet. Parcels outside the County right of way and ADI where the Project does not pose potential impacts to built environment resources, such as physical, visual, or vibration effects, were not included in the APE.

## 3.4.2 Setting

### Prehistoric Context

The first known inhabitants of the Humboldt Bay Region were Wiyot Indians, a member of the Algonquin linguistic group. The Wiyot population prior to 1850 is estimated to have been between 1,000 and 3,300 individuals (E. Taylor & J. Roscoe, October 1998). Wiyot settlements were located chiefly along the lower Mad River, around Humboldt Bay, and the lower Eel River. Village sites were located at the water's edge, ocean, bay, or creek, with trails leading to grassy openings, and from one village to another. A small part of the population lived in an area from the Mad River to the northern portion of Humboldt Bay; they lived in settlements of one to three families. Within the Arcata planning area, they lived in semi-permanent settlements and often traveled seasonally for hunting and gathering. The estimated population for the Arcata planning area, in or about the year 1848, is 600 inhabitants (City of Arcata General Plan).

### Historic Context

After the start of the California Gold Rush, from 1850 to 1860, Wiyot territory became the center of the largest concentrations of European settlers in California, north of San Francisco. The settlers utilized Humboldt Bay as a major shipping point for supplies to the gold mines on the Trinity, Klamath, and Upper Sacramento Rivers. In addition, the establishment of the redwood timber industry, and homesteading of the Eel River and Arcata Bottom for ranching and farming purposes, brought more people into the area. The influx of new settlers brought violence, including the Indian Island Massacre of February 26, 1860, which nearly destroyed the entire Wiyot population.

There are currently 32 recorded archaeological sites in the Arcata planning area. Most sites are situated along the margins of Humboldt Bay, along the edges of marshes and sloughs, and in the Arcata Bottom area. Sites also tend to be located at the base of hills and on mid-slope terraces near sources of water.

Data collected by L. L. Loud (1918) identified a number of Wiyot habitation and resource procurement sites in the Arcata planning area. According to the Arcata General Plan, the most likely location for additional (unrecorded) archaeological sites is a band approximately 1,000 meters wide along the Humboldt Bay shoreline and the Mad River. There is also the possibility of encountering archaeological resources elsewhere in the Arcata planning area.

Arcata represents one of the last settled areas in United States history, and has historic resources dating back to the early 1850s. There are historical structures and sites throughout the central core of Arcata, on the lower slopes of Fickle Ridge, and in the Arcata Bottom (Arcata General Plan).

Old Arcata Road evolved from an Indian trail into a crude wagon road in the early 1850s. Known at the time as Arcata Road or Arcata – Eureka Road, it served as the only overland route between Arcata and Eureka. The marshy terrain cut by multiple sloughs and creeks made for a difficult landscape to cross with a road, yet no practical alternative existed as steep, densely wooded lands to the east posed more formidable challenges. In the 1860s the County devoted road taxes to the betterment of Arcata Road and by 1862 it was reported to be a “a good piece of work.” Despite this assessment, the low-lying, poorly drained area continued to be plagued by impassable muddy conditions and roadway washouts during the rainy season, thus making the road unusable much of the year. Stage service started between Arcata and Eureka in 1866 and the County continued to work on the roadway. Incrementally the road improved, but the problems with drainage, muddy conditions, and stream crossings persisted into the early twentieth century with Arcata and Eureka residents generally preferring ferries to cross the bay and residents of Bayside and other communities along the road having their travel greatly restricted during times the road was impassable (JRP 2020).

Logging activities brought about the formation of Bayside as a community with its focal point at Bayside Corners. The first formal sign of a town coming into being was in July 1875 when the County Board of Supervisors approved the organization of the Jacoby Creek School District, leading to the construction of the first schoolhouse in 1876 on Jacoby Creek Road near Arcata Road. The town name also became settled in 1876. Previously referred to as “Jacoby Creek,” residents rejected this moniker and chose “Bayside” after also considering “Carson” and “Waterside.” Other new non-residential buildings existing in Bayside in 1876 included a public house, hotel, and blacksmith shop, none of which are extant (JRP 2020).

The early twentieth century marked a transition for Bayside as the nearby redwood stands became logged out and timber activity waned. Dolbeer &Carson’s land was logged out by 1898 and the company closed their Bayside shingle mill that year. The extractive industries of timber and stone that were the basis for the formation of Bayside diminished in importance in the early twentieth century and farming rose to be the predominate enterprise. As the local economy moved from timber to agriculture, transportation in Bayside also changed. Up to 1923 the Flanigan, Brosnan and Company railroad ran through the center of Bayside, transporting materials from the forest to the bay shore, but did not serve passengers wanting to go to Eureka or Arcata. Travel to these places remained via Arcata Road, a route, as noted, plagued by flooding and muddy conditions during the rainy months. Bayside residents welcomed a more reliable transportation option in 1901 when the Eureka & Klamath River Railroad (and later the Northwest Pacific Railroad) started running trains between Arcata and Eureka on tracks that skirted the edge of Humboldt Bay. The railroad company built a station stop – Bayside Station – at the present-day intersection of US 101 and Bayside Cutoff. The station, located roughly one mile from the intersection of Bayside Corners, was connected with Bayside by a plank road and sidewalk that allowed crossing this often swampy terrain. The railroad gave Bayside residents dependable, daily, year-round transportation and mail service (JRP 2020).

Not long after construction of the railroad, the State started planning a state highway – now US 101 – running generally parallel just to the east of the tracks along the bay. Construction of the section between Eureka and Arcata spanned seven years between 1918 and 1925. Built on a roadbed raised well above the marshlands and high tide, and with highway standard bridges crossing all creeks and sloughs, this route rarely flooded and was a vast improvement over Arcata Road. Associated with the highway project was the construction of Bayside Cutoff, a new roadway connecting the highway with the Arcata Road and Bayside. Completion of the highway resulted in renaming Arcata Road to “Old Arcata Road,” and a dramatic reduction of traffic on the old route, which thereafter was used primarily by residents of the small communities along its route (JRP 2020).

## 3.4.3 Regulatory Framework

Historical and cultural resources in California, including historic resources, are protected and/or regulated by federal, state, and local laws and policies. Those applicable to the Project are summarized below.

## Federal

### *Section 106 of the National Historic Preservation Act*

Section 106 of the National Historic Preservation Act (NHPA) requires that, before beginning an undertaking, a federal agency, or projects that require a federal permit or utilize federal funds, must take into account the effects of the undertaking on historic properties and afford the Advisory Council on Historic Preservation and other interested parties an opportunity to comment on these actions.

Section 106 of the NHPA prescribes specific criteria for determining whether a project would adversely affect a historic property, as defined in 36 Code of Federal Regulations (CFR) 800.5. An impact is considered significant when prehistoric or historic archaeological sites, structures, or objects listed in or eligible for listing in the NRHP are subjected to the following effects:

– physical destruction of or damage to all or part of the property
– alteration of a property
– removal of the property from its historic location
– change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance
– introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features
– neglect of a property that causes its deterioration
– transfer, lease, or sale of the property

Cultural resource significance is evaluated in terms of eligibility for listing in the NRHP. NRHP significance criteria applied to evaluate the cultural resources for this Project are defined in 36 CFR 60.4 as follows: "The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, association, and

A. that are associated with events that have made a significant contribution to the broad patterns of our history; or
B. that are associated with the lives of persons significant in our past; or
C. that embody the distinctive characteristics of type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. that have yielded, or may be likely to yield, information important in prehistory or history."

Specific regulations regarding compliance with Section 106 state that, although the tasks necessary to comply with Section 106 may be delegated to others, the federal agency is ultimately responsible for ensuring that the Section 106 process is completed according to statute.

## State

### *California Environmental Quality Act*

Historical resources are defined as buildings, sites, structures, or objects, each of which may have historic, architectural, archaeological, cultural, or scientific importance. Under CEQA, a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (PRC Section 21084.1). Demolition, replacement, substantial alteration, and relocation are actions that would change the significance of a historical resource (CEQA Guidelines Section 15064.5). The following steps are normally taken in a cultural / historic resources investigation to comply with CEQA:

- Identify historical resources, including archaeological resources, as defined in CEQA Guidelines Section 15064.5 within a study area
- Evaluate the significance of the cultural resources based on established thresholds of significance
- Evaluate the impacts of a project on historical resources
- Develop and implement measures to mitigate the impacts of the project on historical resources, including significant archaeological resources

Because the Project is located on non-federal land in California, it is also necessary to comply with state laws pertaining to the inadvertent discovery of human remains of Native American origin. The procedures that must be followed if burials of Native American origin are discovered on non-federal land in California are described in the Impacts and Mitigation Measures section below.

Pursuant to CEQA Guidelines section 15064.5 (a) the term “historical resources” includes the following:

- A resource listed or determined to be eligible by the State Historical Resources Commission for listing, in the California Register of Historical Resources (CRHR) (PRC §5024.1, 14 CCR, §4850 et seq.).
- A resource included in a local register of historical resources, as defined in Public Resources Code Section 5020.1 (k) or identified as significant in a historical resource survey meeting the requirements of Public Resources Code Section 5024.1 (g), shall be presumed historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the CRHR (PRC §5024.1, Title 14 CCR, §4852) including the following:
    1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
    2. Is associated with the lives of persons important in our past;
    3. Embodies the distinctive characteristics of type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
    4. Has yielded, or may be likely to yield, information important in prehistory or history.
- The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC §5020.1(k)), nor identified in a historical resources survey (meeting the criteria in PRC §5024.1(g)) does not preclude a lead agency from determining that the resource may be a historical resource as defined by Public Resources Code Section 5020.1(j) or 5024.1.

Historical resources eligible for listing in the CRHR must meet one of the criteria of significance described above and retain enough integrity to convey the reasons for their significance. Integrity under CRHR guidelines is defined as the authenticity of an historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

CEQA applies to archaeological resources when: (1) the archaeological resource satisfies the definition of a historical resource, or (2) the archaeological resource satisfies the definition of a “unique archaeological resource.” A unique archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

1. The archaeological resource contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.

2. The archaeological resource has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. The archaeological resource is directly associated with a scientifically recognized important prehistoric or historic event or person.

### *California Coastal Act*

The Project Area is within the Coastal Zone. The California Coastal Act contains policies relevant to cultural resources. The following Coastal Act sections are relevant to this analysis:

> *Public Resources Code Section 30116 Sensitive coastal resource areas*
>
> *"Sensitive coastal resource areas" means those identifiable and geographically bounded lands and water areas within the coastal zone of vital interest and sensitivity. "Sensitive coastal resource areas" include the following:*
>
> *(d) Archaeological sites referenced in the California Coastline and Recreation Plan or as designated by the State Historic Preservation Officer.*
>
> *Public Resources Code Section 30244 Archaeological or paleontological resources*
>
> *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

### *Office of Historic Preservation*

The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration, and protection of California's irreplaceable archaeological and historic resources under the direction of the State Historic Preservation Officer and the State Historical Resources Commission.

OHP reviews and comments on federally sponsored projects pursuant to NHPA Section 106, and state programs pursuant to PRC Sections 5024 and 5024.5, which provide policies and plans for preserving and maintaining all state-owned historical resources or eligible historical resources. OHP also reviews and comments on local government and state projects pursuant to CEQA.

A variety of programs have been created by OHP in order to manage historic resources and to determine eligibility for classification as a historic resource. The programs that OHP administers include: the NRHP, CRHR, California Historical Landmarks, and the California Points of Historical Interest. Each program has different eligibility criteria and procedural requirements; the eligibility criteria listed through the NRHP and CRHR (mentioned above) are used to evaluate significance of potential cultural resources within this Project.

The CRHR criteria is nearly identical to the federal NRHP criteria and are used in tandem as "1/A" or "2/B" when identifying impacts in Section 3.4.6 (Impacts and Mitigation Measures). There is a slight difference in meaning between the CRHR and NRHP regarding Criterion 3 (Criterion C in the NRHP), which would be accounted when determining impacts and significance in Section 3.4.6 (Impacts and Mitigation Measures).

### *California Public Resources Code*

As part of the determination made pursuant to PRC Section 21080.1, the lead agency must determine whether a project would have a significant effect on archaeological resources.

Several sections of the PRC protect cultural resources. Under Section 5097.5, no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic ruins, burial grounds, archaeological site, inscriptions made by humans, rock art, or any other archaeological, or historical feature situated on public lands, except with the express permission of the public agency that has jurisdiction over the lands. Violation of this section is a misdemeanor.

PRC Section 5097.98 states that if Native American human remains are identified within a project area, the landowner must work with the Native American Most Likely Descendant (MLD) as identified by the NAHC to develop a plan for the treatment or disposition of the human remains and any items associated with Native American burials with appropriate dignity. These procedures are also addressed in Section 15046.5 of the CEQA Guidelines. Section 30244 of the PRC requires reasonable mitigation for impacts on paleontological and archaeological resources that occur as a result of development on public lands, which can be considered applicable to the portions of the Project located within the Caltrans right of way.

On September 25, 2014, Assembly Bill 52 (AB 52) was signed, which included amendments to PRC Section 5097.94. AB 52 requires tribal cultural resources to be considered under CEQA. AB 52 requires lead agencies to provide notice to Native American tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if they have requested notice of projects proposed within that area. See Section 3.12 (Tribal Cultural Resources) for more information on AB 52 compliance and tribal cultural resources.

### *California Health and Safety Code*

California Health and Safety Code (HSC) Section 7050.5 prohibits disinterring, disturbing, or removing human remains from a location other than a dedicated cemetery. Section 7050.5 also requires that construction or excavation be stopped in the vicinity of discovered human remains until the Coroner can determine whether the remains are those of a Native American. If determined to be Native American, the Coroner must contact the California NAHC.

### *California Native American Historical, Cultural and Sacred Sites Act*

This Act applies to both state and private lands. The Act requires that upon discovery of human remains, that construction or excavation activity cease and that the county Coroner be notified. If the remains are of a Native American, the Coroner must notify the NAHC. The NAHC then notifies those persons most likely to be descended from the Native American remains. The Act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

## Regional and Local

Most of the Project Area is within the City of Arcata, except for the southern extent which is within Humboldt County jurisdiction. A small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and City's Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone. This section also includes Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *City of Arcata General Plan*

The Arcata General Plan contains guidelines for cultural resources within the Historic Preservation Element. The General Plan has developed specific goals and related policies that address cultural and archaeological resources within the City. The following policies are applicable to the proposed Project:

> *H-1: Historic Landmarks*
>
> *Designate and preserve significant structures and sites that are representative of the City's social and physical development; that are reminders of past eras, events, and persons important in local, state or national history; which provide significant examples of architectural styles of the past; or which are unique and irreplaceable assets to the City, and the neighborhood in which the structure or site is located.*

*Applicable sub-policies:*

- *H-1a: National Register and State Historic Landmarks designations – The City encourages owners of eligible structures to request National Register and State Historical Landmarks designations for their properties.*
- *H-1b: Local Historic Landmarks designations – Structures or sites having special character or special historic, architectural, or aesthetic interest or value shall be designated as local Historic Landmarks. Such structures or sites shall be protected from demolition and inappropriate alterations. Locally designated Historic Landmarks are shown in Figure HP-a and are listed in Table HP-1, at the end of the Element.*
    - *"Bayside Post Office" (1786-1788 Old Arcata Road; aka Charles Monahan-Dexter House; LHP-83-03), located adjacent to the Project Area, is listed as a Local Historic Landmark on Table HP-1.*

*H-2: Noteworthy Structures*

*Identify and encourage retention of structures which could qualify as historical landmarks, but are not currently designated. Although some of these structures may lack the level of significance attached to designated landmarks, they have an architectural or design character which represents particular building styles or eras in the City's development, and they contribute to the overall character and historical texture of a neighborhood.*

*H-4: Neighborhood Conservation Areas (NCAs) and Specific Plans Districts (SPDs)*

*Objective: Designate the Central Arcata, Arcata Heights, Bayview, and Bayside areas as Neighborhood Conservation Areas and assure that new construction, modifications or alterations of noteworthy structures, and significant changes to other structures are harmonious with the existing character of these neighborhoods.*

*H-4a: Neighborhood Conservation Areas:*

- *Bayview Conservation Area*
- *Arcata Heights Conservation Area*
- *"Central" Conservation Area*

*H-4f: Specific Plan Districts:*

- *Bayside Specific Plan District*
- *"South of Samoa" (SOS) Specific Plan District*

*Specific Plans prepared for these Districts would include preservation measures for historic and noteworthy structures.*

*Chapter 5.6 – Implementation Measures*

*H-2: Historic Resources Inventory: Update historical resources inventory (add structures throughout the City based on age, and add Bayside area to inventory).*

*H-7: Archaeological and Cultural Resources*

*Protect and preserve Native American and Euro-American archaeological sites and cultural resources within the City of Arcata.*

*Applicable sub-policies:*

- *H-7b: Archaeological Surface Reconnaissance. If the cultural resources project review determines that the project is located in an area with a high probability of archaeological resources, an archaeological survey by a professional archaeologist or other qualified expert shall be performed.*
- *H-7c: Mitigation of potential impacts on archaeological resources. If the results of the surface reconnaissance show that the project area contains a resource of cultural significance, and it is demonstrated that a project would cause damage to such a resource, the City may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of other treatment include, but are not limited to the following:*
  - *Modifying the project to avoid portions of the site with archaeological resources.*
  - *Providing or conveying easements or other deed restrictions.*
  - *Capping or covering archaeological resources with a soil layer before construction.*
  - *Planning open space to incorporate archaeological sites.*
- *H-7d: Monitoring of Construction. In appropriate circumstances, when archaeological resources are likely to be present at a construction site, monitoring of excavation and other soil disturbing activities by archaeological and/or Native American observers shall be required.*
- *H-7f: Discovery of archaeological resources: Upon discovery of archaeological or paleontological materials, all grading or other land-disturbing construction activities at the site shall be suspended until the nature of the cultural resources has been ascertained and the appropriate disposition method determined.*

***City of Arcata Local Coastal Plan***

There are no policies in the City of Arcata Local Coastal Plan specific to protection of cultural or archaeological resources.

***Humboldt County General Plan***

The goals and policies within the Humboldt County General Plan that regulate cultural resources include the following:

*CU-G1: Protection and Enhancement of Significant Cultural Resources*

*Protected and enhanced significant cultural resources, providing heritage, historic, scientific educational, social and economic values to benefit present and future generations.*

*CU-P1: Identification and Protection*

*The potential for impacts to significant cultural resources shall be identified during ministerial permit and discretionary project review, impacts assessed as to significance, and if found to be significant, protected from substantial adverse change per California PRC Section 5020.1.*

*CU-P2: Native American Tribal Consultation*

*Native American Tribes (as defined below in CU-S3) shall be consulted during discretionary project review for the identification, protection and mitigation of adverse impacts to significant cultural resources. Consultation on ministerial permits shall be initiated if it has been determined the project may create a substantial adverse change to a significant cultural resource. At their request, Tribes shall be afforded the opportunity to review and provide comments to the County early in project review and planning (screening) about known or potential Tribal cultural resources located in project areas within their respective tribal geographical area of concern.*

*CU-P3: Consultation with Other Historic Preservation Agencies and Organizations*

*Historic preservation agencies and organizations shall be consulted during discretionary project review for the identification, protection and mitigation of adverse impacts to significant cultural resources. These include, but may not be limited to, the County's Cultural Resources Advisory Committee, Humboldt County Public Works Department and the Planning and Building Divisions, the Northwest Information Center of the California Historical Resources Information System (NWIC), the California Office of Historic Preservation, the Native American Heritage Commission, local historical societies, museums, colleges and universities, and incorporated cities historic preservation commissions or committees for their respective LAFCO sphere of influence, and local historians, cultural resources consultants and historic preservation staff affiliated with various state and federal agencies.*

*CU-P4: Avoid Loss or Degradation*

*Projects located in areas known, or suspected to be archeological sites or Native American burial sites shall be conditioned and designed to avoid significant impacts to significant sites, or disturbance or destruction to Indian burial grounds. Preserving Native American remains undisturbed and in place shall be selected as the preferred alternative unless substantial factual evidence is presented demonstrating that no alternative(s) are feasible. Conditions of approval shall include standard provisions for post review inadvertent archaeological discoveries and discovery and respectful treatment and disposition of Native American remains with or without funerary objects in accordance with state law (Health and Safety Code (HSC) Section 7050.5 and PRC Section 5097.98).*

*CU-P5: Findings Necessary for Loss or Destruction*

*Substantial adverse changes to significant cultural resources shall not be allowed through a ministerial or discretionary action unless:*

- *The cultural resource has been found not to be significant based on consultation with culturally affiliated Native American Tribe(s) and other historic preservation agencies and organizations as required by CU-P2; or*
- *There is an overriding public benefit from the project, and compensating mitigation to offset the loss is made part of the project.*

*CU-P6: Mitigation*

*Mitigation measures shall be required for any permitted project or County action that would adversely impact significant cultural resources.*

***Humboldt Bay Area Plan – Local Coastal Plan***

Applicable policies from the Humboldt Bay Area Plan are cited below.

*3.18 Archaeological and Paleontological Resources*

*Where new development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

*A. PLANNED USES*

*The Native American Wiyot tribe, part of the Algonkian family, once occupied the Humboldt Bay area. The Humboldt County Department of Public Works has identified 117 known archaeological sites in this planning area. The Wiyots depended heavily upon the resources of Humboldt Bay, and their heritage is an important resource within the Humboldt Bay area. Areas with great archaeological and paleontological values have been identified within the planning area, as identified with the Humboldt County Public Works, Natural Resource Division.*

*B. DEVELOPMENT POLICIES*

*a. Reasonable mitigation measures may include but are not limited to:*

*b. Changing building and construction sites and/or road locations to avoid sensitive areas.*

*c. Providing protective cover for sites that cannot be avoided.*

*d. Where appropriate and with the approval of all parties concerned, provide for the removal or transfer of culturally significant material by a professional archaeologist or geologist.*

## 3.4.4 Evaluation Criteria and Significance Thresholds

Under criteria based on Appendix G of the CEQA Guidelines, the Project would be considered to have a significant impact on cultural resources if it would result in any of the following:

– Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;
– Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or
– Disturb any human remains, including those interred outside of formal cemeteries.

## 3.4.5 Methodology

Substantial Project-level studies were completed to analyze this Project, including one that addressed potential archaeological resources and the other solely addressed built environment resources. The primary archaeological resources-focused report (which also included discussion of built environment resources) is the *Archaeological Survey and Extended Phase I Report for the Old Arcata Road Improvements Project, Bayside, Humboldt County, California* prepared by William Rich and Associates (WRA) and Pacific Legacy, Inc. (WRA and Pacific Legacy 2021). The primary built environment resources-focused report is the *Historical Resources Evaluation Report Old Arcata Road Improvements Project Arcata, Humboldt County, California*, prepared by JRP Historical Consulting, LLC in December 2020 (JRP 2020). These investigations included reviews of archival records and relevant literature.

A preliminary historic resource report initially completed by JRP Historical Consulting, LLC in February 2020) was supplanted by the more recent and more in-depth Historical Resources Evaluation Report (HRER) prepared for the Project, as discussed below (JRP 2020).

Archaeological resources investigations included tribal consultation under AB 52.

Additional documents prepared for the Project's Section 106 Consultation conducted by Caltrans, which also support impact assessment under CEQA, include the following evaluations and documents prepared by Pacific Legacy, Inc. and JRP Historical Consulting, LLC in 2021:

– Environmentally Sensitive Area (ESA) Action Plan, which delineates archaeological sites to be protected, documents the specific protective measures required, and identifies responsible parties and their appropriate tasks. The ESA Action Plan would also identify required archaeological monitoring necessary during Project implementation, notification requirements, and responsible parties thereof.
– Phased Identification Plan, which addresses the need, rationale, archaeological expectations based on sensitivity, methods and timing for pedestrian survey, and reporting. The plan also addresses construction impacts procedures for an additional archaeological evaluation, if needed.
– Post-Review Monitoring and Discovery Plan, which includes protocols for working within the construction environment, such as monitoring schedules, lines of communication for discoveries, methods to evaluate finds and reporting and notifications.
– Finding of No Adverse Effect, which concludes that the built environment and archaeological resources present in the study area would not be adversely affected by the Project.

## Historical Resources Evaluation

JRP's December 2020 HRER included extensive research and efforts to identify known and potential historical resources (JRP 2020). Research entailed locating and reviewing sources to develop a historic context relevant to the built resources in the APE under evaluation and to determine their individual property histories. Research for a study of this sort would ordinarily include visits to repositories such as the Humboldt State University Humboldt Room, Humboldt County Historical Society, and local branch libraries, but these facilities were not open to researchers at the time of the Project because of the Covid-19 pandemic. Therefore, JRP conducted extensive online research that included historic newspapers, maps, photographs, and aerial photographs. JRP also consulted histories of the area written by local Humboldt County historians such as Rhode, "Humboldt Bay Shoreline," Schafran, "Bayside Through the Years," and "An Historic Resources Inventory: The Old Arcata Road – Myrtle Avenue Corridor," by the Humboldt County Department of Public Works, to which Susie Van Kirk contributed. (Rhode 2020; Schafran 1984; Humboldt County DPW 1978). Another indispensable source was Susie Van Kirk's compilation of transcribed newspaper articles on the Bayside / Jacoby Creek area (Van Kirk n.d.). JRP also utilized documents from its in-house library and archives collected from many past projects in the Humboldt Bay region.

To identify known and potential historical resources – buildings, structures, objects, districts, or sites – that have been previously recorded or evaluated in or near the Project study area, JRP examined these standard sources of information: the California Historical Resources list curated by the California Office of Historic Preservation, which includes resources on the NRHP, CRHR, State Historical Landmarks, and Points of Historical Interest; the California Office of Historic Preservation Built Environment Resource Directory (BERD); City of Arcata Historical Landmarks List, and a California Historical Resources Information System records search conducted by WRA at the NWIC on October 26, 2018.

JRP Principal Christopher McMorris conducted a field survey on September 10, 2020, consisting of an intensive level pedestrian survey of the entire APE. As noted above, this includes the area that may be directly and indirectly affected by the Project along Old Arcata Road and Jacoby Creek Road. The APE encompasses the Project's ADI and the area around the proposed new roundabout at Old Arcata Road and Jacoby Creek Road, including six adjacent parcels that could experience a visual impact. Parcels outside the County right of way and ADI where the Project does not pose potential impacts to built environment resources, such as physical, visual, or vibration effects, were not included in the APE. Fieldwork entailed examining and taking photographs of the resources in and immediately adjacent to the APE, and noting their materials, design, and alterations. Mr. McMorris also made general observations and took photographs of the properties along the entire Project corridor along Old Arcata Road and Jacoby Creek Road document the general character and periods of construction of the built environment resources in the area. Broader observations were also made of the land use, surroundings, and setting.

Of the six parcels outside the County right of way that are in the APE, JRP identified three historic-era (45 years old or older) built environment resources and noted their location on the APE map using Map Reference (MR) numbers. The three properties are: 2212 Jacoby Creek Road (MR 1), 1928 Old Arcata Road (MR 2), and 2297 Jacoby Creek Road (MR 3). The building at 2212 Jacoby Creek Road (MR 1) is the Old Jacoby Creek School, which was listed in the NRHP in 1985 (Van Kirk 1984). As a NRHP-listed property, it did not require re-evaluation in the HRER, and it is automatically listed in the CRHR. The two other built environment resources in the APE required recordation and evaluation for NRHP and CRHR eligibility on California Department of Parks and Recreation (DPR) 523 forms. The property at 1928 Old Arcata Road (MR 2) had not been previously evaluated for the NRHP or CRHR. The building at 2297 Jacoby Creek Road (MR 3) is the current Bayside Community Hall and the former Bayside Grange. It was listed in the CRHR in 2002, but documentation associated with that listing has not been found (OHP 2012). The property was not evaluated for NRHP eligibility until JRP's HRER in 2020. JRP's evaluation of these two properties concluded that both meet the criteria for listing in the NRHP and CRHR. These properties were evaluated as per CEQA Guidelines Section 15064.5(a)(2)-(3) using the criteria outlined in Section 5024.1 of the California Public Resources Code. Thus, all three of these properties in the APE are historical resources for the purposes of CEQA (JRP 2020).

### *Historical Resources in the APE*

*Old Jacoby Creek School, 2212 Jacoby Creek Road (MR 1)*

The Old Jacoby Creek School (MR 1) was built in 1903 and listed in the NRHP in 1985 (Van Kirk 1984), thus it is automatically listed in the CRHR and is a historical resource under CEQA. Historian Susie Van Kirk prepared the NRHP nomination, and the school was determined eligible under Criteria A and C at the local level for its association with the development of the Bayside area, as well as for its design as an excellent and unique example of transitional architecture in Humboldt County. The period of significance is 1903-1957, the latter date being the opening of a new school building and cessation of classes at the Old Jacoby Creek School. The property boundary is defined by its historic parcel. Van Kirk noted that changes to the rear wall on the north corner took place in the 1960s and that the owners had intended to replace the front steps, which were missing at the time of its nomination. Field survey has confirmed that those steps have been added to the building since its listing (Van Kirk 1984).

The character-defining features of the Old Jacoby Creek School are not specifically identified in the NRHP Nomination Form, although there are features noted within the description of the building. During fieldwork, JRP staff noted and confirmed Van Kirk's description of the characteristic features of the property. The following list of character-defining features have been distilled from Van Kirk's NRHP Nomination Form: the massing, L-shaped plan, and cross hipped / gable roof; pedimented gable on the front elevation; square belltower with a pyramidal roof and twelve decorated arches; wide eaves with false rafter ends and plain frieze; circular slatted vent on the belltower; arched top window and vent in the front gable end; all windows that fall within the period of significance; all doors that fall within the period of significance; the front entryway consisting of an arched portico, double front doors with large glass panes, a transom light and sidelights; fan brackets with "three raised baseball bats" decorating the corners of the porch; fishscale siding; horizontal overlapping wood siding; cove-rustic shiplap siding; and horizontal course moulding between the fishscale and horizontal wood sided sections (Van Kirk 1984).

*Temperance Hall, 1928 Old Arcata Road (MR 2)*

The HRER concluded that the Temperance Hall, built in 1882, appears to meet the criteria for listing in the NRHP / CRHR under Criteria A / 1 at the local level for its significant association with community development in Bayside and is a historical resource under CEQA. The period of significance is 1882 to 1970. The property boundary is its legal assessor parcel. The property's character-defining features are its massing; rectangular plan; front-gable roof; cornice returns; vertical posts at the building corners; modest appearance and lack of ornamentation; horizontal wood siding; front entryway; all of the original wood-sash windows, and its location at Bayside Corners. The other building on the parcel was constructed in the 1980s and is not a contributing feature of the historical resource. The parking lot on the front (west side) of the building was formed after the 1946 realignment of Old Arcata Road into its current configuration. This feature does not contribute to the significance of the property.

*Bayside Grange, 2297 Jacoby Creek Road (MR 3)*

The HRER concluded that the Bayside Grange, built in 1941, appears to meet the criteria for listing in the NRHP / CRHR under Criteria A / 1 at the local level for its significant association with community development in Bayside and is a historical resource under CEQA. The period of significance is 1941 to 1970. The property boundary is its legal assessor parcel. The property's character-defining features are its massing; L-shaped plan; cross-gable roof; modest appearance and lack of ornamentation; horizontal wood siding; louvered vents in the gable ends; front entryway; raised side entryway; all of the original wood-sash windows; and its location at Bayside Corners.

### *Known and Potential Historic Properties Outside of the APE*

In addition to the historical resources identified within the APE defined in the HRER, there are four other properties with recognized historic status that are outside of the APE, but are along the Project corridor. These were identified in a 1978 study titled *Historic Resources Inventory for the Old Arcata Road-Myrtle Avenue*

*Corridor* by the Humboldt County Department of Public Works. These four properties also received concurrence from the State Historic Preservation Officer as eligible for listing in the NRHP and one is listed as a City of Arcata Historic Landmark. While not within the APE, the City of Arcata *General Plan 2020* (drafted in 2000, updated 2008) recommended the Bayside area as a Neighborhood Conservation Area (NCA) and designated it a Specific Plan District (SPD). To date, the City has not designated Bayside as an NCA, nor has it prepared a specific plan for the Bayside SPD. Included in the General Plan is a map defining the boundaries of the Bayside SPD, which includes properties on both sides of Old Arcata Road along much of the Project corridor. The City did not map the boundaries of a proposed Bayside NCA. Since Bayside has been identified as a potential NCA and designated an SPD, a discussion of the four historic-era properties previously identified that are within the Bayside SPD as defined on the map in the General Plan is warranted. These buildings have been identified as historically important for their architecture. The four properties are listed below by their address and Assessor Parcel Number (APN):

– Charles Monahan-Dexter House (City of Arcata locally designated landmark; NRHP/CRHR-eligible); 1788 Old Arcata Road (APN 501-011-015)
– Nellist-Zucar-Smith House (NRHP/CRHR-eligible); 1752 Old Arcata Road (APN 501-011-021)
– David Oscar Nellist House (NRHP/CRHR-eligible); 1686 Old Arcata Road (APN 500-221-035)
– Rhodes-Marsh House & Trinidad Water Tower Complex (NRHP/CRHR-eligible); 1365 Old Arcata Road (APN 500-171-010)

In addition to these four properties, the 1978 study also documented several other buildings and structures along the Project corridor, but outside of the APE. These properties, while documented in the study, did not receive SHPO concurrence as eligible for listing in the NRHP and none are listed as City of Arcata landmarks. Nonetheless, their recognition in the study give them the potential to be local historically noteworthy properties.

The 1978 study also concludes that the “road [Old Arcata Road] is a valuable historic resource,” asserting that the route’s location was determined by geological processes and that it was the general route of a former Native American trail. This conclusion was not well supported and did not receive SHPO concurrence. Old Arcata Road is no longer a trail, and it does not resemble a wagon road. Rather, it is a modern roadway of modern materials and design. A reading of the full 1978 report also calls into question the meaning of this statement. The study does not describe or specifically document the physical roadway as it does the buildings and structures along the road, suggesting the statement that the road is a valuable historic resource does not mean the road itself, but the identified buildings and structures along the road. It should also be noted that the 1978 report is nearly 50 years old and identifying a typical modern roadway such as Old Arcata Road as a historically valuable resource is quite rare by the prevailing contemporary cultural resource management standards and practices.

Another document that has been used in this area to help identify historic resources is a map titled “Bayside in the 1890s.” Rather than being a maps records or identifies historically significant buildings, this is a hand-drawn map based on the recollections of three individuals showing buildings and structures that existed in the 1890s, many of which no longer exist. While being a useful document to understand the history of Bayside and illustrative of the substantial amount of change that has occurred, it is not a document that identifies existing historically significant resources.

## Archaeological Resources Evaluation

Archaeological resources located with the APE are considered confidential; thus, their location and other characteristics are not herein disclosed in detail. Archaeological resources investigations included tribal communications with affected tribes. WRA sent a letter to the Native American Heritage Commission (NAHC) on October 13, 2018, requesting a search of the Sacred Lands File and a current list of local Native American groups and individuals who may have an interest in and information regarding Native resources located in the Project vicinity. The NAHC responded on October 16, 2018, stating that the search of the Sacred Lands File did not indicate the presence of Native American cultural resources in the vicinity of the APE. The NAHC provided a list of local Native American tribal representatives to contact for further information. On October 13, 2018, WRA sent letters to representatives of three local tribal groups affiliated with the Wiyot. Letters requesting information

and help in identifying and protecting Native American cultural resources were sent to the THPOs of the Bear River Band of the Rohnerville Rancheria, Blue Lake Rancheria, and Wiyot Tribe. These parties were also contacted by phone. Formal consultation for the Undertaking with Native American tribal representatives was carried out by the City in coordination with Caltrans District 1 Archaeologist Darrel Cardiff. Mr. Cardiff helped facilitate discussions with the three Wiyot groups regarding the protection of Native American archaeological sites within the APE on October 31, 2018; January 15, 2019; March 15, 2019; and May 20, 2019.

A pedestrian field survey of the APE was completed by William Rich of WRA on August 24, 2018, November 6 and 7, 2018, and May 17 and 24, 2019, as detailed in the ASR (WRA and Pacific Legacy 2021). The pedestrian field survey was followed by subsurface investigations in key locations, the results of which are documented in the Project's Archaeology Survey Report. No new archaeological results were identified during the pedestrian survey or subsurface investigations.

## 3.4.6 Impacts and Mitigation Measures

**Impact CR-1: Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?**

The analysis regarding CR-1 is related to the effect the proposed Project may have on the integrity of built environment historical resources and the ability of such resources to convey their significance. Impacts to archaeological resources that are, or may be, historical resources, or are otherwise deemed significant under CEQA, are addressed in Impact CR-2.

Relevant sections of the CEQA guidelines outlining a framework for analyzing potential Project impacts on built environment historical resources in the vicinity of the Project corridor and in the Project-specific APE include the following:

– Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired [Section 15064.5(b)(1)].
– The significance of an historical resource is materially impaired when a project:
    - Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources [Section 15064.5(b)(2)(A)].

A resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics that convey its historical significance. Under CEQA, projects following the Secretary of the Interior's Standards for the Treatment of Historic Properties (SOI Standards) are generally considered mitigated to less than significant impact. CEQA requires the lead public agency to mitigate any impacts through enforceable measures included in project permits, agreements, or other measures. Impacts can be direct, indirect, and cumulative. Impacts have the potential to diminish a historical resource's historic integrity, i.e., the physical characteristics that convey its significance. Historic integrity is assessed with regard to the retention of the historical resources' characteristics of Location, Setting, Design, Materials, Workmanship, Feeling, and Association.

The SOI Standards provide guidance on the preservation and protection of cultural resources listed in or eligible for listing in the NRHP. This is also used for properties listed in or eligible for listing in the California Register of Historic Resources, and lead agencies use the SOI Standards for other CEQA historical resources. Four types of treatments, Preservation, Rehabilitation, Restoration, and Reconstruction, comprise the SOI Standards. Rehabilitation is the most relevant treatment to assess this Project. Rehabilitation is defined as "the act or process of making possible a compatible use for the property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values." The SOI Standards for Rehabilitation are:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The Old Arcata Road Improvements Project would not result in the physical demolition, destruction, relocation, or alteration of any of the known historical resources addressed herein or any other building or structure along the Project route.

The following subsections regarding the general road improvements and construction of the roundabout examine whether the Project would cause a substantial adverse change by alterations that would cause the surroundings of historical resources to be materially impaired. This could occur through impacts to landscaping features associated with the known and potential historical resources, or through visual impacts to those resources. To materially impair such features, the Project would need to alter in an adverse manner those physical characteristics that convey historical significance.

Based on JRP's analysis and defining of the APE, the Project was found to have the potential to impact the three built environment historical resources in the APE, limited to the vicinity of the proposed roundabout: the Old Jacoby Creek School at 2212 Jacoby Creek Road (MR 1), the Temperance Hall at 1928 Old Arcata Road (MR 2), and the Bayside Grange at 2297 Jacoby Creek Road (MR 3). Because all Project activities are within the existing public right of way, the potential impacts relate to the alteration of the immediate surroundings of these three historical resources. The following analysis considers the three built environment historical resources individually.

## Old Jacoby Creek School, 2212 Jacoby Creek Road (MR 1)

The parcel (APN 501-011-006) on which the Old Jacoby Creek School sits has frontage along Jacoby Creek Road and a by-passed section of former roadway currently used as the driveway for an informal parking area for the adjacent US Post Office. The parcel for the Old Jacoby Creek School does not have frontage directly on the proposed roundabout. The Project would not encroach into the legal parcel of this property, nor would it entail

removal of any landscape feature or fencing considered character defining of the historical resource. Specific Project elements directly along the parcel frontage include an improved driveway approach, some roadway widening and slight realignment, underground storm drain, new sidewalk along a portion of the frontage, and paving and landscaping at the informal US Post Office parking area. Other Project elements at the intersection of Jacoby Creek Road and Old Arcata Road not directly adjacent to the parcel frontage that are associated with the roundabout include concrete traffic splitter islands, roundabout center island, curbs, sidewalks, streetlights, crosswalks, and landscaping.

The improvements directly along the parcel frontage of the Old Jacoby Creek School would be minimal and generally consistent with the current use and appearance. In addition, these improvements would be about 125 feet from the building and other Project elements associated with the roundabout would be further away, the nearest being the concrete traffic splitter island on Jacoby Creek Road about 175 feet from the school, and the center of the roundabout approximately 250 feet from the school. Visibility of the proposed improvements would be impaired by the distance and the existing large trees, hedge, and other vegetation between the school and the proposed Project work.

The historical significance of the Old Jacoby Creek School derives from its association with the development of Bayside and the architecture of the building. The character-defining features of the property would not be altered in any way by the Project and the general setting would remain unchanged. The visual and atmospheric changes resulting from the Project would be minimal, distant, and largely obscured from view, and thus, not cause a substantial adverse change to the historical resource. Additionally, the Old Arcata Road / Jacoby Creek Road intersection has been previously altered and is not the original configuration. The original configuration closely resembled a Y-shape with the north and south sections of Old Arcata Road coming together from different angles at a distinct point with Jacoby Creek Road. This configuration changed in 1946 when Old Arcata Road was realigned to the current sweeping curve through Bayside Corners that eliminated the need for vehicles to slow down at the intersection and allowed for higher speeds on Old Arcata Road through Bayside Corners. This type of sweeping curve improvement was reflective of the “modern” post-World War II era traffic engineering ethos of accommodating high speed motor vehicle traffic. It is a modern intersection design that is much different from the original intersection designed during the pre-automobile era. The Project, therefore, is not proposing to replace a historic intersection, but rather a modern intersection reflecting modern highway design and engineering that does not contribute to the significance of the property. Other changes in the immediate vicinity of the intersection that have occurred over time are the loss of many late nineteenth century and early twentieth century buildings and structures, and the addition of multiple newer buildings, such as the US Post Office immediately next to the Old Jacoby Creek School, constructed in 1985. These alterations have changed the setting of Bayside Corners and the immediate surroundings of the Old Jacoby Creek School since 1903 when the building was constructed, yet this property and Bayside Corners still maintain a rural feeling and setting sufficient for this property to be deemed to have integrity in 1985 when it was listed in the NRHP, and the Project would not substantially alter the surroundings such that this property can no longer convey its significance. Any potential impact would be less than significant.

## Temperance Hall, 1928 Old Arcata Road (MR 2)

The Temperance Hall – currently the Mistwood Education Center – is at the corner of Jacoby Creek Road and Old Arcata Road. The parcel (APN 501-012-012) has frontage along both roads with unpaved parking lots between the building and the roads on these two sides. The Old Arcata Road (northwest) frontage is directly along the site of the proposed roundabout. The parking area on this side is not part of the legal parcel, but within the existing public right of way The Project would not encroach into the legal parcel of this property, nor would it entail removal of any feature considered character defining of the historical resource. Specific Project elements along the parcel include an improved driveway approach on Jacoby Creek Road, some roadway widening and realignment, underground storm drain, new sidewalks, roundabout center island, concrete traffic splitter islands, curbs, streetlights, crosswalks, and landscaping. The roundabout and the road encircling it would include a portion of the parking area on the Old Arcata Road-side of the building that is in the public right of way. The

center of the proposed roundabout would be about 100 feet from the building at its nearest point and clearly visible.

The historical significance of the building derives from its association with Bayside community development. The only potential effect of the Project would be visual and atmospheric. The nearest Project element would be the roundabout at intersection of Old Arcata Road and Jacoby Creek Road. Similar to the impact discussion presented above for Old Jacoby Creel School, this intersection was reconfigured in in 1946 from the original configuration that closely resembled a Y-shape immediately adjacent the northwest side of Temperance Hall. Constructed 64 years after the building was erected, the realignment created the current sweeping curve that allowed for higher speeds on Old Arcata Road through Bayside Corners. This type of sweeping curve improvement was reflective of the “modern” post-World War II era traffic engineering ethos of accommodating high speed motor vehicle traffic. It is a modern intersection design that is much different from the original intersection designed during the pre-automobile era. The Project, therefore, is not proposing to replace a historic intersection, but rather a modern intersection reflecting modern highway design and engineering that does not contribute to the significance of the property. Other changes in the immediate vicinity of the intersection that have occurred over time are the loss of many late nineteenth century and early twentieth century buildings and structures, and the addition of multiple newer buildings, such as the US Post Office across Jacoby Creek Road from the Temperance Hall and two residences built within the past 30 years across Old Arcata Road from the building. These alterations have changed the setting of Bayside Corners and the immediate surroundings of the Temperance Hall when the building was constructed in 1882, yet this property and Bayside Corners still maintain a rural feeling and setting, and the Project would not substantially alter the surroundings such that this property can no longer convey its significance. Any potential impact would be less than significant.

## Bayside Grange, 2297 Jacoby Creek Road (MR 3)

The Bayside Grange – currently the Bayside Community Hall – is on Jacoby Creek Road east of the Old Arcata Road intersection (APN 501-012-002). The entire parcel frontage is on Jacoby Creek Road and no part of the parcel is directly on the roundabout proposed for the Project. The Project would not encroach into the legal parcel of this property, nor would it entail removal of any feature considered character defining of the historical resource. Specific Project elements directly along the parcel frontage are a slight roadway realignment away from the property and installation of an underground storm drain. Other Project elements at the intersection of Jacoby Creek Road and Old Arcata Road not directly adjacent to the parcel frontage are the components of the roundabout: concrete traffic splitter islands, roundabout center island, curbs, sidewalks, streetlights, crosswalks, and landscaping.

The proposed Project improvements directly along the parcel frontage are minor and generally consistent with the current use and appearance. The nearest roundabout Project element is the concrete traffic splitter island on Jacoby Creek Road about 150 feet from the closest part of the building, and the center of the roundabout is approximately 200 feet away. The building faces northeast and the roundabout is northwest of the building. The building’s main entryway is on the northeast corner of the building. There is a parking area between the road and the building, as well as a large parking lot on the southeast side of the building.

The historical significance of the building derives from its association with Bayside community development. The character-defining features of the property would not be altered in any way by the proposed Project and the setting would undergo only slight changes. The visual and atmospheric alterations resulting from the Project immediately adjacent to the parcel would be minimal, and the elements of the Project at the Old Arcata Road / Jacoby Creek Road intersection, including the roundabout, are alterations to a modern, 1946 roadway realignment that would not diminish the historic rural character, setting, or feeling of the area to any substantial degree. Other changes in the recent past discussed above have also occurred, yet Bayside Corners still maintains its rural feeling and setting that would not be substantially changed by the Project and this property would retain sufficient integrity to convey its significance. Any potential impact would be less than significant.

## Properties at 1365, 1686, 1752, and 1786-1788 Old Arcata Road

As noted above, the properties at 1365, 1686, 1752, and 1786-1788 Old Arcata Road are properties with historic status that are outside of the Project APE, but within the Bayside Specific Plan District. While the City has not prepared a specific plan for Bayside, the 2020 General Plan does identify the boundaries of the Bayside SPD and states that any specific plan prepared would "include preservation measures for historic and noteworthy structures," thus, analysis of the potential for substantial adverse change to these four properties is presented below.

An APE boundary was drawn for the HRER that only encompassed the parcels in the vicinity of the roundabout. This decision was based on the fact that the roundabout would be a reconfiguration of the Old Arcata Road / Jacoby Creek Road intersection, thus the potential for an effect / adverse change. In all other areas of the Project, it was determined that Project activities were relatively minor, small scale, and not notably dissimilar in use or appearance from existing conditions, therefore the Project would not have the potential to affect (physical, visual, or vibration effects) adjacent parcels along these sections, and thus these parcels were not encompassed within the APE. Project activities in these areas would be such things as restriping and resurfacing pavement, construction of a new sidewalk on one side of the road, bike lanes, paving driveway approaches, landscaping between the sidewalk and roadway, and minor expansions of the roadway within the existing right of way. Also, as noted above, the Project activities are entirely within the existing roadway right of way and would not entail the removal or alteration of any landscape feature (including fencing) that is, or could be, considered a contributing feature to the historic character of property. The four properties at 1365, 1686, 1752, and 1786-1788 Old Arcata Road have been noted as historically significant for their architecture. Project activities would not result in a significant aesthetic or visual change in the viewshed from these properties that would substantially diminish their historic character or lessen the ability of the properties to convey their architectural importance. As there would be no physical alteration to any of the four properties, or any property along the Project corridor, and only minor visual changes to the roadscape adjacent to these properties, the Project would not cause a substantial adverse change to any of the four properties previously identified in the 1978 study.

The 1978 study also documented several other properties along the Project corridor outside of the APE that did not receive SHPO concurrence like the above four. Nonetheless, these properties have the potential to be historically noteworthy properties at the local level by virtue of their being documented in the 1978 study and being within a potential Bayside NCA and the Bayside SPD. In addition, there may be other properties along the Project corridor outside of the APE that have become 45 years old or older since 1978 that have not been evaluated for historical significance. While the General Plan 2020 Chapter 5.6, Section H-2 recommended updating the City's historic resources inventory, including adding Bayside, such an inventory of Bayside has not occurred. Thus, for the same reasons as presented in the above paragraph, the Project would not cause a substantial adverse change to any property identified in the 1978 study, or any potential, unevaluated historic resource.

Furthermore, the proposed Project improvements in the vicinity of the four properties listed above would comply with the Secretary of the Interior's Standards for Rehabilitation, specifically Standards 9 and 10, whereby the proposed new adjacent construction would not destroy historic materials, features, or spatial relationships that characterize each property, and the new construction would be as compatible with the historical resources as the current roadway. The new construction could also be removed without impacting the historic integrity of these resources.

## Consideration of a Potential Historic District

During the course of research and fieldwork for this Project, consideration was given to the potential presence of a historic district in the study area as defined by NRHP and CRHR guidelines. The National Park Service published guidelines for applying the National Register criteria for evaluation specifically addresses the evaluation of historic districts, defining a historic district property type as a "significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development." A historic district must be a unified entity of interrelated resources that can "convey a visual sense

of the overall historic environment" or are "an arrangement of historically or functionally related properties (NPS 1997: 5, 44-46)." Similarly, CRHR guidelines define the historic district property type as a unified geographic entity which contains a "concentration of historic buildings, structures, or sites united historically, culturally, or architecturally (OHP 2001: 2)." Like other resources found to be eligible for listing in the NRHP or CRHR, a historic district must meet one of the four criteria for significance and must retain historic integrity.

JRP's examination of documentary evidence to determine the history of the Bayside community and the properties in the APE, combined with field survey observations, revealed there is no potential for the formal creation of an historic district in or overlapping with the APE as defined by NRHP and CRHR guidelines. The area within and adjacent to the APE does not meet the standard of a historic district because there is insufficient concentration or discrete grouping of properties that are united historically, aesthetically, culturally, or architecturally. While properties do exist in and near the Project area that were constructed during the same period of development, share some cultural associations, or have similar architectural styles, these various properties are scattered in areas adjacent to the APE and the wider Bayside area, rather than in a clearly identifiable and concentrated grouping that would constitute a historic district within or overlapping with the APE. Potential concentration of the area's older properties is disrupted by buildings interspersed throughout and adjacent to the APE that have lost historic integrity, or that do not share the unifying historical, aesthetic, cultural, or architectural characteristic of the group. This lack of concentrated cohesion around any unifier results in an assortment of building types and styles that do not reflect a particular historically significant period of development or architectural style.

Changes to the Bayside Corners community have diminished the historic character of the area that link it to its historic past. For example, logging and lumber milling were vital to Bayside's, founding, early history, and character, but most built environment associated with this industry are gone. The Flanigan, Brosnan and Company railroad was one such property. Constructed in 1882, the railroad carried timber from the hills east of Bayside to mills at Bayside and docks at the bay shore. The tracks passed directly through Bayside Corners at the Old Arcata Road / Jacoby Creek Road intersection next to the Temperance Hall. This railroad, so closely associated with the logging era, was removed around 1923. Similarly, the lumber mill is gone, as are most of the other buildings associated with logging and milling such as a cookhouse, store, railroad engine house, warehouse, and several worker cabins. Another major alteration to the historic character of Bayside Corners was the reconfiguration of the Old Arcata Road / Jacoby Creek Road intersection from its original configuration in 1946. The original, historic configuration was designed for horses and wagons and closely resembled a Y-shape with Old Arcata Road passing directly in front of the Temperance Hall and Old Arcata Road intersecting with Jacoby Creek Road at a distinct point immediately adjacent the northwest side of this building. The realignment created the current sweeping curve that allowed for higher speeds on Old Arcata Road through Bayside Corners. This type of sweeping curve improvement was reflective of the "modern" post-World War II era traffic engineering ethos of accommodating high speed motor vehicle traffic. It is a modern intersection design that is much different from the original intersection designed during the pre-automobile era. Other modern additions to Bayside Corners are the addition of multiple newer buildings, such as the US Post Office constructed in 1985 and two residences at the intersection built within the past 30 years. Such loss of the historic built environment coupled with the addition of modern buildings and structures illustrates that Bayside Corners lacks a "concentration of historic buildings, structures, or sites united historically, culturally, or architecturally" that would enable it to be a historic district as defined by CRHR guidelines. Given that a historic district is not present within the APE, or in overlapping adjacent areas, an impact would not result.

In addition to there being no historic district as per NRHP and CRHR guidelines, there is also no historic district as per City of Arcata regulations. As noted above, the City of Arcata General Plan 2020 recommended a Bayside Neighborhood Conservation Area (NCA) and designated a Bayside Specific Plan District (SPD), but has not prepared a corresponding Bayside Specific Plan. The General Plan did not designate Bayside as a historic district, and neither an NCA nor an SPD are historic districts. Rather, these are geographic areas recognized as containing historic buildings and structures, and designation as an NCA or SPD puts certain restrictions on new construction and modifications or alterations of noteworthy buildings and structures to assure that any changes are harmonious with the existing character of these areas. Notwithstanding formal designation as an NCA or a

specific plan for the Bayside SPD, the Project would not impair the historic attributes of any buildings or structures in a potential Bayside NCA or the Bayside SPD. As discussed at length above, the alterations proposed by the Project would cause only minor changes to the setting; these changes would not substantially alter the significant historic characteristics of any historical resource such that the historic importance of the resource would be diminished to any consequential degree.

## Summary

In summary, the Project would not diminish the integrity of location, design, materials, workmanship, or association of any historical resource because the Project is entirely within the public right of way and would not physically alter any property. The integrity of feeling and setting would be slightly modified, but this would not result in a substantial adverse change to any known or potential historical resource under CEQA. The feeling and setting would not be altered to a significant degree because: the Project components are modest in scale, sympathetic to the surroundings, and similar to existing conditions; improvements to the intersection are alterations to the 1946 realignment, not to the original historic intersection; and the setting is already a mixture of old and new built environment. Thus, the historical resources in the APE and along the Project corridor would retain their overall integrity and retain their ability to convey their historical significance.

**Mitigation Measure:** No mitigation

**Level of Significance:** Less than significant

**Impact CR-2: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?**

Archaeological resources are known to be present within the Project Area. Archaeological resources were evaluated under the Project's ASR and Extended Phase 1 Report prepared by WRA and Pacific Legacy (2020). The archaeological area of potential effect for the Project was defined by the City in coordination with staff from Caltrans District 1 and THPOs from the Bear River Band of the Rohnerville Rancheria, the Blue Lake Rancheria, and the Wiyot Tribe. The APE incorporates the proposed area of direct impact (ADI) associated with the Project as well as the full extents of archaeological sites that are known or believed to extend into the Project ADI.

No substantial, intact prehistoric or historic period deposits associated with known or previously unrecorded archaeological sites were encountered during development of the ASR and the two Extended Phase 1 investigations. In coordination with consulting tribes and Caltrans, the City developed an ESA Action Plan, Phased Identification Plan, Post-Review Monitoring Discovery Plan, and a Finding of No Adverse Effect to ensure protection measures, monitoring, and reporting requirements necessary to protect archaeological resources present or potentially present in the APE during construction of the Project.

Although unrecorded archeological resources were not encountered during investigations, there remains the potential to encounter such deposits during Project ground disturbing activities, particularly since much of the Project ADI is subsumed by concrete, asphalt and development areas. Implementation of the ESA Action Plan, Phased Identification Plan, and Post-Review Monitoring and Discovery Plan would reduce the potential risk to archaeological resources. However, the potential impact to archaeological resources inadvertently discovered during construction could be significant. Mitigation Measure CR-1 shall be incorporated into the Project to ensure potential impacts to archaeological resources, if encountered, would be reduced to a less than significant level.

## Mitigation

Mitigation Measure CR-1 would be implemented by the City to develop a Memorandum of Understanding (MOU) with consulting tribes to address protections necessary for tribal cultural resources potentially affected by the Project.

**Mitigation Measure CR-1: Develop and Implement an MOU with Consulting Tribes**

The City shall develop an MOU with consulting tribes to that would include:

- When and where tribal and or archaeological monitors would be needed
- Potential Preconstruction guided investigation needs that would occur prior to construction
- Inadvertent discovery protocols and plans

The MOU shall be developed prior to construction and implemented throughout the duration of Project construction.

With the implementation of the plans described under Mitigation Measure CR-1, potential impacts to archaeological resources would be less than significant.

**Level of Significance:** Less than significant after mitigation

**Impact CR-3: Would the Project disturb any human remains, including those interred outside of formal cemeteries?**

Inadvertent discovery of human remains has the potential to result in a significant impact to cultural resources. The MOU included in Mitigation Measure CR-1 would specifically include detailed special procedures for discoveries of potential human remains, consistent with the City's standard protocol for inadvertent discovery of human remains.

As included in the City's standard protocol, if human remains are discovered during Project construction, work within the discovery location plus nearby areas reasonably suspected to overlie human remains, would cease (Public Resources Code, Section 7050.5). The Humboldt County Coroner and designated tribal representatives would be contacted by the Project Archaeologist to determine if the cause of death must be investigated. If the Coroner determines that the remains are of Native American origin, it is necessary to comply with state laws regarding the disposition of Native American burials, which fall within the jurisdiction of the California Native American Heritage Commission (NAHC) (Public Resources Code, Section 5097). In this case, the Coroner would contact NAHC. The descendants or most likely descendants (MLD) of the deceased would be contacted, and work would not resume until they have made a recommendation to the landowner or person responsible for excavation work with direction regarding appropriate means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98.

Given the inclusion of inadvertent discovery in the Mitigation Measure CR-1 MOU and implementation of the City's standard protocol for inadvertent discovery of human remains, any potential impact would be less than significant.

**Mitigation Measure:** No mitigation

**Level of Significance:** Less than significant

## 3.4.7 Cumulative Impacts

**Impact CR-C-1: Would the Project contribute to a cumulatively significant impact to cultural resources?**

Cumulative effects analysis examines the current Project effects taken together with effects of past projects and known projects in the foreseeable future. Future projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust's watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber Project, and future Jacoby Creek School classroom improvements.

– The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows

under a County bridge on Old Arcata Road. Future enhancement project locations within the lower watershed have not yet been identified and may or may not be located within proximity to Old Arcata Road. Built historical resources would be unlikely to be altered by the Jacoby Creek watershed planning study. Delineated archaeology resources evaluated by the Project do not extend outside the APE and thus would not be affected by the Jacoby Creek watershed planning study and associated enhancement projects. A potential cumulative impact to cultural resources thus would not result.

– The VERO Eureka/Arcata Fiber Project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. The fiber cable would be located subsurface, parallel to Old Arcata Road and within the City and County right of ways. Some portions of the VERO project along Old Arcata Road have already been completed, resulting in minimal soil disturbance to install sub-grade utility boxes in discrete locations, approximately five feet square, alongside the roadway. Construction to date was monitored by the Caltrans archaeologist and tribal cultural monitors. Resources were not identified during monitoring. Given the majority of ground disturbance has already occurred and resources were not identified by qualified professional and tribal monitors, a potential cumulative impact would not result.
– Planned classroom improvements to the Jacoby Creek School would be located at the western end of the campus, away from Old Arcata Road. Improvements would not include any two-story structures. Classroom improvements and new construction could potentially be located in an archaeologically sensitive setting. Depending on the depth of necessary ground disturbance and the context of any ground disturbance which have already occurred to date, new construction could have the potential to impact cultural resources. As part of the Project's CEQA process, a Mitigation Monitoring and Reporting Plan (MMRP) was developed to protect any potential cultural or tribal historic resources on the school campus. With implementation of the MMRP, significant impacts to cultural resources would be avoided. Thus, any potential cumulative cultural resources impact resulting from the two combined projects would be less than significant.
– Past projects include the 1946 reconfiguration of Old Arcata Road through Bayside Corners and the Old Arcata Road / Jacoby Creek Road intersection, the demolition of old buildings and construction of new buildings in the area, as well as the common contemporary roadway improvement such as new paving, signage, and striping. Three of the four buildings immediately adjacent to the proposed roundabout, for example, were built within the past 36 years. The current Project would introduce some changes to the feeling and setting of Bayside Corners but would largely alter physical features that have already been modified – such as the intersection and the roadway – and are not contributing features to the historical resources in the APE. Thus, a potential cumulative impact would not result.

Therefore, the Old Arcata Road Improvements Project, taken together with past and foreseeable future projections, would not cause a cumulative adverse effect to historical resources. Given that the Project would not result in any significant impacts to historical or cultural resources, and that the three projects considered in Table 3-1 would not permanently affect historical and cultural resources in the Project Area or vice versa, the potential for cumulative impacts within the study area would not result.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

## 3.4.8 References

California Office of Historic Preservation. 2012. "Directory of Properties in the Historic Property Data File for Humboldt County."

California Office of Historic Preservation. 2001. "Instructions for Preparing Documentation for Nominating Historical Resources to the California Register of Historical Resources." Appendix in Technical Assistance Series #7, *How to Nominate a Resource to the California Register of Historical Resources.*

City of Arcata. 1989. Local Coastal Program (Coastal Land Use Element and Implementing Ordinances). Certified as legally adequate by the California Coastal Commission on October 10, 1989. Prepared in

association with W. Woodroff of the Coastal Commission and Environmental Analysts: J. Butler, J. Test, W. Mader, T. Roelofs, and F. Hastings.

City of Arcata. 2008. Arcata General Plan: 2020; Historical Preservation Element. Available at: https://www.cityofarcata.org/DocumentCenter/View/35/Chapter-5-Design-and-Historical-Preservation---2-Historical-Preservation-Element-PDF

E. Taylor & J. Roscoe. 1998. *Cultural Resources Study prepared by E. Taylor, J. Roscoe, and Susie Van Kirk*. October 1998. Submitted to the City of Arcata with project application for Janes Creek Meadow Subdivision on the Sorensen property.

Humboldt County Department of Public Works. 1978. “An Historic Resources Inventory: The Old Arcata Road – Myrtle Avenue Corridor.”

Humboldt County. 2014. Humboldt Bay Area Plan, of the Humboldt County Local Coastal Program. December. Available at: https://humboldtgov.org/DocumentCenter/View/50844/Humboldt-Bay-Area-Local-Coastal-Plan

Humboldt County. 2017. Humboldt County General Plan. Chapter 10: Conservation and Open Space Elements. Available at: https://humboldtgov.org/205/General-Plan

JRP Historical Consulting, LLC. (JRP). 2020. Historical Resources Evaluation Report, Old Arcata Road Improvements Project Arcata, Humboldt County, California. Federal Project No.: RPSTPL-5021(023). December. Prepared for the City of Arcata and Caltrans District 1.

Loud, L.L. 1918. Ethnogeography and Archaeology of the Wiyot Territory. In American Archaeology and Ethnology 14(3):221-436.

National Park Service. 1997. Bulletin 15: *How to Apply the National Register Criteria for Evaluation. Washington, D.C.: Department of the Interior.*

Public Resources Code Division 20. 2021. California Coastal Act. Available at: https://www.coastal.ca.gov/coastact.pdf

Rhode, Jerry. 2020. “Humboldt Bay Shoreline, North Eureka to South Arcata: A History of Cultural Influences.”

Schafran, Walter C. 1984. “Bayside Through the Years.” Center for Community Development, Humboldt State University.

Van Kirk, Susie. 1984. “Old Jacoby Creek School.” National Register of Historic Places Inventory – Nomination Form.

_____. n.d. “Research Notes on Bayside and Jacoby Creek.” Susie Van Kirk Papers, Special Collections, Humboldt State University.

William Rich and Associates (WRA) and Pacific Legacy, Inc. 2021. Archaeological Survey and Extended Phase I Report for the Old Arcata Road Improvements Project, Bayside, Humboldt County, California. Federal Project No.: RPSTPL-5021(023). Prepared for the City of Arcata.

# 3.5 Energy

This section evaluates the potential impacts of the Project related to energy consumption during construction and operation of the Project. To provide the basis for this evaluation, the Setting section describes the environmental setting for energy resources. The Regulatory Framework section describes the regulatory background that applies to the Project. The Impact Analysis section establishes the thresholds of significance, evaluates potential energy impacts, and identifies the significance of impacts.

## 3.5.1 Study Area

The study area for energy impacts includes the Project Area and Humboldt County.

## 3.5.2 Setting

### Energy Resources

Energy resources in Humboldt County consist primarily of fossil fuels such as natural gas deposits, and local biomass resources sourced from lumber mill wood residue. There are no developed industrial energy resources within the City of Arcata, although many residences and businesses have installed solar panels in support of sustainable energy development. The City's energy needs are largely met from developed energy resources from outside the city limit, into Humboldt County and beyond.

The majority of primary energy used in Humboldt County is imported, with the exception of biomass energy. Although natural gas deposits exist in Humboldt County such as within the Tompkins Hill Gas Field in the Eel River basin, the County imports approximately 90 percent of its natural gas. There is no record of geothermal production in Humboldt County. The Project site is not located on or near any substantial known energy source or energy system infrastructure.

Roughly half of the electricity serving Humboldt County is generated at the Pacific Gas and Electric Company (PG&E) Humboldt Bay Generation Station utilizing a 163-megawatt natural gas-fired power plant. Local biomass resources are used to provide about 25 to 30 percent of the county's electricity needs. The biomass resources are primarily derived from lumber mill wood residue. It is projected that local renewable resources could provide the majority of Humboldt County's electricity needs and a substantial portion of heating and transportation energy demands (Humboldt County 2017). PG&E power poles and overhead electricity transmission lines are present throughout the vicinity of the Project site.

## 3.5.3 Regulatory Framework

Federal regulations, such as the Corporate Average Fuel Efficiency Standards, and state regulations, such as the California Green Building Standards and California Energy Efficiency Standards for Residential and Non-residential Buildings, are not included in this section as the Project does not involve components (such as automobile manufacturing or construction of structures) that would be subject to such regulations.

### Federal

There are no federal regulations that apply to the Project related to energy resources in Humboldt County.

### State

#### *Senate Bill 350*

SB 350, *Clean Energy and Pollution Reduction Act,* was signed by Governor Brown on October 7, 2015. It increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030.

This objective will increase the use of Renewables Portfolio Standard (RPS) eligible resources, including solar, wind, biomass, geothermal and others.

### *State of California Energy Action Plan*

In 2003, the three key energy agencies in California— the California Energy Commission (CEC), the California Power Authority (CPA), and the California Public Utilities Commission (CPUC)—jointly adopted an Energy Action Plan (EAP) which sets goals for California's energy future and memorializes a commitment to achieve these goals through specific actions. In 2005, the CPUC and the CEC jointly prepared a subsequent draft of the EAP (EAP II) to identify further actions necessary to meet California's future energy needs. To the extent that efficiency, demand response, renewable resources, and distributed generation are unable to satisfy increasing energy and capacity needs, the EAP II supports the use of clean and efficient fossil-fuel energy generation. The plan recognizes that concurrent improvements are required to the bulk electricity transmission grid and distribution facility infrastructure to support growing demand centers and the interconnection of new generation, both on the utility and customer side of the meter.

### *Senate Bill 1389*

Senate Bill (SB) 1389, the California Integrated Energy Policy, was adopted in August 2002 and requires the CEC to prepare an Integrated Energy Policy Report (IEPR) for electricity, natural gas, and transportation fuels. The IEPR contains an analysis of the policies and actions that are necessary to ensure that the state has adequate energy resources—including a range of alternative energy resources—to meet its needs. The IEPR also includes recommendations to reduce energy demand and to improve the state's energy infrastructure.

### *Senate Bill 100*

SB 100, *California's Commitment to 100 Percent Clean Energy,* was signed by Governor Brown on September 10, 2018. It commits California to operating off of 100 percent clean energy by 2045, speeding up the state's timeline for moving to carbon-free power sources. Under the law 60 percent of the power purchased by California utilities must come from renewable sources by 2030. The additional 40 percent of the power California' utilities will deliver to residents, businesses and government agencies must come from 'zero-carbon' sources. This is a term still waiting to be defined by California's policy makers.

### *Assembly Bill 1007*

Assembly Bill 1007, (Pavley, Chapter 371, Statutes of 2005) required the CEC to prepare a state plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the State Alternative Fuels Plan in partnership with the California Air Resources Board and in consultation with other state, federal, and local agencies. The final State Alternative Fuels Plan, published in December 2007, attempts to achieve an 80-percent reduction in greenhouse gas emissions associated with personal transportation, even as California's population increases.

## Regional and Local

Most of the Project Area is within the City of Arcata, and the western portion of the Project Area (bisected by Old Arcata Road) is also within the Coastal Zone. The southern extent of the Project Area is within Humboldt County jurisdiction, and a small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and the City's Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone, the Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *City of Arcata General Plan*

The goals and policies within the City of Arcata General Plan that regulate energy and that are applicable to the Project include the following:

*RC-8: Energy Resources Management*

*Reduce the net emissions of greenhouse gases from Arcata; reduce other negative impacts of energy production and use, including risks from nuclear power, air emissions, fuel spills, and wildlife and habitat destruction; reduce energy costs to the city and its residents, and increase the percent of energy purchases from sources within our region; increase the city's and nation's energy security and reduce our vulnerability to changes in energy availability and price; increase public awareness of energy issues and encourage an energy conservation ethic; monitor the cost and effectiveness of Arcata's actions so we and others can learn from them; and implement Arcata's Advisory Proposition B.*

*Advisory Proposition B – Approved by Arcata Voters April 8, 1980:*

*"In accordance with America's renewed determination to be energy self reliant, be it resolved that the citizens of Arcata and their City government are committed to the enactment of conscientious energy conservation measures and the accelerated development and active promotion of safe and economical alternative renewable energy sources for our community.*

*Be it further resolved that the City government of Arcata support complete independence from nuclear power including the permanent closure of the Humboldt Bay nuclear power plant and its replacement by safe, clean and efficient generating sources more compatible with the resources and health and safety of the Northcoast, such as conservation, solar power and generation from wood waste."*

*Applicable sub-policies:*

- *RC-8c: Promotion of energy efficiency in transportation – The City shall give strong consideration to energy conservation and the goals of this policy in all transportation and traffic management decisions. It is City policy to reduce the need for motor vehicle trips within the city and between the city and other destinations, and to reduce per-trip energy consumption; this policy applies to trips by residents, non-residents, and city staff. Such measures as bike and pedestrian paths, public transportation, parking and traffic management, and encouraging use of alternative-fueled vehicles shall be used to make these reductions.*

### *City of Arcata Local Coastal Program*

There are no applicable policies in the City of Arcata's Local Coastal Program that address energy resources.

### *Humboldt County General Plan*

The goals and policies within the Humboldt County General Plan that regulate energy and that are applicable to the Project include the following:

*E-G2. Increase Energy Efficiency and Conservation*

*Decrease energy consumption through increased energy conservation and efficiency in building, transportation, business, industry, government, water and waste management.*

*E-G3. Supply of Energy from Local Renewable Sources*

*Increased local energy supply from a distributed and diverse array of renewable energy sources and providers available for local purchase and export.*

*E-P3. Local Renewable Energy Supply*

*The County shall support renewable energy development projects including biomass, wind, solar, "run of the river" hydroelectric, and ocean energy, consistent with this Plan that increases local energy supply.*

*E-P10. Transportation Management Plans*

*Major commercial, business, or industrial, facility developments shall be required to submit a transportation management plan that addresses energy conservation measures such as connectivity to alternative transportation modes; preferential parking for carpools, vanpools, motorcycles, mopeds, and bicycles; shuttle services; alternative fueling stations; transit passes; bike lockers; and locker-room facilities. Develop incentives for projects not deemed as major that incorporate such energy conservation measures.*

*E-P11. Energy-efficient Landscape Design*

*Encourage and incentivize energy efficient landscape design in development projects, subdivisions, and in new and existing streets and parking areas in order to reduce impervious surfaces, minimize heat and glare, control soil erosion, and conserve water.*

*AQ-P16. Electric Vehicle Accommodations*

*Encourage and provide incentives for commercial and residential design that supports the charging of electric vehicles.*

***Humboldt Bay Area Plan – Local Coastal Plan***

The policies within the Humboldt Bay Area Plan that regulate energy and that are applicable to the Project include the following:

*Section 30253. New development shall:*

- *Minimize energy consumption and vehicle miles traveled.*

## 3.5.4 Evaluation Criteria and Significance Thresholds

Under criteria based on Appendix G of the CEQA Guidelines, the Project would be considered to have a significant impact on energy resources if it would result in any of the following:

- Result in potentially significant environmental impact due to wasteful, inefficient; unnecessary consumption of energy resources, during Project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The following sections describe the anticipated environmental impacts on energy due to the Project.

## 3.5.5 Methodology

Existing information sources were reviewed to determine whether any portions of the study area contain significant energy resources and to evaluate how these resources, if any, would be affected by the Project. This analysis evaluates the use of energy resources (e.g., fuel and electricity) during the construction and operation of the Project. Specifically, the analysis considers whether construction and operation of the Project would use large amounts of fuels or energy, and whether they would be used in a wasteful manner.

## 3.5.6 Impacts and Mitigation Measures

**Impact ER-a:** **Would the Project result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?**

Construction of the Project would involve grading, excavation and use of heavy machinery as discussed under Section 3.3 - Air Quality. Construction would require the use of fuels, primarily gas, diesel, and motor oil. The precise amount of construction-related energy consumption that would occur is uncertain. However, construction would not require a large amount of fuel or energy usage because of the moderate number of construction vehicles and equipment, worker trips, and truck trips that would be required for a Project of this scale. Trips associated with the Project construction were estimated to consist of up to 68 trips per day, and construction equipment would remain staged in the Project Area once mobilized. Use of these fuels would not be wasteful or unnecessary because their use is necessary to complete the Project.

Excessive idling and other inefficient site operations would be prohibited. Equipment idling times would be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes or less (as required by the California airborne toxics control measure (Title 13, Section 2485 of the CCR)).

The Project would improve ease of use for non-motorized transportation along Old Arcata Road by upgrading bike lanes and improving and extending the pedestrian walkway. These improvements would enhance opportunities for non-motorized commuting and transit by local residents and thereby reduce Vehicle Miles Traveled (VMT) and associated energy consumption.

Because construction would not encourage activities that would result in the use of large amounts of fuel and energy in a wasteful manner, and with implementation of required idling restrictions, the short initial construction timeframe (6-8 months), and the limited scope of construction equipment use, impacts related to the inefficient use of construction-related energy impacts would be less than significant. Because the Project facilitates non-motorized transportation such was bicycling and walking, operations-related energy impacts would also be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact ER-b:** **Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

### State Plans

The following plans were highlighted above in Section 3.5.3, and are reiterated here for ease of reference.

#### *State of California Energy Action Plan*

In 2003, the three key energy agencies in California— the California Energy Commission (CEC), the California Power Authority (“CPA”), and the California Public Utilities Commission (CPUC)— jointly adopted an Energy Action Plan (“EAP”) that listed goals for California’s energy future and set forth a commitment to achieve these goals through specific actions. In 2005, the CPUC and the CEC jointly prepared the EAP II to identify the further actions necessary to meet California’s future energy needs. To the extent that efficiency, demand response, renewable resources, and distributed generation are unable to satisfy increasing energy and capacity needs, the EAP II supports the use of clean and efficient fossil-fired generation. The plan recognizes that concurrent improvements are required to the bulk electricity transmission grid and distribution facility infrastructure to support growing demand centers and the interconnection of new generation, both on the utility and customer side of the meter.

### *Senate Bill 1389*

Senate Bill (SB) 1389, the California Integrated Energy Policy, was adopted in August 2002 and requires the CEC to prepare an Integrated Energy Policy Report (IEPR) for electricity, natural gas, and transportation fuels. The IEPR contains an analysis of the policies and actions that are necessary to ensure that the state has adequate energy resources—including a range of alternative energy resources—to meet its needs. The IEPR also includes recommendations to reduce energy demand and to improve the state‘s energy infrastructure.

### *Assembly Bill 1007*

Assembly Bill 1007, (Pavley, Chapter 371, Statutes of 2005) required the CEC to prepare a state plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the State Alternative Fuels Plan in partnership with the California Air Resources Board and in consultation with other state, federal, and local agencies. The final State Alternative Fuels Plan, published in December 2007, would attempt to achieve an 80-percent reduction in greenhouse gas emissions associated with personal transportation, even as California’s population increases.

## Local Plans

### *City of Arcata*

In 2006, the City developed a Community Greenhouse Gas Reduction Plan. The plan focuses on six action areas: energy efficiency, renewable energy, sustainable transportation, waste and consumption reduction, carbon sequestration and other methods, and cross-cutting approaches. In addition to reducing greenhouse gas emissions it is expected that the implementation of this plan would offer many other community benefits. These include: energy cost savings with subsequent benefits to the local economy, cleaner air, less reliance on fossil fuels and imported energy sources, and a move toward a more sustainable energy economy. Implementation of this plan would also serve to fulfill numerous objectives that are stated in the Arcata General Plan: including Policy RC-8, Energy Resources Management (City of Arcata 2008).

The Community Greenhouse Gas Reduction Plan also includes applicable recommendations for sustainable transportation, including:

- Improve bicycle infrastructure,
- Improve pedestrian infrastructure (sidewalks, paths, and walkways), and
- Improve mass transit infrastructure.

### *Humboldt County*

In cooperation with Redwood Coast Energy Authority, Humboldt County is currently developing a Climate Action Plan. The plan is not yet complete.

The proposed Project is consistent with State and local plans and includes elements that would promote non-motorized infrastructure, such as improved bicycle lanes and upgraded and extended pedestrian facilities. In addition, planned improvements to Old Arcata Road would better enable future integration with the Humboldt Transit Authority for a mass transit bus route along the Project corridor. The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would result.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.5.7 Cumulative Impacts

**Impact ER-C-1: Would the Project contribute to a cumulatively significant impact to Energy Resources?**

Projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust's watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber Project, and future Jacoby Creek School classroom improvements.

- The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows under a County bridge on Old Arcata Road. Future enhancement project locations within the lower watershed have not yet been identified and may or may not be located within proximity to Old Arcata Road. Any such enhancements to the stream corridor would most likely be limited to the regulated in-water work window (mid-June through October) and thus short-term in duration. Aside from the use of heavy equipment during construction (fossil fuels), the projects would not be highly energy consumptive. The timing of planned enhancements also remains speculative, and, if implemented, would occur after implementation of the Project. The combined projects would not result in a cumulative impact to energy resources.
- The VERO Eureka/Arcata Fiber optic project would be located subsurface, parallel to Old Arcata Road and within the City and County rights-of-way, which obtained CEQA coverage under a Categorical Exemption filed by the California Public Utilities Commission (CA PUC 2019). The VERO project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. Some portions of the VERO project along Old Arcata Road have already been completed and are short-term in duration. Given the low-intensity construction methods and associated low level air emissions, the VERO project would not be highly energy consumptive; thus, a cumulative impact to energy resources would not result.
- The Jacoby Creek School (JCS) Improvement Project includes planned classroom improvements located at the western end of the campus, away from Old Arcata Road and behind existing structures facing Old Arcata Road. Improvements would not include any two-story structures. JCS Improvement Project objectives include, "Greater building efficiency to reduce energy consumption." Additionally, the JCS Improvements Project facilities are subject to the California Energy Code regulations, which require energy efficient features (JCSD 2018). Construction-related air emissions from the planned improvements would be short-term in duration and consistent with low level construction intensity. The improvements would be unlikely to be highly energy consumptive. Operationally, the new classrooms may require additional, long-term energy resources. While the additional operational energy demand has not yet been determined, it is unlikely to be substantial. Any potential cumulative energy impact would be less than significant.

Given that the Project would not result in any significant air quality impact, and that the three projects considered in Table 3-1 would not result in a likelihood for significant energy-related impacts in or near the Project Area, the potential for cumulative energy-related impacts within the study area would not result.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.5.8 References

California Public Utilities Commission (CA PUC). 2019. Decision Granting VERO Fiber Networks, LLC a Certification of Public Convenience and Necessity to Provide Resold and Full Facilities-based Local Exchange and Interexchange Telecommunications Services.

City of Arcata. 2006. *Community Greenhouse Gas Reduction Plan*. August.

Humboldt County. 2017. *Humboldt County General Plan.* Available at: https://humboldtgov.org/205/General-Plan

Jacoby Creek School District (JCSD). 2018. *Initial Study and Mitigated Negative Declaration for the Jacoby Creek School Improvement Project*. Adopted December 10, 2018.

# 3.6 Geology and Soils

The Project is located on generally flat and gently sloping bottomlands between Humboldt Bay and the forested hillslopes and neighborhoods east of the Project corridor. Soils along the Project corridor are likely to have been previously disturbed and compacted due to prior activities to construct and maintain Old Arcata Road, adjacent residences, businesses, and schools, and associated utility infrastructure. The Project is located on existing roadway that includes existing vehicular use. Project construction predominantly includes shallow excavation (less than 2 feet). In specific areas, limited excavation up to a depth of approximately eight feet would occur for streetlight footings or foundations. As noted in Chapter 2 - Project Description, the City would adhere to recommendations from design-level geotechnical and pavement investigations for the Project as part of the Project design process.

## 3.6.1 Study Area

For impact assessment related to direct construction impacts, the project boundary was used as the study area. Impact assessment related to seismic conditions considered a broader, regional study boundary reflective of applicable fault and tsunami hazard mapping.

## 3.6.2 Setting

### Regional Geological Setting

The Humboldt Bay region occupies a complex geologic environment characterized by very high rates of active tectonic deformation and seismicity. The region lies just north of the Mendocino Triple Junction, the intersection of three crustal plates (the North American, Pacific, and Gorda plates). North of Cape Mendocino, the Gorda plate is being actively subducted beneath North America, forming what is commonly referred to as the Cascadia subduction zone. In the Humboldt Bay region, deformation along the continental margin occurs as a series of northwest-trending, northeast-dipping thrust faults, and intervening folds. The geomorphic landscape of the Humboldt Bay region is largely a manifestation of the active tectonic processes and a dynamic coastal environment setting.

### Local Geological Setting

Arcata is located within the Coast Ranges Geomorphic Province of California, which is characterized by subparallel north- to northwest-trending mountain ranges and intermountain and coastal alluvial valleys and plains. Topography in the province is controlled by the predominant geological structural trends within the Coast Range that generally consist of northwest trending synclines, anticlines, and faulted blocks.

The parcels within the Project are located at the edge of a broad, coastal alluvial plain at the northeastern end of Humboldt Bay. The alluvial plain is a result of historic fluvial deposition from Humboldt Bay (to the west) and Jacoby Creek, which flows approximately 0.40 mile south of the Project Area boundary. The coastal plain north of Humboldt Bay is commonly referred to as the "*Arcata Bottom,*" and is underlain by an unknown thickness of alluvial sediments. The area immediately west of (and in some instances within) the Project Area boundary can also be considered a coastal plain formed from alluvial deposits and is similar to the Arcata Bottom to the north. Borings from the Arcata Bottom coastal plain have typically encountered less than 100 feet of recent alluvial sediment, but there may be structural or depositional complexities in the subsurface that could influence overall alluvial thickness beneath any particular site. The age of the alluvial plain sediments is not currently known. The deeper sediments are likely to be Pleistocene in age. The upper sediments are interpreted to be early to middle Holocene in age, reflecting the post-glacial rise in sea level during that period. The depth of the transition from Holocene to Pleistocene age sediments beneath the Arcata Bottom is not known. The western portion of the Project Area and area beyond it to the west is assumed to contain the same or similar geological characteristics

as the Arcata Bottom coastal plain which is located approximately 2.5 miles northwest of the Project (separated by the City of Arcata).

The eastern portion of the Project Area contains developed infrastructure located at the western extent of foothills associated with the Kneeland Hills further east. The Project Area is located at the boundary between the Humboldt Bay and Jacoby Creek alluvial plain and the Kneeland Hills further inland. The Project Area is generally flat and can be associated moreso with the flat alluvial, coastal plain than the Kneeland Hills.

## Site Soils

Soils within the Project Area are tentatively mapped by the Natural Resources Conservation Service (NRCS) and predominantly consist of the Hookton-Tablebluff complex, but also contain small amounts of Lepoil-Espa-Candymountain, and Worswick-Arlynda complex soils. Hookton soil is a very deep loam that is somewhat poorly drained and derived from mixed alluvium. Tablebluff soil is a very deep silt loam that is moderately well drained and derived from eolian deposits over mixed alluvium. Construction of Old Arcata Road and adjacent houses in the past, however, has resulted in extensive modification of the site soils, including reworking of the upper soil horizons and placement of a significant amount of imported fill.

## Regional Seismic Setting

The Project is located in a complex, dynamic tectonic setting. Due to the dynamic crustal deformation associated with location near the Mendocino Triple Junction, there is a high level of seismicity in the region; the north coast region of California is the most seismically active region in the continental United States. Over sixty earthquakes have produced discernible damage in the region since the mid-1800s (Dengler et al. 1992). Historic seismicity and paleoseismic studies in the area suggest there are six distinct sources of damaging earthquakes in the Humboldt Bay region:  1) the Gorda Plate; 2) the Mendocino fault; 3) the Mendocino Triple Junction; 4) the northern end of the San Andreas fault; 5) faults within the North American Plate (including the Mad River fault zone); and 6) the Cascadia Subduction Zone (Dengler et al. 1992).

Earthquakes originating within the Gorda Plate account for the majority of historic seismicity. These earthquakes occur primarily offshore along left-lateral faults, and are generated by the internal deformation within the plate as it moves toward the subduction zone. Significant historic Gorda Plate earthquakes have ranged from magnitude 5.0 to 7.5. The November 8, 1980, earthquake (magnitude 7.2) was generated 30 miles (48 km) off the coast of Trinidad, on a left-lateral fault within the Gorda Plate.

The Mendocino fault is the second most frequent source of earthquakes in the region. The fault represents the plate boundary between the Gorda and Pacific plates, and typically generates right lateral strike-slip displacement. Significant historic Mendocino fault earthquakes have ranged in magnitude from 5.0 to 7.5. The September 1, 1994, magnitude 7.2 event originating west of Petrolia was generated along the Mendocino fault. Available data suggests the maximum magnitude earthquake for the Mendocino fault is magnitude 7.4 (CDMG/USGS, 1996).

The Mendocino Triple Junction was identified as a separate seismic source only after the magnitude 6.0 August 17, 1991 earthquake. Significant seismic events associated with the Triple Junction are shallow onshore earthquakes that appear to range from magnitude 5.0 to 6.0. Raised Holocene age marine terraces near Cape Mendocino suggest larger events are possible in this region.

Earthquakes originating on the northern San Andreas Fault are extremely rare but can be very large. The northern San Andreas Fault is a right lateral strike-slip fault that represents the plate boundary between the Pacific and North American plates. The fault extends through the Point Delgada region and terminates at the Mendocino Triple Junction. The 1906 San Francisco earthquake (magnitude 8.3) caused the most significant damage in the north coast region, with the possible exception of the 1992 Petrolia earthquake (Dengler et. al. 1992).

Earthquakes originating within the North American plate can be anticipated from a number of intraplate sources, including the Mad River fault zone and Little Salmon fault. There have not been large magnitude earthquakes

associated with faults within the North American plate, although the December 21, 1954, magnitude 6.5 event may have occurred in the Mad River fault zone. Damaging North American plate earthquakes are expected to range in magnitude from 6.5 to 8.0.

The Project does not lie within a fault zone but is located approximately 0.40 mile south of an “inferred” fault in Arcata that trends west-east. (DOC 2021). The Project is located approximately 3.25 miles west of the “accurately located” Fickle Hill fault, which trends northwest-southeast (DOC 2021).

The Little Salmon fault, located south of Eureka, appears to be the most active fault in the Humboldt Bay region, and is capable of generating very large earthquakes. The Little Salmon fault is a northwest-trending, southwest-vergent reverse fault. Paleoseismic studies of the Little Salmon fault indicate that the fault deforms late Holocene sediments at the southern end of Humboldt Bay (Clarke 1992). Estimates of the amount of fault slip for individual earthquakes along the fault range from 15 to 23 feet (4.5 to 7 meters). Radiocarbon dating suggests that earthquakes have occurred on the Little Salmon fault about 300, 800, and 1,600 years ago. Average slip rate for the Little Salmon fault for the past 6,000 years is between six and ten mm/yr. Based on currently available fault parameters, the maximum magnitude earthquake for the Little Salmon fault is thought to be between 7.0 (CDMG/USGS, 1996) and 7.3 (Geomatrix Consultants 1994).

The Cascadia Subduction Zone (CSZ) represents the most significant potential earthquake source in the north coast region. A great subduction event may rupture along 200 km or more of the coast from Cape Mendocino to British Columbia, may be up to magnitude 9.5, and could result in extensive tsunami inundation in low-lying coastal areas (Clarke 1992). The April 25, 1992, Petrolia earthquake (magnitude 7.1) appears to be the only historic earthquake involving slip along the subduction zone, but this event was confined to the southernmost portion of the fault. Paleoseismic studies along the subduction zone suggest that great earthquakes are generated along the zone every 300 to 500 years. Historic records from Japan describing a tsunami thought to have originated along the Cascadia Subduction Zone suggest the most recent event occurred on January 27, 1700. A great subduction earthquake would generate long duration, very strong ground shaking throughout the north coast region.

## 3.6.3 Regulatory Framework

### Federal

There are no federal policies or regulations relevant to the Project for geology and soils.

### State

#### *Alquist-Priolo Earthquake Fault Zoning Act*

The Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code, Division 2, Chapter 7.5) was passed in 1972 to mitigate the hazard of surface faulting (i.e., ground rupture) to structures designed for human occupancy (CGS 2018). Title 14 of the California Code of Regulations (CCR), Section 3601(e), defines buildings intended for human occupancy as those that would be inhabited for more than 2,000 hours per year. In accordance with the Alquist-Priolo Act, the State Geologist is responsible for delineating regulatory zones, called “earthquake fault zones,” around the surface traces of faults that exhibit evidence of ground rupture during the Holocene Epoch (i.e., the last ~11,700 years). These zones are depicted on USGS 7.5-minute topographic quadrangle maps and published by the CGS. Because many active faults are complex and consist of more than one branch, earthquake fault zones can extend several hundred feet on either side of the mapped fault trace. Within these zones, buildings for human occupancy cannot be constructed unless the building site has been formally investigated by a Professional Geologist who has prepared a geologic report demonstrating that the proposed structure would not lie astride the trace of an active fault.

While the Project Area lies approximately 0.4 miles south, and 3.25 miles west of Alquist-Priolo Earthquake Fault Zones (CGS 2021), no portion of the Project Area lies within such a fault zone. The Project would not include

construction or ongoing use of buildings that meet the criterion for human occupancy. Therefore, the regulatory provisions of the Alquist-Priolo Act do not apply to the Project.

### *Seismic Hazards Mapping Act*

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (Public Resources Code [PRC] Sections 2690 to 2699.6) is intended to reduce damage resulting from earthquakes. More specifically, the act sets forth a statewide minimum public safety standard such that buildings for human occupancy do not collapse in response to an earthquake (CGS 2008). While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically-induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act in that the State Geologist is charged with identifying and delineating areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards. Counties and cities are then tasked regulating development within the mapped Seismic Hazard Zones. In particular, cities and counties are prohibited from issuing development permits for sites within Seismic Hazard Zones until appropriate site-specific geologic and/or geotechnical investigations have been conducted by a state-licensed engineering geologist or civil engineer, and measures to reduce potential damage have been incorporated into the development plans.

Official Seismic Hazard Zone Maps have not yet been prepared for all parts of the State, and the Humboldt Bay area (which contains the Project Area) is one of the regions that has not been mapped for seismic hazards such as liquefaction and landsliding. Humboldt County's Web GIS contains generalized geologic hazard (e.g., liquefaction and landslides) zoning delineations and uses that information as part of the decision-making process in the issuance of County building permits.

### *California Building Code*

The State of California provides minimum standards for building design through the California Building Code (CBC 2019). The CBC applies to building design and construction in the state and is based on the 2018 International Building Code (IBC) that is in use or has been adopted in the 50 U.S. states. In other words, the CBC represents a modification of the IBC unique to the needs and conditions of California. Seismic safety and structural design requirements are set forth in CBC Chapter 16. Chapter 18 provides criteria for geotechnical and structural considerations related to the investigation of soils as well as the design and construction of foundations and retaining walls. Appendix J regulates earthwork grading activities including drainage and erosion control, and construction on unstable soils such as those subject to liquefaction.

### *California Public Resources Code*

As part of the determination made pursuant to PRC Section 21080.1, the lead agency must determine whether a project would have a significant effect on paleontological resources.

Several sections of the PRC protect cultural resources and PRC Section 5097.5 protects vertebrate paleontological sites located on public land. Under Section 5097.5, no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any prehistoric ruins, vertebrate paleontological site (including fossilized footprints), or any other paleontological, or historical feature situated on public lands, except with the express permission of the public agency that has jurisdiction over the lands. Section 30244 of the PRC requires reasonable mitigation for impacts on paleontological and archaeological resources that occur as a result of development on public lands.

### *California Coastal Act*

The Project Area is within the Coastal Zone. The California Coastal Act contains policies relevant to paleontological resources. The following Coastal Act section is relevant to this analysis:

*Public Resources Code Section 30244 Archaeological or paleontological resources*

*Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

## Regional and Local

Most of the Project Area is within the City of Arcata, except for the southern extent which is within Humboldt County jurisdiction. A small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and City's Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone. This section also includes Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *City of Arcata General Plan*

The City of Arcata General Plan contains guidelines for geology and soils within the Resource Conservation and Management Element and the Public Safety Element. According to Figure PS-a (Hazards Map), the Project Area contains areas considered to have moderate liquefaction potential. The following policies from the Arcata General Plan are applicable to the proposed Project.

*RC-9: Soils and Mineral Resources*

*Conserve and manage soil and mineral resources.*

*Applicable sub-policies:*

- ***RC-9a:*** *Erosion control measures on slopes and other areas of instability – Policy PS-3 – other Geologic Hazards in the General Plan Public Safety Element includes provisions for protecting steep and unstable slopes, and minimizing erosion and sedimentation. This policy shall be followed as a safety precaution and also to conserve soil resources.*

*PS-2: Seismic Hazards*

*Protect existing and new structures from seismic hazards. Identify and map seismic hazards and assure that any development within such hazard areas does not proceed until geologic and soils conditions are adequately investigated and appropriate geotechnical recommendations, if any, are incorporated into development plans.*

*Applicable sub-policies:*

- ***PS-2b****: Mitigation of ground-shaking hazards – Arcata will experience ground-shaking during an earthquake. The City maintains seismic data files that identify areas where ground-shaking will most likely damage buildings and infrastructure. New construction and renovation shall incorporate the most current and effective seismic engineering measures to strengthen building foundations and infrastructure in these areas.*
- ***PS-2c:*** *Mitigation of surface rupture and groundshaking hazards – The City's Alquist-Priolo Special Studies Zone map (Figure PS-a) and Geologic Hazard Land Use Matric (Table PS-1) identify areas highly susceptible to surface rupture and groundshaking. Construction in these areas shall be restricted, unless it can be demonstrated, in geotechnical reports prepared by qualified personnel, that structures and facilities can be designed to withstand liquefaction hazards induced by seismic events.*
- ***PS-2d:*** *Requirement for and review of "Geotechnical Reports" – New building and infrastructure construction, and substantial renovations in areas with seismic hazards, shall incorporate geotechnical report specified measures into project design. Geotechnical reports shall be required for structures or*

*infrastructure in seismic hazard areas. Required reports, prepared by a registered geologist, certified engineering geologist or registered engineer with expertise in seismic engineering, shall recommend mitigation for seismic impacts and identify alternative solutions. The City may require independent review of the geotechnical reports.*

- ***PS-2g:*** *Earthquake-resistant buildings and infrastructure standards – The current Uniform Building Code standards for strengthening buildings and infrastructure to withstand earthquakes shall be enforced. The competency of existing road and utility networks shall be evaluated and, where necessary, upgraded to withstand the most current ground acceleration standards.*

*PS-3: Other Geologic Hazards*

*Protect existing and new structures from non-seismic geologic hazards such as unstable slopes and soils. Require that all non-seismic geologic hazards be adequately addressed and mitigated.*

*Applicable sub-policies*

- ***PS-3b****: Grading standards for erosion and sedimentation control – The design, extent, and location of grading shall minimize disturbance of the natural terrain and land features and shall not impact offsite areas.*

***City of Arcata Land Use Code***

The City of Arcata Land Use Code addresses geologic hazards and grading activity within Chapters 9.62 (Geologic Hazard Review) and 9.64 (Grading, Erosion, and Sediment Control). The following sections apply:

*9.62: Geologic Hazard Review*

*Provide procedures for the filing, processing, and approval or disapproval of applications for Geologic Hazard Review, to protect the health, safety, and welfare of the residents of the City by minimizing the risk from carrying out development in areas subject to geologic and/or seismic hazards.*

*9.64: Grading, Erosion and Sediment Control*

*Establishes minimum standards and regulations for grading activities as well as construction and post-construction runoff control criteria to prevent unreasonable or unnecessary erosion and sediment production and related degradation of the City's stormwater drainage systems.*

***City of Arcata Local Coastal Plan***

The policies within the City of Arcata's Local Coastal Plan that regulate geology and soils within the City's jurisdiction of the Coastal Zone include the following:

***H-2:*** *The City shall regulate land use in areas of significant natural hazards in the following manner:*

*(c) Non-Critical Facilities: Non-critical facilities shall be permitted to locate or expand in areas of potential liquefaction. Non-critical facilities shall be permitted to locate or expand in the 100-year flood plain only if flood proofing measures which meet flood insurance criteria and which are satisfactory to the City are provided, and if it can be shown that such development would not cause additional flooding and/or drainage problems in other areas.*

***H-3:*** *For non-critical facilities the City may require site-by-site soils and geologic engineering studies when the Director of Community Development determines that public health and safety could be affected. These studies shall be done by a registered geologist, a registered civil engineer with expertise in soils, or a certified engineering geologist in areas of potential liquefaction and settlement. Potential hazards shall be evaluated using the ground shaking parameters presented in the Seismic Safety Element. The study should show that the proposed project minimizes the potential hazard to life and health.*

### *Humboldt County General Plan*

The goals and policies within the Humboldt County General Plan that regulate geology and soils include the following:

*RL-P2. On-Site Water and Septic Systems*

*Cumulative impacts of water withdrawal from surface and groundwater sources, and cumulative impacts from on-site sewage disposal systems, shall be assessed during the zoning and subdivision and, in critical watersheds, any other discretionary review of development.*

*WR-G11. Wastewater Management*

*Individual wastewater systems that do not contaminate surface and groundwater.*

*WR-P10. Erosion and Sediment Discharge*

*Ministerial and discretionary projects requiring a grading permit shall comply with performance standards adopted by ordinance and/or conditioned to minimize erosion and discharge of sediments into surface runoff, drainage systems, and water bodies consistent with BMPs, adopted Total Maximum Daily Loads (TMDLs), and non-point source regulatory standards.*

*WR-P42. Erosion and Sediment Control Measures*

*Incorporate appropriate erosion and sediment control measures into development design and improvements.*

*S-P1. Reduce the Potential for Loss*

*Plan land uses and regulate new development to reduce the potential for loss of life, injury, property damage, and economic and social dislocations resulting from natural and manmade hazards, including but not limited to, steep slopes, unstable soils areas, active earthquake faults, wildland fire risk areas, airport influence areas, military operating areas, flood plains, and tsunami run-up areas.*

*S-P7. Structural Hazards*

*The County shall protect life and property by applying and enforcing state adopted building codes and Alquist-Priolo requirements to new construction.*

*S-P11. Site Suitability*

*New development may be approved only if it can be demonstrated that the proposed development will neither create nor significantly contribute to, or be impacted by, geologic instability or geologic hazards.*

*IS-P7. Capacity of Facilities and Land Use Decisions*

*The County shall evaluate the capacity and sizing of road and drainage facilities in coordination with water and wastewater service providers to determine adequacy for proposed land uses and discretionary development.*

### *Humboldt County Geologic Hazards Ordinance*

Humboldt County Code Section 336 regulations apply to those projects and activities which fall within the County's land use and development jurisdiction. The purpose of these regulations is to ensure that risks to life and property in moderate and high geologic hazard areas are minimized and further to assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability or destruction of development sites or surrounding areas.

***Humboldt County Code Title VI Division 1 Water and Sewage***

Provides local authority for management of onsite wastewater treatment systems.

***Humboldt County Streamside Management Ordinance***

Humboldt County Code Section 314-61 regulates excavation, grading, and erosion control near streams, floodplains, and wetlands, including setback requirements.

***Humboldt County Grading Excavation, Erosion and Sedimentation Control Ordinance***

Humboldt County Code Section 331-14 regulates grading activities exceeding 50 cubic yards.

***Humboldt Bay Area Plan – Local Coastal Plan***

*3.17 Hazards –B. Development Policies – 30253*

*(1) New development shall be consistent with the adopted Humboldt County Safety and Seismic Safety element of the General Plan.*

*(2) The County shall amend Chapter 70, Section 7006, of the Uniform Building Code to require soil engineering and geological engineering investigations, prepared by a registered geologist or by a professional civil engineer with experience in soil mechanics or foundation engineering, or by a certified engineering geologist, for classes of development and hazard areas as shown in Table 1 and Plate III and maps as shown in Humboldt Bay Area Plan Appendices C, D & E.*

*a. The report should consider, describe and analyze the following.*

*(1) Cliff geometry and site topography, extending the surveying work beyond the site as needed to depict unusual geomorphic conditions that might affect the site;*

*(2) Historic, current and foreseeable cliff erosion, including investigation of recorded land surveys and tax assessment records in addition to the use of historic maps and photographs where available and possible changes in shore configuration and sand transport;*

*(3) Geologic conditions, including soil, sediment and rock types and characteristics in addition to structural features, such as bedding, joint and faults;*

*(4) Evidence of past or potential landslide conditions, the implications of such conditions for the proposed development, and the potential effects of the development on landslide activity;*

*(5) Impact of construction activity on the stability of the site and adjacent area;*

*(6) Ground and surface water conditions and variations, including hydrologic changes caused by the development (i.e. introduction of sewage effluent and irrigation water to the ground water system; alterations in surface drainage);*

*(7) Potential erodibility of site and mitigating measures to be used to ensure minimized erosion problems during and after construction (i.e. landscaping and drainage design);*

*(8) Effects of marine erosion on seacliffs;*

*(9) Potential effects of seismic forces resulting from a maximum credible earthquake;*

*(10) Any other factors that might affect slope stability.*

*b. The report should evaluate the off-site impacts of development (e.g. development contributing to geological instability on access roads) and the additional impacts that might occur due to the proposed development (e.g. increased soil moisture from a septic system). The report should also detail mitigation measures for any potential impacts and should outline alternative solutions. The*

*report should express a professional opinion as to whether the project can be designed so that it will neither be subject to nor contribute to significant geologic instability throughout the lifespan of the project. The report should use a currently acceptable engineering stability analysis method and should also describe the degree of uncertainty of analytical results due to assumptions and unknowns. The degree of analysis required should be appropriate to the degree of potential risk presented by the site and the proposed project.*

*c. The developments permitted in the hazard areas shall be sited and designed to assure stability and structural integrity for their expected economic life spans while minimizing alteration of natural landforms. Bluff and cliff developments (including related storm runoff, foot traffic, site preparation, construction activity, irrigation, waste water disposal and other activities and facilities accompanying such development) shall not create or contribute significantly to problems of erosion or geologic instability on the site or on surrounding geologically hazardous areas.*

## 3.6.4 Evaluation Criteria and Significance Thresholds

The Project would cause a significant impact related to geology and soils, as defined by the CEQA Guidelines (Appendix G), if it would:

– Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - 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;
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; or
  - Landslides.
– Result in substantial soil erosion or the loss of topsoil.
– Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
– Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
– 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.
– Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

## 3.6.5 Methodology

Project activities are evaluated in terms of their potential significance to impact (i.e., increase risks associated with) the identified geologic hazards. Where appropriate, impact analysis relied on the California Department of Conservation's online earthquake hazard mapping tool, EQ Zapp. Mitigation measures are then described for those impacts determined to be significant.

## 3.6.6 Impacts and Mitigation Measures

**Impact GEO-a.i:** **Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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 Project would have no impact with regard to the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake fault Zoning Map. The nearest fault, the Fickle Hill Fault, is approximately 0.5 miles away from the northern terminus of the Project corridor (DOC 2021). Project activities, which include shallow excavation and repaving, would not rupture the Fickle Hill fault or any other known fault. No impact would occur.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact GEO-a.ii:** **Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking? (No Impact)**

The Project is situated within a seismically active area close to several seismic sources capable of generating moderate to strong ground motions. Given the proximity of the Fickle Hill fault and other significant active faults (the Little Salmon fault to the southwest, the Mad River fault zone to the north, and the Cascadia subduction zone offshore to the west), as well as other active faults within and offshore of northern California, the Project site could experience strong ground shaking during the economic life span of the proposed development.

The Fickle Hill fault is located less than 0.5 miles northeast of the Project and is the closest recognized active fault (DOC 2021). The Project site is not located within an Alquist-Priolo earthquake fault zone, in which the State requires special studies for structures for human occupancy. Due to the distance from the Project site to the nearest recognized active fault, and based on the information available, the potential for ground surface fault rupture to occur at the Project site is considered low. The Project is located on an existing roadway with existing daily use. Thus, Project implementation would not increase the risk of strong seismic ground shaking or exposure to strong seismic ground shaking above existing conditions.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No Impact

**Impact GEO-a.iii, a.iv, c, d:** **Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving liquefaction, landslides, or otherwise unstable soils? (No Impact)**

Liquefaction is a phenomenon involving loss of soil strength and resulting in fluid mobility through the soil. Liquefaction typically occurs when loose, uniformly-sized, saturated sands or silts are subjected to repeated shaking in areas where the groundwater is less than 50 feet below ground surface. In addition to the necessary soil and groundwater conditions, the ground acceleration must be high enough, and the duration of the shaking must be sufficient, for liquefaction to occur. Given strong ground shaking, these conditions appear to have been met at the Project site.

The potential for liquefaction-related settlement exists at the Project site. Earthquake-related liquefaction could result in sand boils and minor differential settlement on the site; however, lateral spreading due to liquefaction is

not anticipated to affect the Project site given that there are no free faces of significance nearby. Project implementation would not increase the risk of liquefaction or exposure to liquefaction above existing conditions and no impact would occur.

The Project corridor is generally flat and gently sloping, located in the Humboldt Bay bottomlands. Steep slopes and hillslopes are not present within the Project corridor. Thus, landslides within or near the Project corridor are unlikely to occur, and the potential for landslide occurrence is not increased by the Project. No impact is anticipated

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact GEO-b: Would the Project result in substantial soil erosion or the loss of topsoil? (No Impact)**

Due to the flat topography, the lack of significant cut or fill slopes and the requirements of the City and State with regard to storm water management and erosion control, soil erosion and loss of topsoil are considered to be less than significant.

Construction activities, including cut, fill, removal of vegetation, and operation of heavy machinery would disturb soil and, therefore, have the potential to cause erosion. These activities would be performed in compliance with the BMPs prescribed in the Arcata Municipal Code, NCRWQCB regulations and the California Building Code (CBC). BMPs may include: silt fences, straw wattles, soil stabilization controls, site watering for controlling dust, and sediment detention basins. Environmental Protection Action 1 includes a SWPPP which would be required prior to any grading or construction activities in excess of one acre (see Section 2.8.1). Therefore, no substantial soil erosion or loss of topsoil would result from the Project, and the potential impact would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact GEO-e: Would the Project 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)**

Project activities include replacement of sanitary sewage infrastructure, including laterals and clean outs. In addition to municipal sanitary sewer facilities, private septic systems are also in use along the Project corridor. The Project would continue to be connected to the City of Arcata's wastewater treatment system and would not require the use of additional septic tanks or an alternative wastewater disposal system. There would be no impact.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No Impact

**Impact GEO-f: Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Less than Significant with Mitigation)**

Paleontological resources are the remains or traces of prehistoric animals and plants. Paleontological resources, which include fossil remains and geologic sites with fossil-bearing strata are non-renewable and scarce and are a sensitive resource afforded protection under environmental legislation in California. Under California PRC Section 5097.5, unauthorized disturbance or removal of a fossil locality or remains on public land is a misdemeanor.

State law also requires reasonable mitigation of adverse environmental impacts that result from development of public land and affect paleontological resources (PRC Section 30244).

According to the Humboldt County General Plan (2017), the geology of the Mad-Redwood Basin is complex and variable. The basin includes the Mad River, Redwood Creek, Eureka Plain, and Trinidad planning watersheds which all differ in their bedrock composition. Mad River, Redwood Creek, and Trinidad are composed primarily of Franciscan rock types, while Eureka Plain is mostly younger sedimentary rock.

The Project includes only shallow excavation limited to a maximum depth of up to eight feet in limited, discrete locations that have largely been previously disturbed by prior road development and utility installation. It is unlikely that Project construction would impact potentially significant paleontological resources; however, there is the possibility of discovering unique paleontological resources or unique geologic features during construction. Mitigation Measure GEO-1 is included in event paleontological resources are inadvertently discovered within the Project Area during construction, reducing the potential impact to less than significant.

### Mitigation

**Mitigation Measure GEO-1: Inadvertent Discovery of Paleontological Resources**

If potential or paleontological resources are encountered during Project subsurface construction activities or geotechnical testing, all work within 50 feet of the find shall be stopped, and a qualified archaeologist funded by the City and approved by the City shall be contacted to evaluate the find, determine its significance, and identify any required mitigation. The applicant shall be responsible for implementing the mitigation prior to construction activities being re-started at the discovery site.

Implementation of Mitigation Measure GEO-1 would reduce this impact to a less-than-significant level for both construction and operation because a plan to address discovery of unanticipated paleontological resources and to preserve and/or record those resources consistent with appropriate laws and requirements would be implemented.

**Level of Significance:** Less than significant with mitigation

## 3.6.7 Cumulative Impacts

**Impact GEO-C-1: Would the Project contribute to a cumulatively significant impact to Geology or Soils?**

Projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust's watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber Project, and future Jacoby Creek School classroom improvements.

- The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows under a County bridge on Old Arcata Road. Future enhancement project locations within the lower watershed have not yet been identified and may or may not be located within proximity to Old Arcata Road. Any such enhancements to the stream corridor would include best management practices for erosion control, including measures to avoid sediment entry into Jacoby Creek, resulting from standard Clean Water Act permitting requirements. The timing of planned enhancements also remains speculative, and, if implemented, would occur after implementation of the Project. The combined projects would not result in a cumulative impact to soils or geologic resources.
- The VERO Eureka/Arcata Fiber optic project would be located subsurface, parallel to Old Arcata Road and within the City and County right of ways. The VERO project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. Some portions of the VERO project

along Old Arcata Road have already been completed, resulting in minimal soil disturbance to install sub-grade utility boxes in discrete locations, approximately five feet square, alongside the roadway. Soil erosion, geologic instability, increased seismic risk, or other geologic impacts would not result from the VERO project; thus, a cumulative geologic impact would not result.

– Planned classroom improvements to the Jacoby Creek School would be located at the western end of the campus, away from Old Arcata Road and behind existing structures facing Old Arcata Road. Improvements would not include any two-story structures. Construction of the new classrooms could require minor site grading, although deep excavations would likely not be required, resulting in minimal soil disturbance and low potential for soil erosion and geologic impacts. A cumulative geologic impact would not result.

Given that the Project would not result in any significant soil and geologic disturbance, and that the three projects considered in Table 3-1 do not result in a likelihood for soil or geologic impacts in or near the Project Area, the potential for cumulative geologic impacts within the study area would not result.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

## 3.6.8 References

California Building Standards Commission. *2020. 2019 California Building Code, Title 24, Part 2, Volume 1 of 2*.

California Department of Conservation (DOC). 2021. *Online Earthquake Hazard Zone Mapping Tool EQ Zapp*. Available online: https://maps.conservation.ca.gov/cgs/EQZApp/app/ Accessed on January 1. 2021.

California Geological Survey (CGS). 2018. Earthquake Fault Zones: A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California (revised). Calif. Dept. of Conservation. Calif. Geol. Surv. Special Publication SP-42. 83 p.

City of Arcata. 1989. Local Coastal Program (Coastal Land Use Element and Implementing Ordinances). Certified as legally adequate by the California Coastal Commission on October 10, 1989. Prepared in association with W. Woodroff of the Coastal Commission and Environmental Analysts: J. Butler, J. Test, W. Mader, T. Roelofs, and F. Hastings.

City of Arcata. 2008. *Arcata General Plan: 2020; Design Element; Open Space Element*. Available at: https://www.cityofarcata.org/160/General-Plan

Clarke. 1992. *Geology of the Eel River Basin and Adjacent Region: Implications for Late Cenozoic Tectonics of the Southern Cascadia Subduction Zone and Mendocino Triple Junction*.

Dengler, L.A., Carver, G.A., and McPherson R.C. 1992. *Sources of North Coast Seismicity. California Geology*, v. 45, pp. 40-53.

Geomatrix Consultants. 1994. *Seismic ground motion study for Humboldt Bay bridges on Route 255*. Unpublished consultants report for the California Department of Transportation.

Humboldt County. 2014*. Humboldt Bay Area Plan, of the Humboldt County Local Coastal Program.* December. Available at: https://humboldtgov.org/DocumentCenter/View/50844/Humboldt-Bay-Area-Local-Coastal-Plan

Humboldt County. 2017*. Humboldt County General Plan. Chapter 10: Conservation and Open Space Elements*. Available at: https://humboldtgov.org/205/General-Plan

Public Resources Code Division 20. 2021. *California Coastal Act*. Available at: https://www.coastal.ca.gov/coastact.pdf

United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS). 2021. *Web Soil Survey.* websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

# 3.7 Greenhouse Gas Emissions

This section evaluates the potential greenhouse gas (GHG) emissions impacts during construction and operation of the Project. The GHG analysis below discusses GHG and consistency with the State of California's 2017 Climate Change Scoping Plan. If the Project meets the criteria laid out in applicable GHG emissions plans, policies, and regulations, then its impact for that category may be considered less than significant.

## 3.7.1 Study Area

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself" (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512). Because of the global nature of GHG, and the state-wide application of CEQA, the study area for GHG impacts is the State of California.

## 3.7.2 Environmental Setting

### Climate and Meteorology

The proposed Project is located in the western portion of Humboldt County, California, which is in the jurisdiction of the North Coast Air Basin. The coastal zone of Humboldt County experiences wet, cool winters, and dry, mild foggy summers. Coastal summer highs range from the mid-60s to 70s, with lows from the upper 40s to mid-50s. In the winter, highs range from the low 40s to high 50s, with lows in the 30s and 40s. The coastal zone experiences a number of frosty nights in winter and early spring, though snowfall and hard freezes are rare.

### Global Climate Change – Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse. The accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), ozone ($O_3$), and water vapor ($H_2O$).

While GHGs in the atmosphere are naturally occurring, the emission rate of $CO_2$, $CH_4$ and $N_2O$ has been accelerated by human activities. Emissions of $CO_2$ are largely by-products of fossil fuel combustion, whereas $CH_4$ results from off-gassing associated with such activities as agricultural practices and landfills. Other GHGs include hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride, which are generated during certain industrial processes. GHGs are typically reported in "carbon-dioxide-equivalent" measures ($CO_2e$).

There is international scientific consensus that human-caused increases in GHGs have contributed, and would continue to contribute, to climate change. Potential climate change impacts in California may include, but are not limited to, a decrease in snowpack, sea level rise, and a greater number of extreme heat days per year, high ozone days, large forest fires, and drought years. Secondary effects are likely to include impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity.

The U.S. Environmental Protection Agency (EPA) reports U.S. GHG emissions for 2011 as 6,702 million metric tons (MMT) of $CO_2e$. Electricity production accounts for 33 percent, followed by the transportation sector at 28 percent and the industrial sector at 20 percent. Commercial and residential fuel use and the agricultural sector accounted for the remaining 19 percent (EPA 2017).

The California Air Resources Board (CARB) estimated that in 2011 California produced about 448 MMT $CO_2e$. The transportation sector was the highest source at 38 percent of the State's total GHGs, followed by the industrial sector at 22 percent, and electricity generation (both in-state and out-of-state) at 19 percent.

Commercial and residential fuel use, recycling and waste, high global warming potential, and agricultural sectors accounted for the remaining 21 percent of the State's total GHGs (CARB 2013).

GHGs normally associated with the proposed Project include the following listed below. Global Warming Potential (GWP) is a measurement of the heat absorbed by any GHG in the atmosphere, as a multiple of the heat that should be absorbed by the same mass of $CO_2$. All GWP are given as 100-year GWP. Unless otherwise noted, all GWPs and information presented below were obtained from the Intergovernmental Panel on Climate Change (IPCC 2007):

*Water Vapor ($H_2O$). Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute 90 percent and 10 percent of the water vapor in our atmosphere, respectively. The primary human-related source of water vapor comes from fuel combustion in motor vehicles; however, it does not contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change (IPCC) has not determined a Global Warming Potential for water vapor.*

*Carbon Dioxide ($CO_2$). Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, $CO_2$ emissions from fossil fuel combustion increased by a total of 5.6 percent between 1990 and 2015 (EPA 2017). Carbon dioxide is the most widely emitted GHG and is the reference gas (GWP of 1) for determining GWP for other GHGs (IPCC 2007).*

*Methane ($CH_4$). Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The United States' top three methane sources are landfills, natural gas systems, and enteric fermentation (flatulence produced by livestock digestion). Methane is the primary component of natural gas, used for space and water heating, steam production, and power generation. The GWP of methane is 25 (IPCC 2007).*

*Nitrous Oxide ($N_2O$). Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 298 (IPCC 2007).*

*Hydrofluorocarbons (HFCs). HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase-out of Chlorofluorocarbons (CFCs) and HFCs gains momentum. The GWP of HFCs range from 124 for HFC-152 to 14,800 for HFC-23 (EPA 2017).*

*Perfluorocarbons (PFCs). PFCs are compounds consisting of carbon and fluorine, and are primarily created as a byproduct of aluminum production and semiconductor manufacturing. Perfluorocarbons are potent GHGs with a GWP several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years) (EPA 2018). The GWP of PFCs range from 7,390 to 12,200 (EPA 2018).*

*Sulfur hexafluoride ($SF_6$). $SF_6$ is a colorless, odorless, nontoxic, nonflammable gas. Sulfur hexafluoride is the most potent GHG that has been evaluated by the IPCC with a GWP of 22,800 (EPA 2018). However, its global warming contribution is not as high as the GWP would indicate due to its low mixing ratio compared to carbon dioxide (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm], respectively) (EPA 2018).*

In addition to the six major GHGs discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric ozone ($O_3$) depletors; therefore, their gradual phase-out is currently in effect. The following is a listing of these compounds:

*Hydrochlorofluorocarbons (HCFCs). HCFCs are solvents, similar in use and chemical composition to chlorofluorocarbons (CFCs). The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The United States is scheduled to achieve a 100-percent reduction to the cap by 2030. The GWP of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b (IPCC 2007).*

*1,1,1 trichloroethane. 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. The GWP of methyl chloroform is 146 times that of carbon dioxide (IPCC 2007).*

*Chlorofluorocarbons (CFCs). CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the EPA's Final Rule (57 Federal Register [FR] 3374) for the phase-out of $O_3$ depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere contributing to the greenhouse effect. CFCs are potent GHGs with 100-year GWP ranging from 3,800 for CFC 11 to 14,400 for CFC 13 (IPCC 2007).*

The Project site is located within a rural residential area generally comprised of single-family residences, adjacent agricultural land, undeveloped riverine floodplains, and estuarine wetlands located further west. Although agricultural activities do generate GHG emissions, the amount of active agricultural operations within the Project region (Humboldt County) is limited. The majority of GHGs emitted from the Project region are from transportation and use of electricity at residences. Vehicle trips throughout the County are associated with traveling between Arcata and Eureka, and for residents traveling to their respective homes within the Project Area. No other major sources of GHG emissions exist in the Project region.

## 3.7.3 Regulatory Framework

### Federal

On February 18, 2010, the Council on Environmental Quality (CEQ) provided a draft guidance memorandum for public consideration and comment on the ways in which federal agencies can improve their consideration of the effects of greenhouse gas emissions and climate change in evaluations of proposals for federal actions under the NEPA (CEQ 2010). The CEQ updated that draft in 2014 and provided a final guidance on August 2, 2016 (CEQ 2016).

The CEQ's 2010 draft guidance proposed to advise federal agencies to consider, in scoping their NEPA analyses, whether analysis of the direct and indirect greenhouse gas emissions from their proposed actions may provide meaningful information to decision makers and the public. Specifically, if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of carbon dioxide equivalent ($MTCO_2e$) emissions on an annual basis, agencies should consider this an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public. For long-term actions that have annual direct emissions of less than 25,000 MTCO2e, CEQ encouraged federal agencies to consider whether the action's long-term emissions should receive similar analysis. CEQ did not propose this as an indicator of a threshold of significant effects, but rather as an indicator of a minimum level of greenhouse gas emissions that may warrant some description in the appropriate NEPA analysis for agency actions involving direct emissions of greenhouse gases. The CEQ removed the direct emissions criteria from the 2016 final guidance, which contains no numeric recommendations. For comparison, the EPA's Greenhouse Gas Reporting Program requires mandatory reporting for 'large' industrial sources of GHG to report GHG data and defines large industrial sources as those that emit more than 25,000 $MTCO_2e$ per year.

## State

### *Executive Order S-3-05*

In 2005, the Governor of California signed Executive Order S-3-05, which established greenhouse gas emission reduction targets to reduce emissions as follows:

– By 2010, reduce GHG emissions to 2000 levels,
– By 2020, reduce GHG emissions to 1990 levels, and
– By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Secretary of the California Environmental Protection Agency (Secretary) was designated to coordinate oversight of the multi-agency efforts made to meet the targets.

The Cal/EPA Secretary must also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the Secretary of Cal/EPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first CAT Report in March 2006, with its most recent S-3-05-mandated CAT Report released in 2010. The report proposes to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through state incentive and regulatory programs.

### *Assembly Bill 32, California Global Warming Solutions Act of 2006*

In 2006, the Governor of California signed the Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32), committing California to reducing GHG emissions to 1990 levels by 2020. The statute requires the California Air Resources Board (CARB) to track emissions through mandatory reporting, determine the 1990 emission levels, set annual emissions limits that would result in meeting the 2020 target, and design and implement regulations and other feasible and cost effective measures to ensure that statewide GHG emissions would be reduced to 1990 levels by 2020. CARB calculated the 2020 emissions limit as 431 million metric tons (MMT) $CO_2e$. Projected business-as-usual emissions for 2020 are 509 MMT $CO_2e$. A reduction of 78 MMT $CO_2e$ is needed to meet the goal (CARB 2012).

### *Executive Order B-30-15*

On April 29, 2015, the Governor of California announced EO B-30-15 and established the 2030 target of reducing GHG emissions to 40 percent below 1990 levels. The emission reduction target is an interim-year goal to provide substantial progress toward the ultimate goal of reducing emissions by 80 percent below 1990 levels by 2050.

### *Senate Bill 350*

In October 2015, Governor Brown signed SB 350, which requires that that 50 percent of the annual electricity generated and sold to California retail customers be from eligible renewable energy resources by December 31, 2030. Under the legislation, the State Energy Resources Conservation and Development Commission would establish annual targets for statewide energy efficiency savings and demand reduction that would achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030. The bill also requires the California Public Utilities Commission to establish efficiency targets for electrical and gas corporations and requires local publicly owned electric utilities to establish annual targets for energy efficiency savings and demand reduction.

### *Senate Bill 32 and Assembly Bill 197*

Senate Bill (SB) 32, passed in 2016, extended the goals of AB 32 and codifies the GHG reduction target of 40 percent below 1990 levels by year 2030, consistent with EO B-30-15. The companion bill to SB 32, AB 197, provides additional direction to CARB in developing each update to the Climate Change Scoping Plan (see below).

### *Climate Change Scoping Plan*

In December 2008, pursuant to AB 32, CARB adopted the Climate Change Scoping Plan (Scoping Plan), which outlined measures to attain the 2020 GHG emissions limit. The Scoping Plan estimated that implementation of identified measures would result in a reduction of 105.3 MMT CO2e from various sectors. AB 32 requires CARB to update the Scoping Plan at least every five years. The 2017 Scoping Plan does not contain a recommended reduction level or percent for local government's municipal operations. However, the 2017 Scoping Plan does describe CARB's recommended statewide per-capita emissions targets for 2030 and 2050, and further details how local land-use agencies may derive quantitative locally-appropriate community-wide per capita emissions targets that align with the statewide targets.

### *California Coastal Act*

The following policies of the California Coastal Act regulate air pollution which may contain GHGs.

> *Section 30253. New Development shall:*
>
> *Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control board as to each particular development.*

## Regional and Local

The entire Project Area is subject to and regulated by the North Coast Unified Air Quality Management District (NCUAQMD). Most of the Project Area is within the City of Arcata, with the western portion of the Project Area (bisected by Old Arcata Road) is also within the Coastal Zone. The southern extent of the Project Area is within Humboldt County jurisdiction, and a small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and the City's Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone, the Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *North Coast Unified Air Quality Management District*

The NCUAQMD is a regional environmental regulatory agency with jurisdiction over Humboldt County. The NCUAQMD enforces local, state and federal air quality regulations and air quality permits. In 2011, NCUAQMD adopted Rule 111 (Federal Permitting Requirements for Sources of Greenhouse Gases) into the District rules and thus established a threshold above which New Source Review (NSR) and federal Title V permitting applies. Rule 111 also established federally enforceable limits on GHG emissions for stationary sources. This Project does not include any new stationary sources; therefore, Rule 111 would not apply.

The NCUAQMD has not adopted regulations regarding the evaluation of GHG emissions in a CEQA document, or established CEQA significance criteria specific to evaluating the effects of project-related GHG emissions.

### *City of Arcata Community Greenhouse Gas Reduction Plan*

The City of Arcata developed a Community Greenhouse Gas Reduction Plan in 2006 which set a GHG emissions target of 20% below 2000 GHG levels by 2010. The Plan was developed in part by analyzing an inventory of community-wide greenhouse gas emissions that was conducted in 2000. The plan focuses on six action areas:

1. Energy efficiency
2. Renewable energy
3. Sustainable transportation
4. Waste and consumption reduction
5. Sequestration and other methods
6. Cross-cutting approaches

In addition to reducing GHG emissions it is expected that the implementation of this Plan will offer many other community benefits. These include: energy cost savings with subsequent benefits to the local economy, cleaner air, less reliance on fossil fuels and imported energy sources, and a move toward a more sustainable energy economy.

Based on an updated community-wide GHG emissions inventory conducted in 2007, City of Arcata staff estimated that the City's GHG reduction target has not been achieved within the residential, commercial, and industrial sectors. Emissions inventories in 2010 and 2015 have not resulted in significantly different findings. Since the Arcata Community Greenhouse Gas Reduction Plan was adopted in 2006 and is based on GHG inventories using outdated methodologies, it does not contain reduction goals that are consistent with the goals set forth in AB 32 and SB 32. As such, the Plan does not provide CEQA review streamlining benefits for development projects within the City. However, it is the only local GHG reduction plan relevant to projects in the City of Arcata, and it is appropriate for all projects in the City subject to CEQA to include an analysis of consistency with the City's adopted plan.

As of early 2019, the City's efforts towards creation of a Greenhouse Gas Reduction Plan would be put towards a Regional Climate Action Plan, which is currently under development.

***City of Arcata General Plan***

The following policies from the City of Arcata General Plan regulates GHGs, also see Section 3.2 (Air Quality) for additional policies that regulate air quality:

> *RC-8: Energy Resources Management*
>
> *Reduce the net emissions of greenhouse gases from Arcata; reduce other negative impacts of energy production and use including risks from nuclear power, air emissions, fuel spills, and wildlife and habitat destruction; reduce energy costs to the city and its residents, and increase the percent of energy purchases from sources within our region; increase the city's and nation's energy security and reduce our vulnerability to changes in energy availability and price; increase public awareness of energy issues and encourage and energy conservation ethic; monitor the cost and effectiveness of Arcata's actions so we and others can learn from them; and implement Arcata's Advisory Proposition B.*
>
> *Advisory Proposition B (approved by Arcata Voters April 8, 1980)*
>
> *"In accordance with America's renewed determination to be energy self reliant, be it resolved that the citizens of Arcata and their City government are committed to the enactment of conscientious energy conservation measures and the accelerated development and active promotion of safe and economical alternative renewable energy sources for our community.*
>
> *Be it further resolved that the City government of Arcata support complete independence from nuclear power including the permanent closure of the Humboldt Bay nuclear power plant and its replacement by safe, clean and efficient generating sources more compatible with the resources and health and safety of the Northcoast, such as conservation, solar power and generation from wood waste."*

*Applicable sub-policies:*

- *RC-8d: Restoration for Greenhouse Gases Absorption – Foster and restore forests and other terrestrial ecosystems that offer significant carbon mitigation potential.*

***City of Arcata Local Coastal Program***

There are no applicable policies in the City of Arcata Local Coastal Program that address GHG emissions.

***Humboldt County Draft Climate Action Plan***

Humboldt County prepared a Draft Climate Action Plan in 2012 as part of the General Plan Update, which includes a comparison of GHGs emissions from 2006 and 1990. The emissions of carbon dioxide equivalents in unincorporated Humboldt County in 2006 were shown to have declined by approximately a half million metric tons when compared to 1990 levels. Such decreases may be attributed to a decline in industrial emissions in Humboldt County since 1990 related to a decline in the lumber industry and closure of several major industrial facilities related to timber processing (Humboldt County 2012).

***Humboldt County General Plan***

The Humboldt County General Plan, which includes an Air Quality Element, contains policies to reduce GHG emissions, mitigate climate change, and mitigations to achieve increased carbon storage within the County. Increasing carbon storage on timber and agricultural lands may be the County's most effective means to combat global warming. See Section 3.2 (Air Quality) for a list of policies that regulate both air quality and GHGs.

The General Plan includes policies and implementation measures that require the development and implementation of a Climate Action Plan to achieve reductions consistent with AB 32 and SB 32. To comply with AB 32 and SB 32, the County would adopt county-wide GHG emissions targets for the years 2020 and 2030 (and possibly also 2040) that would incorporate an updated 1990 GHG Inventory. The preparation of a revised GHG inventory for 1990, using the currently accepted methodology, is essential so that appropriate targets can be established for the preparation of a Climate Action Plan that complies with the statutory requirements. As of early 2019, the County's efforts towards creation of a Climate Action Plan would be put towards a Regional Climate Action Plan.

***Regional Climate Action Plan***

In early 2019, Humboldt County local governments decided to take a regional approach to climate action planning. The Regional CAP partnership consists of Redwood Coast Energy Authority (RCEA), the County of Humboldt and the cities of Arcata, Eureka, Blue Lake, Ferndale, Fortuna, Rio Dell and Trinidad. Together, these local governments are working to develop strategies to reduce emissions throughout the region. The plan is currently under development.

***Humboldt Bay Area Plan – Local Coastal Plan***

There are no applicable policies in the Humboldt Bay Area Plan that address GHG emissions.

## 3.7.4 Evaluation Criteria and Significance Thresholds

The Project would cause a significant impact related to GHG emissions, as defined by the CEQA Guidelines (Appendix G), if it would:

– Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

– Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

## 3.7.5 Methodology

Construction emissions were estimated using CalEEMod version 2016.3.2, as described in Chapter 3.2 - Air Quality, of this Draft EIR. The Project's potential construction and operation-generated GHG emissions were evaluated qualitative against the State's AB 32 GHG reduction goals, and the Project's operations were further evaluated for consistency the State's *2017 Climate Change Scoping Plan* and the City of Arcata's *Community Greenhouse Gas Reduction Plan.*

## 3.7.6 Impacts and Mitigation Measures

**Impact GHG-a, b: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (Less than Significant)**

Climate change refers to change in the Earth's weather patterns including the rise in the Earth's temperature due to an increase in heat-trapping greenhouse gases (GHG) in the atmosphere. Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of GHGs that contribute to global warming or global climate change have a broader, global impact. Global climate change is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the Earth's atmosphere. The principal GHGs contributing to global warming are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O) and fluorinated compounds. These gases allow visible and ultraviolet light from the sun to pass through the atmosphere, but they prevent heat from escaping back out into space. GHG emissions can be reduced to some degree by improved coordination of land use and transportation planning at the city, county and subregional level, and other measures to reduce automobile use. Energy conservation measures also can contribute to reductions in GHG emissions.

### State Guidance

The leading guidance on greenhouse gas emissions within the State of California is the Global Warming Solutions Act of 2006 (Assembly Bill 32), which committed the State of California to reduce GHG emissions to 1990 levels by 2020. The statute requires the California Air Resources Board (CARB) to track emissions through mandatory reporting, determine the 1990 emission levels, set annual emissions limits that would result in meeting the 2020 target, and design and implement regulations and other feasible and cost effective measures to ensure that statewide GHG emissions would reach its target.

In December 2008, pursuant to Assembly Bill 32 (AB 32), the CARB adopted the Climate Change Scoping Plan (Scoping Plan), which outlined measures to attain the 2020 GHG emissions limit. The Scoping Plan estimated that implementation of identified measures would result in a reduction of emission from various sectors including transportation, energy, forestry, and high global warming potential gas sectors. The CARB has updated the Scoping Plan twice, approving the First Update to the Climate Change Scoping Plan (Updated Scoping Plan) in May 2014, and the 2017 Scoping Plan in December 2017. The 2017 Scoping Plan identifies progress made to meet the near-term (2020) objectives of AB 32 and defines California's climate change priorities and activities for the next several years (CARB 2017). The 2017 Climate Change Scoping Plan provides strategies for meeting the mid-term 2030 greenhouse gas reduction target of 40 percent below 1990 levels by year 2030 set by SB 32. The plan also identifies how the State can substantially advance toward the 2050 greenhouse gas reduction target of Executive Order S-3-05, which consists of reducing greenhouse gas emissions to 80 percent below 1990 levels.

### Regional Guidance

The NCUAQMD does not have rules, regulations, or thresholds of significance for non-stationary GHG emissions. In 2011, the NCUAQMD adopted Rule 111 - Federal Permitting Requirements for Sources of Greenhouse Gases to establish a threshold above which New Source Review and federal Title V permitting

applies and to establish federally enforceable limits on potential to emit GHGs for stationary sources. These are considered requirements for stationary sources and should not be used as a threshold of significance for non-stationary source Projects. For reference, Rule 111 Section D(1)(a) and D(1)(b) have applicability thresholds of 75,000 $MTCO_2e$ per year and 100,000 $MTCO_2e$ per year.

## City of Arcata

In 2006, the City developed a community-wide Greenhouse Gas Inventory as well as a Community Greenhouse Gas Reduction Plan; this plan focused on six action areas including energy efficiency, renewable energy, sustainable transportation, waste and consumption reduction, carbon sequestration and other methods, and cross-cutting approaches. Arcata's greenhouse gas inventory has since been updated in the 2010 Greenhouse Gas Emissions Inventory of Government Operations and the 2015 Community Greenhouse Gas Emissions Inventory.

Applicable transportation measures from the Greenhouse Gas Reduction Plan include:

– Improve Bicycle Infrastructure: create more bike lanes on existing roads and make bridges and intersections more bicycle-friendly. Bicycle parking should be easily accessible, plentiful, and protected from rain where possible.
– Improve Pedestrian Infrastructure (sidewalks, paths, and walkways): sidewalks need to be wide enough so people can walk comfortably side by side and be able to pass others. Walkways need to be well marked, accessible and continuous, so that walkers can safely share the roadways with cyclists and autos.

## Project Impacts

### *Construction*

Project construction activities would result in a temporary increase in GHG emissions, including exhaust emissions from on-road trucks, worker commute vehicles, and off-road heavy-duty machinery. Construction would require clearing, earthmoving, and delivery equipment, as used for similar projects, and which have been accounted for in the State's emission inventory and reduction strategy for both on and off-road vehicles. Construction emissions were estimated using CalEEMod version 2016.3.2 and are estimated to be approximately 88 $MTCO_2e$ from all construction activities over the construction period. The Project's construction emissions equal 3.9 $MTCO_2e$ per year when annualized over the assumed 30-year lifespan of the Project.

In addition, Project construction may benefit (have a reduced generation of GHG) from implementation of some of the State-level regulations and policies, the Project would not impede the State in meeting the AB 32 greenhouse gas reduction goals. Therefore, impacts from the Project's construction emissions would be less than significant.

### *Operation*

Project operation would not result in a new source of GHG emissions as it would not increase the vehicle capacity, speed, or vehicle miles traveled of the Project roadway.

The Project would improve bicycle and pedestrian infrastructure and therefore is consistent with and supports the City's Community Greenhouse Gas Reduction Plan. These Project components also support the 2017 Climate Change Scoping Plan's goals to reduce emissions from the transportation sector. The recommended next steps in the 2017 Climate Change Scoping Plan are broad policy and regulatory initiatives that would be implemented at the State level and do not relate to the construction and operation of smaller individual infrastructure projects such as the proposed Project.

The Project would not conflict with the City of Arcata's Community Greenhouse Gas Reduction Plan, the 2017 Climate Change Scoping Plan, nor the goals of AB 32. In addition, the Project facilities improved ease of use for

non-motorized transit along Old Arcata Road, which would reduce VMT and associated emissions. Therefore, the Project would result in a less than significant impact.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.7.7 Cumulative Impacts

**Impact GHG-C-1: Would the Project contribute to a cumulatively significant impact to Greenhouse Gas Emissions?**

Greenhouse gas impacts are inherently cumulative in nature. The Project's cumulative contribution to greenhouse gas impacts is addressed above. However, as identified in Impact GHG Sections (a) and (b), the Project would not conflict with the AB 32 GHG reduction goals, the State's *2017 Climate Change Scoping Plan,* or the City of Arcata's *Community Greenhouse Gas Reduction Plan.* Therefore, the project's contribution to the cumulative impact is not cumulatively considerable.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than Significant

## 3.7.8 References

California Air Resources Board. 2008. *Climate Change Scoping Plan*. December.

California Air Resources Board (CARB). 2012. *Status of Scoping Plan Recommended Measures.* http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf.

California Air Resources Board (CARB). 2013. *California Greenhouse Gas Inventory for 2000-2011*. August 2013.

California Air Resources Board (CARB). 2014a. *California Greenhouse Gas Inventory for 2000-2012 - by Category* Defined in the Scoping Plan. March 24, 2014.

California Air Resources Board (CARB). 2014b. *First Update to the Climate Change Scoping Plan: Building on the Framework*. May 2014.

California Air Resources Board. 2017. *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target.* https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

City of Arcata. 2006. *Community Greenhouse Gas Reduction Plan*. August.

City of Arcata. 2008. *Arcata General Plan and Local Coastal Land Use Plan.* Amended October.

Council on Environmental Quality (CEQ). 2016. *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Review.* Effective August 5, 2016.

Humboldt County. 2012. *Draft Climate Action Plan. A Strategy for Greenhouse Gas Reduction and Adaptation to Global Climate Change.* January.

Humboldt County. 2014*. Humboldt Bay Area Plan, of the Humboldt County Local Coastal Program*. December. Available at: https://humboldtgov.org/DocumentCenter/View/50844/Humboldt-Bay-Area-Local-Coastal-Plan

Humboldt County. 2017. *General Plan. Chapter 15 – Air Quality Element*. Adopted October 23.

Intergovernmental Panel on Climate Change. 2007. *Climate Change 2007: Working Group I – The Physical Science Basics, 2.10.2, Direct Global Warming Potentials*. https://archive.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

North Coast Unified Air Quality Management District (NCUAQMD). 2011. *Rule 111 – Federal Permitting Requirements for Sources of Greenhouse Gases.* January 2011.

North Coast Unified Air Quality Management District (NCUAQMD). 2017. *NCUAQMD Website – Greenhouse Gases (GHG) & Climate Change*. www.ncuaqmd.org.

Public Resources Code Division 20. 2021. *California Coastal Act*. Available at: https://www.coastal.ca.gov/coastact.pdf

U.S. Environmental Protection Agency (EPA). 2017. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990 to 2015*. April 15, 2017.

U.S. Environmental Protection Agency (U.S. EPA). 2018. *Overview of Greenhouse Gas Emissions.* https://www.epa.gov/ghgemissions/overview-greenhouse-gases#f-gasses.

# 3.8 Hazards and Hazardous Conditions

This section evaluates the potential impacts related to hazards and hazardous materials during construction and operation of the Project. An Initial Site Assessment (ISA) covering the Project Area informs this chapter of the EIR (GHD 2018). To provide the basis for this evaluation, the Setting section describes the local setting within and adjacent to the Project Area. The Regulatory Framework section describes the regulatory background that applies to hazards and hazardous conditions. The Impact Analysis section establishes the thresholds of significance, evaluates potential hazard-related impacts, and identifies the significance of impacts.

## 3.8.1 Study Area

For impact assessment related hazards and hazardous conditions, the Project Area boundary, combined with adjacent properties of concern identified in the ISA, was used as the study area

## 3.8.2 Setting

### Site Description

#### *Historical Use of the Project Area*

Historical aerial photographs were reviewed as part of the ISA in order to evaluate historic uses for potential sources of contamination (e.g. mill operations, auto body shops). The Project alignment and surrounding areas were evaluated for the years 1941, 1954, 1956, 1972, 1983, 1993, 2005, 2009, 2012, and 2016. The photographs were at a scale of one inch equals 875 feet. The majority of the land uses surrounding the Project Area have historically been residential in nature, but Automotive Businesses (Erikson's Garage and Roger's Garage) operated along the Old Arcata Road roadway within the middle segment of the Project alignment.

– 1941: The Project alignment is dominantly undeveloped agriculture and forest lands adjoining Humboldt Bay and the City of Arcata. Buttermilk Lane, the northern boundary of the Project alignment, has been developed. The surrounding residential area of Sunny Brae has not been developed. Sparse residential development on either side of Old Arcata Road is visible.
– 1954: This photograph depicts the area north of Buttermilk Lane, which has been developed and is visible in its present-day configuration. Golf Course Road and Hyland Street are developed, and increased residential development - as compared to the 1941 aerial photo, throughout the Project alignment and surrounding vicinity - is visible.
– 1956: This photograph is similar to the 1954 photograph, with the exception of increased residential development of properties north of Buttermilk Lane and Jacoby Creek School (center of Project alignment) along the Old Arcata Road corridor. Features within the Project alignment appear to show increased development including roads and buildings.
– 1972: This photograph is similar to the 1956 photograph, with the exception that significant deforestation (logging) occurred southeast of the Project Alignment. Development north of Buttermilk Lane adjoining the Project alignment is consistently visible. Jacoby Creek Road (southeast of the Project alignment) shows evidence of increased development. Features within the Project alignment appear to include minor increased development, specifically along the southern section of the alignment. Evidence of construction of Erickson's Garage adjoining the northern segment and Roger's Garage is visible within the middle segment of the Project alignment.
– 1983: This photograph is similar to the 1972 photograph with the exception that additional development is visible south of Buttermilk Lane and east of the area adjoining the middle segment (Jacoby Creek) of the Project alignment. General features within this Project segment appear unchanged with the exception of visible apparent materials (such as derelict automobiles, etc.) located at Roger's Garage.

- 1993: This photograph is similar to the 1983 photograph. Features within this Project segment appear unchanged, with the exception of increased development south of Buttermilk Land and an increase in the number of derelict automobiles stored at Roger's Garage.
- 2005: This photograph is similar to the 1993 photograph. Features within this Project segment appear unchanged with the exception of increased development along Golf Course Road (east of the Project alignment), and development west of Buttermilk Lane (Willows Apartments and decrease/removal of derelict automobiles stored at Roger's Garage).
- 2009: This photograph is similar to the 2005 photograph. Features within this Project segment appear unchanged.
- 2012: This photograph is similar to the 2009 photograph. Features within this Project segment appear unchanged with the exception that ponds associated with Gannon Slough show visible water.
- 2016: This aerial photograph appears similar to the 2012 photograph, with no change in features along this Project segment.

#### *Historical Use of Adjacent Property*

Historical land use on adjoining properties was determined using the aerial photographs described above. Properties to the west have been used for agriculture, or left as open space, for decades. These properties remain in agricultural use or as open space today. Land to the east has been residentially developed, particularly since the mid 1950's. There is no evidence in the reviewed historical aerial photographs of industrial or manufacturing land uses of any kind at the Project Area, or on contiguous lands.

## Definition of Hazardous Materials

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. Factors that influence the health effects of exposure to hazardous materials include the dose to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility.

The California Code of Regulations (CCR) defines a hazardous material as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either: (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10). Hazardous materials are classified according to four properties: toxicity, ignitability, corrosivity, and reactivity (CCR, Title 22, Chapter 11, Article 3), which are defined in the CCR, Title 22, Sections 66261.20-66261.24.

#### *Hazardous Materials in the Study Area*

The purpose of the ISA is to identify areas of potentially impacted soil and/or groundwater along the Project alignment that may require special handling and disposal during construction or could potentially pose a health exposure risk to construction workers or sensitive receptors. The ISA contained the results of federal, state, tribal and local regulatory agency database searches (conducted by Environmental Data Resources, Inc [EDR], an independent database search service for identifying known hazardous materials locations, in October 2018).

The ISA identified six properties based upon EDR report review as presented in Table 3.8-1 (below) where potentially impacted soil and/or groundwater may be encountered. The Erickson's Garage property is adjoining the Project segment to the northeast and not within the proposed Project Area alignment. However, due to the proximity to the proposed Project alignment, it is identified as a Site of Interest. The Steve Morris Logging & Contracting property is adjoining the Project segment to the west and not within the proposed Project, though it is identified as a Site of Interest. The Cal-Kirk Landscaping & Erosion Control property is located within the proposed Project alignment and was identified as a Site of Interest.

The (former) Roger's Garage property is located within the proposed Project Area alignment and was identified as a Site of Interest. Based on research completed during the ISA, it is unlikely that petroleum hydrocarbon soil and groundwater impacts associated with the Roger's Garage property would affect construction within the proposed Project alignment. The Smith, Normans/La Donna's Rest Home property is located within the proposed Project alignment property and was identified as a Site of Interest.

The entire Project corridor was identified as a Site of Interest due to potential Aerially Deposited Lead (ADL) based upon historic and current use as a critical roadway between Arcata and Eureka. Based upon the research completed during the ISA, it is unlikely that petroleum hydrocarbon soil and groundwater impacts associated with the Project Corridor would affect project construction, but ADL is a concern (GHD 2018). Sites where impacted soil and groundwater may affect construction activities were given Hazard Ranks, summarized in Table 3.8-1.

***Table 3.8-1. Sites of Interest and Hazard Rankings***

| Site | Hazard Rank |
|---|---|
| Erickson's Garage | 2 |
| Steve Morris Logging & Contracting | 2 |
| Cal-Kirk Landscaping & Erosion Control | 2 |
| Former Roger's Garage | 2 |
| Smith, Normans/La Donna's Rest Home | 2 |
| Old Arcata Road Corridor | 3 |

## Potential Receptors/Exposure

The sensitivity of potential receptors in the areas of known or potential hazardous materials contamination is dependent on several factors, the primary factor being an individual's potential pathway for exposure. Exposure pathways include dermal absorption, inhalation, and ingestion of tainted air, water, or food. Depending on the magnitude, frequency, and duration, human exposure to hazardous materials can cause a variety of health affects ranging from short-term acute symptoms to long term chronic effects. The principal elements of exposure assessments typically include:

– Evaluation of the fate and transport processes for hazardous materials at a given site
– Identification of potential exposure pathways
– Identification of potential exposure scenarios
– Calculation of representative chemical concentrations
– Estimation of potential chemical uptake

Schools and residences are examples of sensitive receptors that could be susceptible to significant effects from exposure to hazardous materials. Jacoby Creek School, the Mistwood Education Center, and numerous residential structures along Old Arcata Road are located within or adjacent to the Project Area. Therefore, numerous sensitive receptors are within and adjacent to the Project Area boundary.

## Fire Hazards

The study area is within the Arcata Fire District. In responding to emergencies, local fire departments work closely with law enforcement, public utilities, the County Office of Emergency Services, and ambulance companies. The California Department of Forestry and Fire Protection (CAL FIRE) identifies fire hazard severity zones and Local Responsibility Areas (LRA) throughout California. The majority of the study area is located within an LRA and is ranked as having a moderate fire hazard severity index. The eastern and southern extent of the Project Area (near the intersection of Jacoby Creek Road and Old Arcata Road) is located within the State Responsibility Area (SRA) and is also ranked as having a moderate fire hazard severity index (CAL FIRE 2007). Additionally, Sanborn Fire Insurance maps assist in the identification of historical land uses and commonly illustrate the existence and location of aboveground and underground storage tanks, structures, improvements,

and facility operations. No Sanborn maps were reported to be available for the Project alignment in the EDR Sanborn Library, LLC collection.

### Airports

The closest public airport to the study area is Murray Field, located near Highway 101 in Eureka approximately 3.9 aerial miles south-southwest from the southern boundary of the Project Area. There are no private airfields in the Project vicinity.

## 3.8.3 Regulatory Framework

Hazardous materials and hazardous wastes are subject to federal, state, and local laws and regulations intended to protect public health and safety and the environment. The U.S. Environmental Protection Agency (EPA), U.S. Department of Transportation (DOT), California Environmental Protection Agency (Cal/EPA), and Department of Toxic Substances Control (DTSC) are the primary agencies that enforce these regulations. The main focus of the federal Occupational Safety and Health Administration (OSHA) and California Occupational Safety and Health Administration (Cal/OSHA) are to prevent work-related injuries and illnesses, including those from exposures to hazardous materials. CALFIRE implements fire safety regulations. In accordance with Chapter 6.11 of the California Health and Safety Code (CHSC, Section 25404, et seq.), local regulatory agencies enforce many federal and state regulatory programs through the Certified Unified Program Agency (CUPA) program, including:

– State Uniform Fire Code requirements (Section 80.103 of the Uniform Fire Code as adopted by the State Fire Marshal pursuant to Health and Safety Code Section 13143.9); and
– Underground storage tanks (Chapter 6.7 of the Health and Safety Code, Sections 25280 et seq.).

The CUPA for Humboldt County and the study area is the Humboldt County Division of Environmental Health.

### Federal

The primary federal agencies with responsibility for hazardous materials management are the EPA, OSHA, and the DOT. Federal laws, regulations, and responsible agencies relevant to the Project are summarized in Table 3.8-2.

***Table 3.8-2. Federal Regulations Related to Hazardous Materials Management***

| Classification | Law or Responsible Federal Agency | Description |
|---|---|---|
| Hazardous Materials Management and Soil and Groundwater Contamination | Community Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act [SARA]) | Imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health, or the environment, in the event that such materials are accidentally released. |
| | Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) (amended by SARA 1986 and Brownfields Amendments 2002) | Regulates the clean-up of sites contaminated by releases of hazardous substances. |
| Hazardous Materials Transportation and Handling | U.S. Department of Transportation | Regulates the safe transportation of hazardous materials. The DOT regulations govern all means of transportation except packages shipped by mail (49 CFR). |
| Occupational Safety | Occupational Safety and Health Act of 1970 | OSHA sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR). |

State and local agencies often have either parallel or more stringent regulations than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the state or local regulatory section.

## State

### *Soil and Groundwater Contamination*

The clean-up of sites contaminated by releases of hazardous substances is regulated primarily by the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), which was amended by the Superfund Amendment and Reauthorization Act of 1986 (SARA), the Brownfields Amendments (2002) and by similar state laws. Under CERCLA, the EPA has authority to seek the parties responsible for releasing hazardous substances and to ensure their cooperation in site remediation.

Section 30232 (Oil and hazardous substance spills) of the California Coastal Act of 1976 (Coastal Act) provides for the protection against the spillage of crude oil, gas, petroleum products, or hazardous substances in relation to any development or transportation of such materials. Effective containment and clean-up facilities and procedures shall be provided for accidental spills that do occur.

The DTSC's Hazardous Waste and Substances Sites List (Cortese List, Government Code Section 65962.5) identifies sites with leaking underground fuel tanks, hazardous waste facilities subject to corrective actions, solid waste disposal facilities from which there is a known migration of hazardous waste, and other sites where environmental releases have occurred. Before a local agency accepts an application as complete for any development project, the applicant must certify whether or not the project site is in the Cortese List. Databases that provide information regarding the facilities or sites identified as meeting Cortese List requirements are managed by the DTSC and State Water Resources Control Board (SWRCB).

### *Hazardous Materials Transportation*

The State of California has adopted DOT regulations for the intrastate movement of hazardous materials. State regulations are contained in Title 26 of the CCR. In addition, the State of California regulates the transportation of hazardous waste originating in the state and passing through the state. Both regulatory programs apply in California. The two state agencies that have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and California Department of Transportation (Caltrans).

### *Occupational Safety*

Worker health and safety is regulated at the federal level by OSHA. Under this jurisdiction, workers at hazardous waste sites (or workers coming into contact with hazardous wastes that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations. Worker health and safety in California is regulated by Cal/OSHA. California standards for workers dealing with hazardous materials (including hazardous wastes) are contained in CCR Title 8. The DTSC and Cal/OSHA are the agencies that are responsible for overseeing that appropriate measures are taken to protect workers from exposure to potential soil or groundwater contaminants.

### *Emergency Response*

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local government agencies. Responding to hazardous materials incidents is a part of this plan. The plan is administered by the State Office of Emergency Services (OES), which coordinates the responses of other agencies such as local fire and police agencies, emergency medical providers, CHP, CDFW and Caltrans.

Humboldt County has an adopted Humboldt County Operational Area Hazard Mitigation Plan as identified below. FEMA approved the Humboldt Operational Area Hazard Mitigation Plan on March 20, 2014.

### *Fire Regulation*

State fire safety regulations that apply to activities proposed under the Project include the following:

– Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC Section 4442).
– Appropriate fire suppression equipment must be maintained during the highest fire danger period – from April 1 to December 1 (PRC Section 4428).
– On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet (3 meters) from any equipment that could produce a spark, fire, or flame, and the construction contractor must maintain the appropriate fire suppression equipment (PRC Section 4427).
– On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines must not be used within 25 feet (7 meters) of any flammable materials (PRC Section 4431).

CAL FIRE also provides oversight for all prescribed burning in the study area.

### *Water Quality*

The Porter Cologne Water Quality Control Act (Porter-Cologne) is the primary state statute for protection of water quality in California. Under Porter-Cologne, the nine Regional Water Quality Control Boards (RWQCBs), with oversight from the SWRCB, regulate discharges to waters of the State based on the regulatory standards and objectives set forth in Water Quality Control Plans (also referred to as Basin Plans) prepared for each region. The North Coast RWQCB has regulatory oversight of the study area, with standards and objectives provided in the Water Quality Control Plan for the North Coast Region (NCRWQCB 2018).

Responsibility for implementation of Section 402 of the Clean Water Act has also been delegated to the SWRCB/RWQCBs, where they implement and enforce permits that fall under the National Pollutant Discharge Elimination System (NPDES). The General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order No. 2009-0009, as amended by Order No. 2010-0014) applies to discharges from construction sites that include one or more acre of soil disturbance. Construction activities include clearing, grading, grubbing, excavation, stockpiling, and reconstruction of existing facilities involving removal or replacement. The Statewide General NPDES Permit for Residual Aquatic Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Applications (Order No. 2013-0002-DWQ) applies to any pesticide applications at aquatic sites that will result in discharges to Waters of the U.S, including the use of imazapyr.

The Coastal Act set policies related to management of resources in California's coastal zone. The policies of the Coastal Act constitute the statutory standards applied to planning and regulatory decisions made by the California Coastal Commission (CCC), pursuant to the Coastal Act. Hazardous substances are addressed in Chapter 3, Section 30232 (Oil and hazardous substance spills) of the Coastal Act. Per Section 30232 of the Coastal Act, "(p)rotection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and clean-up facilities and procedures shall be provided for accidental spills that do occur" (CCC 1976).

### *California Coastal Act*

The following policy of the California Coastal Act regulates air pollution which may contain GHGs.

> *Section 30253. New Development shall:*
>
> *Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control board as to each particular development.*

## Local

Most of the Project Area is within the City of Arcata, and the western portion of the Project Area (bisected by Old Arcata Road) is also within the Coastal Zone. The southern extent of the Project Area is within Humboldt County jurisdiction, and a small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and City Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone, the Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *City of Arcata General Plan*

The following policies from the City of Arcata General Plan address GHGs, also see Section 3.2 (Air Quality) for additional policies that address air quality:

*PS-1: Emergency Preparedness*

*Ensure that the City, its residents, businesses, agencies, and organizations are prepared for emergencies or disasters and have effective response and recovery plans in place.*

*Applicable sub-policies:*

- *PS-1a: City Emergency Response Plan – The City shall maintain a comprehensive response plan for emergencies, including seismic events, tsunamis, slope failures, floods, storms, fires, and materials spills or contamination. The plan will provide for timely and coordinated response to emergencies that threaten community residents, property, and vital services. The plan will identify City and other emergency response agencies that should be contacted, and also identify neighborhood resources available for more localized assistance and relief.*
- *PS-1b: Evacuation routes/transportation facilities – Emergencies such as floods, storms, fires, distantly generated tsunamis, and hazardous materials spills may necessitate immediate evacuation of affected areas. A map of evacuation routes shall be included in City and neighborhood emergency response plans. These plans will also include evacuation methods for residents who are without, or unable to operate, vehicles. An emergency access plan shall be developed for access to the east side of town (east of State Route 101) after a major seismic event.*
- *PS-1e: Development & design standards for emergency response – New and renovated structures, as well as streets, driveways, and alleyways, shall be designed to provide adequate entry and exit by emergency vehicles and personnel. This includes visible street numbering, emergency vehicle turn-arounds, accessible building entry points and stairways, lighting, and interior evacuation routes.*

*PS-6: Hazardous Materials*

*Minimize the personal injury, property damage, and public health risks associated with the production, use, storage, disposal, and transporting of toxic substances or hazardous materials.*

*Applicable sub-policies:*

- *PS-6a: Reduction of hazardous waste (source reduction) – There are increasing numbers of environmentally safe materials and substances available that offer alternatives to hazardous materials. Improved water-based paints that replace oil and lead based paints, cellulose insulation materials that replace asbestos, and biodegradable antifreezes that replace glycol-based coolants, are all examples of safer materials and substances currently in use. The City shall request information from County, State, and Federal agencies, as well as manufacturers and suppliers, regarding environmentally safe products and shall have a list of those products available to the public.*

- *PS-6b: Contaminated sites – There are sites in and around the City where wood product milling and production, vehicle and equipment storage and repair, agricultural production, and other uses may have resulted in site contamination. Materials such as lead based paints may also contribute to contamination. Many of these sites are inactive and may be appropriate for alternative uses. Environmental Site Assessments shall be required prior to development review and approval of potentially contaminated sites, and cleanup is required prior to reuse. The City shall record and map sites with known contamination.*
- *PS-6c: Use of potentially harmful materials on public lands and rights-of-way – The City of Arcata does not use toxic sprays or substances on vegetation in public lands or rights-of-way, and has been persuasive in stopping State agencies, such as Cal-Trans, from using toxic sprays along State rights-of-way within the City limits. The City shall continue this practice and prohibit other public agencies from using toxic sprays or substances within the City limits (see Resource Conservation and Management Element Policy RC-1i).*

***City of Arcata Local Coastal Plan***

Consistent with Section 30253 of the California Coastal Act (stated above).

***Humboldt County General Plan***

The goals and policies within the Humboldt County General Plan that regulate hazards and hazardous materials include the following:

*WM-G3. Reduce Waste Toxicity.*

*A low toxicity waste stream that reduces risk of exposure to residents, solid waste and recycling industry workers, and the environment.*

*WR-P41. Oil/Water Separation*

*Parking lot storm drainage shall include facilities to separate oils from stormwater in accordance with Public Works requirements and the recommendations of the Stormwater Quality Association's California Stormwater Best Management Practices Handbooks or their equivalent.*

*WR-P45. Reduce Toxic Runoff*

*Minimize chemical pollutants in stormwater runoff such as pesticides, fertilizers, household hazardous wastes, and road oil by supporting education programs, household hazardous waste and used oil collection, street and parking lot cleaning and maintenance, use of bioswales and other stormwater BMPs described in the California Stormwater Best Management Practices Handbooks or their equivalent.*

*S-P1. Reduce the Potential for Loss*

*Plan land uses and regulate new development to reduce the potential for loss of life, injury, property damage, and economic and social dislocations resulting from natural and manmade hazards, including but not limited to, steep slopes, unstable soils areas, active earthquake faults, wildland fire risk areas, airport influence areas, military operating areas, flood plains, and tsunami run-up areas.*

*S-P3. Hazard Education*

*Encourage the education of the community regarding the nature and extent of hazards and community disaster preparation and response.*

*S-P4. Disaster Response Plans*

*The County shall prepare and maintain current disaster response plans. The County shall support and participate in the preparation of disaster response plans by community organizations, companies, cities, and state and federal agencies.*

*S-P5. Hazard Mitigation*

*The County shall actively seek opportunities to reduce the impacts of disasters through hazard mitigation planning.*

*S-P7. Structural Hazards*

*The County shall protect life and property by applying and enforcing state adopted building codes and Alquist-Priolo requirements to new construction.*

*S-P11. Site Suitability*

*New development may be approved only if it can be demonstrated that the proposed development will neither create nor significantly contribute to, or be impacted by, geologic instability or geologic hazards.*

*S-P12. Federal Flood Insurance Program*

*The County shall participate in the Federal Flood Insurance Program and maintain Flood Damage Prevention regulations in the County Code to regulate land uses in flood hazard areas in order to minimize loss of life and property and public flood-related expense.*

*S-P22. Prescribed Burning*

*Encourage the use of prescribed burning as a management tool for hazardous fuels reduction, timber management purposes, livestock production, and enhancement of wildlife habitat.*

*S-P23. Hazardous Fuel Reduction*

*Encourage land management activities that result in the reduction of hazardous fuels and also support timber management, livestock production, and the enhancement of wildlife habitat, through the use of prescribed burning, hand or mechanical methods, firewise plants, biomass utilization, and animal grazing.*

*S-P33. Hazardous Waste*

*Eliminate the use of toxic materials within Humboldt County, where feasible, and require the reduction, recycling, and reuse of such materials, to the greatest extent possible, where complete elimination of their use is not feasible. Require new development which may generate significant quantities of hazardous wastes to be consistent with all the goals and policies of the Hazardous Waste Management Plan.*

*S-P34. Pre-disaster Planning and Mitigation*

*The County shall proactively reduce known hazards through pre-disaster planning and mitigation efforts.*

*S-P35. Hazard Mitigation Plan*

*The County incorporates by reference into this Safety Element the Humboldt Operational Area Hazard Mitigation Plan for unincorporated areas (Volume I and the Humboldt County Annex and the Appendices of Volume II) as adopted and amended by the Board of Supervisors, in accordance with the Federal Disaster Mitigation Act of 2000 and California Government Code, Section 65302.6.*

***Humboldt Bay Area Plan – Local Coastal Plan***

*3.14 Industrial – Protection Against Spillage – 30232*

*Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

a. *Industrial uses shall include mitigation and design features for compatibility with adjacent land uses; in particular, screening and/or landscaping to buffer adjacent residential and recreational uses.*

*New industrial development adjacent to areas planned for public recreation, natural resources, or residential use on the North Spit shall include mitigation measures, including at a minimum, setbacks, landscaping, and design controls to minimize significant conflicts with adjacent land uses.*

*3.17 Hazards – New Development – 30253*

*(1) Minimize risks to life and property in areas of high geologic, flood and fire hazard.*

*(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding areas or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

***Humboldt County Operational Area Hazard Mitigation Plan***

The 2014 Humboldt County Operational Area Hazard Mitigation Plan Update is the county's plan to identify and reduce hazards before any type of hazard event occurs (Humboldt County 2014). The Hazard Mitigation Plan aims to reduce losses from future disasters such as dam failure, drought, earthquake, fish losses, flooding, landslide, severe weather, tsunami, and wildfire. The Hazard Mitigation Plan also includes a vulnerability analysis and proposed initiatives designed to minimize future hazard-related damage.

***Humboldt County Emergency Operations Plan***

The 2015 Humboldt County Emergency Operations Plan (EOP) for the Humboldt Operational Area addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting Humboldt County (Humboldt County 2015). The EOP addresses integration and coordination with other governmental levels when required. The EOP accomplishes the following:

– Establishes the emergency management organization required to mitigate any significant emergency or disaster affecting Humboldt County.
– Identifies the policies, responsibilities, and procedures required to protect the health and safety of Humboldt County communities, public and private property, and the environmental effects of natural and technological emergencies and disasters.
– Establishes the operational concepts and procedures associated with field response to emergencies, County Emergency Operations Center activities, and the recovery process.

## 3.8.4 Evaluation Criteria and Significance Thresholds

Based on Appendix G of the CEQA Guidelines, a hazards or hazardous materials impact is considered significant if implementation of the proposed Project would do any of the following:

– Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
– 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;

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 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 create a significant hazard to the public or the environment;
- Be 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, where the Project could result in a safety hazard or excessive noise for people residing or working in the Project Area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

## 3.8.5 Methodology

An ISA covering Project Area was completed to identify and address existing conditions related to hazards and hazardous materials. The purpose of the ISA was to identify environmental hazards as pertains to the proposed Project. This ISA is generally consistent with Chapter 10 of Caltrans Standard Environmental Reference (SER) and portions of the most recent ASTM International (ASTM) E1527 13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* 1527-13 (the Standard) but does not satisfy all appropriate inquiries (AAI) in conformance with the standards and practices set forth in 40 CFR Part 312 and is not considered to be a Phase I ESA as defined in the Standard. As per SER terms and conditions, this study (ISA) deviates from the above referenced ASTM Standard and does not meet the definitions of an ESA Phase I.

## 3.8.6 Impacts and Mitigation Measures

**Impact HAZ-a: Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Less than Significant)**

Construction of the Project would include the transport and use of common hazardous materials inherent to the construction process, including petroleum products for construction equipment and vehicles, and paints, asphalt materials, concrete curing compounds, and solvents for construction of Project improvements. These materials are commonly used during construction, are not acutely hazardous, and would be used in relatively small quantities.

Caltrans and the California Highway Patrol (CHP) 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. 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.

Project construction would be required to implement storm water best management practices during construction in accordance with the State Water Resources Control Board General Construction Storm Water Permit. Best management practices addressing materials management would be required, including proper material delivery and storage, spill prevention and control, and management of concrete and other wastes.

Because the City and its contractors would be required to comply with existing and future hazardous materials laws and regulations and applicable best management practices addressing the transport, storage, use, and

disposal of hazardous materials, the potential to create a significant hazard to the public or the environment during construction of the Project would be less than significant.

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.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact HAZ-b: Would the Project 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)**

The Project would utilize heavy machinery to perform some tasks including grading, paving, and transportation of materials. There is always the possibility when equipment is operating that an accident could occur and fuel could be released onto the soil. Equipment on site during construction would be required to have emergency spill cleanup kits immediately accessible in the case of any fuel or oil spills. The potential impact is less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact HAZ-c: Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Less than Significant)**

Jacoby Creek Elementary School is located within the Project corridor. Construction activities are assumed to include the use of hazardous materials such as fuels, lubricants, degreasers, paints, and solvents. These materials are commonly used during construction, are not acutely hazardous, and would be used in small quantities. Numerous laws and regulations ensure the safe transportation, use, storage, and disposal of hazardous materials (see Impact discussion in Section 3.9 (a) and (b) above). Although construction activities could result in the inadvertent release of small quantities of hazardous construction chemicals, a spill or release at a construction area is not expected to endanger individuals at nearby schools given the nature of the materials and the small quantities that would be used. Therefore, because the City and its contractors would be required to comply with existing and future hazardous materials laws and regulations covering the transport, use, and disposal of hazardous materials, and because of the nature and quantity of the hazardous materials to be potentially used by the Project, the impact related to the use of hazardous materials during construction adjacent to the school would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact HAZ-d: Would the Project 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? (Less than Significant with Mitigation)**

The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List." A search of the Cortese List (CalEPA 2019) was completed to determine if any known hazardous waste sites have been recorded on or adjacent to the Project alignment. The Project is not located on a hazardous materials site compiled pursuant to Government Code Section 65962.5.

An Initial Site Assessment (ISA) was conducted to evaluate areas of potentially impacted soil and/or groundwater along the Project alignment that may require special handling and disposal during construction or could pose a health exposure risk to construction workers (GHD 2018). This ISA identified five properties where potentially impacted soil and/or groundwater may be encountered, as detailed below (GHD 2018).

## Erickson's Garage

The former Erickson's Garage (Erickson's Garage) is located at 800 Bayside Road, Arcata, California and is further identified as Humboldt County Division of Environmental Health (HCDEH) Local Oversight Program (LOP) Case Number 12288. This property is located northeast of the Project alignment on the southeast side of Buttermilk Lane.

Based on information contained in the SWRCB Geotracker database and the HCDEH files, soil quality was impacted by a release of petroleum hydrocarbons from an undetermined source at the property. Constituents of concern (COCs) for this site include petroleum hydrocarbons, lead, and leaking UST (LUST) metals. HCDEH correspondence dated May 9, 1999 states that the case is closed, and no remedial action is required.

The Erickson's Garage site is located northeast of, and not included within, the Project alignment. Based on the information available on the SWRCB Geotracker database and contained within the HCDEH file, soil impacts do not extend beyond the property boundaries and groundwater flow direction is to the west, towards Humboldt Bay and downgradient of the Project alignment. It is unlikely that impacts from this property would affect soil and groundwater quality in the vicinity of the Project alignment.

Because the site is located outside of the Project Area and is not within 15 feet of the Project, potentially contaminated soils would not be disturbed, and the impact would be less than significant.

## Steve Morris Logging & Contracting

The Steve Morris Logging & Contracting property (Steve Morris Logging) is located at 963 Bayside Road, Arcata, California and is further identified in SWRCB Geotracker database file review as having a 1,640 gallon above ground storage tank (AST) on the property. This property is located west of the Project alignment on the west side of Old Arcata Road.

Based on information contained in the SWRCB Geotracker database, soil quality and groundwater were not impacted by petroleum hydrocarbons though a risk exists as the property contains an active AST. The Steve Morris Logging site is located west of, and not included within, the Project alignment. Based on the information available on the SWRCB Geotracker database and contained within the HCDEH file, soil impacts do not extend beyond the property boundary and groundwater flow direction is to the west, towards Humboldt Bay and downgradient of the Project alignment. It is unlikely that impacts from this property would affect soil and groundwater quality in the vicinity of the Project alignment. The potential impact would be less than significant.

## Cal-Kirk Landscaping & Erosion Control

The Cal-Kirk Landscaping & Erosion Control property (Cal-Kirk Landscaping) is located at 1127 Old Arcata Road Arcata, California and is further identified as Humboldt County Division of Environmental Health (HCDEH) Local Oversight Program (LOP) Case Number: 12082. The North Coast Regional Water Quality Control Board (RWQCB) Case Number is 1THU082. Historic use of the site includes previous UST's reported to contain diesel and leaded motor vehicle gasoline. This property is located west of the Project alignment on the west side of Old Arcata Road.

Based on information contained in the SWRCB Geotracker database and the HCDEH files, soil quality was not impacted by a release of petroleum hydrocarbons from the property. As noted in HCDEH files, two USTs were removed from the property in 1990 and the site was officially closed. Constituents of concern (COCs) for this site include petroleum hydrocarbons and leaking hazardous waste previously stored onsite.

The Cal-Kirk Landscaping site is located west of, and not included within, the Project alignment. Based on the information available on the SWRCB Geotracker database and contained within the HCDEH file, soil impacts do not extend beyond the property boundaries and groundwater flow direction is to the west, towards Humboldt Bay and downgradient of the Project alignment. It is unlikely that impacts from this property would affect soil and groundwater quality in the vicinity of the Project alignment. The impact would be less than significant.

## Smith, Norma/La Donna's Rest Home

The Smith, Norma/La Donna's Rest Home (Norma/La Donna's Rest Home) is located at 1972 Old Arcata Road in Arcata, California. The SWRCB has identified hazardous materials previously stored onsite. During the ISA, the property was identified as containing a single 1,000 gallon UST, classified as a farm motor vehicle fuel tank, containing diesel fuel. This property is located outside the Project Area, to the south of the Old Arcata Road and Jacoby Creek Road intersection.

Based on information contained in the SWRCB Geotracker database and the HCDEH files, soil quality was not impacted by a release of petroleum hydrocarbons. UST constituents of concern (COCs) for this property include petroleum hydrocarbons and leaking UST (LUST) metals.

Based on the information available on the SWRCB Geotracker database and contained within the HCDEH file, soil impacts do not extend beyond the property boundaries and groundwater flow direction is to the west, towards Humboldt Bay and downgradient of the Project alignment. It is unlikely that impacts from this property would affect soil and groundwater quality in the vicinity of the Project alignment. As Project construction would likely not impact the Norma/La Donna's Rest Home property, collection of preconstruction borings are not recommended. The impact would be less than significant.

## Roger's Garage & KD Investments

The Former Roger's Garage and KD Investments property (Roger's Garage) is located at 1622 Old Arcata Road, Arcata, California and is further identified as Humboldt County Division of Environmental Health (HCDEH) Local Oversight Program (LOP) Case Number: 12735. The North Coast Regional Water Quality Control Board (RWQCB) Case Number is 1NHU804. This property is located east of the Project alignment on the east side of Old Arcata Road, directly across from Jacoby Creek Elementary School.

Based on information contained in the SWRCB Geotracker database and the HCDEH files, soil quality was impacted by a release of petroleum hydrocarbons, and heavy metals due to site historical use at the property. Constituents of concern (COCs) for this property include petroleum hydrocarbons, copper, lead, zinc, and cadmium metals. The GeoTracker cleanup status, notes case is open and assessment and interim remedial action ongoing as of June 22, 2017.

The Roger's Garage site is located east of, and not included within, the Project alignment. Based on the information available on the SWRCB Geotracker database and contained within the HCDEH file, soil impacts do not extend beyond the property boundaries and groundwater flow direction is to the west, towards Humboldt Bay and downgradient of the Project alignment. It is anticipated that impacts from this property may affect soil or groundwater quality in the vicinity of the Project alignment. As the Project is anticipated to impact soil or groundwater within 15 feet of the Roger's Garage property, pre-construction borings are recommended. With the incorporation of Mitigation Measure HAZ-1, the potential impact would be less than significant.

## Old Arcata Road Corridor

The Project alignment is located along Old Arcata Road which currently and historically has been used for vehicular traffic since its development in the late 1930s/early 1940s. Due to historical use of Old Arcata Road as a highway when leaded gas was present, aerially deposited lead (ADL) may have impacted soils in the immediate vicinity of the roadway. As Old Arcata Road defines the Project boundary, there is the potential for ADL. Pre-characterization of soil and groundwater for potential ADL impacts is recommended in the ISA prior to

the start of construction activities (GHD2018). With the incorporation of Mitigation Measure HAZ-2, the potential impact would be less than significant.

## Mitigation

**Mitigation Measure HAZ-1: Evaluate and Manage Potential Contamination from "Roger's Garage"**

Historical records of previous borings would be reviewed (if available) to mitigate duplicate boring efforts. If existing data is insufficient to evaluate potential contamination of soils to be excavated within the Project Area, additional pre-construction borings would be performed. If sampled soil is found to be impacted by ADL, petroleum hydrocarbons, or other regulated contaminants, a Construction Soil Groundwater Monitoring Plan (SGMP) shall be prepared prior to construction activities. During construction, the SGMP shall be implemented.

**Mitigation Measure HAZ-2: Evaluate and Managed Aerially Deposited Lead**

In areas of ground disturbance, pre-construction soil borings shall characterize lead concentrations in soil and groundwater in anticipation of construction activities. Once the areas of ground disturbance and potential dewatering are confirmed, a Preliminary Site Investigation (PSI) workplan shall identify the location and number of borings necessary for pre-characterization and depth for sample collection. Historic soil boring information (if available) shall be reviewed to further define boring locations and mitigate duplicative borings.

Laboratory analytical results of soil samples collected from the borings shall be utilized to ascertain whether health and safety concerns are present for construction workers and determine the potential for ADL-impacted groundwater, and soil and/or groundwater handling and disposal options. Proposed soil borings and/or grab groundwater sample locations shall be determined following identification of the areas and depths of soil excavation and dewatering activities. If pre-construction TTLC soil characterization sampling indicates that concentrations of lead are elevated above 1,000 ppm, or if STLC analytical results are greater than 5 mg/l, then such data may indicate potential ADL impacts to groundwater.

If construction activities include dewatering, and if laboratory analysis of pre-construction soil borings indicate elevated total and STLC concentrations of 1,000 ppm and 5 mg/L, respectively, then pre-construction groundwater characterization shall occur. If lead impacted soil or groundwater is identified during pre-construction characterization, then a SGMP shall be developed to identify protocols that should be utilized to proactively manage potentially impacted soil and groundwater within the Project alignment and reduce exposure to site workers.

If pre-construction characterization indicates ADL impacts above STLC levels to soil and/or groundwater, site workers involved in excavation activities be trained in accordance with the Hazardous Waste Operations and Emergency Response (HAZWOPER) certification (Occupational Safety and Health Administration [OSHA] 1910.120).

With the incorporation of Mitigation Measures HAZ-1 and HAZ-2, potential impacts from existing hazardous sites located adjacent to the Project corridor and ADL would be less then significant.

With the implementation of Mitigation Measure HAZ-1, impacts associated with potential soil contamination from Roger's Garage would be less than significant.

**Level of Significance:** Less than significant with mitigation

**Impact HAZ-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? (No Impact)**

The Project is not located within an airport land use plan. No impact would occur.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact HAZ-f:** **Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (No Impact)**

The City does not have an independent emergency response plan. The Humboldt County Emergency Operations Plan (Humboldt County 2015) does not designate specific evacuation routes or emergency shelter locations or include policies or procedures with which the Project would conflict. Therefore, the Project would not impair implementation of or physically interfere with the plan. No impact would occur.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact HAZ-g:** **Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? (Less than Significant)**

The California Department of Forestry and Fire Protection (CAL FIRE) is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These Fire Hazard Severity Zones (FHSZ) influence how people construct buildings and protect property to reduce risk associated with wildland fires. The Project site is primarily located in a local responsibility area (LRA) meaning an area where local governments have financial responsibility for wildland fire protection (Humboldt County 2019). The Project site is in an area that has low potential for wildland fire. A very small portion of the Project corridor along Jacoby Creek Road is located in a state responsibility area (SRA). The Project corridor and surrounding vicinity is located in a moderate hazard severity zone, which is the lowest risk of all mapped categories (Humboldt County 2019). It is possible fire ignition could occur during construction (e.g. related to heavy machinery usage). The Project would not otherwise increase exposure to wildlife fire above existing conditions. The impact would be less than significant**.**

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.8.7 Cumulative Impacts

**Impact HAZ-C-1:** **Would the Project contribute to a cumulatively significant impact to Hazards and Hazardous Conditions?**

Projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust's watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber Project, and future Jacoby Creek School classroom improvements.

– The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows

under a County bridge on Old Arcata Road. Future enhancement project locations within the lower watershed have not yet been identified and may or may not be located within proximity to Old Arcata Road. Any such enhancements to the stream corridor would include best management practices for prevention of accidental spills of hazardous materials during construction, resulting from standard Clean Water Act permitting requirements. The timing of planned enhancements also remains speculative, and, if implemented, would occur after implementation of the Project. The combined projects would not result in a cumulative impact related to hazards or hazardous conditions.

– The VERO Eureka/Arcata Fiber optic project would be located subsurface, parallel to Old Arcata Road and within the City and County rights-of-way. The VERO project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. Some portions of the VERO project along Old Arcata Road have already been completed, resulting in minimal soil disturbance to install sub-grade utility boxes in discrete locations, approximately five feet square, alongside the roadway. Construction of the VERO project would presumably require standard accidental spill avoidance and response, as related to on-site construction equipment. The VERO project would not result in any operational hazard-related impact. Thus, a cumulative geologic impact would not result.
– Planned classroom improvements to the Jacoby Creek School would be located at the western end of the campus, away from Old Arcata Road and behind existing structures facing Old Arcata Road. Construction of the new classrooms could require minor site grading, although deep excavations would likely not be required, resulting in a potential for accidental spill as related to on-site construction equipment. Classroom improvements and new construction would presumably require standard accidental spill avoidance and response, and an operational hazard-related impact would not result. A cumulative geologic impact would not result.

None of the projects identified in Table 3.1 involve any of the sites of concern as identified in the ISA. Furthermore, the Project would not result in any significant hazard-related impacts after the incorporate of mitigation measures. The potential for cumulative geologic impacts within the study area would not result.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

## 3.8.8 References

GHD. 2018. Initial Site Assessment. Old Arcata Road Improvements Project. Prepared for the City of Arcata. Arcata, CA.

Humboldt County. 2015. Emergency Operations Plan, Humboldt Operational Area. Humboldt County, CA https://humboldtgov.org/DocumentCenter/View/51861/Humboldt-County-Emergency-Operations-Plan-2015

# 3.9 Hydrology and Water Quality

This section evaluates the potential impacts related to hydrology and water quality resulting from construction and operation of the Project. To provide the basis for this evaluation, the Setting section describes the hydrologic setting. The Regulatory Framework section describes the regulatory background that applies to the Project. The Impact Analysis section establishes the thresholds of significance, evaluates potential impacts to hydrology and water quality, and identifies the significance of impacts.

## 3.9.1 Study Area

The study area for hydrological resources mimics the Biological Study Area (BSA), encompassing the footprint of the road bed and a 600-foot buffer applied to the north end of proposed Project improvements. One- and three-parameter wetlands exist intermittently to the north and south of Old Arcata Road within the Project Area boundary but entirely outside the ground disturbance footprint. Beith and Jacoby Creeks are included in the Study Area. Beith Creek is located approximately 50 feet north of the Project and flows under Old Arcata Road through a culvert. North Jacoby Creek flows under Old Arcata Road roughly 800 feet south of the Jacoby Creek School campus. The BSA is shown in Figure 2 of the Natural Environment Study (NES) prepared for the Project by Northstar Environmental (2019), included as Appendix D.

## 3.9.2 Setting

Hydrology within the Project Area is driven by precipitation which is influenced by Pacific Ocean and atmospheric weather patterns. Generally, air temperature averages about 52 degrees Fahrenheit, and ranges from the low 30s to around 80 degrees. Average annual rainfall is approximately 38 inches per year, based on historic records for 1961 through 2021. Storms generated by the Pacific Ocean contribute high amounts of annual rainfall between October and March. In some years, additional significant rainfall occurs through April. During the remainder of the year, coastal marine influences result in fog that at times is dense enough to generate moisture in the form of mist. Seasonal rainfall is often high in intensity and results in surface water runoff. Consequently, stream flows are typically high in the winter, and many of Arcata's small streams have little flow in late summer.

The small portions of the southern extent of the Project Area near Jacoby Creek Road are within the historic Jacoby Creek floodplain. The Project Area is not typically affected by flood waters when Jacoby Creek overtops its banks. The entire Project Area is located outside of Federal Emergency Management Agency (FEMA) designated special flood hazard areas, including the FEMA 100-year flood zone. The entirety of the Project Area is within the Mad River Valley – Mad River Lowland groundwater basin, which is not identified by the California Department of Water Resources as overdrafted basin. Existing storm drainage along Old Arcata Road and Jacoby Creek Road is informal and disjointed, consisting largely of roadside ditches. Roadside drainage near the intersection of Jacoby Creek Road and Old Arcata Road is an ad-hoc system of ditches and driveway culverts.

## 3.9.3 Regulatory Framework

### Federal

#### *Clean Water Act*

The Clean Water Act (CWA) enacted by Congress in 1972 and amended several times since, is the primary federal law regulating water quality in the United States and forms the basis for several state and local laws throughout the country. It established the basic structure for regulating discharges of pollutants into Waters of the United States. It also gave the EPA the authority to implement federal pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint source pollution. At the federal level, the CWA is administered by the EPA and U.S. Army Corps of Engineers (USACE). At the state and

regional levels in California, the CWA is administered in part and enforced by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs).

Section 303(d) of the CWA requires state governments to present the EPA with a list of “impaired water bodies,” defined as those water bodies that do not meet water quality standards, even after point sources of pollution have been equipped with the minimum required levels of pollution control technology. In accordance with CWA Section 303(d), the State of California periodically identifies “*those waters within its boundaries for which the effluent limitations ... are not stringent enough to implement any water quality standard applicable to such waters.*” There are no impaired water bodies within the Project Area. Sections 404 and 401 of the CWA require permitting and state certification for construction and/or other work conducted in “Waters of the United States.” Such work includes levee work, dredging, filling, grading, or any other temporary or permanent modification of wetlands, streams, or other water bodies. The Project would require both a CWA Section 401 Water Quality Certification from the RWQCB and a CWA Section 404 permit from USACE.

### *National Flood Insurance Program*

The FEMA administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps identifying which land areas are subject to flooding. The maps provide flood information and identify flood hazard zones in each community. The design standard for flood protection is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 annual exceedance probability (i.e. the 100-year flood event).

According to FEMA regulations, "a revision of floodplain delineation based on fill must demonstrate that such fill has not resulted in a floodway encroachment" (44 CFR 65.5 (a) (7)). The State of California model ordinance defines encroachment as "the advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain which may impede or alter the flow capacity of a floodplain." The Floodplain Management and Protection of Wetlands section of the Federal Code of Regulations (44 CFR Section 9.2) states that it is FEMA’s environmental review policy to:

1. Avoid long- and short-term adverse impacts associated with the occupancy and modification of floodplains and the destruction and modification of wetlands;
2. Avoid direct and indirect support of floodplain development and new construction in wetlands wherever there is a practicable alternative;
3. Reduce the risk of flood loss;
4. Promote the use of nonstructural flood protection methods to reduce the risk of flood loss;
5. Minimize the impact of floods on human health, safety, and welfare;
6. Minimize the destruction, loss, or degradation of wetlands;
7. Restore and preserve the natural and beneficial values served by floodplains;
8. Preserve and enhance the natural values of wetlands.

### *National Pollutant Discharge Elimination System*

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate industrial and municipal discharges to surface Waters of the United States. NPDES permit regulations have been established for broad categories of discharges including point source municipal waste discharges and nonpoint source stormwater runoff. An NPDES permit is required when proposing to or discharging waste into any surface water of the state. The SWRCB issues NPDES permits to cities and counties through RWQCBs, and implements and enforces the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009, as amended by Order No. 2010-0014). Order No. 2009-0009 took effect on July 1, 2010 and was amended on February 14, 2011. The Order applies to construction sites that include one or more acre of soil disturbance. Construction activities include clearing, grading, grubbing, excavation, stockpiling, and reconstruction of existing facilities involving removal or replacement.

### *Federal Antidegradation Policy*

The federal antidegradation policy is set forth in 40 Code of Federal Regulations (CFR) Section 131.12. It serves as a catch-all water quality standard to be applied where other water quality standards are not specific enough for a particular waterbody, or where other water quality standards do not address a particular pollutant. SWRCB Order No. 68-16 incorporates the federal antidegradation policy into the state policy for water quality control and ensures consistency with federal CWA requirements. This federal regulation establishes a three-part test for determining when increases in pollutant loadings or other adverse changes in surface water quality may be permitted, including consideration of existing instream uses and water quality.

## State

### *Porter Cologne Water Quality Control Act*

The Porter-Cologne Water Quality Control Act (Porter-Cologne) is the primary statute covering the quality of waters in California. Under Porter-Cologne, the SWRCB allocates water rights, adjudicates water right disputes, develops state-wide water protection plans, establishes water quality standards, and guides nine RWQCBs state-wide. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters. RWQCB boundaries are based on watersheds and water quality requirements are based on the unique differences in climate, topography, geology, and hydrology for each watershed. The RWQCBs regulate water quality under Porter-Cologne through the standards and objectives set forth in Water Quality Control Plans (also referred to as Basin Plans) prepared for each region. The current 2018 Basin Plan prepared by the North Coast Regional Water Quality Control Board (NCRWQCB) provides a definitive program of actions designed to preserve and enhance water quality and to protect beneficial uses of water in the North Coast Region.

The beneficial uses serve as a basis for determining appropriate water quality objectives for the region. To protect these beneficial uses, the Basin Plan sets forth water-resource protection objectives for inland surface waters spanning many parameters. Basin Plan parameters relevant to potential water quality impacts of Project actions include: floating material, suspended material, settleable material, oil and grease, sediment, turbidity, pH, dissolved oxygen, temperature, toxicity, waste discharge and effluent limits, pesticides, and chemical constituents.

### *North Coast Regional Water Quality Control Board, Basin Plan*

The Porter-Cologne Water Quality Control Act of 1967, Water Code section 13000 et seq., requires the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (Regional Boards) to adopt water quality criteria to protect State waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. The criteria for the Project Area are contained in the Basin Plan. The Basin Plan, adopted by the California Regional Water Quality Control Board, North Coast Region, and amended in 2012, establishes a number of policies regarding discharges of wastewater. The Basin Plan also includes a Water Quality Control Plan for the Enclosed Bays and Estuaries of California, and a specific Action Plan for Humboldt Bay. The Action Plan for Humboldt Bay requires surveillance and monitoring, review and assessment of land use activities, and Regional Board coordination with other state and local agencies with regard to protecting water quality in Humboldt Bay. In order to assure protection of waters in Humboldt Bay, the Regional Board closely monitors construction and industrial activities that could potentially impact water quality.

### *California State Water Resources Control Board*

As of July 1, 2015, all construction projects over one acre within a designated small Phase II municipal separate storm sewer system (MS4) must comply with both the state Construction General Permit and Phase II Small MS4 General Permits, as outlined below:

- National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009-DWQ NPDES No. CAS000002 (Construction General Permit or CGP).

  Post-Construction Permit runoff standards do not need to be met where a project is subject to MS4 Permit Post-Construction Standards. In the event MS4 Requirements are not used, the CGP calls for replicating the pre-project water balance for the 85th percentile, 24-hour runoff event. Regardless of the MS4 requirements, a CGP must be obtained and a construction Storm Water Pollution Prevention Plan (SWPPP) must be prepared and submitted to the State Water Board, via SMARTS, with the appropriate Permit Registration Documents, Notice of Intent and appropriate fee. Appropriate best management practices (BMPs) and site monitoring must be outlined in the SWPPP and implemented onsite.

- Water Quality Order No. 2013-0001 – DWQ NPDES General Permit No. CAS000004 Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4 Permit).

  Projects that create or replace 5,000 sq ft or more of impervious surface are considered Regulated Projects under this Permit. Regulated Projects must use Site Design Measures, as defined in the Permit, to capture the maximum amount of the 85th percentile, 24-hour storm runoff event. Any runoff that cannot be captured by Site Design Measures must then be routed to an appropriate bioretention facility. Additionally, for projects creating or replacing over one acre of impervious surface, the MS4 Hydromodification Standards must be met. For this geomorphic province, the post-project runoff shall not exceed the estimated pre-project runoff for the 2-year, 24-hour storm event.

In order to help guide its communities to meet these MS4 low impact development (LID) requirements, Humboldt County developed the Humboldt County Low Impact Development Stormwater Manual (HLIDSMS) with which the Project would comply.

### *Wetland Riparian Area Protection Policy*

The SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures took effect May 28, 2020 and consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition is a Water of the State; 3) wetland delineation procedures; and 4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Procedures, formerly known as the Wetland Riparian Area Protection Policy, has been renamed in order to communicate that the Procedures apply to all discharges of dredged or fill material to waters of the state, not just wetlands.

### *California Coastal Act*

The California Coastal Act (Coastal Act) of 1976 requires any person proposing to develop in the Coastal Zone to obtain a Coastal Development Permit or obtain coverage under a Consistency Determination. The Coastal Zone extends from the State's three-mile seaward limit to an average of approximately 1,000 yards inland from the mean high tide of the sea. In coastal estuaries, watersheds, wildlife habitats, and recreational areas, the Coastal Zone may extend as much as five miles inland. In developed urban areas, the Coastal Zone may extend inland less than 1,000 yards. The Project Area is within the Coastal Zone. The California Coastal Act contains policies relevant to hydrologic and water quality resources. The following Coastal Act section is relevant to this analysis:

> *Section 30233 Diking, filling or dredging*
>
> *The diking filling or dredging of open coastal waters, wetlands, estuaries and lakes shall be permitted in accordance with other applicable provisions of this division where there is no feasible less environmentally*

*damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*

*(5) Incidental public service purposes*

*Section 30253 Minimization of Adverse Impacts*

*New development shall:*

*(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard*

*Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

## Local

Most of the Project Area is within the City of Arcata, except for the southern extent which is within Humboldt County jurisdiction. A small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and City Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone. This section also includes Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *City of Arcata General Plan*

The City of Arcata General Plan contains guidelines for hydrology and water quality within the Resource Conservation and Management Element. The following policies from the Arcata General Plan are applicable to the proposed Project.

*RC-7: Water Resources Management*

*Manage Arcata's water resources from a watershed perspective, to maintain surface and subsurface water quality and quantity. Runoff will be managed for the benefit of aquatic habitats.*

*Applicable sub-policies:*

- ***RC-7a:** Protection of surface waters from point and nonpoint pollution sources – The use of natural stormwater drainage systems, which preserve and enhance natural features, shall include the following:*
    1. *Efforts to acquire land or obtain easements for drainage and other public uses of floodplains, where desirable to maintain stream courses in a natural state, shall be supported.*
    2. *Recreational opportunities and aesthetics shall be considered in the design of stormwater detention/retention and conveyance facilities.*
    3. *Sound soil conservation practices shall be required, and impacts of proposed developments, with regard to water quality and effects on watersheds, wetlands and drainage courses, shall be carefully examined.*
    4. *The quality of runoff from urban and suburban development shall be improved through use of appropriate and feasible mitigation measures including, but not limited to, artificial wetlands, grassy swales, infiltration/sedimentation basins, riparian setbacks, oil/grit separators, and other best management practices (BMPs).*

5. *New development shall be required to mitigate to the maximum extent feasible increases in stormwater peak flows and/or volume. Mitigation measures should take into consideration impacts on the Mad River, Arcata Bay, and adjoining lands in the City and Planning Area.*
6. *New project designs shall minimize drainage concentrations, maximize permeable surfaces (such as unpaved parking areas) and maintain, to the extent feasible, natural site drainage conditions.*
7. *New projects that affect the quantity and quality of surface water runoff shall be required to allocate land necessary for detaining post-project flows and/or for incorporating measures to mitigate water quality impacts related to urban runoff. To the maximum extent feasible, new development shall not produce a net increase in peak stormwater runoff.*

- ***RC-7c**: Watershed and urban runoff management – To protect structures, critical facilities, existing habitat values and water quality, flooding shall be managed on a watershed basis, using a combination of biotechnical solutions, flood protection practices, and Drainage Master Plan's management practices.*

### *City of Arcata Land Use Code*

The following land use code addresses hydrology and water quality within Chapters 9.64 (Grading, Erosion and Sediment Control) and 9.66 (Urban Runoff Pollution Control).

*Section 9.64. Grading Erosion and Sediment Control*

*Establishes minimum standards and regulations for grading activities as well as construction and post-construction runoff control criteria to prevent unreasonable or unnecessary erosion and sediment production and related degradation of the City's stormwater drainage systems.*

*Section 9.66. Urban Runoff Pollution Control*

*Establishes provisions to ensure that activities within Arcata add no new pollutants to waterways and reduce present pollutant levels and sediments which are carried to our area and regional waterways through stormwater runoff.*

### *City of Arcata Local Coastal Plan*

There are no distinct policies within the City of Arcata's Local Coastal Plan that regulate hydrology and water quality that aren't already stated within the Coastal Act.

### *Humboldt County General Plan*

The goals and policies within the Humboldt County General Plan that regulate hydrology and water quality are located within the Water Resources Element and include the following:

*WR-G10.Storm Drainage*

*Storm drainage utilizing onsite infiltration and natural drainage channels and watercourses, while minimizing erosion, peak runoff, and interference with surface and groundwater flows and stormwater pollution.*

*WR-P1. Sustainable Management*

*Ensure that land use decisions conserve, enhance, and manage water resources on a sustainable basis to assure sufficient clean water for beneficial uses and future generations.*

*WR-P10. Erosion and Sediment Discharge*

*Ministerial and discretionary projects requiring a grading permit shall comply with performance standards adopted by ordinance and/or conditioned to minimize erosion and discharge of sediments into surface runoff, drainage systems, and water bodies consistent with best management practices, adopted Total Maximum Daily Loads, and non-point source regulatory standards.*

*WR-P11. County Facilities Management*

*Design, construct, and maintain County buildings, roads, bridges, drainages, and other facilities to minimize erosion and the volume of sediment in stormwater flows.*

*WR-P21. Enhance Groundwater Recharge Capacity*

*Encourage watershed management practices that enhance infiltration of rainfall into the groundwater.*

*WR-P35. Implementation of NPDES Permit*

*Implement and comply with the National Pollutant Discharge Elimination Systems (NPDES) Permit issued by the State Water Resources Control Board to the designated portions of the County.*

*WR-P36. Natural Stormwater Drainage Courses*

*Natural drainage courses, including ephemeral streams, shall be retained and protected from development impacts which would alter the natural drainage courses, increase erosion or sedimentation, or have a significant adverse effect on flow rates or water quality. Natural vegetation within riparian and wetland protection zones shall be maintained to preserve natural drainage characteristics consistent with the Biological Resource policies. Stormwater discharges from outfalls, culverts, gutters, and other drainage control facilities that discharge into natural drainage courses shall be dissipated so that they make no significant contribution to additional erosion and, where feasible, are filtered and cleaned of pollutants.*

*WR-P37. Downstream Stormwater Peak Flows*

*Peak downstream stormwater discharge shall not exceed the capacity limits of off-site drainage systems or cause downstream erosion, flooding, habitat destruction, or impacts to wetlands and riparian areas. New development shall demonstrate that post-development peak flow discharges will mimic natural flows to watercourses and avoid impacts to Beneficial Uses of Water.*

*WR-P38. New Drainage Facilities*

*Where it is necessary to develop additional drainage facilities, they shall be designed to be as natural in appearance and function as is feasible. All drainage facilities shall be designed to maintain maximum natural habitat of streams and their streamside management areas and buffers. Detention/retention facilities shall be managed in such a manner as to avoid reducing streamflows during critical low-flow periods.*

*WR-P42. Erosion and Sediment Control Measures*

*Incorporate appropriate erosion and sediment control measures into development design and improvements.*

*WR-P43. Storm Drainage Design Standards*

*Drainage design standards for new development shall be adopted by ordinance. The design standards shall ensure that storms of specified intensity, frequency, and duration can be accommodated by engineered drainage systems and natural drainage courses.*

*WR-P44. Storm Drainage Impact Reduction*

*Develop and require the use of Low Impact Development (LID) standards consistent with Regional Water Board requirements to reduce the quantity and increase the quality of stormwater runoff from new development and redevelopment projects in areas within the County's MS4 boundary or as triggered under other Regional Water Board permits. For all other watersheds, develop storm drainage development guidelines with incentives to encourage LID standards to reduce the quantity and increase the quality of stormwater runoff from new developments.*

*WR-P45. Reduce Toxic Runoff*

*Minimize chemical pollutants in stormwater runoff such as pesticides, fertilizers, household hazardous wastes, and road oil by supporting education programs, household hazardous waste and used oil collection, street and parking lot cleaning and maintenance, use of bioswales and other stormwater best management practices described in the California Stormwater Best Management Practices Handbooks or their equivalent.*

***Humboldt Bay Area Plan – Local Coastal Plan***

The policies within the Humboldt Bay Area Plan Local Coastal Plan that regulate hydrology and water quality include the following:

*Section 30254. Public Services – Rural*

*New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal- dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor- serving land uses shall not be precluded by other development.*

*Section 30240 – ESHA*

*a. Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.*

*b. Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.*

*Section 30233 – Filling of Wetlands*

*The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*

*(5) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*

*Section 30607.1 – Mitigation for Wetland Fill*

*Where any dike and fill development is permitted in wetlands in conformity with this division, mitigation measures shall include, at a minimum, either acquisition of equivalent areas of equal or greater biological*

*productivity or opening up equivalent areas to tidal action; provided, however, that if no appropriate restoration site is available, an in-lieu fee sufficient to provide an area of equivalent productive value or surface areas shall be dedicated to an appropriate public agency, or such replacement site shall be purchased before the dike or fill development may proceed. Such mitigation measures shall not be required for temporary or short-term fill or diking; provided that a bond or other evidence of financial responsibility is provided to assure that restoration will be accomplished in the shortest feasible time.*

## 3.9.4 Evaluation Criteria and Significance Thresholds

The Project would cause a significant impact related to hydrology and water quality, as defined by the CEQA Guidelines, if it would:

– Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
– Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin;
– 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;
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
    - 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
    - Impede or redirect flood flows.
– In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
– Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

## 3.9.5 Methodology

Impact assessment methodology considered existing proximity of the Project to existing streams, ditches, other watercourses, and existing informal storm drainage within the Project Area. Impact assessment also evaluated the FEMA 100-year flood zone relative to the Project Area.

## 3.9.6 Impacts and Mitigation Measures

**Impact HWQ-a: Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? (Less than Significant with Mitigation)**

The Project is required to obtain and comply with necessary permits requirements, acting to prevent, or essentially reduce the potential for the Project and operations to violate any water quality standards or waste discharge requirements.

The greatest potential Project impacts to water quality would result from sediment mobilization during construction and operations. Construction and operation activities such as site clearing, grading, excavation, and material stockpiling could leave soils exposed to rain or surface water runoff that may carry soil contaminants (e.g., nutrients or other pollutants) into waterways adjacent to the site, degrade water quality, and potentially violate water quality standards for specific chemicals, dissolved oxygen, suspended sediment, or nutrients. This impact would be potentially significant without mitigation.

However, as described in Section 2.8.1 (Environmental Protection Action 1), because the proposed Project is anticipated to disturb over one (1) acre of land, compliance with State Water Board Order No. 2009-0009 would be required which will regulate stormwater runoff from Project construction activities. Project operations will obtain coverage under State Water Resources Control Board Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities, as amended by Order No. 2012-0006. In compliance with the National Pollutant Discharge Elimination System requirements, a Notice of Intent would be prepared and submitted to the North Coastal Regional Water Board prior to undertaking construction, providing notification and intent to comply with the State of California Construction General Permit. In addition, a Construction Stormwater Pollution Prevention Plan (SWPPP) would be prepared for pollution prevention and control prior to initiating site construction activities.

The Construction SWPPP would identify and specify the use of erosion sediment control BMPs for control of pollutants in stormwater runoff during construction related activities, and would be designed to address water erosion control, sediment control, off-site tracking control, wind erosion control, non-stormwater management control, and waste management and materials pollution control. A sampling and monitoring program would be included in the Construction SWPPP that meets the requirements of the NCRWQCB to ensure the BMPs are effective. A Qualified SWPPP Practitioner would oversee implementation of the Plan during all elements of Project implementation, including visual inspections, sampling and analysis, and ensuring overall compliance.

Beith Creek is located approximately 50 feet north of the Project Area and was included within the BSA. Beith Creek flows under Old Arcata Road through a culvert. With the implementation of standard erosion control BMPS, Beith Creek would remain unimpacted by construction nearest the northern end of the Project corridor. The North Fork of Jacoby Creek Road is culverted under Old Arcata Road near Spring Hill Lane. The culvert would not be modified or extended, and in-water work would not occur. Thus, any aquatic species in Jacoby Creek would not be affected.

Additionally, water sourced from dewatering activities would be pumped into Baker tanks (or similar), dewatering bags, or settling basins and used for dust control purposes, consistent with Mitigation Measure AIR-1. Water sourced from dewatering would not be discharged to storm drains, sewer systems, or any drainage ditches to cause potential polluted runoff.

To ensure that the Project would not negatively impact drainage conditions, a drainage analysis is being prepared prior to final design. The drainage analysis would compare the peak runoff from existing and proposed conditions and analyze the conveyance capacity of drainage system, and would ensure long-term drainage conditions in the Study Area would not be worsened as a result of Project activities. If warranted, the existing and proposed drainage facilities would be modified to ensure that adjacent properties are not negatively impacted by the Project. Potential modifications to existing drainage facilities would be stated as recommendations in the drainage analysis, and would be fully incorporated into the Project, as included in Mitigation Measure HWQ-1. Through the drainage study, the Project is obligated to demonstrate existing drainage issues in the area would be not compounded, specifically those hydrologically connected to Jacoby Creek flood conditions.

The potential impact to water quality standards would be less than significant with the incorporation of Mitigation Measure HWQ-1.

## Mitigation Measures

**Mitigation Measure HWQ-1: Water Quality Control Measures During Excavation, Including Drainage**

In instances where excavation occurs within the vicinity of stream channels, flowing ditches, or wetted waters of the U.S. or State, erosion and sediment control measures shall be implemented. These measures shall include installation and maintenance of silt-fence along channel banks or wetted waters as specified in Project designs, and development of erosion control plans to prevent inadvertent sediment delivery.

Additionally, the Project shall implement recommendations from the drainage study prepared for the Project to document the facility is designed in accordance with City and County standards. The drainage study would include:

- Delineation of contributing watershed subbasins
- Calculation of peak runoff rates in accordance to City and County requirements
- Capacity analysis of post-Project drainage facilities

Implementation of Mitigation Measure HWQ-1 would mitigate potential impacts on water quality standards and waste discharge requirements to a less than significant level by appropriately managing construction dewatering and implementing erosion control measures near streams and other wetted waters of the U.S. or State.

**Level of Significance:** Less than significant with mitigation

**Impact HWQ-b: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin? (No Impact)**

The Project would not decrease groundwater supplies or interfere with groundwater management. During construction, isolated and short-duration groundwater dewatering may occur as needed. Dewatering would be small in scale and limited to shallow groundwater only. Storm water swales are included in Project designs and would help bio-remediate roadway runoff and serve as a source of infiltration and local groundwater recharge. There would be no impact.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact HWQ-c.i: Would the Project 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? (No Impact)**

The Project would be designed consistent with recommendations of the drainage study to ensure consistency with City and County standards (see Mitigation Measure HWQ-1). The existing drainage pattern of the Project Area is limited to ad hoc unpaved roadside ditches and underground storm drain infrastructure. Roadway and utilities improvements would not result in a realignment of the existing drainage pattern of the Project Area, and the Project Area would not modify a stream or watercourse. Some storm drains and ditches with the Project Area ultimately drain to adjacent agricultural fields on private properties and would continue to do so after construction is complete. There would be no impact.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact HWQ-c.ii: Would the Project substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (Less than Significant)**

The Project would be designed to meet City, County and Regional Water Board storm water requirements to address any changes in the area of impervious surface. The Project would not be expected to cause on- or off-site flooding given that post-construction runoff would be detained on site and limited to pre-construction runoff rates, and that proper installation and long-term maintenance of the storm water controls would be conditionally required based on the results of the drainage study.

The Project includes facilities to control and convey runoff from paved areas. Runoff from the roundabout and roadway areas adjacent to the Mistwood Education Center and Bayside Hall would be directed to new drainage inlets and underground piping. The drainage would then be conveyed through a network of existing underground piping that extends south along Old Arcata Road and continue to discharge to an open channel on the west side of Old Arcata Road, consistent with existing conditions.

Under existing conditions, roadside drainage near the intersection of Jacoby Creek Road and Old Arcata Road is an ad-hoc system of ditches and driveway culverts. The Project would upgrade existing drainage into a formal, sub-surface system to improve roadside drainage. The existing drainage along the north side of Jacoby Creek Road is comprised of an open ditch, driveway culverts and drainage inlets. Jacoby Creek Road's approach to the roundabout would be realigned over a portion of the existing roadside ditch. A portion of the existing ditch is also proposed to be filled to accommodate additional on street parallel parking east of Bayside Hall. In order to continue to convey the drainage, new inlets and underground piping would be extended.

Drainage improvements to the north side of Jacoby Creek Road would not improve drainage or reduce flooding at the Bayside Hall or Mistwood parking areas. However, the roadway and roundabout drainage facilities would better convey and direct roadway drainage away from these areas and not exacerbate existing issues, resulting in a Project benefit. Any potential impact would be less than significant.

Between Hyland and Jacoby Creek Road, the roadway would be crowned with the western half draining to the landscape/swale located between the road and walkway. New inlets and underground piping would then convey the runoff to discharge points. There is currently an existing storm drain system (inlets and pipes) on the east side of the road. Drainage would be directed to new and existing inlets that connect to the existing system. Potential impacts would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact HWQ-c.iii) Would the Project 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? (Less Than Significant)**

Changes in impervious surface would be small in scale and include an extension of the pedestrian pathway, a new sidewalk along Hyland Street, and the new roundabout at the Jacoby Creek Road intersection. Given that these Project features would be scattered along the Project corridor and not concentrated in a single location, the quantity of post-Project stormwater runoff is not expected to be significantly different than pre-Project stormwater runoff. The capacity of existing drainage facilities would be analyzed during Project design development relative to City and County design standards applied in the drainage study (see Mitigation Measure HWQ-1). Stormwater system upgrades would be integrated into the overall Project design, as needed. In addition, the Project's SWPPP would both include provisions for managing stormwater runoff and ensuring that changes in impervious surfaces are addressed through bioswales or similar stormwater runoff treatment areas. No additional sources of pollution would be introduced through Project actions. The potential impact would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact HWQ-c.iv: Would the Project impede or redirect flood flows? (No Impact)**

The Project Area is not located within the 100-year floodplain as mapped by FEMA (Humboldt County 2021). Under existing conditions, the roadway can become shallowly inundated during large rain events when roadside ditches exceed capacity and water floods Old Arcata Road. The Project corridor does not intersect a stream, canal, or other flood control waterway. The Project would not impede or redirect any flood flows. There would be no impact.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact HWQ-d: Would the Project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation? (Less than Significant)**

The Project site is not located near a larger isolated body of water that may be affected by a seiche. The Project is also located outside of the FEMA 100-year flood zone (Humboldt County 2021). Extending from the northern terminus of the Project south to 1210 Old Arcata Road, the Project is located in the very eastern edge of the Tsunami Evacuation Area. The balance of the Project is located outside the Tsunami Evacuation Area. If a tsunami occurred during construction, pollutants from heavy machinery (e.g., diesel) could be released into the environment. In the event of tsunami that was severe enough to extend to the eastern edge of the Tsunami Evacuation Area, the cumulative environmental and human impact would be catastrophic and the impacts directly attributable to the proposed Project would be insubstantial by comparison. The potential impact would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact HWQ-e: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (No Impact)**

The relevant water quality control plan is the NCRWQCB Basin Plan, which establishes thresholds for key water resource protection objectives for both surface waters and groundwater. The Project would obtain coverage under State Water Resources Control Board Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities, which would include a SWPPP as described in Environmental Protection Action 1 (see Section 2.8.1). These regulatory requirements and associated requisite monitoring would ensure that a conflict with the Basin Plan does not occur. There would be no impact.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

## 3.9.7 Cumulative Impacts

**Impact HWQ-C-1: Would the Project contribute to a cumulatively significant impact to Hydrologic and Water Quality Resources?**

Projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust's watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber project, and future Jacoby Creek School classroom improvements.

– The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows under a County bridge on Old Arcata Road. Future enhancement project locations within the lower watershed have not yet been identified and may or may not be located within proximity to Old Arcata Road. Any such enhancements to the stream corridor would most likely be limited to the regulated in-water work window (mid-June through October) and thus short-term in duration. Given any enhancements to Jacoby Creek would result in a long-term environmental benefit and restoration of the stream corridor, any potential impact would be specific to construction and minimized with standard Clean Water Act, California Endangered Species Act, and Endangered Species Act permitting conditions, along with the requirements of

the California Fish and Game code pursuant to streambed alteration. A cumulative hydrology and water quality impact would not result.

– The VERO Eureka/Arcata Fiber project would be located subsurface, parallel to Old Arcata Road and within the City and County rights-of-way. The VERO project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. Some portions of the VERO project along Old Arcata Road have already been completed, resulting in minimal soil disturbance to install sub-grade utility boxes in discrete locations, approximately five feet square, alongside the roadway. Given the low-intensity construction methods, significant impacts to hydrology and water quality would likely not result from the VERO project. Potential cumulative impacts related to hydrology and water quality would be less than significant.
– Planned classroom improvements to the Jacoby Creek School would be located at the western end of the campus, away from Old Arcata Road and behind existing structures facing Old Arcata Road. Construction related to the planned improvements would be short-term in duration and consistent with low level construction intensity. Classroom improvements and new construction would occur on the developed school campus, which does not include streams or watercourses. Any potential cumulative impact related to hydrology and water quality would be less than significant.

Given that the Project would not result in any significant impacts to hydrology and water quality, and that the three projects considered in Table 3-1 would not result in a likelihood for significant impacts to hydrology and water quality in or near the Project Area, the potential for cumulative hydrology and water quality impacts within the study area would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.9.8 References

Humboldt County. 2021. Humboldt County WebGIS Online Database, FEMA Flood Zone Layer. Available online: https://webgis.co.humboldt.ca.us/HCEGIS2.0/ Accessed on July 9, 2021.

Northstar Environmental. 2019. Natural Environment Study for the Old Arcata Road Rehabilitation & Pedestrian/Bikeway Improvements. Prepared for Caltrans and the City of Arcata. Lake Forest, CA. January.

# 3.10 Noise

This section evaluates the potential impacts related to noise during construction and operation of the Project. To provide the basis for this evaluation, the Setting section describes the noise setting. The Regulatory Framework section describes the regulatory background that applies to the Project. The Impact Analysis section establishes the thresholds of significance, evaluates potential noise-related impacts, and identifies the significance of impacts.

## 3.10.1 Study Area

The study area for this section includes the Project Area and the surrounding 0.25 mile buffer. Numerous residences, the Jacoby Creek School, the Mistwood Education Center, and a small number of businesses exist within the study area.

## 3.10.2 Setting

***Fundamentals of Acoustics***

Noise may be defined as objectionable or disturbing sound caused by its pitch or its loudness. Pitch is the height or depth of a tone or sound, depending on the relative frequency of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is the intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several measurement scales which are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities.

There are several methods of characterizing sound. The most common method in California is the A-weighted sound level or (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called Leq. The most common averaging period is hourly, but Leq can describe any series of noise events of arbitrary duration.

Since the sensitivity of noise receptors to noise increases during the evening and at night, and because excessive noise interferes with the ability to sleep, 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The Day/Night Average Sound Level (Ldn) is average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 PM and 7:00 AM. The Community Noise Equivalent Level (CNEL) is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 PM - 10:00 PM) and a 10 dB addition to nocturnal (10:00 PM - 7:00 AM) noise levels.

***Fundamentals of Groundborne Vibration***

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several methods are typically used to quantify the amplitude of vibration including Peak Particle Velocity (PPV) and Root

Mean Square (RMS) velocity. PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. RMS velocity is defined as the average of the squared amplitude of the signal, usually measured in decibels referenced to one micro-inch per second (in/sec) and reported in velocity decibels (VdB). PPV and VdB vibration velocity amplitudes are used in this analysis to evaluate the effect of vibration on buildings and people in the vicinity of construction activities.

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction-related groundborne vibration levels. Because of the impulsive nature of such activities, the PPV descriptor has been used routinely to measure and assess groundborne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 in/sec PPV. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level, whereas the opposite is true for people in rural areas.

Structural damage can be classified as cosmetic only, such as minor cracking of building elements, or may threaten the integrity of the building. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher and there is no general consensus as to what amount of vibration may pose a threat for structural damage to a building. Construction-induced vibration that can be detrimental to a building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

### *Existing Noise and Vibration Environment*

The study area is located along an arterial road (Old Arcata Road) in a rural residential area and can be considered a generally quiet area. There is consistent use of Old Arcata Road by vehicles, and an increase in noise and vehicle congestion near Jacoby Creek School during the morning and afternoon when school begins and ends. Noise within the study area is sourced from vehicular and pedestrian use of Old Arcata Road, residences, and the café located at the intersection of Hyland Street and Old Arcata Road. Sources of groundborne vibration are from vehicles using the roadway. There are no other sources of noise or vibration within the study area.

Current conditions in the Project Area generate noise associated with traffic on Old Arcata Road, Jacoby Creek Road, and adjacent City streets. Noise sources include stopping, turning, accelerating, and decelerating vehicles. Background noise for a busy urban street is estimated at 90 decibels (City of Arcata 2008). However, the City of Arcata projected noise contours for the year 2020 along the Project corridor predict a noise level of 65 decibels (City of Arcata 2008). Thus, existing noise in the Project Area likely ranges between approximately 65 and 90 decibels, depending on the time of day and types of vehicles utilizing the roadway.

### *Sensitive Receptors*

Sensitive receptors are land uses or people who are particularly susceptible to the adverse effects of noise, and include: residences, schools, playgrounds, childcare centers, retirement homes, hospitals, and medical clinics.

The Project Area is located in a developed rural residential area. Sensitive receptors immediately adjacent to the Project Area include residences, the Mistwood Education Center, Jacoby Creek School, community gardens, and small businesses. Portions of the Jacoby Creek School and Mistwood Education Center campuses that front Old Arcata Road are within or adjacent to the Project Area boundary. Therefore, numerous sensitive receptors are within and adjacent to the Project Area boundary.

# 3.10.3 Regulatory Framework

## Federal

There are no federal noise regulations that apply to the Project.

## State

There are no state noise regulations that apply to the Project.

## Local

Most of the Project Area is within the City of Arcata, except for the southern extent which is within Humboldt County jurisdiction. A small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and City Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone. This section also includes Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *City of Arcata General Plan*

The City of Arcata General Plan contains guidelines for noise within the Noise Element. The following policies from the Arcata General Plan are applicable to the proposed Project.

*N-3: Transportation Noise Sources and Levels*

*Establish acceptable noise levels, for land uses and activities, that will protect community residents from the harmful effects of excessive noise exposure due to transportation noise sources. Maintain interior and exterior noise standards that will achieve land use compatibility with respect to community noise.*

*Applicable sub-policies:*

- ***N-3b:** Transportation Noise – Transportation noise sources shall be periodically measured, and significant increases mitigated, so as not to exceed the levels specified in Table N-2 for outdoor activity areas or interior spaces of existing receptors.*
- ***N-3c:** Roadway projects – To minimize noise impacts, the following criteria may be used as a test of significance for roadway projects:*
    1. *Where existing traffic noise levels are less than 60 dB $L_{dn}$ at the outdoor activity areas of noise receptors, a +5 dB $L_{dn}$ increase in noise levels due to a roadway improvement project will be considered significant.*
    2. *Where existing traffic noise levels range between 60 and 65 dB $L_{dn}$ at the outdoor activity areas of noise receptors, a +3 dB $L_{dn}$ increase in noise levels due to a roadway improvement project will be considered significant.*
    3. *Where existing traffic noise levels are greater than 65 dB $L_{dn}$ at the outdoor activity areas or noise receptors, a +1.5 dB $L_{dn}$ increase in noise levels due to a roadway improvement project will be considered significant.*

*N-5: Intrusive and Intermittent Noise Sources*

*Protect community residents from the effects of excessive, intrusive, and intermittent noise. Set standards for intrusive and intermittent noise sources for both daytime and nighttime periods. Intrusive noise sources have a qualitative aspect that can be annoying. These sources may contain a tonal component which is absent from the existing general background noise. They may also be rhythmic, reoccurring or impulsive in*

*nature, or comprised mainly of music or speech. Intrusive noise can result in annoyance or interference with sleep. These types of noise sources can include, but are not limited to, industrial processes, warning horns, backup alarms, and pressure release devices.*

*Applicable sub-policies:*

- ***N-5d**: Construction site tool or equipment noise – The following shall apply to construction noise from tools and equipment:*

    1. *The operation of tools or equipment used in construction, drilling, repair, alteration or demolition shall be limited to between the hours of 8 A.M. and 7 P.M. Monday through Friday, and between 9 a.m. and 7 p.m. on Saturdays.*
    2. *No heavy equipment related construction activities shall be allowed on Sundays or holidays.*

    *This shall apply to construction noise from tools and equipment which are subject to the review of the City, and which may affect receptor uses. This policy shall not apply to emergency work of public service utilities or by variance under a noise ordinance.*

- ***N-5e:** Stationary and construction equipment noise – All stationary and construction equipment shall be maintained in good working order, and fitted with factory approved muffler systems.*

### *City of Arcata Land Use Code*

The City of Arcata Land Use Code addresses noise within Chapter 9.30 (Noise Standards). The following section applies:

*Section 9.30.050 – Noise Standards*

*Implements the policies of the Noise Element of the General Plan, and provides standards for noise mitigation that are intended to protect the community health, safety, and general welfare by limiting exposure to the unhealthful effects of noise.*

### *City of Arcata Local Coastal Plan*

There are no policies within the City of Arcata's Local Coastal Plan that regulate noise within the City's jurisdiction of the Coastal Zone.

### *Humboldt County General Plan*

The Noise Element of the Humboldt County General Plan sets forth policies related to noise and land use compatibility. The most applicable policies and standards to the proposed Project are listed below:

*N-P1. Minimize Noise from Stationary and Mobile Sources*

*Minimize stationary noise sources and noise emanating from temporary activities by applying appropriate standards for average and short-term noise levels during permit review and subsequent monitoring.*

*N-S7. Short-term Noise Performance Standards (Lmax)*

*The following noise standards, unless otherwise specifically indicated, shall apply to all property within their assigned noise zones and such standards shall constitute the maximum permissible noise level within the respective zones:*

*Table 3.10-1 Short-term Noise Standards in $L_{max}$*

| Zoning Classification | Day (Maximum) 6:00 a.m. to 10:00 p.m. dBA | Night (Maximum) 10:00 p.m. to 6:00 a.m. dBA |
|---|---|---|
| MG, MC, AE, TPZ, TC, AG, FP, FR, MH | 80 | 70 |
| CN, MB, ML, RRA, CG, CR, C-1, C-2, C-3 | 75 | 65 |
| RM, R-3, R-4 | 65 | 60 |
| RS, R-1, R-2, NR | 65 | 60 |

*Exceptions:*

*The short-term noise levels shown in the above table shall not apply to certain uses, including but not limited to the following:*

- *Portable generator use in areas served by public electricity when electrical service is interrupted during emergencies as determined by the Planning Director.*
- *Temporary events in conformance with an approved Conditional Use Permit.*
- *Use of chainsaws for cutting firewood and power equipment used for landscape maintenance when accessory to permitted on-site uses.*
- *Heavy equipment and power tools used during construction of permitted structures when conforming to the terms of the approved permit.*
- *Emergency vehicles.*

***Humboldt County Code– Section 103.1 Industrial Performance Standards***

*101.3.1. Noise*

*All noise generating operations shall be buffered so that they do not exceed the exterior ambient noise level by more than 5 dB(A).*

*101.3.4. Vibrations*

*No perceptible vibrations shall be permitted off the building site.*

## 3.10.4 Evaluation Criteria and Significance Thresholds

The Project would cause a significant impact related to noise, as defined by the CEQA Guidelines (Appendix G), if it would:

– Result in the 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;
– Result in generation of excessive groundborne vibration or groundborne noise levels; or
– Be located within the vicinity of a private airstrip or 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, and expose people residing or working in the Project Area to excessive noise levels.

## 3.10.5 Methodology

Impact assessment related to noise compares Project-related noise levels to applicable City and County noise policies and guidelines, as well as existing noise in the study area.

## 3.10.6 Impacts and Mitigation Measures

**Impact NOI-a:** **Would the Project result in 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)**

Construction of the proposed Project would temporarily increase noise in the immediate vicinity of the Project site. The temporary noise increases would result from use of construction equipment for the Project, as well as from increased traffic as construction workers commute to and from the Project site. To prevent noise disturbance to the community, City of Arcata General Plan Noise Element Policy N-5d limits construction activity to the hours between 8 a.m. and 7 p.m. Monday through Friday, And between 9 a.m. and 7 p.m. on Saturdays. No heavy equipment-related construction activities shall be allowed on Sundays or Holidays.

Sensitive noise receptors, including housing and schools, are adjacent to the Project corridor. The Project would generate temporary noise during construction. Noise levels would be consistent with the reference noise levels in Table 3.10-2 below.

***Table 3.10-2 Construction Equipment Reference Noise Levels as Measured at 50'***

| Equipment | Noise Level (dB[1]) | Equipment | Noise Level (dB) |
|---|---|---|---|
| Drill rig truck | 84 | Jackhammer | 85 |
| Horizontal Boring Hydraulic Jack | 80 | Large Generator | 82 |
| Front end loader or Backhoe | 80 | Paver or Roller | 85 |
| Excavator | 85 | Dump truck | 84 |

Source: Federal Highway Administration, 2006.

Sound from a point source is known to attenuate at a rate of -6 dB for each doubling of distance. For example, a noise level of 84 dB Leq as measured at 50 feet from the noise source would attenuate to 78 dB Leq at 100 feet from the source and to 72 dB Leq at 200 feet from the source to the receptor. Based on the reference noise levels in Table 3.10-2, the noise levels generated by construction equipment at the Project site may reach a maximum of approximately 85 dB Leq at 50 feet during site excavation and construction. The maximum noise level would result in short-term increases in noise to sensitive receptors in and adjacent to the Project Area; however, construction-related increase in noise would not constitute a significant noise-related impact.

For measuring noise levels and setting noise standards, the City uses the Community Noise Equivalent Level (CNEL) and the Day/Night Noise Level (Ldn). As discussed above in Section 3.10.2, The Ldn measure averages a weighted noise over a 24-hour period, and adds 5 dBA (A-weighed decibel) to noise levels between 7:00 p.m. and 10:00 p.m. The CNEL uses the same methodology, plus adds 10 dBA to noise levels between 10:00 p.m. and 7:00 a.m.

Adherence to City of Arcata General Plan Policy N-5d, which limits construction activity hours, and Policy N-5e, which requires that all construction equipment be maintained in good working order and fitted with factory approved mufflers, would limit construction noise intensity and duration such that construction noise at sensitive receptors would be reduced. The City of Arcata's Noise Element does not include restrictions or guidelines for short-duration roadway improvement projects, and construction-related noise would be short-term and limited to hours of construction as defined in the City's Noise Element and Land Use Code. The impact would be less than significant.

Operational noise associated with the proposed Project would consist of standard roadway maintenance, which occurs periodically on Old Arcata Road and other City roadways. The incremental increase in noise in the Project

[1] "dB" is a weighted decibel measurement for assessing hearing risk and, therefore, is used by most regulatory compliance.

Area would not expose persons to noise levels in excess of applicable standards and would not represent a substantial increase in noise.

Operational noise near the proposed roundabout at the Jacoby Creek Road intersection would decrease due to a quieter, smoother roadway surface and traffic calming measures such as speed humps and improve signage. The proposed roundabout would further decrease operational noise by reducing the amount of acceleration and braking associated with stopping, turning, and reaccelerating at the current intersection, including near the Mistwood Education Center. The roundabout would remain consistent with the City of Arcata Noise Element. Projected noise contours in the Noise Element show the highest level of anticipated noise along and adjacent to the immediate roadway of Old Arcata Road where the Mistwood Educated Center is located. The impact would be less than significant.

## Noise Ordinance Compatibility

The City of Arcata's Noise Element does not include restrictions or guidelines for short-duration roadway improvement projects. Short-term noise performance standards during daytime hours for Humboldt County range from a maximum of 65 dB – 85 dB, depending on the land use. However, exceptions include the use of heavy machinery and tools used during construction of permitted structures when conforming to the terms of the approved permit (Humboldt County 2017). The Project would be fully permitted and would comply with terms of approved permits, including those that specifically address noise limitations. The Project would not conflict with Humboldt County's Noise Element.

## Noise and Land Use Compatibility

### *Construction*

The Project is located along an existing primary transportation corridor, connecting the City of Arcata to the communities of Sunny Brae, Bayside, Indianola, Eureka, and Highway 101. As an existing public roadway, the land use of the Project corridor is consistent with proposed construction activities. As with any primarily public roadway, short-duration road construction and general road maintenance activities, as well as their accompanying levels of noise, are common and routine activities. Increases in noise due to construction would occur during daytime hours only. The impact would be less than significant.

### *Operation*

After construction, operational noise generated by the Project would decrease due to a quieter, smoother roadway surface and traffic calming measures such as speed humps and improve signage. The proposed roundabout at the Jacoby Creek Road intersection would also decrease operational noise by reducing the amount of acceleration and braking associated with stopping, turning, and reaccelerating. The potential impact would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact NOI-b: Would the Project result in generation of excessive groundborne vibration or noise levels? (Less than Significant Impact)**

Earth moving and earth compacting activities using heavy machinery would create groundborne vibrations and noise that may be noticeable on a temporary and intermittent basis, at nearby residences, school, commercial and retail businesses. There would be no pile driving associated with the Project. Noticeable groundborne vibrations and noise be limited to normal daytime hours. The proposed Project would comply with all applicable City policies to abate construction-related noise impacts. City General Plan Policy N-5d requires limiting construction activity to specified daytime hours, consistent with planned Project operations. City Policy N-5e requires that all construction equipment be maintained in good working order and fitted with factory approved

mufflers. Adherence to these policies would result in a less than significant impact with regard to exposing persons to or generating excessive groundborne vibration or groundborne noise levels. Additional groundborne vibrations beyond baseline conditions are not anticipated as a result of operational activities, and the potential impact would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact NOI-c: For a Project located within the vicinity of a private airstrip or an airport, land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project Area to excessive noise levels? (No Impact)**

The Project is not located within the vicinity of a private airstrip or an airport land use plan, or within two miles of a public airport. There would be no impact.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

## 3.10.7 Cumulative Impacts

**Impact NOI-C-1: Would the Project contribute to a cumulatively significant impact to Noise?**

Projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust's watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber project, and future Jacoby Creek School classroom improvements.

- The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows under a County bridge on Old Arcata Road. Future enhancement project locations within the lower watershed have not yet been identified and may or may not be located within proximity to Old Arcata Road. The timing of planned enhancements also remains speculative, and, if implemented, would occur after implementation of the Project. Related potential construction would be short-term in duration, limited to a single construction season during the permitted in-water work window of mid-June through mid-October. Potential construction would be outside the noise range of sensitive receptors within the Project Area. The combined projects would not result in a cumulative impact to noise.
- The VERO Eureka/Arcata Fiber project would be located subsurface, parallel to Old Arcata Road and within the City and County rights-of-way. The VERO project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. Some portions of the VERO project along Old Arcata Road have already been completed, resulting in minimal soil disturbance to install sub-grade utility boxes in discrete locations, approximately five feet square, alongside the roadway. Excavation was short-term in duration within any single sub-grade utility box along Old Arcata Road. Installing the fiber optic cables through the newly installed piping and utility boxes is not expected to generate high levels of noise or endure for long periods of time; thus, a cumulative geologic impact would not result.
- Planned classroom improvements to the Jacoby Creek School would be located at the western end of the campus, away from Old Arcata Road and behind existing structures facing Old Arcata Road. Construction of the new classrooms and related improvements would result in short-term construction noise consistent with periodic new construction and repair-related noise throughout the Project Area. Construction techniques required for classroom construction would not likely require pile driving. Any potential cumulative impact related to noise would be less than significant.

Given that the Project would not result in any significant new noise, and that the three projects considered in Table 3-1 do not result in a likelihood in a noise-related impact in or near the Project Area, the potential for cumulative noise-related impacts within the study area would remain less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.10.8 References

City of Arcata. 2008. General Plan Noise Element. Arcata, CA. Available online: http://www.cityofarcata.com/DocumentCenter/View/39/Chapter-6-Health-and-Safety---2-Noise-Element-PDF?bidId=

Humboldt County. 2017. Humboldt County General Plan. Noise Element. https://humboldtgov.org/DocumentCenter/View/61989/Chapter-13-Noise-Element-PDF

# 3.11 Transportation

This section evaluates the potential impacts related to transportation during construction and operation of the Project. To provide the basis for this evaluation, the Setting section describes the transportation setting. The Regulatory Framework section describes the regulatory background that applies to the Project. The Impact Analysis section establishes the thresholds of significance, evaluates potential transportation-related impacts, and identifies the significance of impacts.

## 3.11.1 Study Area

The Transportation study area includes the Project Area, bounded by the roadway prism and including Old Arcata Road from Buttermilk Lane to approximately 300 feet south of Jacoby Creek Road, the westernmost 600 feet of Jacoby Creek Road, the westernmost 400 feet of Hyland Street, and associated crosswalks, speed humps, signage, sidewalks, and pathways.

## 3.11.2 Setting

The Project Area is located along Old Arcata Road (which is primarily within City of Arcata jurisdiction, although a small portion is with Humboldt County jurisdiction) and along the lower 300 feet of Jacoby Creek Road (which is within Humboldt County jurisdiction). Old Arcata Road is considered an arterial road according to the City's General Plan. Arterial roads deliver traffic between collector roads (small, neighborhood roads) and highways or freeways. Old Arcata Road serves as the major thoroughfare through Bayside. Old Arcata Road includes a 25 mile per hour (mph) speed limit and a 15 mph speed limit (in the vicinity of Jacoby Creek School). A Class II bicycle lane exists along Old Arcata Road within a portion of the Project Area. Sidewalks intermittently exist on both sides of Old Arcata Road in the northern portion of the Project Area, which are often utilized by community members. Further south, a sidewalk exists only along the western side of the road for approximately 0.46 miles, ending at the Jacoby Creek School.

The Project is a multi-modal transportation improvement project, designed to be consistent with transportation policies from the City of Arcata and Humboldt County. The Project is partially funded through the State Transportation Improvement Program (STIP), which is administered by Caltrans, and requires the Project be consistent with State and federal transportation policies. Traffic counts were most recently obtained at select location along Old Arcata Road in 2005 and 2006, resulting in an Average Daily Traffic (ADT) of less than 3,000 vehicles. While this data was collected more than ten years ago, it is assumed that the region is unlikely to add new development that would result in a significant increase in traffic volumes (SHN and Omni Means 2017).

## 3.11.3 Regulatory Framework

### Federal

There are no federal transportation plans, policies or regulations pertaining to the Project. The transportation facilities associated with the Project are under State and City/County Jurisdiction.

### State

Transportation analysis in California is guided by policies and standards set at the state level by Caltrans for highway facilities under state jurisdiction, as well as by local jurisdictions. Any work or traffic control within the state right of way requires an encroachment permit issued by Caltrans. In addition, work that requires movement of oversized or excessive load vehicles on highway facilities requires a transportation permit by Caltrans. No work is proposed on or within state jurisdiction roadways and therefore an encroachment permit issued by Caltrans is not required.

### *Vehicle Miles Traveled*

SB 743 creates a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative Maintenance of Effort (MOE) to control delay and associated Level of Service (LOS) for evaluating transportation impacts, which was done in early 2019. OPR recommends that vehicle miles traveled (VMT) become the primary metric or MOE of transportation impact across California. As of July 1, 2020, all CEQA lead agencies must analyze a project's transportation impacts using VMT (Caltrans 2019). Utilizing LOS as the primary method of determining transportation impacts is acceptable until July 1, 2020. Humboldt County has not yet adopted VMT thresholds against which the Project would be compared; however, draft thresholds were introduced at the August 20, 2020 Planning Commission Meeting. See Section b), below for a more detailed description of the VMT analysis performed for this document.

## Local

Most of the Project Area is within the City of Arcata, except for the southern extent which is within Humboldt County jurisdiction. A small portion of the Project Area within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and City Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone. This section also includes Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *City of Arcata General Plan*

The City of Arcata General Plan contains guidelines for transportation within the Transportation and Open Space Elements. The following policies from the Arcata General Plan are applicable to the proposed Project.

*T-1: Balanced Transportation System with Choice of Modes*

*Create and maintain a balanced transportation system with choice of bus transit, bicycle, and pedestrian as well as private automobile modes. Reduce the percentage of trips that are made by automobile and provide the opportunity and facilities to divert trips from automobiles to other modes.*

*Applicable sub-policies:*

- ***T-1d:*** *Critical transportation facilities – Critical transportation facilities for emergency vehicle access and emergency evacuation shall be maintained and improved as a priority need. Critical transportation facilities include the major routes into and out of the City such as Highways 101, 299, and 255, their interchanges with City streets and primary intra-city street connections including Samoa Boulevard, 11th Street, "G" and "H" Streets, Sunset Avenue, L.K. Wood Boulevard, Alliance Road, Janes Road, and Giuntoli Lane. Due to the potential for structural failure of these facilities in a seismic emergency, alternative routes and procedures for their use shall be identified.*

*T-2: Travel Demand Management*

*Reduce the percentage of automobiles and reduce the annual vehicle-miles of travel.*

*Applicable sub-policies:*

- ***T-2a****: Land use development patterns – The City encourages and supports travel demand management efforts. The City shall promote land use and development patterns that encourage walking, bicycling and transit use. In recognition of the link between land use and transportation, the land use plan shall discourage low density, homogenous land use patterns that foster automobile travel and are impractical to serve with transit. Land use planning shall emphasize high density and mixed land use patterns which translate into higher transit and pedestrian travel in the downtown and*

*neighborhood commercial areas. Infill, redevelopment, and reuse of underutilized property at higher densities shall be encouraged prior to outward expansion of City boundaries. The following land use measures are emphasized:*

1. *Mixed-use neighborhood centers within transit corridors which include housing and commercial services near employment.*

2. *Land use patterns which maximize linking trip opportunities by assembling uses, thus allowing people to take care of a variety of daily needs with a single trip.*

*T-4: Streets and Highways Plan and Policy*

*Plan an internal street system consistent with Arcata's small-town, nonmetropolitan character and which: 1) efficiently utilizes existing facilities and reduces need for investment in new or expanded street and highway facilities or capacities; 2) improves connectivity of streets to provide for direct routes between origins and destinations; 3) has a high quality of regular maintenance and repair; and 4) maintains a level of service which minimizes delays, but allows for higher levels of congestion during the short peak periods on weekdays.*

*Applicable sub-policies:*

- ***T-4b**: Arterial streets – Routes designated as arterial streets are shown on the functional classification map in Figure T-a.* (Old Arcata Road is considered an arterial street on Figure T-a). *The following shall apply to these routes:*

  1. *Functional classification and designated routes. Arterial streets are intended to provide a high degree of mobility and serve longer trips within the City. Arterials connect various neighborhoods within Arcata and provide direct connections to the state highway system. Arterials are intended to emphasize traffic movement over access to property.*

  2. *Alternative street cross-sections for arterial streets. The Department of Public Works shall prepare alternative cross-sections for new arterial streets utilizing a smaller right-of-way, and prepare alternative cross-sections for existing rights of way that reduce traffic speed and safely accommodate bicycle and pedestrian traffic.*

  3. *Arterial street connectors. Extend existing roads to increase the City's arterial connectivity if proposed development creates significant traffic congestion or overwhelms existing neighborhoods. The Foster Avenue to Sunset connector is a planned road extension if feasible. This project will extend Foster Avenue east of Alliance Road to connect with Sunset Avenue near the State Route 101 interchange to create an east-west facility between Spear Avenue and 14thStreet. This extension would bypass the residential neighborhoods on Sunset Avenue, provide a direct arterial connection from Alliance Road to State Route 101, and improve and facilitate bus routing.*

  4. *No additional automobile travel lanes on arterial streets. Street projects to improve traffic flow shall emphasize intersection improvements and facility maintenance. Construction of additional arterial street travel lanes shall be considered only when no other feasible congestion management methods are available.*

  5. *Minimize the installation of new traffic signals. New traffic signals shall be provided only in instances where there is no feasible alternative to relieve a demonstrated safety problem at an intersection (based on documented accidents). Alternatives which shall be studied prior to signals include roundabouts or installation and monitoring of all-way stop signs.*

6. *Minor improvements at intersections. Minor projects to improve traffic safety include redistributing lane allocations and coordination of traffic signals. Improvement projects shall be designed to accommodate the needs of pedestrians and bicyclists.*

*T-5: Bicycle and Pedestrian Facilities*

*Create a complete, interconnected bicycle and pedestrian circulation system. Increase the percentages of person trips via walking and bicycling. Provide a pedestrian and bicycle system which serves commuter as well as recreational travel.*

*Applicable sub-policies:*

- ***T-5c:*** *Class II bikeways – Class II bikeways are lanes located on the outside edge of roadways, including all arterial streets, and delineated from vehicle travel lanes with striping and pavement markings. The following standards apply to Class II bikeways:*

  1. *Design standards. Caltrans design standards shall be used for Class II facilities. Minimum widths are five feet adjacent to on-street parking or vertical curb without on-street parking, and four feet on streets without curb and gutter. Appropriate signing and pavement markings shall be provided to identify the bicycle lane. Caltrans standards shall be used for bike lane markings or transitions at intersections.*

  2. *Required street width. The standard street width of forty-feet curb-to-curb can accommodate Class II bike lanes in both directions if parking is eliminated from one side of the street and vehicle travel lanes are reduced to eleven feet. Bike lanes should be provided in both directions, if feasible, unless the street is one-way. Streets appropriate for Class II bike lanes include those where on-street parking needs are not critical. Alternatively, prohibition of parking on one side of the street during certain hours of the day may be considered to accommodate bicyclists.*

- ***T-5f:*** *Pedestrian enhancements – prioritize implementation of improved pedestrian facilities and enhancements in areas of the city with the greatest need including the Arcata Plaza, Westwood Center area, the Sunset Avenue neighborhood, Samoa Boulevard, Alliance Road, Spear Avenue, Janes Road in the vicinity of the Pacific Union School, and Bayside Road in the vicinity of Jacoby Creek School. The following pedestrian improvements and safety enhancements should be considered in future planning for these areas:*

  1. *Close sidewalk gap.*
  2. *Install vertical curbs to keep vehicles from parking on sidewalks.*
  3. *Reduce street crossing distance with curb extensions and smaller curb radii.*
  4. *Use on-street parking as a pedestrian buffer.*
  5. *Install textured crosswalks.*
  6. *Provide adequate street lighting focused on crossings.*
  7. *Restrict parking near crosswalks to improve sight distance.*
  8. *Install rumble strips on approaches to crosswalks.*
  9. *Plant street trees or place street trees in planters in the parking lane.*
  10. *Relocate intersection stop bars five feet back from crosswalks to improve driver and pedestrian visibility.*

- *T-5g: Pedestrian pathways and multi-use trails – Pedestrian pathways or multi-use trails for the exclusive use of non-motorized transportation modes should be provided. Pathways may be long facilities located along corridors or short facilities providing direct access through development projects or connecting areas not directly accessible by streets. Pathways should be planned to serve both recreational and commuter needs. The following shall apply to pedestrian pathways or multi-use trails:*

    1. *Easement dedication. Dedication of easements for pathways through new private developments may be required.*

    2. *Cooperation with local and regional agencies and jurisdictions. The City shall cooperate with other agencies to establish and maintain off-street pathways and trails utilizing creek, utility, and railroad right of way.*

    3. *Foster Avenue Extension. Multi-use paths or trails shall be included in the Foster Avenue extension to Sunset Avenue.*

    4. *Other Locations. Other potential locations for multi-use paths are within the North Coast Railroad right of way from Giuntoli Lane to Samoa Boulevard, along the west side of Samoa Boulevard/Old Arcata Road east of State Route 101, and along the perimeter of Arcata Bay towards Manila.*

- ***T-5h:** Sidewalks – A continuous and interconnected system of sidewalks shall be provided throughout the City. The existing standard right of way of most arterials, collectors, and local streets (fifty feet) permits a five-foot sidewalk in each direction, the minimum width to comply with Americans with Disabilities Act (ADA) requirements. Some commercial areas in downtown Arcata should have wider sidewalks to accommodate higher levels of pedestrian traffic and window-shopping. The following standards shall apply to sidewalks:*

    1. *Sidewalk continuity. Gaps in existing sidewalks should be closed to provide a continuous pathway. Cul-de-sacs should be discouraged because they disrupt pedestrian connectivity.*

    2. *Sidewalk widths. New development projects shall be required to construct or reconstruct sidewalks along the property frontage. Required widths for new or reconstructed sidewalks are shown in Table T-5.*

    3. *Sidewalk Requirements. Where adequate width exists to maintain ADA minimum clearance, sidewalk pedestrian amenities should be provided in the downtown commercial area. These include benches, bicycle parking, pedestrian-scale lighting, street trees, flower boxes, trash receptacles, drinking fountains, and awnings. Private development projects shall be required to include sidewalk improvements; other landowners are encouraged to provide improvements.*

    4. *Sidewalk Maintenance. Sidewalk facilities shall be systematically inspected and maintained to clean and repair damaged surfaces and remove impediments such as poles, newspaper racks, and other paraphernalia that interfere with pedestrian flow.*

*OS-1: Overall Open Space System*

*Designate, maintain, and enhance the quality, and increase the amount of permanently protected open space in the Arcata Planning Area, including: natural resource areas; resource production areas; outdoor recreation areas; and areas subject to health and safety hazards. These areas are to be protected, linked together in a network wherever practical for accessibility managed for resource production, and maintained for enjoyment by City residents and visitors.*

*Applicable sub-policies:*

- ***OS-1d:*** *Linkages between open space areas – Linkage of open space lands, especially along biological corridors and greenways, is important for animal migration, non-motorized vehicle transportation, and community recreation, and shall be encouraged. Trails along levees or adjacent to railroad tracks and street rights of way can serve as links to parks, open space, and natural areas. Easements shall also be considered as a lower cost alternative to preserving links between open space.*

***City of Arcata – Local Coastal Plan***

There are no transportation policies in the City of Arcata's Local Coastal Plan applicable to the Project.

***Arcata Pedestrian and Bicycle Master Plan***

The Pedestrian and Bicycle Master Plan (City of Arcata 2010) serves as the foundation for improving the safety and attractiveness of walking and bicycling in Arcata. The following goals, objectives and actions are relevant to the Project include:

*Plan Goal: Work towards achieving 50% of all trips that begin and end in Arcata being made by non-motorized modes by year 2020.*

*Objective A: Implement the pedestrian and bicycle master plan.*

*Actions*

*(4) Maximize coordination between municipalities, schools, and community organizations to review and comment on pedestrian and bicycle issues of mutual concern.*

*Objective B: Complete a network of bikeways that are feasible, fundable, and that serve bicyclists' needs, especially for travel to employment centers, schools, commercial districts, transit stops, and institutions.*

*Actions*

1. *Coordinate and offer assistance to local agencies, Humboldt State University, and developers in Arcata to ensure that appropriate bicycle connections are planned, constructed, and maintained.*
5. *Develop and implement a bikeway signing system that serves bicyclists*
6. *Provide bicycle access to recreational areas*
7. *Identify and mitigate travel impediments and obstacles on designated bicycling routes, especially along prime school routes and in commercial areas.*

*Objective C: Complete a network of walkways that serves pedestrian needs, especially for short trips to employment centers, schools, commercial districts, transit stops, and institutions.*

*Actions*

1. *It shall be city policy to require sidewalks on both sides of roadways where possible and in accordance with the municipal code.*
2. *Identify and complete pedestrian connectivity to make direct routes for walking.*
3. *Identify and mitigate travel impediments and obstacles on designated walking routes.*
4. *Implement programs to improve access for elderly people and those with disabilities.*
5. *Install and upgrade pedestrian facilities as part of all new roadway improvements.*

6. *Require new development projects to provide pedestrian facilities that connect to nearby transit facilities.*

8. *Provide opportunities for walking for health and recreational purposes.*

*Objective D: Maintain and improve the quality, operation, and integrity of bikeway and walkway network facilities.*

*Actions*

1. *Undertake routine maintenance of walkway and bikeway network facilities, such as sweeping bicycle lanes and repairing sidewalks, and funding and priorities allow.*

2. *Ensure that repair and construction of transportation facilities minimize disruption to the walking and bicycling environment to the extent practical.*

*Objective G: Provide bicycle connections outside of the city limits, linking to important destinations like Eureka and McKinleyville.*

*Actions*

1. *Work and coordinate with neighboring City and County agencies to provide integrated bikeways.*

2. *Integrate with trails outside of the city limits, for example: Arcata-Eureka, and Arcata-McKinleyville 101 Corridor, State Route 255, Hammond Trail, Annie & Mary Rail-Trail, and Pacific Coast Bike Route.*

***Humboldt County General Plan***

The goals and policies within the Humboldt County General Plan that regulate transportation include the following:

*C-G1. Circulation System Safety and Functionality*

*A safe, efficient, accessible and convenient circulation system in and between cities, communities, neighborhoods, hamlets, and adjoining regions taking into consideration the context-specific needs of all users*, consistent with urban, suburban, rural or remote community character.*

**All users is defined in the Complete Streets Act to include: motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan.*

*C-G2. Diverse Transportation Opportunities*

*A transportation system that provides the availability of options among modes of travel by considering the needs of all users* in a context sensitive manner that is appropriate to urban, suburban, rural or remote community character.*

*C-G4. Access to Active Transportation*

*Improved access to non-motorized modes of transportation, including walking, bicycling, horseback riding and hiking.*

*C-P1. Circulation System*

*Encourage development of a circulation system that supports:*

A. *Access to higher density residential areas, local commercial facilities, neighborhood parks and schools, while maintaining maximum bicycle and pedestrian connectivity.*

*B. Designing access to residential areas to minimize disruptions to the flow of traffic while providing for user safety and connectivity on arterial or collector roads.*

*C. Improving connectivity between interrelated areas such as neighborhoods and common destinations.*

*D. Planning retail, service and industrial facilities, community centers, major recreational facilities, employment centers, and other intensive land uses that consider the location of collectors or arterial roads consistent with the Land Use Element.*

*C-P5. Level of Service Criteria*

*The County shall strive to maintain Level of Service C operation on all roadway segments and intersections, except for US 101, where Level of Service D shall be acceptable. Level of Service improvements for automobiles should not adversely affect Level of Service and/or Quality of Service for other modes of transportation, if possible. Level of Service C is defined as stable traffic flow, with less freedom to select speed, change lanes, or pass. Some delay may be experienced. Level of Service D is defined as a traffic stream approach unstable flow, with reduced speed and maneuverability.*

*C-P7. Joint Use of Traffic Models*

*The County-Wide Transportation Plan (CWTP) and projects with potentially significant transportation impacts should integrate transportation planning through joint use of area-wide traffic models, including but not limited to the Greater Eureka Area Travel Model (GEATM) or the Humboldt County Traffic Demand Model (HCTDM). Develop travel demand models with methods and inputs that incorporate walking, biking and transit. Support coordination with agencies to maintain the accuracy and utility of such models.*

*C-P8. Coordination Between County Agencies*

*County Public Works shall coordinate with Planning and Building and consider suggestions from other County departments to encourage uniform implementation of the Circulation Element and County-Wide Transportation Plan.*

*C-P9. Circulation Planning for Bicycles, Pedestrians and Transit*

*Circulation planning and project review shall include an assessment for bicycle, pedestrian and public transit access.*

*C-P17. Highway Improvements*

*Encourage state and federal highway improvements that promote safety and connectivity for all users, especially for communities with highway arterials.*

*C-P20. State and Federal Consistency*

*Road construction and maintenance activities shall be consistent with and support approved state and federal salmon or steelhead recovery plans, Clean Water Act Total Maximum Daily Loads (TMDLs), and the National Pollution Discharge Elimination System Stormwater Program.*

*C-P29. Right-of-Way Design Standards*

*The County shall develop and include in the County-Wide Transportation Plan right-of-way design standards incorporating the needs of all users, consistent with urban, suburban, rural or remote community character. The County shall develop incentives for development of multi-modal facilities to offset any potential loss of developable land.*

*C-P31. Removal of Obstacles in Pathways*

*Where feasible and consistent with the County-Wide Transportation Plan, new pathways and sidewalks shall be free of obstacles such as utility poles and mailboxes. Where obstacles are unavoidable on existing sidewalks or pathways, pedestrian facilities shall be widened or otherwise designed to provide the least amount of obstruction to users.*

### *Humboldt Bay Area Plan – Local Coastal Plan*

There are no transportation policies in the Humboldt Bay Area Plan applicable to the Project.

### *Humboldt County Association of Governments (HCAOG)*

The HCAOG is a joint powers authority comprising the County of Humboldt and the seven incorporated cities, each with a seat on the Board of Directors. Under its authority as the Regional Transportation Planning Agency (RTPA) for Humboldt County, HCAOG adopts and submits an updated Regional Transportation Plan to the California Transportation Commission and Caltrans every five years. The Regional Transportation Plan is a long-range (20-year) transportation planning document for Humboldt County. The most recent updates of the HCAOG RTP were completed in 2014 and 2017 and are entitled “Variety in Rural Options of Mobility (VROOM).”

### *Humboldt Regional Bicycle Plan*

The Humboldt Regional Bicycle Plan (HCAOG 2018) includes the following policies that are applicable to the Project. Policies are inclusive of policies from VROOM, HCAOG’s Regional Transportation Plan.

*Policy 1.1*

*HCAOG will work with and support local jurisdictions and local Native American Tribes to plan, install and maintain local bikeway networks, as well as to collaborate to build a comprehensive regional bicycle network linking cities, unincorporated areas, counties, the California Coastal Trail, and the Pacific Coast Bike Route. Humboldt’s regional bicycle network shall have:*

- *Regional bikeways that link communities and connect to local bicycle networks and facilities;*
- *Local bikeways that link to major activity centers, public transportation, recreation, and other destinations;*
- *Bicycle-friendly streets, as consistent with “Complete Streets” policies, designed with best current practices, and innovative treatments where appropriate;*
- *Comprehensive facilities that support bicycle travel, including, but not limited to, directional signage, bike maps, sheltered parking, and changing stations; and*
- *Bicycle facilities integrated to access other modes of transportation (e.g. driving, carpooling, public transit).*

*Policy 1.2*

*HCAOG encourages local jurisdictions to adopt the National Association of City Transportation Officials (NACTO) design guides, including the Urban Bikeway Design Guide and the Urban Bikeway Design Guide, and/or the Federal Highway Administration’s (FHWA) Small Town and Rural Multimodal Networks as their primary guides for designing innovative bicycle facilities.*

*Policy 1.3*

*HCAOG will coordinate local and regional bicycle signage and amenities to be consistent with a regional trails signage and amenities plan, when adopted, per Regional Trails Master Plan-Goal 4.5.*

*VROOM Policy CS-12*

*To advance Safe Routes to School, and Safe Routes to Transit initiatives, HCAOG shall support jurisdictions to establish and maintain safe pedestrian paths and designated bikeways (Class I, II, or III) within one mile of all public schools and public transit connections.*

***Humboldt County Department of Public Works***

The management of Humboldt County roads is provided by the County Department of Public Works. This includes all maintenance, repairs and construction activities on these public roads, as well as permits and encroachments onto the roadway. Private driveways or access roads that connect onto a County road, including reconstruction or improvements to the private roadway within the public right of way, require an encroachment permit. Private work on roadways may also be subject to engineering review by the Department of roadway encroachment plans prior to construction activities.

## 3.11.4 Evaluation Criteria and Significance Thresholds

The Project would cause a significant impact related to transportation, as defined by the CEQA Guidelines (Appendix G), if it would:

- Conflict with program, plan, ordinance or policy addressing the circulation system, taking into account all modes of transportation including transit, roadway, bicycle, and pedestrian facilities;
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)-*Transportation Projects-VMT*;
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access.

## 3.11.5 Methodology

Transportation impact assessment evaluated the Project against applicable City and County transportation plans and policies, contemporary roadway design standards, and the Project's potential impact on emergency access during construction.

## 3.11.6 Impacts and Mitigation Measures

**Impact TR-a:** **Would the Project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? (Less Than Significant)**

### City of Arcata

The goals and objectives of the Project specifically involve improvement to multi-modal transportation infrastructure, consistent with City plans and policies. The Project is consistent with the City of Arcata's General Plan Transportation Element and its policies (City of Arcata 2008b), which addresses how transit facilities can be planned to achieve maximum individual mobility in a manner consistent with community character and environmental protection, including but not limited to:

*Policy T-1* *Investment in alternative modes of transportation, such as bikeways.*

*Policy T-5* *Upgrade existing bicycle routes to a higher class (Old Arcata Road is included in the City of Arcata's bicycle route system plan.)*

*Policy T-5f* *Prioritize implementation of improved pedestrian facilities and enhancements in areas of the city with the greatest need, including Bayside Road (Old Arcata Road) in the vicinity of Jacoby Creek Elementary School.*

*Policy T-5g* *Provide pedestrian pathways and multi-use trails.*

*Policy T-4b5* *Consider roundabouts as an alternative to new traffic signals.*

Additionally, improvements to bicycle facilities along Old Arcata Road are consistent with the City policy outlined in the Transportation Element and the Arcata Pedestrian and Bicycle Master Plan, as well as the Humboldt Regional Bicycle Plan. The Project would not conflict with City transportation plans and policies.

As a standard requirement, the City would require the Project contractor to develop and implement a temporary Traffic Control Plan outlining work zones, activities, and time needed to complete the work in each zone. As part of the Traffic Control Plan, the Project would be required to keep at least one lane open in each direction of travel on Old Arcata Road at all times during the construction process. Work performed on the segment adjacent to Jacoby Creek Elementary School and Mistwood Education Center at the intersection of Jacoby Creek and Old Arcata Roads would be scheduled in coordination with School Administration and would avoid work coincident with the school's start and end times, when traffic congestion is typically high. Any potential impact would be less than significant.

## Humboldt County

A small portion of the Project Area at the Jacoby Creek Road intersection is located within the jurisdiction of Humboldt County. The Project is consistent with the Humboldt County General Plan Circulation Element (2017) and is supported by the following policies:

– C-P34 Use traffic calming measures where feasible to improve safety for all users, including roundabouts.
– C-1M18 Use roundabouts to ease congestion and provide a safe multi-modal circulation system.

During construction, traffic controls would be implemented. In accordance with jurisdictional requirements, the construction contractor would be required to obtain encroachment permits and temporary traffic control approvals from the City of Arcata and County of Humboldt prior to beginning the work within their respective rights of way. As part of the encroachment permit process, the construction contractor would be required to prepare a traffic control plan for review and acceptance of planned work within the public right of way. The development and implementation of a traffic control plan would include, but not necessarily be limited to: temporary traffic control systems, delineators, signs, and flaggers conforming to the current California Manual of Uniform Traffic Control Devices. Any potential impact would be less than significant. The Project would not conflict with County transportation plans and policies, and an impact would not result.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact TR-b: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? (Less Than Significant)**

Section 15064.3, subdivision (b), of the CEQA Guidelines lists the criteria for analyzing transportation impacts from proposed projects. The criteria are broken into four categories, including land use projects, transportation projects, qualitative analysis, and methodology. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. This section was recently added by the state legislature in an attempt to separate CEQA's purpose and role from traffic or other issues related to ease of use of single occupancy vehicles. For this reason, impacts to parking are not analyzed as an environmental impact in the section or in other areas of this document. For roadway capacity

projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. Because the proposed Project would not increase the length of roadway, add new roadways, or increase the number of travel lanes, there would be no increase in vehicle miles traveled. By promoting multi-modal transportation, the Project would reduce vehicle miles traveled through the Project Area. The impact would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact TR-c: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (No Impact)**

The Project is being designed in accordance with the American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets, 7th Edition (2018). In addition, the Project would be designed in accordance with other specific applicable standards, including the 2014 California Manual on Uniform Traffic Control Devices (CA MUTCD 2020); the 2010 Americans with Disabilities Act (ADA) Standards for Accessible Design; and portions of the 2019 California Building Code and Caltrans Highway Design Manual, 7th Edition (2020). Given that the Project would conform to roadway design requirements and follow a corridor that is generally straight, increases in hazards due to a geometric design feature or incompatible use would not occur. There would be no impact.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact TR-d: Result in inadequate emergency access? (Less Than Significant with Mitigation)?**

Construction activities would primarily occur within the public right of way, including travel lanes on Old Arcata Road, sidewalks, and other areas designated as right of way. During construction, the normal functionality of Old Arcata Road in the Project Area would be altered due to the need for temporary lane closures. The impact would only occur during the day when construction is ongoing given that vehicle access would be restored at the end of each workday through the use of steel trench plates or trench backfilling. However, the lane closures could result in delays for emergency response vehicles or temporarily block access to driveways and cross-streets along the route. The construction impact would be potentially significant without Mitigation Measure TR-1.

Following construction, the Project would be expected to improve overall emergency access as the added lanes would provide more space for emergency response vehicles to go around stopped vehicles and because it would add capacity, thereby reducing congestion that affects emergency response times. The proposed intermittent medians may make turning movements along portions of the corridor more difficult for larger fire response vehicles; however, such conditions are common along roadways with intermittent center medians and emergency response vehicles can cross over medians or navigate around medians through oncoming traffic lanes. The operational impact would be less than significant.

## Mitigation

Mitigation Measure TR-1 would reduce the temporary impact of construction activities on emergency access to a less than significant level by requiring the City and its contractors to have ready at all times the means necessary to accommodate access by emergency vehicles, as well as to notify emergency responders in advance of construction activities.

**Mitigation Measure TR-1: Maintain Emergency Access and Notify Emergency Responders**

The City shall require contractors to provide adequate emergency access to all properties along the corridor during the construction process. At locations where the access to a nearby property is temporarily blocked, the contractor shall be required to have ready the means necessary to accommodate access by emergency vehicles to such properties, such as plating over excavations. As construction progresses, emergency providers shall be notified in advance of the timing, location, and duration of construction activities and the locations and durations of any temporary lane closures.

With implementation of Mitigation Measure TR-1, any potential impact to emergency access during construction would be less than significant.

**Level of Significance:** Less than significant with mitigation

## 3.11.7 Cumulative Impacts

**Impact TR-C-1: Would the Project contribute to a cumulatively significant impact to Transportation?**

Projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust's watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber project, and future Jacoby Creek School classroom improvements.

- The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows under a County bridge on Old Arcata Road. The study and enhancement projects would not involve Old Arcata Road and are unrelated to transportation. The combined projects would not result in a cumulative impact to transportation.
- The VERO Eureka/Arcata Fiber project would be located subsurface, parallel to Old Arcata Road and within the City and County rights of way. The VERO project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. Some portions of the VERO project along Old Arcata Road have already been completed, resulting in minimal soil disturbance to install sub-grade utility boxes in discrete locations, approximately five feet square, alongside the roadway. Construction would not be concurrent, avoiding the potential for compounding lane closures. The project would have no operational transportation impact. Thus, a cumulative transportation impact would not result.
- Planned classroom improvements to the Jacoby Creek School would be located at the western end of the campus, away from Old Arcata Road and behind existing structures facing Old Arcata Road. Construction of the new classrooms and improvements would involve the ingress and egress of construction equipment to the school but would not alter or otherwise involve Old Arcata Road. A cumulative transportation impact would not result.

Given that the Project would not result in any significant transportation-related impact, and that the three projects considered in Table 3-1 do not result in a likelihood for additional transportation impacts in or near the Project Area, the potential for cumulative transportation impacts within the study area would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.11.8 References

American Association of State Highway and Transportation Officials (AASHTO). 2018. *A Policy on Geometric Design of Highways and Streets,* 7th Edition.

California Building Standards Commission. 2020. 2019 California Building Code, Title 24, Part 2, Volume 1 of 2.

California Department of Transportation (Caltrans). 2018. *Highway Design Manual, 6th Edition*.

California Department of Transportation (Caltrans). 2020. *California Manual on Uniform Traffic Control Devices* (CA MUTCD) 2014 Edition Revision 5.

City of Arcata. 2008. Arcata General Plan: 2020, Transportation and Open Space Elements. https://www.cityofarcata.org/DocumentCenter/View/44/Chapter-2-Community-Development---3-Transportation-Element-PDF

City of Arcata. 2010. Pedestrian & Bicycle Master Plan. Department of Public Works. July. http://assessment.walkfriendly.org/fileupload/Apr10_PedBikeMasterPlan-2010-cc.pdf

Humboldt County. 2017. *Humboldt County General Plan Circulation Element.* https://humboldtgov.org/DocumentCenter/View/61999/Chapter-7-Circulation-Element-PDF?_sm_au_=iVVqtqfmN3SZV43M

Humboldt County Association of Governments (HCAOG). 2018. Humboldt Regional Bicycle Plan. http://www.hcaog.net/sites/default/files/final_bike_plan_update_2018_incl_maps.pdf

SHN Engineers and Geologists (SHN) and Omni Means Engineering Solutions. 2017. *Community Charrette for Design Success: Design Charrette and Preliminary Concept Designs Old Arcata Road Improvements Project*.

# 3.12 Tribal Cultural Resources

This section evaluates potential impacts on tribal cultural resources from construction and operation of the Project.

## 3.12.1 Study Area

Consistent with Section 3.4 – Cultural Resources, the study area for the Project, also referred to as the Area of Potential Effects (APE), includes the area that may be directly and indirectly affected by the Project along Old Arcata Road and Jacoby Creek Road. The APE encompasses the entire Project Area, including the Project's area of direct impact (ADI; i.e., the horizontal and vertical limits of proposed ground disturbing activities associated with the Project), and the full extent of three archaeological sites that extend into or are proximate to the Project ADI. The vertical APE varies by Project activity and ranges in depth from one to eight feet.

## 3.12.2 Setting

Tribal cultural resources include resources that are of specific concern to California Native American tribes, with knowledge of such resources limited to tribal people. Refer to Section 3.4 – Cultural Resources, for a discussion of prehistoric or historic archaeological sites, structures, or objects.

## 3.12.3 Regulatory Framework

### Federal

There are no federal regulations which apply to tribal cultural resources.

### State

#### *California Public Resources Code*

*Section 21074*

*California PRC Section 21074 details what can be considered a tribal cultural resource.*

*A) Tribal cultural resources are either of the following:*

*1) Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe that are either of the following:*

*a) Included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR).*

*b) Included in a local register of historical resources as defined in subdivision (k) of PRC Section 5020.1.*

*2) 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.*

*B) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.*

C) *A historical resource described in PRC Section 21084.1, a unique archaeological resource as defined in subdivision (g) of PRC Section 21083.2, or a "nonunique archeological resource" as defined in subdivision (h) of PRC Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).*

### *Assembly Bill 52*

Assembly Bill 52 (AB 52), the Native American Historic Resource Protection Act, sets forth a proactive approach intended to reduce the potential for delay and conflicts between Native American and development interests. Projects subject to AB 52 are those that file a notice of preparation for an Environmental Impact Report or notice of intent to adopt a negative or mitigated negative declaration on or after July 1, 2016. AB 52 adds tribal cultural resources to the specific cultural resources protected under CEQA. Under AB 52, a tribal cultural resource is defined as a site, feature, place, cultural landscape (must be geographically defined in terms of size and scope), sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register of Historical Resources (CRHR) or included in a local register of historical resources. A Native American Tribe or the lead agency, supported by substantial evidence, may choose at its discretion to treat a resource as a tribal cultural resource. AB 52 also mandates lead agencies to consult with tribes, if requested by the tribe, and sets the principles for conducting and concluding consultation.

### *California Environmental Quality Act*

CEQA requires lead agencies to determine if a project would have a significant effect on tribal cultural resources. The CEQA Guidelines define a tribal cultural resource according to California PRC Section 21074.

While some tribal cultural resources include physical archaeological resources, described above, cultural resources are not limited to physical resources that have scientific significance. Tribal cultural resources also include cultural landscapes and non-unique archaeological resources. Non-unique resources are resources that are deemed culturally significant to a tribe, but do not contain information needed for scientific purposes, and may not be the best specimen in terms of quality, uniqueness, or age.

## Local

Most of the Project Area is within the City of Arcata, except for the southern extent which is within Humboldt County jurisdiction. A small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and City Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone. This section also includes Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *City of Arcata General Plan*

There are no goals or policies within the City of Arcata General Plan that regulate tribal cultural resources, see Section 3.4 – Cultural Resources, for a list of goals and policies within the City of Arcata General Plan that regulate cultural resources.

### *City of Arcata – Local Coastal Plan*

There are no policies within the City of Arcata Local Coastal Plan that regulator tribal cultural resources.

### *Humboldt County General Plan*

There are no goals or policies within the Humboldt County General Plan that regulate tribal cultural resources, see Section 3.4 – Cultural Resources, for a list of goals and policies within the Humboldt County General Plan that regulate cultural resources.

***Humboldt Bay Area Plan – Local Coastal Plan***

There are no policies within the Humboldt Bay Area Plan that regulator tribal cultural resources.

## 3.12.4 Evaluation Criteria and Significance Thresholds

Under criteria based on Appendix G of the CEQA Guidelines, the Project would be considered to have a significant impact on a tribal cultural resource if it would cause a substantial adverse change in the significance of a tribal cultural resource, (as defined in PRC Section 21074), that is:

– A resource listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k); or
– 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 PRC Section 5024.1.

## 3.12.5 Methodology

On June 10, 2021, formal AB 52 letters were sent to area tribal governments by the City, to provide notification of the decision to undertake a project and consultation opportunities. The letters were distributed to the Tribal Historic Preservation Officers (TPHOs) at the Blue Lake Rancheria, Wiyot Tribe, and Bear River Band of the Rohnerville Rancheria. The three local area THPOs declined additional formal consultation under AB 52, but did express a desire to continue to refine appropriate avoidance/treatment plans to guide Project Operations. The THPOs have been working with City of Arcata and Caltrans staff to develop an MOU as described in Mitigation Measure CR-1, below. See Section 2.10 – AB 52 Consultation for additional information pertaining to AB 52 processes and outcomes.

As part of the previous Initial Study/Mitigation Negative Declaration (ISMND) prepared for the Project, formal AB 52 notification letters were sent to designated THPOs for the Blue Lake Rancheria, Wiyot Tribe, and Bear River Band of the Rohnerville Rancheria on August 30, 2019. All three tribes responded requesting consultation under AB 52. Formal tribal consultation for the Project was carried out by the City in coordination with Caltrans District 1 Archaeologists on July 19, 2019, September 26, 2019, and October 9, 2019. Completion of the AB 52 process has been formalized in a completion letter to the three local THPOs, dated December 15, 2020.

## 3.12.6 Impacts and Mitigation Measures

**Impact TCR-a,b: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource? (Less Than Significant with Mitigation)**

As a result of formal AB 52 consultation between consulting tribes and the City, as well as findings of cultural resource investigations (see Section 3.4 – Cultural Resources), the City would develop a Memorandum of Understanding (MOU) with the consulting tribes to ensure the protection of cultural resources that may be inadvertently discovered during construction. In order to ensure potential impacts to unknown tribal historic resources that may be present remain less than significant, Mitigation Measure CR-1 would be implemented to include development and implementation of an MOU as an outcome of the AB-52 process. With the implementation of Mitigation Measure CR-1, potential impacts to tribal cultural resources would be less than significant.

### Mitigation

**Mitigation Measure CR-1: Develop and Implement an MOU with Consulting Tribes**

**Level of Significance:** Less than significant with mitigation

## 3.12.7 Cumulative Impacts

**Impact TCR-C-1: Would the Project contribute to a cumulatively significant impact to Tribal Cultural Resources?**

Cumulative effects analysis examines the current project effects taken together with effects of past projects and known projects in the foreseeable future. Future projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust's watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber project, and future Jacoby Creek School classroom improvements.

– The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows under a County bridge on Old Arcata Road. Future enhancement project locations within the lower watershed have not yet been identified and may or may not be located within proximity to the Project Area. It is unknown if enhancement projects would involve any tribal cultural resources. Delineated archaeology resources evaluated by the Project do not extend outside the APE and thus would not be affected by the Jacoby Creek watershed planning study and associated enhancement projects. As the Project would not involve any tribal cultural resources, a potential cumulative impact would not result.
– The VERO Eureka/Arcata Fiber project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. The fiber cable would be located subsurface, parallel to Old Arcata Road and within the City and County rights-of-way. Some portions of the VERO project along Old Arcata Road have already been completed, resulting in minimal soil disturbance to install sub-grade utility boxes in discrete locations, approximately five feet square, alongside the roadway. Construction to date was monitored by the Caltrans archaeologist and tribal cultural monitors. Sub-surface tribal cultural resources were not identified during monitoring. As the Project would not involve any tribal cultural resources, a potential cumulative impact would not result.
– Planned classroom improvements to the Jacoby Creek School would be located at the western end of the campus, away from Old Arcata Road. Improvements would not include any two-story structures. Classroom improvements and new construction could potentially be located in an archaeologically sensitive setting. Depending on the depth of necessary ground disturbance and the context of any ground disturbance which have already occurred to date, new construction could have the potential to impact cultural resources. As part of the Project's CEQA process, a Mitigation Monitoring and Reporting Plan (MMRP) was developed to protect any potential cultural or tribal historic resources on the school campus. With implementation of the MMRP, significant impacts to cultural and tribal cultural resources would be avoided. Thus, any potential cumulative impact resulting from the two combined projects would be less than significant.

In sum, the Old Arcata Road Improvements Project, taken together with past and foreseeable future projects, would not cause a cumulative adverse effect to tribal cultural resources. Given that the Project would not result in any significant impacts to tribal cultural resources, and that the three projects considered in Table 3-1 would not significantly affect tribal cultural resources in the Project Area, the potential for cumulative impacts to tribal cultural resources would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.12.8 References

None

# 3.13 Utilities and Service Systems

This section evaluates the potential impacts related to utilities and service systems resulting from construction and operation of the Project. To provide the basis for this evaluation, the Setting section describes the utilities setting. The Regulatory Framework section describes the regulatory background that applies to the Project. The Impact Analysis section establishes the thresholds of significance, evaluates potential impacts to utilities and service systems, and identifies the significance of impacts.

## 3.13.1 Study Area

The Project Area is the study area for utilities and service systems, bounded by the roadway prism. Adjacent infrastructure (pipes, drainage systems) are included. Historic drainage issues within the Project Area and surrounding parcels constitute baseline conditions..

## 3.13.2 Setting

The Project Area contains surface level electricity and internet infrastructure owned and maintained by Pacific Gas and Electric Company (PG&E) and Suddenlink, respectively, and ad hoc stormwater conveyance ditches. Garbage and recycling is collected curbside weekly by Humboldt Waste Management Authority. Subsurface water and wastewater piping exist along Old Arcata Road which serves the community. Implementation of the Project would not involve the removal of electricity power poles or subsurface water and wastewater piping, although the Project may require minor modifications/disturbance to water/wastewater pipes if encountered during construction activities. The Project would not permanently modify stormwater conveyance ditches; however, stormwater pathways would be improved as a result of the Project. Garbage and recycling pick up would remain in operation during Project implementation and would be collected in accordance with other temporary traffic control methods (such as one lane of traffic with flaggers). Mail delivery would remain in operation during project construction and would also be collected in accordance with other temporary traffic control methods.

## 3.13.3 Regulatory Framework

### Federal

There are no federal regulations governing utilities that apply to the Project.

### State

#### *California Integrated Waste Management Act*

The California Integrated Waste Management Act (CIWMA), also known as Assembly Bill 939, required each jurisdiction in the state to divert 50 percent of its solid waste from landfill or transformation facilities by 2000, and established a statewide diversion of 75% by 2020 for all municipal solid waste. The CIWMA also required each County to prepare a Countywide Integrated Waste Management Plan (CoIWMP), which is the main planning document for solid waste management in each County. Humboldt County's CoIWMP is the principal planning document for solid waste management in the County, addressing source reduction, household hazardous waste, and countywide landfill capacity needs.

#### *Utility Notification Requirements*

Title 8, Section 1541 of the California Code of Regulations requires excavators to determine the approximate locations of subsurface installations such as sewer, telephone, fuel, electric, and waterlines (or any other subsurface installations that may reasonably be encountered during excavation work) prior to opening an

excavation. The California Government Code (Sections 4216 et seq.) requires owners and operators of underground utilities to become members of and participate in a regional notification center. According to Section 4216.1, operators of subsurface installations who are members of, participate in, and share in the costs of a regional notification center are in compliance with this section of the code. Underground Service Alert North (USA North) receives planned excavation reports from public and private excavators and transmits those reports to all participating members of USA North that may have underground facilities at the location of excavation. At this point, members of the regional notification center would mark or stake their facilities, provide information, or give clearance to dig (USA North 2014).

### *California Public Utilities Commission*

The California Public Utilities Commission (PUC) regulates privately owned electric, natural gas, communications, water, sewer utilities, railroads, and passenger transportation companies in the State. Regulations are established that ensure the public safety and reasonable rates. The PUC does not regulate personal private utility systems (such as individual water wells, solar panels, private roads, etc.), or private utility associations (such as Community Service Districts).

## Local

Most of the Project Area is within the City of Arcata, except for the southern extent which is within Humboldt County jurisdiction. A small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and City Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone. This section also includes Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

### *City of Arcata General Plan*

The City of Arcata General Plan contains guidelines for utilities and service systems within the Public Facilities and Infrastructure Element. The following policies from the Arcata General Plan are applicable to the proposed Project.

> *PF-3: Soils and Mineral Resources*
>
> *Implement the City's drainage master plan to utilize natural drainage systems; minimize increases in stormwater runoff, flooding, and erosion; maintain the integrity of stream hydrology; reduce pollutant loads; and acquire easements and properties for effective drainage management.*
>
> *Applicable sub-policies:*
>
> - ***PF-3b:*** *Control of stormwater runoff, flooding and erosion – Stormwater runoff, especially at peak flows, can cause significant flooding and erosion if adequate precautions have not been taken. As stated in the Drainage Master Plan, the City shall manage the storm and surface water system in Arcata to maintain a hydrologic balance in order to protect water quality, prevent property damage, provide for the safety and enjoyment of citizens, and preserve and enhance habitat and sensitive areas.*
> - ***PF-3c:*** *Stormwater quality – Enforce surface water controls, facilities such as detention basins and natural infiltration areas, and education programs to protect surface and ground-water quality.*
> - ***PF-3d:*** *City drainage system – The City shall take a comprehensive approach to drainage system management in order to effectively control the quantity of stormwater runoff, assure water quality, and reduce potential flood damage from peak flows. As stated in the City Drainage Master Plan, the City shall gradually expand the City managed drainage system to:*

1. *Continue maintenance of all drainage facilities within public right-of-way, regardless of size.*
2. *Extend responsibility onto private property only when permanent easements are dedicated or otherwise available from the private property owner, and need is established based on technical criteria.*
3. *Define service limits upstream of the City as the point at which runoff from a publicly (not county) dedicated street enters the drainage system, or when a drainage feature needs repairs/improvements which have public benefits that exceed the cost of said repairs/improvements.*

*PF-5: Public Facilities*

*Provide adequate facilities for services and programs administered by the City and other public service providers, including City administrative and meeting facilities (City Hall), police and fire departments, libraries, and community centers.*

*Applicable sub-policies:*

- ***PF-5e**: Maintenance of City streets and rights-of-ways – The City's streets and right-of-ways shall be adequately maintained for public use. Utilities within rights-of-way shall be placed underground, when feasible, to reduce obstructions such as poles and above-grade utility boxes on sidewalks. Pavement and landscape management programs shall be periodically reviewed and prioritized.*

*PF-6: Integrated Waste Management*

*Reduce solid waste generation at the source; maximize re-use and repair of appropriate items and material; promote composting and recycling; and properly transport non-recyclable solid waste to approved disposal sites.*

### *City of Arcata – Local Coastal Plan*

There are no policies within the City of Arcata's Local Coastal Plan that regulate utilities and service systems within the City's jurisdiction of the Coastal Zone.

### *Humboldt County General Plan*

The goals and policies within the Humboldt County General Plan that regulate utilities and service systems include the following:

*IS-P16. Water and Wastewater System Capital Improvement Programs*

*Support the efforts of service providers to develop and maintain capital improvement programs for construction of water and wastewater systems.*

*IS-P17. On-site Sewage Disposal Requirements*

*Maintain regulations governing construction and maintenance of on-site sewage disposal systems to protect health and safety and to reflect changes in state law and advances in treatment technologies. Recognize and allow the use of alternative onsite sewage disposal systems that meet state standards.*

*WM-G1. Comprehensive System.*

*A flexible system for the management of solid wastes and waste resources on a countywide basis, which encompasses storage, collection, separation, processing, reduction, reuse and repair, recycling, recovery, marketing, and, when necessary, landfill disposal.*

*WM-G3. Reduce Waste Toxicity.*

*A low toxicity waste stream that reduces risk of exposure to residents, solid waste and recycling industry workers, and the environment.*

*WR-P28. Conservation and Re-use Strategy.*

*Promote the use of water conservation and re-use as a strategy to lower the cost, minimize energy consumption, and maximize the overall efficiency and capacity of public and private water systems. Encourage the installation of water storage, rain catchment and graywater systems to support domestic and outdoor water needs. Encourage and support conservation for agricultural activities that increase the efficiency of water use for crop irrigation and livestock. Support the use of treated water for irrigation, landscaping, parks, public facilities, and other appropriate uses and coordinate with cities and other wastewater treatment entities in planning uses and minimizing impacts for treated water in unincorporated areas. Avoid water reuse that could adversely affect the quality of groundwater or surface water.*

***Humboldt Bay Area Plan – Local Coastal Plan***

The Humboldt Bay Area Plan contains requirements related to the siting of regional electrical transmission lines and the installation of oil and natural gas pipelines. However, these requirements do not pertain to the development of individual sites like the proposed Project.

## 3.13.4 Evaluation Criteria and Significance Thresholds

The Project would be considered to have a significant impact on utilities and service systems if it would result in any of the following:

- Substantial adverse physical impacts associated with the provision of, or need for, new or physically altered governmental facilities such as drinking water, sewer and waste water, recycling, electrical sub-stations, or solid waste facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, and/or other public facilities;
- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- 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;
- 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; or
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

## 3.13.5 Methodology

Project activities relating to utilities include new and upgraded storm drain piping, stormwater swales catch basins, and junction boxes. New storm drain pipe, catch basins, and junction boxes are proposed in the following locations:

- The west side of Old Arcata Road from Jacoby Creek School south to approximately 100 feet south of Golf Course Road;

– The west side of Old Arcata Road across from Noga Lane;
– The west side of Old Arcata Road across from and extending approximately 200 feet south of Spring Hill Lane; and
– The perimeter of the proposed roundabout.

Stormwater swales would be integrated into the vegetated median between Old Arcata Road and the enhanced and newly constructed pathway, as well as vegetated areas surrounding the proposed roundabout. Existing sewer laterals may be replaced with new cleanouts. Water service connections may also be updated, along with resetting and/or installing water meters. Electrical infrastructure would be required to power the proposed street lighting at the proposed roundabout. These planned Project elements were analyzed against the Evaluation Criteria in Section 3.13.4 to determine the level of impact. Given the Project's potential impacts to utilities and service systems would not be significantly impactful and the Project would not increase demand for new or expanded utilities or service systems, as analyzed below, specific technical studies to evaluate utilities and service systems were not required.

## 3.13.6 Impacts and Mitigation Measures

**Impact UTL-a:** **Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? (No Impact)**

The Project includes new stormwater drainage facilities, including roadside stormwater swales and storm drain piping. The potential environmental impacts associated with construction of the new and/or upgraded utilities are evaluated in this section, as detailed in Section 3.13.5. The following subject areas relate to the proposed storm water drainage facilities, and are evaluated in other sections of this EIR:

– Potential impacts related to biological resources are evaluated in Section 3.3 (Biological Resources).
– Potential impacts related to cultural resources are evaluated in Section 3.4 (Cultural Resources).
– Potential impacts related to hydrology and water quality are evaluated in Section 3.9 (Hydrology and Water Quality).

No additional stormwater drainage facilities or expansion of existing facilities beyond those identified in Section 3.13.5 – Methodology and evaluated in this EIR would be required. Proposed stormwater improvements would upgrade the existing ad hoc stormwater ditches with a formal stormwater system consistent with contemporary design and drainage standards in specific locations in the Project Area, including new sub-surface catch basins and junction boxes. Improvements to sub-surface City water and sewer pipelines within the Project Area would replace and upgrade existing utility infrastructure within approximately the same footprint and/or general area but would not expand service. Alterations to the City's drinking water or waste water treatment plants, or associated sub-stations, would not be required as a result of the Project.

Following the finalization of the Project design, there is one Pacific Gas & Electric (PG&E) power pole within the public right of way that may need to be relocated to a nearby location, also within the public right of way. If required to be relocated, the power pole would not be relocated to an area where wetland impacts or impacts to sensitive habitats would result. Replacing the single pole, if required, would not result in an expansion of electric service.

The Project would not involve alteration of natural gas, electrical power, or telecommunications systems. Given the Project would improve stormwater drainage, and replace existing aging water and sewer lines with new piping in approximately the same footprint without an expansion of service that would require new or expanded utility or service system infrastructure, no impact would result. The potential need to relocate the PG&E power pole to a nearby location would not expand electric service. Additional potential impacts would not result.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No Impact

**Impact UTL-b: Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years? (No Impact)**

During construction, City water supplies could potentially be used for dust control and other activities. Construction-related water demands would be short-term and minimal in volume and would be sufficiently served by existing entitlements. Following construction, the Project would not directly or indirectly induce population growth and would not result in an increased demand for water. The City's water utility system would not be expanded. Therefore, no new entitlements or facilities would be required. No ongoing long-term increased demand to water supply would result. No impact would result.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No Impact

**Impact UTL-c: Would the Project 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? (No Impact)**

Following construction, the Project would not directly or indirectly induce population growth and would not increase the amount of wastewater generated. The Project would install new and upgraded sewer laterals and associated connectors along a portion of Old Arcata Road; however, the replaced sewage infrastructure would not increase wastewater generation or capacity. Because there would be no increase in wastewater discharges, the Project would not impair the ability of the City of Arcata Wastewater Treatment Plant to continue serving existing commitments. No impact would result.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No Impact

**Impact UTL-d: Would the Project 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)**

Construction of the Project would result in a temporary increase in solid waste disposal needs associated with demolition and construction wastes. Construction wastes would include, but not be limited to, demolished asphalt pavement, concrete, small tree/shrub removal, and excavated soils. Many of these materials can be delivered to facilities for recycling, composting or reuse. Construction waste with no practical reuse or that cannot be salvaged, composted or recycled would be disposed of at a local transfer station. Asphalt grindings associated with construction would be recycled, similar to all City projects. Active permitted in-County transfer stations include the Humboldt Waste Management Authority facilities in Eureka or Samoa, California and Humboldt Sanitation's McKinleyville, California transfer station. Solid waste generated by the Project would represent a small fraction of the daily permitted tonnage of these facilities. This would be a less than significant impact on landfill capacity with the implementation of federal, state, and local statutes and regulations related to solid waste. Therefore, the Project's construction-related solid waste disposal needs would be sufficiently accommodated by existing landfills, and the impact would be less than significant. Following construction, Project operation would not generate additional solid waste. No operational impact would occur.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact UTL-e: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (No Impact)**

There are no federal solid waste regulations that would apply to the Project. At the State level, the Integrated Waste Management Act mandates a reduction of waste being disposed and establishes an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance. The Project would not conflict with or impede implementation of such programs. Following construction, Project operation would not generate additional solid waste. Therefore, no construction or operational impacts would occur.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No Impact

## 3.13.7 Cumulative Impacts

**Impact UTL-C-1: Would the Project contribute to a cumulatively significant impact to Utilities and Service Systems?**

Projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust's watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber project, and future Jacoby Creek School classroom improvements.

- The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows under a County bridge on Old Arcata Road. Future enhancement project locations within the lower watershed have not yet been identified and may or may not be located within proximity to Old Arcata Road. Any such enhancements to the stream corridor would not involve utilities and service systems and would generate only minimal construction waste. A cumulative impact to utilities and service systems would not result.
- The VERO Eureka/Arcata Fiber project would be located subsurface, parallel to Old Arcata Road and within the City and County rights-of-way. The VERO project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. Some portions of the VERO project along Old Arcata Road have already been completed, resulting in minimal soil disturbance to install sub-grade utility boxes in discrete locations, approximately five feet square, alongside the roadway. The project would not interfere or involve other subsurface utilities in the roadway right of way, such as water, power, and sewer, nor would the project generate substantial amounts of solid waste. Potential cumulative impacts related to utilities and service systems would not result.
- Planned classroom improvements to the Jacoby Creek School would be located at the western end of the campus, away from Old Arcata Road and behind existing structures facing Old Arcata Road. Construction related to the planned improvements would be short-term in duration and consistent with low level construction intensity. Classroom improvements and new construction would not conflict with other utilities and service systems in the Project Area, such as water, power, and sewer, nor would the improvements and new classrooms generate substantial amounts of solid waste. Potential cumulative impacts related to utilities and service systems would not result.

Given that the Project would not result in any significant impacts to utilities and service systems, and that the three projects considered in Table 3-1 would not significantly impact utilities and service systems in or near the Project Area, the potential for cumulative impacts to utilities and service systems within the study area would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.13.8 References

None

# 3.14 Wildfire

This section evaluates the potential impacts related to wildfire resulting from construction and operation of the Project. To provide the basis for this evaluation, the Setting section describes the wildfire setting. The Regulatory Framework section describes the regulatory background that applies to the Project. The Impact Analysis section establishes the thresholds of significance, evaluates potential impacts to wildfire, and identifies the significance of impacts.

## 3.14.1 Study Area

The study area for wildfire includes the Project Area and surrounding vicinity.

## 3.14.2 Setting

A wildfire is a non-structural fire that occurs in vegetative fuels, excluding prescribed fire. Wildfires can occur in undeveloped areas and spread to urban areas where the landscape and structures are not designed and maintained to avoid sparking fire. A wildland-urban interface is an area where development is located in proximity to areas prone to wildland fire. More specifically, the wildland-urban interface exists when a certain set of conditions are present. The National Fire Protection Agency states that these conditions include, but are not limited to, the amount, type, and distribution of vegetation; the flammability of structures in the area and their proximity to fire-prone vegetation and to other combustible structures, weather patterns and general climate conditions, topography, hydrology, and average lot size (NFPA 2009).

Vegetation acts as the main source of fuel for a potential wildfire. Areas with limited vegetation have a lower risk for wildfires to occur, therefore areas near open spaces may be more likely to experience a wildfire. Climate conditions such as wind, temperature, and humidity are all factors generally used to predict fire behavior. Wind increases the flammability of fuels by removing moisture through evaporation. During a wildfire, wind can carry embers, increasing the fire's range. Higher temperatures and low humidity are also indicative of higher fire risk, increasing flammability of vegetation. Topographic features such as slope as well as overall form of the land effects fire behavior, specifically its intensity, direction, and rate of spread. Fires in flat or gently sloping areas tend to burn slower. Existing hydrology can also have an impact, as streams and rivers tend to channel winds, which can accelerate the fire's speed and direction. The presence of large hydrological features tends to increase humidity and can make it more resistant to the effects of fire (Humboldt County 2019).

The study area is located primarily within the Arcata Fire District. In responding to emergencies, local fire departments work closely with law enforcement, public utilities, the County Office of Emergency Services, and ambulance companies. The California Department of Forestry and Fire Protection (CAL FIRE) identifies fire hazard severity zones and Local Responsibility Areas (LRA) throughout California. The majority of the study area is located within an LRA and is ranked as having a moderate fire hazard severity index. The eastern and southern extent of the Project Area (near the intersection of Jacoby Creek Road and Old Arcata Road) is located within the State Responsibility Area and is also ranked as having a moderate fire hazard severity index (CAL FIRE 2007).

## 3.14.3 Regulatory Framework

### Federal

The federal government is responsible for responding to wildfires that are on federal lands. The Department of the Interior (DOI) manages wildfire response for more than 400 million acres of national parks, wildlife refuges and preserves, other public lands and Indian reservations. The U.S. Forest Service (USFS) carries out wildfire management and response across the 193 million acres of the National Forest System. The Samoa Dunes

Recreation Area, located three miles southwest of the Project site, is managed by the Bureau of Land Management (BLM) and is in the Federal Responsibility Area.

## State

### *California Department of Forestry and Fire Protection (CAL FIRE)*

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. CAL FIRE responded to 9,069 wildfire incidents in 2020, which burned a total of 4,193,364 acres (CAL FIRE 2020).

Pursuant to Public Resources Code (PRC) Sections 4201-4204 and Government Code Sections 51175-89, CAL FIRE has created Fire Hazard Severity Zone (FHSZ) maps for the state that identify areas that are within state or local responsibility areas for preventing or suppressing fires. These maps identify areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. The FHSZ zones then define the application of various mitigation strategies to reduce risks associated with wildland fires. State Responsibility Areas were originally mapped by CAL FIRE in 1985 and LRAs in 1996. Within State Responsibility Areas, the Director of CAL FIRE has designated areas as moderate, high and very high fire hazard severity zones (PRC Section 4202.) Outside of State Responsibility Areas but within LRAs the Director of Cal Fire was charged with recommending the locations of very high fire hazard severity zones (VHFHSZ). (Government Code Section 51178.)

### *State of California Emergency Response Plan*

California has developed the State of California Emergency Response Plan to coordinate emergency services provided by federal, state, and local government agencies. The plan is administered by the State Office of Emergency Services (OES), which coordinates the responses of other agencies such as local fire and police agencies, emergency medical providers, California Highway Patrol (CHP), the CDFW and Caltrans (CGOES 2017).

### *California Public Resources Code*

The California PRC sets forth fire safety regulations that include the following:

– Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC Section 4442).
– Appropriate fire suppression equipment must be maintained during the highest fire danger period – from April 1 to December 1 (PRC Section 4428).
– On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor must maintain the appropriate fire suppression equipment (PRC Section 4427).
– On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines must not be used within 25 feet of any flammable materials (PRC Section 4431).

## Local

Most of the Project Area is within the City of Arcata, and the western portion of the Project Area (bisected by Old Arcata Road) is also within the Coastal Zone. The southern extent of the Project Area is within Humboldt County jurisdiction, and a small portion of the Project within County jurisdiction is also within the Coastal Zone, at the intersection of Jacoby Creek Road and Old Arcata Road. Therefore, this section includes City of Arcata General Plan and City Local Coastal Program policies for the portions of the Project within City limits and within the Coastal Zone, the Humboldt County General Plan policies for the area within County jurisdiction, and regulations from the County's Local Coastal Program - Humboldt Bay Area Plan for the area co-located within County jurisdiction and within the Coastal Zone.

***City of Arcata General Plan***

The following policies from the City of Arcata General Plan address wildfire:

*PS-1: Emergency Preparedness*

*Ensure that the City, its residents, businesses, agencies, and organizations are prepared for emergencies or disasters and have effective response and recovery plans in place.*

*Applicable sub-policies:*

- ***PS-1a:*** *City Emergency Response Plan – The City shall maintain a comprehensive response plan for emergencies, including seismic events, tsunamis, slope failures, floods, storms, fires, and materials spills or contamination. The plan will provide for timely and coordinated response to emergencies that threaten community residents, property, and vital services. The plan will identify City and other emergency response agencies that should be contacted, and also identify neighborhood resources available for more localized assistance and relief.*
- ***PS-1b:*** *Evacuation routes/transportation facilities – Emergencies such as floods, storms, fires, distantly generated tsunamis, and hazardous materials spills may necessitate immediate evacuation of affected areas. A map of evacuation routes shall be included in City and neighborhood emergency response plans. These plans will also include evacuation methods for residents who are without, or unable to operate, vehicles. An emergency access plan shall be developed for access to the east side of town (east of State Route 101) after a major seismic event.*
- ***PS-1e:*** *Development & design standards for emergency response – New and renovated structures, as well as streets, driveways, and alleyways, shall be designed to provide adequate entry and exit by emergency vehicles and personnel. This includes visible street numbering, emergency vehicle turn-arounds, accessible building entry points and stairways, lighting, and interior evacuation routes.*

*PS-5: Fire Hazards*

*Minimize risk of personal injury and property damage resulting from structural (urban) and wildland fires. Applicable sub-policies:*

- ***PS-5b:*** *Review of development for fire safety – The Arcata Volunteer Fire Department takes an active role in reviewing new development for compliance with fire safety standards. The City shall continue to incorporate Fire Department review to ensure that driveways, turns-arounds, and other access ways have sufficient width, vertical clearance, and turn-around space for fire fighting vehicles. Roadways shall have an all-weather surface and grades shall not exceed the Fire Department's maximum slope standards for emergency access.*
- ***PS-5c:*** *Water supply (fire flow) – The City's fire hydrant system provides the primary source of water for fighting urban fires. The City shall maintain fire hydrant spacing so that no residential structure is more than 500 feet from a hydrant and no commercial or industrial structure is more than 300 feet from a hydrant. Each hydrant shall have adequate fittings and be capable of providing adequate water flows to meet Fire Department standards. The City shall maintain adequate fire flows in its water system. Open-water sources such as ponds, swimming pools, private storage tanks, and reservoirs may be used as a secondary water source by fire-fighting apparatus. These sources shall be equipped with appropriate filtering devices or strainers to prevent clogging of water pumps.*
- ***PS-5e:*** *Fire suppression services – The Arcata Volunteer Fire Department's (AVFD) jurisdiction (shown as District #1 on the AVFD service area map) includes the City's incorporated, sphere of influence, and planning areas, except for an outlying area along Jacoby Creek Road. The AVFD maintains two fire stations to provide rapid response to all fire calls within its service area. They also maintain mutual aid agreements with the CDF and the Eureka Fire Department for rapid response to fires in outlying areas.*

***City of Arcata – Local Coastal Plan***

There are no applicable policies in the City of Arcata Local Coastal Plan pertaining to wildfire.

***Humboldt County General Plan***

The goals and policies within the Humboldt County General Plan that regulate wildfire include the following:

*S-G4. Fire Risk and Loss*

*Development designed to reduce the risk of structural and wildland fires supported by fire protection services that minimize the potential for loss of life, property, and natural resources.*

*S-P1. Reduce the Potential for Loss*

*Plan land uses and regulate new development to reduce the potential for loss of life, injury, property damage, and economic and social dislocations resulting from natural and manmade hazards, including but not limited to, steep slopes, unstable soils areas, active earthquake faults, wildland fire risk areas, airport influence areas, military operating areas, flood plains, and tsunami run-up areas.*

*S-P17. Joint Planning and Implementation*

*The County shall plan collaboratively with local fire agencies and companies, Cal Fire, and federal fire organizations on countywide fire prevention and response strategies. Implementation shall be coordinated to maximize efficiency and ensure efforts are complimentary.*

*S-P19. Conformance with State Responsibility Areas Fire Safe Regulations*

*Development shall conform to Humboldt County State Responsibility Area Fire Safe Regulations.*

*S-P22. Prescribed Burning*

*Encourage the use of prescribed burning as a management tool for hazardous fuels reduction, timber management purposes, livestock production, and enhancement of wildlife habitat.*

*S-P23. Hazardous Fuel Reduction*

*Encourage land management activities that result in the reduction of hazardous fuels and also support timber management, livestock production, and the enhancement of wildlife habitat, through the use of prescribed burning, hand or mechanical methods, firewise plants, biomass utilization, and animal grazing.*

*S-P24. Fire Safe Education*

*Expand fire prevention and mitigation education capacity in the county.*

*RL-P4. Fire Safety Hazards*

*Support implementation of State Responsibility Area Fire Safe Standards and Wildland-Urban Interface Building Codes for new development and voluntary programs for fuels reduction, dwelling fire protection and creation of defensible space for existing development.*

***Humboldt Bay Area Plan – Local Coastal Plan***

There are no applicable policies in the Humboldt Bay Area Plan pertaining to wildfire.

***Humboldt County Emergency Operation Plan***

The Humboldt County Emergency Operation Plan (EOP) addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security

emergencies in or affecting Humboldt County (Humboldt County 2015). The Federal Emergency Management Agency (FEMA) approved the Humboldt Operational Area Hazard Mitigation Plan on March 20, 2014. The EOP addresses integration and coordination with other governmental levels when required. The EOP accomplishes the following:

– Establishes the emergency management organization required to mitigate any significant emergency or disaster affecting Humboldt County.
– Identifies the policies, responsibilities, and procedures required to protect the health and safety of Humboldt County communities, public and private property, and the environmental effects of natural and technological emergencies and disasters.
– Establishes the operational concepts and procedures associated with field response to emergencies, County Emergency Operations Center (EOC) activities, and the recovery process.

***Humboldt County Community Wildfire Protection Plan***

The Humboldt County Community Wildfire Protection Plan (CWPP) serves as the guiding document for the work of the Humboldt County Fire Safe Council. It is a planning tool to help secure funding for numerous projects that have helped residents and community groups prepare for the impacts of wildfire. The CWPP contains six goal areas:

1. Wildfire Ignition Prevention: Reduce human-caused wildfire ignitions;
2. Wildfire Preparedness: Increase community resilience and adaptation to wildfire;
3. Disaster Preparedness: Increase resident's ability to effectively prepare for and survive wildfire;
4. Fire Protection: Support fire protection for people, property, communities, and natural resources;
5. Restoration of Beneficial Fire: Restore beneficial fire at the landscape level;
6. Integrated Planning: Maximize integration of planning efforts to improve community; and ecosystem resilience to wildfire.

The CWPP breaks the county down into 14 planning units in order to gain community feedback and to create individual plans relevant to the particular community, of which the Humboldt Bay is a planning unit. This unit covers all areas within the greater Humboldt Bay Area. The Humboldt Bay Area Plan (Plan) identifies: community assets and values at risk, the wildfire environment, fire protection capabilities, evacuation, community preparedness, wildfire prevention plans, community identified potential projects, and an action plan. The Plan states that evacuation routes within the Humboldt Bay Planning Unit will depend on the location of the community at risk and law enforcement recommendations based on fire behavior, wind patterns, traffic, and ingress of emergency vehicles (Humboldt County 2019). Evacuation from within this unit will take place traveling either north or south along Highway 255.

A Fire Safe Council (FSC) is a public and private organization that comprise a council intended to minimize the potential for wildfire damage to communities and homeowners, while also protecting the health of natural resources. The Firewise Communities/USA Recognition Program teaches people living in the Wildland Urban Interface (WUI) how to adapt to living with wildfire by preparing for a fire before it occurs. This program empowers communities with tools and resources for reducing their wildfire risk and encourages neighbors to work together to take action to minimize losses from wildfire. In 2002, the Humboldt County Board of Supervisors formed the Humboldt County FSC, which produced the CWPP discussed above (Humboldt County 2019). No local FSC or recognized Firewise communities exist within the Humboldt Bay Planning Unit.

## 3.14.4 Evaluation Criteria and Significance Thresholds

Under criteria based on Appendix G of the CEQA Guidelines, the Project would result in a significant impact if it was located in or near a State Responsibility Area or lands classified as very high fire hazard severity zones, and would result in any of the following:

- Substantially impair an adopted emergency response plan or emergency evacuation plan;
- 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;
- 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 the temporary or ongoing impacts to the environment; or
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes.

The following sections describe the anticipated environmental impacts due to wildfire risks from the Project.

## 3.14.5 Methodology

Impact assessment considered the CAL FIRE fire hazard responsibility zones attributed to the Project Area, as well as environmental and topographical characteristics of the built and natural environment within the study area. The entire Project is located on lands near or within the State Responsibility Area for fire protection. The portion of the Project located within the City of Arcata jurisdiction is not within the State Responsibility Area; however, the portion of Project that is within the jurisdiction of Humboldt County, nearest Jacoby Creek Road, is within the State Responsibility Area.

## 3.14.6 Impacts and Mitigation Measures

**Impact WDF-a: Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan? (No Impact)**

As discussed in Section 3.8 (f), the City of Arcata does not have an independent emergency response plan. The Humboldt County Emergency Operations Plan (Humboldt County 2015) does not designate specific evacuation routes or emergency shelter locations or include policies or procedures with which the Project would conflict. Therefore, the Project would not impair implementation of or physically interfere with the Plan. No impact would occur.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No Impact

**Impact WDF-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? (Less than Significant)**

The Project Area includes very low slopes in the coastal bottomland near Humboldt Bay where coastal winds are common. Fire ignition risk associated with construction activities is low and limited to accidental ignition associated with a potential heavy machinery-related incident. The Project would not otherwise increase exposure to wildfire above existing conditions. The impact would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

**Impact WDF-c: Would the Project 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? (No Impact)**

Repaving of Old Arcata Road would result in a low fire ignition risk, associated with a potential heavy machinery accident (discussed in Section 3.14 (b) above). Ongoing operation and use of the Project corridor after construction is complete would not exacerbate fire risk or impact the environment.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** No impact

**Impact WDF-d: Would the Project 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? (Less than Significant Impact)**

Project construction would not expose people or structures to significant risk. The Project is located in the low-lying, generally flat bottomlands surrounding Humboldt Bay. The immediate Project Area is not forested, although the trees and vegetation are present. The sloped hillside of the Arcata Community Forest is located approximately 0.3 miles east of the Project alignment, nearest the northern endpoint. Because the Project is located in flat bottomlands, risk of flooding or landslides associated with post-fire slope instability or changes in drainage is extremely low. The potential impact is less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.14.7 Cumulative Impacts

**Impact WDF-C-1: Would the Project contribute to a cumulatively significant impact to Wildfire?**

Projects considered for cumulative impacts are identified in Table 3-1 and include the Jacoby Creek Land Trust's watershed planning study and future enhancement activities, the VERO Eureka/Arcata Fiber project, and future Jacoby Creek School classroom improvements.

- The Jacoby Creek watershed planning study would consider the Jacoby Creek channel and adjacent floodplain, which is located 0.4 miles south of the Project Area at the nearest location, where the creek flows under a County bridge on Old Arcata Road. Future enhancement project locations within the lower watershed have not yet been identified and may or may not be located within proximity to Old Arcata Road. Any such enhancements to the stream corridor would most likely be limited to the regulated in-water work window (mid-June through October) and thus short-term in duration. The enhancements would not increase environmental impact risks relative to wildfire. A cumulative wildfire impact would not result.
- The VERO Eureka/Arcata Fiber project would be located subsurface, parallel to Old Arcata Road and within the City and County rights-of-way. The VERO project would be completed in 2021, prior to implementation of the Project in late 2022 and continuing into to 2023. Some portions of the VERO project along Old Arcata Road have already been completed, resulting in minimal soil disturbance to install sub-grade utility boxes in discrete locations, approximately five feet square, alongside the roadway. Given the low-intensity construction methods, significant impacts related to wildfire would likely not result from the VERO project. Potential cumulative impacts related to wildfire would be less than significant.
- Planned classroom improvements to the Jacoby Creek School would be located at the western end of the campus, away from Old Arcata Road and behind existing structures facing Old Arcata Road. Construction related to the planned improvements would be short-term in duration and consistent with low level construction intensity. Classroom improvements and new construction would occur on the developed school campus and would not increase environmental risk relative to wildfire. Any potential cumulative impact related to wildfire would be less than significant.

Given that the Project would not result in any significant wildfire-related impacts, and that the three projects considered in Table 3-1 would not result in a likelihood for significant impacts to wildfire in or near the Project Area, the potential for cumulative wildfire-related impacts within the study area would be less than significant.

**Mitigation Measures:** No mitigation is necessary

**Level of Significance:** Less than significant

## 3.14.8 References

California Department of Forestry and Fire Protection (CAL FIRE). 2007. Fire Hazard Severity Zones in State and Local Responsibility Areas. http://frap.fire.ca.gov/webdata/maps/statewide/fhszs_map.pdf

California Governor's Office of Emergency Services (CGOES). 2017. State of California Emergency Plan. https://www.caloes.ca.gov/PlanningPreparednessSite/Documents/California_State_Emergency_Plan_2017.pdf

Humboldt County. 2015. Emergency Operations Plan – Humboldt Operational Area. https://humboldtgov.org/DocumentCenter/View/51861/Humboldt-County-Emergency-Operations-Plan-2015

Humboldt County. 2017. Humboldt County General Plan. Chapter 14: Safety Element. Available at: https://humboldtgov.org/205/General-Plan

Humboldt County. 2019. Humboldt County Communities Wildfire Protection Plan. via https://humboldtgov.org/2431/CWPP-2019

National Fire Protection Agency. 2009. Safer from the Start A Guide to Firewise-Friendly Developments. https://www.nfpa.org/-/media/Files/Training/certification/CWMS/SaferFromtheStart.ashx?la=en

# 4. Alternatives Description and Analysis

## 4.1 Introduction

This chapter presents the alternatives analysis for the Project. Section 15126.6(a) of the CEQA Guidelines require an Environmental Impact Report (EIR) to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that would foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. In addition, an EIR must identify alternatives that were considered by the lead agency and were rejected as infeasible during the scoping process and should briefly explain the reasons underlying the lead agency's determination (CEQA Guidelines Section 15126 [(c]).

For ease of reference, the project objectives identified in Chapter 2, the Project Description, are repeated below:

- Rehabilitate and reconstruct the roadway pavement, and improve traffic striping and signage
- Improve intersection safety at the intersection of Old Arcata and Jacoby Creek Roads, as well as other intersections within the Project corridor
- Extend pedestrian connectivity from Jacoby Creek Road intersection to Buttermilk Road intersection, and provide for safer routes to schools for students and families
- Increase multimodal transit use by improving bicycle and pedestrian facilities via shared use pathways, re-striped bicycle lanes, improved and extended sidewalks, and enhanced cross walks
- Decrease speed, calm traffic, improve traffic operations, and increase safety at the intersection of Jacoby Creek and Old Arcata Road, an area identified by the Bayside community as unsafe particularly for pedestrians and bicyclists due to speeding vehicles and an uncontrolled intersection
- Create a "gateway" at the southern entrance to Arcata
- Improve subsurface storm drainage infrastructure and accommodate additional City underground utility improvements as needed (water and sewer)
- Maintain consistency with City policies in the Transportation Element of the General Plan and the Bicycle and Pedestrian Master Plan for alternative transportation, and recommendations provided by the Transportation Safety Committee
- Improve traffic operations and pedestrian safety at Hyland Street near Jacoby Creek School
- Implement a project that does not require permanent right of way acquisitions
- Minimize potential environmental impacts to the extent feasible, particularly in the Coastal Zone
- Apply accepted traffic engineering standards to guide selected roadway and safety improvements

One of the alternatives analyzed must be the "No Project" alternative. CEQA Guidelines Section 15126.6(e)(1) states that the purpose of describing and analyzing the no project alternative is "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." The no project analysis is required to "discuss the existing conditions at the time the notice of preparation is published…as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" (Section 15126.6[e][2]).

### 4.1.1 Identifying Project Alternatives

In 2017, the City lead a community design charrette process that involved members of the Bayside and neighboring communities. The design charrette process included the identification of deficiencies and potential improvements of the roadway. The results of the community design charrette led to the development of a Project Study Report (PSR) (City of Arcata 2017). Potential alternatives identified through the charrette process were further described and evaluated by the PSR. The alternatives had similar costs as they included similar features and materials with slightly varying quantities.

The City first prepared an Initial Study/Proposed Mitigated Negative Declaration (ISMND) to comply with CEQA's environmental analysis and disclosure requirements. The ISMND was circulated between January 20, 2021, and February 22, 2021. Written and voicemail comments were received from 39 individuals, agencies, or organizations. As described in Section 1.8 – Areas of Controversy and Key Issues to be Resolved, comments included statements for and against the Project, including the proposed roundabout at the intersection of Jacoby Creek Road and Old Arcata Road. Comments on the ISMND include requests for an alternatives analysis. Potential alternatives raised by the ISMND comments are repeated by comments on the Notice of Preparation, as described below.

A Notice of Preparation (NOP) was circulated for the Project in May of 2021, describing the proposed rehabilitation activities to be conducted within the Project Area. The NOP and comments received during the scoping period can be found in Appendix A and Appendix B, respectively. Comments germane to CEQA received during scoping included:

– Concern about street lighting proposed near the roundabout
– Potential impacts to historical resources
– Concern about the current road condition and the unmet need for bicycle and pedestrian safety
– Support for a T-Intersection alternative
– Support for a roundabout configuration
– Support for additional speed reducing measures, such as speed humps
– Requests for additional speed enforcement measures

Project alternatives have been explored to consider scoping period comments, as well as comments previously received via public comment on the Initial Study/Mitigated Negative Declaration (IS/MND, see Section 1.8 – Areas of Controversy and Key Issues to be Resolved).

## 4.2 Alternatives Considered but Rejected

During the preliminary planning of the Project and the scoping process for the EIR, several alternatives to the Project were evaluated and/or suggested. These alternatives are summarized below and were evaluated to determine if they meet the qualifications for alternatives receiving full EIR analysis, as required under CEQA.

In accordance with CEQA Guidelines Section 15126.6(a), an alternative must meet the following three criteria:

1. The alternative must attain most of a project's basic objectives;
2. The alternative must avoid or substantially reduce the significant environmental impacts of a proposed project; and
3. The alternative must be potentially feasible.

An EIR need not analyze an alternative whose impact cannot be reasonably ascertained and whose implementation is remote and speculative. Furthermore, an EIR need not consider every conceivable alternative, but must consider a reasonable range of alternatives that would foster well-informed decision-making and public participation.

Alternatives for Old Arcata Road were conceived by identifying and developing alternatives the following two main components of the proposed Project: 1) improvements for the corridor road between Buttermilk Lane and Jacoby Creek Road, and 2) the Jacoby Creek Road intersection. The following Project elements would remain applicable to all alternatives except the No Project Alternative:

> The road pavement would overlayed or reconstructed throughout the whole Project Area. the pavement section would include up to 1.33' of class II aggregate base and 0.5' of asphalt concrete. Striping would be done to separate bicycle lanes. The current separated path located in the northern part of the Project Area would be replaced by a 6' wide separated concrete path that meets ADA standards. The path would require approximately 0.5' depth of class II aggregate base and 0.33' of concrete. The vegetated buffer strip between the separated path and the roadway would convey runoff act as a low impact design (LID) feature for stormwater runoff. The northern segment where Bayside Road and Old Arcata Road connect Bayside Road into a shared road with a widened shoulder to accommodate pedestrians.

Rejected Alternative A addresses an alternative configuration for pedestrian and roadway improvements along the Old Arcata Road corridor. Rejected Alternatives B through G address alterative configurations and improvements to the intersection of Old Arcata Road and Jacoby Road.

### 4.2.1 **Rejected Alternative A (Intersection)** Larger Roundabout Footprint

During conceptual design development, unconstrained roundabout footprints were considered. Rejected Alternative A consisted of an unconstrained roundabout footprint that would be larger than the proposed Project's footprint. An unconstrained roundabout footprint would provide improved traffic flow, fastpaths (the fastest any vehicle can navigate through the roundabout, ignoring striping), and truck turning radii. However, the unconstrained roundabout footprints resulted in private property encroachment and increased proximity to the Mistwood Education Center.

Rejected Alternative A was rejected for further consideration because it would not achieve the proposed Project's objectives of implementing a project that does not require permanent right of way acquisitions. An unconstrained roundabout also would have resulted in increased roadway proximity to the Mistwood Education Center, compared to the proposed Project. Additionally, the alternative would not avoid or substantially reduce potential significant impacts of the proposed Project.

### 4.2.2 **Rejected Alternative B (Intersection)** Mini Roundabout Footprint

During conceptual design development, more constrained roundabout footprints were considered. Rejected Alternative B consisted of a more constrained mini roundabout that would have a smaller footprint than the proposed Project's footprint. Mini roundabouts are typically best suited to environments where speeds are already low. Because of the higher approach speeds of both westbound Jacoby Creek Road, and northbound Old Arcata Road (45 MPH and 35 MPH, respectively), special consideration must be given to the mini roundabout placement, and the alignment/geometry of approaching lanes. The central island would also be required to be fully mountable to accommodate trucks and vehicles with larger turning radii.

The result is that although a more constrained roundabout footprint would be smaller than the footprint of the proposed Project, the design configuration would require the roundabout to be positioned such that there is the potential to encroach on private property located to the west. The required alignment and geometry for the approach lanes on Jacoby Creek Road may result in additional encroachment onto private property to the west. A speed hump on Jacoby Creek Road would also be needed to control westbound speeds approaching the intersection. Several driveways may also be impacted, requiring relocation or limited access (e.g., right-in/right-out only) to accommodate required splitter island. The required fully mountable central island to accommodate trucks and larger vehicles which would eliminate opportunities for landscaping in the central island.

Rejected Alternative B was rejected for further consideration because it would not achieve the Project's objectives of implementing a project that does not require permanent right of way acquisitions. A mini roundabout also would likely restrict driveway access to private properties.

### 4.2.3 Rejected Alternative C (Intersection) T Intersection at Jacoby Creek Road, Multi Way Stop Control

Rejected Alternative C included retaining a T intersection at the intersection of Jacoby Creek and Old Arcata, to be controlled by an all-way stop, also called a Multi Way Stop Control (MWSC). However, transportation design analysis determined that the intersection likely would not likely meet applicable engineering guidance criteria for installing additional stop signs, known as warrant criteria (GHD 2021). The intersection falls within both the City of Arcata and the County of Humboldt jurisdiction. While the City of Arcata does have policies/guidelines for MWSC installation, the County does not. Therefore, an initial transportation design analysis was conducted using the guidance provided in Section 2B.07 Multiway Stop Applications of the California Manual on Uniform Traffic Control (CA MUTCD) and City of Arcata's Policy on implementing MWSC Intersections.

The GHD (2021) review of warrant criteria determined that the intersection likely would not meet the key CA MUTCD criteria for justification of a MWSC, including not meeting the minimum volume warrant and not meeting the crash warrants. Per the CA MUTCD, a 'warrant' describes the threshold condition based upon average or normal conditions that, if found to be satisfied as part of an engineering study, shall result in analysis of other traffic conditions or factors to determine whether a traffic control device or other improvement is justified (CalSTA/Caltrans 2014). Additionally, the analysis determined that the intersection would score up to nine points using the City of Arcata's Policy; however, 20 points is needed to warrant consideration of a MWSC.

Therefore, Rejected Alternative C does not meet the CEQA Guidelines requirement of being potentially feasible, and is rejected from further consideration. Additionally, Alternative C was rejected for further consideration because it would not achieve the Project objective to apply accepted engineering standards to guide selected roadway and safety improvements.

### 4.2.4 Rejected Alternative D (Intersection) T Intersection at Jacoby Creek Road with A Traffic Signal

Rejected Alternative D included retaining a T intersection at the intersection of Jacoby Creek and Old Arcata, to be controlled by a traffic signal. However, the GHD (2021) warrant criteria review determined that the intersection likely would not meet applicable engineering guidance criteria for installing a traffic signal.

The transportation design analysis was conducted using the guidance provided in Chapter 4C Traffic Control Signal Needs Studies, Section 4C.02 through Section 4C.10 of the CA MUTCD. Specifically, the following warrants were evaluated for the study intersection based on the collected accident, speed, and traffic volume data:

- Section 4C.02 Warrant 1, Eight-Hour Vehicular Volume:
- Section 4C.03 Warrant 2, Four-Hour Vehicular Volume:
- Section 4C.04 Warrant 3, Peak Hour:
- Section 4C.05 Warrant 4, Pedestrian Volume:
- Section 4C.06 Warrant 5, School Crossing:
- Section 4C.07 Warrant 6, Coordinated Signal System:
- Section 4C.08 Warrant 7, Crash Experience:
- Section 4C.09 Warrant 8, Roadway Network:
- Section 4C.10 Warrant 9, Intersection near a Grade Crossing:

Based on the review of available data in relation to the above warrants, GHD (2021) determined that a traffic signal at the intersection would likely fall short of meeting required warrant criteria. Therefore, Rejected Alternative D does not meet the CEQA Guidelines requirement of being potentially feasible, and is rejected from further consideration. Additionally, Alternative D was rejected for further consideration because it would not achieve the Project objective to apply accepted engineering standards to guide selected roadway and safety improvements.

### 4.2.5 **Rejected Alternative E** Unmodified T Intersection at Jacoby Creek Road with Speed Enforcement

Rejected Alternative E included updating the existing T intersection at the intersection of Jacoby Creek and Old Arcata without modification. Speed enforcement applied to increase speed control in the Project vicinity was suggested by some members of the public as an alternative to a roundabout during public comment on the ISMND prepared for the proposed Project, as well as the EIR scoping. Implementing a speed control option, such installation and use of a traffic enforcement camera or increasing police presence, could be costly. Additionally, traffic enforcement cameras have not be utilized elsewhere in the City of Arcata, and it would be infeasible to have constant police presence at the intersection.

Rejected Alternative E was rejected for further consideration because it would not achieve the following Project objectives: improve intersection safety at the intersection of Old Arcata and Jacoby Creek Roads; increase multimodal use by improving bicycle and pedestrian facilities via improved bicycle lanes, improved and extended sidewalks, and enhanced cross walks; decrease speed, calm traffic, improve traffic operations, and increase safety at the intersection of Jacoby Creek and Old Arcata Road; maintain consistency with City policies in the Transportation Element of the General Plan and the Bicycle and Pedestrian Master Plan for alternative transportation, and recommendations provided by the Transportation Safety Committee; create a “gateway” at the southern entrance to Arcata; and, apply accepted traffic engineering standards to guide selected roadway and safety improvements.

### 4.2.6 **Rejected Alternative F (Intersection)** Historic Old Arcata Road and Jacoby Creek Road Alignment

Rejected Alternative F consists of modifying the intersection of Jacoby Creek Road and Old Arcata Rod to realign the roads and intersection to their original historic alignment, as shown in Image 4-2. The historic alignment was offered as an alternative to a roundabout during public comment on the ISMND and EIR scoping.

The intersection configuration of Rejected Alternative F is not consistent with current uses, including the post office, pump station, and contemporary traffic volumes. The historic alignment would realign traffic adjacent to the Mistwood Education Center and the Bayside Post Office. Additionally, implementation of a historic alignment alternative would include a sharp horizontal curve of Old Arcata Road, which would likely require an all-way stop due to reduce turning and speed hazards.

Rejected Alternative F was rejected for further consideration because it would not achieve the following Project objectives: improve intersection safety at the intersection of Old Arcata and Jacoby Creek Roads; increase multimodal use by improving bicycle and pedestrian facilities via improved and extended sidewalks, and enhanced cross walks; decrease speed, calm traffic, improve traffic operations, and increase safety at the intersection of Jacoby Creek and Old Arcata Road; maintain consistency with City policies in the Transportation Element of the General Plan and the Bicycle and Pedestrian Master Plan for alternative transportation, and recommendations provided by the Transportation Safety Committee; create a “gateway” at the southern entrance to Arcata; and, apply accepted traffic engineering standards to guide selected roadway and safety improvements.

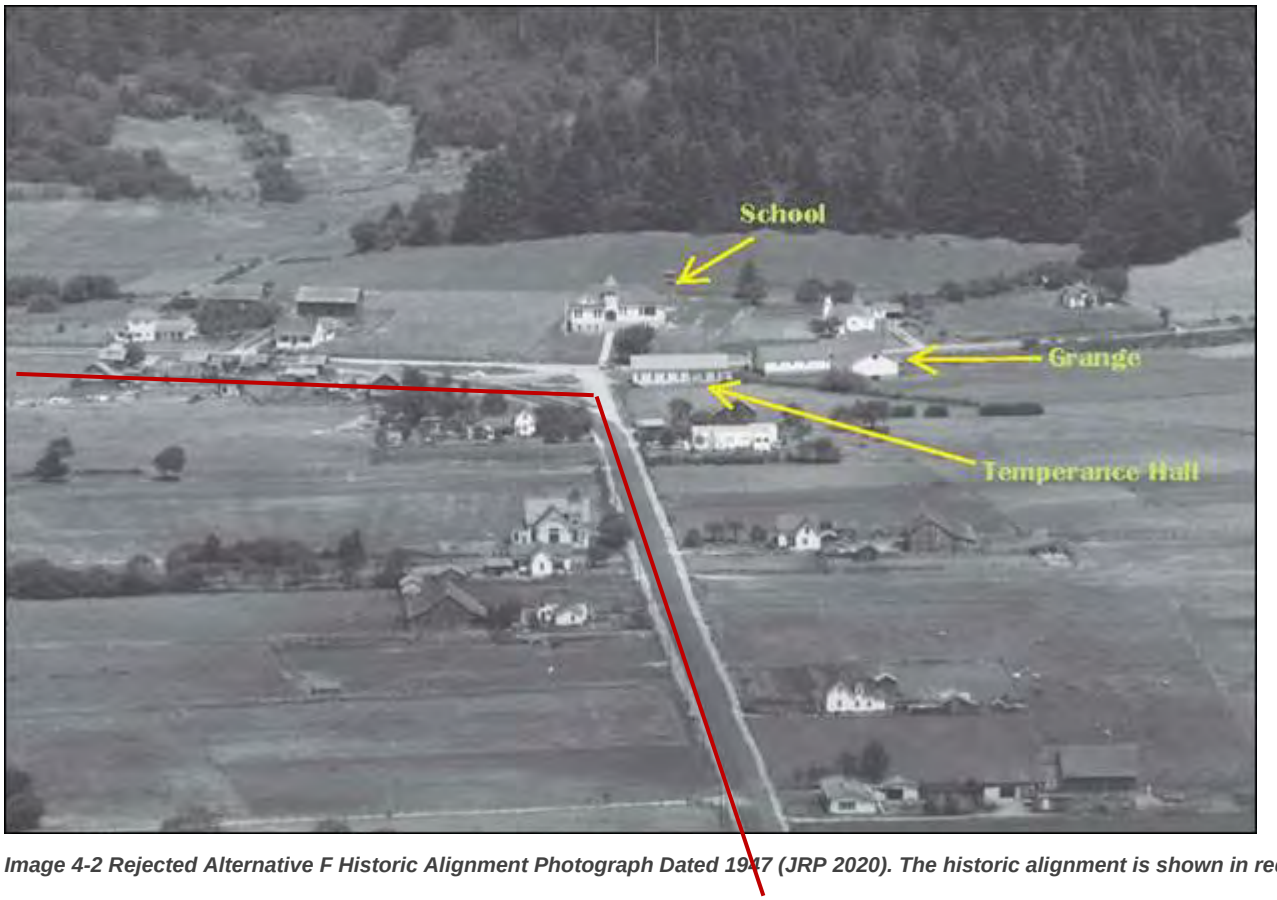



*Image 4-2 Rejected Alternative F Historic Alignment Photograph Dated 1947 (JRP 2020). The historic alignment is shown in red.*

# 4.3 Analysis of Alternatives

This section describes the Project alternatives that were selected and analyzed in accordance with CEQA Guidelines Section 15126.6(a). As described above in Section 4.2, several other potential alternatives were evaluated, but were determined to be infeasible, would not attain most of the Project's basic objectives, or would not avoid or substantially reduce significant impacts of the proposed Project and have been rejected.

The two alternatives to the proposed Project evaluated further in this EIR include the No Project Alternative and the T-Intersection Alternative. Resource categories identified as having no impacts under the proposed Project are not discussed below in detail.

As the proposed Project would result in no impact to Agricultural and Forestry Resources, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, and Recreation (see Section 5.1 – Environmental Issues Determined Not to be Significant), the No Project Alternative and T-Intersection Alternative are considered to be equivalent for those resource categories as identified in the CEQA Appendix G checklist and are not discussed further.

A comparison of alternatives is provided in Section 4.4. The environmentally superior alternative is described in Section 4.5.

## 4.3.1 Alternative 1: No Project Alternative

### Description

Under a No Project Alternative, the Project corridor would remain in its existing condition without change. Gaps in bicycle and pedestrian facilities along Old Arcata Road between Jacoby Creek School and Jacoby Creek Road

would remain. The existing walkways, driveways and curb ramps within the Project corridor that are non-compliant with current accessibility codes and standards would remain unaltered and continue to be a barrier to pedestrian mobility. The current roadway and turning configurations for Jacoby Creek School parking lot at the Hyland Street intersection would remain unaltered, and no left-turn lane for northbound traffic would be constructed. No modifications to the Jacoby Creek School parking lot would occur. The five paved diagonal parking space along Old Arcata Road in front of Jacoby Creek School would remain.

The intersection of Old Arcata Road and Jacoby Creek Road would remain in its existing configuration, and no new sidewalk, crosswalk, signage, landscaping, or other improvements would be constructed. Additionally, no retaining wall would be constructed near the intersection.

The existing asphalt roadway, identified as extremely deteriorated and considered to be in “poor” condition, would continue to degrade, but would be resurfaced at an unknown future date according to current city practice and roadway prioritizations (NCE 2017). The existing street lights located at the Jacoby Creek Road intersection would remain, and Old Arcata Road would continue to have some power-pole-mounted lights. Existing trees would remain, and no increase or modification of landscaping would occur.

Existing utility infrastructure, including storm drain, sanitary sewer lines, and water service lines, would remain, and no improvements to that infrastructure would occur.

## Analysis

For the purposes of this EIR, impact levels for the No Project Alternative assume continued use and degradation of Old Arcata Road and Jacoby Creek Road. The roadway would not be resurfaced. However, the No Project Alternative is not considered a ‘project’ under CEQA and implementation of mitigation measures through a CEQA document or CEQA process would not apply.

### *Aesthetics*

The No Impact Alternative would not include any visual change. However, the No Project Alternative would also not include many of the visual enhancements proposed by the Project, such as stamped concrete, colored concrete, landscape vegetation, and bicycle lanes and buffered pathways, that improve the visual character of the Project corridor. The impact to aesthetics would be less under the No Project Alternative.

### *Air Quality*

The No Impact Alternative would not result in any emissions. The impact to Air Quality would be less under the No Project Alternative.

### *Biological Resources*

The No Impact Alternative would not result in any disturbance to biological resources. The impact to Biological Resources would be less under the No Project Alternative.

### *Cultural Resources*

The No Project Alternative would not modify or disturb any archaeological resources. The impact to Cultural Resources would be less under the No Project Alternative.

### *Energy*

The No Impact Alternative would not result in any energy consumption. The impact to Energy would be less under the No Project Alternative.

### *Geology and Soils*

The No Impact Alternative would not result in disturbance to geologic or soil resources. The impact to Geology and Soils would be less under the No Project Alternative.

***Greenhouse Gas Emissions***

The No Impact Alternative would not result in any greenhouse gas emissions. The impact to Greenhouse Gas would be less under the No Project Alternative.

***Hazards and Hazardous Materials***

Soil characterization and, if needed, remediation required by the Project near Roger's Garage would not occur under a No Project Alternative. If any soil contamination were to remain, it would persist and clean up would not result. Thus, the No Project Alternative would be potentially more impactful, as any existing contamination would not be remediated.

***Hydrology and Water Quality***

The No Impact Alternative would not result in any hydrology or water quality impacts. The impact to Hydrology and Water Quality would be less under the No Project Alternative.

***Noise***

The No Project Alternative would not reduce operational noise through the Project Area due to a quieter, smoother roadway surface. The No Project Alternative also would not include traffic calming measures such as the roundabout, splitter islands, and improved signage. The existing noise environment at the intersection would remain. Nose-related impacts under a No Project Alternative would be greater than the proposed Project.

***Transportation***

The No Project Alternative would not include improved pedestrian and bicycle facilities along Old Arcata Road, or improved pedestrian and bicycle facilities at the intersection of Old Arcata Road and Jacoby Creek Road. Existing hazards to pedestrian and bicyclists would remain. Transportation-related impacts under a No Project alternative would be greater than the proposed Project.

***Tribal Cultural Resources***

The No Impact Alternative would not result in any Tribal Cultural Resource impacts. As tribal cultural resources were not identified in the Project Area as a result of AB 52 consultation with designated tribal representatives. However, the No Project Alternative is unlikely to encounter unknown tribal historic resources and, therefore, the impact to Tribal Cultural Resources would be less than the proposed Project.

***Utilities and Service Systems***

The No Project Alternative would not include needed water, sewer, or other utility improvements. Thus, the No Project Alternative is more impactful than the proposed Project.

***Wildfire***

The No Impact Alternative would not result in any wildfire-related impacts. The impact to Wildfire would be less under the No Project Alternative.

## 4.3.2 Alternative 2: T Intersection at Jacoby Creek with Improvements and Additional Traffic Calming Measures

### Description

Alternative 2 would implement the Project as proposed, except for the roundabout at the intersection of Old Arcata Road and Jacoby Creek Road (See Figure 4-1, Alternative Layout). Instead of a new roundabout, the existing T-intersection would be retained, and traffic patterns would remain the same as under existing conditions. Through traffic would remain on Old Arcata Road, and the stop sign on Jacoby Creek Road would be retained. Improvements at the intersection would include a mountable concrete apron to divide turning lanes on westbound Jacoby Creek Road, at the stop sign. The accessway to the Bayside Post Office would be repaved

and restriped, with formal parking added on the north side of the utility island. The paved roadway area at the Jacoby Creek Road would be reduced to calm traffic, and mountable aprons would be installed to accommodate vehicles with larger turning radii. The new pathway/sidewalk along Old Arcata Road would transition into a new LED or rapid rectangular flashing beacon (RRFB) enhanced crosswalk with curb ramps at the northern end of the intersection. The crosswalk would include a pedestrian refuge, which is a median with a refuge area that is intended to help protect pedestrians who are crossing multiple lane roads. The crosswalk would connect to a new sidewalk on the southern and eastern edge of the lift station utility island. New crosswalks and curb ramps would provide connectivity to both entrance/exits of the improved Bayside Post Office accessway. A fourth new crosswalk with LED or RRFB and a set of curb ramps would provide connectivity across Jacoby Creek Road near the Bayside Grange, linking to a new sidewalk in front of the Bayside Grange and Mistwood Education Center. The intersection would be repaved and restriped; signage would be updated, including signage posting speed limits of 25 miles per hour. Bicycle lanes would be re-striped on Old Arcata Road, through the intersection. As with the proposed Project, the T-Intersection Alternative would be located entirely within the public right of way. Traffic calming measures would be integrated into the T-Intersection alternative to the degree feasible, including additional traffic calming measures along the Old Arcata Road corridor, north and south of Jacoby Creek School. Traffic calming measures would include mountable median islands, center delineators, and radar feedback signs.

## Analysis

### *Aesthetics*

Under Alternative 2, the same improvements as the proposed Project would be implemented, except that the intersection of Old Arcata Road and Jacoby Creek Road would be retained as a T-intersection, with the same traffic pattern as the existing environment but with additional traffic calming measures to improve safety and reduce speeds. Improvements to the intersection would include new concrete aprons, repaving and restriping accessway to the Bayside Post Office, as well as multiple shoulder, crosswalk, sidewalk, bike lane, and other multi-model improvements.

Alternative 2 would have similar to slightly reduced aesthetics impacts with a potential to temporarily block or alter existing view through the presence of heavy machinery, materials stockpiling and storage, and construction-related safety signage and channelizers, and roadside vegetation (trees) removal. Therefore, the potential impact to aesthetics is expected to be the same under Alternative 2.

### *Air Quality*

Under Alternative 2, the amount of construction activity would be similar to the proposed Project. Therefore, the generation of criteria area pollutants and dust during construction of Alternative 2 would be similar to the proposed Project. The air quality impacts associated with the proposed Project were determined to be less than significant with implementation of Environmental Protection Action 1, which would require provisions that the City and its contractor prepare and adhere to a SWPPP prior to construction, to ensure compliance under the required Construction General Permit administered by the North Coast Regional Water Quality Control Board. The SWPPP would include dust control measures, as a matter of standard protocol. Dust control measures in the SWPPP would reduce potential fugitive dust emission and particulate matter impacts, providing consistency with Quality Regulation 1, Rule 104 (D), Fugitive Dust Emissions. The impacts of Alternative 2 would similarly be less than significant with implementation of Environmental Protection Action 1.

### *Biological Resources*

Impacts to biological resources associated with the proposed Project were determined to be less than significant with implementation of mitigation measures. Comparative to the proposed Project, impacts to biological resources under Alternative 2 would be marginally reduced due to the reduction in area that would be disturbed at the intersection of Old Arcata Road and Jacoby Creek Road. Neither alternative would impact wetlands. However, the potential to impact each of the species and resource identified in Section 3.3 (Biological Resources) during the construction phase would remain the same under Alternative 2, and all identified mitigation

measures (Mitigation Measures BIO-1, 2, 3, and 4) would remain applicable. Therefore, the impacts related to biological resources for Alternative 2 would be equivalent to the proposed Project.

***Cultural Resources***

Under the proposed Project, impacts to historical resources were determined to be less than significant. As described in Section 3.4, Cultural Resources, three built historic resources were identified in the vicinity of the intersection of Old Arcata Road and Jacoby Creek Road; the Old Jacoby Creek School at 2212 Jacoby creek Road, the Temperance Hall at 1928 Old Arcata Road, and the Bayside Grange at 2297 Jacoby Creek Road. The proposed Project would not diminish the integrity of location, design, materials, workmanship, or association of the Old Jacoby Creek School, Temperance Hall, Bayside Grange, or any historic district because the Project would not physically alter any of these properties. Although the integrity of feeling and setting would be modified, this Draft EIR found that this would not result in a substantial adverse change under CEQA, as the feeling and setting would not be altered to a significant degree. The proposed Project components are modest in scale and sympathetic to the surroundings; improvements to the intersection as realigned in 1946 are not to the original intersection, and the setting is already a mixture of old and new build environment. Alternative 2 would similarly result in a less than significant impact to historic resources, as the components would be modest in scale and sympathetic to the surroundings.

Under the proposed Project, cultural resources impacts were determined to be less than significant with implementation of mitigation. Alternative 2 would result in slightly less disturbance at the Project site due to a slightly smaller footprint at the intersection of Old Arcata Road and Jacoby Creek Road. The area of ground disturbance under Alternative 2 is only minimally smaller than the Project footprint, and only at the intersection of Old Arcata Road and Jacoby Creek Road.

The same mitigation measures for the proposed Project (Mitigation Measures CR-1) would be applicable to Alternative 2 (see Section 3.4). Implementation of Mitigation Measure CR-1 would reduce the impact to archaeological resources by requiring the development and implementation of a MOU with consulting Tribes that would include archaeological monitoring, guided investigation prior to construction, and inadvertent discovery protocols and plans.

With implementation of mitigation measures identified above, the Alternative 2 potential for impacts to archaeological resources (Impact CR-2) would be similarly be reduced to a less-than-significant level. Therefore, impacts to archeological resources and historic resources would be equivalent to those under the Project.

***Energy***

Comparatively, construction-related energy use under Alternative 2 would be equivalent to the proposed Project. As with the proposed Project, Alternative 2 would result in a less than significant impact to energy resources because it would not result in a substantial increase in energy use, in inefficient, wasteful, or unnecessary consumption of fuels or other energy resources, or conflict with an applicable plan for energy efficiency.

***Geology and Soils***

Although Alternative 2 would result in slightly smaller footprint than the proposed Project at the intersection of Old Arcata Road and Jacoby Creek Road, the general risk for encountering undiscovered unique paleontological resources would remain the same as the proposed Project. Paleontological resources are highly unlikely to be encountered regardless, as no deep excavation greater than 8 ft is planned. Additionally, potential for soil loss due to construction related erosion would be equivalent. The same Best Management Practices (BMPS) and EPA 1 (SWPPP) would apply to Alternative 2 as with the proposed Project.

The same mitigation measures for the proposed Project would apply to Alternative 2 to reduce potential impacts to construction-related impacts to paleontological resources to a less than significant level (reference Section 3.6). Therefore, impacts related to geology and soils under Alternative 2 would be equivalent to what would occur under the proposed Project.

### *Greenhouse Gas Emissions*

Similar to the proposed Project, Alternative 2 would result in a temporary increase in GHG emissions during Project construction, including exhaust emissions from on-road haul trucks, worker commute vehicles, and off-road heavy-duty equipment. Comparatively, construction related GHG emissions associated with Alternative 2 would substantially be the same as the estimated emissions for the proposed Project. As with the proposed Project, Alternative 2 would result in a less than significant impact to GHG emissions, because neither the Project nor Alternative 2 would exceed the quantitative emissions threshold, impede the State in meeting the AB 32 greenhouse gas reduction goals, or conflict with the City's adopted Climate Action Plan. As with the proposed Project, Alternative 2 would improve bicycle and pedestrian infrastructure and therefore is consistent with and supports the City's Community Greenhouse Gas Reduction Plan. As with the proposed Project, operations of Alternative 2 would not result in a new source of GHG emissions as it would not increase the vehicle capacity, speed, or vehicle miles traveled of the Project roadway. Under the proposed Project, there would be improved traffic flow through the intersection and an associated reduction in future idling during Project operation. As such, the proposed Project and Alternative 2 may result in a reduction in operational GHG emissions as compared to continued use of the intersection without Project improvements. Additionally, there would likely be long-term GHG benefits from improved operation and smoother pavement surfaces. Therefore, impacts related to greenhouse gas emissions under Alternative 2 would be equivalent to what would occur under the proposed Project.

### *Hazards and Hazardous Materials*

Although Alternative 2 would result in slightly smaller footprint than the proposed Project at the intersection of Old Arcata Road and Jacoby Creek Road, the general risk for accidental spills of construction fuels and accidental fire ignition during construction would remain the same as the proposed Project. Under Alternative 2, construction activity and excavation would still occur in proximity to the Roger's Garage on Old Arcata Road, and would still result in the need for handling potentially hazardous building materials (e.g., contaminated soils) and potentially aerially deposited lead along the roadway. The same mitigation measures for the proposed Project would apply to Alternative 2 to reduce construction-related impacts associated with managing potential contamination from Roger's Garage and aerially deposited lead to a less than significant level (reference Section 3.8). Therefore, impacts related to hazards and hazardous materials under Alternative 2 would be equivalent to what would occur under the proposed Project.

### *Hydrology and Water Quality*

Alternative 2 would be located on the same site as the proposed Project and would include the same general level of excavation and earthwork, with the exception that the configuration of the intersection of Old Arcata Road and Jacoby Road would be slightly smaller. Similar to the proposed Project, Alternative 2 would require implementation of Environmental Protection Action 1, which requires implementation of storm water controls during construction to ensure compliance with applicable requirements and to prevent erosion, sedimentation, or water quality impacts from occurring. In addition, the same mitigation measure for the proposed Project related to water quality control measures during excavation would be required for Alternative 2 to reduce impacts to a less than significant level (reference Section 3.9). Therefore, impacts related to hydrology and water quality under Alternative 2 would be equivalent to what would occur under the proposed Project.

### *Noise*

Similar to the proposed Project, Alternative 2 would generate construction-related noise associated with the use of heavy equipment for construction. The activities under Alternative 2 would generally occur for the same amount of time and utilize the same equipment as the proposed Project. Similar to the proposed Project, Alternative 2 would reduce operational noise through the Project Area due to a quieter, smoother roadway surface and traffic calming measures such as speed humps and improve signage. Alternative 2 would not place the intersection of Old Arcata Road closer to existing noise receptors; however, Alternative 2 would not reduce the amount of acceleration and braking associated with stopping, turning, and reaccelerating at the current intersection. Under the proposed Project, the proposed roundabout would further decrease operational noise by reducing the amount of acceleration and braking associated with stopping, turning, and reaccelerating at the

current intersection, including near the Mistwood Education Center. Under Alternative 2, the existing noise environment of acceleration and breaking associated with stopping, turning, and reaccelerating at the intersection would remain. Therefore, the impacts related to noise for Alternative 2 would be equivalent to or greater than the proposed Project.

***Transportation***

Transportation impacts associated with Alternative 2 would be equivalent to the proposed Project as it is anticipated that the construction phase would still require similar, if not equivalent, construction worker and equipment trips. Alternative 2 would include the same pedestrian and bicycle facilities along Old Arcata Road, and substantially similar pedestrian and bicycle facilities at the intersection of Old Arcata Road and Jacoby Creek Road as the proposed Project. However, as a deviation, the crosswalk across Jacoby Creek Road would lack a pedestrian refuge island. Implementation of Mitigation Measure TR-1 would be applicable to Alternative 2 and would reduce the impact of temporary construction to emergency access to a less than significant level by requiring adequate emergency access to all properties along the corridor, and advanced notification of construction activity details to emergency responders (reference Section 3.11 – Transportation). Therefore, potential transportation-related impacts under Alternative 2 would be equivalent to what would occur under the proposed Project.

***Tribal Cultural Resources***

Under the proposed Project, tribal cultural resource impacts were determined to be less than significant with implementation of mitigation. Alternative 2 would result in slightly less disturbance at the Project site due to a smaller footprint at the intersection of Old Arcata Road and Jacoby Creek Road. The area of ground disturbance under Alternative 2 is only minimally smaller than the Project footprint, and only at the intersection of Old Arcata Road and Jacoby Creek Road.

The same mitigation measures for the proposed Project (Mitigation Measures CR-1) would be applicable to Alternative 2 (see Section 3.12). Implementation of Mitigation Measure CR-1 would reduce the impact to tribal cultural resources by requiring the development and implementation of a MOU with consulting Tribes that would include archaeological monitoring, guided investigation prior to construction, and inadvertent discovery protocols and plans.

With implementation of mitigation measures identified above, the potential for impacts to tribal cultural resources (Impact TCR-1 and TRC-2) would continue to be reduced to a less than significant level as with the proposed Project. Therefore, Alternative 2 impacts to Tribal Cultural Resources would be equivalent to those under the proposed Project

***Utilities and Service Systems***

Utility and service system impacts associated with Alternative 2 would be equivalent to the proposed Project. Alternative 2 would have the same water, sewer, and utility improvements as the proposed Project. Therefore, impacts to public services and utilities associated with Alternative 2 would be less than significant (reference section 3.13 Utilities and Service Systems), and equivalent to what would occur under the proposed Project.

***Wildfire***

Wildfire impacts associated with Alternative 2 would be equivalent to the proposed Project. Alternative 2 would be located on the same site as the proposed Project and would be subject to the same fire ignition risks and exposure to wildfire. Therefore, impacts to wildfire under Alternative 2 would be equivalent to what would occur under the proposed Project.

## 4.4 Comparison of Alternatives

Table 4-1 (Comparison of Alternatives to the Proposed Project) compares the impacts of the proposed Project with each of the alternatives. As summarized in Table 4-1, the No Project Alternative does not result in any impacts to environmental resources as identified in the CEQA Appendix G checklist, as disturbance would not

result. As noted in Section 4.3.1 above, the No Project alternative, existing environmental concerns would remain:

– Hazards – Legacy contamination that may remain near the former site of Roger's Garage would persist, unevaluated.
– Noise – Reductions in operational noise achievable under the proposed Project would not occur; and
– Transportation – Improvements to pedestrian and bicycle safety and transportation facilities would not occur. Level of Service (LOS) at the intersection of Old Arcata Road and Jacoby Creek Road would continue to degrade.

Potential environmental impacts resulting from Alternative 2 are generally equivalent to the proposed Project (Table 4-1). Neither alternative would result in any unmitigated significant impacts and required mitigation for both Alternative 2 and the proposed Project would be equivalent. Both a modified T-intersection and a roundabout at the intersection of Old Arcata Road and Jacoby Creek Road would result in similar visual changes, such as new sidewalks, curbs, crosswalks, stamped and colorized concrete, fencing, and landscaping. Neither alternative would result in tall structures or visually obscuring features. Air quality, energy, and greenhouse gas emissions would be equivalent for the proposed Project and Alternative 2, as the same amount of construction and operational resources would be required to implement each. Biological impacts for the proposed Project and Alternative 2 would be equivalent. Aside from removal of several trees within the public right of way at the intersection of Old Arcata Road and Jacoby Creek Road, all other vegetation removal would be equivalent. Neither the proposed Project nor Alternative 2 would impact wetlands. Similarly, potential impacts to cultural resources would be equivalent, as both the proposed Project and Alternative 2 have similar ground disturbance footprints required for construction.

***Table 4-1 Comparison of Alternatives to the Proposed Project***

| Potential Impact | Project | Alternative 1<br>No Project | Alternative 2<br>T-Intersection Jacoby Creek with Improvements |
|---|---|---|---|
| Aesthetics | Aesthetic impacts would be less than significant after mitigation and occur as a result of Project construction (e.g., temporary visual impacts from construction). | No visual change would occur. | Same as proposed Project. |
| Air Quality | Air quality impacts, including generation of emissions during construction, would be less than significant. | No air quality impacts or emissions would occur. Reductions in vehicle emissions by improving facilities for pedestrian and bicycle transit would not be achieved. | Same as proposed Project. |
| Biological Resources | Mitigation measures would be implemented to ensure biological and aquatic resources were protected. Wetland impacts would not occur. Impacts would be less than significant after mitigation. | No biological impacts would occur. | Same as proposed Project. |
| Cultural Resources | Impacts to cultural and historic resources would not occur.<br>Inadvertent discovery protocols would be implemented to protect any uncovered resources not identified by the Project's cultural resource investigation and related tribal consultation. | No cultural or historic resource impacts would occur. | Same as proposed Project. |

| Potential Impact | Project | Alternative 1<br>No Project | Alternative 2<br>T-Intersection Jacoby Creek with Improvements |
|---|---|---|---|
| Energy | Impacts to energy would be less than significant. | No energy impacts would occur. Reductions in vehicle-related fossil fuels by improving facilities for pedestrian and bicycle transit would not be achieved. | Same as proposed Project. |
| Geology and Soils | Impacts to geologic and soil resources would not occur.<br>Inadvertent discovery protocols would be implemented to protect any uncovered paleontological resources. | No changes to geologic or soil resources would occur. | Same as proposed Project. |
| Greenhouse Gas Emissions | Impacts to greenhouse gas emissions would be less than significant. | No greenhouse gas emissions impacts would occur. Reductions in vehicle emissions by improving facilities for pedestrian and bicycle transit would not be achieved. | Same as proposed Project. |
| Hazards and Hazardous Materials | Hazards and Hazardous Materials impacts would be less than significant after mitigation and occur as a result of Project construction (e.g., disturbance of contaminated soils during construction). | No changes to hazards or hazardous materials would occur. Potential legacy contamination that may remain near the former Roger's Garage would persist. | Same as proposed<br>Project. |
| Hydrology and Water Quality | Hydrology and Water Quality impacts would be less than significant after mitigation and occur as a result of Project construction (e.g., disturbance of soils during construction). | No changes to hydrology would occur. Improvements to the existing ad hoc storm drainage system would not occur. | Same as proposed Project. |
| Noise | Impacts from noise would be less than significant. | No changes to noise would occur. | Same as proposed Project for construction.<br>More than proposed Project and less than No Project for operation but remaining less than significant. |
| Transportation | Transportation impacts would be less than significant after mitigation and occur as a result of Project construction (e.g., emergency access during construction). | No changes to transportation would occur. The deteriorating roadway throughout the Project Area and depreciating LOS at the intersection of Old Arcata Road and Jacoby Creek Road would persist. | Same as proposed Project. |
| Tribal Cultural Resources | Impacts to cultural and historic resources would not occur.<br>Inadvertent discovery protocols would be implemented to protect any uncovered resources not identified by the Project's cultural resource investigation and related tribal consultation. | No tribal resource impacts would occur. | Same as proposed Project. |

| Potential Impact | Project | Alternative 1 No Project | Alternative 2 T-Intersection Jacoby Creek with Improvements |
|---|---|---|---|
| Utility and Service Systems | Impacts related to utilities and service systems would be less than significant. | No changes to utilities would occur. | Same as proposed Project. |
| Wildfires | Impacts related to wildfires would be less than significant. | No changes to utilities would occur. | Same as proposed Project. |

# 4.5 Environmentally Superior Alternative

As shown in Table 4-1, Comparison of Alternatives to the Proposed Project, the environmental impacts of the proposed Project, Alternative 1 (No Project Alternative), and Alternative 2 (T-Intersection Jacoby Creek with Improvements) would be substantially similar or equivalent. Of the three alternatives, the No Project Alternative is the least environmentally impactful alternative, as it avoids disturbance to the Project Area and would not result in any changes compared to existing conditions. However, the No Project Alternative would fail to meet any of the Project objectives.

The proposed Project and Alternative 2 (Modified T-Intersection) would result in equivalent environmental impacts and require identical mitigation measures to ensure any potential environmental impact remains less than significant. The ground disturbance footprint required for Alternative 2 would be only negligibly smaller near the intersection of Old Arcata Road and Jacoby Creek Road and identical for the balance of the Project Area. Absent a roundabout, operational noise at the intersection is expected to be higher than would be achieved under the proposed Project; however, operational noise under both alternatives would not be environmentally significant. As such, the proposed Project and Alternative 2 are considered environmentally equivalent.

# 4.6 References

California State Transportation Agency /California Department of Transportation (CalSTA/Caltrans). 2014. California Manual on Uniform Traffic Control Devices, Revision 6 (March 30, 2021).

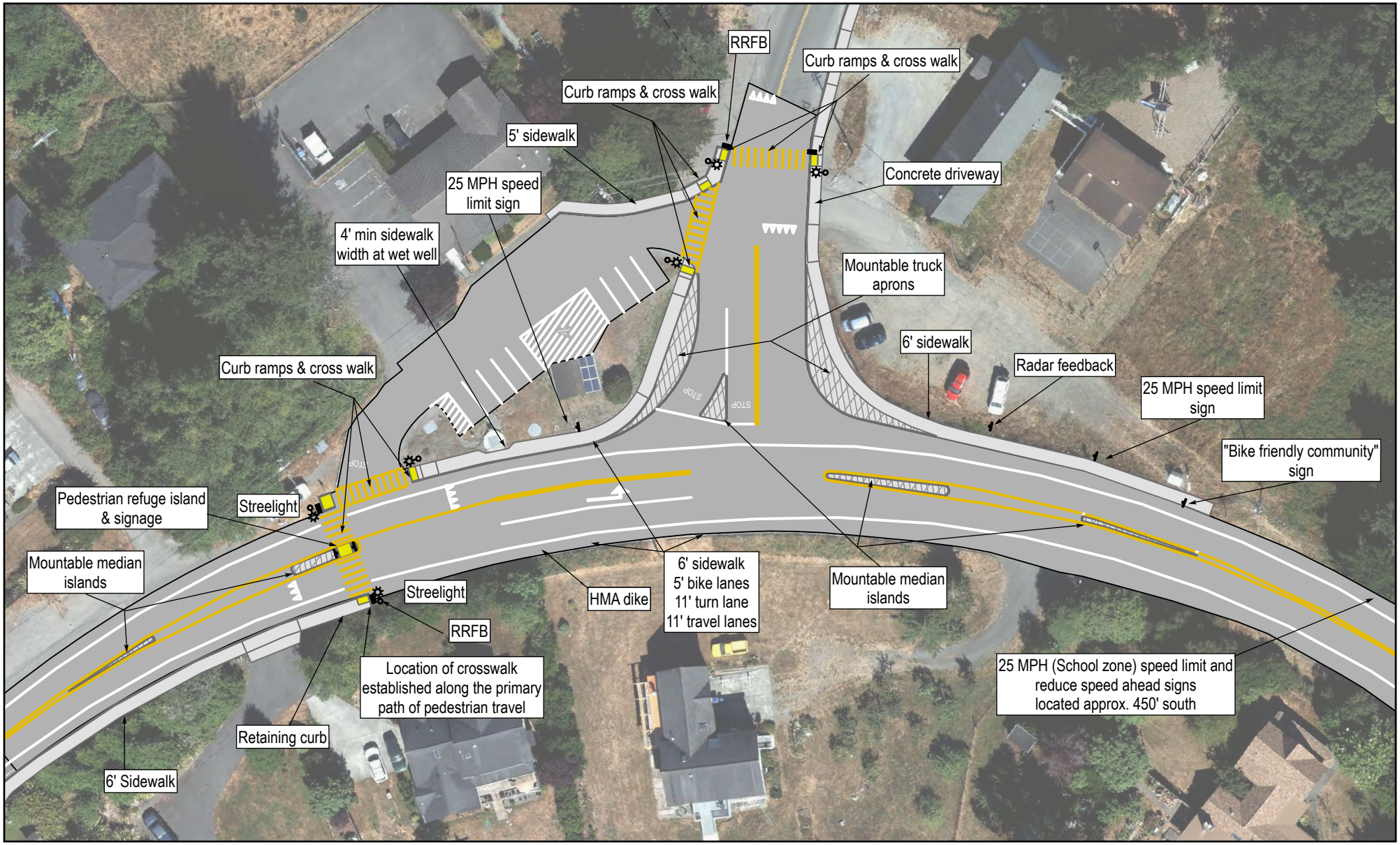
City of Arcata. 2017. Project Study Report (PSR) Old Arcata Road Rehabilitation & Pedestrian/Bikeway Improvements. Arcata, California.

GHD. 2021. Alternatives Considerations for the Old Arcata Road/Jacoby Creek Intersection Technical Memorandum. June 24.

JRP Historical Consulting, LLC. (JRP). 2020. Historical Resources Evaluation Report, Old Arcata Road Improvements Project Arcata, Humboldt County, California. Federal Project No.: RPSTPL-5021(023). December. Prepared for the City of Arcata.

Nichols Consulting Engineers (NCE) (2017). City of Arcata Pavement Management Update (2016-17)-Final Report. NCE Project Number 599.03.55.

SHN Engineers and Geologists (SHN) and Omni Means Engineering Solutions. 2017. Community Charrette for Design Success: Design Charrette and Preliminary Concept Designs Old Arcata Road Improvements Project.




Paper Size ANSI A

0 10 20 30 40

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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**City of Arcata**
**Old Arcata Road Improvements**

Project No. **11159130**
Revision No. **-**
Date **7/26/2021**

## Alternative Layout

# FIGURE 4-1

G:\111\11159130 Arcata Old Arcata Road Improvements\08-GIS\Maps\Deliverables\20210726_AltLayout\11159130_AlyLayout.aprx
Print date: 26 Jul 2021 - 15:03

Data source: AirPhoto_2019_MapService:
World Topographic Map: Esri Community Maps Contributors, BuildingFootprintUSA, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

# 5. Other CEQA Required Sections

## 5.1 Environmental Issues Determined Not to Be Significant

CEQA Guidelines Section 15128 requires an Environmental Impact Report (EIR) to briefly describe any possible significant effects that were determined not to be significant and were, therefore, not discussed in detail in the Draft EIR. For the purposes of this Draft EIR, an evaluation of Agricultural and Forestry Resources, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, and Recreation were eliminated from further consideration during the scoping phase of the environmental analysis for the reasons presented below.

### 5.1.1 Agriculture and Forestry Resources

Trees removed during construction will be replaced in other nearby locations. Tree removal would be limited to one or two locations near the roundabout at the intersection of Jacoby Creek Road and Old Arcata Road. None of these areas are forested. The Project corridor does not include any Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or land covered by a Williamson Act contract (Humboldt County 2019). In addition, the Project is not zoned for agricultural, forest land, or timberland, nor are there any agricultural or forest lands within the confines of the Project corridor (Humboldt County 2019). No impact to agriculture or forest resources would occur.

### 5.1.2 Land Use and Planning

The Project would not physically divide a community. The Project is limited to improvements to an existing roadway and would improve physical linkages and ease of use across Old Arcata Road. The Project would improve user experience in crossing the existing Old Arcata Road by upgrading pedestrian cross walks, installing new signage, upgrading and installing speed humps to slow vehicle speeds, restripe bicycle lanes, and improve community connectivity through upgraded and extended multi-use pathways and sidewalks. The Project would improve non-motorized user experiences while maintaining the character of the existing community.

Under existing conditions, there are no cross walks or other safety features at the intersection of Old Arcata Road and Jacoby Creek Road. There is a single stop sign at Jacoby Creek Road, and there is no stop sign along Old Arcata Road, allowing through traffic. Cross walks and signage would be integrated into the proposed roundabout, improving safety for motorists, bicycles, and pedestrians. The Project would improve physical linkages and ease of use across Old Arcata Road.

The Project is consistent with the City of Arcata and Humboldt County zoning and land use planning designations, which indicates the Project corridor is an existing, planned roadway. Post-Project operation of the roadway would be similar to existing conditions (e.g., no increase in speed or roadway designation). The footprint of the roadway would expand only slightly to accommodate a new roundabout at the Old Arcata Road/Jacoby Creek intersection within public right of ways, which is consistent with City and County transportation policies (see Section 3.17) and would not alter land use. Permanent encroachments onto private property would not result. No impact to land use would occur.

### 5.1.3 Mineral Resources

Construction of the proposed Project would not result in the loss of mineral resources because there are no mineral resources found within the Project corridor. Soils in the Project Area are predominantly comprised of

Hookon-Tablebluff complex (USDA/NCRS 2021). Hookton-Tablebluff soils are classified as farmland soils and thus not a mineral resource. The Project does not require a substantial amount of any mineral resource for construction, although some mineral resources (primarily aggregate and rock) would be needed for construction. Quarries or other sources of mineral resource extraction are not located in or near the Project Area. Given the Project Area does not include mineral resources and only small quantities of mineral resources would be imported to the Project Area from off-site locations for construction purposes, an impact to mineral resources would not result.

### 5.1.4 Population and Housing

The Project does not include components that would directly support unplanned population growth, such as new housing, roads, utilities, or other developments. The Project would extend an existing shared use path adjacent to Old Arcata Road to complete the connection between the communities of Sunny Brae and Bayside. Project elements are not expected to induce population growth or result in a demand for additional housing. The path extension and other Project components would also improve the usability of the Old Arcata Road corridor for non-motorized users, which may increase the desirability of the community to existing and future residents. The overall goal of the Project is to maintain and upgrade the existing roadway and associated municipal infrastructure (e.g., underground sewer and water services) as needed to ensure satisfactory levels of service continue without interruption for existing residents, schools, and businesses. The proposed Project would not displace people or housing or otherwise effect housing. Therefore, the Project would result in no impact to population and housing.

### 5.1.5 Public Services

The City of Arcata General Plan Land Use Element includes Old Arcata Road as a transportation corridor. The Project is limited to improvements to an existing roadway, and would improve physical linkages and ease of use across Old Arcata Road. The proposed Project would not require any changes to maintain an acceptable service ratio for City of Arcata fire protection services and would improve the quality of the roadway for increased ease of use by fire protection service vehicles.

The City of Arcata Police Department currently provides services to Old Arcata Road and would continue to do so. The proposed Project would not create substantial adverse physical impacts necessitating new police department facilities.

The proposed Project would occur near Sunny Brae Middle School and adjacent to Jacoby Creek Elementary School. The proposed Project would not result in significant adverse effects on school district service ratios or school facilities for the same reasons discussed above for fire and police protection services. Streetscape improvements in front of Jacoby Creek Elementary School and the new roundabout at the Jacoby Creek Road intersection would improve safety for students and staff, as well as enhance walkability or bikeability of students to and from school along repaved and restriped bike lanes and the extended pedestrian pathway. Therefore, no impact to public services would occur.

### 5.1.6 Recreation

The Project would not increase the use of existing neighborhood parks or recreational facilities. Access (e.g., additional parking, new roadway construction, directional signage) to the Bayside Park Farm and Community Garden or Jacoby Creek Elementary School playground would not be affected, and a change in use would not result. The construction or expansion of recreational facilities would not be required by the Project or included in the Project. Therefore, no impact to recreation would occur.

## 5.2 Energy Use

To guarantee that energy implications are considered in project decisions, CEQA Guidelines Appendix F, *Energy Conservation*, requires that EIRs "include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy." An evaluation of potential impacts related to the energy consumption of the Project and the applicability of state or local plans for renewable energy and energy efficiency is discussed in Section 3.5 (Energy).

## 5.3 Growth Inducement

The CEQA Guidelines require that an EIR evaluate the growth inducing impacts of a proposed project. The CEQA Guidelines describe growth-inducing impacts in the following manner:

> *"Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment." (CEQA Guidelines Section 15126.2[d]).*

Projects can have direct and/or indirect growth inducement potential. An example of direct growth inducement would be the construction of new housing. Examples of indirect growth inducement could include establishing substantial new permanent employment opportunities and removing obstacles to population growth (e.g., the expansion or improvement of utilities which allows for more growth within a service area).

Growth inducement itself is not an environmental effect but may lead to an environmental effect(s). Environmental effects may include increased demand on other public services and infrastructure, increased noise and traffic, degradation or loss of plant or animal habitats, degradation of air and water quality, or conversion of open space land to urban development.

The Project would improve Old Arcata Road, including improvements to motorized and non-motorized transportation and user safety in Bayside, California. The Project would link existing critical activity centers within the community, including schools, neighborhood facilities, and residential areas, but would not modify regional access or result in access to a previously inaccessible area. Additionally, the Project would result in no impact to land use and planning, public services, or housing and population, as described in Section 5.1, above. Therefore, the Project would not induce substantial population growth.

## 5.4 Significant and Unavoidable Impacts of the Proposed Project

Section 15126.2(c) of the CEQA Guidelines require that an EIR identify any significant environmental effects that cannot be avoided if the Project were implemented, including those that can be mitigated but not reduced to a level of insignificance.

Mitigation measures proposed by the City of Arcata have been identified throughout Chapter 3 of this EIR and would mitigate potentially significant project effects to less than significant. Mitigation measures also are summarized in Table 1-1. With implementation of the proposed mitigation measures, there would be no significant unavoidable impacts.

# 5.5 Significant Irreversible Environmental Changes

Section 15126.2(d) of the CEQA Guidelines requires that an EIR include a discussion of significant irreversible environmental changes that would result from project implementation. The CEQA Guidelines describe irreversible environmental changes in the following manner:

> *"Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified." (CEQA Guidelines Section 15126.2[d]).*

Construction activities associated with the Project would result in an irretrievable and irreversible commitment of non-renewable resources through the use of construction materials. This would include the use of fossil fuels (such as gasoline, diesel and oil) during the construction period, and the use of earth minerals and ores (such as concrete and steel). The Project would result in permanent alterations to the existing roadway to improve motorized and non-motorized transportation and user safety in Bayside, California. The Project would link critical activity centers within the community, including schools, neighborhood facilities, and residential areas. The Project would not modify regional access or result in access to a previously inaccessible area. As a proposed transportation infrastructure project, the Project is not representative of a land use type that would result in accidents that could lead to irreversible environmental damage. Overall, given the Project's low consumption of irretrievable resources, such commitment is justified, and does not constitute a significant environmental effect.

# 5.6 References

United State Department of Agriculture (USDA)/National resources Conservation Service (NRCS). 2021. Soil Map Database Information for the Old Arcata Road Project. Accessed on July 26, 2021.

# 6. List of Preparers

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